Fiscal Year 2014 Specialty Crop Block Grant
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Oregon Department of Agriculture
Agricultural Development and Marketing Division
1207 NW Naito Parkway, Suite 104
Portland, Oregon 97209
(503) 866-1439

Shannon Brubaker
Specialty Crop Block Grant Program Manager
Email: sbrubaker@oda.state.or.us

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Grant Administration

CONTACT NAME: **Shannon Brubaker, SCBGP Manager**
ORGANIZATION: **Oregon Department of Agriculture**
PHONE: **503-872-6617**
EMAIL: **sbrubaker@oda.state.or.us**

The Specialty Crop Block Grant Program (SCBGP) is an important program for Oregon agriculture. With more than 220 agricultural commodities and greater than 60% of the agricultural farm gate value from specialty crops, specialty crop markets constitute a large portion of Oregon's economy. When taking into account the fact that the majority of Oregon's 34,600 farms are small to medium sized, you begin to realize the complexity of Oregon agriculture. The SCBGP has been essential in supporting Oregon's diverse and complex agricultural economy.

In order to provide necessary support toward the specialty crop industry, Oregon Department of Agriculture (ODA) decided to continue the use of a portion of the funds to support a full time SCBGP Manager. The position is responsible for all aspects of Oregon's SCBGP, including:

> *Coordination and oversight:* Responsibility of the coordination of all grant agreements, proper training for successful project management for sub-recipients, tracking and compiling all reporting to USDA-AMS, documentation and communications, and grantee performance reporting and monitoring. Progress and financial reports submitted by the sub-grantees to ODA are one of the tools that SCBGP Manager uses to monitor the success of the implementation of the projects. Reports are used to ensure that work is completed within the required timeline, ensure that the funds are used only for activities covered by the approved project, and ensure that grant funds supplement rather than replace State funds.
>
> The SCBGP Manager develops and manages a system to track and analyze the data to be used for documentation of grant outcomes and accomplishments. The data is compiled into summary reports required by the USDA.
>
> The SCBGP Manager coordinates with representatives of Oregon's specialty crop industry to enhance the development of meaningful, coordinated, productive projects that yield a measurable marginal return to the bottom line of Oregon agriculture.
>
> *Outreach/Training:*
> SCBGP Manager conducted outreach and trainings for potential recipients interested in program regarding the criteria for development and implementation of effective grant projects. SCBGP Coordinator holds statewide training/listening sessions, with additional statewide travel on an as needed basis.
>
> SCBGP Manager provided technical assistance to potential applicants and to those applicants approved by USDA sub-grantees. Trainings are held in the fall and winter and for those not able to attend, webinars of the trainings are held to inform applicants about the program, train applicants on how to apply, and train sub-

grantees on the best practices for reporting. In addition, the program Manager implemented the opportunity for one-on-one conference trainings to enhance a more opportune learning experience in grant writing development for the project proposal open competitive process, implementing this process has helped develop a more outcome driven program in Oregon.

Oregons Specialty Crop Block Grant Program key priority areas are:

Market development and access

- International
    - Understanding and addressing trade barriers or regulatory constraints in foreign markets (e.g. tariffs, TRQs, FTAs, quotas, bilateral agreements)
    - Obtaining market information and providing product exposure through trade shows, conferences, seminars, market research, consumer testing, in-bound and outbound trade missions
    - Applying new technologies to help identify new customers and facilitate shipments (e.g. packaging configurations, customer data, logistics, and transportation enhancements)
- Local and farm-direct, regional, and domestic markets
    - Obtaining market information and providing product exposure through trade shows, conferences, seminars, market research, consumer testing, and trade missions
    - Connect farmers to consumers by enhancing direct marketing opportunities that highlight production practices, farmers, and growing locations
    - Support the development and advancement of co-operatives to leverage grower and producer efforts
    - Develop and enhance economic opportunities in local communities that increase the awareness and consumption of specialty crops
    - Increasing child and adult nutrition knowledge and consumption of specialty crops by expanding access at schools, at work, and in local neighborhoods

Certification programs

- Assisting all entities in the specialty crop distribution chain in developing certification programs that enhance market access and increase sales by addressing food safety, sustainability, or other outcomes, including, but not limited to:
- Good Agricultural Practices (GAP), Good Handling Practices (GHP), Good Manufacturing Practices (GMP), identity preserved, sustainability, Global Food Safety Initiative (GFSI), Maximum Residue Levels (MRLs), development of organic sustainable production practices, or other market assurance programs.

Food safety compliance and traceability

- Investing in specialty crop research toward food safety compliance and traceability through implementation of practices, trainings, or systems development and preparation for and/or assistance in compliance with the Food Safety Modernization Act (FSMA).

Efficiency of distribution systems

- Improving efficiency of distribution systems by enhancing the shelf life and marketability of crops/farm products through shared post-harvest handling and storage, logistics, warehousing, cold storage, or transportation.

Pest and disease management

- Address pest and management issues that affect or protect markets and minimize economic harm to specialty crop growers.

Training and equipping the next generation

- Training and equipping the next generation of farmers in agronomic, economic, and environmental stewardship skills by introducing, educating and recruiting people to the variety of specialty crop career opportunities

On farm labor needs

- Connecting growers with hiring resources, providing technical information about laws and compliance, or developing mechanization or methodologies for routine or repetitive labor demands. Create and implement workforce training programs or tools to maintain the technical skills required to keep Oregon specialty crops sector competitive.

Productivity enhancements, innovation, value added

- Investing in projects that address productivity enhancements, innovation, value added products and other production efficiencies for specialty crops

Agriculture and food-related priorities identified by Oregon Solutions Network Regional Solutions Centers

- To address rural economic development in Oregon. Projects must also comply with one or more of the required previously listed program priorities.

ODA-001 Onion smut survey in Malheur County – *Final report*

CONTACT: Elizabeth Savory
ORGANIZATION: Oregon Department of Agriculture, Plant Health
PHONE: 503-986-4620
EMAIL: esavory@oda.state.or.us

PROJECT TITLE: Onion smut survey in Malheur County

PROJECT SUMMARY:

The Oregon Department of Agriculture conducted a three-year survey of *Allium* (including shallots and red and yellow onions) fields for onion smut (*Urocystis cepulae*) in Malheur County (MC), Oregon. The goal of this project was to meet the conditions set forth by BioSecurity Australia (BSA) to re-open access to the Australian market for growers, packers, and shippers. Prior to 2010, MC exported onions to Australia. In response to a 2009 report of onion smut in spring-planted onions, BSA suspended all imports of MC onions. Following the Performance Monitoring Plan set forth by BSA, over 3,600 acres (10.3% of planted acres) of *Allium* spp. were visually inspected over a three year period from 2015 to 2017. Within 114 randomly chosen fields, 22-100% of plants were inspected, exceeding the 10% threshold set by BSA. No suspicious symptoms were observed in any of the three years of the survey. All survey data was entered into the National Agricultural Pest Information System database. Based on the results of this survey, MC meets the standards set forth by BSA for pest-free status for onion smut.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE:

Prior to 2010, Malheur County (MC) was the only Oregon county allowed to ship onions to Australia. On June 22, 2010, BioSecurity Australia (BSA) contacted the USDA APHIS AMS (United States Department of Agriculture Animal Plant Health Inspection Service Agriculture Marketing Service) requesting clarification of an anecdotal report of onion smut (*Urocystis cepulae*) in MC. This report had been posted by an Oregon State University Extension Agent on the Pacific Northwest & Treasure Valley Pest Alert website on June 9, 2009, claiming that onion smut had been found infecting spring-planted onions in a MC field. The Oregon Department of Agriculture (ODA) was unable to confirm or deny the report. As a result, BSA suspended all imports of MC onions in the late summer of 2010.

The ODA had been approached several times by the Malheur County Onion Growers Association asking for assistance with this issue as it affects international trade and interstate shipments. Many MC onion growers work with packers in Idaho and vice versa. Currently, these growers, packers, and shippers must segregate their crops in order to enable shipments to Australia.

The goal of this project is to establish pest-free status from onion smut for MC in order to re-open the Australian market for onion growers, packers and shippers. The objectives of this project were as follows:

1) Conduct a three-year survey of Malheur County (MC) *Allium (*shallot and onion) fields for onion smut (*Urocystis cepulae*) based on the Performance Monitoring Plan set forth by BioSecurity Australia.
2) Determine if onion smut is present in MC, and if so, implement disease management methods.
3) Re-open Australian markets for MC onions either by establishing pest-free status or implementing disease management methods that would meet international phytosanitary requirements.

PROJECT ACTIVITIES

The ODA surveyed *Allium* fields in MC over three years, including fields of shallots and red, yellow, and white onions. The survey was done based on the Performance Monitoring Plan (PMP) outlined by BSA. According to this standard protocol: 1) A minimum of 10% of the onion fields within the county must be surveyed; 2) fields must be randomly selected for survey; 3) within each individual field surveyed, at least 10% of the plants must be inspected; 4) suspicious samples must be submitted to an official laboratory for identification; and, 5) surveys must be conducted for a minimum of three years, or three growing seasons.

We fulfilled the requirements for the PMP in years 2015, 2016, and 2017 and did not observe any suspicious symptoms in any field, nor did we find any onion smut infections (Table 1). In 2015, a total of 422 (11,123 acres) *Allium* fields were planted in MC. We randomly selected 46 fields (1,231 acres) for this survey and visually inspected all plants within 274.5 acres (22.3%). In 2016, we visually inspected 80% of the plants within 37 fields. These fields encompassed 1,203 acres of the total 11,800 acres planted in 2016. In 2017, there were 12,037 acres planted to *Allium* in MC. We inspected 31 fields, representing 1,295 acres. Within these fields, 100% of the plants were inspected. In none of the three years was onion smut observed. This data was submitted to the National Agricultural Pest Information System (NAPIS) database.

Table 1. Results of the three-year *Allium* field survey in Malheur County, OR.

2015 Survey Data (Year 1)				
Crop	**Fields (Percent of Total)**	**Acres**	**Acres Inspected**	**Results**
Yellow onion	41	1,058	194.7	No smut detected
Yellow/red onion	2	75	39	No smut detected
Red Onion	1	8	0.8	No smut detected
Shallots	3	90	90	No smut detected
Totals:	46 (11%)	1,231	324.5	
2016 Survey Data (Year 2)				
Crop	**Fields (Percent of Total)**	**Acres**	**Acres Inspected**	**Results**

Yellow onion	34	1055	822	No smut detected
White onion	1	11	11	No smut detected
Shallots	2	137	137	No smut detected
Totals:	37	1203	970	
2017 Survey Data (Year 3)				
Crop	**Fields (Percent of Total)**	**Acres**	**Acres Inspected**	**Results**
Yellow onion	29	1,273	1,273	No smut detected
Red onion	2	22	22	No smut detected
Totals:	31	1,295	1,295	

GOALS and OUTCOMES ACHIEVED

Performance Measures:

In Year One, the objective was to determine if the information used by BSA to close market access for MC onions was correct by surveying fields for suspicious plants and diagnosing or verifying presence of onion smut as required. We did not identify any evidence of onion smut in our 2015 survey.

In Year Two, our objective was to verify the results from the first year's survey by continuing to survey fields in MC. A second year of data would either validate or disprove the initial survey and also fulfilled the requirements of the PMP. The second year of survey data supported the findings from the first year, that there was no incidence of onion smut in *Allium* fields surveyed in MC.

Year Three survey data provided the final year of data necessary to establish market access according to international phytosanitary standards for a pest-free area or an area with a pest of limited distribution and under official control. The results of the surveys from Years One through Three, where no onion smut was identified in MC, support establishment of a pest-free area.

Measurable Outcomes:

The goal of this project was to establish a pest-free area for onion smut in MC or, if disease was identified, to implement appropriate management efforts such that BSA would allow MC onions to be exported to Australia. The benchmark at the onset of this project was zero, as no onions were able to be shipped from MC to Australia. The results of this three year survey indicate that MC is free of onion smut. We fulfilled the requirements of the PMP set forth by BSA and did not find any symptomatic plants, suspicious plants, or any incidence of onion smut in the surveyed fields. Our target outcome was to enable at least one MC onion shipper to re-gain market access to Australia. We are currently providing the results of this survey to BSA and USDA APHIS in order to meet this target.

Recommendations & Conclusions

Based on the results of this three-year survey of *Allium* in MC which found no evidence of onion smut in any field surveyed, the ODA recommends that MC be declared a pest-free area and that market access to Australia be restored.

BENEFICIARIES

The beneficiaries of this project are the growers of *Allium*, including shallots and onions, in MC, OR as well as the packers and shippers in both OR and nearby ID. The Treasure Valley, which includes MC, has ~300 growers that raise nearly 1.5 billion pounds of onions annually. The results of the survey indicate that MC has no incidence of onion smut and should be declared a pest-free area. This pest-free designation will allow market access to the Australian onion market to be re-opened which would impact any grower, packer, or shipper that wants to export their products to Australia.

LESSONS LEARNED

We were able to meet the performance measures set forth in each year of the project, despite some obstacles in terms of weather. In 2015, there was a drought, leading some growers who had planned on growing *Allium* crops in that year to choose not to. Initially, there was an overestimation of acreage by the Oregon State University Extension which we used to to plan our survey. The PMP put forth by BSA required a certain percentage of planted fields to be surveyed, so accurate data concerning the actual number of fields planted was essential. Having a good working relationship and open communication with the Malheur County Onion Grower's Association enabled us to get the final numbers, and we were able to adjust our survey accordingly to meet the needs of the PMP. Having positive contact and interactions with stakeholders was an important component of successfully completing this project.

ADDITIONAL INFORMATION

Matching funds totalling $19,668 for 0.05 FTE for Plant Health Manager oversight for the progam were provided by the ODA. This included $12,958 in salary and $5,960 in Fringe.

ODA-002 Oregon International Culinary Ambassador Program - *Final report*

CONTACT: Theresa Yoshioka
ORGANIZATION: Oregon Department of Agriculture, Development & Marketing
PHONE: 503-872-6600
EMAIL: tyoshioka@oda.state.or.us

PROJECT SUMMARY

In many regions of the world, consumers have little awareness of the diversity of Oregon's specialty crop products, such as berries, wine, cider and hazelnuts. This limited awareness combined with a lack of understanding of how to prepare and serve these products prevents consumers from purchasing these products. This project will address this challenge beginning
with the key food influencers in Northern Europe and Japan. The goal is to educate these key
food influencers about Oregon's berries, wine, cider and hazelnuts, who will in turn educate the
food consumers of their region and ultimately increase consumption and sales of these products.

This project selected key food influencers, including well-known chefs and food writers to invite to Oregon during the Feast of Portland food event. These important food influencers would be "International Culinary Ambassadors". The goal was to increase awareness and knowledge of Oregon's berries, wine, cider and hazelnuts among these key food influencers in Northern Europe and Japan. The goal was successfully met with all of the international culinary ambassadors showing an increased awareness of the specialty crops from Oregon of focus for this project. In addition, the writers' articles appeared in publications in the UK and Japan making impressions among consumers.

PROJECT PURPOSE

The purpose of this project was to increase awareness, knowledge and ultimately sales of Oregon's berries, wine, cider and hazelnuts in Northern Europe and Japan through key food influencers. Increasingly food events are where new products and new ways of preparing and serving foods are showcased. These events, which target chefs, culinary professionals and food writers, influence the food buyers.

Feast Portland is the flagship food and drink event of the Pacific Northwest, capturing the current energy and enthusiasm driving America's food revolution. Founded by Mike Thelin and Carrie Welch, Feast Portland showcases local culinary talent and Pacific Northwest ingredients alongside internationally recognized chefs, culinary professionals and industry leaders. With Bon Appétit as the headline sponsor, Portland Feast has grown rapidly, attracting top chefs from across the US and writers from leading magazines. With the national success of Portland Feast, Oregon this was an opportunity to build international interest regarding Oregon's specialty crops. We took advantage of the interest in food and Portland Feast to establish Oregon as recognized provider of quality berries, wine, cider and hazelnuts in the global market.

In many regions of the world, consumers have little awareness of the diversity of Oregon's specialty crop products, such as berries, wine, cider and hazelnuts. The regions of Northern Europe and Japan were selected based on their appreciation of high quality foods and the consumers' ability to purchase these products.

ODA worked in close partnership with Feast Portland, Travel Oregon, Oregon Raspberry Blackberry Commission, NW Cider Association, Oregon Wine Board, Oregon Hazelnut Marketing Board and individual producers of these products from Oregon to prepare an educational program. The goals of the program was to increase awareness and sales opportunities for Oregon berries, wine, cider and tree nuts in the Northern European and Japan markets. This was achieved through food preparation demonstrations, working with award-winning chefs to prepare dishes with specialty crop products, farm/orchard/vineyard tours and hands-on farm experiences.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT ACTIVITIES

For this 2-year project, we invited key influencers from Northern Europe and Japan to Oregon during the Feast Portland event. The first year we focused exclusively on Northern Europe. The second year we invited influencers from both regions with an emphasis on Japan.

Working in with our partners Feast Portland, Travel Oregon, Oregon Wine Board, Oregon Raspberry Blackberry Commission, NW Cider Association and Oregon Hazelnut Marketing Board, we selected and invited eight International Culinary Ambassadors to Oregon in September 2015. These eight International Culinary Ambassadors from Northern Europe represented both food writers and top chefs.

Due the prestige of two of the chefs selected to be International Culinary Ambassadors, we were able to work with Feast Portland to have them collaborate with award-winning chefs from the US to prepare two of the dinners at the event. We worked with our sponsor organizations to have hazelnuts and blackberries incorporated into the menu, so International Culinary Ambassador chefs had the chance to work with these specialty crop products and see how local chefs prepared these products. It was a big win to get these products into the hands of master chefs.

Rather than join the regular Travel Oregon excursions, we allowed International Culinary Ambassadors to arrive a day later. In place of the larger excursions, we arranged an intimate Wine Country Tour with representatives from the Oregon Wine Board and ODA. At the wineries, they visited the vineyard and toured the winery with the wine makers, owners and international sales people. We also arranged a special Cider Country Tour with a local cider maker and ODA. This tour visited a young cider orchard to taste different cider apple and pear varieties for key traits. The tour included comparative tastings of ciders and perries from the region. These tours illustrated how close to Portland the state's specialty crop

products are grown.

For the 2016 International Culinary Ambassadors the grant funded a total 10 key influencers the targeted regions. These 2016 International Culinary Ambassadors consisted of six chefs from restaurants in Japan, two food writers from Japan and two beverage writers from the UK. In addition, Travel Portland funded a travel writer and photographer team to join the group.

Once again, some of the chefs selected were quite famous. We asked two of the famous chefs to partner with award-winning chefs from the US to prepare a special Japanese-influenced dinner using US ingredients, including Oregon blackberries and hazelnuts. This headline dinner was a huge hit. The meal was served with specialty crop beverages: craft cider and wine. The evening before the kick-off reception for the International Culinary Ambassadors, the project manager arranged for a visit to a local craft cider tap room in Portland. The tap room opened special for the group. The executive director for the NW Cider Association, ODA and special bilingual tour guide team joined the group to tour the brewery and tap room with the brewer/owner.

The project manager worked with the Oregon Wine Board and NW Cider Association to arrange a special cider and wine tour. This tour took the chefs and food writers to fields. The group began by traveling to a craft cidery where they tasted two of Oregon's craft ciders. The owners of both cider companies were on hand guide the tasting and answer questions about the different craft ciders. The owner of the cider company that we visited gave a brief tour of the brewing area and then took us out the cider apple orchard at Oregon State University. During the tours, the food blogger and photographer took lots of photos. The weather was very nice so the photos turned out great.

After tour the cidery and orchard, the group toured a winery. It turned out to be a good time to visit the winery. The winery was busy harvesting and pressing the grapes. It was an exciting time to see the winery and see how wine is made. Next the winery took the group to see the vineyard. It was on a small hill, so the view was amazing. The writers and photographers had a great view for the photos.

GOALS and OUTCOMES ACHIEVED

Our goal for this project is to increase awareness and knowledge of Oregon Specialty Crop Products, including berries, wine, cider and hazelnuts in Northern Europe and Japan. To measure this increased awareness, we did surveys before and after each group traveled to Oregon.

The first group of eight from Northern Europe showed a stronger baseline awareness of the specialty crops of focus, but still had a significant increased awareness after their visit. We found that 25% - 75% of the responding International Culinary Ambassadors (n=4) indicated some familiarity with Oregon's wine, cider, berries or hazelnuts. The target was to have 90% of these International Culinary Ambassadors report an increased awareness and knowledge of the specialty crop products of focus for this project. We exceeded this target

with 100% of the respondents reporting an increased awareness. Not only did they report a greater familiarity with these specialty crop products, but were able to report specifics, such as the types of berries they preferred.

Among the 10 that came to Oregon from Japan and Northern Europe the second year, we found that 20% - 100% of the responding International Culinary Ambassadors (n=11) indicated some familiarity with Oregon's wine, cider, berries or hazelnuts. The target was to have 90% of these International Culinary Ambassadors report an increased awareness and knowledge of the specialty crop products of focus for this project.

Although the Japanese International Culinary Ambassadors showed an increase in awareness of wine, craft cider and berries, they showed a decrease in their familiarity with hazelnuts. (There was an inconsistency around the way the hazelnut question was asked in the pre- and post-visit surveys, which created an anomaly in our results.) Aside from this anomaly, we exceeded this target with 100% of the respondents reporting an increased awareness. They also showed such an increase in familiarity with specialty crops in Oregon that they could answer questions about specific varieties of berries.

Another target was to have each food writer to publish an article or blog that reached at least 10,000 targeted chef impressions and/or 1 million consumer impressions in the targeted region. We reached this target with one of the International Culinary Ambassadors writing an article for Olive, the United Kingdom's top food magazine. The magazine has a readership of 185,000 plus generates impressions through its Facebook and Twitter presence. In addition, the visit inspired a writer of books on craft cider to explore creating a film series to tell the story of cider. The travel writers from Japan that came to Oregon with Travel Portland were originally just planning write a story about the food scene in Portland for the Delta Sky magazine. However, after visiting the craft cider tap room in Portland at the beginning of the trip, having Oregon craft cider served at every event at Feast Portland and touring the cider brewery, tap room and orchard in Corvallis with two additional cider makers, the story ended up with a two-page spread on Oregon craft cider (see included scan of Delta Sky magazine). This two-page Oregon craft cider spread in the January/February issue of the Delta Airlines Sky in-flight magazine was a nice boost to our impressions. The magazine readership is at 5.9 million for the English version. In addition, the first page of the article ran a two-page photo from the vineyard we visited on the tour.

The project had the potential to benefit other non-specialty crop commodities while the International Culinary Ambassadors created complete menus that included the four specialty crop products that were the beneficiaries of this project. These products were all donated by other commodities and not funded by this grant. The International Culinary Ambassadors were also at some Feast Portland activities that included some non-specialty crop commodities. To ensure that no grant funds supported this exposure, all passes to events at Feast Portland were provided by the event and not funded by this grant.

BENEFICIARIES

The beneficiaries of this project are the farmers, packers and processors of Oregon hazelnuts, blackberries, raspberries, wine and craft cider. The hazelnuts represent approximately 67,000 acres of orchards grown by 800 farm families. The berries represent about 9,000 acres in Oregon. The beverages represent 725 wineries, 1,056 vineyards, 45 hard cider companies and the apple orchards supplying cider companies.

This grant project achieved its goal of increasing awareness of these specialty crops among key influencers as shown by survey results. In addition, the media coverage of Oregon's specialty crops increased the awareness within the food focused and consumer markets in Northern Europe and Japan.

This awareness of the excellent hazelnuts, blackberries, raspberries, wine and craft cider is the first step to increasing demand and thus sales of these products. Although the window to measure resulting sales was too small to necessarily attribute to this project, sales of wine in the UK and Japan increased. Sales of Oregon craft cider into Japan has shown rapid growth in the past few years. Other projects of the Oregon Department of Agriculture, Wine Board and NW Cider Association were being carried out in these markets. This project helped build on the momentum created by other projects of the Oregon Department of Agriculture, Wine Board and NW Cider Association in this space.

LESSONS LEARNED

The goal of increasing awareness of the Oregon specialty crops of focus among the key influencers selected to be international culinary ambassadors was achieved. In addition, the goal for media coverage was also met.

Related to the administration of the project, we learned an important lesson. Our contractor encountered the language barrier when working with the Japanese chefs and to a lesser extent the writers. This meant more work for the contractor in communicating with the chefs prior to their arrival in Oregon. This meant allowing time for translating of the surveys to measure awareness of specialty crop products, logistics and itineraries for the project. In addition to hired interpreters, we worked with the Agricultural Trade Office in Tokyo, one bilingual chef in the group and the Japan American Society of Oregon volunteers to facilitate communications prior to and throughout their time in Oregon. The language barrier and the different cultural expectations around hosting guests, created a little more work than initially expected. With some Oregon Department of Agriculture and partners, such as JASO, we were able to adjust and make the project a success.

ADDITIONAL INFORMATION - Attachments

See scans of the Delta Sky in-flight magazine as well as earlier provided media coverage.

ODA-003 Celebrate Oregon Agriculture fruits, vegetables, tree nuts, nursery stock and other specialty crops – *Final report*

CONTACT: Karla Valness
ORGANIZATION: Oregon Department of Agriculture, MAC Development & Marketing
PHONE: 503-872-6600
EMAIL: kvalness@oda.state.or.us

PROJECT SUMMARY

Phase I (2012) of this project was developed with Specialty Crop Block Grant funds (FY 2009). We piloted visual and verbal messages on television, print and online platforms. During Phase II (2013) we built on the pilot and expanded it based on the lessons we learned. Specifically, we partnered with a major retail chain to pilot how we may bring this campaign to where people shop to drive the purchase of Oregon specialty crops in retail outlets, and we explored social media options including Facebook, Twitter, blogs, podcasts, and e-newsletters (2010). Phase III (2014) included the full implementation of multiple platforms including television segments, online sponsored content and social media of Facebook and Twitter 2011), along with radio and television commercials funded through industry partnerships.

The Celebrate Oregon Agriculture promotion featuring fruits, vegetables, tree nuts, nursery stock and other specialty crops is a multi-platform television, print, and on-line campaign. In addition, the promotion provided opportunities for hands-on experiences and featured displays to motivate parents and caregivers of school-aged children to purchase, prepare and consume Oregon specialty crops.

As a result of this work, we have reached 97% of Portland area homes approximately 13 times generating over 32 million media impressions and the content remains available through our social media and website posts. Research also shows an increase of nearly 4.5% more adults 18+ are buying more local foods.

PROJECT PURPOSE

The purpose of this project is to increase awareness of how Oregon's specialty crops are produced, the virtues of the products, where to purchase them, how to use, and how to engage our youngest consumers in the process.

From previously funded Specialty Crop Block Grant projects, we learned that there is a strong consumer identification with the Celebrate Oregon Agriculture promotion. To build on the previous momentum, this project continues to inform consumers through television, online content, print and the creation of displays and hands-on demonstrations featuring fruits, vegetables, tree nuts and other specialty crops.

PROJECT ACTIVITIES

During the project we produced and aired ten 4-minute television segments that featured Oregon fruits, vegetables and other specialty crops to bring awareness to Oregonians on how specialty crops are produced, where to purchase them and the availability and the affordability of the products. Each television segment initially reached approximately 50,000 views each time they air. We have reached approximately 97% of the households in the Portland Designated Media area with this content. The segment content is also available online and posted on Facebook and continues to reach a growing audience.

To extend the reach of the Celebrate Oregon Agriculture: fruit and vegetable and other specialty crops promotion, we developed a partnership with the Oregon Museum of Science and Industry (OSMI) to create and install a display to increase consumers' knowledge of Oregon's specialty crops growing regions and the importance of pollinators to the specialty crop production of fruits, vegetables and other specialty crops in Oregon.
The displays featured photo galleries, display cases, soffit display and a regional availability map of specialty crops. The displays were installed in the museums' Theory café that is open to the public and all visitors to the museum. In addition, we participated in the 2015 OMSI Harvest Festival that provided an opportunity to showcase the seasonality of Oregon's fruits, vegetables and other specialty crops. In our booth we created an interactive activity to test consumer's knowledge of when specialty crops are grown and available in Oregon. We also distributed approximately 500 seasonality charts at the one-day event.

The Oregon Harvest seasonal availability poster was printed and distributed at the OMSI Harvest festival and other consumer and family focused events such as the Oregon Bounty Event to visually reinforce the message of when Oregon specialty crops are harvested and available in Oregon.

GOALS and OUTCOMES ACHIEVED

The measureable outcome for this project was based on the ability to research for Scarborough Research and to add to their sampling methodology a question specific to the purchase of "local fruits and vegetables". Scarborough was unable to add this specific question and continues to sample with the question of "do you purchase local food". As a result, we established a baseline for this project on 2014 data which indicated 47.1% of adults 18+ indicate they are purchasing local food. As of September 2015, research indicates 51.6% of adults 18+ are purchasing local foods. Which is an increase of 4.5%.

BENEFICIARIES

The beneficiaries of this project include farmers, retailers and families. Oregon has over 35,000 family farms growing over 200 different crops. Beneficiaries include the producers of featured products such as blueberries, blackberries, cranberries, raspberries, strawberries, onions, potatoes, pears, cider apples, squash and other root vegetables, culinary herbs, honey and nursery products. Celebrate Oregon Agriculture messaging suggests consumers learn more about and purchase Oregon specialty crops at farmers markets, grocery stores, garden centers and restaurants, therefore these retail outlets benefitted from the messaging suggesting consumers purchase specialty crops from these outlets.

LESSONS LEARNED

One of the lessons learned in this project was as a result of a change in on-camera spokesperson. We originally started this project with one on-camera spokesperson and completed the project using multiple industry representatives as on-camera spokespersons. As a result, this gave us more opportunity to engage our specialty crop producers and processors and it also showed us a way to continue this type of work into the future.

Another highlight of this project was working with our local science museum (OMSI) to engage consumers, families and children and making not only the connection between what types of specialty crops are produced and where we also were able to make the connection between the agriculture and food processing sectors and science based careers. As a result, our industry has developed one-on-one relationships with OMSI to continue working of cooperative projects in the future.

ADDITIONAL INFORMATION

See attached photos of displays, harvest poster and links to television segments.

Television segments

- Oregon seasonal side dish with vegetables
  https://www.youtube.com/watch?v=GIgb-Ska7o4#action=share
- Oregon Root Veggie soup and Cranberry hand pies
  https://youtu.be/1xmhIVY6m34
- Spring planting in Oregon
  www.youtube.com/watch?v=P1-7X76DC44#action=share
- Oregon Cider Week
  https://www.youtube.com/watch?v=QnnO7F272s4#action=share
- Celebrate Oregon Berries
  https://www.youtube.com/watch?v=TaeDQnVwnXQ#action=share
- Oregon Potatoes
  http://katu.com/amnw/am-northwest-celebrate-oregon-agriculture/celebrate-oregon-agriculture-potatoes

ODA-004 NW Food Buyers Alliance – *Final Report – Accepted May 2016*

CONTACT: Amy Gilroy
ORGANIZATION: Oregon Department of Agriculture, Development & Marketing
PHONE: 503-872-6600
EMAIL: agilroy@oda.state.or.us

Project transferred through amendment to project oversight by Ecotrust and is now reported under project ODA S30 NW Food Buyers Alliance

ODA-005 Systems approach and marketing strategy for Oregon Christmas tree exports – *Final report*

CONTACT: Theresa Yoshioka
ORGANIZATION: Oregon Department of Agriculture, Development & Marketing
PHONE: 503-872-6600
EMAIL: tyoshioka@oda.state.or.us

PROJECT SUMMARY

The purpose of this project was to remove regulatory barriers for the export of Oregon Christmas trees to foreign countries and to introduce overseas importers and distributors of Christmas trees and ornamental greens to Oregon's specialty crop suppliers of these products. We also wanted to minimize disruptions to shipping Oregon Christmas trees to Mexico by providing input to Mexican officials on the review and implementation of NOMN-013(Mexican Import Regulation).

To this aim, we brought two inbound groups to Oregon's Christmas tree growing region and sent a combined technical and trade team to Mexico. Through these activities, we successfully educated key buyers about Oregon's Christmas tree and cut greens products. Unfortunately, the volume of Oregon Christmas trees has declined in recent years, so our increased sales results were not achieved. The two market access goals for the grant were achieved. 1) We successfully had 50% of the target countries change to a systems approach for pest mitigation thus reducing the regulatory barriers for Christmas tree exports to the target countries. 2) We successfully reduced the disruptions to the shipping of Oregon Christmas trees to Mexico for the 2017 season.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

The purpose of this project was to remove regulatory barriers for the export of Oregon Christmas trees to foreign countries and create a marketing plan to introduce overseas importers and distributors of Christmas trees and ornamental greens to Oregon's specialty crop suppliers of these products.

The project focused on activities to remove or minimize the technical regulatory barriers to implement a systems approach to mitigate pest risks in the field and packing operations and then bring plant health regulatory officials to Oregon to observe these pest mitigation strategies. The objective was for foreign governments to recognize and adopt the Oregon pest mitigation measures and thus reduce shipment rejections and/or mandatory quarantine treatments.

A key part of the project was a marketing plan. For the marketing plan, the pivotal strategy was to bring perspective overseas buyers to Oregon to observe growing and shipping conditions of locally grown trees to verify the quality and beauty of Oregon Christmas trees to stimulate sales in the respective foreign markets. At the same time, overseas buyers will

be exposed to the selection and marketing potential of ornamental greens and holiday wreaths to also expand overseas sales in that sector.

To accomplish this marketing objective, foreign buyers from the floricultural industry were identified and funded to travel to Oregon to observe Christmas tree cultivation and the ornamental greens industry.

The key purpose of the Request for Amendment is to minimize disruptions to shipping Oregon Christmas trees to Mexico. Primarily, to provide input to Mexican officials on the review and implementation of NOMN-013(Mexican Import Regulation) The objective of the input is threefold: 1) To have the new NOMN -013 implemented in the off season and not during the 2017 shipping season, 2) to clarify paperwork requirements to minimize Phytosanitary technical rejections, and provide scientific evidence that the mandatory pesticide treatment is less effective than an active Integrated Pest Management Program.

PROJECT ACTIVITIES

Phase 1: As described in the grant proposal, the first inbound mission of plant health regulatory officials from Southeast Asia came to Oregon and Washington November 1-7, 2014 in collaboration with APHIS.

In an attempt to develop specific export protocols for fresh cut Christmas trees to foreign markets, plant health regulatory officials from Malaysia and the Philippines were invited to Oregon to visit Christmas tree production and processing sites to become familiar with the Christmas tree industry in the Pacific Northwest. The invited participants were two officials from the Plant Biosecurity Division of the Malaysian Department of Agriculture and two officials from the Plant Quarantine Service, Bureau of Plant Industry of the Department of Agriculture, Philippines.

Prior to their visit to the Pacific Northwest, it was interesting to learn that the participants had no idea of the extent of Christmas tree farming in Oregon and Washington and actually thought that Christmas trees were either harvested from the wild or were generated by cutting the tops off of wild trees. The delegation was delighted to learn that tree production was a year-round, sustainable farming operation. The week-long review began at the North Willamette Research and Extension Center in Aurora where Extension Specialist, Chal Landgren with Oregon State University gave a comprehensive introduction to the Pacific Northwest industry and an outline of the Best Management Practices developed to minimize pest infestations in export shipments. Chal also explained the different species of trees used by the industry, their differing applications and shelf life, and presented branch examples of each species.

In total, the delegation visited five Oregon Christmas tree farms and one farm in Washington. The group was able to observe all aspects of production and harvesting to include shaking practices to remove pests, binding procedures, field production strategies and even the movement of bundles of trees from remote fields to loading areas through the use of helicopters. The group's primary emphasis was to observe all possible pathways that could potentially transmit pests to their foreign countries.

Phase 2: As per the work plan, a market promotion inbound delegation of Christmas tree and floricultural buyers from SE Asia came to Oregon July 20-25, 2015.

This trade mission focused on current and potential Christmas tree importers from Malaysia, Singapore and the Philippines. A total of 6 buyers from 5 companies in these countries traveled to Oregon for this trade mission. An additional buyer from the Philippines planned to join the inbound mission, but had to cancel at the last minute. They placed an order of a container of Christmas trees with an Oregon company even without participating.

The inbound trade mission included visits to five Christmas tree farms, visits to two ornamental plant farms, visit to the Portland Flower Market, ODA inspection demonstrations, technical information about different varieties of trees, a Christmas tree seminar, meetings with suppliers of Christmas trees and meetings with suppliers of other decorative products from plants. One of the florist shop buyers from Singapore placed an order for cut flowers and cut greens within a month of the inbound mission. We are currently in the middle of the Christmas tree shipping season, so we do not yet know the impact of the inbound mission. Overall the results for this inbound mission are expected to be positive, but data will not be available until after Christmas.

Phase 3: In keeping with the work plan, this year the project was focused on working with the regulatory officials in SE Asia. Although at the beginning of the project regulatory officials visited Oregon and Washington, still work was needed to achieve the systems approach goals.

The project manager kept the focus on Malaysia and the Philippines as it was officials from these countries that traveled to the US in phase one of the project. Communications through APHIS officials in responding to pest lists and questions were continued throughout the year.

Just prior to the report deadline, APHIS announced that the work with the Philippine Bureau of Plant Industry had paid off. A systems approach was established in late October 2016! This achieved one part of the goal for this project. A systems approach for Christmas tree and cut greens exports to the Malaysia was the other part of the goal, but we were not able to achieve this second part of the goal.

Phase 4: In early September 2017, the Oregon Dept. of Agriculture (ODA) met with PROFEPA (Mexican Border Inspection) in Monterrey Mexico concerning the technical criteria for shipping Christmas Trees to Mexico and review of the paperwork rejections at the border. A key part of the exchange included review of the pest detections, how pests are identified and the life cycle of the pests that could be encountered at the border. Following the meetings with PROFEPA the ODA traveled to Mexico City, Mexico to meet with SEMARNAT (Mexican Forest Service) to discuss the implementation of the new NOMN-13. In order to understand their concerns, the ODA met with Mexican Christmas tree shippers and growers in Monterrey and Mexico City and upon returning Oregon shippers and growers to discuss areas of agreement and strategize a plan of compliance and consensus moving forward.

GOALS and OUTCOMES ACHIEVED

One of the goals was to have a pest mitigation systems approach for Oregon Christmas trees adopted by a target country's NPPO to create a reduction in port of entry inspection procedures or generate the removal of mandatory or voluntary fumigation requirements. Specifically, we targeted the Philippines and Malaysia.

We set the performance measure to achieving success if 50% of the targeted countries recognized and adopted Oregon's systems approach to pest mitigation in 2015. We did in fact, achieve this success in the Philippines with the changes they made to their protocols beginning in the fall of 2016. Although we were disappointed not to achieve the same in Malaysia, we did meet the 50% success performance measure, but a year later than targeted.

Another goal of this grant was to increase sales of Oregon Christmas trees and to initiate sales of fresh cut ornamental greens to buyers and distributers in Asia and Central America. The target was to increase Christmas tree sales by 5% as measured by phytosanitary certificates issued. Unfortunately, the final years of the grant coincided with a reduction in Christmas tree inventory and a resulting drop of approximately 13% in Christmas tree sales from the state. Christmas tree shipments as indicated by phytosanitary certificates dropped by 33% in 2017 from the 2014 numbers. Due to Malaysia not recognizing and adopting Oregon's systems approach to pest mitigation, this remained a difficult market for Christmas tree exports from Oregon. As a result, Oregon Christmas tree exporters shifted all of their limited product sales to markets with a lower threshold of protocols.

The inbound trade mission was successfully completed by the target end of 2015. The buyers learned about Oregon Christmas trees, varieties, inspections and our systems approach to pest mitigation. They were ready to purchase Oregon Christmas trees once the protocols were changed.

For the Amendment of Mexico Outbound

- The new NOMN-13 regulatory document was not implemented during the shipping season and PROFEPA agreed to include the input from Oregon to include IPM strategies rather than a prescribed pesticide treatment.

- Zero (0) Phytosanitary Certificates of Oregon Christmas trees were rejected at the border for declared quantities in 2017.

- Overall, 2017 reported 46% fewer pest rejections at the border than 2016 (21).

BENEFICIARIES

The changes in protocols will benefit the entire US Christmas tree industry with an estimated 15,000 farms. The visit of buyers from SE Asia will also have the potential to benefit the US Christmas tree industry, but more precisely benefits the Oregon Christmas tree industry that accounts for 40% of the US industry. In addition, to Oregon Christmas tree

farmers, the Christmas tree shippers, the local brokers of Christmas trees and the companies making and marketing wreaths, garlands and other cut greens benefited from the exposure.

LESSONS LEARNED

The results of the first phase of the project took longer than expected. The groups of regulatory officials' visit to Christmas tree farms and shipping companies resulting in many questions that took time to answer. With our trade policy person departing the agency and the position not being replaced, the questions were not addressed in a timely manner. This resulted in short-term increase in protocol requirements into the Philippines before being resolved in the fall of 2016. Although the goal of a systems protocol was achieved for the Philippines, the questions had a negative impact on two shipping seasons.

The recommendation for others would be to have just one country's NPPO group visit at a time and make sure that all questions are answered during the visit when APHIS, industry and technical experts are available.

ADDITIONAL INFORMATION

ODA-S06 Clackamas Food System ONEStop Virtual Partnership - *Final report-accepted May 2017*

CONTACT: Rick Gruen
ORGANIZATION: Clackamas County
PHONE: 503-742-4345
EMAIL: rgruen@co.clackamas.or.us

PROJECT SUMMARY

Clackamas County's 2012 Agricultural Investment Plan (AIP) focuses on expanding countywide economic growth by fostering and capturing emergent markets and business opportunities for the county's agricultural sector. The Clackamas County Foodshed Strategic Plan details the scope of the food system in the region, opportunities for specialty crop farmers, and specifies a series of action steps for small and medium sized specialty crop farms to participate more fully in the region's $4.8 billion foodshed market through import substitution target goals.

Despite the significant amount of agricultural activity, there is an absence of a centralized hub of information and services providing business and operational support for county specialty-crop farmers. The Clackamas Food System ONEStop is conceived as a virtual public, private, non-profit and academic partnership to support the region's foodshed vision and meet the identified needs of its specialty crop growers. SCBG funding supported the ONEStop Partners to implement the Food System ONEStop model developed through the Governor's Oregon Solutions process by building an online ONEStop website as a virtual farmgate through which specialty crop growers can access the resources they need to be more successful. The website is live now at www.clackamasfarmonestop.com and is quick and easy to navigate.

The project was not previously funded by or in part by SCBGP.

PROJECT PURPOSE

In 2012, Clackamas County's Agricultural Investment Plan (AIP) was adopted by the Board of Commissioners. The AIP focused on expanding countywide economic growth by fostering and capturing emergent markets and business opportunities in the county's agricultural sector. As part of the AIP, the County solicited and received survey responses from 1,200 local food and specialty growers who identified the issues and barriers they face which included land use and zoning regulations, access to new markets, aging farmers, access to land and capital, availability of labor, beginning farmer training and mentoring and the need for a more coordinated system of accessing or learning about services available.

In short, the AIP, in conjunction with other complimentary regional economic foodshed studies, identified major challenges and opportunities to enhance the competiveness of the County's specialty crop growers by recognizing:

- $4.8 billion is spent annually in the region on the consumption of food and related inputs.
- 90-95 percent of our food is currently sourced from outside the region

- Each 1% increase in local food purchases result in $40 million in regional economic benefit.
- Underutilized agricultural and nursery lands can be transitioned to provide increased production and certainty to meet a large portion of the regional food system's demand for our specialty crop fruits, vegetables and tree nuts

The Clackamas County Foodshed Strategic Plan, an element of the AIP, details the scope of the food system in the region and opportunities for Clackamas County specialty crop farmers who rank among the top six in the state for the production of vegetables (#6), fruits, tree nuts and berries (#6) and nursery (#2). More specifically, the Foodshed Strategic Plan specifies a series of action steps necessary for small and midsize producers eager to serve the regional food market. These actions steps coalesced into the Clackamas Food System ONEStop, a virtual public, private, non-profit and academic partnership in support of the region's foodshed vision to advance economic development and job creation for local specialty crop producers in the emerging food system cluster while also fostering co-benefits such as public health, food equity and environmental stewardship.

The unique and innovative aspect of the Clackamas FoodSystem ONEStop Partnership is that the diverse expertise among the ONEStop partners can be collaboratively shared, co-marketed and implemented, to help specialty crop producers, processors and distributors participate more fully in the regional food economy and better navigate and connect to a set of linked services and resources including finance, legal, regulatory, food policy, certification, production, marketing, conservation and education.

In December 2012, Clackamas County submitted a request on behalf of the Board of County Commissioners to Oregon Solutions for designation of the Clackamas FoodSystem ONEStop as an Oregon Solutions project. In May, 2013, Governor Kitzhaber designated the ONEStop as an Oregon Solutions project. With assistance from the Oregon Solutions effort, this innovative ONEStop model has now moved from concept to reality, culminating with more than 20 local and regional service providers, non-profits, public agencies and 2 specialty crop growers as Project Advisors, coming together as ONEStop Partners to sign a Declaration of Cooperation (DOC) in April, 2014.

The initial work of the ONEStop Partners once the Oregon Solutions project was convened, was to assess the needs, issues and timeliness of the project. The Clackamas AIP Grower Survey and Clackamas Community College Agriculture Stakeholder meetings were used to validate baseline needs and opportunities for developing the ONEStop Model Partnership. The Project Team field tested the emerging ONEStop portal recommendations with local specialty growers, using a beginning farmer, a traditional/established grower and a Co-op farm to critique the ONEStop model. Their feedback was incorporated into the adopted ONEStop model as part of the Partners' Declaration of Cooperation.

The timing of this project is essential for the ONEStop Partners to build on the success achieved through the Governor's Oregon Solution project. SCBG funding will allow the ONEStop Partners to implement the ONEStop model developed through the Oregon Solutions process by building an online ONEStop portal as a virtual farmgate through which specialty crop growers can access the resources they identified to be more successful. This

virtual ONEStop Farmgate will provide information, connections and services direct from the ONEStop Partners through the following portals:

- What to grow and how to grow it
- Marketing, Processing and Distribution
- Farm Management, Labor and Financing
- Farm Infrastructure, Land, Tools and Equipment
- Government Services and Regulations
- Resource Conservation and Certification
- Farm Support: Businesses, Vendors and Organizations

PROJECT ACTIVITIES

In January 2015, County staff guided all ONEStop partners in building or updating their organization's profiles on Food-hub.org (an online directory of food producers or service providers in the region). Food-hub.org is hosted and managed by Ecotrust, which is the same organization tasked with building the ONEStop web portal. After the profiles were created, Ecotrust migrated the content from partner profiles over to the new ONEStop webportal. At this time 100% of the ONEStop partners have created profiles and the web portal is live (www.clackamasfarmonestop.com).

County staff also coordinated the nomination and established the appointments of a six-person ONEStop Advisory Team (OAT) from among the participating partners of the ONEStop program. OAT members include representatives from the Clackamas Community College, the Clackamas Soil and Water Conservation District, the Oregon Food Bank, 1000 Friends of Oregon, Farmers of specialty crops, and Organic Sandy (a local, specialty crop produce vendor). The OAT has met four times over the last 18 months to review development status and give feedback on initial website design and functionality.

In May 2016, the ONEStop website was live and available for partner review. Ecotrust outlined best practices for supporting other ONEStop partners in creating robust profiles such as using completed "optimal" profiles from an OAT member's profile and filling out the new FAQ's section. Ecotrust also suggested best practices for supporting farmers or other customers to use or find the site by navigating the site with them and also promoting the web portal on Partner websites, social media, flyers and brochures. These strategies and best practices were outlined in the Promotional Kit developed by Ecotrust.

In addition to launching the ONEStop web portal, the OAT outlined protocols for adding new members, highlighting relevant events, and advocating for farmers supporting public policies at the County, State, and Federal level. In September, staff began promoting the ONEStop to rural communities in Clackamas County at township meetings and farmers attending the OSU Small farm school. A "Grand Opening" is planned for mid-Fall of 2016 with active promotion conducted by all ONEStop partners through the end of the year.

GOALS and OUTCOMES ACHIEVED

Outcomes achieved:

- **ONEStop web portal – Resource:** The ONEStop web portal was launched May, 2016 and actively promoted October, 2016.

- **Growing the Growers:**
  - **Increasing Farming Activity:** According to the Oregon Employment Department (OED), Clackamas County's Agriculture and Food Systems enjoyed improvements across all metrics between 2010 (the base year for this analysis and source of data presented in the original proposal) and 2014. An analysis of Clackamas County's Agriculture and Food system cluster indicated healthy growth in jobs and farmgate sales from 2010 and 2014. There were 346 Ag and Food System entities in the County in 2014, with 24 firms added since 2010. OED reported 728 new jobs added during the study period for a total of 5,951. Significant increase in payroll of $197.5 million in 2014, up from $152.9 million in 2010. The increase in payroll also lifted average wages by $3,914 to an annual income of $33,188. The Ag and Food Systems cluster experienced healthy growth between 2010 and 2014 in terms of jobs, wage, sales (up from $469 million to $1.6 billion), and GDP (up $241 million to $586 million).

  - **Import Substitution Trend:** One of Clackamas County's policy objectives is for the Clackamas ONEStop web portal to help support purchases of locally grown specialty crop products with the long term goal of realizing a 1% to 5% increase in purchases of local Clackamas County specialty crops; in particular the $4.8 billion spent on the regional consumption of food. An analysis of total county-wide demand for food products supplied by Clackamas County firms was conducted as part of this grant. 2014 data suggest a significant increase from 2010 in local purchases in the Ag and Food Systems cluster to 8.8% of all products (an increase of $89 million to $152 million in local purchases).

  - **New Partner Outreach:** Currently three new partners joined the ONEStop partnership: Clackamas Workforce Partnership, Clackamas County Tourism, and Clackamas County Planning. Clackamas Workforce Partnership is a non-profit organization which serves as an advocate for workforce development within Clackamas County and the State of Oregon.

    The Clackamas Workforce Partnership is working to develop strategies to best serve business sectors that have the most need and potential for workforce development including Agriculture and Food Processing sectors.

    Clackamas County Tourism assists farmers to develop and promote new agro-tourism activities such as tastings and large catered events such as weddings or banquets. The Clackamas County Planning office frequently assists farmers wanting to add tasting events, food processing, or in building a produce stand on farms that are not generally supported by existing land use code.

- **Specialty Crop Focus:** To ensure that grant funds were used solely to enhance the

competitiveness of specialty crops, the ONEStop project uses specific language referring services and technical resources suited to specialty crops. All activities, reports, and outputs are consistent in emphasizing the focus of specialty crop production. This focus is apparent in the ONEStop brochure and other marketing materials, and the specialty crop focus will be present on the ONEStop web portal, as well.

BENEFICIARIES

County Farmers

Clackamas County is the second most agriculturally productive county in the state with 4,200 farms (63 are organic farms) producing combined gross farm sales above $400 million.

Based on the Clackamas County Agricultural Producer Survey in 2012, the predominant areas farmers indicated their need for business support services included: financing, succession planning, and distribution. The ONEStop webportal can connect farmers to the top needs highlighted in the survey as well as a number of other services related to business planning, expanding into food processing or connecting to more effective distribution methods (farmer's markets to produce aggregators or wholesalers)

By connecting farmers to business support services tailored to Agriculture and Food Processing via the ONEStop webportal, Clackamas County producers can effectively expand the reach and productivity of their farms. Furthermore, the ONEStop will function as a consierge service that actively assists farmers in finding answers from 24 different public agencies, non-profits, and educational organizations rather than pointing the farmer to each service alone. Finally, the ONEStop Advisory Bord will act as policy advocates working together to support the local Ag community regarding public policy issues at the regional, state, or federal level.

LESSONS LEARNED

One of the most difficult tasks in this project was coordinating activities from a variety of personnel from different organizations as well as engaging with farmers. Most people are incredibly busy with their own work and cannot make it to a ONEStop avisory meeting, or make changes on their Food-hub profile. Staff turnover occurs frequently and the primary contact information on the ONEStop is no longer participating. Additionally, farmers are also busy and are reluctant to spend time away from their farm to attend meetings or field phone calls from ONEStop users. The best way to maintain engagement and participation was frequent emails and phone calls as well as through Basecamp (an online project management tool).

ADDITIONAL INFORMATION

- No donations were used in the development of the ONEStop.
- Ecotrust prepared a promotional kit to assist the ONEStop partners in marketing and promoting the ONEStop web portal by providing template content for newsletters, emails, press releases, and social media. Additionally they provided template content to recruit new partners.

- The grant award outlines several areas of Cash and In-Kind Match funds for Clackamas County to contribute. A few notes on these areas are as follows:
    - Supplies were budgeted at a $2,000 cash match for 2,000 fliers for the program. Fliers were created as part of the press packet available to new partners but was not mass-produced. This resulted in cost-savings in the supplies category that was in-turn used as cash match to pay for additional project management hours.
    - The contractual cash match of $30,000 has not yet been fully spent. All contractual dollars spent through September 30, 2016 are reported in the grant. Cogan Owens Greene provided additional support in October 2016, and an invoice was received on October 31, 2016 for an additional $1,232.50. This will complete the cash match portion for the contractual category.

ADDITIONAL INFORMATION - attachments

ODA-S07 Expanding the market for vegetable CSAs with Institutional Partnerships - ***Final report – accepted May 2017***

CONTACT: David Perry
ORGANIZATION: Zenger Farms
PHONE: 503-963-7324
EMAIL: david@zengerfarms.org

PROJECT SUMMARY

This project encompasses a 2015 pilot program and 2016-promotion campaign. The pilot program partnered CSAs with different types of institutions to develop a toolkit applicable to a
wide range of institutions and will increase sales of Oregon vegetables that year by $90,000. The
promotion campaign disseminated this partnership model in Oregon with seminars at various
state conferences increasing Oregon's vegetable sales by $300,000 in 2016.

This project created a toolkit that facilitates partnerships between institutions and vegetable farmers who operate a CSA. These partnerships increased sales of Oregon-grown vegetables at workplaces to employees, at fitness centers to clients, at health clinics to patients, and at places of worship to their followers. Zenger Farm led a 2 phase project that piloted partnerships with 4 CSA Farms and Institutions in the 2015 season, then disseminated a toolkit to establish an implementation phase with 24 partnerships in 2016. These 24 partnerships represented 460 CSA shares for 14 different Oregon farms, for an estimated total of more than $188k in sales. The success of the pilot partnership with health centers has led to additional investment in a collaborative project called CSA Partnerships for Health, led by Zenger Farm and the Multnomah County Health Department.

PROJECT PURPOSE

This project was designed to address three specific barriers to growth in the farm-direct market. First, traditional farm-direct venues are inconvenient for many people. Farmers markets are open for just a few hours each week and most farm stands are located outside of population centers. Even traditional CSAs require the customer to travel to a pick-up point that is only open for a few hours. Institutional CSA partnerships overcome this access barrier by providing an incredibly convenient arrangement for both the farmer and consumer with regular bulk deliveries to many customers at once where they already are.

Second, poor nutrition knowledge acts as a barrier to increased vegetable consumption. People will eat fewer vegetables if they do not know how to store, prepare or cook them. An institutional CSA partnership offers an incredible opportunity to change customers' vegetable consumption behavior. Evidence indicates that CSA customers are exposed to a higher quantity and a greater variety of vegetables than they ate in the past. This project creatied an educational curriculum including cooking classes, informational one-sheets, and recipes that the institution or farmer can provide to the customers. Most importantly, this project taps into the customers' existing social network of peers, provides them all with the

same unique mix of vegetables, and creates a support network out of coworkers, church members, exercise buddies, etc.

Third and finally, customers who buy farm-direct by visiting a farmers market or farm stand represent a limited demographic and reaching beyond that demographic is a challenging barrier for farmers who want to expand their sales. This project addresses this challenge by partnering with an institution and co-marketing to their members – delivering vegetables to people where they work, pray, exercise, and so on. The membership of these institutions represents a much wider demographic, one that mirrors the general population, and reaches well beyond customers who frequent farmers markets and farm stands. This is the truly innovative aspect of this project, to enlist the help of institutions to co-market for the farmer, thus expanding the total marketplace for locally-grown vegetables.

This project is timely and important because other farm-direct venues such as farmers markets are becoming saturated, with farmers reporting difficulty in increasing annual sales. But an opportunity for a new marketing method exists because institutions are becoming more focused on the health of their members. Locating our institutional project partners was surprisingly easy because of this trend - institutions are eager to support the wellbeing of their members in new and innovative ways.

This project built upon on our 2011 Specialty Crop Block Grant to expand vegetable CSA markets by accepting SNAP (food stamp) payments. In 2013, that project created 179 SNAP CSA customers in Oregon, over $100,000 in annual sales of Oregon-grown vegetables, and front-page coverage in the Oregonian Newspaper. Specifically for this project, the ability to accept SNAP payments allowed CSA farmers to partner with institutions regardless of their members' income levels such as religious institutions, public health clinics, and employers paying a wide spectrum of wages who want to see a partnership benefit all their employees.

PROJECT ACTIVITIES

During the Project, the team developed a toolkit for establishing successful CSA partnerships based on lessons learned from the pilot phase. This toolkit included:

- sample MOUs for farmer/institution partnerships
- worksheets for deciding the logistics of the partnerships such as pick-up location, times, etc
- Six CSA Skill sheets were designed, translated to Spanish, printed, laminated and given to all 145 CSA members:
    - Storing Fruit and Vegetables (please see attached example)
    - Grilling Vegetables
    - Making Quick Pickles
    - Roasting Vegetables
    - Stir Frying Vegetables
    - Cooking Greens on the Stove

- The following demonstration cooking workshops were performed (examples of topic was "grilling vegetables" and "making quick pickles"):
    - 4 at Mid County for Mid County CSA members
    - 4 at NCNM for NCNM CSA members

    - 1 at Crossfit Portland for Crossfit Portland CSA members
    - 2 at Door of Hope for Door of Hope CSA members
    - 2 "Cooking with your CSA share" at Zenger Farm for Mid County CSA members
    - 1 "Canning and Preserving" at Zenger Farm for all CSA members
    - 4 "Cooking with your CSA share" at NCNM for NCNM CSA members
- The following dissemination about this project occurred
    - 2015/7/16 Multnomah County, "County clinic offers oasis in food desert, model for future" https://multco.us/global/news/county-clinic-offers-oasis-food-desert-model-future
    - 2015/8/24 NCNM, "Prescription Foods – Rx CSA The Doctor's Prescription for Whole Foods via Community Supported Agriculture" https://foodasmedicineinstitute.com/2015/08/24/prescription-foods-rx-csa/
    - 2015/9/13-16 Closing the Hunger Gap, "Improving Impact Evaluation," workshop presented by Bryan Allan. Evaluation can be more than counting pounds and participants. In this workshop, we'll define impact evaluation, why it's important, and we'll hear from evaluators in the field. Do you struggle measuring the impact of your programs? Come prepared to think about where your program fits in the pathway to food security and get support from your peers to determine your next evaluation move.
    - Oregon Small Farms Conference February 20, 2016 *"CSA Innovations: Increase Sales and Keep Your CSA Hip and Relevant"*
    - 2015/12/24 Portland Business Journal, "Zenger Farm, PSU to extend community agriculture reach", http://www.bizjournals.com/portland/blog/sbo/2015/12/zenger-farm-psu-to-extend-community-agriculture.html
    - 2016/1/6 Portland Tribune, "More veggies for all: CSA program expands pickup sites", http://portlandtribune.com/sl/287638-164673-more-veggies-for-all-csa-program-expands-pickup-sites
    - 2016/1/26 Portland Tribune,"'Prescription' Food Looks to Expand", http://portlandtribune.com/pt/244-health/289901-167159-prescription-food-looks-to-expand
    - 2016/7/19-21 NACCHO, CSA Partnerships for Health: Connecting Health Department Clinic Patients to Locally Grown Food and Farmers, submitted by Elizabeth Barth 2016/12/18 and accepted.
    - A proposal was submitted to the 2016 Food Hub Conference but was not selected

Additional funding for the project has been leveraged through the USDA Community Food Projects grant program, OHSU's Knight Cancer Institute, and Kaiser Permanente's Healthy Eating Active Living grant. Pending funding from Providence Health Services and the 99 Girlfriends Foundation will continue to provide administrative and participant support for at least 3 additional years.

Benefits to non-specialty crops due to this project were negligible.

GOALS AND OUTCOMES ACHIEVED

GOAL: Vegetable farmers are more connected to consumers through direct marketing and distribution.
TARGET: Vegetable sales from farms in the pilot phase will increase by $90,000. Vegetable sales from farms in the implementation phase will increase by $300,000.
RESULTS: Vegetable sales from farms in the pilot phase increased by $73,000. Vegetable sales from farms in the implementation phase increased by $188,000.

GOAL: Increased child and adult consumption of specialty crops by expanding access.
TARGET: 90% of CSA customers will report an increase in vegetable consumption.
RESULTS: 89% of CSA customers report eating a greater variety of vegetables due to their participation in the CSA program.

GOAL: Increased child and adult nutrition knowledge of specialty crops.
TARGET: 90% of workshop participants will report an increase in knowledge.
RESULTS: 87% reported learning new ways of cooking and preparing vegetables due to their participation in the CSA program.

GOAL: The next generation of farmers are equipped with valuable skills.
TARGET: 90% of participants will report an increase in knowledge and improved access to resources.
RESULTS: Conducting a final evaluation of the farmers who utilized the toolkit and created a partnership proved to be beyond the scope of this project. While we were unable to determine the level of new skills and knowledge gained by farmers, the number of farms who participated and indicated they would continue partnerships next year is an anecdotal indicator of new skills and knowledge gained.
A long-term goal of this project is to lay the groundwork for a CSA 'prescription' model where health care providers provide incentives to

BENEFICIARIES:
The following chart describes the farms, institutions, and CSA customers who benefitted from the project in the 2016 season as part of the implementation phase:

Farm	Site	Shares	Sales
Zenger Farm	Mid County Health Clinic	40	$ 18,400.00
Adelante Mujeres	Rose CDC	25	$ 9,900.00
Big Yellow Farmstead	SE Portland Health Center	10	$ 4,000.00
Oregon Food Bank Farm	OHSU Richmond Clinic	20	$ 8,000.00
Food Works	North Portland Health Center	11	$ 5,060.00
Our Table Cooperative	AECOM	7	$ 1,225.00
Our Table Cooperative	Perkins & Co.	40	$ 9,500.00

	Our Table Cooperative	OCHIN	44	$	10,500.00
	Laguna Farm	Forestville Wellness Center (West County Health Centers)	4	$	1,500.00
	Sauvie Island Organics, LLC	Door of Hope Church	21	$	11,235.00
	Sauvie Island Organics, LLC	Multnomah County: Hawthorne Building	25	$	10,690.00
	Sauvie Island Organics, LLC	Multnomah County: McCoy Building	19	$	5,595.00
	Love Farm Organics LLC	NUNM (Formerly NCNM)	26	$	13,000.00
	Love Farm Organics LLC	Port of Portland	45	$	22,000.00
	Love Farm Organics LLC	VCELS	8	$	3,000.00
	Siskiyou Sustainable Cooperative	Starting Strong	26	$	14,049.00
	Siskiyou Sustainable Cooperative	Grants Pass YMCA	12	$	6,120.00
	Siskiyou Sustainable Cooperative	AllCare	15	$	8,100.00
	Mama Tee's Farm	ADX	13	$	5,200.00
	Hood River Organic	Multnomah County Animal Services	1	$	3,333.00
	Hood River Organic	MultCo Yeon Building	2	$	1,667.00
	Schoolyard Farms	OMSI	12	$	3,300.00
	Full Cellar Farm	Blue Ox Athletics	16	$	6,080.00
	Full Cellar Farm	Crossfit PDX	18	$	6,840.00
Total	14 Farms	24 sites	460	$	188,294.00

An additional $73,000 of income from 152 members at 4 partner sites was reported during the 2015 season.

Participants in the pilot period study represented the following demographics:

Table 1. Demographic characteristics of participants who completed the pre-season survey (n=97)

Gender

Male 23%

Female 72%

Age (years)

18-24 5%

25-34 45%
35-44 25%
45-60 19%
60+ 2%
Hispanic Origin
Yes 14%
No 82%
Highest Level of Education
<High School Degree 1%
High School Degree 5%
Some college or technical school 15%
Associate degree or technical certificate 11%
Bachelor's Degree 41%
Graduate School 21%
Current use of food and nutrition assistance programs
SNAP/EBT/ Food Stamps 29%
WIC 1%
WIC Fruit and Veggie Vouchers 2%
Senior Farmer's Market Nutrition Program 0%
Not currently using any of these programs
66%

LESSONS LEARNED

Leatherman Tools, one of our planned 5 pilot phase institutional partners, left the program early on. Our primary contact is no longer employed with the company and remaining staff members were quite unfamiliar with the CSA concept.
In several cases, CSA members signed up because of the marketing that occurred at partner institutions but they opted to pick up from a different location that the farmers deliver to. These indicate that marketing efforts occurring at the partner sites reaches new customers, and is effective separate from other benefits of the partnership model.
Hands-on cooking workshops became a challenge at all the locations except NUNM because the other organizations did not have adequate facilities. Instead, we offered one workshop to all CSA members and held it at Zenger Farm. Thus, effort was focused on demonstrations and tasting activities.

ADDITIONAL INFORMATION

$68,392 of ODA funds were spent in support of this project.

Matching funds during the project period came from the following sources:
USDA Community Foods Project Award #2015-33800-24194
Kaiser Permanente, Healthy Eating Active Living grant
OHSU Knight Cancer Institute

Additionally, the following matching contributions were made In-Kind:
Zenger Farm CSA Partnerships Interns

ATTACHEMENTS

ODA-S08 Fresh is Best: Improving Direct Sales of Produce - *Final report*

CONTACT: Sarah Sullivan
ORGANIZATION: Gorge Grown
PHONE: 541-490-6420
EMAIL: sullivan@gorgegrown.com

PROJECT SUMMARY

Agriculture has long been the lifeblood of the economy in the Columbia River Gorge region. The first commercial orchard was planted in Hood River County in 1876. Today, the valley is a top producer of tree fruit, including pears, apples and cherries. Eastern Gorge counties specialize in wheat, livestock and some fruits. For decades, the bulk of these products have been destined for national and international commodity markets.

The Fresh is Best project strengthened direct-market channels for specialty crops and increased consumer interest in purchasing locally grown fruits/veggies. Farmers participated in promotional events and trainings in topics like marketing and branding. Consumer surveys informed a Buy Local campaign, while chefs and farmers made important connections at Buyers/Seller events. Overall, the project was a great success and we are grateful for the support.

PROJECT PURPOSE

The objectives of the Fresh is Best project were to A) Improve skills among specialty crop producers in direct-to-consumer marketing, including Latino and beginning farmers B) Create a direct marketing campaign to promote local specialty crops C) Connect producers around production/crop planning D) Promote local producers through events.

After 10 years of market growth, Gorge Grown Farmers' Market berry and vegetable produces saw a 17% loss in gross vendor sales between 2012 and 2013. Vegetable farmer reported increased competition for restaurant accounts. The number of vegetable CSA farms plateaued in 2014. These examples illustrate the timeliness and importance of this project to bolster the sales of local produce to enable our local farmers to succeed.

PROJECT ACTIVITIES

- Developed a "Buy Local" fruits/veggies marketing campaign informed by extensive consumer surveys, focus groups, and research. (See attached Why Buy Local Tomatoes Poster.) The approach was multi-pronged and involved events at Farmers Markets like "Iron Chef" competitions or cooking demonstrations, social media blasts, recipe promotion, news articles, seasonal shopping guides, stories and ads in "Savor the Gorge," a local magazine dedicated to local food, and Buyer/Seller Networking events;

- Attended the OSU Small Farmers Conference (2014, 2015, 2016) with local farmers;

- Organized direct-marketing workshops for farmers in English and Spanish. Two Latino vegetable growers became anchor vendors at 2 local farmers markets as a result of collaboration, mentoring, and marketing;

- Conducted a study on the cost of local fruit/veggies vs. imported fruits/veggies; promoted local fruits/veggies that are comparable in price or cheaper at farmers markets;

- Tracked direct sales data at all regional farmers markets.

GOALS and OUTCOMES ACHIEVED

The outcome measures of this project are long term: to increase sales of fruit and vegetables and ensure that our local farmers are thriving. We did make progress towards our goals.

One unexpected event that impacted the measurable outcomes of this project was a mandatory farmers market move in 2016. Additionally, 2 of the largest produce vendors transitions into other markets (one into wholesale, one into CSA's only). So while overall vegetables sales decreased, the vegetable vendors that did sell in 2016 did much better then previous years.

Hood River Farmers Market Sales Data (Dollars)			
	Fruit	**Veggies**	**Total**
2013	11,700	87,272	98,973
2014	17,510	94,428	111,938
2015	19,160	115,655	134,815
2016	20,409	82,702	103,111

Mosier Farmers Market Sales Data (Dollars)			
	Fruit	**Veggies**	**Total**
2013	100	7384	7484
2014	1,257	9,280	10,567
2015	3,566	5,733	9,299
2016	4,970	10,304	15,274

Mercado del Valle (Odell) Farmers Market Sales Data (Dollars)			
	Fruit	**Veggies**	**Total**
2013	N/A	N/A	N/A
2014	0	1,590	1,590
2015	0	1,944	1,944
2016	255	2,348	2,603

The Dalles Farmers Market Overall Sales (Dollars)	
2013	70,629
2014	51,665
2015	71,867
2016	82,928

By partnering with Travel Oregon and other businesses to promote agritourism, we were able to link

farmers with new companies featuring local fruits and vegetables, hosting farm to table dinners, or touring visitors around local farms and farmers markets.

Other goals/outcomes achieved:

- Established new relationships between 18 buyers (including restaurants) and 29 fruit/veggie producers through Buyers/Sellers events and one-on-one consultation;

- Developed a working relationship with The Small Business Development Center to co-facilitate direct marketing classes; the most well attended business class held was in Spanish for over 35 attendees;

- Sponsored event for schools to meet with producers and consultants to source more local food;

- Updated website for buyers to source fruit/veggie producers by product.

BENEFICIARIES

The main beneficiaries of this project include at least 60 vegetable, fruit, and berry producers of Hood River, Wasco, and Sherman Counties. Secondary beneficiaries include 4 farmers markets (and consumers who shop there), farm stands, you-pick operations, CSAs, restaurants, and other buyers such as school districts.

Farmers and buyers benefitted from targeted marketing, data on consumer opinions around local food/farming, marketing skills trainings based on consumer surveys, and one-on-one consulting. Ultimately, the long term impact of this project will be increased revenue streams, new jobs, and increased production of specialty crops.

LESSONS LEARNED

It was difficult to get sales data from producers as we'd hoped. Many of them, especially farm stands, were not willing to share private sales data which made tracking changes in sales more difficult for CSA's, farm stands, and farmers not at markets. Also, when vendors sell multiple products i.e. meat and veggies they often do not separate sales data by product. It was more difficult to track those vendors' sales.

It was very difficult to get farmers to host or attend "Meet Your Farmer" events during their busy season. The farmers we work with are committed to selling to local people, and not as interested in serving tourists. We adapted to farmers requests to promote them and their products at existing farmers markets and events. The results were positive: at farmers markets with cooking demonstrations, activities for children like "Thank Your Farmer" cardmaking and seasonal celebrations, attendance at markets and sales increased. We were also able to build relationships with farmers, business owners, and key stakeholders such as

the Columbia Center for the Arts, who invited farmers to sell produce and meet potential customers at local food themed exhibits like "Farm to Fork: Art of the Harvest." There farmers met new CSA customers they might not have otherwise.

Increasing sales of local fruits and vegetables worked well when we paired promotion with other programs, such as Veggie Rx (prescriptions for fruits and veggies) and the "Healthy Cornerstore Project" (promoting local produce in small groceries).

Moving a farmers markets always poses challenges, and despite a dip in sales in 2016 we believe the move was for the best, long term. The opening day of Hood River Market May 6th had record

veggie sales for a spring market, and veggies were sold out 2 hours before market was over. Farmers are excited about planting even MORE for next year: success!

Staff turnover posed challenges in tracking data through farmers markets, fruit/veggie vendors, and within Gorge Grown Food Network. Farmers changing their business plans (i.e. from farmers market to CSA only) made it difficult to track progress, and have a consistant cohort of farmers to collect sales data from. It jeaporadized our relationship with some farmers to demand sales data from them, and we've found some farmers to be quite private about income earned.

Farmers here were only ready to start collaborating to aggregate product in the late fall of 2016; they were resistant to the idea until then. They thought it would breed competition and some did not want to be "told" what to grow or obligated to produce a particular product.
Now, Stoneworks farm is aggregating greens and other products from multiple farms to deliver and sell at Mt. Hood Meadows ski resort (a HUGE local buyer) and other establishments.

Farmers did not want to participate in a "Meet your CSA farmer" promotional event. They thought past events like this were awkward and competitive. Instead, we focused on promoting the concept of a CSA through media and public education, then directed consumers to our "Who's Your Farmer" directory to find a CSA to suit them. That seemed to work better then a "Meet Your CSA Farmer" type-event. Several CSAs in the area have grown their membership in the past three years including Wildwood Farm, Saur Farming, Raices Cooperative, and Stoneworks.

It did not work to charge fees for direct marketing workshops, buyer/seller events or maps. We did a lot of work to encourage participation, and it doesn't seem like we are in a place to charge for workshops and services quite yet. Attendence at some events was lower then we'd hoped even without charging a fee.

Three messages that seem to resonate with the most people to inspire them to buy local:

1. Local food is good for the economy;
2. Most of our food is shipped in from other places: We could be self-reliant again;
3. Local food is fresher and tastier.

ADDITIONAL INFORMATION

The total amount we've listed in the reimbursement workbook for in-kind support is $3,000 for Emily Reed's consultation on the local food marketing campaign. While we had other in-kind matching donations documented such as staff time from multiple organizations/farmers/partners dedicated to workshops and meetings, we were not able to track the in-kind donations consistently across programs/meetings.

The total cash match is $34,114.44. That includes $18.451 raised for Veggie Prescription (Rx) Vouchers. Vouchers were spent by low-income, food-insecure residents on local fruits and vegetables at several farmers markets and farm stands from August 2015 – March 2017. This program has greatly increased participation in farmers markets by low-income shoppers, and we are excited that we are continuing to expand the program this year to benefit specialty crop growers.
$1,207.86 was fundraised to provide fringe benefits for the staff of this project.
$12,455.58 was spent on the Healthy Cornerstore Initiative which is directly related to this project: The Knight Cancer Institute awarded GGFN funding to facilitate the sales of local fruits and vegetables in 2 groceries in The Dalles in low-income neighborhoods. This is providing much better access to fruits and vegatables for food insecure residents, while bolstering sales for specialty crop growers.

Thank you for the support.

ATTACHMENTS

ODA-S09 Columbia Gorge Cider Makers Expansion Support – *Final report*

CONTACT: Carrie Pipinich
ORGANIZATION: Mid-Columbia Economic Development District
PHONE: 541-296-2266
EMAIL: carrie@mcedd.org

PROJECT SUMMARY

The Gorge region is renowned for its apples, pears, and cherries, and the majority of these products leave the region from packing houses to be used elsewhere around the country and the
growing Asian markets. However, local cider makers are working to add value to this key crop
to grow their production, and contribute to the diversification of our region's economy by utilizing inputs throughout their supply chain that are locally sourced.

Cider makers, orchardists, Mid-Columbia Economic Development District, and other partners in the Mid-Columbia region are coming together to support the growing cider industry in the Columbia River Gorge. Through formation of the Gorge Cider Society this group is working to create more opportunity for collaboration between cideries and orchardists, and leverage opportunities for coordinated marketing, and increase demand for the region's renowned tree fruit locally. During this project, the Hood River Hard Pressed Cider Fest has grown in attendance each year, the Cider Society's Gorge Cider Adventure provided an in-depth educational opportunity for cider fans to delve into the process of making cider, and the cideries in the Gorge have continued to grow. The group collectively developed a strong brand for the Cider Society, a website to present that brand to consumers, and assets that the Cider Society will be able to build on in the coming years to educate consumers about the cider produced in the Columbia Gorge.

PROJECT PURPOSE

The Gorge Cider Industry project was developed to support the nascent cider production industry in the Columbia River Gorge. This is a region known for its fruit production, including apples, pears, and cherries. However, most of this fruit production leaves the region through packing houses and is sold nationally and internationally. Over the last four years, there has been a growing interest in utilizing some of this fruit to develop a local hard cider industry in partnership with the local orchardists. This allows for the orchardists to diversify their markets and income streams, as well as building upon the region's reputation for quality, craft beverage production as a foundation for the cideries themselves to grow and thrive.

There are several challenges for growth in this industry that the Cider Society has identified and focused on addressing over the last several years. These include:

1. Putting the Gorge on the map for cider. As we began this project, the cider market as a whole was quickly expanding. Oregon was at the epicenter of that expansion, and the local cideries saw an opportunity to put the Gorge on the map for cider enthusiasts as a

great place to explore cider while the market was maturing. This effort was able to build on the Gorge's reputation for quality fruit production, craft beverage, and agri-tourism.
2. Connecting to local fruit growers and cider fruit. As we began this process, the cideries saw the importance of engaging with local fruit growers to access quality fruit and diverse varieties.
3. Small business expansion. As small businesses with passionate artisans at their core, the path a business takes to grow can be critical to its success. Providing opportunities to collaborate on marketing activities, access business support services, and network with peers moving through the same process is critical to success.

Each of these challenges has focused our work as the nascent industry has continued to grow since 2014. The number of cideries grew from six three years ago to 11 today. Working with this group of businesses and supporting orchardists to proactively identify opportunities to address these challenges as growth occurs has been key to the continued growth of our local industry.

PROJECT ACTIVITIES

This project took on a variety of activities focused on addressing the core challenges identified above, including small business expansion, connections to orchardists and local fruit, and putting the gorge on the map for cider to promote the industry and the specialty crops that go into it. The following is a brief overview of the work accomplished, results, conclusions, and recommendations for next steps that have resulted.

Organizational Development: A group of cideries came together in 2013 to discuss opportunities to collaborate, network, and collectively market the region as a cider destination. Staff worked with the group to develop a questionnaire, interviewed other cider industry associations, and developed information for the group to consider for their formalization. The participating cideries discussed this at one of the group meetings held quarterly and determined they were not ready to take on the overhead of a formal organization as of yet. They did agree to formation of an advisory committee that would meet in between group meetings to provide feedback to staff on implementation of the Cider Society's efforts. In addition to this work, the group developed a strategic action and marketing plan for the Cider Society that will guide its efforts toward formalization, identify potential resources, and continue to support collective activity.

Marketing Development: One of the core areas for collective efforts identified during the grant process was marketing. The group determined that collective marketing should be a focus for the Cider Society moving forward, and as such incorporated development of a marketing plan as part of this grant. However, as the Cider Society worked to find a consultant to work with the group to develop this plan, they were approached by a local marketing firm about conducting some pro bono branding efforts in advance of development of a marketing plan. This developed the "Cider Society" name, logo, and branding guidelines as well as focused efforts on digital marketing, social media, and events

connecting cideries to consumers. After this process, staff worked with the firm to develop a marketing strategy that will be utilized over the next several years.

As a result of the pro bono work, the marketing plan budget was utilized to develop several key marketing assets. These included: development of a new website utilizing the new branding, creation of a video that highlights the gorge cider region, and some funds to support marketing the Cider Society and its events with Facebook boosts. These assets have been very well received by partners, consumers and Cider Society members. Additionally, the Facebook boosts resulted in almost 20,000 impressions.

Lastly, through the support of this grant, the Cider Society was able to develop its first iteration of the "Gorge Cider Route" map to showcase the number of cideries in the region. This effort was successful enough with distribution and utilization that a second version was created and printed utilizing local matching funds.

Events: The Cider Society hosted several events both as a group and with partner entities. These have included:

- **Gorge Cider Adventure:** The Gorge Cider Society hosted two extended format events to educate consumers about the cider making process. The group hosted Cider Camp, a weekend-long event, focused on sharing each step of the production process from the orchard and apple selection to the glass, as well as the diversity of cider styles produced in the region. After challenges getting attendance that would cover the costs of this event, the group felt it would be more appropriate to move toward a one-day event. This approach allowed more flexibility for attendees and increased attendance to the point where the event broke even. It was successful in sharing the cider making process with the group and enjoyed by attendees. However, after this experience the Cider Society decided to move toward hosting several, smaller events that could provide more frequent interaction with consumers. The focus on educating consumers continues to be vital to the Cider Society's approach.
- **CiderFest:** Each year during this grant period, Cider Fest was held by the Hood River Chamber of Commerce with support from the Cider Society. This effort utilizes no Specialty Crop Block Grant Funds to host the event. However, the event focuses on exposing consumers to the variety of cider that is produced in the Gorge and the broader Pacific Northwest. It has grown each year both in terms of attendees and the number of ciders that are poured. The event has provided an opportunity for additional exposure for the Cider Society, the local cideries themselves, and the region as a cider destination.
- **CiderCon Gorge Bus Tour:** In addition to the planned events, during the second year of our grant cycle, the national cider industry convention, CiderCon was held in Portland, OR. The organizers approached our region about hosting one of the three planned bus tours that were publicized and made available to all US Association of Cider Makers (USACM) members as well as in their promotional materials. Approximately 55 attendees chose to participate in our tour and visited an orchard, a small cidery, and a large cidery to get to explore the Gorge Cider industry.
- **Food Biz Incubator:** Through surveys and interviews with each of the participating cideries in the region, several key topics were identified for training opportunities.

These include continued cider making educational opportunities, business development support related to scaling up and working with distributors, cider apple growing information, forming connections between apple growers and cidermakers, and fruit contracts as a way to formalize those connections. This information was shared with Gorge Grown Food Network as well as NW Cider Association as we further developed the Meet and Greet discussed below. As a result of this input and information from other food and beverage businesses, Gorge Grown hosted one of its Food Biz Incubator classes on distribution and held it at Crush Cider Café. Staff continues to share continuing education opportunities over our Gorge Cider Society listserve to ensure that our local cideries are getting the business development and cider making support they need.

- **Cider/Orchardist Meet & Greet:** As one of the identified needs in the region was connecting orchardists and cideries, as well as disseminate information regarding cider apple production, the Cider Society worked to find opportunities to address this need. In conjunction with Northwest Cider Association's SCBG funded project, the Cider Society acted as the local host for one of the two Cider/Orchard Meet and Greet sessions. The session was held at Kiyokawa Orchards in Parkdale and featured a tour as well as speakers from each piece of the supply chain. One of the speakers included focused on fruit contracts as a result of the need identified by the Cider Society.

GOALS and OUTCOMES ACHIEVED

GOAL: Creation of a formalized regional cider organization that is replicable in other areas around the country. This goal focused on creation of a formal organization as well as 80% participation in the group and at least 20% of cideries connecting with local orchardists for fruit. While the Cider Society remains an informal group at this time, there is still strong momentum around participation. 90% of the local cideries participate in the group, and 63% connect with local orchardists based on responses to surveys and interview data. The group made a conscious choice to maintain the informal status during this period to ensure that overhead costs were minimized due to the size of the participating businesses. However, the group did develop an "Advisory Team" that is continuing to develop a framework for participation in the group and prepare for formalization as the businesses in the area mature and additional income streams for the Cider Society are developed.

GOAL: Creation of a marketing plan to guide future collaborative marketing efforts. The Cider Society has both a marketing and strategic plan in place as a result of the work completed by staff, participating businesses, and partners. This strategy and resulting action plan will guide work done by the Cider Society throughout the next several years. The Cider Society sought to begin implementation of at least two of the strategies by the end of the grant, but even more are moving forward : the Cider Map is in the process of moving toward a passport format and has been redesigned,the social media presence is continuing to expand, and the website has been revamped to support a stronger online presence for the region. Additionally, the group has reserved a booth at the Hood River farmer's market to have an ongoing, rotating presence this summer in the community for cider education.

GOAL: Increase recognition of our region as a premier cider producing region with unique, local inputs and experiences to support increased cider production in the Mid-Columbia. The performance measure focused on this goal is around both media coverage of cider producers, growers, and events in the Gorge as well as actual increases in production.

In early 2015 staff interviewed the local cideries to determine production amounts as well as discuss other barriers and opportunities for their businesses. At that time, approximately 12,800 gallons were produced by the cideries engaged in the Cider Society. In 2016, approximately 16,600 gallons were being produced. In 2017, anticipated growth was reported by every cidery that responded to our survey. This growth represents an additional 6540 gallons of production in 2017 which is larger growth than from 2015 to 2016. Initially, six cideries were utilizing local fruit growers to supply their fruit, with one additional cidery noting they used local fruitgrowers each year of the grant. The events information is detailed above.

Year	Production (in gallons)
2015	12,800
2016	16,600
Anticipated 2017	23,140

The original target in this goal of increasing production by 5% each grant year was met and demonstrated in the table above. Articles highlighting the CiderFest were published in the NW Cider Association website, Portland Monthly, Real Food Traveler and the Capital Press.

GOAL: Cideries in the Mid-Columbia have the tools to grow and scale up their businesses. The goal of this effort was to ensure that local cideries had the opportunity to participate in business development activities that would support addressing challenges identified. Through the end of the grant, 54% of the local cideries participated in one of these activities. During this process, it became clear that in order to support business development opportunities, partnerships with other entities and flexibility in timing the sessions was critical for attendance.

BENEFICIARIES

At the beginning of the SCBG funded project, there were six cider businesses already producing cider in the region, and at the end of the project there are 13. All of these businesses benefited from the work done to promote the area as a premier cider region. In addition to these specific businesses, there are over 400 orchardists in the Mid-Columbia Region. Several of these growers are directly engaged with the local cider industry through use of their produce. However, continuing to develop this market provides an opportunity for these local orchardists to continue to diversify their income streams by selling to cideries or developing their own cider business, provides a market for apples that cannot meet the packing house requirements that pays more than the regular juice market, and a variety of other opportunities.

LESSONS LEARNED

In talking with several other industry organizations in the Columbia Gorge Region, taking a slower approach to formalization was critical for some in their efforts to ensure sustainability in the long run. This allows resources to be focused on the activities of the organization rather than the administrative expenses like insurance, bookkeeping services, office space, and others that can be incurred quickly. The opportunity to continue incubating the Cider Society through the regional economic development entity, MCEDD, has allowed the Society to have this focus as they develop their path forward. Project participants and staff encourage others to utilize this approach if a willing partner is available.

ADDITIONAL INFORMATION

Please see our reimbursement workbook for documentation of matching funds. The funds spent were focused on providing needed services for events that are not SCBG eligible and supporting our website.

Additional attached work products not already received are attached or linked to below:

- Cider Society Website: gorgecidersociety.com
- Cider Society Video: https://www.youtube.com/watch?v=FRwr4zDc6BY
- Cider Society Facebook page: https://www.facebook.com/gorgecidersociety/
- Cider Route: http://gorgecidersociety.com/files/2016/10/2016GorgeCiderRoutew.pdf
- Gorge Cider Branding Document
- Gorge Cider Society Strategic & Marketing Plan
- Cider Industry Organizational Development Handbook

ATTACHMENTS

ODA-S10 Create Production Standards for the Northwest Cider Industry - *Final Report – Accepted May 2016*

CONTACT: Sherrye Wyatt
ORGANIZATION: NW Cider Association
PHONE: 360-929-9924
EMAIL: sherrye@nwcider.com

PROJECT SUMMARY

The Northwest Cider Association (NWCA) has grown by historic proportions. The industry determined at an early point in its development to tackle the difficult undertaking of creating best practices for its cidermaker members. Multiple stakeholders gave input and this was the "most discussed" project of the year. Everyone agreed that to be called a Northwest cider, it must be made here by a company based in the Northwest using fruit grown here. The logo created now communicates that sense of place and represents the value placed on farming roots, the heritage of pioneering in the region, and above all, reinforces that this is a leading apple and pear growing region. The membership developed Conventions to promote the "NW Heritage Ciders and Perries" that value ciders made from fresh pressed juice. What may sound like a simple undertaking, it has forced a great deal of self-reflection and lively exchange. Additionally, in tandem, the industry developed a manual (industry toolkit) in the form of a dynamic wiki page for cideries and orchardists to exchange best practices and standards, as the industry continues to expand and evolve. The wiki is public and open to everyone with content managed by the NWCA board.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

The Northwest cider industry is growing at an unprecedented rate. Northwest cidermakers are some of the most innovative and adventurous in the world. To sustain that growth in the most positive direction and help the industry reach its full potential, there existed the immediate need to develop a set of industry standards with a mark or logo to easily identify ciders which fit the bill. Until now it was unclear what even defined a Northwest cider. Northwest cidermakers have proven they are extraordinarily committed to being good stewards of the growing industry and want to establish a sustainable model which others may follow. This included developing an online industry toolkit (Wiki) as a "go to" for cidermakers new and old to find answers to frequently asked questions (FAQs). As the industry expansion continues (72 cidermaker members now with another 30 expected in 2016), it is important to educate the trade on agreed language and a logo that goes with it. As Oregon cider continues to move into overseas markets it is key to claim the high ground and stress the Northwest ciders are the ones to buy. The plan is to help teach people to seek out and appreciate Northwest ciders, including the nuances of specialty apples and perry pears.

PROJECT ACTIVITIES

The NWCA conducted detailed research around similar industries and programs to model the needs of our cideries around successful certification programs. The association profiled the California Olive Oil Association, the French Appellation Controllee system, the British Columbia Vintners Quality Alliance (BC VQA), Salmon Safe, and Low Input Viticulture and Enology (LIVE). After compiling the best attributes from each program, a subcommittee within the board was formed which spearheaded the bulk of the project as NWCA discussed a definition of Northwest Cider and continuously refined and moved it in a direction the membership wanted.

The subcommittee was made up of our grant contractor Emily Ritchie, Eric Jorgenson of Finnriver Farm & Cidery, Nick Gunn of Wandering Aengus Ciderworks, and Elaine Albrich of Stoel Rives LLP. Sherrye Wyatt, Executive Director of NWCA, oversaw the entire project. During the year, Elaine was elected onto the NWCA board. Many iterations of the standards and definitions were written and discussed to benefit the whole industry. Throughout this grant, monthly conference calls were held with the Board to discuss progress and solicit input. The board established the final standards and defined Northwest Heritage Cider and Northwest Heritage Perry. See the attached Conventions Establishing Standards Regarding the Provenance of Northwest Heritage Cider/Perry. We did meet with the membership twice in person (once in Troutdale and once in Seattle) and 4 times in the form of online surveys to reach the far ranging geographical distance among our members.

There were two membership meetings, one in June in Troutdale, Oregon (the first time it was held in conjunction with Oregon Cider Week), and one in September in Seattle to discuss definitions and standards and to communicate findings with the industry. The conversation ranged from the group's core values, to the marketing benefits, to the idea of making the mark more inclusive or more exclusive. In an effort to hear the most input from members all over our territory, many phone calls were made each month, to solicit opinions and to communicate the board's suggestions.

Specifically from the work plan submitted to ODA, we did attend all of our outreach meetings, including one that we held in Hood River with brand new cidermakers and with current members of the Columbia Gorge Cider Masters (now known as the Columbia Gorge Cider Society). Held at the soon-to-open Spoke and Sail Cidery, over 35 people attended our private function, gave input into the standards, and agreed to add information to the wiki page being developed at the time.

Separately, we met with Carrie Pippinich of the Gorge Cider Society, to coordinate grant targets. Additionally, we held the Peter Mitchell Cider Master course in the Gorge to further connect the two organizations. It was sold out months early and well attended.

Further activities:

- Solicited legal advice on trademarking and TTB regulations, from Stoel Rives experienced attorney and a dedicated legal extern from Lewis and Clark Law School.
- Chose an opt-in program format to help market ciders made here.
- Final meeting with cider maker members was September 12th, 2015. Articles of Conventions in their final form were presented to membership.

- Wiki page developed by a professional programmer who created a specific look and feel for our NW cider brand. It is designed to mimic Wikipedia, to have user-generated content. To start, there are 15 pages of FAQs (ie Equipment, Compliance, Food Safety, Fermentation, Sales/Marketing, Exporting Cider, etc). Content is tagged for specific states. Specific people have been designated as the administrators to check the content thoroughly to make sure it is appropriate. Future maintenance is included in the plan.
- Multiple versions of the mark were designed by a professional for optimum use, regardless of color, size, orientation of bottle label (see attached).

The overall scope of the project did not benefit commodities other than specialty crops.

GOALS and OUTCOMES ACHIEVED

The NWCA has now established standards, definitions, and the certification process for the industry. At our most recent count, 12 cider companies have expressed interest in adopting the new NW Heritage labels that were developed for this project (see attached). We developed the physical application (see attached) and the system to accept cideries piloting the new label. We expect the Northwest Agribusiness Center to be a key partner in the implementation portion of this new label. Our target was for 20 cider makers to adopt some form of the new standards in their marketing/packaging. We intend to pause the full role out of the Conventions until we have some marketing finances to send the new label out into the marketplace with a bang. The 12 cideries who have expressed interest will be our early pilot group. Once we secure future funding for marketing, we expect that number to rise.

The Wiki can be accessed here: http://wiki.nwcider.com/wiki/
Our cider wiki page is live and has been populated with an incredible depth and breadth of best practices knowledge and more. This innovation has never been done before in the industry and we expect this web page not only to relieve the burden on our established cider makers who have been answering these frequently asked questions repeatedly one-on one, but we also expect to be the thought leaders and the go-to resource for cideries all over the world through this technology.

The Northwest Heritage Cider and the Northwest Heritage Perry logo/mark were developed to synergize with any cider label in our membership, with simple colors and a few variations. See the attached Conventions and the variations on the mark. We expect to see a new mark infiltrate the industry in the coming year as we promote and market the new message and definitions. We realized it was premature to meet with focus groups during this short one year project but we do intend to meet this goal in the future as part of our marketing campaign. As part of that campaign, we will demonstrate how often the standards are being used and teach consumers what the certification means.

FUTURE

This is just the beginning. Now that the Articles and the Mark have been developed, we are actively seeking funding to market and promote the meaning of this certification to the public so that our members feel the full benefit of the new mark. This project was very political and was done with finesse to come to a conclusion that benefits the whole industry. Now that a definition and a system of approval has been put in place, we are developing an Integrated Marketing Strategy to strongly promote the new mark and our industry. As part of the next steps, we're developing a Cider Marketing brain trust of NW food thought leaders to guide our decisions as we move forward. Our future plans are to raise significant

funds to market the new label so that it is recognized and revered by consumers as an important mark to search for on cider bottles. We also hope to fund focus groups and get a reality check with consumers to maximize the message. We expect to promote the new label at CiderCon in February and at future brewing conventions.

BENEFICIARIES

The specialty crop groups that benefited from the completion of this project's accomplishments are the apple and pear growers and the value added companies who make cider and perry. Additionally, most ciders made in the Northwest use additional specialty crops to flavor their ciders such as hops, blackberries, raspberries, apricots, cherries, etc. By defining Northwest Heritage Cider, we will have traction in the market, growing the consumer base looking for ciders made right here. Our association members directly benefited from the project, and as of September 15th, there are 72 members all over Oregon, Washington, Idaho, and Montana. Specifically, there are 25 cider makers here in Oregon. Moreover, there are countless farmers, distributors, and processors who also benefit from the cider industry strengthening and valuing locally grown apples and flavors (total membership exceeds 300). The majority of our membership can directly benefit from this mark that was developed as most cideries in the NWCA have a traditional cider they make without extra flavors. Cideries benefit from having a defined mark and label they can rally behind and can use to help collectively market Northwest made cider together. We are stronger together rather than apart.

LESSONS LEARNED

- Allow more time to develop a definition that the industry can agree on. This is a very sensitive topic and needed finesse and time to fully discuss. It was over-ambitious to expect to focus group the project with the amount of time and funding available.
- This is a continuing conversation and just as the industry continues to evolve, so may this mark and the wiki will definitely evolve as best practices improve and new resources are discovered. Additionally, we see this model being used internationally.
- We expect to approach a branding and marketing firm in the future to do market research and launch this project and communicate to our consumers that the NW makes incredible cider.
- We do have the ability to serve as a resource for a rapidly evolving dynamic industry, nationwide.
- We discovered there are more perry producers than we originally expected and we have the opportunity to serve them as a specific group into the future.

ADDITIONAL INFORMATION

- Inkind matching included Travel: $1,200.00; Supplies: $1,850.00; Consulting: $56,176; Other: $50.00. Cash matching included Travel: $719.78; Consulting: $4,635.00; Other: $4,500.00. Summary is $59,276 inkind, $9,854.78 cash =
- NWCA cidermaker members supported and participated in the Second Annual Hard Pressed Cider Festival in Hood River, OR http://hoodriver.org/events-festivals/chamber-events/hard-pressed-cider-fest-
- NWCA staff traveled twice to the Columbia Gorge for outreach meetings and partnered with the Northwest Agriculture Business Center to offer the first internationally acclaimed Principles and Practices Cider Making course in Hood River, OR http://www.cider-academy.co.uk/PDFs/pdf-pp-mv-web-2015v3.pdf

- Fourth annual Oregon Cider Week included a formal proclamation from the Governor of Oregon http://static1.squarespace.com/static/50b30f8fe4b054abacd92359/t/55837eb9e4b069ce52d0369a/1434681017968/ORCW2015Events.pdf
- NWCA member helped ODA host Japanese apple growers and were featured in the ODA Spring newsletter http://www.oregon.gov/ODA/shared/Documents/Publications/Administration/AgQuarterlySpring.pdf
- NWCA Worked closely with ODA and FEAST to provide a "Branch to Bottle" experience for chefs and media from the UK https://www.facebook.com/ORAgriculture

ODA-S11 Market Development of a Value-added Sweet Cherry – *Final Report-accepted May 2017*

CONTACT: Steve Kollars
ORGANIZATION: Oregon Cherry Growers
PHONE: 503-485-5859
EMAIL: skollars@orcherry.com

PROJECT SUMMARY:
A survey of Oregon Cherry Growers taken in late 2013 indicated that 95% of respondents consider, "effectively responding to market conditions in order to optimize the marketing of the
grower owners' fruit and delivering a return that is at or above current market value", extremely
to very important.

Clearly there is a need to develop value-added cherry products, which go beyond the current commodity based offerings, and ultimately provide higher returns to sweet cherry growers in Oregon. The grant titled "Market Development of a Value-Added Sweet Cherry" was used to conduct consumer research to identify categories that capitalize on the consumer trends in healthy snacking. New innovative sweet cherry products were developed for the savory snacks and dried fruit categories. Consumer focus groups and sensory evaluation were completed for each product to determine acceptance and purchase intent. A soft dried sweet cherry emerged as a viable value-added product that would generate an increased return to the sweet cherry grower.

PROJECT PURPOSE:
Oregon Cherry Growers Inc. completed this project to expand the sweet cherry market with additional value-added cherry products that go beyond the current product offerings and capitalize on the growing trends in healthy snacking. Monetary returns to sweet cherry growers in Oregon for processing are increasingly commodity driven and depend on limited markets and pricing. In addition, production and labor costs continue to increase. There is increasing concern that the decrease in market returns will result in an unsustainable economic situation for Oregon growers that will lead to a loss of farms depending on income from sweet cherries for processing. For the sweet cherry specialty crop in Oregon, market research and consumer testing have been completed to identify value-added products that potentially can strengthen product diversity and provide better returns to the sweet cherry growers of Oregon and the Northwest region.

PROJECT ACTIVITIES:
Market Research
Market research was performed to quantitatively evaluate product category attractiveness, such as size and growth of the category, current household penetration rates, and ability of new products to leverage market trends such as health and wellness. The study included deep dives on selected categories across key channels (grocery, club, mass, foodservice, ingredient plays, etc.), and ultimately identified the most attractive adjacent categories for potential expansion of new products based on both quantitative and strategic factors. The

market research was conducted by Brandology for potential cherry products by categories. The market research indicated two categories of opportunities for sweet cherries: Snacking and Frozen Food Service. The snacking category was selected because of potential market size, so product development emphasis was placed on a Cherry Fruit Chip, High Fiber Dried Cherry, and Soft Dried Cherry.

Cherry Fruit Chips

Two versions of a cherry fruit chip were developed: a multigrain wavy chip containing cherry powder and a multigrain fruit-filled snack chip made with cherry puree. Pilot trials of the formulations took place at a third party snack chip manufacturer to produce samples to be evaluated at a focus group. The focus group took place at the Oregon State University (OSU) Food Innovation Center (FIC) and was moderated by Insights2Strategy. Three consumer groups, millennial snack consumers, mothers with young children, and mothers with teenage children, were surveyed for snacking behavior, reaction to the product concepts, and reaction to the product samples. Consumers are looking for snacks that are simple and healthy, with high fiber, low sugar, and multiple grains. They were put off by foods that could not be made in their kitchens. In general, the fruit chip concept was difficult for consumers to understand. The closest products currently on the market, dried fruits and apple chips, are concretely associated with sweet profiles, not savory, and were not viewed as interchangeable with chips.

Of the two versions, the multigrain wavy fruit chip was closer to a traditional chip, and also more difficult for consumers to understand. Because a traditional chip was their closest frame of reference for this product, there was a substantial disconnect between their expectations for fruit to be sweet and soft and a chip to be savory and crispy. Additionally, these consumers felt they were already getting enough fruit in their diets, and would better appreciate this formulation approach to be taken with vegetables.

The multigrain fruit filled snack was poorly received, but had some appeal for mothers who viewed it as a nutritious alternative to NutriGrain bars or Fig Newtons for their children. These consumers saw the product set apart by the inclusion of real fruit and six whole grains, but still considered it to be a treat or dessert, and not belonging in the chip or cracker category. The product formulation was perceived as being too “manufactured,” which took away from the perceived healthiness.

Due to the poor reception of these items in the focus group, the project was not pursued further. Key findings from the focus group include the importance of clean label formulations as well as the importance of clear intended use occasions in product positioning.

High Fiber Dried Cherry

An infused dried cherry was developed that had approximately 20% fewer calories, 50% less sugar, and five times more fiber than a conventional sweetened dried cherry. The cherries were developed in the lab and brought to a focus group to gauge consumer response. The focus group took place at the OSU FIC and was moderated by Insights2Strategy. The focus group explored dried fruits as a category, then sampled and evaluated the two most common dried cherries on the market, sweetened dried tart cherries and unsweetened dark sweet cherries, followed by the high fiber cherry and a soft dried dark

sweet cherry. Four groups were brought in: heavy dried fruit consumers aged 25-40, millennial healthy "snackers", home bakers aged 35-60, and commercial bakers. These consumers view dried fruit as a healthy snack that satisfies cravings for sweets without guilt. The benefit of drying is year-round access to seasonal fruit for these consumers. Dried fruit usage is seen as multifunctional and includes snacking, baking, and cooking. Consumers seek simple, low or no sugar, sulfite-free dried fruits, and are motivated by natural, organic, Fairtrade, and sustainability claims. Health claims are not strongly motivating for dried fruits, and any health claims made should be inherent to the fruit in its raw state. These consumers seek dried fruit from either the bulk food section or large resealable containers. The commercial bakers in particular are focused on product sensory characteristics and less interested in health claims, although they do avoid added sulfites.

The high fiber dried cherry was not well received by the focus groups. The offering was seen as being medicinal, and did not match what the consumers were seeking in a dried fruit, as detailed above. Consumers felt very strongly that they only wanted health benefits that were inherent to the fruit in its raw state and were averse to any added ingredients, but especially to sugar and the corn fiber used in the test product. The Soft Dried Cherry, an intermediate moisture cherry with a tender texture, generated solid interest. The concept was more closely aligned with what consumers desired from the category and the idea was perceived as new and interesting. Based on this feedback, the high fiber dried cherry was discontinued and the Soft Dried Cherry was pursued.

Soft Dried Cherry

In response to the solid interest in the Soft Dried Cherry offering, this concept was further developed. With the finalization of the updated nutritional facts panel regulation, the formulation was modified so that there would be no added sugars in the product. Additionally, a line of the cherries paired with complementary flavor inclusions were developed. These were presented at a focus group that took place at the OSU FIC and was moderated by Insights2Strategy. The products were reviewed by millennial/iGen foodies, millennial/iGen snackers, shopper moms, and X-Gen business travelers. In general, the consumers liked the concept, but had some challenge understanding the product without having a familiar point of reference. The unique texture and flavor pairings positively set the product apart from other dried fruit offerings. The price point, relatively high when compared to dried fruits on the market, was tolerated by the millennial/iGen foodies and X-gen travelers, who justified the price with the product's value; however, the millennial/iGen snackers and shopper moms indicated that they would not tolerate the price point. Claims that were important to all groups were no added sugar, no preservatives, all natural, and non-GMO. Due to the adjustments made to the project timeline, there was not time within the grant period to pursue further consumer sensory testing and in-store market testing.

Final Report and Spring Membership Meeting

Since the overall project evolved from Cherry Fruit Chips, to High Fiber Dried Cherries, then to the Soft Dried Cherry, the report to the Spring Membership meeting in 2016 was delayed. The project was reviewed at the Strategic Planning meeting in September of 2016, and reported to the Board of Directors at the October 2016 meeting. At that meeting, the latest results of the Soft Dried focus group were summarized with recommended next steps. An update to the project will be presented at the 2017 Spring Membership meeting.

GOALS and OUTCOMES ACHIEVED:
The goals of the project were to identify two new market opportunities or types of value-added sweet cherry products, determine increased return to sweet cherry growers based on projected sales, and to publicize the results to the Oregon sweet cherry growers industry. The project was successful in identifying one new viable value-added sweet cherry product, the Soft Dried Cherry and its accompanying flavored inclusions line. This product had a 64% top two box purchase intent score, indicating that it has strong potential. Therefore, the product would be offered at retail outlets in the healthy snacking or convenience sections. The cherries would be packaged in small pouches for convenient snacking that would justify the price point. Based on the cost evaluation for the Soft Dried Cherries, there is an increased margin over standard commodity based products, which increases the potential return to the grower by approximately five percent per pound of delivered fresh sweet cherries. The results were presented to the Oregon Cherry Growers board of directors and will be publicized at the 2017 Spring Membership meeting and to the Oregon Sweet Cherry Commission (OSCC).

Based on the project outcomes, product development and market positioning will continue on the soft-dried cherry line in order to commercialize the product. In addition to identifying this new value-added product, the results from the focus groups will be used to guide the direction of future product development in the snacking and dried fruit segments.

BENEFICIARIES:
Overall, the program brought viable new opportunities for sweet cherries that could benefit sweet cherry growers in the region. The specialty crop stakeholders consist of 70 independent member owners of the cooperative Oregon Cherry Growers, Inc., and in addition, the OSCC representing over 250 growers in Oregon. Also, the OSCC has worked with other northwest cherry producing states (Washington, Idaho, Utah, and Montana) in promoting sweet cherries. By introducing more value-added sweet cherry products into the market, greater demand is created and pricing is improved for northwest cherry growers in the region to supply processing cherries that are not available to the fresh market.

LESSONS LEARNED:
Although significant progress was made, not all of the planned outcomes were achieved. This was primarily attributed to poor reception to two of the three concepts and prototypes presented at the focus groups. While not directly useful in driving the projects forward, the information learned from each group was used to inform and guide the subsequent focus groups. In this manner, efficiencies emerged by not needing to spend time exploring the same segment areas repeatedly. For example, information gleaned about the snacking and dried fruit categories was used to better position the Soft Dried Cherry concept.
The initial scope of the project anticipated consumer in-store testing at other geographic locations, but there was not enough time to conduct those tests, so travel, supplies, and other funds were not used. The information gained locally was satisfactory to make the appropriate decisions, but the travel and supply budget was over estimated.

ADDITIONAL INFORMATION:

The total cash matching donations by Oregon Cherry Growers was $35,997.21 which consisted of personnel ($5,485.78), fringe benefits ($2,055.43), travel ($1,803.40), supplies ($356.35), contractual ($26,001.25), and other ($295) costs.

ODA-S12 Promotion of U.S. Grown Public Hop Varieties to Domestic Brewers – *Final report*

CONTACT: Michelle Pilacios
ORGANIZATION: Oregon Hop Commission
PHONE: 503-982-7600
EMAIL: michelle@oregonhops.org

PROJECT SUMMARY

The overall goals of this project are to promote the use of Oregon and U.S. grown public hop varieties to craft brewers nationwide as well as promoting the United State Department of Agriculture/Washington State University (USDA/WSU) public breeding program. The public breeding program currently does not have a way to promote the hop varieties that they develop. The promotion of these public varieties will help to educate brewers about the public breeding program and the public varieties that are currently available, as well as new public varieties that will be available in the near future. Promotion of this program is essential for the sustainability of the public hop breeding program. With this project we hope to bring more attention to the public hop varieties and public hop breeding program. There are many beneficiaries of this project the first would be the sixty U.S. hop growing families followed by the USDA/WSU public breeding program and the Hop Research Council (HRC).

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

Oregon is currently the second largest producer of U.S. hops, producing nearly 15% of the hops grown in the U.S. Over the last few years, many changes in the brewing industry have greatly affected Oregon hop production. The consolidation of large brewers along with a worldwide oversupply of alpha hop products led acreage to decrease in 2009 and 2010. However, with the growth of craft breweries nation wide, the U.S. hop acreage is back on the increase to keep up with growing demand for aroma hop varieties. Most of these public aroma hop varieties developed by the USDA-Agriculture Research Service (ARS) hop breeding program grow well in Oregon's Willamette Valley.

Hop varieties developed by the USDA Hop Breeding Program (Public Hops) make up about 95% of the hops grown in Oregon. Many of these varieties were developed by the USDA and WSU public breeding programs years ago. The public breeding program lacks a mechanism to promote these public hop varieties once they are released from the program. Hop Growers of America (HGA) has started on the path promoting these public hop varieties of which four new varieties have been released in the past year. The HGA had a vendor booth at the 2014 Craft Brewers Conference that promoted all public varieites focusing on introducing brewers to the varieties that were recently released.

Over the last ten years there have been at least three private hop breeding companies started, these companies are competing for market share with their private hop varieties, which has increased the need for promotion of public hop varieties. These private breeding companies control every aspect of the hop varieties they release, including who grows the variety and

who the grower can sell the private variety to. They also have the resources to promote those private varieties to brewers. Anyone can grow and sell hop varieties released from the public breeding program and currently there isn't a program established to promote the use of publicly bred hop varieties.

Presentation of data to the brewers is a difficult task to perform because of the number of data points present in a breeding program. Smaller brewers are interested in flavor components and chemistry.

Larger brewers are concerned with all aspects of the hop from chemistry to brewing flavor, to agronomic characteristics. They are also interested in parentage and breeding lines. This database will reach into a large number of data points (into the 10 of thousands) and we will need a way to query this information and present the proper data to the end user, in this case the brewers. Previously, the evaluation data was kept in a simple spreadsheet which limited a user's ability to search the data. As well, access and the ability to enter data were extremely limited.

This project was timely because the OHC received a grant of $63,000.00 from the Hop Research Council to increase the number of potential new hop varieties that will be planted out in commercial research plots in an effort to find new public varieties. This was the third year for this public breeding program project expansion. It generally takes up to ten years to release a new hop variety with all of the evaluations that need to be completed on each selection.

Selections are first evaluated to determine if they are male or female (we only keep females as they are the ones that produce hop cones on the plants) and the subsequent growers seasons provide for evaluation of disease and pest resistance and plant vigor. Finally, if the selection makes it through all of that it is planted out and expanded to multiple hills, picked, dried and packaged for brewer evaluation. We captured the current momentum in the public breeding program and used this project to establish a program to promote the use of public varieties.

Portland, Oregon was the location of the 2015 Craft Brewers Conference which provided a perfect opportunity to promote the public breeding program to attending brewers from across the country as well as from around the world. Attendance at the event exceeded 11,000 participants.

PROJECT ACTIVITIES

The first activity for the project was to promote public hop varieties to U.S. brewers at the 2015 Craft Brewers Conference held in Portland, Oregon, April 14-17. The event provided the perfect audience of more than 11,000 brewers from across the country and around the world. We partnered with Hop Growers of America, the US hop industry's national organization to participate in its booth at the BrewExpo trade show. We chose to spotlight "old school" hop varieties from the public breeding program that have been available for many years that many of the brewers new to the industry may have no or limited experience using. The varieties selected were all in commercial production and available for purchase and/or contracting. The booth also featured a pouring station so that visitors could taste the hops in a single-hop beer. By limiting a beer to only one hop, the hops individual

characteristics can more easily be evaluated. Five Oregon brewers brewed a beer, each with a single hop that we served in our booth and at our hospitality room. The participating breweries were Barley Browns, Pfriem Family Brewers, Ex Novo Brewing Company, Breakside Brewery, and Fat Heads Brewery. In addition to the single hop beers, we provided samples of each hop variety as a whole cone and pellet. The hop samples encouraged visitors to the booth to evaluate the hop. Brewers could also take samples of the hops to their brewers for pilot brewing and further sensory evaluation.

The Oregon Hop Commission created a video that captured the spring hop activities on a hop farm. While the location of the conference was ideal for visitors to tour a local hop farm, we believed we could reach a much larger audience by bringing the farm to the brewers at the conference, rather than only a fraction of attendees visiting a farm. We worked with a videographer to create the video which was released in time for the conference. The video was looping on a screen in the trade show booth for the duration of the conference. In addition to it playing in the booth, we also distributed it to our mailing list, posted it on all of our social media channels, and on our website homepage. The positive feedback from the spring hop activities video was overwhelming and prompted the OHC to create a harvest video that was released in October 2015.

The project included the creation of a comprehensive database to catalog the thousands of hop selections being evaluated for possible public release and commercial production. This database has increased the information available to brewers about selections and where they are in the evaluation process. It has also encouraged brewers to more pro-actively request experimental hops for pilot brewing. The database is housed on a webpage that has a public access where visitors can learn about the trial locations and sponsors. Stakeholders are provided login credentials that give access to the actual database of information.

The database has improved the speed at which information is available about the hop selections. During the growing season the hops are evaluated for pest tolerance and vigor. The evaluator's observations can be immediately uploaded into the database from the field along with photographs. Chemistry data is collected shortly after harvest and is immediately entered into the database. Multiple users can input information into the database without the need to send information to a single administrator to enter the data. Not only has this proven more efficient, but it has also reduced data entry errors.

Finally, the project included a brewing and sensory project with Oregon State University's Fermentation Science Program. The Oregon Hop Commission, along with input from HRC identified advanced hop selections to conduct pilot brewing. A number of factors were considered when finalizing the list of hops for the trial, including but not limited to: disease and pest resistance, high alpha percentage, and unique aroma profile. A total of 10 experimental hops were selected for brewing and sensory evaluation. All 10 experimental hops were brewed in the lager style and four selections were also brewed in the India Pale Ale style. The experimental hops in the trial were:

- W1159-059
- WIII8-018
- W1108-403
- W1008-291

- W1020-161
- 2001022-147
- 20010-06
- 2003013-002
- 2003041-010
- W1030-092

The brewing and sensory results were uploaded to the database to correspond with the respective selection. In addition to the hop selections brewed with as part of this trial, brewers that have brewed with these hops and others are able to add their results to the database.

GOALS and OUTCOMES ACHIEVED

GOAL: The goal of this project was to increase the production (acreage) of U.S. public hop varieties by promoting them to large and small brewers across the country.

OUTCOME: Since this project began in 2014 Oregon hop acreage has increased by 44% with 11 of the top 13 most widely grown varieties in the state being public hop varieties.

BENCHMARK: Attached is the 2016 U.S. Hop Statistical Report which confirms the overall increase in acreage (page 5) and production (page 8). Acreage and production has significantly increased since the project began. Acreage and production are key indicators as to the level of demand the brewing industry has for public hop varieties.

TARGET: The target of this goal was to increase the hop production acreage in Oregon, Washington and Idaho by 5% in every grant year. This target was met as indicated through the 44% growth show in the 2016 U.S. Hop Statistical Report when compared to 2014 production acreage.

BENEFICIARIES

The primary beneficiaries of this project are the 22 Oregon hop growing families, most of which are multi-generational farms. This project did have a multi-state impact as we saw increased in acreage and production for the 12 Idaho hop producers and 45 Washington hop producers. Having a greater selection of public hop varieties may also have a national impact as more and more farmers in new-growing states are planting test plots of hops for their local breweries to evaluate if economical hop production is possible in their area. Additional beneficiaries are Oregon craft brewers, members of the Oregon Brewers Guild, Oregon home brewers, and finally, all brewers with the ability to purchase and brew with U.S. public hop varieties. The hop industry suppliers, hop merchants, and the rural communities that the hop growing families support also benefited from this project. The U.S. hop industry public breeding program received some much needed promotion as a result of this project. We will continue to promote this program in the future and hopefully the result will be many new successful public hop varieties.

LESSONS LEARNED

The goal to increase Oregon hop acreage was realized and we anticipate that interest in public hop varieties will continue to increase in the coming years. Several of the selections

tested as part of the brewing and sensory trials are in the pipeline for release to the public for commercial use.

One of the biggest lessons learned was that the change in staff had a much greater impact on the project than the OHC anticipated. Nancy Sites, the previous administrator departed in April 2016 and I was hired to start June 1, 2016. I did not have any prior experience with Specialty Crop Block Grants and because of the gap in hiring there was not a transition period between administrators to effectively transfer information about the project. This resulted in a delay in securing a contractor for the data base. It was initially challenging for me to think of all the features that a brewer or scientist would desire for the database. Therefore, I learned to request feedback from brewers and the hop breeders as we continued to fine tune the database features. This allowed for the database contractor to be much more efficient when making edits.

ADDITIONAL INFORMATION

Michelle Palacios and Nancy Sites spent approximately 416 hours working on all the details for the project since 2014. The OHC used the Administrator salary and fringe benefits as an in-kind match. The Commission received a grant in the amount of $63,000 from the Hop Research Council that was used as a cash match for this project.

The site map for The HOPS Trial website is located below and can be found at:
http://oregonhops.claritywebsites.com/

Attachments

ODA-S13 Farm to Science; Celebrating Oregon Fruits, Vegetables, and Culinary Herbs and Spices – *Final report - accepted May 2017*

CONTACT: Andrew Haight
ORGANIZATION: Oregon Museum of Science and Industry
PHONE: 503-797-4573
EMAIL: ahaight@omsi.edu

PROJECT SUMMARY

Many Oregonians are not aware of the breadth and diversity of crops grown throughout the state, leading to fewer specialty crop sales and local consumption. To increase sales, Oregon specialty crop farmers need a more aware and educated consumer base.

OMSI addressed this community need through the Farm to Science project. OMSI worked in close partnership with a group of specialty crop producers and advocacy organizations to increase public awareness of and interest in Oregon's vibrant specialty crop industry.

Programs and events delivered through the Farm to Science project impacted adults making purchasing decisions, the priority audience for the project, in significant and tangible ways:
1. public audience participants, particularly adults, in Farm to Science increased their awareness of: the diversity (number and type) of specialty crops grown in Oregon; the period(s) during the year when specialty crops are in season; locations to buy specialty crops while they are in season; and the value of purchasing in season crops from local producers.
2. Public audience participants in the Farm to Science program increased their interest in purchasing goods from Oregon-based specialty crop producers, as a result of understanding their value.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

OMSI is a science education leader, regularly connecting the public with scientific information and resources around current and relevant topics. The goal of the Farm to Science project was to develop, implement, and sustain a multi-layered season of community engagement programming that would increase public audience awareness of Oregon specialty crops. This awareness would, in turn, promote an increase in the sales of Oregon specialty crops. The Farm to Science season of programming took place beginning June 2015 and ran through November 2016, to parallel Oregon's peak growing season. By taking part in Farm to Science programs, public audience participants would increase their awareness of the diversity (number and type) of specialty crops grown in Oregon; when specialty crops are in season; where to buy in season specialty crops; and the value (to Oregon specialty farmers, and to the Oregon economy) of purchasing in season crops from local producers. Attendees of Farm to Science programs would also increase their interest in purchasing from local specialty crop producers.

PROJECT ACTIVITIES

The Project team approached the goals through three different strategies:

OMSI formed robust partnerships with specialty crop producers, processors and advocates across the state. This Advisory Council kicked off its work in February 2015 with a brainstorming session to highlight the priority specialty crop stories from across the state best suited for OMSI's audiences and goals. From this work, the Project Team created deeper connection with specialists who provided content for demonstrations and activities, served as speakers at Science Pubs and other events, and contributed products for display in the OMSI eatery Theory.

In order to affect the project's primary audience – adults – the season of Food Science Programming utilized existing OMSI programs and added to their content through the partnerships established in the Advisory Council. Over the course of the two year project, OMSI delivered the following events programs:

- Four OMSI After Dark events had an Oregon Specialty Crop theme. June 2015 and 2016 focused on the cider industry. Partnership with organizations such as USA Pears and the Portland Fruit Tree product highlighted the Oregon pear industry. Over 23 local and regional cider producers were on site to highlight their product. Educational programs included grafting demonstrations, cider pressing and exploration of various fruit seeds. Total attendance: 4,117 people. September 2015 and 2016 focused on beer and the hop industry of Portland. Educational programs included highlighting various Oregon hop varieties.

- Eight Science Pubs focused on Food Science. Grouped during September 2015 and September 2016, these topics ranged from Entrepreneurism to Technology. The complete lineup of presenters and topics for 2015 included: Sue Queisser – food scientist and owner of Melarova Baking; Jared Clark – Ninkasi Sensory Technician; Elizabeth Tomasino – assistant professor in food science and technology at Oregon State University; Michael Morrissey, PhD – Professor in Food Science and Technology and Director of the OSU Food Innovation Center. The 2016 lineup included Andrew Daday and Liam Kenna – Director of Coffee and Tasting Bar Manager at Stumptown Coffee; Clint Burfitt – Program Manager for Insect & Pest Prevention and Management at the Oregon Department of Agriculture; Dana Garves – Beer Chemist and Founder of Oregon BrewLab.

- Two Harvest Festivals took place on OMSI's property, one September 2015 and one in October 2016. Combined, these two events showcased over 70 producers, processors and specialty crop industry members and attracted over 4,500 people. Ranging from small-scale producers, such as Zenger Farms to large industry players like Pape Machinery, the event saw large crowds of people and provided a unique opportunity to learn more about the specialty crop industry. In addition to the vendor booths, each Harvest Festival featured a stage for cooking demos and special talks. Each of these demonstrations shared cooking strategies for specialty crops. Bon Appetite Management Company collaborated closely with OMSI to provide highly trained professional chefs for this programing.

- Wednesday through Sunday from 11 a.m. to 2 p.m., OMSI educators facilitated demonstrations with the public in the eatery Theory. Topics for these demos ranged from exploring Oregon's varied growing regions to seed sorting and exploration. During 2015,

Volunteers spent 295.5 hours delivering food science demonstrations to the public. In 2016, Volunteers spent 585.75 hours delivering food science demonstrations to the public.

- Two ticketed Lab Experiences were developed and offered to the public four times. The first Lab Experience utilized Oregon specialty crops as natural fabric dyes and taught participants different strategies for using familiar crops in new and unique ways. The second class explored green tissue grafting. Over 40 people attended these class offerings.

GOALS and OUTCOMES ACHIEVED

The Farm to Science season of programming set out to increase the public's awareness of and interest in Oregon's vibrant specialty crop industry. As a result of this increased awareness, programs will promote increased sales of selected specialty crops. As measured through a questionnaire at the end of OMSI's programs and events, Farm to Science activities significantly impacted participants' awareness of a) the diversity (number and type) of specialty crops grown in Oregon; b) the time period during the year when specialty crops are in season and where to buy them; c) the value of purchasing in season crops from local producers.

Using a retrospective pre-/post-test survey design, statistically significant increases were observed in confidence explaining specialty crops in general and the seasonality of specialty crop harvesting, as well as in awareness of Oregon specialty crops and in intentionality regarding informed food purchasing behavior. These increases were observed among participants in both the OMSI Harvest Fest events and other Farm to Science events (e.g., Meet a Farmer, food science demos, Better Bites). Based on pre-test responses, Harvest Fest participants reported higher levels of preexisting confidence, awareness, and informed food purchasing intentionality than did non-Harvest Fest event participants. Post-test responses indicated that Harvest Fest participants also left these events with higher levels of informed food purchasing intentionality and confidence explaining specialty crop seasonality than did participants at non-Harvest Fest events, although non-Harvest Fest event participants reported higher levels of post-intervention confidence explaining specialty crops in general. It should be noted that while all pre- to post-test differences were statistically significant at the $p \leq 0.05$ level, the only statistically significant difference between Harvest Fest ($M = 3.20$, $SD = 1.32$) and non- Harvest Fest ($M = 2.64$, $SD = 1.46$) participant responses was in pre-test confidence in explaining specialty crops, $t(184) = 2.29$, $p = .02$. At a statistically significant level, event participants were more similar than different; however, we look forward to building on this study by expanding the reach of the Harvest Fest events and exploring the ways in which responses differ or remain consistent among audiences from communities across the state of Oregon. The complete report including an Executive Summary is included with supplemental materials for this Final Report.

BENEFICIARIES

Through participating in OMSI's season of food science, Oregon specialty crop producers and processors accessed large groups of people in a manner they may not have through traditional public programming such as farmers markets.

The entire community of specialty crop producers and processors benefited from the Farm to Science project because it introduced large groups of people to an aspect of agriculture they may not have been familiar with prior to the programming.

By making Oregon specialty crops and the associated industries within agriculture a central theme for OMSI programming and events, the agriculture industry benefited from the Farm to Science project. For example, 82% of respondents intended to sustain existing habits towards adapting grocery lists based on seasonality after their participation in activities. Through particular programs, specific industries benefited more deeply. For example, through the OMSI After Dark programming over 4,000 people engaged with the cider industry through tastings, science activities and talking directly with Oregon producers.

After Dark Beneficiaries = 4,000 +
Harvest Festivals Beneficiaries = 4,500 +
Eatery Theory = 295.5 Volunteer Hours in 2015, 585.75 Volunteer Hours in 2016
(Unknown exact number of beneficiaries because presentations were given in public locations.)
Lab Experience Classes Beneficiaries = 40

LESSONS LEARNED

Over the two-year project, OMSI tackled a variety of challenges. In producing the Science Pubs, the project team was challenged to find diverse topics with dynamic speakers and presenters fluent in the topic. By working closely with partners, such as the Oregon Department of Agriculture and the Food Innovation Center, the project team was connected with experts. Additionally, the Harvest Festival was very well received by the public demonstrated by attendance numbers (over 4,500 attendees) but was challenging to recruit vendors to in the first year because of existing farmers market obligations. By moving the event to October in year two, the event increased participation significantly. Finally, by focusing on a fall Harvest Festival limited the types of crops available for highlighting. The project team hopes to increase this diversity through the recently funded Farm to Science: Fairs and Festivals project set to start in the summer of 2017.

With funding secured for two more years of Harvest Festivals and expanded events at county fairs and community events around the state, OMSI is drawing on these lessons to ensure successful expansion of the program's depth and impact.

ADDITIONAL INFORMATION

Supplemental materials attached

ODA-S14 Oregon Potato Promotions in Vietnam – *Final report - accepted May 2017*

CONTACT: Jennifer Fletcher
ORGANIZATION: Oregon Potato Commission
PHONE: 503-239-4763
EMAIL: jennifer@oregonspuds.com

PROJECT SUMMARY

The Oregon Potato Commission (OPC) recognizes the advantage Oregon has with ports up and down the Pacific coast able to export agricultural products and commodities to the Southeast Asian market. With the steady decline in United States potato consumption over the years, the potato industry needs new markets developed. Fresh potato market access was granted to the US in 2010 by Vietnam and in 2013 by the Philippines.

OPC had a highly trafficked booth at the Food Hotel Vietnam 2015 (FHV2015) Show at the Saigon Exhibition & Convention Center April 21-23, 2015. Daniel Chin of Wong Potatoes and Jim Cramer of Amstad Produce were provided travel, food and lodging to attend the FHV2015 Show booth and were introduced to several interested hotel and restaurant purchasing agents, chefs and other food industry professionals.

United Base Company (UBC), a Vietnamese marketing contractor, who OPC has worked with on four other projects, was hired to procure a notable Vietnamese celebrity chef to demonstrate recipes at the OPC FHV2015 Show booth and to endorse Oregon potatoes in general.

Chef Dieu Thao, was contracted to create recipes and performed demonstrations everyday at the booth. Chef Thao's presence at FHV2015 was advertised in three local publications and proved to be quite the crowd generator. Eight videos of Chef Thao's potato recipes were produced for future promotional use in retail stores or at other Vietnamese food shows.

Import buyers and distributers were introduced to Mr. Chin and Mr. Cramer by United Base Company (UBC) representative Francis Lee. Opening a new market takes persistence but OPC is developing relationships.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

The purpose was to increase Oregon potato sales to Vietnam. With the steady decline in United States potato consumption over the years, the potato industry needs new markets developed. Fresh potato market access was granted to the US in 2010 by Vietnam and in the Philippines in 2013. The OPC had already invested time and funding, during 2012-2014, developing the newly open market in Vietnam. Vietnam and the Philippines are both identified as viable potato markets by the US Potato Board and the trade market specialists at Bryant Christie, Inc.

The OPC sent two Oregon shippers to participate at the FHV2015 show in Ho Chi Minh City, Daniel Chin and Jim Cramer. UBC was hired by OPC to procure Chef Dieu Thao to demonstrate recipes at the OPC FHV2015 Show booth.

OPC already had an established relationship with UBC because of collaboration in 2012 to bring Vietnamese buyers and distributers into Oregon for a reverse trade mission, where they observed production practices and experienced the unique qualities of Oregon grown potatoes. UBC also orchestrated retail promotional potato samplings in Vietnam in March of 2013 and in March of 2014. UBC also planned events and invited importers to the November 2014 Oregon Washington Directors Trade Mission.

Through UBC, OPC contracted Chef Dieu Thao, a well-known Vietnamese chef, to endorse and demonstrate recipes of Oregon grown potatoes at FHV2015 and in video productions for later promotional use at retailers.

The idea was to appeal to the Vietnamese market through a celebrity they already knew; to build Vietnamese consumer confidence that Oregon grown potatoes are both healthy and delicious. UBC advertised, in local publications, about Chef Thao's potato recipe demonstrations to draw more customers to the OPC booth.

The funds for this project were used solely for the promotion of fresh Oregon grown potatoes with the message "Nutritious Potatoes from Healthy Oregon Soil." This project received no other Federal, State or private grant funding but did include some OPC matching funds.

PROJECT ACTIVITIES

Oregon potato distributers were invited to participate in the Oregon Potato booth at the Food Hotel Vietnam 2015 (FHV2015) Show. A contract with a Vietnamese marketing consultant, United Base Company, was signed. Oregon participants purchased their airfare and were instructed to submit expense reports to OPC. It was explained that reimbursements would be limited to U.S. General Services Administration (GSA) guidelines.

Dan Chin of Wong Potatoes and Jim Cramer of Amstad Produce arrived in Ho Chi Minh City. Attended the FHV2015 Show (Food Hotel Vietnam 2015) April 21-23, 2015; an event marketing to hotel and restaurant purchasing agents, chefs and various food industry professionals.

Francis Lee, Jim Cramer, Chef Dieu Thao, Su Chef and Dan Chin attended FHV2015

Import buyers and distributers were introduced to Mr. Chin and Mr. Cramer by United Base Company (UBC) representative Francis Lee during the FHV2015 Show. UBC also arranged the details required to provide live demonstrations at the Oregon Potatoes booth and produced display and print materials highlighting the prominent Chef Dieu Thao scheduled presence at the booth. The were also very skilled interpreters working closely with the Oregon commodity representatives at the show everyday.

UBC hired Chef Dieu Thao to create eight recipes for the Oregon Potato Commission. A cookbook with pictures and instructions was printed using Chef Thao's image and recipes furthering the endorsement of Oregon Potatoes in Vietnam.

Demonstrations were performed all three days, April 21-23 during the FHV2015 Show. Chef Thao's appearance was advertised in newspapers the week prior to the show using $3,000 matching funds from OPC to purchase the advertisement space.

On April 23, 2015 Chef Thao was assisted by Consul General Rena Bitter and Phil Karsting, head of the U.S. Foreign Agriculture Service, Vietnam, to demonstrate how to make a delicious Vietnamese snack using Oregon potatoes. (click here to see the Consul General's post) Chef Thao used potatoes donated and shipped from Wong Potatoes and Amstad Produce in the demonstrations.

Mr. Chin reported back to the OPC that the Oregon Potato booth was very active and had good attendance by many Vietnamese industry professionals.

Video demonstrations were produced of Chef Thao's creations and CD discs were provided to the Oregon Potato Commission that can be utilized in booths at future Vietnamese trade shows or at future retail potato promotions.

The OPC staff communicated with the contractor, UBC, mostly through email and the occasional phone call. OPC staff provided images and messages for UBC to emphasize throughout the project. At the following OPC Quarterly Meeting, commissioners reviewed and discussed materials and services provided by the contractor and continue to show

support for future trade actvities in Vietnam.

PROBLEMS AND DELAYS

Initially, there wasn't enough booth space to accommodate demonstrations but United Base Company was eager to have Chef Thao perform at the Oregon Potatoes booth. The OPC staff was able to procure additional space adjoining the Oregon Agriculture Booth. Chef Thao demonstrations did draw crowds to the booth area. The additional booth fees resulted in only $2,014 in matching funds provided by OPC.

GOALS, OUTCOMES AND LESSONS LEARNED

The tonnage of potatoes exported to Vietnam from November 1, 2012 to June 30, 2013 totaled 280 tons. The OPC's target was to export 560 tons of potatoes to Vietnam from May 1, 2015 to June 30, 2016.

The data regarding Oregon potatoes exported to Vietnam are: 208 tons of potatoes exported in 2013 (Jan-Dec), 80 tons exported in 2014, 26.6 tons exported in 2015 and zero potatoes were exported in 2016.

These are obviously not the results that were hoped for. It appears no-one benefited from this project. Some factors that effected the project's outcome include strained relations between International Container Terminal Services Inc. (ICTSI), leasee of the Port of Portland's Terminal 6 and Local 8 of the International Longshore and Warehouse Union (ILWU).

There were unofficial "slow downs" all across the western ports. Terminal 6's irregular service lead to the February 2015 departure of Hanjin Shipping, the port's only large scale shipping container operation, leaving no carrier service for the Port of Portland.

This issue is being addressed by the OPC Trade Committee; Bill Brewer, OPC President, CEO and Mark Ward, OPC Vice Chairman and Trade Chair started attending Agriculture Transportation Coalition (AgTC) meetings. Mr. Brewer and Mr. Ward have attended several meetings representing potato farmers and shippers affected by union slow downs.

For example there were 450 attendees at the 2015 annual AgTC Meeting, the Presidents of 7 north american ocean carriers, the leadership of the International Longshore and Warehouse Union, Executive Directors of 6 major US ports, Commissioner Doyle of the Federal Maritime Commission, trucking executives, and of course 270 agriculture and forest products exporters large and small participated in discussions in an effort to resolve this long range problem.

According to the US Potato Board (USPB), another issue affecting potato exports in 2015 was the strong US dollar in world economics. (click here to link to USPB Summer Meeting presentation) The stronger the US dollar is, the more it costs to export and harder for countries with weaker currencies to afford.

Finally the 20% tariff and 5% import tax imposed by Vietnam also continues to hinder the export of potatoes. The OPC Legislative Committee has discussed Trade issues with all of Oregon's US legislators at multiple venues. The US has withdrawn from the Trans Pacific Partnership (TPP) but OPC continues communicating with legislators about developing better trade negotiations.

An interest has been developed for Oregon Potatoes in Vietnam. Communication continues

with potential Vietnamese importers and when the Vietnamese market demand is able to support the cost, Oregon Potato shippers are ready to export to the Vietnam market.

ADDITIONAL INFORMATION

The total amount of cash matching funds paid by OPC was $7,032. The OPC paid $3,000 for print advertising space in local Vietnamese papers two weeks leading up to the FHV2015 Show. The advertisements highlighted Chef Dieu Thao endorsement and presentation time at the FHV2015.

OPC also paid $2,000 for the setup of one-on-one meetings between Oregon potato shippers and Vietnamese import customers. The remaining $2,032 was paid to cover the FHV2015 Show charges for additional booth space, TV and DVD equipment not covered by the initial proposal budget.

The amount of in-kind matching donations totals $27,277. OPC staff time and fringe benefits represents $6,005 of the in-kind matching. Another $7,670 was matched by the shippers for the cost of airfare above the GSA rate reimbursed to them.

The majority of in-kind matching was derived from the value of the potatoes shipped to Vietnam by Wong Potatoes as $12,432 for 780 50# CTN boxes and another $1,170 fee to ship from Klamath Falls to Sherwood Oregon for packaging and preparations of the product being shipped over seas.

Unfortunately, the potatoes donated by Wong Potatoes were greatly damaged do to a port slow-down causing the potato shipment to take approximately eight weeks and improper shipping container temperatures damaged a good deal of the product only providing enough for Chef Dieu Thao's demonstrations at FHV2015.

ATTACHMENTS

ODA-S15 Bakery Seminars for Food Professionals in Hong Kong – *Final report - accepted May 2017*

CONTACT: Darcy Kochis
ORGANIZATION: Oregon Raspberry & Blackberry Commission
PHONE: 503-505-3876
EMAIL: darcy@foodfirstmarking.com

PROJECT SUMMARY

Bakery products, especially Western bakery products, have become popular as breakfast foods and snacks, resulting in a rapid growth in the bakery products industry and market in China. In the last five years, many bakery stores and plant bakeries in China have continually expanded their area of operation and production capacity. From 2007-2012, the baked goods market in China grew at a continued annual growth rate of 33.5%. Market value sales soared from US $4.9 billion in 2007 to US $20.8 billion in 2012 making the region one of the most lucrative markets in the world for baked goods.

The ORBC hosted a series of 3 seminars promoting the use of frozen, canned and pureed raspberries and blackberries as ingredients for the baking industry in Hong Kong. These seminars targeted professional bakers, educated them on the technical aspects, premium flavor, versatile formats and nutritional benefits of Oregon berries to in order to generate new industrial and retail demand for berries as ingredients in bakery products in the Hong Kong and Mainland China marketplace. In addition to the 20 professionals in the seminars, the print and television coverage of Oregon berries reached an audience of 1.2 million people in Hong Kong.

The ORBC was awarded a Specialty Crop Block Grant in 2012 to continue its outreach to the East Asian marketplace by attending the Hofex trade show in Hong Kong in 2013.

PROJECT PURPOSE

As a component of that grant, a sensory and market evaluation survey was created and administered by the Food Innovation Center to food service, manufacturing, retail and other food professionals to determine their opinions on processed blackberries and raspberries. The survey showed that participants had little or no knowledge of blackberries, some knowledge of raspberries, but also a desire for new berries to incorporate into the bakery sector, an area they felt was the best use for berries in general. The survey also showed that new berries would need to be introduced slowly and in a targeted manner in order to gain acceptance. This grant built on that information and was the next step to introducing Oregon raspberries and blackberries into Hong Kong and Mainland China.

The importance and timeliness of this project was driven by both consumer demand and production supply factors. From the demand side: The bakery sector in the US is the strongest area for selling blackberries, with pies, cobblers, pastries and cakes having a solid sales base. The bakery industry in China has been accelerating as the interest in Western style food has grown, especially among the middle class who demand more premium products from safe food sources. Bakeries in the region have seen the growth of "grab & go" breakfasts and snacks, and demand for bakery products has remained steady and

substantial, with these products becoming a daily necessity for many people, especially in urban areas. For the five year period from 2007 to 2012, the baked goods market in China grew at a continued annual growth rate of +33.5%. Market value sales soared from US $4.9 billion in 2007 to US $20.8 billion in 2012, making the region one of the most lucrative markets in the world for baked goods. Regarding production supply: Oregon berry farmers have been dealing with a large surplus of berry puree which has built up in Oregon over the last few years due to harsh winters and invasive pests which cause berry crop damage. Much of the resulting fruit did not meet the standards of individually quick frozen (IQF) packing but had to be turned into juice stock or puree in quantities far in excess of current demand levels.

PROJECT ACTIVITIES

Seminar Curriculum Research and Creation, Pre and Post Course Survey Development, Materials Translation and Printing: The ORBC gathered content from a wide variety of industry sources on topics such as breeding, varietals, berry health benefits, the Oregon growing environment, Oregon berry product formats and created a course booklet, which also included bios of the chef and all recipes developed for the seminar. The ORBC also created a pre and post course survey to be administered to attendees to measure their knowledge of Oregon berries. This booklet, and the surveys, were then translated and printed according to the best bid received. 50 sets of documents were printed.

Source and hire Hong Kong Consultant Firm: A communications and PR firm Media Services Public Relations & Communications Ltd was chosen to facilitate implementation of grant activities in Hong Kong. This is a company that the ORBC had successfully worked with on a previous project in Hong Kong. They submitted a detailed outline of the work that they would do for this project and met all needs for the work to be done in a timely manner.

Source and hire Celebrity Chef to teach seminars: The ORBC met Denice Wai, a celebrity chef in both Hong Kong and Vancouver, BC, during a prior trip to Hong Kong. Ms Wai stars in several TV shows that are based on the fusion of Asian cuisine with western cuisine, and when contacted she was enthusiastic about working with this grant and producing new baking recipes that would appeal to the Hong Kong consumer, use Oregon caneberries and U. S. wheat but still be in the western style of baked goods. Denice is also well known for her work with diet and health making her an ideal spokesperson for the health benefit message of Oregon berries.

Consult on recipe development and work on recipe creation for seminars. Ship berries to Hong Kong for Recipe Testing. Oversee shipping and customs: ORBC consulted with Matt Weiner of U.S. Wheat Associates on the creation of six new recipes using frozen and canned Oregon raspberries and blackberries and U.S. wheat products. Mr Weiner connected the ORBC with Chef Heinz Fischer, a respected international pastry chef who is well known in Hong Kong. He developed the following 6 recipes for use in the ORBC workshops: Raspberry Cheesecake with Crispy Base; Raspberry Meringue Pie; Raspberry – Apple Muffins with Sunflower Seeds; Blackberry Almond Buttercake; Blackberry and Coconut Filo Strudel; Blackberry Crumble Tarts with Hazelnuts.

Chef Denice Wai was also asked to create five new recipes using caneberries for use in the workshops. She developed the following 5 recipes: Blackberry, Apple, Walnut Quinoa Muffin; Blackberry Tofu Cheesecake with blackberry, black pepper syrup and fresh berries;

Apple, Blackberry Crumble Muffins; Raspberries, Red Dates Spread, Mascarpone Bread Slices; Stuffed chicken breast with blackberry sauce.

Since shipping and customs of Oregon caneberries into Hong Kong can be difficult, we worked with the ATO office in Hong Kong secure a reputable shipper. Berries were shipped first to U.S. Wheat Associates and Six Senses Cooking School for recipe development and then a larger amount was shipped to Six Senses Cooking School for use in the workshops and product development post seminar for attendees.

Identify local Hong Kong product sources for use in seminars, Choose and Purchase all Ingredients to be used in seminars: Working with Media Services, U.S. Wheat Associates and Chef Denice Wai sourcing for workshop materials available in Hong Kong were determined and contacts were made to procure necessary ingredients to make the developed recipes correctly.

Choose seminar locations in Hong Kong: Several locations for holding the seminars were suggested by Media Services including a hotel kitchen, a larger cooking school and the Six Senses cooking school. Ultimately the Six Senses cooking school was chosen not only for its location and the fact that it had all necessary equipment present but that it also had a facility for filming the workshop for use potentially in TV segments by Chef Denice Wai.

Identify and contact invitees for the seminars: Media Services used their industry network, combined with previous ORBC contacts to develop an extensive list of invitees. Media Services issued the invites, and were able to fill all the seminar spots with high quality guests.

Prepare Presentation on Oregon caneberries for seminar: The ORBC wrote, created and presented a power point slide show showcasing key information on all course content areas. This presentation was translated in real time by an on-site translator during the seminars.

Travel to Hong Kong to oversee and evaluate the seminars: Given the busy schedules of the celebrity chef Denice Wai and the availability of the cooking school, the 3 baking seminars were condensed into a 2 day time frame in May 21-22, 2015. This change meant that the ORBC representatives could attend all the sessions and facilitated the invite process, where invitees could choose the date which worked best for their schedule. The first day had 1 seminar session, with time spent fine tuning the coursework and flow to maximize the other sessions. Day 2 had both a morning and afternoon session. All sessions were fully subscribed.

Final Report on Bakery Seminar Outreach to ORBC and Packers: All course materials, list of attendees, recipes, evaluations and photographs were presented to the ORBC in September 2015 following the trip to Hong Kong. Several rounds of follow up with packers to determine sales results have taken place in 2015 and 2016.

GOALS and OUTCOMES ACHIEVED:

BENCHMARK: No new berry products in the pipeline at onset of bakery training, no current use of Oregon berries, based on entry surveys of attendees

GOAL: Five (5) new berry products produced and marketed within 6 months after the last

baking seminar was given. To be determined by follow up calls or emails conducted by Media Services.
OUTCOME: Oregon berry products were used in incremental cooking demonstrations by Chef Denice Wai in both Hong Kong and for Chinese chefs in the Vancouver market. Media Services carried out a second follow up survey with seminar participants in October 2016 with feedback received from 14 of the 20 seminar attendees (70% response rate). Here are the results:

- 10 of the respondents said they have launched raspberry and/or blackberry products as a direct result of this seminar series (50% of the overall group)
- Those who didn't launch a product but provided feedback said that the seeds in blackberries was an issue that held them back from using the fruit
- The raspberries and blackberries used came from a variety of areas: USA, Chile, Canada, Korea, Mexico, Japan
- Raspberries and Blackberries were used in the following ways:
    - in cooking demonstrations and/or as part of teaching materials in house
    - in desserts, including a packaged goods and menu items in the following categories: cupcakes, mousse cake, blackberry & raspberry cheesecake, truffles, puff pastry, ice cream, snow bar, toppings on cakes, fillings & mousse for pies and cakes, custard
- A-1 Bakery, a leading Hong Kong storefront bakery chain launched the following items (PDFs attached)
    - Berries Paradise Creamy Crispy Cookies and Ice Cream Cake
    - Fromage Cru Patisserie (raspberry garnish)
    - Fruity Paradise Cake (multi-berry topping)

GOAL: Increased sales commitments to Hong Kong/China by Oregon packers. To be determined by follow up calls or emails conducted by the ORBC and/or a formal survey in 2015.
OUTCOME: No new sales commitments reported. Packers were reluctant to share any information on sales despite repeated requests. Additionally, many sales are made to brokers who protect the identities of their clients so packers are not aware of where their berries end up.

GOAL: Increase knowledge in seminar trainees about Oregon raspberries and blackberries use in bakery products.
OUTCOME: According to the results of our exit survey given to all 20 seminar attendees, 100% of the seminar participants now feel confident working with raspberries and blackberries in bakery products as a result of this course.

BENEFICIARIES
ORBC – received TV and print magazine media exposure in the Hong Kong marketplace, and direct contact with key local decision/taste makers through the seminar series where information was handed out and products were sampled. Due to the extent of TV and print magazine in the public sphere there is no way to tell the full impressions of the project.

US Wheat – product brochures were handed out to all 20 seminar workshop participants, recipes using US Wheat flour were created and sampled to key decision/taste makers to promote their product

United States Agricultural Trade Office (ATO) – Hong Kong - the ATO sent a guest speaker to address the attendees at the first seminar held, generating contacts through this direct community outreach. These product brochures continue to be handed out beyond the reach of the project.

LESSONS LEARNED

- Product development goal of 5 new products within 6 months was not feasible as lead times for new product development go beyond 6 months, and much of this is proprietary or secret for competitive reasons. Longer lead times for follow up need to be included in future projects.
- Measurement of an increase in sales by Oregon packers to Hong Kong/China was not achieved as packers are reluctant to share client information. Additionally, many sales are made to brokers (middle men) who also closely guard the identities of their sales in terms of specific clients as well as markets (foreign and domestic). A stronger direct sales link needs to be built into any future programs, possibly targeting brokers.
- Having a single, strong, local partner in Media Services was instrumental for project success and efficiency. A local agency that can handle all project elements, translation, logistics, make culturally appropriate suggestions and more is key when you are managing things from afar.

ADDITIONAL INFORMATION

- Cash Match = $15,000 provided by the ORBC all allocated to Food First Marketing program execution and management fees
- In Kind Matching Donation= $24,640
    - $8,640 personnel
        - $2,640 provided by ORBC for administrative support and program oversight: Philip Gutt
        - $6,000 provided by Wheat Marketing Association staff in both Hong Kong and the USA for program support and oversight on materials creation
    - $16,000 supplies
        - $6,000 provided by ORBC for use of current recipes, photographs and frozen and canned berries
        - $10,000 provided by US Wheat Associates for development and photography of 6 recipes, promotional materials and provision of US flour (including shipping)
- Documents accompanying this report:
    - Reimbursement workbook for full financial summary
    - Final Report from Media Services: Includes photos of all sessions, complete recipes, details on television and press coverage
    - Entry Survey Summary
    - Exit Survey Summary
    - Feedback on Oregon berries & product formats from attendees & Chef Denice Wai
    - Today's Baking Magazine Image

- October 2016 Survey Results from Media Services
- A-1 Bakery Products – Ice Cream Cakes, Patisseries and Cakes

ADDITIONAL INFORMATION

Supplemental materials attached

ODA-S16 Growing Agripreneurs Phase III: Training the Next Generation of Farmers – *Final report - accepted May 2017*

CONTACT: Maud Powell
ORGANIZATION: Oregon State University – Jackson County Extension
PHONE: 541-776-7371
EMAIL: maud.powell@oregonstate.edu

PROJECT SUMMARY

Oregon State University (OSU) Small Farms' Growing Agripreneurs program, in partnership with Rogue Farm Corps (RFC) Farms Next internship program, addresses the need to educate and train the next generation of specialty crop producers. This collaboration presents a model education and training program that integrates classroom experience, hands-on mentoring, farm business planning and marketing support.

In two phases and over the last four seasons, the Growing Agripreneurs Program has grown into a very successful beginning farmer training program. The initial grant, Phase 1, established the program, starting with the creation of the teaching farm and the first curriculum modules. The second grant, Phase II, built on the existing program and funded a partnership between Growing Agripreneurs and Rogue Farm Corps' FarmsNext program. This partnership broadened and strengthened the curriculum and reduced any redundancy that existed in beginning farmer education in Southern Oregon. The program has continued to develop over the 2015 and 2016 seasons into a model education and training program that integrates classroom experience, farm tours, field-work on the teaching farm, hands-on mentoring, farm business planning and marketing, and food preservation classes.

Now offering a twelve class series, the growing Agripreneurs Program offers participants education on various aspects of the production of specility crops. Classes cover both theoretical and practical information taught by OSU faculty, experienced farmers and agricultural professionals.

The class series encourperates a series of farm tours. While some subjects are best taught in the classroom others are best taught visually and experiencially by farmers on their farms in combination with a farm tour. This aspect of the program allows students to tour a number of working small farms in our region and learn from our community's most experienced and successful farmers.

The most prominent aspect of the program is the hands-on learning and field work that occurs on the Teaching Farm. Program participants work alongside the farm manager for a minimum of three hours a week. During this time on the farm students have an opportunity to gain agricultural experience and understanding that empowers their ability to one day farm on their own.

In addition to cultivation, students learn about the business of running a farm and the availability of markets. Business planning is offered as one of the classes and students also have the opportunity to sell at local farmer's markets. During the peak of the season, the participants join the farm manager in attending one farmer's market per month. This provides participants with experience harvesting for market, packing for food safety, displaying products and selling directly to customers.

Along with all these aspects of the program, students also have an opportunity to learn about food preservation and the potential of value added products and selling farm direct. In collaboration with the Extension's Master Food Preservers, students participate in a 5- part class series, aimed at preserving the harvest and adding value to specialty crops.
Using produce grown on the teaching farm, students learn: water-bath canning, fermenting and dehydrating.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

Oregon State University (OSU) Small Farms' Growing Agripreneurs program, in partnership with Rogue Farm Corps (RFC) Farms Next internship program, addressed the need to educate and train the next generation of specialty crop producers. As the 2012 USDA Agriculture Census reported, the average age of farmers both in Oregon and the United States continues to increase, highlighting the need for expanded beginning farmer education. While farmers are aging, the demand for locally produced food has also increased dramatically over the past ten years. Opportunities for direct market sales in specialty crops have skyrocketed and provided beginning farmers with new markets.
The purpose of Growing Agripreneurs is to offer innovative and effective hands-on training, educational programming and business development support to beginning farmers. While training beginning farmers the programs will provide a model for other communities in Oregon and the nation. The success of the program will prove to increase the number of successful farms in southern Oregon, increase food security in southern Oregon by producing more locally grown food, and create new farm jobs in the local agricultural sector.

PROJECT ACTIVITIES

During 2013, eight participants completed the Growing Agripreneurs program. The program, which began in April and concluded in October, consisted of seven classes, five farm tours, monthly skill building sessions, and weekly training hours on the Teaching Farm.

During 2014, OSU Faculty completed the Growing Agripreneurs Toolkit and four additional curriculum modules: Irrigation; Winter Farming, Equipment; and Business Planning. Two other OSU Extension Small Farms Faculty members have used the Toolkit and plan to host Growing Agripreneurs programs during 2015.

The 2015 season began with a new Program Coordinator/Teaching Farm Manager. Meetings and trainings occurred over the winter to bring the new staff member up to speed. Outreach

and recruitment were done online and at Small Farms events. As of March 31, 2015, nine participants were accepted and a new cohort of participants started the Growing Agripreneurs program in April. The existing cover crop on the one-acre teaching farm plot was tilled in and the season began with soil building and bed preparation.

During the 2015 season, the following 4 classes were offered:

- Intro to Horticulture
- Soil Science
- Entomology & Beneficial Insects
- Business Planning

And the following 8 classes/farm tours were offered:

- Greenhouses and Weed Management and Farm Tour at Wolf Gulch Farm
- Conservation and Composting and Farm Tour at Willow Witt Ranch
- Ponds and Irrigation and Farm Tour at White Oak Farm
- Orchard Management and Cider Production and Farm Tour at Thompson Creek Organics
- Post-harvest Handling and Farm Tour at Blue Fox Farm
- Tractors and Farm Tour at Wandering Roots Farm
- Seed Production and Farm Tour at both Dancing Bear Farm and Seven Seeds Farm

From April through October, the participants completed over 80 hours of field-work and skill building sessions on the Teaching Farm on the following:

- Soil Building and Bed Preparation
- Setting up Irrigation
- Direct Seed Sowing
- Transplanting
- Mulching
- Trellising
- Planting potatoes
- Thinning
- Harvesting

During the 2015 season we offered the Food Preservation series for the first time. The first class of the series introduced food preservation in general and also gave the students an opportunity to learn about the Farm-Direct bill, the legality of producing and selling value added products and kitchen requirements, food safety and sanitation. Also, it specifically covered the principles of water bath canning for fruits and offered students some hands-on lab time, making peach and strawberry jams to take home.

The second class in the series was entirely dedicated to tomato canning. Building on the skills learned in the first class, student learned how to prep and preserve tomatoes and tomato products such as salsa. Using 40 pounds of tomatoes and 20 pounds of sweet and hot peppers from our field, students water bathed pints of stewed tomatoes, mild salsa and hot salsa.

The third class in the series was on Fermentation. We brought in Kristen Shockey, the author of Fermented Vegetables, to teach the class and inspire the students to start fermenting their bounty. Using carrots, peppers and cabbage from the Teaching Farm, students packed different jars with different combination of ingredients and took them home to tend to the fermentation process.

The fourth class in the series was on Dehydration techniques. Students learned a variety of recipes and techniques and also tasted samples of everything from fruit leathers to zucchini chips.

During the 2016 season the curriculum remained mostly the same. Some changes were made to the class and farm tour series improving upon what was offered in 2015.

The following 6 classes were offered:

- Introduction to Horticulture
- Fertility Management and Soil Health
- Irrigation Systems
- Entomology and Beneficial Insects
- Introduction to Farm Business
- Cover Crops and Crop Rotation

And the following 8 classes/farm tours were offered:

- Weed Management and Tool Use and Farm Tour at Wandering Fields Farm
- Greenhouses, Propagation & Perennial Herb Production and Farm Tour at Herb Farm
- Orchard Management & Cider Production and Farm Tour at Thompson Creek Organics
- Tractors and Farm Tour at Dunbar Farm
- Post-harvest Handling & Food Safety and Farm Tour at Blue Fox Farm
- No-Till Farming and Conservation Agriculture and Farm Tour at Hanley Farm
- Seed Production and Farm Tours at both Seven Seeds Farm and Dancing Bear Farm
- Winter Farming and Farm Tour at Wolf Gulch Farm

From April through October, the participants completed over 80 hours of field-work and skill building sessions on the Teaching Farm, on the following:

- Soil Building and Bed Preparation
- Setting up Irrigation
- Direct Seed Sowing
- Transplanting
- Mulching
- Pruning
- Trellising
- Planting potatoes
- Thinning
- Harvesting

- Cover cropping

During the 2016 season the Food Preservation series remained mostly the same. An additional class was added, separating the previously combined introduction and canning class. This way the first class was focused entirely on food safety and the Farm Direct Bill. Then, each of the techniques was given its own class: Water-bath canning for Jams and Jellies, water-bath canning for Tomato products, Fermentation and Dehydration.

GOALS and OUTCOMES ACHIEVED

Goal #1 Offer innovative and effective hands-on training, educational programming and business development support to beginning farmers.
Activities Completed: After four seasons of running the program, we've developed a strong class series that includes a focus on business development, a beautiful teaching farm and an inspiring series of farm tours.
Target: 54 participants will attend 7 classes and 5 on-farm education tours and demonstrations.
Actual: 70 participants attended 6 classes and 8 farm tours.

Goal #2 Increase the number of successful farms in southern Oregon.
Activities Completed: Offered education and training to beginning farmers over four seasons.
Target: 15 new farm businesses within 2 years of completion of grant period.
Actual: We are unaware of exactly how many new farm businesses have been created as a result of the program. We know it is at least 5 and we will conduct further activity to determine how many.

Goal #3 Offer as a model program for other communities in Oregon and the nation.
Activities Completed Writing Growing Agripreneurs Toolkit; compiling resources for Toolkit; editing of Toolkit by additional OSU faculty; and creation of four additional curriculum modules including PowerPoint presentations and instructor outlines.
Target: Completion of Toolkit and Curriculum for starting a Teaching Farm.
Actual: Toolkit and Curriculum were completed. Two OSU Extension Small Farms faculty members have already downloaded the Toolkit and plan to started Teaching Farms in 2015.

Goal #4 Increase food security in southern Oregon by producing more locally grown food.
Activities Completed Donation of excess produce to local food banks. Attendance at the Jacksonville Growers Market.
Target: 7,000 lbs. of produce sold through 3 underserved farmers markets.
Actual: 10,000 lbs. of produce donated to local food banks. 1600 lbs. of produce sold through 1 underserved market.

Goal #5 Create new farm jobs in southern Oregon.
Activities Completed Conducted classes in specialty crop production and marketing; offered tours of successful specialty crop farms; offered weekly on-farm skill building sessions; and provided weekly farm hours with a farm mentor. In particular, offered a business class to introduce beginning farmers to concepts of business planning.
Target: 27 new farm jobs within 2 years of completion of grant period.

Actual: 14 new farm jobs from Growing Agripreneurs and FarmsNext graduates of the 2013 program. We will continue to survey future graduates to track long term outcomes.

BENEFICIARIES

Growing Agripreneurs participants: 36 participants from 2013-2016.
FarmsNext participants: 36 participants from 2013-2016.
Food banks: 10,000 lbs. of fresh produce was donated to local food banks.

Jacksonville Growers Market customers: 1200 lbs. of fresh produce was sold to Jacksonville Growers Market customers.

Specialty Crop Growers: Graduates are currently working at local specialty crop farms. The farm owners have been able to hire well-trained, knowledgeable employees.

Agricultural Professionals: Two OSU Faculty members have used the Toolkit and Curriculum to launch their own teaching farms. The Toolkit and Curriculum are available through the OSU Small Farms website for use by other agricultural professionals.

LESSONS LEARNED

- Many of our goals were met above benchmark.
- The main lesson learned is that the program can not be coordinated by one staff member alone. Right now the Program Coordinator is also the Teaching Farm Manager, employed at .49 FTE. At the least, the program needs another part time employee.
- Program graduates that desire to go on farming are experiencing challenges accessing farm land. This raises interest in developing a second year - farmer incubator program, potentially supporting graduates by offering some of the OSU Extension's acreage.

ADDITIONAL INFORMATION

See attached program schedule from the 2016 season.

ODA-S17 Native plants: connecting growers with gardeners and landscape professionals – *Final report - accepted May 2017*

CONTACT: Linda Hardison
ORGANIZATION: Oregon State University
PHONE: 541-737-4338
EMAIL: hardisol@science.oregonstate.edu

PROJECT SUMMARY

The native plant industry grew from provisioning a limited number of plant species for habitat restoration projects. As increasing numbers of gardeners and landscapers integrate native species in their plantings, the nursery industry has been challenged to meet the demand for a greater selection of attractive species that provide diverse functions. Accompanying the demand are the needs of the customer, the retailer, and the grower for information about this specialty crop. This project advanced the developing native plant market by 1) assessing the commercial availability of native plant species; 2) providing online access to inventory lists from native plant providers; 3) offering workshops to educate home gardeners and landscapers about the unique features of native species as well as their context in the natural world. We interviewed 26 growers or retailers of natives to better understand their challenges; this informed our workshop content. A new gardening webpage was added to the Oregon Flora Project website (http://oregonflora.org/gardening.php) that features 587 species and their availability through 28 vendors. We directly engaged 478 attendees through the presentation of 15 condensed (1-2 hr) and two extended (4-6 hr) workshops targeted to gardeners or landscape professionals.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

The objective of this project was to further develop Oregon's native plant specialty crop market through support to both industry members and consumers. We used two synergistic approaches: 1) connecting with native plant producers and retail vendors to promote public awareness of their native plant inventory and to encourage expanding that inventory; and 2) educating both consumers and producers/vendors about the unique opportunities and challenges of this specialty crop.

There are currently almost thirty native plant producers in Oregon, with over two-thirds located near Portland or in the Willamette Valley. Online information about the availability of native plant materials is inconsistent, with no single statewide resource providing lists of producers (and vendors) and their inventories. We contacted these growers either by phone or in person to learn what successes and challenges they faced as a specialty crop provider, and to introduce botanical resources available from the Oregon Flora Project (OFP). We also communicated with retail nurseries (predominately in the Willamette Valley) to learn who was selling native plants, what support retailers needed to increase demand for native plants, and why some vendors did not sell native plants, or market native plant materials to customers as a specialty crop. We repeatedly heard the desire for informed consumers—whether within the industry or the end customer. Communicating how native plants don't

conform to expected horticultural characteristics—some are dormant or lack showy flowers during spring's business uptick—raised opportunities for novel marketing strategies and clarified customer expectations within this specialty crop.

Presentations directed to home gardeners focused on habitat requirements of native species, cultivation conditions (e.g., water, light, soils, and nutrient needs), pollinator and wildlife values, and species for companion planting. Participants unequivocally expressed the desire for information about the commercial availability of native plant materials. Workshops for professional landscapers were more in-depth, and emphasized the ecological and landscape functions of species along with design and site preparation concepts. With both audiences, we demonstrated how knowledge of plant characteristics and habitats in the wild can be applied to promote success in the planted environment.

Developing native plants as a specialty crop offers important economic and ecological benefits statewide: it is a "100% local" business model in which the commodity is locally sourced and the target market covers all of Oregon and adjacent states. Ecologically, native plant species are unquestionably well-adapted to their originating ecoregional climate; they provide important ecosystem services, and affirm our sense of place. As interest in using natives in planted environments continues to increase, our efforts to provide accurate information offers timely support to the development of this niche market.

PROJECT ACTIVITIES

Identifying vendors and providers of native plants To identify active native plant growers, we reviewed websites (PlantNative [http://plantnative.org], the Native Plant Society of Oregon [http://www.npsoregon.org/landscaping5.php], and the Oregon Association of Nurseries [http://nurseryguide.com]) and business listings, and networked with existing plant sellers. Personal contacts were made with 26 nurseries to apprise owners of our project and to have conversations about their experience with this specialty crop.

Linking commercially available native species to OFP resources Along with identifying native plant growers and vendors, we compiled lists of the plants each business sold. We aligned names with the taxonomic framework of the OFP and addressed discrepancies, such as the marketing of materials under a scientific binomial name (e.g., *Tiarella trifoliata*) when multiple subspecies of that taxon occur in the state (e.g., *T. trifoliata* var. *laciniata* and var. *unifoliata*). We also identified instances when some resources refer to a non-native species (*Trillium angustipetalum*) by the name of a true Oregon native (*T. kurabayashii*). Clarifications like these demonstrate how the taxonomic research of the OFP adds value to specialty crop merchandise by allowing vendors to verify its "native species" status, and to confidently advertise plant materials as native.

Communications with native plant producers Upon launching the project, we established commmunication via email, phone, or a personal visit with as many native plant producers as possible. Three things became clear during these discussions: first, that growers within a region formed collaborative networks and regularly communicated with each other; second, that trying to schedule a meeting of growers was going to be a difficult task; and third, that learning what customers were seeking in this niche market could leverage time spent with assembled growers more effectively. As a result, we shifted the focus of initial workshops toward home gardeners and retail nurseries.

Communications with retail nurseries The first group of retail nurseries we contacted were in the Portland Metropolitan area. Four types of nurseries emerged: 1) those which offered a broad assortment of native plants and actively promoted gardening with natives, 2) those which identified and offered a small assortment of native plants, 3) those which sold some native plants, mostly shrubs and trees, but did not identify them as native, and 4) nurseries which had negative associations with native plants. We partnered with the first 3 types of businesses in the Willamette Valley and in Bend to present our gardener-targeted workshops. This allowed us to feature live plant material sold by the stores during the presentation. Grant funds were used to purchase plants to give to workshop participants. The events were reviewed very favorably by participants (see Appendix 1), and deemed a public relations success by the host stores.

We sought insights from retailers into how our project effort could best support their businesses. They wanted clear guidelines about watering and fertilizing that reflected the taxon's natural conditions, and plant characteristics *e.g.,* flowering time, dormancy, and size at maturity. . These resources would help them better manage their inventory as well as educate their customers to the nuances of this specialty crop. With a clearer understanding of the behavior of native species, retailers could strategize with their producers to optimize delivery dates, develop a "take-back" policy for materials that don't sell (thereby allowing the producer to grow the plants for resale the following year), display perennials of various ages to demonstrate the lifespan of the species, promote the specialty crop with point of sale labeling, and to be generally attuned to the aesthetic demands of retail customers that habitat restoration projects do not invoke.

In all cases, the retail nurseries we interacted with were highly supportive of our efforts to create and support an informed clientele. Instructional opportunities held in the stores were appreciated by both sponsors and participants. The workshops developed and offered during this funding cycle have expanded consumer knowledge about native plants. Retailers are poised to benefit from the growing enthusiasm with the continued work of the OFP to present the commercial availability of inventory linked to educational tools on the *OregonFlora* website.

Launch of Oregon Flora Project's gardening webpage On 31 May 2016 we launched a new website page (http://oregonflora.org/gardening.php) promoting gardening with natives (Figure 1). The key feature of the webpage is a list of native plant species sold by Oregon nurseries. The list is sortable by common or scientific name, and by geographic region of the vendors. There are hyperlinks to the vendors' websites. We launched the webpage with listings of 550 native species sold by 26 nurseries; there are currently 587 species available through 28 nurseries, an increase of 6.3% in the number of species identified as commercially available. We continue to add to the list as nurseries become aware of the resource. Additionally, nurseries that sell native seed have expressed an interest in being listed.

We have further developed the educational component of this project by leveraging a partnership with Portland Metro and the Adult Conservation Educators Northwest (ACE-NW) working group. In 2014, this group published a brochure entitled "Native plants for Willamette Valley yards," featuring several hundred native plants and their characteristics

relevant to gardening. Seeking a way to expand the visibility of their entire dataset and to keep it curated, they initiated a collaboration with the OFP. The data are the foundation of the gardening portal that will be featured in the redesigned *OregonFlora* website. It will offer a filtering tool for users to select their desired characteristics of garden plants, then return results matching those criteria, including where each species can be purchased (Figure 2) . Garden-specific profile pages for each species are also being developed. Our latest projected launch date for the new *OregonFlora* website is late November 2017.

Workshops for home gardeners Workshops and presentations directed to home gardeners became a major focus of the project. Our first presentations were to Master Gardeners, thereby amplifying our impact by "training the trainers". As the growing season progressed, we offered presentations on site at retail nurseries. In total we conducted 14 1-1.5 hr workshops attended by approximately 408 home gardeners (Table 1). Appendix 1 summarizes the results of the evaluations that were returned.

The content of the presentations focused on plants within the ecoregion where the workshop was being conducted. Importantly, we also provided a larger context for gardening with native plants: what constitutes a "native species"; how knowledge about a species' habitat, plant community, and taxonomy can be applied to planted environments; and how native plants contribute to the ecological health of our larger environment. Table 2 is an example of a handout. It lists plant species native to the given area and 11 gardening characteristics.

Workshops for professional landscapers and landscape managers These workshops proved to be highly interactive, with lively discussion from individuals who brought both experience and detailed questions to the events. Three such workshops were conducted (Appendix 1, Table 1). The first, hosted by the Dept. of Landscape Architecture at University of Oregon, was attended by students, faculty, and community landscape professionals. The subsequent events were presented by a team consisting of coPI's D. Albert and L. Hardison, and regional experts. Topics included those covered in the home gardener presentations, landscape design exercises, soils and site preparation, and water conservation. The latter two workshops were registered with the Landscape Contractor Board to provide up to 6 CEU credits, reflecting the spectrum of educational opportunities this project brought to the public.

GOALS and OUTCOMES ACHIEVED

GOAL	BENCHMARK	TARGET	ACHIEVEMENTS
Develop the native plant specialty crop market	Current number of native species available in retail nurseries (to be determined with start of grant)	Add 2% new native species to currently available species in retail nurseries	The volatility of inventory made it impractical to track. Of 2 reporting businesses, one added 19 species (14%) and the other 20 species (12.3%) over the grant period. 28 nurseries are listed with addresses and inventory on the OFP gardening webpage
	~Number of retail nurseries currently selling natives	2.5% increase in # of nurseries selling natives	
	Sales reported in survey of retailers (performed with start of grant)	10% increased native sales reported in closing survey	
Increased	Growers', retailers'	80% of respondents have	We realigned workshops to target

information exchange between growers, OFP	knowedge of OFP measured by pre-survey	used OFP website as resource ≥once	**(1)**growers + gardeners; and **(2)**landscapers. **(1):** 408 participants, voice survey indicated ~30% were aware of OFP; post-wkshp evaluations indicated 91% would use OFP website. **(2):** 70 participants; ~75% were aware of OFP; evaluations indicated 100% would use OFP --Total: 478 participants --The OFP gardening webpage received 1,992 hits since launch
	Promote workshops	100 participants statewide (or 80% of active native plant growers)	
Inform gardeners, landscapers about native plants	List appropriate native plants for ecological regions with workshops	100 appropriate species by region and retail sources	
	Google Analytics data for web page traffic	5% greater traffic to OFP website	
	Promote workshops	270 participants, including citizen science educators	

Contrary to our initial expectations, inventory held by native plant sellers can be very volatile: a crop may do poorly, consumer demand for a species may drop or consume all stock, or the grower may not have the seeds or starts they carried the previous year. We learned that comparing inventory between years is not accurate, and that inventory lists reflected on the OFP website are most effectively updated once each season.

Our outcomes suggest that the greatest boost to the native plant specialty crop market comes through education—certainly to consumers, but also to sellers. Increasing sales through novel marketing approaches and arming retailers with information to promote their merchandise are key. The new *OregonFlora* website will have educational tools for gardening with natives linked to commercial availability, thereby reinforcing a "learn—purchase/experiment—succeed" cycle.

BENEFICIARIES

Our project has benefited citizen educators (Master Gardeners and Native Plant Society) and their program participants. Partnering with Portland Metro and ACE-NW to develop a scientifically robust and accessible garden web portal supports their mission of promoting sustainable urban landscapes. OFP resources allow commercial landscapers to successfully respond to municipal policies requiring native plantings and ecosystem services. The general public—a key consumer of this specialty crop—benefits from the information and the commercial availability; their clearly-demonstrated demand for native garden plants will sustain the further development of the market.

Native Specialty Crop Market Beneficiaries = 28 new nurseries listed
Increase Information Exchange Beneficiaries = 408 participants
Inform Gardeners, Landscapers and others about Native Plants Beneficiaries = 1,992 webpage hits

LESSONS LEARNED

We learned there is intense interest in gardening and landscaping with native plants. Oregonians appreciate what natives offer, and want to successfully use them. We found this

among both consumers and producers; both groups recognize that education around native plants will bring that success.

Of all our encounters with growers and vendors, only one rejected the application of OFP resources and nomenclature. We respectfully learned that the use of "nativars" and other horticultural industry practices are at times inconsistent with traditional taxonomic and genetic delineations, and view these cases as opportunities to educate through articulating the differences.

ADDITIONAL INFORMATION—in accompanying document
Appendix 1—Evaluation surveys following workshops
Figure 1—Gardening page on current Oregon Flora Project website
Figure 2—Mockup of garden search page on new *OregonFlora* website
Table 1—Workshops presented
Table 2—Handout listing native species of the region and their characteristics

ATTACHMENTS

ODA-S18 Promoting specialty crops through enhancement of bee pollinator health – ***Final report - accepted May 2017***

CONTACT: Sujaya Rao
ORGANIZATION: Oregon State University
PHONE: 541-737-9038
EMAIL: sujaya@oregonstate.edu

PROJECT SUMMARY

Specialty crops are vital to the economy of Oregon, and hence it is critical that its producers achieve profitable returns from their investments. Different factors promote each specialty crop
as production practices differ but a common component critical for many specialty crops is pollination by bees. Even with high investments and best production practices, a grower may
achieve little or no yield and/or suboptimal quality of produce if bees are absent. Thus, there is
an urgent need for promoting bee health for ensuring long-term sustainability of Oregon's specialty crops. It is well known that pollinators are at risk to direct pesticide exposure but little
is known about the effects of residues in pollen and nectar, and potential synergistic effects with
production practices

Promotion of bee health is critical for long term sustainability of specialty crops in Oregon, where honey bee pollination is valued at $500 million, and wild bumble bees and solitary bees also contribute to pollination of crops such as blueberries. In this project, impacts of potential bee mortality factors were evaluated for mitigating future bee loses and augmenting specialty crop production in Oregon. In a field study in Madras, potential negative impacts of the pesticide Beleaf ® (flonicamid) on honey bee colonies placed adjacent to carrot seed crop were documented. A separate laboratory study highlighted the detrimental impacts of the neonicotinoid Safari® (dinotefuran) on native bumble bees. Further, sugars such as galactose and mannose that are believed to be present in the nectar of ornamental linden trees were shown to be toxic to honey bees and bumble bees. For promoting bees, pollinator gardens were created at the Food Innovation Center in Portland. These also served as educational resources for highlighting the importance of bees to specialty crop production and the economy of Oregon. Additionally, workshops were organized at Aurora and Madras for increasing awareness about factors that lead to pollinator declines, and about best management practices for promoting pollinator health.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

Oregon's specialty crops provide diverse and vast economic opportunities for growers, and it is critical that their production is strengthened by development of best management practices to ensure profitable returns for producers. Each crop differs in factors that can increase yield but one common component that is critical for many specialty crops is

pollination by bees. Even with high investments and best production practices, a grower may achieve little or no yield and/or suboptimal quality of produce if bees are absent.

Key pollinators of specialty crops in Oregon are honey bees and bumble bees, and pollination services that they provide is estimated to be worth over $500 million in Oregon. Thus, for promotion of specialty crops in Oregon, it is critical that both honey bees and bumble bees are protected.

For sustaining healthy populations of bee pollinators, adequate food resources are required throughout the life cycle of each bee colony which can last for several months in the case of native bees, and all year round in the case of honey bees. When bee pollinated specialty crops are not available, bees forage on other crops in the area. Hence, specialty crop producers are dependent on the adoption of best management practices for bees not just in their crop but in other cropsin the area that are visited by bees.

Negative impacts on bees can be mitigated if bee-friendly practices are adopted. These will be facilitated if outreach activities are developed for increasing awareness about specialty crop production practices that create risks for bee pollinators. Also, awareness is needed on best management practices for protection of bees from pesticide exposure and for enhancing their populations through augmentation of food resources and nesting habitats on farms and nurseries.

The objectives of this project were to:

1. Evaluate impacts on honey bees and native bumble bees of pesticide residues in specialty crop pollen and nectar, and determine if the negative consequences are further confounded by other factors such as plant stress.
2. Build competency in recognition of bee pollinators, increase awareness about their life cycles, behaviors and threats to survival for enhancing adoption of best management practices for promoting successful development, growth and conservation of honey bees and native bees.
3. Establish pollinator gardens to serve as an educational resource for highlighting the connection between pollinators and food production, as well as the need to protect native pollinators and their habitat.

This project is important and timely because of the critical controbution of bees to specialty crop pollination and yield in Oregon, the current declines in bees that have been reported gloabally, and the urgent need to increase awareness about pollinator services provided by bees for large scale promotion of their health and long erm sustainability.

PROJECT ACTIVITIES

<u>Objective 1. Evaluate the impacts of pesticides and potential toxic compounds in nectar of specialty crops on honey bees and native bumble bees</u>:

Pesticides: The project focused on pesticides used for suppression in specialty crops of aphids, thrips, whiteflies and other pests with piercing and sucking mouth parts.

A field experiment was conducted to determine the impacts of the insecticide Beleaf® (flonicamid) on honey bee colonies placed adjacent to a carrot seed field in Madras in

central Oregon. The insecticide was applied twice, three weeks apart, and pesticide residues were quantified in incoming pollen and nectar in the colonies. For examination of pollen, pollen traps were mounted on five honey bee colonies. The traps consisted of sieves such that when foraging honey bees returned to the hive, pollen loads were removed from their hind legs. Pollen was collected from the traps daily for pesticide analysis. The pollen traps were removed a week later. Nectar and bee samples were also collected from the experimental colonies for pesticide residue analysis. The experimental colonies were further monitored for colony mortality and population.

In a laboratory study impacts of the neonicotinoid Safari® (active ingredient dinotefuran) on native bumble bees were evaluated. Colonies of the bumble bee *Bombus vosnesenskii*, the dominant species in Oregon, were maintained in the laboratory prior to use. The afternoon before the experiment five workers bees were randomly assigned to treatments in cylindrical wire mesh cages (13 cm high x14 cm diameter) with artificial honey and pollen as a food source. The bees were starved for 8 hours prior to exposure to the treatments. The treatments evaluated were: 1) 1X Wet; 2) 1X (6 OZ/100g = 0.448g/L); 3) 0.1X (= 0.0448g/L); 4) 0.01X (= 0.00448g/L); 5) Control = water. The experiment was set up with two replications. During the experiments, the cages with bees exposed to the treatments were maintained at 28°C, 50% humidity in growth chambers. Observations were made at five hours after initial exposure and then twice a day for two days. The numbers of dead bees were recorded.

Laboratory studies were also conducted for determining the identity of bee toxic compounds in the nectar of linden trees. Flowers from unhealthy (under which dead/dying bumble bees were observed) linden trees were collected and nectar obtained from each flower using a micro-capillary tubes was frozen at -80°C. Bumble bees that fell to the ground after feeding on the unhealthy bees were collected. The bees were placed in a cooler, and regurgitated nectar collected by pressing on the abdomen was preserved. All samples were analyzed at the Linus Pauling Science Center and at the OSU Center for Mass Spectrometry.

<u>Objective 2. Increase awareness about the critical role of bees in specialty crop production, and ways by which they can be conserved and promoted</u>:

Workshops for increasing awareness about risks to pollinators and providing information on best management practices for promoting their health. One workshop was organized for producers of nursery crops and blueberries at Aurora in October 2015 while another that targeted carrot seed producers was organized at Madras in July 2016.

Attendees built competencies related to honey bees and native bees (their life cycles, behaviors and how they differ from each other), negative impacts of pesticides, and best management practices for conservation and promotion of all bee species. Pre and post quizzes were administered for determining the impacts on attendees of information that was presented.
Two presentations (9-24-2016 in Madras and 9-27-2016 in Crooked River Ranch) were given on importance of bees as pollinators and ways to reduce pesticide exposure to bees.

Objective 3. Establish pollinator gardens to serve as an educational resource for highlighting the connection between pollinators and food production, as well as the need to protect native pollinators and their habitat.
Three large plots in the Food Innovation Center front plaza were transformed into pollinator gardens. In the first phase, the existing grasses and overgrown/unproductive plants were removed along with the top layer of soil. New soil and drip irrigation was installed on the plots. In consultation with the West Multnomah Soil Water Conservation District and OSU Master Gardeners Program, pollinator friendly plants were replanted and spaced appropriately. In addition, educational materials on meadowscaping were included to ensure that the gardens were properly maintained through various seasons.

GOALS and OUTCOMES ACHIEVED

GOAL 1. Evaluate impacts on honey bees and native bumble bees, of pesticide residues in specialty crop pollen and nectar, and determine if the negative consequences are further confounded by other factors such as plant stress.

PREFORMANCE MEASURE: The study showed that honey bees and bumble bees are at risk to diverse mortality factors associated with specialty crop production. In some specialty nursery crops such as linden, toxic compounds in nectar and pollen can lead to pollinator mortality.

PERFORMANCE MONITORING PLAN: The greatest risk to pollinators, however, is direct exposure to pesticides while they collect nectar and pollen from flowers. The dose of insecticide to which they are exposed impacts their survivorship. Some insecticides maybe relatively safe at low doses but may have detrimental impacts at high doses. Hence, producers need to ensure that insecticides are applied at the specific doses listed on the label.

TARGET: Negative impacts at the colony level may also occur as foraging bees may return with reduced amounts of pollen and nectar which can affect development and growth of brood. Even if specialty crop producers are cautious and ensure that insecticides are not sprayed during bloom in their crop, they need to ensure that bees foraging on their crop are not exposed to pesticides applied to neighboring crops.

GOAL 2. Build competency in recognition of bee pollinators, increase awareness about their life cycles, behaviors and threats to survival for enhancing adoption of best management practices for promoting successful development, growth and conservation of honey bees and native bees.

PERFORMANCE MEASURE: Pre-and Post quizzes were administered to assess gain in knowledge related to pollinators in workshop attendees.

TARGET: A comparison of the scores on the pre and post tests showed an overall 20 % increase in scores.

PERFORMANCE MONITORING PLAN: There was a doubling of scores for questions on why honey bees are more sensitive to pesticides compared to other insects – this provided the attendees a better understanding and realization of why caution is critical when

pesticides are applied to their specialty crops. Attendees were also aware of aspects that are critical for promoting pollinator populations such as the need for continuity in bloom across plants included in habitat enhancements for effective conservation and promotion of honey bees and native bees.

GOAL 3. Establish pollinator gardens to serve as an educational resource for highlighting the connection between pollinators and food production, as well as the need to protect native pollinators and their habitat.

PERFORMANCE MEASURE: The measurable outcomes from this project are three new pollinator friendly gardens that will attract Oregon native pollinators and serve as an educational showpiece for visitors and tours to the Food Innovation Center.

BENEFICIARIES

Specialty crop groups that benefitted from the project included producers of nursery crops, carrot seeds and other specialty crops that use insecticides such as neonicotinoids that have been shown to have negative impacts on bees. These groups benefitted by the information generated on negative impacts of pesticides on honey bees and bumble bees. They also benefited from information provided to them on practices that they can adopt for enhancing pollinator populations.

Visitors to the Food Innovation Center, clients, regulatory officials and legislators will benefit from the visibility of these gardens and the further understanding that pollinators play in food production, economic resiliency and food security.

LESSONS LEARNED

Positive: Clickers were used for determining attendee responses to questions presented to them at the start of the workshop and again at the end. This assessment strategy was well received by the attendees as it was possible for them to learn the right answers right away and ask questions for gaining further insights.

Challenge: Drought stress is believed to be one factor leading to mortality of bumble bees foraging on linden trees. However, it was not possible to create drought stress conditions on the Blue Heron Farm for this aspect of the study due to rainfall in the region and the irrigation set up at the farm. The trees were too large for conducting a study under greenhouse conditions. Thus trees were subjected to stress by cutting the roots but the resulting stress did not translate to differences in nectar composition.

ADDITIONAL INFORMATION

Financial aspects of the grant are handled by the OSRAA Grant Accountant at Oregon State University who will submit the financial report.

Cash match support from Central Oregon Seeds, Inc. ($15,000), and Oregon State Beekeepers Association ($ 10,000) was used to pay salary and benefits for technicians engaged in conducting the specialty crops research.

Cash support from OSU covered the salary and benefits of the lead PI on the project.

ODA-S19 Validation of Propylene Oxide to Inactivate Salmonella on Hazelnuts – *Final report - accepted May 2017*

CONTACT: Joy Waite-Cusic
ORGANIZATION: Oregon State University
PHONE: 541-737-6825
EMAIL: joy.waite-cusic@oregonstate.edu

PROJECT SUMMARY

To comply with increasing food safety regulations, the hazelnut industry needs to identify and validate processing methods that will effectively reduce Salmonella on in-shell hazelnuts and hazelnut kernels. Propylene oxide (PPO) treatments have been determined to be effective methods for inactivating Salmonella on almond and walnut kernels with minimal impact on nut quality and consumer acceptance. Experimental data on the inactivation of Salmonella on hazelnuts (in-shell and kernel) is needed to identify PPO processing conditions that consistently achieve a 5-log CFU/g reduction of Salmonella. Due to the variability in commercial PPO processing chamber configurations and industrial practices, the PPO process must be validated in several commercial facilities to have adequate confidence in the expected microbial reduction.

To comply with food safety regulations, the hazelnut industry needs to identify and validate processing methods to effectively reduce *Salmonella* on in-shell hazelnuts and hazelnut kernels. Based on previous work with almonds and walnuts, propylene oxide (PPO) has potential to reduce *Salmonella* contamination with minimal impact on nut quality and consumer acceptance; however, data on the inactivation of *Salmonella* on hazelnuts (in-shell and kernel) was lacking. The research was a collaborative study with the Food Safety Systems laboratory at Oregon State University, the Oregon hazelnut industry, PPO processors in central California, and the domestic PPO supplier. This research was performed with an informal collaboration with Dr. Linda Harris at UC-Davis. Hazelnuts were inoculated with a cocktail of *Salmonella* strains and buried within bulk loads in various packaging configurations and transported for PPO treatment. PPO concentrations (0.65 and 1.00 kg/m^3) were evaluated in two unique treatment chambers. Both PPO treatments significantly reduced *Salmonella* concentrations; however, the higher dose was required to achieve the targeted 5 log reduction standard. Additional variables (chamber design/fill, gas mixing, nut type/form, packaging materials) may significantly impact the efficacy of PPO. PPO has potential to be a commercially-viable solution for the hazelnut industry to reduce *Salmonella* contamination.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

Tree nuts have been implicated in a variety of recent foodborne outbreaks. In the early 2000s, two fairly large multi-state salmonellosis outbreaks were associated with the consumption of almonds. Unfortunately, in early 2011, in-shell hazelnuts were implicated in a multistate outbreak of *E. coli* O157:H7 in 8 individuals in 3 states. In recent years, the hazelnut industry has dealt with at least one recall annually due to the identification of *Salmonella*. These incidents have brought increasing pressure from FDA to all tree nut industries to improve their approach to food safety. FDA has been conducting an assessment to quantify the risk of salmonellosis associated with the consumption of tree nuts. An accurate risk assessment requires information about the production, harvesting, storage, processing, transportation, and distribution.
The Oregon hazelnut industry has been very proactive with their approach to food safety and is communicating the need for everyone in the industry (from grower to processor) to be part of the food safety solution. The Hazelnut Marketing Board has conducted a multi-year prevalence study to evaluate the prevalence of *Salmonella* in the crop. Another study has also been conducted to evaluate the efficacy of steam treatments to inactivate *Salmonella* on in-shell hazelnuts. This project sought to demonstrate propylene oxide (PPO) treatment as an effective preventive control to reduce *Salmonella* on in-shell hazelnuts and hazelnut kernels. This initial intent of the project was to conduct a process validation study that could provide evidence to support food safety plans to assist with compliance with regulations related to the implementation of the Food Safety Modernization Act (FSMA).

PROJECT ACTIVITIES

Two commercial-scale PPO processing trials at two separate tree nut processors were conducted throughout the course of this project. In-shell hazelnuts and hazelnut kernels were inoculated with high levels of a cocktail of *Salmonella* strains in the Waite-Cusic laboratory. Contaminated nuts ($n > 100$ per PPO treatment) were buried in bulk loads of hazelnuts (10-50 lbs) in cardboard boxes (with and without liners). Packaged hazelnuts were transported to commercial PPO processing facilities and treated at 0.65 or 1.00 kg/m^3 following the facilities standard operating procedures. PPO process parameters included pre-warming conditions, vacuum and gas charging cycles, PPO dose and holding times, ventilation, off-gassing, and hold parameters. The inoculated samples were retrieved after various points in the treatment protocol (after pre-warming, after hold time, etc) and shipped to the Waite-Cusic laboratory for determination of surviving *Salmonella* and calculation of microbial reduction using standard microbial enumeration techniques (spiral plating, spread plating, and/or most probable number). The Harris Laboratory and UC-Davis conducted similar tasks. Alternative tree nuts (almonds, pistachios, walnuts, and/or macadamia nuts) were included in the trials for comparative purposes.

The efficacy of the PPO treatment was determined by comparison of the surviving *Salmonella* on the PPO treated and/or off-gassing as compared with non-PPO treated travel controls. The first PPO treatment and off-gassing of hazelnuts at 0.65 kg/m^3 reduced *Salmonella* contamination on hazelnut kernels by an average of 3.7 log CFU/g and on in-shell hazelnut kernels by 4.8 log CFU/g. An secondary trial was planned at an alternative chamber with an increased PPO dose of 1.00 kg/m^3. For this trial, additional packaging configurations for various nuts and nut forms were included in the experimental approach. Spatial location of samples within the boxes and on the pallet was documented to assist in the determination of gas permeation and its relation to efficacy as influenced by packaging. The higher PPO dose was more effective at reducing *Salmonella* on hazelnuts and achieved

an average reduction on both kernels and in-shell hazelnuts in excess of 5 log CFU/g. However, it was observed that efficacy of the PPO treatment was inversely correlated with vertical height of the samples in the chamber. Upon consultation with an atmospheric engineer it seems likely that current PPO operating procedures due not allow for complete mixing of the PPO and inert filling gases. Therefore, the PPO dose in the chamber in inconsistent on the vertical axis. Calculations to estimate PPO concentration at various locations in the chamber is ongoing. A simple change in the operating procedures of the PPO chambers will likely alleviate this problem; however, additional trials are needed to verify this phenomenon. This approach will require buy-in from the PPO processors and the tree nut industry to commit adequate resources for such research.

GOALS and OUTCOMES ACHIEVED

The overall goal of the proposed work is validation of PPO processes for in-shell hazelnuts and hazelnut kernels that would achieve a 5-log reduction of *Salmonella*. This research identified a PPO treatment (1.00 kg/m^3) process that demonstrated a 5-log reduction of *Salmonella*. This information can be used to support process control strategies for food safety plans for compliance with the Preventive Control regulations. This information could also be used to support reconditioning proposals submitted to the FDA for reworking on contaminated product. It should be noted that this research also identified the potential influence of other commercial practices (other than PPO dose) that have a significant influence on the efficacy of PPO treatment.

The efficacy of PPO treatments for the reduction of *Salmonella* on hazelnuts was judged against the PPO validation work previously completed by the Almond Board of California and the California Walnut Board. These validation studies have been favorably evaluated by FDA and have been determined to be suitable as a pasteurization processes for tree nuts; however, the FDA continues to question these fairly limited validation studies. Through this research, OSU was able to informally collaborate with Dr. Linda Harris at UC-Davis who was heavily involved with the almond and walnut validation studies. Her expertise, network, and resources were critical to the success of this project. Dr. Harris conducted side-by-side experiments using other tree nuts in conjunction with OSU's hazelnut experiments. These comparisons provided additional reference points to evaluate the performance of the PPO treatment in the context of various tree nuts as well as with prior validation studies. This body of work formed the basis for a larger proposal to the USDA-SCRI program to broadly evaluate commercial-scale variables and identify best practices for the PPO and tree nut industries; however, the proposal was not selected for funding. A manuscript is being prepared for submission to a peer-reviewed journal by the end of 2016.

BENEFICIARIES

Existing and new markets are imperative for the health and longevity of the expanding Oregon hazelnut industry. Markets are dependent on the industry's ability to provide product without risk of pathogen contamination. Based on recent outbreaks and numerous recalls of salmonellosis from tree nuts, there is a real need for processing steps that would reduce or eliminate *Salmonella* on in-shell hazelnuts and hazelnut kernels. This project sought to gather scientific evidence that PPO would be a suitable pasteurization process for in-shell hazelnuts and hazelnut kernels.

This study provided baseline data that supports the use of PPO (at 1.00 kg/m^3) as a

processing approach to effectively reduce *Salmonella* contamination on in-shell hazelnuts and hazelnut kernels in a variety of packaging. This information will support the hazelnut industry's food safety plans to assist with compliance with preventive control regulations. Effective treatment of hazelnuts with PPO would reduce the risk of foodborne illnesses and recalls associated with hazelnuts produced in Oregon. This decreased risk improves food safety which directly benefits consumers and the overall public health. Commercial PPO processors will also benefit by expanding their customer base to include the hazelnut industry.

Project Impact on Oregon's Hazelnut Market:

Grower Beneficiaries = All 800 + growers in Oregon

World Market = 5% of the world crop that is grown in Oregon

LESSONS LEARNED

This project was approached with the intention of validating PPO treatment for hazelnuts (in-shell and kernels). The project identified a PPO treatment that was effective at reducing *Salmonella* on these nuts which provides support for the industry to utilize PPO as a preventive control. This research also identified some commercial-scale factors that likely significantly contribute to the efficacy of this treatment and modifications to standard operating procedures in the industry would likely improve the efficacy of these treatments. Engagement of additional stakeholders (the broader tree nut industries and PPO facilities) would be necessary to support additional trials that would verify the importance of these modifications.

In addition to the support provided by the Oregon Hazelnut Industry and Hazelnut Marketing Board, this research project was only successful due to an informal collaboration with Dr. Linda Harris at University of California-Davis. Dr. Michelle Danyluk at University of Florida also provided valuable insight on the research plan and data interpretation. Drs. Harris and Danyluk conducted the original PPO work for the Almond Board and have been actively involved in tree nut research with the pistachio, walnut, and pecan industries on food safety research. Stakeholders in California (tree nut industry, tree nut processors, PPO processors) were instrumental in coordinating and providing resources for commerical treatment and technical insight on processing parameters. This research project required an immense effort from many people to coordinate such large scale experiments and required modifications that could not be forseen. Many of these seemingly small and insignificant modifications allowed for additional observations that demonstrated processing variability that would have not been detected within the original design of the treatments.

Ideally, an additional commercial-scale trial would have been included in project to provide evidence of the variability of microbial inactivation on the vertical axis of the chamber. However, the industry is not interesting in committing such substantial resources to prove that a practice is ineffective. The alternative approach would be to conduct two additional trials to demonstrate efficacy with modified procedures; however, sufficient resources were not available to conduct two additional trials.

ADDITIONAL INFORMATION

Matching Funds - $58,437.63

Matching funds for this project were provided via salary and OPE expenses provided by the Department of Food Science and Technology, College of Agricultural Sciences, Oregon State University. Salary and associated OPE for a graduate student totaled $34,316.63. Tuition costs for the graduate student totaled $17,866. In-kind matching funds were provided in the form of several hundred pounds of in-shell hazelnuts provided by the Hazelnut Marketing Board and valued at $6,255.

Presentations

Theofel, C., Wright, D., Waite-Cusic, J.G., Harris, L. 2015. 2015 UCD/OSU PPO study updates. Webinar to tree nut industry stakeholders.

Wright, D., Waite-Cusic, J.G. 2016. PPO Study Update. Hazelnut Marketing Board.

ODA-S20 Safe Production of Onion - *Final report - accepted May 2017*

CONTACT: Joy Waite-Cusic
ORGANIZATION: Oregon State University
PHONE: 541-737-6825
EMAIL: joy.waite-cusic@oregonstate.edu

PROJECT SUMMARY

FDA has promulgated regulations on the microbiological quality of irrigation water used for produce that is consumed raw ("covered produce"). The standards for irrigation water quality significantly impact dry bulb onion farmers in Oregon and across the Pacific Northwest, particularly those that rely on the relatively poor quality water available for use in the Treasure Valley. This research was designed to evaluate the impact of various conventional practices (curing, storage, chlorine dioxide, fungicides) used by the onion industry to mitigate generic *E. coli* levels in irrigation water. The focuse of the study was to evaluate the survival of various levels (0-100,000 CFU/100 ml) of generic *E. coli* applied via drip irrigation using conventional curing practices. Field trials were conducted at the Malheur County Experiment Station. Despite high levels of *E. coli* contamination in irrigation water, few onions tested positive for *E. coli* following the irrigation event. Onions were free of microbial contamination from the irrigation water (all levels) by 16 days post-irrigation. This information supports the use of conventional curing practices as an effective strategy to mitigate microbial risk associated with the use of poor quality irrigation water.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

Oregon is the nation's second-largest producer of onions, producing 25% of the nation's crop with a farmgate value of $143 million in 2013. Despite a significant track record of safety, onions are commonly consumed raw; therefore, they are subject to the FDA's rule for the Standards for the Growing, Harvesting, Packing and Holding of Produce for Human Consumption. A major portion of the Produce Rule focuses on the microbiological quality of irrigation water used in the production of "covered produce". The rule requires testing of surface water used for irrigation and sets microbiological standards of a rolling geometric mean of <126 CFU/100 ml of generic *E. coli* with a Statistical Threshold Value of <410 CFU/100 ml. The majority of dry bulb onions produced in Oregon are grown in Malheur County where microbiological quality of surface water used for irrigation is especially poor. FDA is seeking additional scientific information about specific crops to determine their relative risk. Standard commercial dry bulb onion production practices require a significant period of time between the last irrigation and harvest to cure the onions, potentially allowing for a significant reduction in *E. coli*. The purpose of this project is to determine the impact of contaminated irrigation water on the relative safety of dry bulb onions produced using drip and furrow irrigation and to begin to evaluate potential solutions that could mitigate any risk associated with contaminated irrigation water.

Objectives:

- Determine the impact of contaminated irrigation water on the safety of dry bulb onions

- Evaluate survival/distribution of environmental and inoculated generic *E. coli* in water, soil, and onions during curing;
- Determine whether drip irrigation acts as an indirect method of water application reducing the risk of *E. coli* contamination of onion bulbs;
- Compare survival of *E. coli* on onions stored in wooden boxes (or bins) to onions stored in plastic boxes (or totes).

- Evaluate potential solutions to mitigate risk of onions produced using contaminated irrigation water.
  - Evaluate the efficacy of chlorine dioxide on survival of *E. coli* in drip systems;
  - Evaluate antimicrobial properties of copper fungicides applied near the end of the vegetative cycle of onion production.

PROJECT ACTIVITIES

Evaluate survival/distribution of environmental and inoculated generic E. coli in water, soil, and onions during curing. This study sought to quantify the reduction in generic *E. coli* on onions (Spanish yellow; Vaquero) from the last irrigation through lifting, curing, and harvesting using irrigation water artificially contaminated with a cocktail of rifampicin-resistant generic *E. coli* (TVS-353, TVS-354, TVS-355) in fields irrigated by drip systems supplied by well-water. The onion plots were split with a randomized block design (n = 5) that were irrigated with contaminated water at 0 (uninoculated well water), 1000, 10,000, and 100,000 CFU/100 ml on the final day of irrigation (8-hr irrigation at 400 L/min). Water samples were collected from plots throughout the irrigation period to monitor and verify inoculum levels. Rifampicin-resistant *E. coli* were enumerated using the IDEXX ColiSure kits with the addition of 50 µg/ml of rifampicin following incubation at 25°C for 24-48 hrs. Individual onion samples (n = 150-300 per contamination level) were collected on days 1, 2, 7, 16, and 28 post-irrigation and analyzed for the presence of rifampicin-resistant generic *E. coli* on the surface of the bulb. The bulb was rinsed in tryptic soy broth containing 50 µg/ml rifampicin (TSB+rif) and enriched by incubation at 25°C for 24-36 hrs. Enrichments were streaked for isolation onto Eosin Methylene Blue Agar supplemented with 50 µg/ml rifampicin (EMB+rif) and incubated at 37°C for 24-48 hrs. Isolates displayed characteristic iridescent sheen or black/purple in color were transferred to CHROMagar ECC Agar for confirmation as *E. coli*. On the last day of onion sampling (day 28 post-irrigation), soil samples from directly above the drip tape were also collected and enumerated for low levels of *E. coli.*

Onion plots irrigated with water containing 0 CFU/100 ml and 1000 CFU/100 ml resulted in a very low number of onion samples testing positive (1 out of 150 for each treatment on day 2 only). The 1000 CFU/100 ml contamination rate was selected due as a high contamination level that would still be compliance with the Produce Rule requirements if included in a data set for calculating the Water Quality Profile. On the day after irrigation (day 1), 9/150 and 20/150 onions tested positive for the medium and high contamination levels, respectively. On subsequent sampling points, *E. coli* was detected only on those onions treated with the highly contaminated water: 16/150 (day 2) and 9/150 (day 7). Rifampicin-resistant generic *E. coli* was not detected on any onions after lifting (day 7). At the end of the curing period, soil samples from low (6/20), medium (12/20), and high (19/20) contamination levels remained positive at very low levels (~1 CFU/50 g). Overall, these results indicate that

limited numbers of onions are contaminated via drip irrigation and that if contaminated, conventional curing practices (16 days or greater) mitigate the remaining risk.

Determine whether drip irrigation acts as an indirect method of water application reducing the risk of E. coli contamination of onion bulbs. During 2015 we conducted trials with four irrigation systems that delivered 1) well water free of *Escherichia coli* via subsurface drip irrigation, 2) canal water with moderate levels of *E. coli* via subsurface drip irrigation, 3) canal water with moderate levels of *E. coli* via furrow irrigation, and 4) canal water with enhanced levels of *E. coli* via furrow irrigation to determine if the type of irrigation affected the likelihood of onion bulbs becoming contaminated with *E. coli* from irrigation water. The four irrigation systems (replicated five times) applied water to onion on silt loam soil. Water was sampled hourly for *E. coli* and the lateral movement of *E. coli* in the soil solution was tracked by soil samples following four irrigations. Onion bulbs were sampled for *E. coli* contamination. The most probable numbers of *E. coli* in the irrigation water and in the soil water were determined using IDEXX Colilert® and Colisure®, respectively, and Quanti-Tray/2000®. Under both furrow and subsurface drip irrigation, a fraction of the *E. coli* in the irrigation water was delivered to the soil water immediately adjacent to the onion bulbs. The silt loam soil retained most of the *E. coli* content away from the onion bulbs and close to where the water entered the soil. *E. coli* was detected on the bulb exteriors prior to and immediately after lifting, but there was no relationship between the exterior contamination and the water source, irrigation system, or soil water content sampled prior to sampling. When onions were sampled after irrigation, no *E. coli* was detected inside of the onion bulbs grown with any irrigation treatment. At packout, there were no *E. coli* on the outside or inside of the bulbs. Current subsurface drip or furrow irrigation practices do not appear to pose a significant risk for *E. coli* contamination of dry bulb onion grown on silt loam in the Treasure Valley.

Compare survival of E. coli *on onions stored in wooden boxes (or bins) to onions stored in plastic boxes (or totes).* As part of the Produce Rule, FDA has mandated that produce storage containers be sanitary for their intended purpose. We conducted a replicated study (n = 5) to compare the roles of wooden and plastic storage containers in contamination of onion bulbs from furrow- (62.4-20,957 MPN/100 ml *E. coli*) and drip-irrigated (0 MPN/100 ml *E. coli*) plots. Onions from each irrigation treatment were harvested into 10 old wooden boxes that had not been sterilized and 10 sterilized plastic crates. Onions were stored for 6 weeks and then prepared for shipment by removal of loose skin, roots, and soil. None of these packed-out onions had detectable *E. coli* on the bulb exteriors or interiors, regardless of storage container type or irrigation water source. Plastic containers did not provide added food safety value compared with wooden boxes for the storage of dry bulb onions.

Evaluate the efficacy of chlorine dioxide on survival of E. coli *in drip systems.* Chlorine dioxide currently is used by growers to maintain drip irrigation systems by inhibiting the growth of algae and biofilms, which clog drip irrigation lines. The potential antimicrobial efficacy of chlorine dioxide (1 and 3 ppm) was assessed using low rates injected continuously into drip irrigation systems throughout each irrigation phase in commercial onion fields that utilize surface water. Water was sampled for *E. coli* at its canal source, after the filter station, and progressively at sites across the field. The most probable number of *E. coli* in water samples was determined using IDEXX Colilert® +Quanti-Tray/2000®. Chlorine dioxide substantially reduced *E. coli* counts at all sampled locations and concentrations.

Therefore, the use of chlorine dioxide could be adapted as a means to remediate microbial contamination of irrigation water, if needed for compliance with water quality standards.

Evaluate antimicrobial properties of copper fungicides applied near the end of the vegetative cycle of onion production. In a separate trial, standard copper fungicides were applied at the end of the vegetative phase to onions grown under furrow irrigation with contaminated water and under drip with uncontaminated water. The incidence of *E. coli*-contaminated bulbs was compared with corresponding onions not treated with fungicides. *E. coli* was detected on onions sampled before the copper fungicide treatment. Most samples had no *E. coli,* some had minor levels (<126 MPN), and a few had high levels. These results occurred across all four irrigation treatments. All bulb interiors, regardless of irrigation or fungicide treatment, were negative for all microbial contaminants. Given that most samples did not have detectable levels of *E. coli,* it was not possible to gauge the effectiveness of copper-based fungicides in controlling *E. coli*.

GOALS and OUTCOMES ACHIEVED

The overall goal of the proposed work was to provide the onion industry with evidence to support an exemption or variance from FDA's proposed water testing requirements in the Produce Rule. The onion industry needed evidence that characterized the risk associated with contaminated irrigation water and whether that risk can be mitigated through the production steps commonly used by the industry (i.e., curing, harvesting, and storage). The original benchmark for the microbiological quality of irrigation water were the standards in the original version of the proposed Produce Rule; however, during the project period a supplemental proposed Produce Rule and the final Produce Rule were published. The updated versions of the Produce Rule allowed for poorer quality water to be used for pre-harvest activities; however, a significant number water sources would likely still fail to meet the standards consistently. Various versions of the Produce Rule provided mitigation strategies to reduce risk associated with poor water quality, including the implementation of an irrigation-to-harvest intervals; however, the final version of the Produce Rule allowed for a maximum application of a 4-day interval (2-log reduction). There is very limited information available about the risk and rate of transfer of bacteria from drip irrigation systems to subterranean crops (onions, carrots, etc.). Data collected from this research provides in-field evidence that the extended irrigation-to-harvest interval (≥16 days) conventionally used by the dry bulb onion industry would mitigate risk associated with poor quality irrigation water. Despite irrigating with highly contaminated water, only a fraction of the onions were contaminated (13.3%) indicates the efficacy of soil as a barrier to microbial contamination from water source to onion surface. Curing strategies used by the dry bulb onion industry are in agreement with the intent of the mitigation strategies of the Produce Rule and reduce the risk of foodborne illness for onions grown in areas with poor irrigation water quality.

BENEFICIARIES

This evidence may be used by the Oregon onion industry to support an exemption or variance to water testing requirements which could help to alleviate the estimated cost to the Oregon onion industry (>$3 million/year). This research can support the on-farm food safety plan of 400 onion growers in the Pacific Northwest. Growers benefit by assurance of market access and minimal additional imposition of added costs of production. In the event that water quality remediation becomes necessary, existing practices could be adapted for

that purpose with minimal disruption to current growing practices. Growers benefit from the demonstrated safety of current storage containers, which obviates the investment in new bins.

LESSONS LEARNED

This was a productive and meaningful collaborative project between OSU-main campus and the Malheur County Experiment Station that supports Oregon's onion industry. While the major objectives of the project were achieved and the outcome of the study was successful, the original proposal of the field work related to the microbiological evaluations was overambitious and proved difficult to accomplish. Based on information from a similar field trial in California, decisions were made to reduce the study to focus on the most applicable commercial scenarios (drip irrigation only) and more controlled and measureable microbial inoculations (rifampicin-resistant *E. coli* only) with an increase in the number of samples analyzed per time point. These decisions were not meant to underestimate the significance of furrow-irrigation in onion production, nor to ignore the variability in microbiological quality of naturally-contaminated water in the Treasure Valley. These additional scenarios were originally included as an augmentation of the current knowledge about varied systems used in onion production and likely warrant further consideration; however, we determined that we could not accomplish the most important goals of the project if resources were allocated to side interests.

ADDITIONAL INFORMATION

Matching Funds - $71,401.75

Matching funds for this project were provided via salary and OPE expenses provided by Malheur Experiment Station, College of Agricultural Sciences, Oregon State University for a total of $41,298.08. Salaries, including time for Dr. Shock, Alicia Rivera (Bio Science Research Tech 1), and Monty Saunders (Bio Science Research Tech 3) for a total of $27,363.88. OPE associated with these salaries totaled $13,934.20. Matching funds from outside sources were also utilized for successful completion of this study. Malheur County Extension Service purchased the chlorine dioxide pump and associated supplies for $5103.67. The Idaho-Eastern Oregon Committee provided an additional $25,000 to support this line of research.

Reports

Shock, C.C., S.R. Reitz, E.B.G. Feibert, A. Rivera, H. Kreeft, and J. Klauzer. 2016. Soil Filtering Reduces Onion Bulb Exposure to *Escherichia coli* from Irrigation Water. OSU Agricultural Experiment Station – Ext/CrS 156 pp. 104-122.

Reitz, S.R., Shock, C.C., E.B.G. Feibert, A. Rivera, H. Kreeft, and J. Klauzer. 2016. Dry Bulb Onion Storage in Sterilized Plastic Crates Compared to Storage in Old Wooden Boxes. OSU Agricultural Experiment Station – Ext/CrS 156 pp. 123-132.

Reitz, S.R., Shock, C.C., H. Kreeft, and J. Klauzer. 2016. Chlorine Dioxide Injection Through Drip Irrigation Reduces *Escherichia coli*. OSU Agricultural Experiment Station – Ext/CrS 156 pp. 133-139.

Presentations

Waite-Cusic, J.G. 2014. FSMA and Agricultural Water: The Supplemental Produce Rule. National Onion Association/National Alium Research Council Annual Meeting, Scottsdale, AZ.

Waite-Cusic, J.G. 2015. Where do we stand with FSMA? The Supplemental Produce Rule. Idaho-Eastern Oregon Onion Growers' Association Annual Meeting, Ontario, OR.

Reitz, S.R., R.A. Roncarati, C.C. Shock, H. Kreeft, and J. Klauzer 2015. Chlorine dioxide injection through drip irrigation reduces *Escherichia coli*. Emerging Technologies for Sustainable Irrigation. Joint ASABE / IA Irrigation Symposium, Long Beach, CA.
Shock, C.C., S.R. Reitz, R.A. Roncarati, H. Kreeft, J. Klauzer, E.B.G. Feibert, and M.D. Saunders. 2015. Drip vs furrow irrigation in the delivery of *Escherichia coli* to fresh produce. Emerging Technologies for Sustainable Irrigation. Joint ASABE / IA Irrigation Symposium, Long Beach, CA.
Shock, C.C., S.R. Reitz, E. Feibert, A. Rivera, H. Kreeft, and J. Klauzer. 2016. Research Results on the Food Safety Modernization Act in Relation to Onion Production. Idaho-Eastern Oregon Onion Growers' Association Annual Meeting, Ontario, OR.
Reitz, S.R. 2016. Where Do We Stand with the FSMA Produce Safety Rules. Idaho-Eastern Oregon Onion Growers' Association Annual Meeting, Ontario, OR.
Reitz, S.R. C.C. Shock, H. Kreeft, J.C. Klauzer, and A. Rivera. 2016. Dry bulb onion storage in sterilized plastic crates compared to storage in old wooden boxes. American Society of Horticultural Sciences, Atlanta, GA.
Waite-Cusic, J.G. 2016. The Final Produce Rule: Ag water and alternatives. Oregon Department of Agriculture Food Safety Steering Committee Meeting, Salem, OR.

ODA-S21 Development of Value-Added Applications of Fruit and Wine Grape Pomace – *Final report - accepted May 2017*

CONTACT: Yanyun Zhao
ORGANIZATION: Oregon State University
PHONE: 541-737-9151
EMAIL: yanyun.zhao@oregonstate.edu

PROJECT SUMMARY

Fruit and wine grape pomaces are the byproducts (biowaste) from fruit juice and wine processes. Over 6 million tons of specialty crop fruit are processed for juice and juice concentrate, and 40,200 and 156,000 tons of wine grape are produced annually in Oregon and Washington, respectively, in which 22-35% are leftover (pomace) after making jucie and wines. Therefore, tremendous amounts of fruit and wine grape pomace are produced annually in the US Pacific Northwest region and nationally.

This project was aimed to develop value-added utilization of fruit pomace as functional food ingredients for promoting human health and as fiber source to create biocomposites. Studies were divdied into three parts: 1) understanding the characteristics of different fruit pomace, including cranberry, blueberry, raspberry, and apple, 2) developing food (including sensory evaluation) and 3) non-food (non-thermal compression, molded pulp technology) applications. A workshop "development of value-added food proudcts using fruit and wine grape pomace" was also held in April 26, 2016, and presentation included current drying technologies, product development, sensory quality, product labels, and shelf-life test. This project helped enhance productivity and innovation of specialty crop producers/processors by aiding in the production of high-value products, benefit the society by reducing environmental burden through the sustainable production of food processing byproducts, and promote human health by providing nutritionally enhanced functional food items. Related research and development have been also presented in NWFPA Sustantability Summiit (2016), Institute of Food Technologiest (IFT) annual meeting (2015 and 2016), and Research Publications (LWT-Food Science and Technology, 2017 and Composite Part A – Applied Science and Manufacturing, 2017).

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

Fruit and wine grape pomaces contain a large amount of insoluble carbohydrates, smaller amounts of proteins and minerals, and some remaining juices with sugars, acids, and other soluble substances. Disposal of pomace has been a burden for the juice and wine industry since their direct disposal into soil or landfills can pose potential environmental problem, thus inhibited. Currently the juice companies truck the wet pomace to local dairies to be used in low-value products such as fertilizer and cow feed, while wineries send the pomace to landfill or return it into compost. Although compost can be a worthy option, most wineries do not have the tools or space to utilize this option, plus compost made from wine grape pomace can harbor viruses and/or disease vector that makes compost worthless to use.

Meanwhile, fruit and wine grape pomace are good source of many functional substances, typically dietary fiber and phenolics (i.e., antioxidants), thus can be utilized for various value-added applications, including as functional food ingredient in food products for promoting human health and as nature fiber for making biocomposites that can be further made into biodegradable packaging containers (e.g., plant/flora pots, clamshell containers, egg cartons) for protecting environment. Especially for the late application, due to the steady decline in the recycled newspapers (a major fiber source for manufacturing biodegradable packaging materials) across the country, the industry has been aggressively seeking new sources of fiber to overcome the shortage.

Along with expanded production of specialty crop juice and wine, increased need for enhancing productivity, innovation, and sustainability, and shortage in nature fibers, it is timely and important to develop new value-added applications of fruit and wine grape pomace. Through technology innovation, the tons of waste product from being a burden can be transformed to becoming a valuable source of revenue for specialty crop industry.

Timelines of the completed project activity are shown below:

Project activity:	***Who is responsible?***	***When accompolished***
• Collected fruit pomace • Applied impingement drying (the most efficient method) • Analyzed lignocellulosic compounds and dietary fiber • Created the biocomposite board samples using molded pulp technology	Zhao's lab at OSU and Pilot-plant scale molded pulp maching donated by Western Pulp Products	Fall 2014 – Winter 2015
• Analyzed bioactive compounds and extractable pectin of fruit pomace • Investigated fiber structures using scanning electron microscopy	Zhao's lab (Zhao and students) at OSU	Spring 2015 – Summer 2015
• Analyzed dietary fiber and lipid fraction in fruit pomace • Physical and mechanical properties of molded pulp container • Participated in NWFPA Sustantability Summiit	Zhao and Simonsen's labs at OSU	Fall 2015 – Winter 2016
• Created fruit pomace fortified baked goods and mustard products • Developed fruit pomace incorporated newapepr slurry and biocomposite board using molded pulp technology • Held the workshop "development of value-added food proudcts using fruit and wine grape pomace"	Zhao and invited speakers Specialty crop producers/processors Specialty food processors	Spring 2016 - Summer 2016
• Removed hemicellulos and lignin from lignocellulosic compounds in apple	Zhao and Simonsen's labs at OSU	Summer 2016 – Spring 2017

pomace • Modify fiber structures of apple pomace • Published two papers and prepare one manuscript • Prepare final report		

PROJECT ACTIVITIES

The accomplished specific tasks from the Work Plan of the approved project proposal were shown below in the checklist (the work accomplished during the grant period can be also checked in the above timeline table). We prepared dried fruit pomace flour for four different fruit pomace (cranberry, blueberry, raspberry, and apple) using the impingement dryer. Pomace fortified baked goods (muffins, cokkies, etc.) and mustard product were created and consumer evaluation study (n=90) was conducted. The workshop "development of value-added food proudcts using fruit and wine grape pomace" was held in April 26, 2016, inclduing presentations in current drying technologies, product development, sensory considerations, product labels, and shelf-life testing of products. Fruit pomace incorporated biocomposite boards and containers were created by using thermal compression and the molded pulp technologies. Their water senstivity and mechanical properties were evaluated in terms of understanidng ligonocelluosic composition and fiber characteristics of fruit pomace. All these works were presented at the NWFPA Sustantability Summiit in March 15, 2016 (invited speaker and presented fruit pomace-fortified muffin samples) and Institute of Food Technologists (IFT) annual meeting in 2015 and 2016, and also two publications (LWT-Food Science and Technology, 2017 and Composite Part A – Applied Science and Manufacturing, 2017) were generated and additional mansucript is under the preparation.

Tasks	Accomplished
Optimize the drying methods/procedures previously studied in Zhao's lab for preserving wet pomace. The efforts are emphasized on developing drying methods that are economically feasible and easily adopted by the specialty crop processors and for pomace from apple, berry fruit and wine grape due to their leading production in the NW region.	X
Develop pomace flour fortified food products (baked goods, especially gluten-free, and processed meat products). Product formulation, quality and consumer acceptance will be studied.	X
Provide trainings to the specialty crop industry and food processors for transforming developed innovations (drying technologies and food product development) for commercial implementation. As a value-added Extension specialist, Zhao has extensive experience and success in providing trainings to the industry.	X
Create fully biodegradable pomace boards (pomace alone and blend with recycled newspapers), evaluate water sorption, biodegradability, and mechanical properties to meet the needs of a series of packaging applications, including, but not limited to plant/floral pots, clamshell containers, and egg cartons. These acticities are mostly time consuming and challenge part of the project.	X
Conduct pilot-scale trials of developed pomace based fiber containers and	X

modify the technology as needed.	
Provide trainings to specialty crop industry for transforming developed biodegradable materials and packaging containers for commercial implementation.	X
Report research results and developed technologies to specilty crop producers and stakeholders through presenting at annual conferences of NW Center for Small Fruit Research, NW Food Processors Association, and Institute of Food Technologists (IFT) and other regional and national meetings	X
Publications	X
Middle and final project report	X

GOALS and OUTCOMES ACHIEVED

GOAL:

- Develop new value-added applications of fruit juice and concentrate processing and winemaking biowaste (pomace) in food and non-food (packaging containers) products;
- Provide workshop based trainings to the specialty crop producers/processors for transferring the developed knowledge, technologies and products for commercial implementation.

OUTCOME ACHIEVED:

- Pomace fortified food products (baked goods and mustard) with increased dietary fiber and antioxidants measured by consumer acceptance study
- Pomace based biodegradable packaging materials and biocomposite boards
- Increased knowledge of specialty crop producers and processors by training workshop.

TARGET:

- Minimal 3 pomace fortified baked goods and processed meat products (pomace substitution of some wheat flour in baked goods and meat in processed meat products) were created, and the products had same or higher consumer acceptance scores than those of controls (without pomace added)
  - We investigated sensory quality (including consumer preference test) of two pomace fortified mustard products - fortified with cranberry and blueberry pomace. While the overall consumer acceptance of pomace fortified mustard is lower than conventional 100% mustard seeds product, consumer appreciated the potential health benefit, color and flavor of fruit pomace fortified product. More education is necessary to promote such product.
- Technologies for creating new biocomposites using pomace alone and pomace blend with recycled newspapers will be developed and tested for making at least 2 types of biodegradable packaging containers

- We created two new types of biocomposite board using either thermal compression method or molded pulping method by blending pomace with recycled newspapers. Products were tested on their performance as described in the proposal.

- At least 80% of participants reported an increase in knowledge after attending the workshops.

BENEFICIARIES

The impact of this project includes 1) enhancing productivity and innovation of specialty crop producers/processors by converting their biowaste into high value products, 2) reducing environmental pollution by reducing the disposal of biowaste and increasing sustainable production of industrial products, and 3) promoting human health by providing more nutritionally enhanced functional food items.

The immediate specialty crop beneficiaries of this project include 1) specialty crop producers, specifically juice and concentrate processors and winemakers, by adding more values to their under-utilized biowaste for enhancing their productivity and increasing their competitiveness, and 2) specialty crop nursery industry and packaging container manufacturers by adding environmental friendly and sustainable new items into their product line for expanding their business. The project will also benefit 1) consumers by increasing bioactive compounds in their diets through various innovative food products for promoting human health, and 2) society by potentially lowering cost and substituting renewable and sustainable materials for petroleum based products.

As stated above, the immediate specialty crop beneficiaries from this project are fruit juice processors and winemakers. In Oregon alone, there are currently 24 active juice and juice concentrate processors, and over 400 wineries, while in Washington, there are 39 juice, puree, juice concentrate, or cider processors, and over 800 wineries. In addition, specialty food processors (>600 active ones in Oregon and Washington) and plant/flora nursery industry are all benefit from this project by making pomace flour fortified health promotion food items, and sale pomace made biodegradable plant/flora pots and containers. Although it is difficult to give an exact value of economic impact at this stage of the project due to the large number of beneficiaries and the wide range of products, it is no doubt that the project will significantly impact the economics by considering the reduction of waste stream impact on environment, launch of new value-added products, and potential health benefit to consumers.

LESSONS LEARNED

We have learned that the type and amount of pomace fortified into different food products varied significantly by consider product physicochemical and sensory properties. Before developing new value-added food products fortified with fruit pomace, it is necessary to survey the consumers' demand toward the target product and to determine the maximum level of fortified pomace in a given product.

We have also learned that fibers from different fruit pomace have different morphology properties, which impact their performance in creating biocompoites. For examples, apple pomace were difficult to be compatible with newspaper fibers due to highly-bound

structures, which affected operation in the pilot-scale molded pulp packaging machine. Hence, it is necessary to modify the apple pomace fiber, such as delignification or removing hemicellulose, or to modify cellulose structures to make it more compatible with other fibers.

ADDITIONAL INFORMATION

Currently, two publications have been made:

- Virginia P. Gouw, Jooyeoun Jung, Yanyun Zhao. 2017. Functional properties, bioactive compounds, and in vitro gastrointestinal digestion study of dried fruit pomace powders as functional food ingredients. LWT-Food Science and Technology, 80, 136–144.

Virginia P. Gouw, Jooyeoun Jung, John Simonsen, Yanyun Zhao. 2017. Fruit pomace as a source of alternative fibers and cellulose nanofiber as reinforcement agent to create molded pulp packaging boards. Composites Part A: Applied Science and Manufacturing, 99, 48-57.

ODA-S22 Fresh strawberry expansion using grower bulletins and field production demonstration– *Final report - accepted May 2017*

CONTACT: Anna Peerbolt
ORGANIZATION: Oregon Strawberry Commission
PHONE: 503-289-7287
EMAIL: anna@peerbolt.com

PROJECT SUMMARY

At its peak in 1957, Oregon had 19,000 acres in strawberry production. By 2012, acreage had
decreased to 2,000 acres with 80% destined to processed markets. However, consumer interest in
local, fresh strawberries has steadily increased. Buyers such as Fred Meyer and New Seasons
have expressed interest in purchasing large quantities of fresh regional strawberries. At present,
there are not enough fresh acres harvested to fill demand.

To encourage growers to grow more strawberries for local fresh market, the Oregon Strawberry Commission (OSC) partnered with Peerbolt Crop Management (PCM) to create twice monthly OSC bulletins. PCM also hosted a workshop in August 2015, which focused on day neutral production, varieties and a taste test. A planting demonstration and tour of Unger Farms' fresh strawberry plantings and cooling facility completed the workshop.

The goal of the project was to assist both the present and next generation of Oregon strawberry growers to profitably produce fresh strawberries. We monitored this goal through four OSC bulletin surveys relating to: growers' interest in planting fresh strawberries, the level of knowledge concerning production and marketing, and whether they are or will be involved in selling their fresh strawberries to retail markets. Results of said surveys were favorable to reflect positive progress made since the beginning of the project. In the final survey, 50% of growers said they have increased production of fresh strawberries. 72% of respondents said that the project delivered adequate information to increase fresh strawberry production in Oregon. Lastly, 85% of growers said that they feel more confident that fresh market production is possible on their farms compared to January 2015.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

The Oregon strawberry industry continues to face many challenges, including changing market dynamics, increased out of area competition and a shrinking labor supply. Strawberry acreage has drastically declined in Oregon from a peak in 1957 of 19,000 acres to 2,000 acres in 2014. About 80% of this remaining acreage is still grown for the processed strawberry market, a niche that offers little opportunity for growth and could continue to

decline due to national/global market trends that no longer economically favor this production method in our region.

In contrast to the processed market, regional fresh market strawberry production continues to indicate expanded economic opportunities for Oregon growers. These diversified production systems offer the potential for additional strawberry varieties and more shelf stable berries. These would fill the increasing market demand for local, quality strawberries and could be available for a longer time throughout the year.
This developing strawberry fresh market faced barriers that were slowing down its expansion and threatening its ability to meet its full potential. These barriers included 1) A need for developing a larger, more informed grower base with knowledge to implement newer production and marketing methods and 2) The lack of adequate mechanisms for collecting and sharing timely production and marketing information on which a thriving, sustainable Oregon fresh market strawberry industry will depend. Therefore, the objectives of the project included increasing the knowledge base of production methods, discussing the types and availability of strawberry varieties that fill the need for growers and marketplace, and supporting growers with regular updates via OSC bulletins. The main goal was to keep those who grow and market fresh strawberries profitable and efficient.

In 2013, the OSC received a Specialty Crop Block Grant titled, "A roadmap for Oregon growers to the fresh strawberry market." The first of the two workshops supported by that grant ("The potential market for fresh strawberries") was held January 29, 2014. It demonstrated the high interest in fresh market strawberry production in Oregon. The workshop 'clicker survey' showed participants placing their highest priorities on learning more about 1) production methods and 2) marketing. During the second workshop in November 2014, growers had the opportunity to talk to buyers and discuss venues for sales. The currently completed project concentrated on production methods and increased grower knowledge, which enhanced the previous projects priority needs.

PROJECT ACTIVITIES

PCM coordinated the workshop and plasticulture demonstration on August 18, 2015. A report of the event was sent using the OSC bulletin. Footage of the presentation and workshop portions of the day were edited and uploaded onto the PCM YouTube channel, http://www.nwberryfoundation.org/workshops.html .

The fresh strawberry taste test went well at the workshop. There were four day neutral varieties represented from two farms. In February 2016, Brian Yorgey of OSU reported on the findings of this tasting and results were presented in one of the OSC bulletins: (http://tinyurl.com/j5z6xfs)

PCM produced 35 bulletins throughout this project. The number of subscribers to these bulletins increased by 64% from October 2014 through September 2016, totaling 225 recipients. Bulletin topics in this time period included OSC strawberry assessment guidance and requirements, season extension, a fresh strawberry buyers' interview and update, strawberry nursery production updates, new varieties, as well as the fresh taste test results from the August 2015 workshop. All bulletins can be found at: http://www.oregon-strawberries.org/freshmarketbulletins.html

PCM conducted three Survey Monkey surveys through this project. The first was conducted in October 2015 and was based on feedback for the August 18th, 2015 workshop and demonstration. In the survey, nearly 70% of respondents said that the August projects encouraged them to plant or increase fresh market strawberry production. Also, the majority of respondents said that the tour of the cooling facilities at Unger Farms was the most helpful section of the August 18th workshop and demonstration.

The second survey was conducted in March 2015 to get general feedback on the fresh strawberry production movement through March 2015. 80% of survey respondents said they knew more about fresh strawberry production in Oregon since the beginning of these projects. Most respondents also said that they still want to know more about plasticulture, day neutral, and June bearing production.

The final survey was conducted in August 2016 and was meant to help determine how Oregon's fresh market strawberry industry has been impacted by this specialty crop block grant. 84% of growers said that they feel more confident that fresh market production is possible on their farms compared to January 2015. When asked if they had increased their production since January 2015, 50% of growers said "yes." However, when asked, in general, if they had noticed an increase in Oregon fresh market production, 80% of respondents said "yes." Respondents were asked which fresh market topics still need coverage. 75% of people selected "more information on consistent labor supply." 12% of respondents requested more information on planting and cooling equipment, and the remaining 12% said "all of the above," which includes food safety and production information (specifically how day neutral production systems can supply the local market for six months of the year). 72% of respondents said that the information provided from thus far was adequate for encouraging fresh market production in Oregon.

Julie Pond of PCM gave project updates at the OSC annual grower meeting in February 2016. Also, Brian Yorgey of OSU shared the results of the fresh strawberry taste test from the August 2015 workshop. Thirty-nine respondents completed ballots, evaluating the four cultivars for overall appearance, color, shape, cap appearance, seeds, flavor, and texture. Attendees at the OSC meeting discussed the results thoroughly, which encouraged a heightened interest in the upcoming 2017 taste tests.

Julie Pond also presented the project updates at the Strawberry Field Day hosted by OSU in June 2016. Here is the link to the field day highlights:
https://www.youtube.com/watch?v=kgV70cU_gpw&feature=youtu.be

GOALS and OUTCOMES ACHIEVED

Although one of the measurements of success of the August 2015 workshop/demonstration listed in the proposal was based on attendance numbers alone, these numbers were actually based on those growers who were poised to transition well into plasticulture production methods instead. Approximately 15-20 growers who fit this description attended. PCM and OSC consider this number good, because these growers could have a real impact on selling more fresh strawberries to Oregon stores. In addition, of the 40 total people who attended, there were also representatives from grocery stores, such as Charlie's Produce and Organically Grown Company. Representatives from Lassen Canyon Nursery, an integral component to producing more fresh strawberry plants for the Oregon region, also attended.

The proposed measure of success for the bulletins was gauged by recording the number opened (29%), links clicked (5%), and signups made (a total of 99 additional people signed up during this two year project). Success of the workshop/demonstration videos was based on traffic reports. There were 462 views of the August 2015 workshop/demonstration videos. Each segment of the workshop and demonstration was uploaded as a separate video, so all video views were added up to the final number of 472.

The fourth and final survey was conducted in August 2016 and was meant to help determine how Oregon's fresh market strawberry industry has been impacted by this specialty crop block grant. A target measurement in the original proposal predicted that 30% of growers from the final survey would show an increased interest and/or knowledge of fresh strawberries. The actual number of growers who showed an increased interest and/or knowledge was 84% in the final survey. A target measurement in the original proposal hoped to add 60 people to the list of those receiving the OSC bulletin when in reality, 99 additional people were added to the list. The last target measurement in the original proposal hoped there would be 1,500 visits to the OSC resource webpage within the OSC website over the lifetime of the project. This number of visits was actually 1,336.

Based on our project outcomes, overall, this project was successful in increasing interest in growing fresh strawberries, knowledge of production methods, and marketing of fresh Oregon strawberries.

BENEFICIARIES

This project was geared toward fresh strawberries only. The workshop, field demonstration, and bulletins concentrate on growers interested in that single specialty crop. Growers, buyers, researchers/breeders, and plant nursery individuals all benefited from the project. All stakeholders listed were able to benefit from this project by providing information, demonstrations, tours, networking and taste testing to help them gain confidence in fresh market potential, production and demand in Oregon. Determining how many benefited from this project is difficult, as there are a vast array of stakeholders rather than just one group of individuals. The project reached everyone who participated in the workshop, received bulletins, or attended the meeting where this project was discussed. A minimum of 225 people are signed up for the bulletin and have received regular updates on the project.

LESSONS LEARNED

The main lesson learned from this project was the difficulty in attracting a larger attendance at the workshop/demonstration. It simply is very difficult to compete with the busy berry harvest season. Growers are still in the field in August, as the majority of these growers have more than one crop that harvest into August. As such, future field demonstrations or workshops should take place later in the year (September or even October) to accommodate more growers' schedules while still having adequate outdoor demonstration abilities on farm. Of course the 100F heat that dominated the meeting's demonstration was another barrier to attracting participants. We resisted doing the demonstration during the morning because we were afraid to delay the portion of the workshop that was meant for scheduled presentations.

ADDITIONAL INFORMATION

We budgeted $16,231 for matching/in-kind funds. The table below shows those amounts.

In-Kind donations $5830

3 speakers at field demo.	60 miles	$0.56	$101 in-kind
Unger Designs plasticulture equipment	Shaping beds, lying plastic.	$500 in-kind	
Wendy Hoashi-Erhardt, WSU Small Fruit Plant Breeding	6 hours	$270 in-kind	
Matt Unger, Unger Farms Owner	5 hours	$200 in-kind	
Will Unger, Unger Farms, Farm Manager	5 hours	$200 in-kind	
Brian Unger, Unger Designs, Owner	5 hours	$200 in-kind	
Philip Gütt, grant administrator	67.5 hours	$4,460 in-kind	

- We did not have speakers at the demonstration, so the $101 in-kind wasn't used.
- Unger Designs is a company making experimental and useful machines for the berry industry. The company made a $500 in-kind donation of the machine that shapes beds and lays plastic.
- Wendy Hoashi-Erhardt donated 6 hours of her times ($270) towards her appearance and presentation at the demonstration.
- Matt Unger donated the 5 hours of his time ($200) towards planning and explanations during the demonstration.
- Will Unger donated the 5 hours of his time ($200) towards planning and explanations during the demonstration.
- Philip Gütt, grant administrator, donated 67.5 hours of his time ($4,460) toward this project.

Cash Match from Oregon Strawberry Commission: $10,000

There was no change in the total of the cash match, however we asked for budget changes with this result:

Item	Funds requested	Difference
Bulletin editor/Personnel	$7,900.00	(0.20)
Other	$2,100.00	$250

We used slightly more than requested for personnel, but were not charged as much as anticipated for the Elks Lodge rental and catering.

ODAS23 Growing the Market for Oregon Organic/Transitioning Specialty Crop Growers – *Final report - accepted May 2017*

CONTACT: Sarah Brown
ORGANIZATION: Oregon Tilth
PHONE: 503-378-0690
EMAIL: sarah@tilth.org

PROJECT SUMMARY

Organic produce buyers in the Pacific Northwest have reported large supply gaps for many organic fruit, nut, and vegetable crops that could be met by Oregon growers. Growers do not have detailed, concrete information about these market opportunities. Expanding or transitioning
to organic production without good market information is risky and unlikely to attract financial
investment. Working with a group of organic produce buyers, we will develop detailed information about market opportunities for specific organic specialty crops, and estimated volume and sales value of supply gaps.

Oregon Tilth worked with Oregon-based organic produce buyers to explore how best to support farmers as they transition to organic production. The project included in-depth research and discussion with buyers to better understand supply shortages and structural constraints, and to identify opportunities for them, as well as for our organization and other service providers, to invest in and support transitioning farmers and organic farmers wanting to scale up production for the wholesale market. As part of the project, Oregon Tilth also conducted outreach and training to increase farmers' knowledge and readiness to enter the market and connect them with resources for help.

The 2014 project was tremendously successful in engaging buyers in market development exploration and analysis and brought many producers to transition workshops and meetings. We published an in-depth report, with key recommendations for moving Oregon's organic produce supply chain forward. We identified many organic specialty crops in demand by buyers, and demonstrated the value of connecting producers and buyers for group and individual discussions to establish relationships, share information, and inform growers' production and financial planning. We also identified key opportunities for investment to grow organic supply and provided a concise overview on the economics of transition.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

Issue. Transitioning to and expanding organic production have enormous potential for Oregon fruit and vegetable farmers. The organic market is rapidly expanding and sales are projected to continue growing at between nine and 14% per year. Fruits and vegetables are the top-selling organic food category, representing 43% of the total market. Oregon has the fourth highest sales of organic fruit in the US and is second in organic vegetable sales.

Demand for organic produce continues to outpace supply. Discussions with buyers confirmed major supply shortages of Oregon-grown organic fruits and vegetables. But despite the market potential, expansion and transition carry substantial risks. There has been almost no information available to farmers to help them understand specifically what crops are in short supply/high demand, or help them conduct production/financial planning accordingly.

Analysis of the market demand – top crops and varieties, scale and nature of demand, acreage/volume /production/sales value – was a critical first step in helping growers expand, transition, and enter the wholesale market. Buyers – organic handlers, wholesalers, and retailers – are also a key part of the equation. Buyers have expressed interest in investing in expanding the organic supply chain, but no real models existed for this kind of investment. With this project we analyzed potential strategies and helped buyers figure out how to connect with producers who want to expand/transition.

Importance and timeliness. Growers cannot effectively respond to organic demand without knowing which crops are needed, when, in what quantities, in what form, etc. This project sought to provide clear information and recommendations on the scope and nature of the market potential, helping growers develop realistic plans for transition and expansion and access financing.

While small-scale farming with organic practices has gained a foothold, especially among beginning farmers, high-volume wholesale markets for many certified organic fruits and vegetables remain unsaturated. Growing demand for and supply shortages of Oregon-grown organic produce, especially in the processed sector, make developing this market a timely investment.

PROJECT ACTIVITIES

A key accomplishment of this project was the completion and release of our report analyzing the market for organic products in Oregon. Through this Oregon Tilth conducted outreach to 95 companies and over 15 industry experts on market opportunities and key issues limiting supply. The report drew on detailed interviews with many large organic buyers, who generally corroborated anecdotal evidence of large unmet demand for many organic products. On the whole, we found that buyers' perspectives on the market are highly variable and that specific crop needs are largely unique to individual buyers. Although we were not able to generate meaningful quantitative data related to supply gaps, we collected extensive information about the nature of demand, constraints on the current supply chain, and the opportunities for buyers and producers to work together to increase supply. A key finding is that one-on-one relationships between farmers and buyers are essential, and that the value of facilitating farmer-buyer networking opportunities cannot be underestimated for growing the organic sector in Oregon. Other recommendations include analyzing production costs on a crop-by-crop basis as a starting point for determining commercially viable market opportunities; providing training and technical assistance to address the risks of organic transition; researching processing infrastructure capacity and potential for scalability to shift more organic purchasing from out-of-state producers to Oregon producers; identification of "full rotation" markets for multiple crops in a rotation and coordination of farmers and buyers to support these; and providing training and resources on market requirements such

as food safety and grading that are often a constraint for producers wishing to enter the wholesale market.

Ecotrust was unable to conduct an infrastructure analysis on organic supply chain so this was not included in the market report. We revised their scope of work to include a written description that characterizes the economics of transition to organic.

Two public webinars were held to share the findings from this project. The first, held on Dec. 4, 2015 was entitled Analysis of the Organic Market in Oregon and gave on overview of the finding from the report. The second, held on Sept. 6, 2016 was on 'Investing in Organic'. This webinar will explore the economics of transitioning to organic and report on strategies that are being used to help growers get over the economic hurdle of the transition period. An estimated 100 individuals viewed both of these webinars.

As planned, we conducted a variety of trainings and presentations to educate growers about organic market opportunities and strategies for accessing these opportunities, as well as to help buyers and service providers learn more about how they can help develop the organic supply chain. These events, reaching an estimated 400 people, included:

Successful Relationships with Farmers: From the Farmers Themselves, Provender Conference, October 15th, 2015

- Organic Weed Management, Organic Soil Fertility and Crop Nutrient Management, NORPAC grower meetings, October 15, 2016 & February 16, 2016
- Talking Transition, Northwest Food Buyers Alliance Local Link, October 29, 2015
- Scaling It Up Panel, InFarmation, November 10, 2015O
- Organic Market Opportunities Panel, Pacific Northwest Vegetable Growers Association Meeting, November 19, 2015
- Organic Market Opportunities: Perspectives from Fresh Market Produce BuyersNorth, Willamette Horticultural Society Meeting, January 12, 2015
- Expanding Organic Marketing Opportunities Workshop, Local Food Connection, February 1, 2016
- Organics Panel, Oregon Processed Vegetable Commission Meeting, February 27, 2016
- We were not able to conduct written surveys at every event due to their structure and/or host/coordinator plans and activities. Review of the workshop evaluations that we were able to disseminate found that all attendees said the training increased knowledge about organic certification process. Collectively, including all sessions, close to 15,000 acres were represented.

All efforts to capture data focused exlusively on specialty crops. Educational events that had the opportunity to benefit non-specialty crop commodities were supported by other funding sources. Project staff tracked all hours using a detailed timesheet to account for any hours that may be non-specialty crop focused.

GOALS and OUTCOMES ACHIEVED

Outcome 1

With the absence of any detailed benchmark data about organic market opportunities we sought to develop a concrete analysis and report. Although we were not able to generate

meaningful quantitative data related to supply gaps, we collected extensive information about the nature of demand, constraints on the current supply chain, and the opportunities for buyers and producers to work together to increase supply. This research culminated in a 30+ page report that was disseminated to 12 partner organizations, 15 companies, and to the media. The report was highlighted in a Capital Press article with circulation to 30,000. Approx. 60 individuals watched the webinar on the market analysis.

As planned, we conducted a variety of trainings and presentations to educate growers about organic market opportunities and strategies for accessing these opportunities, as well as to help buyers and service providers learn more about how they can help develop the organic supply chain. These events, reaching an estimated 400 people, represented well over 6,000 acres

Outcome 2

In order to meet the goal of educating growers about market opportunities and requirements we hosted 8 in-person training events targeting farmers with an additional 2 for larger audiences. Collectively, including all sessions, close to 15,000 acres were represented. The proposal stated that we would do electronic surveys in years 1 and 2. It became clear that electronic surveys are not the best approach for the farmer and buyers audience we are working with. Review of the approx. 100 workshop evaluations that we were able to disseminate found that all attendees said the training increased knowledge about organic certification process.

Outcome 3

In collaboration with Ecotrust Oregon Tilth hosted a webinar entitled 'Investing in Organic Production' on September 6, 2016. This webinar outlined varies approaches organic buyers and lenders can take in supporting producers as they transition. These included transitional premiums, loans, long-term contracts, and USDA programs. Additionally, to examine the options facing an example farmer, we drafted a simple Excel-based spreadsheet model of organic transition for 50 acres of broccoli, grown for the processing market. We based our assumptions about yield, prices, and costs on the enterprise budgets for processing broccoli developed at Oregon State University. These examples, including the model, will continue to be shared this winter including the Pacific Northwest Vegetable Assoc.'s annual meeting as well as an upcoming Oregon Tilth publication focusing on Transition.

Outcome 4

The proposal stated that we would do electronic surveys in years 1 and 2. It became clear that electronic surveys were not the best approach for the farmer and buyer audiences we are working with. Additionally, workshops and outreach events were postponed due to project timeline and timing of grower events. Buyers were also very hesitant to disclose any quantitative data. While this impacted our opportunities to develop a benchmark and administer post surveys we have heard anecdotally from buyers that they've seen an approx. 10% increase in acreage transitioning to organic. When asked how likely they were to pursue organic certification farmers responded as follows: 44% likely, 33% somewhat likely, and 1% said unlikely. Based off of these responses we feel that we can reasonable assume that approximately five percent of growers that attended our trainings will pursue expansion or transition to organic.

Lessons learned from our 2014 project highlight the need to help producers overcome the barriers to organic transition and access to organic markets, connect them with buyers, and increase our understanding of the economics of transition. These efforts will help farmers with production planning and farm management; completing their Organic System Plans and obtaining certification; finding and approaching buyers and meeting their requirements; and demonstrating the feasibility of financial plans to banks and other lenders. Additional constraints and detailed recommendations may be found in the report.

BENEFICIARIES

Key beneficiaries were organic and transitioning specialty crop growers in Oregon. As planned, we conducted a variety of trainings and presentations reaching an estimated 400 people, represented well over 6,000 acres**.** The report was disseminated to 12 partner organizations, 15 companies, and to the media. The report was highlighted in a Capital Press article with circulation to 30,000. An estimated 400 individuals were reached via in-person presentations and another 100 through the two webinars.

Benefits included increased knowledge of market opportunities and how to access these opportunities; expansion and transition management strategies; and resources for help with transition and expansion.

LESSONS LEARNED

Lack of public data and proprietary nature of company data made it difficult to identify the top 8-12 crops with supply gaps and quantify the gap in terms of volume and value. One of the key findings of our report is that organic market opportunities are variable and nearly impossible to quantify. As we realized that demand is best characterized in the context of individual buyers, we began shifting our efforts toward recruiting and organizing buyers to meet and speak with producers. These meetings were tremendously constructive and well-received and we plan to continue holding them. As described above, we also identified a variety of supply constraints and their causes, and began to hold training events focused on how to address these constraints.

An additional lesson learned was that electronic surveys are not the best approach for the farmer and buyers audience we were working with. Evaluations and verbal data collection at workshops seemed to be the most effective approach.

ADDITIONAL INFORMATION

Oregon Tilth provided an in-kind match of $26,048.18. This match represent funds used to support staff salary and fringe benefits on project implementation. A cash match of $10,589.64 was used to support the Transition Intensive at Organicology including speaker registration and facility rental. Ecotrust contributed an additional $9,900 match by covering 55% of their contractual fee as in-kind services.

Capital Press wrote an article about the report, which is available here: http://www.capitalpress.com/Oregon/20160331/analysis-oregon-organic-market-shows-gaps-promise

ODA S24 The Oregon Wine Experience Mobile Application – *Final report*

CONTACT: Jessica Willey
ORGANIZATION: Oregon Wine Board
PHONE: 503-228-8336
EMAIL: Jessica@oregonwine.org

PROJECT SUMMARY

As the Oregon wine industry has grown over the past decade, emerging regions in Southern and
Eastern Oregon have begun to play an increasing role in the state's reputation. While Oregon's
wine persona is still dominated by the Willamette Valley's Pinot noir production, the state's wine community is increasingly being viewed from a statewide perspective.

Unlike other wine growing regions in the U.S., Oregon has made its reputation based on the quality of its wine, not the size of its production. Oregon wine production represents only about 1% of the overall wine produced in the U.S., yet has a reputation for producing some of the highest quality wine in the world. Unfortunately, tools to effectively communicate this story to the wine trade and wine media have been fragmented, proprietary or lacking altogether.

In 2014, the Oregon Wine Board received SCBG funding to develop a suite of digital Oregon wine sales and education resources hosted on a mobile-friendly website called the Oregon Wine Resource Studio. Information on this website covers a broad range of topics including industry statistics, geology, soils, grapes, regional overviews, history and much more. In addition to website copy, the information is also available as a collection of professionally designed downloadable PowerPoint slides, PDF sheets, maps, photography and video that are free to access.

The Oregon Wine Resource Studio empowers each of the 725 wineries in Oregon to professionally and accurately tell the story of their individual brands within the context of the greater Oregon wine story to, ultimately, sell more wine and develop loyal, repeat customers.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

The Problem

Wine produced in Oregon is a unique agricultural product in that it is heavily dependent on the place where the grapes were grown and where it was made. Over a period of more than 50 years, Oregon has earned a reputation as a place where high quality wines are produced, based on the regional soils, climates, and experience and dedication of its artisan farmers.

But, because of the size of the Oregon wine industry and a lack of universal sales and marketing tools, this unique "Oregon story" is not broadly known. Tools to effectively

communicate this story to the wine trade and wine media have been fragmented, proprietary or simply lacking. This has led to a lack of understanding of Oregon's uniqueness. While a rich and interesting story exists, the ability to effectively evangelize it has suffered from an absence of easily accessed tools and resources.

The Solution

The Oregon Wine Board (OWB) received a Specialty Crop Block Grant to develop a suite of digital Oregon wine sales and education resources hosted on a mobile-friendly website called the Oregon Wine Resource Studio (the Resource Studio). Information on the Resource Studio covers a broad range of topics from soil to grapes, geology to history, sustainability to community, laddering up to a message of quality grapegrowing and winemaking in Oregon. In addition to website copy, the information is also available as free, downloadable professionally designed PowerPoint slides, PDF sheets, maps, photography and video, all working to bring the Oregon Wine story to life.

Notably, the OWB also created a series of slide templates for use by wineries. These allow all wineries to create their own presentations in a manner consistent to the Oregon Wine materials, incorporating their own story seamlessly into the broader context.

The Resource Studio empowers each of the 725 wineries in Oregon to professionally and accurately tell the story of their individual brands within the context of the greater Oregon wine story to, ultimately, sell more wine and develop loyal, repeat customers.

PROJECT ACTIVITIES

April 1, 2015 through September 30, 2015

- The OWB team (specifically: Jess Willey and Christina DeArment) worked to frame up the project through a series of stakeholder interviews, developed a new project plan with revised budget allocation, wrote project briefs for the contractors needed and identified those contractors to execute against the project plan.
- On Sept. 1, Willey submitted an amendment to the ODA modifying the proposed approach to achieving the original project objectives (approved Sept. 25).
- On Sept. 30, OWB signed its first contract for this project with Lunabean Media.

October 1, 2015 through March 31, 2016

- *Website development complete (structure and design)*
- Graphic design aesthetic developed
- Information collection and research in development.
- For several sections of information, long format content for website written; material converted to PowerPoint and PDFs for presentation purposes. Completed sections included: Industry history; Industry statistics; Environmental stewardship; Accolades; Climate; Labeling laws.
- Unveiled website and materials to industry in February at Oregon Wine Symposium
- Outreach to regional associations around the state for assistance in developing regional content
- Scheduled industry training meetings for August

April 1, 2016 through September 30, 2016

- Completed content creation for launch including:
    - Final information and data gathering, including collaboration with regional associations to gather statistics for all 18 of Oregon's AVAs
    - Creating, editing and proofing all materials for 30 presentations
    - Long format content written
    - Template slides for custom content
    - Instructions on how to use and information about the Resource Studio
- Researched copyright options with DOJ to protect materials
- Evaluated naming options and determined name (Oregon Wine Resource Studio)
- Prepared website for launch, including:
    - Uploading all content
    - Formatting all pages
    - Testing and troubleshooting functionality
- Soft launched website to about 20 people for "beta testing"
- Full launched website (http://www.oregonwineresourcestudio.org or http://trade.oregonwine.org)
    - Email to 2,200 members of Oregon wine industry
    - News release issued and pitched to 92 writers resulting in 4 articles and several saying they would use the site in the future
- Conducted five educational seminars for industry members around the state, with a total of 116 attendees and an average seminar satisfaction rating of 9 out of 10.
    - Prepared learning objectives, flow, content, presentations and materials
    - Marketed the seminars to get sign-ups
- Collated feedback from industry and prepared to update content

October 1, 2016 through March 31, 2017

- Updated presentation materials and site content reflecting feedback received from initial industry exposure.
- Conducted two additional educational seminars for industry members, with a total of 51 registrants and an average seminar satisfaction rating of 9 out of 10.
- *Scoped production of video and podcast and promotion of Resource Studio to trade audiences. Signed contract with GuildSomm, an international non-profit aimed at educating for wine professionals, to produce the content and promote the materials.*
- Designed, printed and mailed 1,244 brochures to Oregon winery and vineyard owners and principals, raising awareness of the benefits to them of the Resource Studio. Handed out an additional 750 to trade and industry professionals at events.
- Designed, printed and added to website a two-sided information sheet incorporating the Oregon AVA map and key wine industry details, promoting the Resource Studio. This has been handed out at trade events in Oregon, Texas, Canada, Asia and Europe.
- In March, Willey submitted an amendment to the ODA requesting an additional 6 month extension to complete the project.

April 1, 2017 through September 29, 2017

- Coordinated travel and hosted GuildSomm as they traveled to each region of Oregon to record a podcast and shoot interviews for the video.
- The GuildSomm podcast "A Tour of Oregon" launched at the beginning of June and was added to the Resource Studio. So far, the podcast has been listened to over 60,000 times by trade members around the world.

- Coordinated travel and interviews for GuildSomm's return in September to film b-roll and additional interviews for the video; the video was added to the Resource Studio.
- Presentations and website copy were updated in September to reflect the new data collected by the annual Oregon Winery and Vineyard Census.

GOALS and OUTCOMES ACHIEVED

Website

GOAL: The goal of the Oregon Wine Experience project was to provide a convenient, interactive and accessible tool to communicate the story of why Oregon is one of the world's premier wine regions.

PERFORMANCE MEASURE: The Resource Studio website is set up with Google Analytics allowing traffic, users and content to be tracked on the website. Additionally, every time someone downloads a resource from the website, they are required to fill out a form asking for their name, email, business, job title, city and state. This has grown the OWB's trade database and fold users into its on-going trade marketing and education effort.

TARGET: The original quantitative goal was to reach 250 winery users within the first nine months of the website launching. That goal was surpassed with 263 wineries and 328 additional users who identified as media, consumers or members of the trade downloading a resource between launch in August 2016 and April 2017.

Below is a report on the website and download usage since the Resource Studio launched in August 2016 through the end of September 2017.

Website usage
33,173 total page views
13,114 sessions
8,235 unique users
2:43 average session duration
90% of users from U.S.
10% of users from Canada, U.K., Mexico, Australia, Japan, Italy

Content Downloads
7,422 files downloaded
873 Unique users
- Winery/Vineyard: 348
- Trade: 167
- Media: 56
- Educator:103
- Consumers: 56
- Other: 143

Workshops

The Oregon Wine Board conducted seven educational seminars about how to use the website and customize PowerPoint presentations for industry members. A total of 167 industry members attended. Their average seminar satisfaction rating was a 9 out of 10.

Qualitative Industry Feedback

Many key leaders within the Oregon wine industry have had positive things to say about the Resource Studio project. For example:

"This week is the first time I've had a need to bury myself in the Oregon Wine Resource Studio and I must say the site is magnificent, being thorough, fair to all parts of the state, with content that I haven't seen for a long time (some I've never seen), and with the implementation impressively done! There is no excuse for industry members to misunderstand or misrepresent what we are, how big/good/impactful/… we are, where we came from, what the pioneers of the industry did in its founding that was innovative and

instrumental in making us who and what we are today. Amazingly valuable summary of who we are!" – Harry Petersen-Nedry, Founder of Chehalem Wines

BENEFICIARIES

The primary beneficiaries of the Resource Studio now and into the future will be the state's 725 wineries and 1,056 vineyards.

Today, approximately half of Oregon's wineries have downloaded a resource from the website and as it continues to be promoted that number is expected to increase.

The wineries who have utilized the resources available on the Resource Studio have been empowered to professionally and accurately tell the story of their individual brands within the context of the greater Oregon wine story to, ultimately, sell more wine and develop loyal, repeat customers.

LESSONS LEARNED

Creative Partner Selection

At the beginning of this project, OWB issued an RFP and creative brief to creative firms in the area that have clients within the wine industry. The three proposals received offered similar cost estimates and quality work, making it a difficult decision. After asking for references to understand each designer's project management style and ways of working, the choice became clear. For a project of this scale, taking the extra time to find the right creative partner proved to be invaluable.

Time estimates

After the first project revision, this website was to have been launched by February 2016 but did not end up launching until August 2016, with more pieces of the project still to be completed in the following 12 months. The delay was partially due to a signicantly under-estimate of the amount of time it would take to research, write, design and proof the website and all 25 unique presentations. Creative work of that scale deserves significant attention and time. Now, when the materials are updated every six months, time estimates are more realistic.

Tracking

From the beginning of this project, it was very important to us to identify as many ways as possible for us to track usage. Ensuring that Google Analytics was correctly installed and developing the system for tracking downloads has been very useful not just for grant reporting, but also for communicating success to the OWB's constituents in the Oregon wine industry.

ADDITIONAL INFORMATION

Matching funds

OWB in-kind matching in the form of staff time totaled $58,407.92

OWB cash contribution was $11,292.00, largely in service to the traveling workshops.

Website

The Oregon Wine Resource Studio and all related materials can be accessed at http://trade.oregonwine.org and http://www.oregonwineresourcestudio.org.

ODA S25 Leveraging Mobile and Social Media for Oregon Christmas Trees – *Final report-accepted May 2017*

CONTACT: Kari Puffer
ORGANIZATION: Pacific Northwest Christmas Tree Association
PHONE: 503-364-2942
EMAIL: kari@ostlund.com

PROJECT SUMMARY

The Pacific Northwest Christmas tree industry (the largest producing region in the U.S.) has seen stagnated growth in wholesale tree sales in recent years. Planting statistics indicate that more trees have been planted than the market currently demands. This over supply has caused smaller growers (1-29 acres) to struggle to compete in the wholesale market. Small growers represent 83 percent of Christmas tree operations in Oregon. These growers have to look for alternative avenues for selling their trees such as creating choose & cut operations on their farm or setting up a retail lot nearby and/or in bordering states or risk having no market for their trees.

By leveraging past marketing efforts, we created activities specifically designed for these growers and focused on raising awareness of choose & cut farms and retail lots. Through targeted marketing efforts we promoted the positive message of family farms, natural products and positioning real Christmas trees as an affordable way to build memories and traditions for American families.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

The purpose of this project is to address the unique needs of smaller growers (1-29 acres) who have been adversely affected by the oversupply of Christmas trees in recent years and struggle to compete in the wholesale market. Small growers represent 83 percent (2010) of Christmas tree operations in Oregon. These growers have to find an alternative avenue or risk having no market for their trees.

Specifically, this project has three objectives:

1) Develop a strategic marketing plan to raise awareness of choose & cut farms and retail lots
2) Promote a positive message of family farms and real Christmas trees
3) Explore alternative markets for small growers of Christmas trees.

PROJECT ACTIVITIES

A responsive mobile design of the *Find Your Perfect Christmas Tree* search and database from the website www.nwchristmastrees.org was developed in order to improve the user

interface for consumers searching for a Christmas tree on their phones or tablets. In addition, an order form with work flow and shopping cart was created capturing all of the needed information for the Dues and Listings on the website.

Based on the most popular search terms that consumers are using to find a Christmas tree "…Christmas tree in (city/county name)" a Search Engine Optimization/Search Engine Marketing SEO/SEM campaign was developed and website landing pages were created for the cities and counties of those with a listing in *Find Your Perfect Christmas Tree* with an estimated 555,620 unique visits to the website.

Through direct marketing, presentations at annual meetings and direct communication we worked with growers who had Pacific Northwest Christmas trees to help them find alternative markets for their trees. Choose & Cut Growers and Retailers were contacted to show them the value of having a presence online and how a listing in the *Find Your Perfect Christmas Tree* could help provide this for them. 169 growers created listings from this effort.

We used direct marketing, news releases and outreach to promote the *Find Your Perfect Christmas Tree* search to consumers in the cities and counties near the Choose & Cut Growers and Retailers that had created a listing on the website with an audience reach of 750,016.

Total estimated audience reach 1,305,636.

In addition, we found that many growers did not use social media for their business and although they knew it would be beneficial they lacked the knowledge of how to set it up and maintain their presence during the harvest season. We were able to work with growers to determine the social media outlets and promotions that best suited their needs. Helping the growers to create their own social media promotional plan that they could maintain throughout the year and during the Christmas tree harvest season (when activity is highest). This education empowers the growers to be their own advocate with consumers in their market and will serve them well in the future.

GOALS and OUTCOMES ACHIEVED

Through marketing and outreach efforts targeting consumer markets in and around the cities and counties near Choose & Cut Growers and Retailers that had listings we had a 32 percent increase in unique visits to the *Find Your Perfect Christmas Tree*. This was a multi-week outreach in all of our target markets.

Our social media outreach through the growers helped generate a positive message about real Christmas trees. The dialog was geared toward family farms, family traditions, the spirit of the holidays, buying a fresh tree, real tree care tips and the environmental benefits of a real tree.

In 2015, Oregon small Christmas tree growers (1-29 acres) cut and sold 313,000 trees, down by 53 percent from 2010. The gross sales totaled $4.5 million, and the average price per tree was $14.47.

There were 4,609 acres of Christmas trees, grown by small Christmas tree growers (1-29 acres), down 54 percent from 2010. *(National Agricultural Statistics Service, Oregon Christmas Trees, August 24, 2016.)*

Our intent with this project was to address the unique needs of smaller growers (1-29 acres) who have been adversely affected by the oversupply of Christmas trees and struggle to compete in the wholesale market. Through communications with small growers who are no longer growing Christmas trees we found that the majority of them had to sell their business or abandon the trees due to not being able to find market access for their trees.

Through survey and direct communication with small growers and retail lots who participated in the activities funded by this project we learned that more than 80 percent of respondents reported that sales were strong and that the Choose & Cut Growers and Retailers felt that their listing on the website in the *Find Your Perfect Christmas Tree* was one of their strongest forms of advertising.

Pacific Northwest growers met semiannually to discuss status of the project and deliverable outcomes from growers. As well the PWG presented an annual update on the website to PNWCTA Board Members during the 2014 and 2015 annual board meetings.

BENEFICIARIES

This project impacted essentially all Christmas tree farms and retail lots who provide Christmas trees grown in the Pacific Northwest, including all small Christmas tree farms and retail lots in the Pacific Northwest, including Washington and California.

At a time when there has been limited market growth this project developed and conducted marketing efforts to maintain and increase market shares for roughly 540 small Christmas tree farms in Oregon. These small Christmas tree growers make up 78 percent (2015) of the Christmas tree operations in Oregon.

LESSONS LEARNED

The most important lesson we learned was that we can have a meaningful impact on the market with coordinated efforts through grants like this and industry matching funds. We were able to create a responsive mobile design for consumers looking for Christmas trees and help growers to create their own social media promotional plan that they can maintain throughout the year. This education was met with an overwhelming positive response and will last well beyond this project.

Although we were not able to help all of the small growers, those who chose to participate felt we left a positive impression and our efforts gave them a much-needed start that they can continue to access well into the future. Overall, we are pleased with the results and look forward to building on the programs we were able to start utilizing this grant.

ADDITIONAL INFORMATION

In Kind contributions were from the Pacific Northwest Christmas Tree Association. Cash Match was funded by the Pacific Northwest Christmas Tree Association in part through member donations to the expanded marketing program.

Personnel
Jeff Booth – Artistic Director - $2,160 In Kind Match
Kari Puffer – Project Management - $3,630 In Kind Match
Fringe Benefits
Jeff Booth – Artistic Director - $648 In Kind Match
Kari Puffer – Project Management – $1,089 In Kind Match
Total In Kind Contribution - $7,527

Contractual
PNA – Email Newsletter Management - $3,263 Cash Match
PNA – Social Media Management and Dashboard - $1,420 Cash Match
Other
PNA – Tree Fair Promotional Post Card (15,000 each year) - $5,051 Cash Match
PNA – Choose & Cut/Retailer Listing Promotion (10,000 each year) - $$3,200 Cash Match
PNA – News Releases - $1,085 Cash Match
PNA – Mailing List - $1,394 Cash Match
PNA – Postage and Mailing - $4,590 Cash Match
PNA – Survey, Data Collection and Reports - $2,100 Cash Match
Total Cash Match Contribution - $22,104

ODA S26 Putting Pears on the Menu – *Final Report*

CONTACT: Kathy Stephenson
ORGANIZATION: Pear Bureau Northwest
PHONE: 503-652-9720
EMAIL: bwilmes@usapears.com

PROJECT SUMMARY

The "Putting Pears on the Menu" project was able to enhance domestic markets and domestic market sales, which was one of the 2014 Funding Priorities. The grant allowed Pear Bureau Northwest and our growers to develop a chain account mailing list, create outreach opportunities to chain restaurant menu developers, and fine tune our foodservice training presentation. The direct contact with six development chefs resulted in ongoing connections with those restaurants, but the ability to create strong programs for all chain restaurants was a secondary benefit for the growers.

PROJECT PURPOSE

The "Putting Pears on the Menu" project is designed to enhance domestic markets and domestic market sales, which is one of the 2014 Funding Priorities. Through this grant, Washington and Oregon pear growers and shippers will have the opportunity to introduce national chain restaurant decision-makers to pear production, seasonality, varieties, quality, storage and ripening education. There is also a perceived limited use and seasonality of pears among this group that hinders year-round usage and sales into major foodservice operations.

The Pacific Northwest, home to 84% of the US fresh pear crop has had two record- breaking crop yields within the past five years. Thus, increasing foodservice usage of pears is critical in helping demand keep pace with supply. The ultimate goal is to get more pears on national multi-unit restaurant menus, thereby increasing pearsales.

PROJECT ACTIVITIES

The first phase of this project was to complete a qualitative research study, to be conducted by Harvest PR & Marketing. A targeted list of chefs/corporate menu planners

were interviewed by phone for insights on the planner's use of (or decision not to use) fresh pears. This exercise addressed the current barriers to use of pears, and perceptions and topics to address through the education and communication phase. Contacts from our "Putting Pears on the Menu Contact List", Attachment A, were used for the interview.

As pear harvest began, Pear Bureau Northwest conducted a three day event featuring classroom time with a leading post-harvest ripening and handling expert, orchard tours with local growers, and visits to packing and shipping facilities, providing foodservice chefs with an unforgettable experience and closer look at the Pacific Northwest.

The project goal was to recruit 8+ key culinary/foodservice chefs/executives, representing high volume restaurant companies with 50+ units, for example, The Cheesecake Factory, Panera, Freshii, Ruby Tuesday, and Olive Garden. Twelve chefs accepted our invitation, (see Attachment B) yet six dropped out within the last weeks of the event due to unusually high workload in the restaurant industry during the event timeframe. Final attendees included research chefs from Panera Bread, Cheesecake Factory, Sizzler, Tavistock Restaurants, Brio Bravo, and Brickhouse Tavern and Tap.

National menu labeling laws took effect in December 2015 following the 2015 event date. As a result of the labeling requirement, national chain restaurants aggressively reformulated many items on their broad menus to better reflect consumer demands for healthier nutritional portfolios. This was likely the single largest menu development event, or even crisis, to happen in the foodservice industry, preventing many from attending the tour.

Following the tour, Pear Bureau Northwest planned to continue to foster relationships with these decision-makers, supporting menu ideation process by supplying fresh pears (by request for R&D), providing internal pear usage training materials for multi-unit operators, and offering the services of a post-harvest ripening expert for customized support. Outreach occurred four times since the October event, and is now happening on a bi-monthly basis. One chef has provided details of their pear formulation changes, including improving pear ripening for salad at Cheesecake Factory, and two chefs provided feedback on their goals, with Sizzler seeking value- added pear slices and Abe & Louie's continuing to feature pears seasonally. Details can be found in Attachment B.

GOALS and OUTCOMES ACHIEVED

GOAL: Provide northwest pear growers and shippers with a qualitative understanding of the opportunities and barriers for putting northwest pears on the menus of national, multi- unit restaurants.

- The dossier provided the key educational content that the team believes chain restaurants need to understand to expand pears on the menu and was shared with the shippers through our dedicated member's only site.
- Three Fresh News updates were sent during the program period updating shippers and growers and directing them to the team for more information.
- The tour was summarized and shared with the grower community in our quarterly Outreach newsletter delivered to each of 1600 growers in Washington and Oregon.

- The content and learnings were used to build the foodservice website.

GOAL: Increase overall northwest pear sales by increasing foodservice sales to national, multi-unit restaurants. TARGET: Increase pear purchases by the high-volume national restaurant companies participating in outreach by an average of25% by Fall 2016; aim for season-long pear usage or menu items with at least a 3-month promotional duration.

- The Mintel report showing restaurant menuing incidence was purchased at the beginning of the project and is attached. A key challenge to purchasing a follow-up report was identified and the report was not purchased. The follow-up study was not included in the budget and new managing director refutes the value of the study and procedures. During the period, internet searches were conducted to identify menu incidents and a report is attached.
- Incidence on the menu is in no way a predictor of pear sales and volume. A key challenge in foodservice produce distribution is tracking sales.
- A complete review of each restaurant progress is found in Attachment B.

During the project, we accomplished the following:

- **Developed target list of 25 chefs and corporate menu planners**. The target list is attached to the report, and includes target chain accounts for pear menuing collected from internet search, contractors database and national culinary events that were attended – NRA and WOHF/CIA. PBNW continues to use this list.
- **Qualitative research stud**y was planned to support event planning. Phone calls were conducted and chefs were interviewed face to face when possible.
- **Recruit chefs at national gatherings and events**. Six chefs attended the event after more than 30 chefs were invited. The invitations began 8 months before the event and twelve final attendees were firmed up in the last months before the tour, but only six attended.
- **Create final invites to chefs and travel arrangements.** Hotel and transportation was arranged for each chef, as well as group transportation to and from the orchards in Hood River, Oregon.
- **Tour itinerary planning and industry involvement.** A copy of the dossier from the event is found under Attachment C, showing the event and education materials delivered to attendees. The itinerary is found on page 3 and briefly described here:

DAY # 1 - Monday, October 5
5:30 – 7:30 pm Welcome Dinner - Tasty & Alder (Portland)

DAY # 2 - Tuesday, October 6
7:30 am Depart Hotel Lucia. Breakfast to-go Penny Diner
8:45 am Tour Ray Sato's Orchard (Hood River, OR)
10:30 am Tour Kiyokawa Family Orchard (Hood River, OR) Noon Lunch + educational panel: From Orchard to Restaurant: A Primer on the USA Pear Supply Chain at 3 Rivers Grill in Hood River
2:15 pm Tour Duckwall Fruit (Odell, OR)
5:30 pm Pear Dinner at Imperial (Portland) DAY # 3 -

Wednesday, October 7

8:30 am Depart for Plaza del Toro (Portland) 8:45 am
Welcome + Breakfast at Plaza del Toro
9:00 am Pear Nutrition, Varieties and Menu Trends – Kathy Stephenson, USA Pears
9:30 am Culinary Demo - Chef John Gorham
10:30 am Hands-On Session with Plaza del Toro team and Creative Round-Table on Menu Ideation
Noon Wrap-Up

- **Tour conducted in Oregon and Washington.** Tours were conducted per above itinerary in Oregon. Given the limited time spent with the chefs, the tour was only conducted in Hood River and the additional 4 hour drive to reach Yakima Valley was not put into the schedule. The tour included a drive along the Columbia River between Hood River and Portland, Oregon and orchards were pointed out. Video and still photos are provided to show the activities conducted at the tour.

- Chef follow up to support menu development . The hardest and weakest part of the project has been continuing follow-up with the chef attendees. PBNW has reached out three to four times with each chef. Results have been summarized in Attachment B. A complete list of activities accomplished by each restaurant is found in Attachment B. No pear sales volume is possible within the foodservice distribution.

- Developing relationships with chain accounts is a long-term process with the average menu development cycle being 18 months or more. Continued interaction with the development chefs will be required to encourage development of new items. For new fiscal planning, outreach to these targets will be included in the planning.

BENEFICIARIES

The 1600 growers and 50 pear handlers in Washington and Oregon directly benefited from the program. Quantifying pear sales lifts as a result of menuing pears is virtually impossible given the lack of industry shipment data and the private data collection by restaurants. Longer term, the information learned from working with chefs first hand led to the development of the foodservice website for chefs and the video production showing the harvest tour and learnings for future chefs.

LESSONS LEARNED

The leading challenge to the project was the timing of the execution during the year restaurant chains were aggressively reformulating their menus to meet mandatory nutrition labeling requirements.
The effectiveness of the harvest/orchard tours is limited by the reach of the invitees. Current management will work closely to set strong expectations for orchard tours events. Though is a common and useful activity for produce industry organizations, it is also expensive and resource heavy.

The development team was surprised to only have six development chefs attend the event. Additionally, grower orchard and farm tours are a common way to attract top development chefs to produce industry – used by other key commodity boards and market orders.

ADDITIONAL INFORMATION

Total PBNW contributions are attached in Attachment D, and includes $20, 678 in matching funds from the organization. The contributions covered travel expenses and other event costs to reach chef targets.

Attachment C includes printed materials used for the event.

A DROPBOX link can be accessed to review testimonial videos of the chef attendees and photographs of the event.
https://www.dropbox.com/sh/m03guobeu0nq45j/AACyGkHOf6Pn_5Tyxs0w41nRa?dl= 0

Contributions and learnings from the event were used to develop the USA Pears Foodservice website and Foodservice training course. www.foodservices.usapears.org

ODA S27 Steps to Success: Institutional Marketing Guide for Oregon's Produce Farms – ***Final report-accepted May 2017***

CONTACT: Deana Lloyd
ORGANIZATION: Corvallis Environmental Center
PHONE: 541-753-9211
EMAIL: Deanna@corvallisenvironmentalcenter.org

PROJECT SUMMARY

This project addresses production, marketing, financial, and legal risks small and beginning produce farmers face when marketing to institutions. Despite producer interest and institutional demand for local produce in the mid-Willamette Valley, few farms currently sell to this market. Farmers cite barriers to institutional marketing that include price and profitability, quantity, and uncertainty about regulations and requirements. From the institutional side, barriers include price, quantity, quality, and producers' ability to meet standards and procurement requirements.

This project sought to help Oregon farmers access institutional markets by providing farmers with information and education that addressed production, marketing, financial, and legal risks that small and beginning produce faced in marketing to institutions. The original outcome of the project was to create a series of trainings and a subsequent guide that could be used to help farmers market specialty crops to institutions. The project activities were expected to result in an increase in the number of Oregon farmers selling fruits and vegetables to local institutions. In Year 2, the scope of the project expanded to include the facilitation of direct sales of specialty crops between farmers and institutions, and included a farm-to-hospital pilot program. The project included collaboration with state-wide partners working to increase local wholesale market opportunities and creation of a farm-to-institution infographic designed to aid farmers considering selling to institutions.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

This project sought to address barriers faced by small and beginning specialty crop farmers interested in supplying institutional markets. The objective was to provide farmers with education and information that would allow them to understand the needs of institutions, increase their capacity to market to institutions, and meet certification requirements for selling to institutions. This project developed as a result of a wholesale success training workshop and two farmer/chef events in 2014 which demonstrated both a demand from institutions for Oregon-grown agricultural products, and a desire by local farmer to meet that demand.

Despite producer interest and institutional demand for local produce in the mid-Willamette Valley, very few farms sell to institutions. Farmers cite barriers to institutional markets that include price and profitability, distribution challenges and logisitics, quantity, and uncertainty about regulations and requirements. Institutions identify price, distribution and procurement challenges, quantity, quality, and producers' ability to meet standards and procurement requirements as challenges to purchasing direct from farmers. The project sought to create a resource that would bridge the gap between farmers and institutions.

This project comes at a time when there is increasing market demand for local produce and focus on the wholesale market. Oregon Community Food Systems Network, a statewide partnership of over 35 organizations working together to leverage greater impact on food systems work across the state, has identified wholesale marketing as a focus.

PROJECT ACTIVITIES

The project accomplished the following activities:

Planned and facilitated farmer training sessions: In Year 1, an initial pilot of 4 training sessions were designed to address (1) legal and liability issues; (2) food safety rules and certification requirements; and (3) needs, requirements and product demand from institutions. The trainings included presentations by experts, on farm tours, peer learning sessions, and panel discussions with institutional purchasers. Five farmers participated in the pilot. Feedback from farmers, institutions, presenters and project staff indicated that the training series was not as effective and efficient as expected, and project activities were revised for Year 2. In Year 2, the project focused on two primary training opportunities—an On-farm Food Safety Workshop, and a Wholesale Opportunities and Marketing Tour. Both of these are discussed below.

a) **On-farm Food Safety Workshop:** Food safety was identified as a significant topic of interest. In Year 2, an on-farm food safety workshop was in conjunction with the 2016 OSU Small Farms Conference. A total of 111 farmers attended the workshop.

b) **Wholesale Opportunities and Marketing Tour:** In Year 1 participants identified a need for small, local distribution channels. In Year 2, project staff organized an event to tour Fry Family Food Hub and other wholesale farms and facilities in Southern Oregon. Organizations and farmers from around the state convened to learn about and discuss opportunities and barriers to wholesale marketing and collaborative efforts to increase local purchases within wholesale markets.

Built relationships and connections between local farmers, institutional partners and organizations working focused on expanding local wholesale marketing opportunities:

a) **Piloted Farm-to-Hospital Produce Stand at Samaritan Health Regional Medical Center:** Project staff created a new market opportunity at the regional hospital that allowed local farmers to sell over $5,000 worth of produce to patients, visitors and over 200 hospital employees in the pilot year. This program will potentially be expanded in 2017.

b) **Facilitated relationship between the Oregon State University Athletics and local farmers:** Project staff worked with OSU Athletics' food service to pilot a "Tasting Table" education event for student athletes. This activity reached 300–400 student athletes who sampled local produce and learned more about the benefits of eating local and supporting sustainable agriculture.

c) **Presented concerns and achievements of farmers at statewide gathering:** Project staff participated in the 2016 Oregon Community Food Systems Network Convening which brought together over 35 organizations from around the state working on local food systems.

d) **Facilitated contracts between Linn-Benton Food Share and local farmers:** Project staff introduced Linn-Benton Food Share to local farmers and mediated conversations that resulted in forward contracts for two area farms and more fresh, local produce for local hunger relief agencies.

Increased the number of farmers in Benton and Linn counties selling to institutions: Through networking, contract negotiations and the farm-to-hospital project, eleven local farms forged new relationships with institutional buyers, resulting in over $12,000 in initial sales of Oregon specialty crops to institutions.

Published article about schools as institutional purchasers in Oregon Small Farms News: The e-publication reached over 4,000 individuals and annually receives 17,000-33,000 page views.

Created Farm-to-Institution infographic: Originally this publication was intended to be a multi-page guide for farmers wishing to market products to institutions. Upon reviewing existing material and farmer needs, an infographic with pivotal farm-to-institution information and questions to consider was created in collaboration with the OSU Center for Small Farms and Community Food Systems and is available on their website.

GOALS AND OUTCOMES ACHIEVED

GOAL: The performance goal of the project was to increase the number of farmers in Benton and Linn counties selling fruits and vegetables to local institutions.

TARGET: The target was an additional 9 farmers would sell products to institutions as a result of project activities. The project resulted in 11 farmers selling to institutions. Additionally, over 100 farmers participated in educational programs on selling to institutions and wholesale marketing, strengthening their ability to sell to institutions after the grant project.

PERFORMANCE MEASURES: The activities completed to achieve this goal were introductions and facilitation of discussions and contracts between institutions and farmers that resulted in sales between farmers and 4 institutions (Corvallis School District, Oregon State University, Linn Benton Food Share, Good Samaritan Regional Medical Center). These conversations were facilitated as part of the initial training sessions in Year 1. In Year 1, an initial pilot of 4 training sessions were designed to address (1) legal and liability issues; (2) food safety rules and certification requirements; and (3) needs, requirements and product demand from institutions. The trainings included presentations by experts, on farm tours, peer learning sessions, and panel discussions with institutional purchasers. In Year 2, the project focused on two primary training opportunities—an On-farm Food Safety Workshop, and a Wholesale Opportunities and Marketing Tour. Both of these are discussed below.

c) **On-farm Food Safety Workshop:** Food safety was identified as a significant topic of interest. In Year 2, an on-farm food safety workshop was in conjunction with the 2016 OSU Small Farms Conference. A total of 111 farmers attended the workshop.

d) **Wholesale Opportunities and Marketing Tour:** In Year 1 participants identified a need for small, local distribution channels. In Year 2, project staff organized an event to tour Fry Family Food Hub and other wholesale farms and facilities in Southern Oregon. Organizations and farmers from around the state convened to learn about and discuss opportunities and barriers to wholesale marketing and collaborative efforts to increase local purchases within wholesale markets.

RECOMMENDATIONS

- **Facilitating conversations between institutions and farmers is needed:** Farmers noted they don't have time to court institutional buyers, and institutional buyers are unfamiliar with farms appropriate for their needs. Having a third party make introductions and facilitate conversations results in more successful partnerships.
- **More locally based, smaller aggregation and distribution sites are needed:** A concern of institutional buyers was the time and energy needed to procure local product from multiple vendors. A central place to access local, wholesale produce would ease logistical details for both farmers and institutions. These sites need to be scale-appropriate for use by smaller growers who are usually too small for regional distributors.
- **Further education and wholesale "reality checks" with farmers are needed:** Many farmers expressed an adamant desire to sell to institutions, but upon learning more of the details regarding quality, quantity, uniformity and processing standards, felt they needed to better understand wholesale market opportunities, ways to analyze these business opportunities and make informed decisions. Ensuring farmers are set up to succeed with wholesale market opportunities should be emphasized over just getting more local farmers selling wholesale.
- **Further education to institutions and consumers about seasonality, etc. is needed:** Many institutional buyers were interested in purchasing local, but did not understand the concept of seasonality and how this impacts access to ingredients. Education about seasonally appropriate ingredients and menu options is needed. In addition, supporting institutions in making changes and promoting their commitment to local was shown to help create greater customer and institutional buy-in and demand.

BENEFICIARIES

Oregon specialty crop farmers were the primary beneficiaries of the project. As a result of the project, 124 farmers are more prepared to sell to institutions and participate in the wholesale marketplace. The economic impact of the project was an increase in sales by $12,000 during the project. However, the project initiated relationships between institutions and local farmers that have to potential to expand and be long term and lucrative for farmers for years to come.

# of specialty crop farmers who sold to institutions: 11

# of farmers who participated in educational opportunities offered through this grant: 124

# of institutions that purchased from participating farmers: 5

Other beneficiaries of the project are:

- Students in the Corvallis 509J School District who were exposed to Oregon specialty crops through the school meal program: 6,000
- Oregon State University student athletes who were exposed to Oregon specialty crops through a pilot "tasting table" program and outreach initiative: 300 – 400
- Employees, visitors and patients at Good Samaritan Regional Medical Center who visited the Farm-to-Hospital produce stand: 300
- Clients of local hunger relief agencies who received healthy produce through the Linn-Benton Food Share's contracts with local growers: 2,500+
- Attendees of the 2016 OSU Small Farms Conference who ate a meal that featured locally-sourced produce: 1,000

- Organizations that participated in Wholesale Marketing Tour and OCFSN's Wholesale Workgroup: 13

LESSONS LEARNED

Begin education and outreach to farmers considering wholesale by first addressing farmer objectives, goals and business analysis: Many farmers were interested in selling to wholesale markets, but through the workshop series realized they hadn't adequately thought about what entering the wholesale market would require. Utilizing time and energy to help farmers develop clear, realistic objectives for their operation while analyzing their business and time inputs would be the best way to begin education and outreach around selling to institutions. The workshop series began by educating about the nuts and bolts of selling to institutions, but what was needed was more emphasis on farmer suitability for this market.

Perform informational interviews with key stakeholders prior to beginning education and outreach: While this grant was written with the input of multiple stakeholders, once curriculum development began it was clear that the focus and deliverables needed to be adjusted to best meet the needs of area farmers. Through these informational interviews, valuable information was gleaned that led to better, more targeted programming.

Collaborate with other agencies and organizations working on the issue to gain insight into their past and present projects, what challenges they have faced, successes they have seen and how to support each other's work: The target of this grant started focused on farmers within Benton and Linn counties. While that geographic area remained the focus for direct outreach, there were many opportunities to take what was learned in this area and share it with a greater audience. Collaboration with other agencies was required to reaching this wider audience.

ADDITIONAL INFORMATION

Matching Funds Summary:

Expense Category	Cash Match	In-Kind Match
Personnel		$7,169
Other		$600

Personnel:

Name/Title	Level of Effort (# of hours)	In-Kind Funds Received
Lauren Gwin, Co-Director, Center for Small Farms and Community Food Systems, OSU	50 hours	$2,300
Amy Garrett, Small Farms Instructor for Benton, Linn and Polk Counties, OSU	20 hours	$786
Larry Lev, Professor and Extension Economist, Department of Applied Economics, OSU	20 hours	$1,250
Stasi Kasianchuk, Sports Dietician, OSU Athletics	20 hours	$2,833

Other:

Item Description	Justification of Expense	Per-Unit Cost	Number of Units	In-Kind Funds Received
Facility Rental	Year 1 Training Sessions	$200	3 rentals	$600

Farm-to-Institution Infographic:

This publication was produced by the Corvallis Environmental Center in collaboration with the OSU Center for Small Farms and Community Food Systems. This publication addresses key questions farmers should ask themselves before pursuing a wholesale market in addition to providing information about institutional opportunities at different scales.

Publication Citation and Location

Lloyd, D., S. Newton, L. Gwin, A. Garrett. 2016. Farm to Institution Fact Sheet. Corvallis, OR: Corvallis Environmental Center and OSU Center for Small Farms & Community Food Systems. Available at: http://smallfarms.oregonstate.edu/sites/default/files/small-farms-tech-report/farm-to-institution-fact-sheet.pdf.

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ODA S28 Evaluation of an Alternative Irrigation Water Quality Indicator – *Final report-accepted May 2017*

CONTACT: Bonnie Fernandez-Fenaroli
ORGANIZATION: Center for Produce Safety
PHONE: 530-757-5777
EMAIL: bonnie@centerforproducesafety.org

Oregon is in receipt of Washington and Califorina reports, we working with grantee to determine oversight and submission of the report. Please find the combined report for Washington, Califorina and Oregon in the following link.

https://www.centerforproducesafety.org/amass/documents/researchproject/384/CPS%20Final%20Report_Suslow%20(multi-state)_July%202017%20w%20Tables%20&%20Figures.pdf

PROJECT SUMMARY

To protect the Pacific Northwest supply of tree fruit, it is important to assess and understand microbial contamination risks and efforts to control them in the production chain. Knowledge gaps exist regarding the ability of current bin sanitation practices to reduce foodborne pathogen risks. The project objective was to evaluate bin sanitation effectiveness for wood and plastic bins. Tree fruit are the leading agricultural commodity in Pacific Northwest. Washington alone produces almost 60% of the apples and 40% of the pears grown in the United States (Smith, 2012). Although literature on minimizing pathogen contamination along the tree fruit supply chain has increased, most of the studies focused on microbial quality, harvesting methods or antimicrobial treatment of tree fruits (Annous, 2001; Beuchat, 1997; Du, 2003; Errampalli et al., 2005; Rodgers et al., 2004; Sapers, 1999; Sapers, 2002, Wang et al., 2007; Wisniewsky et al., 2000). Significant knowledge gaps exist regarding the role of harvesting and storage bins as a potential source of pathogen contamination, and the ability of sanitation practices to reduce potential food safety risks. However, several studies indicate that bins serve as a potential reservoir for numerous plant pathogens that influence fruit quality (Cossentine et al., 2004; Higbee, et al., 2001; Randall, et al., 2011; Sanderson, 2000). Therefore, the potential exists for bins to harbor and transfer foodborne human pathogens such as Shiga-toxin producing *E. coli* (STEC), *Salmonella spp.* and *Listeria monocytogenes*.

Some industry studies on wood and plastic surfaces indicated that traditional sampling methods may not accurately recover and reflect microbial levels, which may have been related to the presence of biofilms (personal communication with industry representatives). Similarly, biofilms were apparently present in a study of cleaned and sanitized plastic cutting boards in a food service setting, which presented challenges in achieving accurate microbial enumeration; both surface scraping and firm swabbing were utilized during the study (Neth et al., 2008). Therefore, sampling methods for removal of biofilms needed to be investigated in this study to achieve accurate results.

Several factors may influence potential food safety risks associated with bin handling, including type of material (wood versus plastic), bin storage design (nested versus non-nested stacking), type of tree fruit being handled and fruit production practices (organic versus conventional).

Bruised apples have been shown to support growth of *E. coli* O157:H7 (Digman, 2000). However, the ability of different bin materials to influence fruit injury, and potentially food safety, is unclear. Few differences were observed in final fruit grade between plastic and wood bins (Bollen et al., 2001). Wood bins are subject to weathering, resulting in rough surfaces that can harbor various pathogens, whereas plastic bins have been cited as more resistant to weathering, with surfaces that are easier to clean and sanitize (Waelti, 1992). However, long-term integrity and cleanability of plastic bins has not been thoroughly studied. In a study of acetic acid fumigation of fruit storage bins to control diapausing codling moth (*Cydia pomonella* {L.}) larvae, an increased pathogen mortality rate was observed in plastic bins as compared with wood bins (Randall et al., 2011). Current bin sanitation is primarily for control of plant pathogens; verification of control of potential foodborne human pathogens with current practices is warranted. Buyer requests for the industry to shift to plastic bin usage are increasing; nevertheless, investment in plastic bins represents a significant economic impact on the produce industry. There is a lack of scientific evidence to prove that plastic bins reduce food safety risks associated with human pathogen contamination.

Assessing pathogen risks associated with tree fruit bins and the effectiveness of bin sanitation is important to protect the supply of tree fruit and other produce. Development of appropriate methods to accurately assess microbial levels and bin sanitation effectiveness is critical. Assessing current bin sanitation methods and providing insight into sampling methods will deliver information for the produce industry to guide best practices to reduce microbial risks associated with bin handling and sanitation.

Our team's *long-term goal* is to contribute to the assessment of food safety risks for tree fruit. It is critical to collect data to assist in understanding the risks of pathogen contamination and proliferation at each point in the production chain to develop an appropriate risk management plan that spans the farm-to-table continuum. The *purpose* of this project is to assess the effectiveness of bin sanitation practices during tree fruit packing. This project is *important and timely* as outcomes of the Food Safety Modernization Act will require the tree fruit industry to validate prerequisite programs, such as sanitation, and understand pathogen risks. The information will also *increase competitiveness* by assisting growers and packers to meet customer food safety requirements as well as enhance fruit quality and safety. The project team is experienced in working with the Washington apple industry on fruit safety and quality issues through research and extension activities.

PROJECT APPROACH

Industry survey: An initial survey instrument was prepared, and individual interviews were conducted with three packinghouse food safety managers. Requested information included: prevalence of use for wood and plastic bins, number of years wood and plastic bins are typically used (anticipated useful life), types of bin storage design (nested versus non-nested stacking), bin storage conditions, handling during harvest and transport, use of bin liners, use of recycled bins, and bin sanitation practices in the orchard and at the packinghouse. Results from preliminary interviews indicated that a standardized, written survey was unlikely to result in collection of accurate information. Multiple individuals within a facility (food safety/quality, production, sanitation, orchard managers, among others) needed to be consulted to gain accurate information. Therefore, an initial interview with food safety personnel was performed.

Outcomes of this interview were documented, and areas where additional information was needed were highlighted; the respondent was asked to consult with other company personnel and update the document. Individual interviews required more time for data collection, but it is expected that more accurate information was gained. Results of the individual interviews reflect practices with bins associated with the Pacific Northwest tree fruit industry. Individual interviews were conducted with 12 food safety managers representing different packinghouses, and an anonymous poll was taken at an industry food safety meeting where more than 20 packinghouses were represented.

Laboratory examination of sampling methods: Two experimental methods assessed three sampling techniques for wood and plastic bin surfaces, and three enumeration methods for generic *E. coli* (ATCC 8739). Experimental method 1 involved establishing biofilms of generic *E. coli* (ATCC 8739) on wood and plastic bin pieces as well as glass as a control treatment; wood and plastic bin pieces were submersed in dilute tryptic soy broth (TSB) and held at room temperature, with agitation, for 6 days, with nutrient addition every other day. Experimental method 2 was more likely to reflect potential bin contamination under commercial conditions and involved inoculation of 200 μl of generic *E. coli* (ATCC 8739) on wood and plastic bin pieces; the pieces are allowed to dry and incubated for up to 6 days at room temperature. In method 2, an examination of nutrient addition on day 4 was also investigated. For both methods, samples were enumerated after inoculation as well as 1, 4 and 6 days after inoculation. Sampling techniques for microbial recovery compared cotton swabs, metal files and 3M Scotch-Brite™ pads. Enumeration methods that were compared included violet red bile agar (VRBA), VRBA with tryptic soy agar (TSA) overlay (for injured cell recovery) and 3M E. coli/Coliform Petrifilm™ .

Preliminary industry experiments: Preliminary experiments were conducted in two facilities, and plastic bins were provided by a third facility. The ability to examine bins that had been exposed to field conditions and contained fruit was examined. Wood bins were categorized by age and condition into four categories (new 2013, 2009–2012, 2004–2008, 1995–2003). Plastic bins were not used at this facility, so another industry partner provided plastic bins for the experiment. The partner confirmed that all of the plastic bins were approximately 12–15 years old (1998–2001), so categories based on condition (undamaged and damaged) were assigned. Wood and plastic bins were sampled at the packinghouse bin storage area and randomly assigned to treatments: rapid return from the orchard and packed immediately; held in the orchard for several weeks and packed immediately; refrigerated storage prior to packing; and controlled atmosphere prior to packing).

Approximately 80 bins were examined throughout the season; in some cases, a single bin was delivered to an orchard to be filled more than once. Bins were sampled for total coliform and generic *E. coli* levels prior to leaving bin storage and after treatment in the dump tank. Empty bins that had been stored in the bin storage lot without shipment to orchards and filling were examined immediately prior to and after dump tank treatment as a control. Based on observation of bin handling practices, it was determined that the entire bin could be considered a food contact surface since the bins are completely submersed in dump tank water.

For each examination of total coliform and generic *E. coli* levels prior to and after cleaning and sanitation practices, bins were sampled at three one-inch^2 locations on surfaces that would be in

direct contact with tree fruit as well as at three one-inch^2 locations on surfaces that would contact post-harvest agricultural water, such as water in dump tanks. Total coliform and generic *E. coli* were quantified on VRBA with TSA overlays and 3M *E. coli*/Coliform Petrifilm™ for Facility 1 and on CHROMagar™ ECC and 3M *E. coli*/Coliform Petrifilm™ for Facility 2. It was determined that sampling immediately after sanitation provided more accurate microbial results when compared to sampling 24 hours after bin sanitation.

Methods for examination of industry bin sanitation practices: For all cleaning and sanitation practices examined, bins were evaluated for condition and cleanliness. The same sampling sites could not be sampled more than once due to the aggressive nature of the sampling. The sampling team photographed and documented descriptions for each sampling site prior to and after treatment. The sampling team selected six representative sites prior to and after treatment based on visual evaluation in an effort to accurately evaluate the potential for a treatment to reduce microbial levels. Bins were sampled at three one-inch^2 locations on surfaces that would be in direct contact with tree fruit as well as at three one-inch^2 locations on surfaces that would contact post-harvest agricultural water, such as water in dump tanks. Total coliforms and generic *E. coli* were quantified on CHROMagar™ ECC. Time of immersion in water systems is provided in minutes (min) and seconds (sec).

Examination of a chlorinated dump tank and bin washing system: Wood and plastic bins from the facility were categorized into age categories. For wood bins, four categories were identified (2000–2007, 1990–1999, 1980–1989, 1970–1979). For plastic bins, three categories were identified (2007–2009, 2004–2006, 2001–2003). Bins from each category were assigned to one of two treatments (dump tank and bin washer or bin washer only). Bins were sampled prior to sanitation, after dump tank treatment and after bin washer treatment as appropriate. Validation of a CHROMagar™ ECC (see identified challenges below) was also performed. The facility measured chlorine activity using oxidation-reduction potential (ORP) measured in millivolts (mV) and time of submersion was recorded manually. Approximately 65 bins were examined.

Examination of a peroxyacetic acid dump tank system: For wood bins, four categories were identified (new 2014, 2000–2013, 1990–1999, 1980–1989, less than 1979). Plastic bins were not available at this facility and based on the results of one replication, further experiments were not performed. The facility targeted a concentration of 80 ppm peroxyacetic acid in the dump tank system.

Examination of a chlorinated dump tank followed by a heat treatment system: For wood bins, four categories were identified (new 2014, 2000–2013, 1990–1999, 1980–1989, less than 1979). Plastic bins were not available at this facility so another industry partner provided plastic bins; however, the plastic bins could not be accommodated in the dump tank system, so only the heat treatment system was examined for plastic bins. For plastic bins, three categories were identified (2007–2009, 2004–2006, 2001–2003). Facility 3 utilized a chlorinated dump tank followed by a heat treatment. The heat treatment was a separate piece of equipment designed specifically for heat treatment of bins using water immersion with chemical wetting agent targeting 168ºF for a minimum of approximately 2 min. The facility measured chlorine activity using oxidation-reduction potential (ORP) measured in millivolts (mV), and time of

submersion was recorded manually. Temperature in the heat treatment system was available from a thermometer (ºF) and time in the system was recorded manually.

Examination of pressure washing with water alone, as well as pressure washing followed by cleaning and sanitizing. For wood bins, four categories were identified (2000–2007, 1990–1999, 1980–1989, 1970–1979). For plastic bins, three categories were identified (2007–2009, 2004–2006, 2001–2003). Bins from each category were assigned to treatments: pressure washing with water or pressure washing followed by cleaning and sanitizing. Different cleaning strategies were recommended by a partnering chemical supplier. All bins had water applied with a non-pressurized hose prior to cleaning and sanitizing. For wood bins, powdered oxygen bleach was prepared with water in a 2:1 ratio as a cleaning solution. For plastic bins, alkaline cleaner containing quaternary ammonium chlorides was prepared in a 2:1 ratio with water as a cleaning solution. During cleaning, areas that were heavily soiled were brushed. Following cleaning, the bins were rinsed with water and a sanitizer was applied. For both wood and plastic, a peroxyacetic acid (PAA) solution, diluted 1:100 was prepared to yield a target of 1200 ppm, and was prepared as recommended by the product label. Bins were rinsed with water approximately 15 min after application of the sanitizer. Microbial sampling was performed approximately one hour after the final water rinse for post-sanitation samples.

Several industry partners donated staff time and facility resources to conduct research experiments; this involved several planning meetings, use of line time during normal production and troubleshooting efforts. Numerous industry partners contributed to this project with their time to respond to initial and follow-up interviews. Dr. Ines Hanrahan with the Washington Tree Fruit Commission provided insight and was involved in project planning and implementation for bin tracking systems. Dr. Hanrahan and several WTFRC interns were significant contributors and assisted with data collection throughout the study. The Northwest Horticultural Council also provided insight and recommended industry contacts throughout the study.

GOALS AND OUTCOMES ACHIEVED

Knowledge was gained from industry interviews about tree fruit bin handling and sanitation practices. Results of the individual interviews reflect practices with bins associated with the Pacific Northwest tree fruit industry. Individual interviews were conducted with 12 food safety managers representing different packinghouses and anonymous poll was taken at an industry food safety meeting where more than 20 packinghouses were represented.

Further data analysis will be performed to examine the potential influence of bin age and further examine quantitative data from the study.

The objective was to evaluate bin sanitation effectiveness for wood and plastic bins. Laboratory studies identified the optimal sampling technique for removal of biofilms from wood and plastic storage bin surfaces. Preliminary industry studies identified the optimal media for recovery of total coliforms and generic *E. coli* from wood and plastic bins in the presence of background flora. Five bin cleaning and sanitation practices for wood and plastic bins were examined: dump tank treatments using chlorine, dump tank treatments using peroxyacetic acid, heat treatment, pressure washing with water and water pre-rinse followed by

cleaning and sanitation compounds. Methods for wood and plastic bin cleaning and sanitation were identified.

Examination of industry bin sanitation practices: Total coliforms were used to evaluate the ability of cleaning and sanitation practices to reduce microbial levels on bin surfaces; generic *E. coli* were recovered from bins infrequently and at levels that were too low to evaluate the effectiveness of cleaning and sanitation practices.

Examination of a chlorinated dump tank and bin washing system

Dump Tank Treatment with Chlorine (average 774mV ORP):

Wood Bins: 52% (11/21) had more sampling sites positive for total coliforms, 33% had no change and 14% had fewer sites positive for total coliforms.

Plastic Bins: 56% (9/16) had no change in the number of sites positive for total coliforms, 25% had fewer sites positive and 19% had more sampling sites positive for total coliforms.

Results from this study indicated that immersion in a chlorinated dump tank system did not reduce the number of sites with total coliforms present for wood or plastic bins. Bins ranged from 1 min to 4 min 57 sec in the dump tank treatment. Although a bin washing system was evaluated at this facility, challenges with evaluating this system were encountered due to management practices; therefore, this data was not included in the results. This study examined 65 bins over a 3-month period and ended near the beginning of cherry harvest. Based on these results and results from the preliminary industry experiment above, it was determined that additional practices besides the most common industry practice should be examined. Due to timing and convenience for industry partners, additional experiments could not be performed until the beginning of apple season in August of 2014.

Examination of a peroxyacetic acid dump tank system

Peroxyacetic Acid (PAA) Treatment (target 80 parts per million, ppm) in a Dump Tank:

Wood bins: 72% had more sampling sites positive for total coliforms, 17% had no change and 11% had fewer sampling sites positive for total coliforms. (Plastic bins were not available for testing.)

The use of peroxyacetic acid in a dump tank system did not appear to improve the ability of a dump tank system to serve as a cleaning and sanitizing system for apple storage bins based on one replication; full replications of this experiment were not pursued due to project deadlines. Bins ranged from 1 min 37sec to 4 min 35 sec in the dump tank treatment.

Examination of a chlorinated dump tank followed by a heat treatment system

Dump Tank Treatment with Chlorine* (average 829mV ORP):

Wood Bins: 45% (12/29) had more sampling sites positive for total coliforms, 41% had fewer sampling sites and 14% had no change. (Plastic bins could not be accommodated in the dump tank system.)

Hot Water Treatment Following Chlorine Treatment:

Wood bins after treatment in a chlorine dump tank system (noted above*) followed by hot water treatment: 68% had fewer sampling sites positive for total coliforms, 27% had no change and 5% had more sampling sites positive for total coliforms. Treatment in the dump tank system in this experiment ranged from 2 min 16 sec to 5 min 30 sec.

Hot Water Treatment Alone:

Wood bins after hot water treatment alone: 48% (14/29) had no change in sampling sites positive for total coliforms, 41% had fewer sampling sites and 10% had more sampling sites positive for total coliforms.

Plastic bins after hot water treatment alone: 57% had no change in sampling sites positive for total coliforms, 37% had fewer sampling sites positive for total coliforms and 6% had more sampling sites positive for total coliforms.

Hot water treatment warrants further examination as a sanitizing system for wood and plastic bins. Although the highest percentage of wood and plastic bins that received only the heat treatment demonstrated no change in sampling sites positive for total coliforms, the next most frequent response observed was fewer sites positive for total coliforms. In some cases, it appeared that soiled areas may have protected microorganisms during treatment (see photo set 1). Furthermore, for wood bins that were treated with chlorine prior to heat treatment, the majority (68%) had fewer sampling sites positive for total coliforms. Heat treatment ranged from 1 min 15 sec to 3 min 20 sec in the hot water treatment.

It should be noted that several experiments in this project, including this one, indicated that chlorinated dump tank systems did not appear to be effective as a cleaning and sanitation step. In this series of experiments, the chlorinated dump tank system appeared to enhance the ability of the heat treatment system to reduce the number of sampling sites positive for total coliforms on wood bins that received both treatments. There are several possibilities for this observation. Wetting the surface of the bins appears to enhance the recovery of microorganisms, so the exposure to the dump tank system prior to heat treatment may increase the ability of the heat treatment to reach microbial populations. No efforts were made to remove soil from the bins in this experiment; it is also possible that the dump tank treatment removed sufficient amounts of soil from some of the bin surfaces to enhance the effectiveness of the heat treatment. It is also possible that residual levels of chlorine continue to act on the bin surfaces during subsequent heat treatments that were not observed immediately after removal from the dump tank system. For this experiment, 86 bins were sampled over a 3-month period.

<u>Examination of pressure washing with water alone, as well as pre-rinse followed by cleaning and sanitizing</u>

Pressure Washing with Water:

Wood bins: 90% (9/10 bins) had more sampling sites positive for total coliforms after pressure washing with water.

Plastic bins: 40% (4/10 bins) had no change, 30% had fewer sampling sites positive and 30% had more sampling sites positive for total coliforms after pressure washing with water.

Water pre-rinse followed by Cleaning and Sanitizing (average 1043ppm PAA):

Wood bins: 65% (11/17) had fewer sampling sites positive for total coliforms after sanitation while 35% had more sampling sites positive for total coliforms.

Plastic bins: 47% (8/17) had fewer sampling sites positive for total coliforms after sanitation while 29% had no change and 24% had more sampling sites positive for total coliforms.

A water pre-rinse (low pressure) followed by cleaning and sanitation steps were effective in reducing the number of sampling sites positive for total coliforms; this effect was more pronounced for wood bins compared to plastic. Pressure washing with water did not appear to be an effective strategy for wood bins; however, the results for plastic bins not as pronounced, given the limited data set (10 wood and 10 plastic bins examined). The project timeline limited the number of experiments that could be performed for this portion of the study. For this experiment, 54 bins were sampled over a 2-month period, ending in December 2014.

Data collection focused on establishing a baseline using current practices: From observation of bin handling practices, it was determined that the entire bin could be considered a food contact surface since the bins are completely submersed in dump tank water and could contribute to microbial levels and organic load in the dump tank system. Most current bin cleaning and sanitation practices observed did not involve efforts to remove heavily soiled areas prior to treatment, which can overwhelm effective cleaning and sanitation practices. This observation makes drawing conclusions about the data collected in industry settings challenging, as some effective treatments may have appeared less effective on individual bins that heavily soiled (see Photo set 1).

The data from this study indicated that a water pre-rinse followed by cleaning and sanitation would be an effective strategy for reduction of total coliforms on wood and plastic bins. Heat treatment appears to be a promising treatment for wood and plastic bins and warrants further investigation.

BENEFICIARIES

Beneficiaries of the project include produce industries that utilize wood and plastic bins during packing, tree fruit growers and packers, as well as consumers. Currently, in Washington, 59 individual packers of apples alone utilize 500,000 bins to transport and store their fruit. It is anticipated that study results will be shared with at least 1,200 specialty crop producers and packers in the Pacific Northwest as well as distribution of study results nationally through the Center for Produce Safety.

This study was one of the first to examine cleaning and sanitation practices of tree fruit storage bins for produce safety; it is important to establish a baseline by evaluating current practices to determine appropriate action and recommendations. This baseline will assist in directing future research and validation of cleaning and sanitation practices.

Industry survey:

- The majority of the industry used wood bins for apples and pears; bin liners are primarily used for varieties that are more easily damaged. Plastic storage containers (bins or totes),

when used, are more common for use with cherries and soft fruits, like apricots, peaches and plums.

- The most common methods of bin cleaning and sanitation were immersion in a chlorinated dump tank system or hydrocooler, pressure washing or visual inspection with treatment of soiled bins.

Laboratory and commercial examination of sampling methods:

- For the removal of biofilms from wood and plastic storage bin surfaces, 3M Scotch-Brite™ pads were the most consistent sampling method. Prior to sampling, it is necessary to treat the 3M Scotch-Brite™ pads with ethanol to remove antimicrobials that are present in the 3M Scotch-Brite™ pads.
- Although laboratory studies found that Violet Red Bile Agar (VRBA) with an overlay was the most accurate method compared to VRBA and 3M E. coli/Coliform Petrifilm™; preliminary studies in industry settings found an increased number of false positives with VRBA with an overlay. Therefore, CHROMagar™ ECC was used in the remainder of the industry experiments.
- Methods for wood and plastic bin cleaning and sanitation were identified.
- Most current bin cleaning and sanitation practices observed did not involve efforts to remove heavily soiled areas prior to treatment, which can overwhelm effective cleaning and sanitation practices.
    - This observation makes drawing conclusions about the data collected in industry settings challenging, as some effective treatments may have appeared less effective on individual bins that were heavily soiled (see Photo set 1).
- The data from this study indicated that a water pre-rinse followed by cleaning and sanitation would be an effective strategy for reduction of total coliforms on wood and plastic bins.
    - Wood bins: 65% (11/17) had fewer sampling sites positive for total coliforms after sanitation while 35% had more sampling sites positive for total coliforms.
    - Plastic bins: 47% (8/17) had fewer sampling sites positive for total coliforms after sanitation while 29% had no change and 24% had more sampling sites positive for total coliforms.

  A water pre-rinse (low pressure) followed by cleaning and sanitation steps were effective in reducing the number of sampling sites positive for total coliforms; this effect was more pronounced for wood bins compared to plastic. Pressure washing with water did not appear to be an effective strategy for wood bins; however, the results for plastic bins were not as pronounced, given the limited data set (10 wood and 10 plastic bins examined). The project timeline limited the number of experiments that could be performed for this portion of the study. For this experiment, 54 bins were examined over a 2-month period, ending in December 2014.

- Heat treatment appears to be a promising treatment for wood and plastic bins and warrants further investigation.

- Wood bins after treatment in a chlorine dump tank system (noted above*) followed by hot water treatment: 68% had fewer sampling sites positive for total coliforms, 27% had no change and 5% had more sampling sites positive for total coliforms. Treatment in the dump tank system in this experiment ranged from 2 min 16 sec to 5 min 30 sec.

LESSONS LEARNED

Education on the difference between cleaning and sanitation is needed to ensure effective communication on food safety issues and implementation of appropriate practices. Increasing knowledge of chlorine chemistry and the importance of microbial control of cross-contamination using chlorine in dump tank systems is warranted. This not only includes facility personnel connected with food safety management, but also individuals connected with production, sanitation and upper management.

Information gained through this project identified that tree fruit storage bins interface with the farming and fruit packing environment. It is reasonable that different standards and expectations for cleanliness and sanitation exist between these two environments. A challenge identified is that cleaning and sanitation currently rests with bin ownership at the packinghouse. However, the potential for collection of additional soil levels in the farming environment is anticipated. The presence of heavy soils on bins returning from the orchard could present challenges for sanitation in the packinghouse environment (storage and packing), challenges to dump tank management with chlorine sanitizers, and challenges with protection of microorganisms during standard bin sanitation practices at the packinghouse. Adjustments to current cleaning and sanitation practices appear to be warranted. Greater communication and partnership between growers and packers to share responsibility for bin sanitation may also be warranted to address this complex agricultural issue.

The terminology of cleaning and sanitation is not consistent or well understood among industry personnel; this led to challenges in communication during the survey. Several facilities had challenges with dump tank management. These unexpected outcomes were managed through selection of partnering facilities.

For some cleaning and sanitation techniques, increasing the number of bins would have been ideal; however, due to project deadlines additional data collection could not be performed. Allowing no-cost extensions for project would be useful. Delays in data collection occurred due to the need to explore additional cleaning and sanitation practices beyond the most frequent industry practices and alignment with harvest season.

ADDITIONAL INFORMATION

Several industry partners donated staff time and facility resources to conduct research experiments; this involved several planning meetings, use of line time during normal production, and troubleshooting efforts, which amounted to approximately $50,000. Numerous industry partners contributed to this project with their time to respond to initial and follow-up interviews. Washington Tree Fruit Commission interns assisted with the project to assist with

data collection, amounting to approximately $16,000. The Northwest Horticultural Council provided insight and recommended industry contacts throughout the study.

Publications for peer review and extension publications are being prepared based on project outcomes. Presentations include the following:

Utah State Horticulture Association Annual Meeting. 2015. Spanish Fork, UT. Wood and plastic bin sanitation and other considerations for packinghouse food safety.

Washington State Horticultural Association Annual Meeting. 2014. Richland, WA. Validation of packingline food safety interventions and assessment of sanitation techniques for storage bins.

Great Lakes Fruit, Vegetable and Farm Market Expo. 2014. Grand Rapids, MI. How effective are different sanitation techniques for tree fruit storage bins?

Center for Produce Safety, Annual Symposium. 2014. Newport Beach, CA. Assessment of sanitation techniques for tree fruit storage bins.

Center for Produce Safety, Annual Symposium. 2014. Rochester, NY. Assessment of sanitation techniques for tree fruit storage bins. Poster presented and abstract published in the Center for Produce Safety Symposium Program. 25.

Pacific Northwest Horticultural Council. Food Safety Committee Meeting. 2014. Research Review and Update.

Photo Set 1.

Wood bin, 2014. All six sampling sites less than 10 cfu/inch^2 prior to treatment; after heat treatment, 1 heavily soiled sampling site had 14,700 total coliforms cfu/inch^2.
Plastic bin, 2008. 5/6 sampling sites had less than 10 cfu/inch^2 prior to heat treatment and one site had between approximately 40 total coliforms cfu /inch^2. After heat treatment, 5/6 sampling sites had less than 10 total coliforms cfu/inch^2 and one soiled site 14,700 total coliforms cfu/inch^2.
Both of these bins were classified as having more sampling sites positive for total coliforms after treatment.

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ODA S29 Supporting school districts in purchasing and promoting Oregon Specialty Crops - ***Final Report-approved May 2017***

CONTACT: Megen Kemple
ORGANIZATION: Willamette Farm and Food Coalition
PHONE: 541-344-4329
EMAIL: megan@lanefood.org

PROJECT SUMMARY

Farm to school and school garden stakeholders in Oregon need technical assistance and training to overcome barriers to incorporating Oregon-grown fruits and vegetables into school meals, and to implement effective educational programs to promote these crops. Willamette Farm and Food Coalition (WFFC) will partner with other community-based nonprofit organizations and state agencies to provide this technical assistance and training to at least 520 farms to school and school garden stakeholders (including schools, community-based nonprofits, farms, distributors, and school garden educators).

Willamette Farm and Food Coalition partnered with other community-based nonprofit organizations and state agencies to provide technical assistance and training to approximately 1180 farm to school and school garden stakeholders including school districts, farms, distributors, community-based nonprofits, and school garden educators. Our goals were increase the capacity of Oregon schools, farms, and produce distributors and other stakeholders to incorporate Oregon-grown fruits and vegetables into school meals and to develop effective marketing and educational programs to promote these crops. Support was provided through the Oregon Farm to School and School Garden Summits, presentations and outreach at other conferences, regional trainings, webinars, in-person site visits, email and phone communication, and web-based resources. Purchases of Oregon-grown fruits and vegetables by schools increased by $2,349,645 over the project period. The project also increased the visibility of Oregon-grown specialty crops in school settings.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

The **goals** of this project were to increase the capacity of Oregon schools, farms, and produce distributors and other stakeholders to incorporate Oregon-grown fruits and vegetables into school meals and to develop effective marketing and educational programs to promote these crops.

Our **objectives** were to provide farm to school and school garden stakeholders in Oregon with technical assistance, training, and resources to incorporate Oregon-grown fruits and vegetables into school meals and to implement effective educational programs to promote these crops. We provided support through state-wide conferences (Oregon Farm to School and School Garden Summits), presentations and outreach at other conferences and events, regional trainings, webinars, in-person site visits, web-based resources, personal communication and distribution of resources via the Oregon Farm to School and School Garden Network's (OFSSGN) email list.

Farm to school and school garden stakeholders in Oregon needed technical assistance and training, including resources to overcome barriers to incorporating Oregon-grown fruits and vegetables into school meals, and to implement effective educational programs to promote these crops. At the Annual Meeting of the Oregon Farm to School and School Garden Network in November 2013, seventy six stakeholders identified a need for additional technical assistance and training in the areas of local food procurement and best practices for farm to school educational activities, with specific requests for webinars and in-person regional trainings. State agencies and nonprofit partners such as Oregon Department of Education (ODE), Oregon Department of Agriculture (ODA) and Ecotrust did have the capacity to meet the demand for technical assistance, training and resources. WFFC sought funding to work closely with these and other partnerss to provide this technical assistance and training to farm to school and school garden stakeholders.

This project took full advantage of existing resources and previous Specialty Crop Block Grant funded projects. Project partners distributed and promote *Oregon Harvest for Schools* materials. WFFC shared *Celebrate Oregon Agriculture* messaging and content with stakeholders in workshops and via email announcements. WFFC provided support to FoodCorps service sites & supervisors to increase their capacity and skills.

PROJECT ACTIVITIES

Willamette Farm and Food Coalition (WFFC) provided ongoing, responsive technical assistance to farm to school and school garden stakeholders via phone (approximately 24 one-hour technical assistance phone calls), in person (16 in person meetings) and e-mail (approximately 185 email communications). Project partners provided technical assistance in other key areas including: school garden and cafeteria food safety guidelines (ODE), connecting schools with producers (ODA) school garden development (School Garden Project) and food and nutrition curriculum (OSU Extension).

Workshops on incorporating Oregon grown fruits and vegetables into school meals, were held at these events:

- Oregon School Board Association Conference in 2014 and 2015 attended by 55
- Oregon School Nutrition Association Conference 2015 and 2016 attended by 38
- Oregon Farm to School Summit in 2015 and 2016 attended by 175
- Local Food Connection in 2016 attended by 25
- Oregon Small Farms Conference in 2016 attended by 26
- Environmental Association of Oregon Annual Conference attended by 100

Outreach at the following events:

- Small Farms Conference in 2015 and 2016
- Local Food Connection in 2015
- Oregon School Nutrition Association Farm to School Showcase 2015 and 2016

Trainings to Oregon's FoodCorps Service Members on the following topics: Oregon's farm to school resource people, the Oregon Farm to School and School Garden Network, getting started with local food procurement, school garden food safety and Oregon Harvest for School resources. Fifteen FoodCorps Service Members were trained.

The project included Regional Farm to School Trainings in Ashland, Roseburg, Central Point, Tillamook and La Grande September- November 2015 with 89 participants. Topics covered included: an introduction to farm to school and resource people, finding and buying Oregon-grown fruits and vegetables, Oregon Harvest for Schools materials, selling to schools (for farmers), USDA Pilot Project for Procurement of Unprocessed Fruits and Vegetables, educational activities and school gardens, and a special session on overcoming distribution challenges in Eastern Oregon. Out of 41 respondents, 97% indicated that the quality of the trainings was good, very good, or excellent; that they learned something new, received new information or resources; and that presenters were extremely knowledgeable or very knowledgeable.

WFFC and Upstream Public Health convened the Oregon Farm to School and Oregon School Garden Summits in January 2015 and February 2016, along with planning team partners. 375 people attended the Summits in 2015 and 383 people attended in 2016.
Of the 2016 Summit attendees responding to our evaluation survey: 97% indicated they would attend a Summit again in the future, 99% indicated they would recommend the Summits to a colleague, 96% indicated the Summits increased their knowledge about farm to school topics, 94% indicated the Summits increased their network of peers working in this area, 93% indicated the Summits increased their awareness of resources to help their work, 94% indicated the Summits increased their potential for collaborations that will enhance their work, and 96 % indicated the Summits increased their enthusiasm to continue working in the area of farm to school.

The overall scope of the project benefitted some commodities other than specialty crops. WFFC or partners promoted "Oregon foods" more generally when providing certain resources distributed via the OFSSGN email list, support to schools in purchasing local foods, and information shared by program partners at trainings and conferences. These activities by partners were funded using matching funds provided by those agencies. WFFC's non-specialty crop activities were covered by matching funding from the Bill Heally Foundation and program income from the Oregon Farm to School Summit which were not restricted to specialty crops.

GOALS and OUTCOMES ACHIEVED

Proposed measurable outcomes (from the approved project proposal):
GOAL: To increase purchases of Oregon-grown specialty crops by Oregon schools.
PERFORMANCE MEASURE: Economic value of Oregon-grown fruits and vegetables purchased by Oregon schools.
BENCHMARK: Based on available data from 39 out of 188 school districts, during the 2012-13 school year Oregon schools purchased Oregon-grown fruits and vegetables valued at $711,820.
TARGET: During the 2015-16 school year Oregon schools will purchase Oregon-grown fruits and vegetables valued at $1,300,000. This is an increase of approximately $600,000 over the benchmark.

Actual measurable outcome:
During the 2015-16 school year Oregon schools purchased Oregon-grown fruits and vegetables valued at $3,061,465. This is an increase of $2,349,645 over the benchmark.

We exceeded our target by $1,761,465. Most school districts in Oregon opted in to ODE's Farm to School Grants for procurement of Oregon foods during the 2015-2016 school year. The majority of these districts were provided technical assistance, training and support through this grant project.

BENEFICIARIES

Approximately 1180 Farm to School and school garden stakeholders in Oregon including school district nutrition services staff, farmers, distributors, non-profit organizations, OSU Extension staff, FoodCorps and AmeriCorps service members, garden educators and others benefitted from the project by receiving technical assistance, training, and resources to incorporate Oregon-grown fruits and vegetables into school meals, and to implement effective educational programs to promote these crops. Ultimately the beneficiaries were Oregon's fruit and vegetable growers and Oregon's school children.

LESSONS LEARNED

We learned that nutrition services staff who receive training and technical assistance in finding and buying Oregon-grown fruits and vegetables are more successful with their local purchasing if they have one-on-one follow-up to help them address barriers and challenges they may be facing.

ADDITIONAL INFORMATION

Total cash and in-kind match for this project was $35,583. The Bill Heally Foundation provided cash match of $6250 to cover a portion of personnel costs. The National Farm to School Network (NFSN) provided $912 to cover travel costs to the NFSN's Annual Meeting. OSU Extension provided in-kind match of $1,766 for staff time on School Garden Summit Planning Team. ODE provided in-kind match of $13,269 for materials and supplies, venue rental, and staff time for Oregon Farm to School and School Garden Summits. Upstream Public Health provided in-kind match of $13,386 for School Garden Summit costs including personnel and compensation for the planning team.

ODA S30 Northwest Food Buyers' Alliance: Cultivating Large-Scale Regional Demand for Oregon grown Fruit, Vegetables & Tree nuts – *Final report-approved May 2017*

CONTACT: Stacey Sobell
ORGANIZATION: Ecotrust
PHONE: 503-467-0794
EMAIL: ssobell@ecotrust.org

PROJECT SUMMARY

Large-scale food buyers face significant challenges (cost, complexity, consistency, volume needs, transaction costs, lack of tracking/reporting, etc.) in attempting to source fruits, vegetables and tree nuts that are produced or processed in Oregon. Over the past several years, the ODA and Ecotrust, Oregon Physicians for Social Responsibility (OPSR) have cooperated on projects to help these buyers address these challenges. This project builds on previous collaborative efforts and the partners will continue this work by 1) facilitating networking and best-practice sharing, and 2) providing education and support for overcoming known barriers.

This project increased both market demand for Oregon grown specialty crops by large-scale food buyers and access to healthy local foods for vulnerable populations in Oregon and SW Washington by facilitating networking and best-practice sharing and providing education and support for overcoming barriers. From 2014-2016, Ecotrust saw a 114% increase in local purchasing by participating institutions, facilitating a significant shift in procurement budgets and exceeding its 5% target. Through outreach, Ecotrust increased the number of foodservice directors on its institutional food buyers' alliance by 65%, from 49 to 81. Collectively, members serve well over 125,000 meals per day in Oregon. A 2017 survey of buyers showed that 100% of respondents increased engagement as a result of the project. Project activities included the development of: an engagement platform with a logo and brand, a website, an e-newsletter, and the guide *Buying Local at Scale*, designed to attract new prospects. Ecotrust also hosted three educational member meetings, two field trips to farms and kitchens, and two vendor fairs connecting large scale buyers with local producers and distributors.

The project was not funded by another Federal or State grant program nor previously funded by or in part by SCBGP.

PROJECT PURPOSE

Because of their purchasing power and role as anchor institutions in communities, hospitals, school districts, and other large scale institutional buyers provide an important opportunity to scale up local food initiatives and engage supply chain partners. However, large-scale food buyers face significant challenges (cost, complexity, consistency, volume needs, transaction costs, lack of tracking/reporting, etc.) in attempting to source fruits, vegetables, and tree nuts that are produced or processed in Oregon. Over the past few years, Ecotrust, ODA, and Health Care without Harm (HCWH) have cooperated to help buyers address these challenges. Building on the work of the Institutional Food Buyers' Alliance and the 2012 Specialty Crop Block Grant Program project, "*Oregon Institutional Food Purchasing Project,*" this project aimed to provide a compelling platform for foodservice buyer engagement by re-branding and professionalizing the look and feel of the alliance to increase the number and engagement of members, and ultimately to increase purchases of Oregon specialty crops by at least 5%.

PROJECT ACTIVITIES

Brand and Communications

To professionalize the look and feel of Northwest Food Buyers' Alliance (NWFBA) communications to members, Ecotrust worked with a contracted designer to develop: a logo, a website (www.food-hub.org/nwfba), a Mail Chimp email template, and the guide *Buying Local at Scale: Fruits and Veg, 50 Tips for Foodservice Operators*. The website acts as the public-facing expression of the NWFBA where buyers can connect with each other and get the latest information about the NWFBA, including upcoming events, member stories, and impact numbers. It also provides a place for interested buyers to join the NWFBA, as well as an opportunity to download the guide. Capturing the expertise of buyer members, Ecotrust printed several hundred copies of the guide, which were primarily used to generate leads for recruitment. Ecotrust was also able to use non-SCBG funds to craft a one-page flyer and brochure (attached).

Member recruitment campaign

Over the duration of the project, Ecotrust increased NWFBA membership by 65%, from 49 to 81 total institutions through two extensive outreach campaigns. The first campaign included: South Valley, Mid-Valley, Portland Metro, and SW Washington. For these regions, Ecotrust reached out to a total of 182 institutions, inviting them to download a free copy of the guide and learn more about the NWFBA. Ecotrust followed up with those who expressed an interest, gaining 22 new members (8 school districts and 3 health care facilities, as well as some retail, specialty event venues, and corporate cafes), about 12% of those contacted. The second campaign included: Central, Eastern, and Southern Oregon, as well as the coast. For these regions, Ecotrust reached out to a total of 113 institutions. Ecotrust followed up with those who expressed an interest, gaining 10 new members, about 9% of those contacted. Ecotrust was pleased with this conversion rate, since it reached out to most people cold (without any indication of their interest in local food sourcing), and since all were situated geographically far.

Meetings and Field Trips

Ecotrust hosted three member meetings and two field trips:

- **Nov 2014 – NWFBA member meeting:** Celebrated past successes, laid out a vision for the future, and notified members of the transition of NWFBA facilitation to Ecotrust.
- **Apr 2015 – NWFBA member meeting:** A Solutions Session to gather tips and strategies from members which were later captured in the *50 Tips* guide. Members also voted to change the name Institutional Food Buyers Alliance to the Northwest Food Buyers' Alliance and toured the sensory labs at ODA's Food Innovation Center.
- **Jul 2015 – NWFBA field trip:** Visited Intel's cafeterias and kitchens, and Stone Boat Farm in Hillsboro. A contracted photographer took professional photos during the trip that were used in the *50 Tips* guide and on the website and other marketing materials.
- **Apr 2016 – NWFBA member meeting:** Launched the website and *50 Tips* guide.
- **Sep 2016 – NWFBA field trip:** Visited McMinnville School District Nutrition Services kitchens and cafeterias and Stephens Farm, which supplies the district with local produce.
- **Feb 2017 – NWFBA webinar:** "Strategies for Sourcing Better Meat," with members from OHSU and Airbnb as guest speakers. Launched the Local Proteins project to make sustainably raised local proteins affordable and accessible to institutional buyers. All labor associated with this webinar was covered by other funding sources.

- **Apr 2017 – NWFBA member meeting:** Featured an opportunity for institutions to help think through models for processing off-grade, or cosmetically imperfect, Oregon produce, to be used by institutions at an affordable price and in accessible formats.

In addition, the Project Advisory Team (ODA, HCWH, Oregon Tilth, and Willamette University) met approximately bimonthly to provide oversight and input into project activities.

Vendor Fairs

Ecotrust hosted two vendor fairs, both dubbed Local Link, at the Redd on Salmon Street. It nearly tripled the number of vendors featured at the first fair from 12 in 2014 to 33 in 2015. Ecotrust increased the number of vendors again in 2016 by 25% to 41. Vendors marketed their products to 39 attendees in 2015 and to 35 in 2016, including diverse, large-scale, institutional buyers from hospitals, schools, juvenile justice and assisted living facilities, corporate campuses, and others. At these fairs, buyers were able to sample, meet growers, network, and identify future sale opportunities. All expenses, such as table rentals, were covered by non-SCBG match funds.

Highlights from post-event surveys include:

- **2015 Local Link**: Of 45 vendor and buyer responses, 89% agreed the event was useful and 87% said that they would definitely return. Over half (52%) said that they made 3 to 5 good connections, 33% said that they made 1 to 2 good connections, and 14% said that they made 6 or more good connections.
- **2016 Local Link**: Of 29 vendor and buyer responses, 83% agreed the event was very useful and 93% said that they would definitely return next year. Over half (52%) said that they made 3 to 5 good connections, 14% said that they made 1 to 2 good connections, and 31% said that they made 6 or more good connections.

After the 2016 Local Link, an article (attached) was published in Crain's Portland featuring members of the NWFBA. Summaries from both Local Link events plus photos are attached.

Corrections

In January 2016, Ecotrust hosted a Portland State University intern to examine how foodservice works at regional corrections facilities and to recommend ways to increase their local purchasing. As part of that work, staff visited the Stafford Creek Corrections Center, a state male prison located in Aberdeen Washington, and learned about challenges and opportunities for local food sourcing in correctional foodservice. Recommendations for the NWFBA included: targeting resources at top level administration, emphasizing benefits of local sourcing to facilities (e.g., mandate compliance, PR), and prioritizing a focus on working with juvenile facilities (a suggestion which informed the recruitment strategy). The intern's full report is attached.

Non SCBG funds

The NWFBA's work is supported by multiple partners and funding sources. It has the potential to benefit non-specialty crop commodities via projects that are funded by other sources. For example, Ecotrust has additional funds to support the work of the NWFBA, which may include non-specialty crop aspects such as poultry. This work was tracked separately and funds from ODA SCBG were only used to enhance the competitiveness of specialty crops.

GOALS and OUTCOMES ACHIEVED

The project's overall goal was to increase market demand for Oregon grown fruits, vegetables, and tree nuts by large-scale food buyers, primarily institutional foodservice operators, in Oregon and SW Washington. Two targets were outlined as measures of project success: one in relation to purchasing behavior and a second in relation to attitudes towards local sourcing. The procurement target was to see at least a 5% increase in purchasing from 10 large scale food operators across all specialty crop product categories measured in year two of the project – this target was met and exceeded (114% across all categories by 17 member institutions). Ecotrust also aimed to move at least 25 large-scale food-buying entities along a continuum of behavior change as it relates to converting more of their purchasing to Oregon grown fruits, vegetables, and tree nuts. This goal was just barely not met because only responses from 24 members were secured, but 100% of responses received indicated positive behavior change.

In regards to the procurement target, Ecotrust had originally planned to use benchmark data from the FY2012 SCBGP "*Oregon Institutional Food Purchasing Project.*" However, due to issues related to data availability for the institutions involved in earlier data collection efforts, procurement data from partner institutions spanning 2014-16 were compared (with 2014 as the benchmark). Based on the data collected, six out of the 11 crops saw an increase in sales of 5% or more, while local purchasing of the 11 target crops by member institutions overall increased by 114% from 2014 to 2016.

A web survey was used to measure member attitudes towards local sourcing through responses to the following statements:

- "I believe buying from farmers within the region is important and I am committed to increasing my company's regional sourcing."
- "I have learned at least two techniques for overcoming the challenges to regional sourcing." The goal was to see at least 25 members agree with the first statement and 15 members agree with the second. Only 24 members responded to the survey, so although 100% of respondents agreed with the first statement, the goal of 25 was not met. The goal of 15 respondents agreeing to the second statement was met.

Although one target was not met in its entirety, other findings emerged when data were compared across all institutions. Schools increased their purchasing of locally grown apples and pears; hospitals bought more local berries; and 78% of members reported their membership in the NWFBA to be "Very Valuable." For a full summary of evaluation efforts from this project, see the attachment, *The NW Food Buyers' Alliance: Impact of a Specialty Crop Block Grant on institutional procurement of local foods*.

BENEFICIARIES

- 81 NWFBA Institutional food buyer members benefitted from networking with and learning from like-minded peers as well as receiving support to connect with local specialty crop producers via vendor fairs, field trips, and one-on-one technical assistance;
- Approximately 30 Oregon specialty crop vendors and distributors that hosted field trips, attended vendor fairs, or made connections with new institutional buyers benefitted.

- Students, patients, elderly, and other vulnerable populations who consume meals with more Oregon-grown specialty crops also ultimately benefitted.

LESSONS LEARNED

Ecotrust found NWFBA branding and professionalization to be useful as it provided a foundation from which to work and a platform to rally around. Also, one of the most valuable pieces of support for members was helping them make connections to local products. Future efforts will focus exclusively on facilitating local procurement.

One project goal related to behavior change was not met due to an insufficient survey response rate. Although the rate was reasonable at 19% and email follow-up was done, it may have been more useful to follow-up by phone. In addition, cold calls to new institutions made conversions challenging. It may have been more beneficial to focus on a smaller geographic area or limit the types of institutions included. It was much easier to identify and reach out to school districts and hospitals than it was for assisted living, colleges, and others.

Finally, although not supported financially via the SCBG, during the project Ecotrust participated in a national metrics collaborative (attached), which has met in person annually and is working on shared metrics and indicators. Given the accomplishments and lessons learned over the project period, the NWFBA is now poised to not only significantly change the way that Oregon institutions procure food, but also to be an influencer and collaborator at a national level.

ADDITIONAL INFORMATION

Ecotrust received $40,147 in project cash matching funds.
See attachments

ATTACHMENTS

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ODA-002 Oregon International Culinary Ambassador Program

Attachment 1: Delta Fly Article

ポートランド、最新グルメトレンド

全米で最もクリエイティブな都市と呼ばれるポートランドは「食」の分野でも、様々な注目すべきムーブメントを次々と生み出している。そのトレンドの最新情報をお伝えしたい。

text_sky photo_Taro Otake special thanks to_Travel Portland www.travelportland.jp
オレゴン州政府観光局 traveloregon.jp Feast Portland www.feastportland.com

Portland

近年オレゴン州のポートランドは、全米有数のグルメ都市として世界的に注目を集めている。2000年前後のころから、アメリカではローカルのオーガニックフードに対する関心が急速に高まり、高品質な作物をバラエティ豊かに生産するオレゴン州への関心も高まっていった。

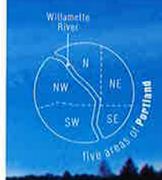
1960年代後半から1970年代にかけて、アメリカは急激な経済成長を遂げた。だが、オレゴン州は開発ブームの流れに乗らず、逆に都市や工業地域の膨張を抑制する目的で、都市成長境界線を1979年に制定した。ポートランド郊外に、豊かな自然と農地が守られているのは、この政策のおかげでもある。

ここ15年くらいの間に、ニューヨークやロサンゼルス、そしてサンフランシスコなどから、多くのスターシェフがポートランドに移り、高品質なレストランを続々オープンさせている。近郊の農家から、新鮮で安全な旬の食材を調達できるポートランドは、料理にクリエイティビティを発揮したい意欲的なシェフたちにとって、理想的な都市といえる。

なお今回の取材では、多くのポートランドのシェフにインタビューしたが、自ら畑で作物を作っている人、そして将来それをしたいと考えている、と答える人が少なくなかった。あらゆる面にクリエイティブでありたい、と考える人々が、今のポートランドのグルメブームを支えているのだろう。sky

Access

オレゴン州への日本からの玄関口、ポートランド国際空港までは、成田国際空港から直行便で約9時間半



ファイアースティード・セラーズ・ワイナリー

Firesteed Cellars Winery

大地の恵みを凝縮したワイン

ポートランドから車で1時間ほどの距離にある、リッガーオールに広大なヴィンヤード(ぶどう畑)を持つワイン製造メーカー。テイスティング・ルームでの試飲をとおして、ウィラメット山系のテロワールを体感することをお勧めする。

Data area —— Willamette Valley

2200 N Pacific Hwy W, Rickreall, OR 97371
☎ +1-503-623-8683 www.firesteed.com

（右）オレゴン産のサイダー作りに
適した品種の林檎をベースに、
各サイダリーは独自の味作りに勤しむ。
（中）ハードサイダーの作り手は、
彼らのように若い世代が中心と
なっているのも特徴だ。
（左）ハードサイダーには、
樽で熟成させるなど様々な製法がある。

近年、ポートランドのクラフトビールは世界的に注目を集めているが、ポートランドではクラフトビールという言葉はあまり使われてはいない。ひとり当たりのクラフトビールの消費量が国内最大のポートランドでは、ビールはクラフトビールなのが当たり前であり、あえてクラフトという言葉は使う必要もないのである。

ポートランドではビールだけでなく、コーヒー、ワイン、蒸留酒などでも、こだわりの「クラフト精神」が発揮され、そのカルチャーが世界に向けて発信されているが、その中でも最新の流行と言えるのがハードサイダーの分野だ。ハードサイダーは、林檎を主原料として発酵させたお酒である。日本ではフランスの呼び方である、シードルのほうが馴染みが深いだろう。

アメリカにおけるハードサイダーの歴史は古く、植民地時代から人々に愛飲されている飲料だった。しかし禁酒法時代を経て、アメリカでのビールの人気が高まるにつれて、ハードサイダーの消費量は次第に減っていくことになった。だがポートランドをはじめとするオレゴン州内では、2010年ころからハードサイダーへ注目が集まるようになった。これはクラフトビールのブームの影響で、ビール以外の分野でもこだわりの酒を作りたいという若い世代の生産者の視線が、ハードサイダーに向いたためである。

2013年には、オレゴン州でのハードサイダーの生産量は3年前の4倍の規模にまで増え、その数字はさらに増加を続けている。穀物を発酵させるビールと異なり、林檎を発酵させるハードサイダーは基本的にグルテンフリーな飲み物なので、昨今の健康志向も急速なハードサイダー人気の高まりに寄与していると思われる。だが、一番の理由はやはりその味の良さと、味わいのバラエティの豊かさが、ポートランドをはじめオレゴン州の人々を魅了しているところにある。

若いサイダリー（サイダー醸造所）の人々は職人気質を発揮し、独自の「クラフトサイダー」の味を追求している。伝統にのっとり林檎を主成分としながらも、ホップや他のフルーツ、そして各種酵母を用いて新しい味を作り出すことに、クリエイティブな喜びを見出しているのだ。現在ポートランドには多くのサイダリーがあり、ハードサイダー専門のタップルームもある。またボトル詰めの製品は、スーパー等どこでも買えるようになっている。クラフトビール同様、ポートランド発のトレンドとして大人気のハードサイダーを、ぜひ味わってみていただきたい。SKY

Topics Portland — 2

飲みやすく、そして味わいが深い
目下、急成長中のハードサイダー

クラフトビール、アーバン・ワイナリー、そしてコーヒーなど、
ポートランドは飲み物の分野でも
全米をリードするトレンドセッターの地位にある。
そんな彼の地で一番急成長なのが、「ハードサイダー」だ。

サイダー・ライオット！
Cider Riot!
こだわりのサイダリー

オレゴン州とワシントン州でとれた林檎のみ使用する、カスケーディアン・サイダーにこだわったアーバンサイダリー。トラディショナルな製法の林檎だけで作ったサイダーから、ホップ入り、ブラックベリー入りのクラフトサイダーまで、そのラインナップは豊かだ。

Data area —— □N ⊠NE □SE □SW □NW

807 NE Couch St, Portland,
OR 97232
☎ +1-503-662-8275
ciderriot.com

2タウンズ・サイダーハウス
2 Towns Ciderhouse
ポピュラーなブランドのひとつ

ポートランドから車で約2時間、セイラムの南にあるコーバリスのサイダリー。日本国内の大手スーパーでも扱いのあるブランドだ。幼馴染3人が作った若い会社であり、伝統的手法と新しい試みを融合した、独自のサイダー作りに励んでいるブランドだ。

Data area —— ⊠ Suburbs of Portland

33930 SE Eastgate Cir, Corvallis,
OR 97333
☎ +1-541-207-3915
2townsciderhouse.com

ワンダリング・アエングス・サイダーワークス
Wandering Aengus Ciderworks
日本でもボトルが買える！

ポートランドから車で約1時間の距離にある、オレゴン州の州都セイラムにテイスティング・ルームを持つ人気のサイダリー。同社の製品は日本でも輸入販売されているので、ハードサイダーを体験してみたい方はネットを検索してみてはいかが。

Data area —— ⊠ Suburbs of Portland

4070 Fairview Industrial Dr SE,
Salem, OR 97302
www.wanderingaengus.com

レヴェレンド・ナッツ・ハード・サイダー
Reverend Nat's Hard Cider
幅広いラインナップが特徴

林檎果汁をベースに、ホップ、アプリコット、黒蜜、ピーチ、洋梨、ブラックベリー、そして各種酵母などの素材を使った、クラフトビール的ともいえるクリエイティブなハードサイダー作りを得意とする。季節限定品、樽熟成品の種類も豊富だ。

Data area —— □N ⊠NE □SE □SW □NW

1813 NE 2nd Ave, Portland, OR 97212
☎ +1-503-567-2221 reverendnatshardcider.com

ODA-S06 Clackamas OneStop

Attachment 1: Clackamas OneStop Wireframes
Attachment 2: Citizen News
Attachment 3: Using the Clackamas Onstop Farmgate

ONESTOP FARMGATE WIREFRAMES

V1.1 • 04.29.2015

CONTENTS

1. Main view
2. Main view with notes
3. FAQ view
4. FAQ view with notes

Prepared by ecotrust

Clackamas County

ONEStop Farmgate

Tag line lorem ipsum dolor tag line lorem ipsum dolor

The Clackamas County Food System ONEStop will be a virtual farmgate through which growers can access resources they need to be more successful. The ONEStop is focused onfoodproducerswhomarkettothePortlandregionandbeyond. Ourlong-termvision is that by growing the growers and linking them to resources, Clackamas County famers can thrive. The ONEStop Farmgate connections will be open to public, private, nonprofit, educational, and philanthropic resources. The ONEStop will not duplicate existing services.

(Do we need some sort of qualifier? "This is a resource for Clackamas County growers...")

> Frequently Asked Questions

> ONEStop Partners

Search: What do you need help with?

What to Grow/Raise and How to Grow/Raise It

Marketing, Processing and Distribution

Farm Management, Labor and Financing

Farm Infrastructure, Land, Tools and Equipment

Government Services and Regulations

Resource Conservation and Certification

Farm Support: Businesses, Vendors and Organizations

Having trouble finding what you're looking for?

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Marketing, Processing and Distribution

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Partner Name

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LEARN MORE
http://food-hub.org/users/1234
http://partner-site.org

CONTACT
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jdoe@partner-site.org
555-555-1212

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ONEStop Partners

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Welcome back, Julie | Messages | Sign Out

search for products | Search

My Saved Searches | Advanced

My FoodHub | Marketplace | Member Directory | Knowledge Base | Blog

Clackamas County

ONEStop Farmgate

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The Clackamas County Food System ONEStop will be a virtual farmgate through which growers can access resources they need to be more successful. The ONEStop is focused onfoodproducerswhomarkettothePortlandregionandbeyond. Ourlong-termvision is that by growing the growers and linking them to resources, Clackamas County famers can thrive. The ONEStop Farmgate connections will be open to public, private, nonprofit, educational, and philanthropic resources. The ONEStop will not duplicate existing services.

(Do we need some sort of qualifier? "This is a resource for Clackamas County growers...")

- Frequently Asked Questions
- ONEStop Partners

SEARCHES SUPPLIED KEYWORDS AND CLIENT QUESTIONS

Search: What do you need help with?

SEARCH FILTERS PARTNERS LIST.

LEFT SIDE ITEMS ARE UNHIGHLIGHTED

- What to Grow/Raise and How to Grow/Raise It
- **Marketing, Processing and Distribution**
- Farm Management, Labor and Financing
- Farm Infrastructure, Land, Tools and Equipment
- Government Services and Regulations
- Resource Conservation and Certification
- Farm Support: Businesses, Vendors and Organizations

Marketing, Processing and Distribution

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EXPANDS AS NEEDED

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Contact Us

Your name

Your email address

What can we help you with?

Send

Message Sent

Thank you for contacting us. Our office hours are M-Th, 8am-5pm. We'll get back to you as soon as possible!

FORM HIDDEN. CONFIRMATION DISPLAYED.

FORM EMAILS CLACKAMAS TEAM.

USED FOR BOTH CUSTOMER SERVICE AND TO LEARN MORE ABOUT WHAT PEOPLE ARE LOOKING FOR

ONEStop Partners

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Clackamas County

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- Frequently Asked Questions
- ONEStop Partners

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- Marketing, Processing and Distribution
- Farm Management, Labor and Financing
- Farm Infrastructure, Land, Tools and Equipment
- Government Services and Regulations
- Resource Conservation and Certification
- Farm Support: Businesses, Vendors and Organizations

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Frequently Asked Questions

About the ONEStop Farmgate

- How do I lorem ipsum dolor?
- When should I lorem ipsum dolor?
- Is there a way to lorem ipsum dolor?

What to Grow/Raise and How to Grow/Raise It

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Farm Management, Labor and Financing

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Farm Infrastructure, Land, Tools and Equipment

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ONEStop Partners

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- Frequently Asked Questions
- ONEStop Partners

1. FAQS OPEN IN PLACE OF PARTNER LISTINGS.
2. PAGE SCROLLS DOWN TO MAKE THE CHANGE OBVIOUS.

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- Marketing, Processing and Distribution
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- Is there a way to lorem ipsum dolor?

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- **When should I lorem ipsum dolor?**

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Still have questions? These partners can help.

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Related Partner Name

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- Is there a way to lorem ipsum dolor?

1. ANSWERS SLIDE DOWN WHEN A QUESTION IS CLICKED.

2. EACH QUESTION WILL BE ASSOCIATED WITH ONE OR MORE PARTNER AGENCIES—WE'LL DISPLAY THE CONTACT INFORMATION DIRECTLY INLINE WITH THE ANSWER.

Marketing, Processing and Distribution

- How do I lorem ipsum dolor?
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Farm Management, Labor and Financing

- How do I lorem ipsum dolor?
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Farm Infrastructure, Land, Tools and Equipment

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ONEStop Partners

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Fall 2016 *Volume 18, number 4*

CitizenNews

CLACKAMAS COUNTY

WES reduces cost of wastewater treatment capacity project

Clackamas County Water Environment Services (WES) engineers and experts worked with consultants to reduce the cost of a wastewater treatment infrastructure upgrade that will protect public health, the environment, and future economic growth.

The project at the Tri-City Water Pollution Control Plant in Oregon City will provide additional capacity for the plant's digesters to handle and treat solids, which are a byproduct of sewage from homes and businesses. Wastewater treated and cleaned at the plant is then released into the Willamette River.

WES provides wastewater treatment services to 165,000 customers in Clackamas County. Together, WES' treatment plants in Oregon City and Milwaukie process more than six billion gallons of sewage every year.

WES serves Gladstone, Happy Valley, Johnson City, Milwaukie, Oregon City and West Linn, in addition to unincorporated Clackamas County, Boring, Fischer's Forest Park, and Hoodland.

After 30 years of service, the populations served by the Tri-City facility have doubled. The plant's digesters are now being overwhelmed by the growing demand.

cont'd on page 14

Memorial rededication for county's only Medal of Honor recipient, Nov. 9.

See page 6.

'Great ShakeOut' prepares masses for earthquakes

Practice makes perfect. Practicing the right thing to do for when an earthquake strikes could save your life.

At 10:20 a.m. on Oct. 20, millions of people participated in the Great ShakeOut, the world's most popular earthquake drill. This was an excellent opportunity for hundreds of thousands of Oregonians to **Drop, Cover and Hold On**, the recommended personal protective action to take during an earthquake.

Did you miss the chance to practice, or didn't hear about it? Taking just 60 seconds out of your day a few times a year could make all the difference if disaster strikes. You are more likely to react quickly and properly when shaking begins if you practice how to protect yourself on a regular basis.

We want you to stay safe. When the shaking starts, you don't want to **think** about what to do, you want to **know** what to do. It could save your life.

HOW TO PRACTICE/WHAT TO DO WHEN THE SHAKING BEGINS

Most people have never experienced the kind of strong earthquake that is possible in our area. Sudden and intense back-and-forth motions will cause the floor or ground to jerk out from under you. Unsecured objects topple, fall or become airborne, potentially causing serious injury. It's a panicky and frightening experience.

In most situations, you will reduce your chance of injury with the **Drop, Cover and Hold On** technique:

- **DROP** down onto your hands and knees (before the earthquakes knocks you down). This position protects you from falling but allows you to still move if necessary.

cont'd on page 11

7 TRASH TALK

12 DOG NOTES

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Krupp's Korner:

County ballot issues reflect public priorities

by County Administrator Don Krupp

Hello fellow Clackamas County residents,

Autumn arrived quickly this year and it is a busy one. It's election season! This fall we will be voting on many important positions and issues in Clackamas County, including the following three measures placed on the Nov. 8 ballot by the Board of County Commissioners:

- **Measure 3-502**, Sheriff's Public Safety Levy – if approved by voters, this measure would:
  - renew the Public Safety Local Option Levy approved by voters in 2011 for five additional years at its current rate
  - cost property owners 24.8 cents/$1,000 of assessed value
  - raise from $11.9 to $13.9 million per year
  - be used to keep open and maintain jail beds, retain deputies and detectives, and continue a drug enforcement program
- **Measure 3-509**, Temporary 6-Cent-Per-Gallon Fuel Tax – if approved by voters, this measure would:
  - Add a 6-cent-per-gallon motor vehicle fuel tax on fuel purchased in Clackamas County for seven years
  - Cost the average driver approximately $22.56 per year
  - Raise a total of $63 million over 7 years, 60% for the county and 40% for cities in the county
  - Be used by the county for road maintenance (paving 115 miles of county roads) and safety improvements (curve and intersection warning signs)
  - Be used by cities for transportation projects
- **Measure 3-510**, Imposing a 3% County Tax on Marijuana Sales – if approved by voters, this measure would:
  - Add a 3% sales tax to the retail sale of recreational marijuana in Clackamas County
  - Raise a total of approximately $180,000 per year
  - Be used for code enforcement, law enforcement, juvenile and adult prevention, dependency and addiction, and public health and safety services

We know from our bi-annual community surveys, as well as public meetings, emails and other input, that public safety and road maintenance are two of the top concerns of Clackamas County residents. These three measures address these important issues. You can read more information about each measure and the exact ballot text on pages 4-5.

The Oregon Secretary of State's Office aptly reminds us of the importance of voting, saying on its webpage, "Only citizens who have the needed knowledge and skills can sustain a democracy" (http://sos.oregon.gov/elections/Pages/toolkit.aspx).

The County Elections Office will mail voter pamphlets to Clackamas County registered voters in mid-October. I encourage you to read the contents of the pamphlet, research the positions and measures of interest to you, and then take the time to complete and turn in your ballot. For more information about the races and measures, and the election timeline, go to clackamas.us/elections or call the Elections Office at 503-655-8510.

Sincerely,

Don Krupp
Clackamas County Administrator

New resource for farmers launched

Launched this past spring, the Clackamas County ONEStop Farmgate is a new website designed to make it easier for specialty crop growers to find the resources they need to be successful. The website makes it simple for growers to search for and find resources and information from public, private, nonprofit, educational and philanthropic entities. The site is part of food-hub.org – a website developed to help wholesale food buyers and sellers do business – and has been designed to meet the specific needs of specialty crop growers in the county.

"Clackamas County farms produce about $350 million per year, including $120 million in food products," stated Commissioner Martha Schrader. "And that's just a fraction of the food needs in the region. Our region imports over 90% of our food and food supplies each year. The ONEStop Farmgate will help our local specialty crop farmers be more successful, help our agriculture economy grow, provide more locally sourced food for the region, and create jobs."

Visit clackamasfarmonestop.com for more information.

County programs recognized by NACo

Clackamas County was recently honored by the National Association of Counties (NACo) with five Achievement Awards for implementing innovative county government programs:

Adoption of Land Use Regulations for Marijuana-Related Businesses: For the development of new regulations for marijuana land use that involved community members.

RiverHealth Stewardship Program: A grant-funded program implemented by county Water Environment Services in 2013 to help improve watershed health.

Citizen Academy: A free course that encourages residents to learn more about county programs and services in order to foster participation.

Leaders in Sustainability: A program offering customized on-site assistance to businesses seeking to prevent waste, reduce energy consumption, use fewer toxic products, and similar goals.

A Safe Place Family Justice Center: A partnership between public and nonprofit agencies co-located under one roof, providing services to victims and their children fleeing domestic violence, sexual violence, elder abuse, and stalking. Read more in the Sheriff's insert.

CitizenNews

The Citizen News is produced quarterly by the Public and Government Affairs Department (PGA). It is mailed to nearly every household in the county.

Contact PGA about stories in the Citizen News:

Amy Kyle at 503-655-8751 or akyle@clackamas.us

Contact your commissioners at:

bcc@clackamas.us
503-655-8581

2051 Kaen Road
Oregon City

ELECTED OFFICIALS

Commission Chair
John Ludlow

Commissioner
Jim Bernard

Commissioner
Paul Savas

Commissioner
Martha Schrader

Commissioner
Tootie Smith

Assessor
Bob Vroman

Clerk
Sherry Hall

District Attorney
John Foote

Justice of the Peace
Karen Brisbin

Sheriff
Craig Roberts

Treasurer
Shari Anderson

Commissioner Actions

Ensuring future prosperity

The future prosperity of Clackamas County will be built on good-paying jobs. Good jobs that support families are crucial to the long-term economic health of the county.

Currently, the Portland metropolitan area faces a critical shortage of industrial lands. In Clackamas County alone, our 20-year supply of industrial land is short by approximately 1,100 acres. The shortage of industrial land threatens the job and economic growth potential for us all. As the population increases, more land is needed for the business and industry that keep our economy growing.

Your county commissioners have established goals to ensure there are plenty of family-wage jobs that promote healthy, thriving families and communities:

- Goal: By 2019, 10,000 new family-wage jobs
- Goal: By 2020, have and maintain a 20-year supply of serviceable non-retail employment land in the Urban Growth Boundary (UGB) to encourage employers in Clackamas County

Designating employment land allows communities to plan the infrastructure needed and prepare for the future. The Board of County Commissioners can't just pick a spot and designate it as employment lands, however. The county is constrained by Oregon state law and Metro restrictions. State law mandates that cities and metropolitan areas have plans in place to control urban expansion to protect farmland, forests and natural resources. Metro is tasked with maintaining the Portland-area UGB, a legal boundary which separates urban from rural land and is designed to reduce urban sprawl. Metro coordinates with cities and counties in the area to ensure a 20-year supply of developable land.

The county also has land outside the UGB, and it is classified in three ways:

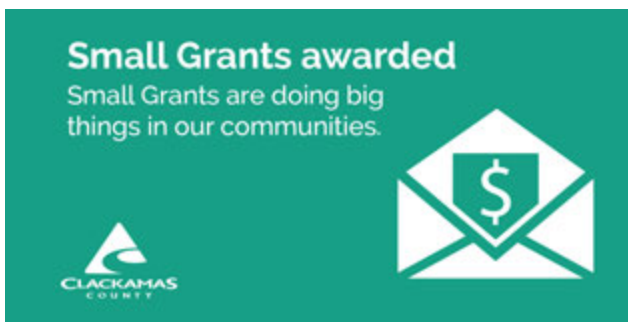
- Rural reserves are lands outside the UGB on which urban development is prohibited for at least 50 years. These lands may have working farms, forests or natural features like rivers, wetlands or buttes.
- Urban reserves are lands outside the UGB that may be considered for potential urban development within the next 50 years.
- Undesignated lands are lands outside the UGB that are neither in an urban reserve or a rural reserve. Generally, undesignated lands may not be used for urban development until much of the urban reserve lands are already developed.

The board is examining whether some areas currently designated as rural reserves should be changed to undesignated lands. This study focuses on less than 2 percent of the county's 68,700 acres of rural reserve land.

One other factor that the board is considering is that residents of the now-former city of Damascus voted to disincorporate on May 17, and land use decisions involving that area are now the responsibility of the county. The majority of the Damascus area lands are within the UGB, but no land use plan was ever developed by the city. As it stands now, the county will be responsible for developing an urban level comprehensive plan.

There are no easy decisions. Commissioners have difficult choices and negotiations to make. We all want to ensure we have enough industrial lands available for strong job growth while preserving and protecting our farmland, forests, and natural features. Follow the progress at bit.ly/2bkmwAC.

QUARTERLY NOTEBOOK



VULNERABLE POPULATIONS TO BENEFIT FROM $250,000 WORTH OF GRANTS

In early October, commissioners announced the recipient organizations of $250,000 in grant funds to support organization homeless people, hungry people, foster children, veterans in need, and other vulnerable populations.

This past summer, commissioners set aside this money to support the Small Grants Program, now in its eighth year. The program assists local nonprofit groups with projects that serve some of the most vulnerable populations of our community.

Just some of the worthy awardees include:

- **Angels in the Outfield:** $7,000 will help prevent homelessness for 14-20 families escaping abusive situations.
- **Building Blocks 4 Kids:** A $10,000 award will provide training, tools and financial support to children aging out of the foster system.
- **Candlelighters for Children with Cancer:** $7,500 will help to provide emergency financial assistance to families with children who are fighting or have succumbed to cancer.
- **Lake Oswego Veterans of Foreign Wars:** An $8,000 award will secure a trailer to store and transport survival bags for homeless veterans.
- **West Linn Food Pantry:** $2,500 will go toward emergency food boxes.

For a full list of this year's awardees, and to learn more about the program, visit clackamas.us/bcc/smallgrants.html

PROPERTY TAX EXEMPTION FOR PUBLIC SAFETY OFFICER WIDOWS/WIDOWERS

In early October, commissioners unanimously passed a resolution enacting a partial property tax exemption for the surviving spouses of public safety officers killed in the line of duty.

The exemption affects the surviving spouses of both police officers and firefighters killed on the job. The Oregon legislature unanimously passed a bill in June allowing counties to take this action.

Approximately six other counties in Oregon have made a similar resolution. The discussion can be watched online on the Oct. 6 Business Meeting webpage by first visiting clackamas.us/bcc/.

COMMISSIONERS HOLD BUSINESS MEETING AT FAIR

Commissioners participated in the annual Clackamas County Fair & Rodeo from Aug. 16-21. Commissioners helped launch fair festivities on opening day and individually participated in events and attractions including livestock and 4-H Club shows, the ice cream social, and the opening parade. On Aug. 18, the board's weekly Business Meeting was held and featured presentations from 4-H youth and their animals, as well as a recognition of a county food drive.

There are always fun things happening at the Clackamas County Event Center year-round. Check it out at clackamas.us/fair.

Ballot Measure 3-510: Proposal for 3% county sales tax on recreational marijuana

The Clackamas County Board of Commissioners is giving county citizens the opportunity to vote on whether to establish a 3 percent sales tax on recreational marijuana items in unincorporated Clackamas County.

If enacted, the 3 percent tax would be in addition to the 17 percent state sales tax already in place (for a total of 20 percent). The tax would apply, according to state law, to "marijuana, cannabinoid products, cannabinoid concentrates and cannabinoid extracts".

If approved by voters in November, the county sales tax would take effect no earlier than February 2017.

If the measure is approved by voters, the board plans to spend the revenue from the 3 percent sales tax for code enforcement, law enforcement, addiction treatment, and related public health, prevention and safety needs.

In late 2015, the board finalized new land use regulations allowing marijuana businesses to conduct retail, wholesale, processing and production/growing activities in various designated zones. The ordinance included requirements for marijuana businesses on a variety of time, place and manner issues, including odor, lighting, minimum lot sizes, security, waste management, minimum separation distances, water, access and hours.

Details are available on the county's Marijuana Land Uses webpage at clackamas.us/planning/marijuana.html.

Public Safety Levy up for renewal this November; if passed, does not increase taxes

In 2006, Clackamas County voters approved the Public Safety Local Option Levy, renewing it five years later in 2011.

Now it is up for renewal once again — as voters were promised that this levy would never automatically renew, always requiring a vote of county residents.

Measure 3-502 is the 2016 Public Safety Levy. Passage of this measure would renew the existing Public Safety Local Option Levy set to expire in 2017.

If passed, Measure 3-502 would not increase taxes. If passed, this would be a continuation of the existing levy at the same rate. If the measure does not pass, there would be no tax for this levy.

If passed, Measure 3-502 would:

- Maintain 84 jail beds;
- Retain approximately 18 Sheriff's patrol deputies and nine detectives;
- Continue the Sheriff's expanded drug enforcement program.

The renewed levy is limited to the five-year fiscal period from 2017 through 2022. Future renewals of this levy would not occur without voter approval.

If this measure is passed, the funds must be used exclusively for the law-enforcement purposes stated in the Ballot Title. (The ballot title is available in the Clackamas County Voter's Pamphlet and online at the County Clerk's Election webpage: clackamas.us/elections/.)

If passed, revenues generated by this measure would:

- Maintain 84 jail beds in the Clackamas County Jail that were opened since the initial passage of the levy. Funding for these 84 jail beds has reduced the number of prisoners released early into the community.
- Maintain funding for approximately 18 Sheriff's patrol deputies, nine detectives and 30 jail deputies.
- Continue the Sheriff's expanded drug enforcement program to arrest drug traffickers and those involved in drug-related crimes such as identity theft, property crimes, child abuse, and child neglect.

If Measure 3-502 is not passed, we would:

- Close 84 jail beds;
- Increase the number of prisoners released early into the community;
- Eliminate approximately 50 Sheriff's deputies;
- Eliminate Sheriff's expanded drug enforcement program.

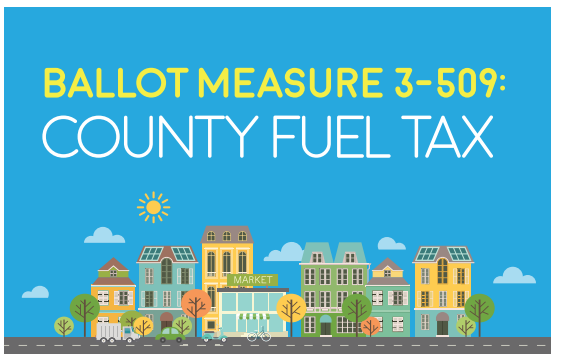
This measure, if passed, would cost 24.8 cents per $1,000 of assessed value. The cost would be approximately $4.13 per month, or $49.56 per year, on a $200,000 home.

It is estimated the proposed rate, if passed, would raise $11.88 million in 2017-18, $12.35 million in 2018-19, $12.85 million in 2019-20, $13.36 million in 2020-21, and $13.89 million in 2021-22.

This proposed renewal of the existing levy is limited to the five-year period from 2017 through 2022.

For more information, visit clackamas.us/sheriff .

Countywide Fuel Tax Measure 3-509, if passed, would fund road maintenance and safety improvements



A few facts about roads and road funding:

54 percent of county roads are in fair or poor condition.

It costs up to 10 times more to rebuild a roadway than to keep it maintained, based on data from the Federal Highway Administration, Oregon Department of Transportation and many other sources. Therefore, investing money in road maintenance today can save additional expense in the long-term.

Under state law, Oregon counties are not permitted to use property tax revenue – by far the largest funding source – for road maintenance, and the county has no local source of funds for roads.

Unlike other metro area counties, Clackamas County does not have a local source of revenue for road maintenance.

In light of this information, the Board of County Commissions has referred a fuel tax measure, Measure 3-509, to the Nov. 8 ballot. Revenue from the countywide fuel tax, if it is approved by voters, would:

- Add a 6-cent-per-gallon tax for motor vehicle fuel purchased in Clackamas County
- Expire after 7 years
- Cost the average driver approximately $22.56/year*, if they purchased all their fuel in Clackamas County
- Raise $63 million over 7 years – 60% for county roads and 40% for city transportation projects

**Based on estimates from the Oregon Department of Transportation on the average number of gallons of fuel purchased by Oregon drivers*

If the measure passes, county funds would be kept in a separate, audit-ready account and used for:

- Road maintenance ($32.3 million) – paving 115 miles of roadway
- Road safety improvements ($3.7 million) – curve and intersection warning signs on rural roads
- The progress of the projects would be tracked online for everyone to see.

For more information about county roads and the fuel tax measure, including a list of roads that would be paved if the measure is approved by voters, go to: theroadahead.us

COUNTY ROAD SYSTEM . . . BY THE NUMBERS

1 ferry; 180 bridges; 1,400 miles of roads, including more paved roads than any other Oregon county; 1,900 manholes; 2,400 miles of gravel shoulder; 8,100 culverts; 9,300 catch basins ; 26,900 traffic signs; 111,000 linear feet of guardrail

BALLOT MEASURE 3-502

Renewal of Current County Sheriff Public Safety Local Option Levy

Question: *Shall Clackamas County fund law enforcement; maintain rate of 24.8 cents per $1,000 assessed value for five years beginning 2017-2022? This measure renews current local option taxes.*

Summary

This measure does not increase taxes. It renews the expiring Public Safety Levy approved by voters in 2011. Renewing the existing levy will allow the Clackamas County Sheriff's Office to:

- Maintain funding for 84 jail beds opened since the initial passage of the levy and 30 jail deputies. This has reduced the number of prisoners released early into the community.
- This measure would continue funding for approximately 18 sheriff's patrol deputies and nine detectives that help keep neighborhoods and communities safe in every part of Clackamas County.
- Continue Sheriff's expanded drug enforcement program to arrest drug traffickers and those involved in drug-related crimes such as identity theft, property crimes, child abuse, and child neglect. Levy support has allowed the Sheriff's office enhanced drug enforcement program to take numerous children into protective custody.

This measure would cost 24.8 cents per $1000 of assessed value. The cost would be approximately $4.13 per month, or $49.56 per year, on a $200,000 home. It is estimated the proposed rate would raise $11.88 million in 2017-18, $12.35 million in 2018-19, $12.85 million in 2019-20, $13.36 million in 2020-21, and $13.89 million in 2021-22.

Explanatory Statement

Passage of this measure would renew the existing Public Safety Local Option Levy approved by the voters in 2011 and set to expire in 2017.

A yes vote on Measure 3-502 would not increase taxes.

A yes vote on Measure 3-502 would:

- Maintain 84 jails beds;
- Retain approximately 18 Sheriff's patrol deputies and nine detectives;
- Continue the Sheriff's expanded drug enforcement program.

The renewed levy is limited to the five-year fiscal period from 2017 through 2022. Future renewals of this levy would not occur without voter approval. The money raised by this measure must be used exclusively for the law enforcement purposes stated in the Ballot Title.

The revenues generated by this measure would:

- Maintain 84 jail beds in the Clackamas County Jail that were opened since the initial passage of the levy. Funding for these 84 jail beds has reduced the number of prisoners released early into the community.
- Maintain funding for approximately 18 Sheriff's patrol deputies, nine detectives and 30 jail deputies.
- Continue Sheriff's expanded drug enforcement program to arrest drug traffickers and those involved in drug-related crimes such as identity theft, property crimes, child abuse, and child neglect.

A no vote on Measure 3-502 would:

- Close 84 jail beds;
- Increase the number of prisoners released early into the community;
- Eliminate approximately 50 Sheriff's deputies;
- Eliminate Sheriff's expanded drug enforcement program.

This measure would cost 24.8 cents per $1,000 of assessed value. The cost would be approximately $4.13 per month, or $49.56 per year, on a $200,000 home. It is estimated the proposed rate would raise $11.88 million in 2017-18, $12.35 million in 2018-19, $12.85 million in 2019-20, $13.36 million in 2020-21, and $13.89 million in 2021-22.

BALLOT MEASURE 3-509

Temporary 6-Cent Per Gallon Vehicle Fuel Tax

Question: *Shall Clackamas County adopt a seven-year, 6-cent-per-gallon motor vehicle fuel tax dedicated to road maintenance projects?*

Summary

The measure imposes a temporary 6-cent-per-gallon tax on motor vehicle fuel sales within Clackamas County. The tax revenues must be used as required by the Oregon Constitution for construction, reconstruction, improvement, repair, maintenance, operation and use of public roads and streets within the county. The tax is estimated to raise approximately $9 million per year.

The County will use 60 percent of the net revenue for 47 specific County road paving and saving projects. A list of county projects and their estimated costs can be found at http://theroadahead.us.

The remaining 40 percent of net revenues will be distributed semi-annually to the cities in Clackamas County to use for their own transportation projects. Distribution to cities will be based proportionately on population within Clackamas County using figures provided annually by Portland State University.

The tax is implemented in March 2017 and will expire seven years after the implementation date. The County will adopt an ordinance for the administration of the motor vehicle fuel tax, and establish and implement licensing requirements.

Explanatory Statement

Road funds primarily come from motor vehicle fuel taxes and vehicle registration fees. Oregon law prohibits using ad valorum (property) taxes for roads. The county uses road funds efficiently, but is unable to keep pace with maintenance needs. There is a $17 million annual gap between funds needed to maintain roads and revenue.

Over 50% of Clackamas County's 1,400 road miles are in fair or poor condition. Every year, a larger percentage of county roads slip into disrepair, and the county doesn't have the necessary revenue to keep up. Waiting also comes at a price, as the cost to reconstruct a road in the future is more than 10 times greater than the cost of providing preventive maintenance today.

Ongoing preventive maintenance is critical to safe roads. Smooth roadways, clear lane markings, unobstructed sightlines, drainage and well-marked intersections help reduce crashes and keep travelers safe.

Oregon law allows the voters of a county to vote to impose a motor vehicle fuel tax. The measure would impose a 6-cent per gallon tax on motor vehicle fuel sold in Clackamas County. Annual revenues generated by the motor vehicle fuel tax are estimated to be $9 million. The tax would be collected by the Oregon Department of Transportation and then distributed to the County. The Department of Revenue will charge a fee for collecting and distributing the tax revenues.

The County will receive 60% of the net revenues and use those revenues for 47 specified County road maintenance and safety projects. The remaining 40% of the net revenues collected will be distributed semi-annually to all cities in Clackamas County. Distribution of the net revenues to each city will be based on the proportional population of the city located within the jurisdictional boundaries of Clackamas County. City populations will be determined by the most current figures provided annually by Portland State University Population Research Center.

The motor vehicle fuel tax revenues must be used as required by the Oregon Constitution for construction, reconstruction, improvement, repair, maintenance, operation and use of public highways, roads, streets and roadside rest areas in the county. If approved, the County will adopt an ordinance for the administration of the tax. The tax would expire seven years after the date of implementation.

BALLOT MEASURE 3-510

Ordinance Imposing 3% County Tax on Retail Sales of Marijuana

Question: *Shall Clackamas County impose a 3% tax on the sale of recreational marijuana items in unincorporated areas of Clackamas County?*

Summary

Under state law, a county governing body may adopt an ordinance to be referred to the voters of the County imposing up to a three percent tax or fee on the sale of retail recreational marijuana items in unincorporated areas of the county by a state licensed marijuana retailer.

Approval of this measure would adopt the Ordinance imposing a three percent tax on the sale of recreational marijuana items in the unincorporated area of the county by a state licensed marijuana retailer. The proposed ordinance is available at the Office of County Counsel and can be viewed on the County's website at clacksmas.us/bcc/marijuanatax.html. The tax would be collected at the point of sale and remitted by the marijuana retailer. "Marijuana items" means marijuana, cannabinoid products, cannabinoid concentrates and cannabinoid extracts. Revenues from the tax will be directed towards code enforcement, law enforcement, juvenile and adult prevention, dependency and addiction, and public health and safety services.

Explanatory Statement

Approval of this measure would adopt an Ordinance that imposed a three percent tax on the sale of recreational marijuana items by a marijuana retailer within the unincorporated area of Clackamas County. The tax would apply only to unincorporated areas of Clackamas County. If approved, the annual revenues from this tax are estimated to be approximately $180,000. The proposed ordinance is available at the Office of County Counsel and can also be viewed on the County's website at clackamas.us/bcc/marijuanatax.html.

There are no restrictions on how the county may use the revenues generated by this tax, but the County proposes to devote the revenues to those services potentially impacted by marijuana sales and usage such as County code enforcement, law enforcement, juvenile and adult prevention, dependency and addiction, and public health and safety services.

Under Measure 91, adopted by Oregon voters in November 2014, codified in ORS chapter 475B and amended by the Legislature in 2015 and 2016, the Oregon Liquor Control Commission must license the retail sale of recreational marijuana. ORS 475B.345 provides that a county governing body may adopt an ordinance imposing up to a three percent tax on the sale of marijuana items (which include marijuana concentrates, extracts, edibles, and other products intended for human consumption and use) by retail licensees in the unincorporated areas of the County, but the Ordinance must be referred to the county voters at a statewide general election. If the measure is approved by the voters, the Ordinance imposing a three percent tax on the sale of marijuana items by a retail licensee in the unincorporated areas of the county will be adopted. The tax does not apply to medical marijuana. The tax will effective 90 days after adoption of the Ordinance.

Regarding content on page 4: This information was reviewed by the Oregon Secretary of State's Office for compliance with ORS 260.432.

Remembering a Local Hero

County, partners will rededicate memorial for county's only Medal of Honor recipient on Nov. 9

A memorial honoring Clackamas County's only Medal of Honor winner will be unveiled Wednesday, Nov. 9 on the county's Red Soils campus amid the pomp and ceremony typically reserved for military funerals.

Army Specialist Larry Gilbert Dahl, born in Oregon City, was posthumously awarded the Medal of Honor for sacrificing his life to save fellow soldiers during the Vietnam War. He died Feb. 23, 1971, during an ambush of a truck convoy in the port city of Qui Nhon.

Dahl is one of only eleven Oregonians to receive the Medal of Honor. He is buried at Willamette National Cemetery in Portland.

The heroic act saved the lives of his fellow soldiers and earned him the military's highest honor which was ordered by proxy to his son Michael by Vice President Gerald R. Ford in August 1974, one day before he became president of the United States.

Michael was six years old.

"We are proud to be able to offer a spot where people can come and contemplate the sacrifice Larry Dahl made for his comrades and for his country," said Commissioner Tootie Smith. "We are honored that our campus was chosen for the relocation of this memorial."

During his time in Vietnam, Dahl was assigned to the 359th Transportation Company in the port city of Qui Nhon, where his duties included maintenance and mechanical work on convoy supply vehicles.

After helping restore the gun truck *Brutus* (after an earlier ambush), Dahl became part of the truck's crew as a machine gunner. On that fateful day in February, *Brutus* was part of a large fuel convoy with other gun trucks.

The convoy was ambushed by a large enemy force, and an enemy soldier lobbed a grenade into *Brutus'* gun box. Dahl's comrades reported that he shouted a warning and immediately dropped to his knees and covered the grenade with his body. The gun truck crews had a special bond of friendship.

For years, a nondescript marker outside the Museum of the Oregon Territory marked Dahl's ultimate sacrifice. The Clackamas County Historical Society, which operates the museum, is a partner in this project.

The newly located memorial will stand between the county's Development Services Building and Public Services Building near the Circle of Honor which commemorates the actions and sacrifices of local veterans and their families.

The rededication ceremony will feature guest speakers from the military including Brigadier General Steven R. Beach, the Assistant Adjutant General of Oregon, and Major General Thomas Mattson, now retired, who was a Platoon Leader in the 6th Battalion, 71st Artillery unit in Vietnam.

The ceremony will also feature a presentation to Dahl's family. Michael will speak at the event.

More than four decades later, Dahl's sacrifice is commemorated throughout our Armed Forces. Today, there are several military vessels and facilities named in Larry Dahl's honor, including a 950-foot Sealift Command ship transporting heavy equipment and arms to world hot spots; the Headquarters Building at Joint Use Langley Eustis; and the Physical Fitness Center at Fort Bragg.

A memorial at the Pentagon bears his name, and he is commemorated at the Medal of Honor Grove in Valley Forge, PA.

Learn more at **clackamashistory.org**, **vfwpost1324.org** and **clackamas.us**.

Larry Gilbert Dahl

VETERANS SERVICE OFFICE IS ON YOUR SIDE

The Clackamas County Veterans Service Office is tasked with helping military veterans, and their families, receive the benefits they've earned. Veterans Affairs (VA) benefits earned by military veterans are not received automatically, and navigating the benefits process can be confusing. That's where our office steps in. Staff members are well-trained and know how to get you the benefits veterans deserve. We can help with:

- Compensation
- Pension
- Health care
- Education
- Home loan
- Career training
- Homeless assistance

The Veterans Service Office also offers transportation to and from appointments for veterans and their spouses.

For more information, call:

Clackamas County Veterans Service Office: 503-650-5631

Coordinated Housing Access (homeless housing): 503-655-8575

Clackamas County Homeless Veterans Outreach Specialists: 503-650-5775

We appreciate our veterans

Here in Clackamas County, the admiration for veterans – and everything they have sacrificed for this country – is greater than ever. Because of their dedication and service, county officials have made veterans services a primary focus. Judging by the results so far, that focus is finding results.

Moving forward, county officials are extremely excited about what will happen in the short-term future regarding veterans. Our Social Services Division formed a Homeless Veteran Coordination Team a year ago, including several external and internal partners. Team goals are to coordinate services for homeless veterans, streamline access to housing and other critical services, and maximize the resources of each partner so services are efficient and effective for homeless veterans.

Significantly reducing veteran homelessness is a goal within reach due to two new projects. First, a federal and state grant will provide 48 new housing slots for veterans who are homeless and at high risk of homelessness, including veterans with serious mental health issues.

Second, an effort is also underway with the Oregon Department of Veterans Affairs, and regional partners Multnomah and Washington Counties, to organize statewide training for Veterans Service Officers on LGBT veteran issues. This will include helping with discharge upgrades for veterans who were dishonorably discharged under the former "don't ask, don't tell" law. Discharge upgrades will allow more veterans to qualify for a broad range of services and benefits not available to those with dishonorable discharges.

To our veterans: We honor you. All county employees, from commissioners to the support staff you may interact with, support and honor your service to this great nation.

Winter Recreation

Hit the slopes at Mt. Hood Skibowl and explore all that Timberline Lodge has to offer in the latest edition of Inside Clackamas County. Find out how you can enjoy the winter wonderland right here in our backyard. Our series highlights the recreational activities, landmarks and areas that make our county such a great place to live, work, play and visit.

Watch the video at bit.ly/2esypY9

What can you do to save on food?

Imagine yourself in this situation:

You are pushing a cart through your local grocery store. It is the beginning of June and you spot a carton of tantalizing strawberries in the produce section. You weren't planning on buying strawberries today, but they look so good. In the cart they go. You take them home, wash them, and eat a few before putting them in your refrigerator.

A few days later you need room in your fridge but it is full of leftovers you forgot about. You pull the trash can over to the fridge and clean it out. You find those strawberries hidden in the back covered in mold. Into the trash they go.

Does this happen in your home? If so, you're not alone. Twenty percent of food brought into American households is never eaten. The average family of four throws away at least $589 each year on uneaten food. Not only is this a waste of money, but it is a waste of water, fuel and labor used to bring that food to your table.

Ready to take action against wasted food? Here are tips to help you save both food and money:

1: Shop with meals in mind

Make a list, stick to it and don't cook more than you can eat or store. Find a system that works for you and your family.

2: Prepare now and eat later

Prep ingredients and meals over the weekend to make weeknight meals faster to put on the table.

3: Keep it fresh

Learn how to store your food in the right place to postpone spoilage.

4: Eat what you buy

Reimagine leftovers and extra ingredients. Need creative help? There are websites where you can find recipes based on using the ingredients in your pantry such as lovefoodhatewaste.com/recipes and bigoven.com.

Preventing wasted food is everyone's responsibility. To learn more, visit this regional resource: EatSmartWasteLess.com.

Master Recycler Spotlight: Alex Mihm

There wasn't one specific topic that attracted Alex Mihm to becoming a Master Recycler. Yes, he wanted to know what he could and could not recycle in the curbside bin. But there was more to it. "I'm a contextual learner," Alex admits. "I wanted to know what role I could play as an individual" in the world of reduce, reuse, recycle.

The Master Recycler Program is a volunteer corps in the Portland Metro area. Members take part in an 8-week course where they learn the skills to make change in their community. Alex is a member of Class 62 from last spring and has already volunteered over 30 hours.

One thing Alex learned from the course was how many resources go into making products we buy daily. While recycling is important, Alex learned "the greenest products are the ones we choose not to buy at all." He now remembers these hidden resources when shopping.

Alex also believes his Master Recycler experience has helped him in his role as the chair of the West Linn Sustainability Advisory board (SAB). The Board is investigating curbside composting and an annual donation and recycling event. "I would not be able to contribute to the SAB work to the same extent had I not become a Master Recycler."

Most of all, Alex has enjoyed meeting new people through the program. "Really, I shouldn't call it a program; it's a community in every sense of the word."

Interested in becoming a Master Recycler?
Visit masterrecycler.org or call 503-742-4463 to learn more.

Inclement weather reminder:

Garbage and recycling service can be disrupted by bad weather

Contact your garbage company to see if collection has been postponed due to unsafe road conditions. Go to **clackamas.us/recycling/garbage.html** to find contact information.

Mix only these items in your **Recycling Container**

PAPER

Newspaper
Cardboard (flattened)
Magazines and phone books
Mail and catalogs
Scrap paper
Paper bags
Cartons: milk, juice, soup (rinsed)
Shredded paper (in a paper bag)

PLASTIC

Bottles
Jugs
Tubs
Nursery pots (larger than four inches)
Buckets (five gallons or less)

Ignore numbers on containers; they indicate plastic resin type, not recyclability
Empty and rinse containers
Six ounces or larger in size

METAL

Aluminum, tin and steel food cans
Metal paint cans (empty and dry)
Aerosol cans
Aluminum foil and pie plates
Scrap metal (smaller than 30 inches and less than 30 pounds)

Do not flatten cans
Labels are OK
Tin tops are OK if crimped inside can
Empty and rinse containers

In your **Garbage Container**

Plastic film and bags

To-go cups and containers
(paper + plastic cups and clamshells)

Frozen food containers

Glassware, ceramics and incandescent light bulbs

Also in your garbage: food-soiled paper, pizza boxes, carpet, textiles, food scraps, containers labeled "compostable," pet waste and diapers. *Some items can be taken to a drop-off center to be recycled or reused.*

In your **Yard Debris Container**

Leaves and flowers
Grass clippings
Weeds
Tree and shrub trimmings (less than four inches in diameter and 36 inches long)

Do not include:
x Plastic bags
x Household garbage
x Metal
x Food scraps or food-soiled papers
x Rocks
x Dirt or sod
x Ashes
x Diapers
x Pet waste
x Oversized items
x Plastic
x Building lumber
x Stumps

*In cities and urban areas with yard debris service

In your separate **Glass Container**

GLASS BOTTLES AND JARS

Empty and **rinse** containers
All colors together
Remove caps and corks
Labels are ok

On the Side

MOTOR OIL

Set used motor oil next to your glass bin

Marked, see-through container with a screw-top cap

No larger than two gallons

Single-family customers only, not at apartments or businesses

Metro's Recycling Hotline **503-234-3000**

Recycling and Reuse in Clackamas County

Below are some of the reuse and recycling locations convenient to Clackamas County. Call or visit the websites of these organizations for the most up-to-date information about hours, currently accepted materials and any possible fees.

Not sure where to take something? For information, call Metro's Recycling Hotline: 503-234-3000 or look up items on the Find A Recycler website: **OregonMetro.gov/FindaRecycler**.

Rigid Plastics

Take non-curbside bulky plastics and rigid plastics to a recycle depot. Bulky plastics include: lawn furniture, crates and storage bins. Rigid plastics include: clean take-out trays, containers and cups.

- **Far West Recycling**
  503-200-5411
  FarWestRecycling.com
  341 Foothills Rd., Lake Oswego
- **Far West Recycling**
  503-238-1640
  FarWestRecycling.com
  4930 SE 26th Ave., Portland

Plastic Bags, Film and Wrap

A variety of plastic film can be returned to **grocery stores** that have bins for plastic bags. Some recycling depots also take this material. Accepted plastic includes produce and bread bags, dry cleaning bags, case wrap, newspaper bags, plastic wrap and air pillows.

- **Far West Recycling**
  503-200-5411
  FarWestRecycling.com
  341 Foothills Rd., Lake Oswego
- **Metro South Transfer Station**
  503-234-3000
  OregonMetro.gov
  2001 Washington St., Oregon City

Bulky Items

Options for getting rid of bulky items, such as furniture and appliances.

- **Donate:** Call **503-234-3000** or go online to search Metro's Find a Recycler **OregonMetro.gov/FindaRecycler**.
- **Curbside pick-up** (by your garbage company). *Call for fees/details*
- **Take to a garbage facility:** Dispose of items at **Metro South Transfer Station** (503-234-3000) in Oregon City or **Clackamas County Transfer Station** (503-668-8885) in Sandy.

Medication

Keep your children and our water safe. Properly dispose of unused medication. It should not be flushed down the toilet! Many police and sheriff offices within Clackamas County have a drop box for unused medications. These drop boxes may not be used by businesses or care facilities.

- **Acceptable items:** Unwanted medications and samples.
- **Unacceptable items:** Thermometers, medical sharps, IV bags, bloody or infectious waste, inhalers and iodine.

Alternate medication drop site:

Metro South Hazardous Waste Facility
503-234-3000 | 2001 Washington St., Oregon City

Electronics

Oregon E-Cycles is a free recycling program for computers, monitors, printers, keyboards, mice and TVs. Take up to seven E-Cycles items at a time to a collection site for free recycling.

Locations in and around Clackamas County include: **Goodwill**, **Salvation Army**, **Teen Challenge Thrift Store**, **Deseret Thrift Store, Free Geek** and many other recycling locations.

oregon E-CYCLES
oregonecycles.org

1-888-532-9253

Household Hazardous Waste

Only Oregon residents can dispose of household hazardous waste at Metro's hazardous waste facilities. Common types of household hazardous waste include paint, batteries, fluorescent light bulbs, solvents, medical sharps, pesticides, fertilizers, poisons and aerosol spray products. Metro has a $5 fee to dispose of up to 35 gallons of hazardous waste.

Metro South Hazardous Waste Facility
OregonMetro.gov
2001 Washington St.
Oregon City
503-234-3000

Donate Your Stuff

Many materials can be donated for reuse in your community.

- **Evergreen Thrift**, Milwaukie
  503-653-7510
- **Red White & Blue Donation Center**, Gladstone
  503-655-3444 | **redwhiteandbluethriftstore.com**
- **Deseret Industries**, Happy Valley
  503-777-3895 | **deseretindustries.lds.org**
- **Habitat Restore**, Canby
  503-263-6691 | **nwvrestore.org**

Yard Debris

These facilities in Clackamas County accept yard debris, branches, untreated wood and other materials for a **fee.**

West Linn Dan Davis Recycling Center (operated by Recology)
503-655-1928
4001 Willamette Falls Dr.
West Linn

McFarlane's Bark
503-659-4240
13345 SE Johnson Rd.,
Milwaukie

Metro South Transfer Station
503-234-3000
2001 Washington St.,
Oregon City

S & H Landscaping Supplies
503-638-1011
20200 SW Stafford Rd., Tualatin

About Trash Talk
Trash Talk pages are provided by Clackamas County's Resource Conservation & Solid Waste Program, on behalf of the Clackamas County Recycling Partnership: a cooperative of Clackamas County, the cities of Barlow, Canby, Estacada, Gladstone, Happy Valley, Lake Oswego, Milwaukie, Molalla, Oregon City, Sandy, West Linn and Wilsonville, and local garbage and recycling companies.

Contact
Clackamas County Resource Conservation & Solid Waste
503-557-6363 | wasteinfo@clackamas.us
clackamas.us/recycling

School Recycling Challenge

Schools and families: Recycle the most plastic film bags (bread bags and more!) and get a chance to win a bench for your school

How does the School Recycling Challenge work?

1. Get started

Interested schools should contact Laurel Bates (lbates@clackamas.us, 503-742-4454) for information and to get started.

The challenge will start on America Recycles Day, Nov. 15, and will end on Earth Day, April 22.

2. Start collecting plastic bags

Identify locations within your school where students, staff and families can bring their plastic bags. The school that collects the most, wins!

3. Weigh the bags

A school volunteer weighs and keeps records of the amount of material collected each month. We have scales to help you weigh.

4. Drop it off

A school volunteer takes the collected plastic to Safeway, Albertsons or other participating retailers.

What you can recycle

Clean and dry plastic grocery bags, packaging wrap, dry cleaning bags, ziploc bags, bread bags, produce bags, ice bags and bubble wrap.

Remember: Do not place plastic bags in your recycling at home or work! You may recycle film plastics like the ones pictured below at participating grocery stores.

Participating schools receive:

Three recycling bins, a poster, magnets for each student and a participation award. The winning school will receive a Trex bench.

Schools compete to collect plastic bags in the Trex School Recycling Challenge.

Recycling at your apartment community

Are you new to the area?

There's a good chance you are renting an apartment, buying a condo or living in a community of five or more units. How and where you recycle and dispose of trash may look different depending on where you live. What doesn't change is your right to recycle.

Oregon law requires landlords to provide you with recycling opportunities and yearly recycling education. You should also receive information on recycling when you move in.

As a resident, you can get help from Clackamas County to:

- Identify what to recycle and what belongs in the garbage
- Learn where to take things that don't belong in the garbage or recycling bin
- Improve the recycling program at your community

You can also contact your property owner or manager for free information and resources.

Are you a property owner?

Clackamas County is committed to enhancing recycling opportunities for your community. Please contact 503-557-6363 or wasteinfo@clackamas.us for free educational materials or assistance with your recycling program.

Order free resources and services online

We offer free recycling resources to meet the unique needs of multi-family communities. Order yours at clackamas.us/recycling/propertymanagers.html.

Genoa Pharmacy opens

In June, Clackamas County opened the new Genoa Pharmacy at Beavercreek Health Clinic in Oregon City. This new pharmacy, a first for Genoa being placed in a primary care clinic, will help patients get the medications they need easily and conveniently, and provide expert guidance in how to take medicine.

Pictured, from left to right, are: Clackamas County Commissioner Paul Savas; Genoa's Raymond Morrow; County Commission Chair John Ludlow, Health Centers' Jo Hobbs; Health Centers Division Director Deborah Cockrell; Health, Housing and Human Services Department Director Rich Swift, and Medical Director Andrew Suchocki.

Great Shake up cont'd from page 1

- **COVER** your head and neck (and your entire body if possible) under a sturdy table or desk. If there is no shelter nearby, only then should you get down near an interior wall (or next to low-lying furniture that won't fall on you), and cover your head and neck with your arms and hands.
- **HOLD ON** to your shelter (or to your head and neck) until the shaking stops. Be prepared to move with your shelter if the shaking shifts it around.

Wherever you are, protect yourself!

Several other questions may be occurring to you. What if you are driving, in bed, in a high-rise building, or at the beach when the shaking starts? Why is Drop, Cover and Hold On recommended? What should you absolutely not do during an earthquake? What should you do right after one? How can you better plan for the unthinkable?

Our Disaster Management Department wants you to be as prepared as possible for any and all major natural or human-caused incidents. Check out our newly-enhanced ShakeOut webpage at clackamas.us/shakeout for answers to all of these questions. Or visit the department's main page at clackamas.us/dm to sign up for emergency text notifications via your cell phone, develop a disaster plan ahead of time for your family, and discover how to better prepare for all types of disasters our area potentially faces.

You can also receive regular tips on events and preparedness by following the department on

Facebook and Twitter (both @ClackamasDM) or signing up to receive notifications over email (click on "Get email updates" at the bottom-right of clackamas.us).

Modernizing public health

The county's Public Health Division is embarking upon a plan to not only save taxpayers money, but keep them healthy in the process.

In July 2015, the Oregon Legislature passed a public health modernization bill establishing a new and equitable model for public health. The new model includes essential services and programs that no person should live without, such as:

- Protection from well-understood diseases like measles and emerging infectious disease like Zika
- Limiting environmental risks by ensuring clean air and safe water and food

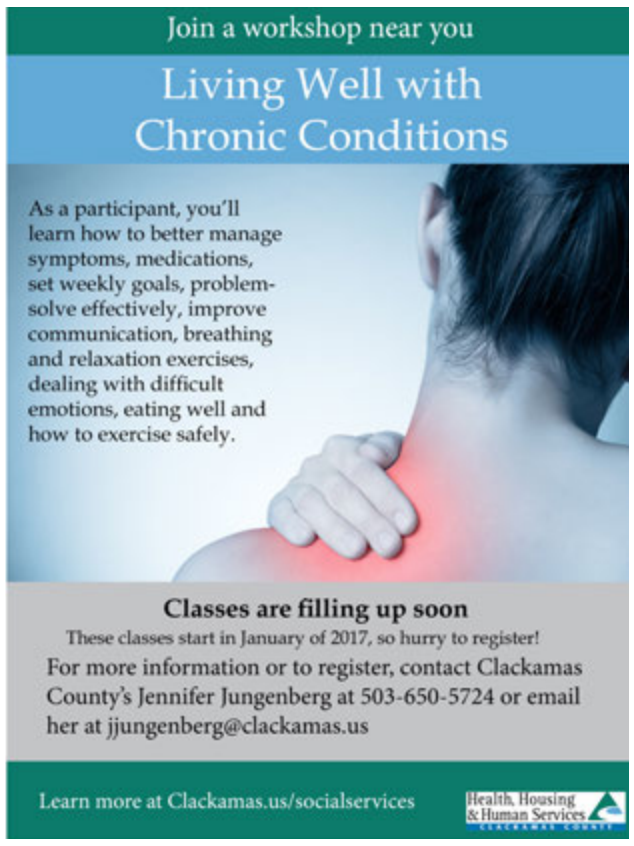
"It's very clear that there are gaps between the way our public health system currently functions and what it would look like if it was modernized and funded the way it's supposed to be," said Clackamas County Public Health Director Dawn Emerick. "Improving our public health system would go a long way in determining how quickly the county responds to public health emergencies as well as preventing illness and disease in Clackamas County."

In order to fully implement the law, public health departments completed an assessment earlier this year. The goal was to determine the resources needed to provide the bill's baseline public health service level across the state. The assessment determined that public health programs are limited, or minimal, in more than one-third of Oregon communities.

In Clackamas County, it is crucial to avoid the predicament that states like Florida now face with the Zika virus. Insufficient funding for ongoing public health programs costs more money down the road and puts residents' health at risk. It is essential that we invest in the Public Health Division's capacity to investigate and respond, its ability to educate and provide timely information and promote its role in leading and building collaboration.

Public health professionals in the county already work tirelessly to keep local communities safe and healthy. With more funding to accomplish the division's goals, though, officials will be able to:

- Create the policies and systems that promote health in our communities
- Respond to emerging health threats
- Meet ongoing local needs like the prevention of heart disease and substance misuse



Keeping your dog busy on a rainy day

By Laura Perkins, CPDT-KA

It's that time of year in Oregon when the rain and darkness keep us indoors more often. Although we may be content staying home and relaxing more in the winter, our dogs really need the same level of mental and physical stimulation all year long. When we don't give our dogs outlets to exhaust their energy, they may find their own ways to entertain themselves!

Below are some ideas about what to do when it's cold, rainy and dark outside, but Fido is ready to run and play.

Play hide and seek. Let one person hide while another family member stays with your canine friend. Once the person has hidden they should call your pup once or twice and then let him work that brain as he searches for his pal. When your dog finds the hidden person make it really fun - pet, praise, play with or treat your dog. Try to start with easy hiding places and work up to more difficult ones. A variation of this game would be to hide toys or treats for your dog to find.

Indoor fetch or toy play. You may already play fetch with your dog inside. But instead of just throwing the toy once or twice between your own activities, set aside 15-20 minutes to get a full game of fetch going much like you might outdoors. Chasing bouncing tennis balls can cause your dog to slide and injure herself on hard floors, so try a soft, quiet toy for your games.

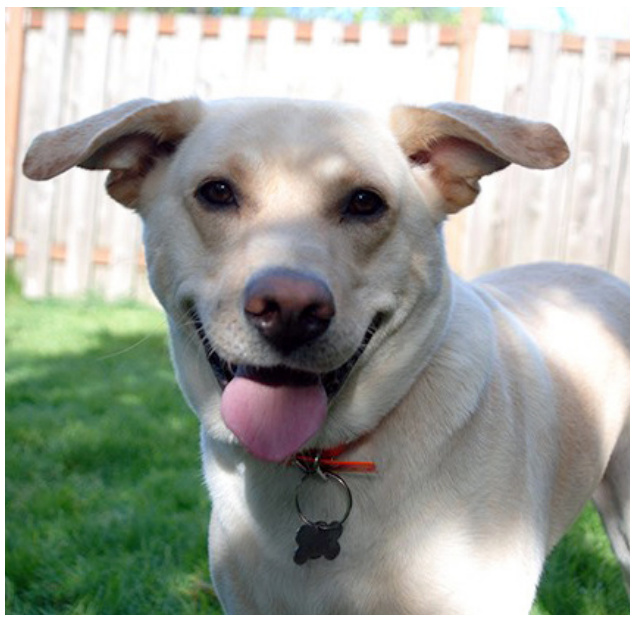
Homemade puzzle toys. Be creative and use recyclables to make an inexpensive puzzle toy. You can use a plastic beverage bottle with some treats inside or a box with a toy enclosed. Another fun toy is treats dropped in a muffin tin with tennis balls to cover the treats. Whatever you use, be sure that your dog doesn't ingest anything she shouldn't by monitoring her while she solves the puzzle you created.

Training time. Training is great mental stimulation for your dog and can really tire him out! Even if your dog is already a model obedience student, he will love to practice what he knows or learn a fun new trick. Be sure to reward your dog when he gets a task right, as that's what keeps training fun for him.

Special chewing session. Chewing can be a great way for your dog to release some energy when you need some quiet time. A great long-lasting chew is a hollow bone or KONG toy stuffed with something and then frozen. The filling can be anything that your dog likes that is a little moist. At Dog Services, we mix a little bit of peanut butter and canned food into the dogs' kibble to fill their daily KONGs. They are always relaxed and ready to nap after they finish working on them.

Why does licensing my dog matter?

Your dog can become separated from you very quickly. Fireworks, car backfires and an accidently left open gate are all ways pets can begin an adventure that often ends with a stay at the local shelter. If your pet visits Clackamas County Dog Services, the license they wear tells us they have a home with information to quickly reunite you with your pet. Not only is licensing your dog the law, but it will help eliminate stressful searches and allow the shelter to provide emergency care if your pet arrives injured. After you purchase your license, be sure your dog wears it at all times. **A dog license is your pet's ticket home!**



Don't get caught harboring a fugitive. License your dog.

It's the law to license your dog in Clackamas County.

Dog licensing also promotes responsible dog ownership, helps prevent spread of disease by ensuring up-to-date vaccinations, and supports investigations of animal cruelty, abandonment and neglect.

Buy or renew licenses online at **clackamas.us/dogs**, at many Clackamas County vet clinics, or at the shelter (13414 SE Highway 212, Clackamas, OR 97015).

	Altered dog	Fertile dog
1 year*	$24	$41

*Discounts offered for multi-year licenses.

CLACKAMAS COUNTY DOG SERVICES

Serving our four-legged friends

We provide shelter, medical care and support to Clackamas County's homeless dogs. We also offer dog licensing, adoptions, officer response, and serve as a resource for lost and found dogs.

Learn more about services and volunteering opportunities at **clackamas.us/dogs**.

Come meet our adoptable dogs!

Adoption hours
Tuesday through Saturday
11:30 a.m. to 4:30 p.m.

Regular business hours
Monday through Saturday
8:30 a.m. to 5:00 p.m.

503-655-8628
13141 SE Highway 212
Clackamas, OR 97015

Adopt. License. Donate.

Hound-Me-Downs sale a howling success

The Clackamas Dogs Foundation held its first "Hound-Me-Downs" garage sale to raise funds for county shelter services on Sept. 17 at the Oregon City Farmers Market.

There was a great turnout of local dog lovers who scored some great deals on dog beds, crates, collars, toys and fashionable doggy clothing.

"It was wonderful to see how much support the shelter has in the community," says Sarah Holcombe, Fundraising and Volunteer Coordinator for Clackamas County Dog Services. "We also raised $1,000 for the foundation."

After such a positive first year, the foundation hopes to make this sale an annual event. A fundraiser for the shelter and great deals for the community; talk about a win-win!

Maintaining a healthy weight for dogs

By Lora Geisler, DVM

Obesity, unfortunately, is a common and serious health issue in our pets. One study indicates that 20 percent of dogs and cats are overweight or obese. In the past five years, there has been a 37 percent increase in obesity in dogs and an alarming 90 percent increase in obesity in cats. Excess weight is harming our pets, from quality of life to serious medical conditions such as diabetes, and virtually all organ systems are affected.

Health risks include:

- Respiratory problems
- Decreased liver and immune system function
- Urinary tract infections
- Increased blood pressure and heart disease
- Digestive disorders
- Skin and coat problems
- Damage to joints, bones and ligaments
- Decreased stamina
- Decreased longevity (shortened life)

Obesity is the second most common health issue in the avian pet. Pet birds typically live sedentary lives; they may be unable to fly as a result of trimmed wings. If owners don't understand their pet's dietary needs, they may become overweight. Obese birds can develop similar diseases to humans such as clogged arteries, metabolism issues, high blood pressure and heart disease.

Weight gain prevention is very important for all pets.

- Encourage exercise
- Choose the correct type and amount of food
- Monitor your pet's weight
- Limit or eliminate treats
- Treat any medical problems or disease
- Start early by regulating your young pet's weight through exercise, feeding healthy food and not feeding "people food"

Weight loss can be achieved with appropriate diet selection, calorie restriction and exercise. Despite the complexity of weight loss, obesity can be a curable condition for your pet.

Consult your veterinarian for an individualized weight loss program that provides a consistent and healthy rate of weight loss to reduce the risk of disease, prevent malnutrition and improve quality of life and longevity. Your veterinarian can also determine if there are any underlying medical problems contributing to obesity.

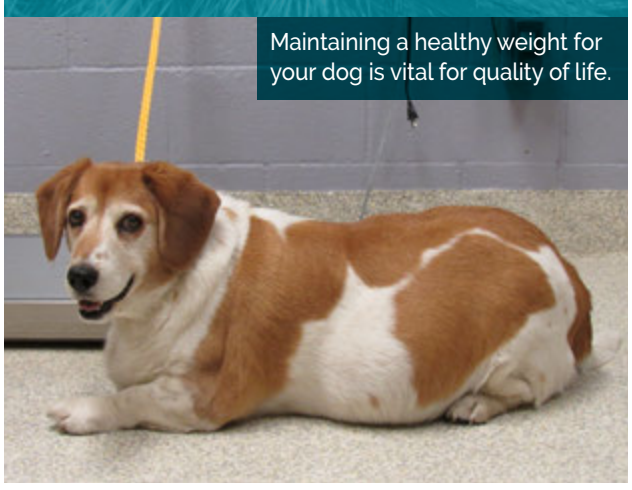
I highly encourage pet owners to spend more time walking their dogs, playing with their cats and increasing activity of their birds to improve the physical fitness of their pets.

BENEFITS OF PROPER WEIGHT

Your pet will thank you for monitoring its weight to have a better quality of life.

Benefits include:

- Increased stamina with more energy to run and play
- Increased mobility
- Increased life span with lean body mass
- Reduced chances of joint pain and damage
- Enhanced protective functions such as the skin and immune system
- Helps fight the stresses of aging



Maintaining a healthy weight for your dog is vital for quality of life.

Clackamas Dogs Foundation provides critical services for dogs

The Clackamas Dogs Foundation supports Dog Services by funding special programs.

It has been one year since the Clackamas Dogs Foundation (CDF) expanded its board of directors and hired staff to manage day-to-day activities. As that year has flown by, CDF has made some major accomplishments focusing on fundraising and awareness of the foundation and its services.

Last May, the foundation held its first self-hosted fundraiser, *Putt for Mutts* at Sah-Hah-Lee Golf Course. More than 70 people raised over $6,000 for the foundation. It was a great success for a first event, and we are already planning for the second one. Save the date for Thursday, May 18, 2017 to join in on a fun evening of food, auctions, putt-putt golf and constant dog talk. We are also collecting donations for our silent auction, so let us know if you or someone you know is interested in donating goods or services.

The foundation also updated its mission statement to better represent the main purpose of what it does. As you may know, the foundation was created in 2012 as a 501(c)3 nonprofit that directly supports Clackamas County Dog Services (CCDS). The new mission states, "The Clackamas Dogs Foundation provides support and assistance to Clackamas County Dog Services in order to advance dog welfare in Clackamas County."

As it grows, the foundation is committed to helping dogs in our community receive the best care possible. The foundation makes a difference in helping feed our shelter guests, reducing overpopulation through spaying and neutering shelter and community dogs, and providing outreach and education in the community.

What's next from the foundation? We'll be sending out a mailer for holiday donations in November. If you would like to be included, email sholcombe@clackamas.us with your information.

With all these fundraising efforts, you might be wondering what the foundation been spending its money on? Lots of projects to support Dog Services!

- Funding a portion of the cost to have a professional dog trainer on staff
- Purchased new sun and rain shades for the doggy play areas
- Funding the Low-Income Spay and Neuter program
- Helping to fund the new dog foster program now being developed

CDF is excited about its new direction and eager to keep the momentum going. If you are interested in getting involved, please contact Volunteer and Fundraising Coordinator Sarah Holcombe at 503-722-6729. Visit CDF's Facebook (facebook.com/ClackamasDogsFoundation) or website (clackamasdogsfoundation.org) for current projects and information on how you can get involved.

DOG FUNDRAISERS

Save the date! The second annual *Putt for Mutts* will be held on Thursday, May 18, 2017, at Sah-Hah-Lee Golf Course in Clackamas. Silent auction donations for goods and services are welcomed for this event.

The holidays can be a difficult time for people, and dogs, too. Donations during the holidays are greatly appreciated. Email Volunteer and Fundraising Coordinator Sarah Holcombe at **sholcombe@clackamas.us** for donation details.

Check out **clackamasdogsfoundation.org** for additional donation information and volunteer opportunities like housekeeping, potty-walking, dog training and administrative support.

High Rocks cleanup a success!

Volunteers from Clackamas County Water Environment Services (WES) recently teamed up with employees from the cities of Gladstone and Oregon City to remove trash and other debris in the High Rocks area along the Clackamas River. The event was organized by SOLVE, a nonprofit that brings volunteers together to take care of parks, natural areas and neighborhoods. The High Rocks Summer Cleanup was the first collaboration of its kind. Clackamas County Chair John Ludlow was among the volunteers.

Members of the Gladstone Police Department and dive team also turned out to help. In all, 100 pounds of trash were removed and 30 pounds of recyclable materials were collected. WES Director Greg Geist said "We are thankful to Gladstone, Oregon City, and SOLVE for helping to organize this collaborative stewardship opportunity to restore a beautiful part of the county prone to littering during the summer months."

WES Reduces Cost of Wastewater Capacity Project cont'd from page 1

Both digesters must operate 24 hours a day, which means there is no backup system in place should one of the digesters need maintenance or repairs.

WES staff recommended a "phased" approach to construction and a strategic method of delivery of equipment to save money for ratepayers. Value engineering by WES staff and the evaluation of current and future capacity needs based on new population growth forecasts also helped keep costs down as it helped determine exactly how much equipment is needed right now.

Construction on a single new digester is expected to be completed in 2020. During that time period, existing equipment at the plant will be upgraded to support the additional capacity and future improvements.

A regional committee will help determine how the cost of the project will be distributed among partner cities and communities.

This co-investment strategy is the latest collaboration in a partnership that has saved millions of dollars for ratepayers over the past 20 years.

Since 1996, the districts' treatment plants have been operationally intertwined and routinely share equipment, management resources, staff, and operating space to help keep rates down.

These partnerships represent the trend of collaboration and cooperation in the increasingly expensive wastewater treatment industry.

To learn more about WES and the solids capacity improvement project, visit clackamas.us/wes/.

Kellogg facility upgraded to protect environment

Two large barges traveled up the Willamette River past Portland this summer to deliver equipment allowing for environmental improvements at the Kellogg Water Resource Recovery Facility in Milwaukie.

The barges are now anchored near Elk Rock Island where they delivered a large crane and construction materials. Scuba divers are using these materials to make improvements to the facility's outfall – the apparatus that discharges highly-treated, cleaned wastewater called effluent deep below the river's surface.

The Kellogg Outfall Project extends the outfall's length by 220 feet, deepening discharge from 35 feet to 65 feet. Divers are also adding a diffuser to improve dilution and further minimize the impact on water quality.

Improvements will help the facility comply with existing and anticipated Oregon and federal water quality regulations. The construction is being conducted through Oct. 31 to accommodate fish passage, also per regulations.

The Kellogg facility is managed and operated by county's Water Environment Services (WES). The public can learn more about WES projects at clackamas.us/wes.

We want to hear from you!

At an Oct. 4 Policy Session, the Board of County Commissioners reviewed and discussed at length proposed amendments to the County Code pertaining to Chapter 2.10, Hamlets and Villages.

The proposed amendments are intended to clarify language concerning training and conduct of hamlet and village board members as well as the dissolution process for a hamlet or village. Commissioners voted to move forward with the public hearing process before voting on the matter.

The Hamlets and Villages program began in 2005 when the commissioners adopted the concept to increase public involvement in unincorporated Clackamas County. Hamlets and villages are intended to give residents a formal community structure to discuss important community issues and make recommendations for their resolution to the county.

These organizations serve an important advisory role to Clackamas County Commissioners.

If you are interested in providing comment on this code revision, please come speak to your commissioners at the Nov. 9 Business Meeting at 10 a.m. at 2051 Kaen Road, Oregon City in the BCC Hearing Room.

A Second Reading is scheduled to take place at the Nov. 23 Business Meeting at 10 am at 2051 Kaen Road, Oregon City in the board's Hearing Room. Dates and times are subject to change. Please consult the commissioners' calendar prior to the meeting.

Questions? Please contact Katie Wilson via email at kwilson2@clackamas.us.

Qué hacer durante un Terremoto

El Condado de Clackamas quiere que usted practiqué qué hacer si un terremoto golpea. Puede salvar su vida.

Queremos que usted se mantenga seguro. Cuando la agitación empieza, Usted no quiere pensar en qué hacer, Usted quiere saber qué hacer.

Los terremotos fuertes son posibles en nuestra zona. El piso o suelo puede tirarse debajo de usted. Cosas acerca de usted pueden derrocar o caer. Eso da miedo.

Cuando está adentro de un edificio puede mejorar sus posibilidades de ser seguro si usted "Agacharse, Cubrirse y Agarrarse" durante un terremoto:

- Agáchese en el suelo a las manos y rodillas (¡antes de que el terremoto le tumbe!)
- Cúbrase debajo de un escritorio o mesa resistente (y su cuerpo entero si es posible). Si no hay una mesa cerca, ponerse al lado de una pared.
- Agárrese del objeto resistente (o proteja la cabeza y el cuello) y quedase allí hasta que pare el temblor.

Elementary school to benefit from proposed urban renewal plan amendment; Public invited to comment

The Clackamas County Development Agency is proposing a substantial amendment to the Clackamas Town Center Urban Renewal Plan in order to provide funds to the Mount Scott Elementary School improvement project.

The Planning Commission and Board of County Commissioners will hold public hearings on the proposed amendment on Nov. 14 and Dec. 15, respectively. The public is welcome to attend and provide testimony at either or both hearings, and is also welcome to submit written testimony in advance to Development Agency Supervisor David Queener by email at davidque@clackamas.us or by mail or drop-off to Development Services Building, 150 Beavercreek Road, Oregon City, OR 97015. Please see the notices below for details.

No public vote is required on the proposed amendment because it would not expand the urban renewal district's boundary, duration or borrowing authority, or alter the basic purpose of the plan. However, because this amendment would be for a project not currently in the plan, and is estimated to cost more than $500,000, it must be approved by the board.

If the amendment is approved, the Development Agency would provide $2.5 million of funding to the North Clackamas School District for improvements to Mount Scott Elementary School, including additional classrooms, restrooms and an expanded cafeteria. The money would come from already-a e Development Agency completed the final work program for this urban renewal district in March 2013. Since then, one road project (Monterey Avenue extension) has been completed, one road project (Otty) is under construction and three road construction projects are in design. In addition, funds from the urban renewal district have been distributed to the Sheriff's Office, North Clackamas Parks and Recreation District, and Clackamas County Fire District No. 1 for projects identified in the urban renewal plan.

NOTICE: PLANNING COMMISSION PUBLIC HEARING

The Clackamas County Planning Commission will meet to review and hold a public hearing on a proposed amendment to the Clackamas Town Center Urban Renewal Plan, and make a recommendation to the Board of County Commissioners.

When: 6:30 p.m., Monday, Nov. 14, 2016

Where: Development Services Building Auditorium, 150 Beavercreek Road, Oregon City

Documents may be found at **clackamas.us/development** or by contacting, Development Agency Supervisor David Queener at 503-742-4322 or davidque@clackamas.us.

NOTICE: BOARD OF COUNTY COMMISSIONERS PUBLIC HEARING

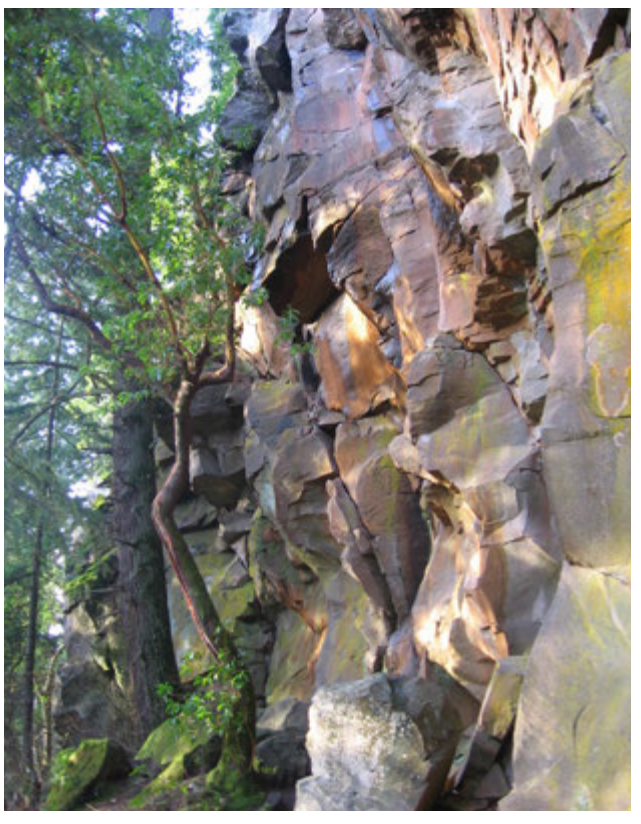
The Board of County Commissioners will hold a public hearing and consider an ordinance for the adoption of a proposed amendment to the Clackamas Town Center Urban Renewal Plan:

When: 10 a.m., Thursday, Dec. 15, 2016

Where: Public Services Building, fourth floor, Board Hearing Room, 2051 Kaen Road, Oregon City

Documents may be found at **clackamas.us/development** or by contacting David Queener, Development Agency Supervisor, at 503-742-4322 or davidque@clackamas.us.

The maximum indebtedness for the Clackamas Town Center Urban Renewal Plan is $177,153,300 and would not be changed by this proposed amendment. The proposed amendment does not impact property tax rates because taxes are no longer collected for this urban renewal area. The ordinance, if approved, is subject to referendum.



Future Madrone Wall park site helped by Oregon National Guard

In August, the Oregon National Guard constructed a road and parking lot at the Madrone Wall site, a county park slated to open next July.

The constructing of the road and parking lot did not come from the county budget, as the County Parks Division successfully applied for a Guard program that provides on-the-ground training opportunities for the Guard's engineering unit while benefitting the county with project cost savings.

The county purchased the Madrone Wall site in the early 1900s for use as a quarry. The defining feature of the site is the 120-foot basalt wall that bisects the property. In the past, this wall has been popular with local rock climbers.

In recent years, the Board of County Commissioners and the County Parks Advisory Board drove the Madrone Wall as a priority project for development. Last year, the project received a key grant from the Clackamas County Tourism Development Council. That grant, along with outside funds raised by the Madrone Wall Preservation Committee and the commitment of the Oregon National Guard, has allowed park development to move forward.

"Through the county's Performance Clackamas strategic plan, we're dedicated to honoring, utilizing, promoting and investing in our natural resources," said County Parks Manager Rick Gruen.

Watch a new video showing the beauty of the wall on the Clackamas County YouTube page, or go to **bit.ly/2cg5Ayt**. More on the Madrone Wall site can be found at **clackamas.us/parks/**.

Proactive testing for lead puts minds at ease

Clackamas County proactively tested for lead at 20 sites with drinking water sources throughout parks and facilities in the North Clackamas Parks and Recreation District. These 20 sites have 60 different designated drinking water sources, like water fountains, kitchen sink faucets, and ice machines.

The results were excellent. Fifty-nine of the 60 outlets tested had a lead level below what the Environmental Protection Agency recommends the maximum allowable level to be. The sole source exceeding the limit was a sink at the Hood View Park house which was not in use as a water source. That sink has been removed.

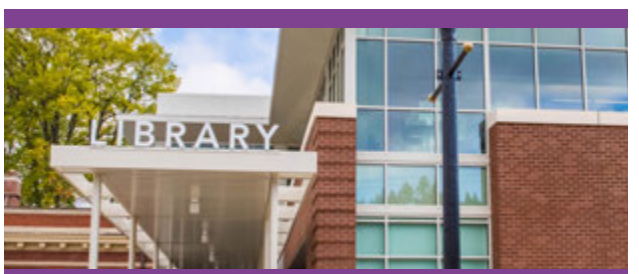
"Clackamas County was not required to perform this testing, and we had no indication that anything was wrong, but we felt it was a prudent step to ensure our residents have peace of mind," stated County Administrator Don Krupp. "We're pleased with this outcome."

The entire project cost under $2,000.

This is only the first phase of the county's current plans for lead testing. It is expected that other county facilities will be subject to testing by the end of the year.

"Through our Performance Clackamas strategic plan, we're committed to building public trust, maintaining a strong infrastructure, and ensuring healthy communities," said Krupp. "We strive to be proactive and forward-thinking for our residents' quality of life."

The 20 sites tested, which make up the entirety of all potential potable water sources found at district- managed and maintained sites, included Alma Myra Park, Altamont Park, Ann-Toni Shreiber Park, Ashley Meadows Park, Century Park, Happy Valley Park, Harmony Road Neighborhood Park, Heddie Notz Park, Hood View Park and Facilities, Maintenance Facility, Milwaukie Center, Mt. Talbert Park, North Clackamas Aquatic Park, North Clackamas Park and Facilities, Pfeifer Park, Risley Park, Stringfield Park and Facility, Summerfield Park, Village Green Park, and Water Tower Park.



The Libraries in Clackamas County (LINCC) – found at lincc.org – provides service to the 13 local area libraries.

Two of our libraries had grand openings on Oct. 15!

- Canby Library
- Oregon City Library

Check them out soon, and find out more about how the county supports our libraries at **lincc.org.**

Summit on Damascus area lands held

Elected officials and staff from four jurisdictions joined Clackamas County Commissioners at a regional summit in late September to begin discussing issues related to the future of land use in the Damascus area.

Representatives from the cities of Happy Valley and Gresham, Metro, and the Oregon Department of Land Conservation and Development attended.

Damascus lands, businesses and residents returned to county jurisdiction on July 18, after city voters approved disincorporation in May. The city had been incorporated since 2004.

Residents can learn about the impact of disincorporation at clackamas.us/damascus.

Damascus

However, larger regional land use and economic issues are also involved now that this large land area is again a part of unincorporated Clackamas County.

Many of those issues were discussed on Sept. 27, when an audience of more than 50 listened to officials comment on development challenges, land use and transportation plans, the need for more employment land, the current lack of needed infrastructure, and related topics.

The agency representatives agreed that extensive public outreach and planning is needed in coming years, and that there will be additional meetings among the jurisdictions.

'Peer Mediation' high schoolers resolve fellow students' issues

High school is a difficult time of transition for most young adults. Dating, maintaining friendships, dealing with cliques, and potential bullying are just some of the issues youth deal with regularly. Simple misunderstandings among students can quickly escalate into difficult situations with long-lasting effects.

The Clackamas County Resolution Services Department set out to do something about this years ago. By developing the Peer Mediation program – through which local students are taught how to mediate others' conflicts – the department has successfully empowered youth to facilitate hundreds of disputes among students, and sometimes teachers, in a positive way for all parties involved.

The process is straightforward. At the beginning of a school year, several students who show leadership abilities receive training or re-training on mediation techniques from professional county staffers.

These peer mediators then stand ready to assist as needed.

When a conflict arises involving students, or a student and a teacher, either party may request having their conflict resolved through the program. If both parties agree the individuals in conflict will meet immediately with a panel of student peer mediators to find an acceptable outcome for all.

One conflict from years past involved a female student who was bothered by the words and actions of a male student during class. She shared with the peer mediator team that she had, on several occasions, told the boy to stop such distracting behavior. The mediators were able to discern that the girl had communicated her needs in a subtle and indirect manner. The boy, on the autism spectrum, indicated that he didn't fully understand that the girl was annoyed with him.

The mediators helped the girl to respectfully and more directly express her needs, while also advocating for the boy by teaching his classmate about autism. In the end, a concrete, collaborative agreement about interaction in class was reached, before a bullying or wrongful outburst could have occurred.

The key aspects to the program, according to county staff, are the speed of the process – how crises can be nipped in the bud before the whole school knows about an issue – and the fact that peer mediators can only be students.

"There's a much greater likelihood of trust being established because authority figures are taken out of the equation," stated Resolution Services' Erin Ruff, who oversees the program for the county. "Fellow students know the people involved, the dynamic of the school, the intricacies of a given situation … they can help guide resolutions in a way that adults cannot."

If only one student wants a peer mediation, but the other declines, the student requesting services will still be interviewed by a peer mediator team. Often, this simple action helps students figure out how to safely cope or respectfully resolve the conflict.

Of course, if the conflict is severe enough or violates school policy, a staff-facilitated mediation involving school counselors/ administration may be engaged, and parents must be contacted.

KNOW A SCHOOL THAT COULD BENEFIT FROM THE PEER MEDIATION PROGRAM?

CONTACT CCRS AT 503-655-8852 TODAY!

The program has been in practice for seven years at New Urban High School in Milwaukie, with an expansion this school year into both Arts & Technology High School in Wilsonville and throughout the Colton School District.

Annarie Wergeland, School Counselor at New Urban, stated "The program has had a powerful impact. Teachers like it because it prevents adults from solely shouldering the responsibility of trying to mitigate conflict. Students are empowered to support one another while practicing practical life skills and helping the school climate. Parents are encouraged that students are resolving conflict peacefully. It's a win-win-win."

If you are a student, teacher, school staff or administrator, parent, or any other person who knows of a school that would benefit from the peer mediation program, please don't hesitate to contact Erin Ruff at eruff@clackamas.us or 503-655-8852.

Using the Clackamas County ONEStop Farmgate

A tool to help Clackamas County specialty crop growers* access the resources they need to be successful

A GUIDE FOR SPECIALTY CROP GROWERS AND COMMUNITY PARTNERS

ClackamasFarmONEStop.com

*Specialty crops are defined as fruits and vegetables, tree nuts, dried fruits, horticulture, and nursery crops.

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WHAT IS THE CLACKAMAS COUNTY ONESTOP FARMGATE?

The Clackamas County ONEStop Farmgate on FoodHub is a virtual farmgate through which specialty crop growers can access the resources they need to be successful.

The Farmgate makes it simple for growers to connect with resources from public, private, nonprofit, educational, and philanthropic entities, and is a place for real farmers to get real help. The site is online, available 24-7, and is quick and easy to navigate.

The Farmgate is built on **FoodHub** – a website developed by Ecotrust to help wholesale food buyers and sellers do business – and has been designed to meet the specific needs of specialty crop growers in Clackamas County.

Clackamas County conducted outreach to partners around the county and the region to confirm that they are interested in providing services to specialty crop growers in Clackamas County. Through robust and informative profiles, it's easy to get a quick sense of who the partners are, and what services they have available to growers in the county.

Check it out at ClackamasFarmONEStop.com

HOW TO USE THE CLACKAMAS COUNTY ONESTOP FARMGATE

FOR SPECIALTY CROP GROWERS

How to create a profile for your business

The Clackamas County ONEStop Farmgate was developed specifically with Clackamas County growers in mind. One easy first step toward connecting with community partners is to create a free FoodHub profile and fill it out completely. Joining FoodHub is not required in order to access the Farmgate, but it is free, and it will enable partners to learn about your farm or business, and tailor their services to meet your needs.

Check out this example to see what a completed profile looks like:
https://food-hub.org/users/view/2182

What you can do

You can start searching for resources right away. Start on the homepage at clackamasfarmonestop.com. A search bar in the center of the page allows you to type in exactly what you need. Based on your search, a list of results will appear, with the names and contact information of partners who have resources to offer related to your search.

The other way in which resources can be accessed is via the seven resource headings listed on the left sidebar of the page, below the search bar. Clicking on any of these resource headings will provide you with the names and contact information of ONEStop partners who have relevant services. If you're logged into FoodHub, clicking on a partner's name or logo will take you to their profile page, where you can learn more. Or, contact them directly via phone or email, using the contact information provided in the search results.

If you're simply interested in learning about resources, but don't have a specific question in mind, try clicking the "**Frequently Asked Questions**" link. Located directly under the picture on the ONEStop homepage, clicking on this link will allow you to see a list of the most common requests for technical assistance – or the most frequently asked questions – that growers have for ONEStop partners. This FAQ content was generated by ONEStop partners. Like the ONEStop partners, the FAQs are organized according to the seven resource categories listed on the left hand side of the page.

The rest of FoodHub is also open to you, so start exploring! The **Marketplace** is for instant connections: When you post about a product you have available, that post becomes visible to buyers in your geographic area, making it easy for them to connect with you and do business.

Not sure how many buyers are near you? Use the **Member Directory** to get a handle on how many schools, hospitals, restaurants, etc. are in your area.

No matter where you go in FoodHub, you can always return to the Clackamas County ONEStop by clicking on the ONEStop button in the top navigation bar.

FOR COMMUNITY PARTNERS

How to create a profile for your agency, organization, or institution

Community partners listed in the Clackamas County ONEStop Farmgate are FoodHub Members (join for free at food-hub.org), and have resources or information to share with growers in Clackamas County. Before you can be listed in the Farmgate, you must update your profile and include information about the resources you are able to provide.

Once you've created your FoodHub account, check out this example to see what a completed profile looks like:

https://food-hub.org/users/view/2182

You can significantly increase the odds that growers will see your profile by completing the **Frequently Asked Questions** section of your profile page. The FAQs in the Clackamas County ONEStop Farmgate are pulled directly from the FAQs in member profiles. So, the more content you add, the more often your profile will show up in search results.

Visit the Portal to see a full list of the types of resources growers are looking for, update your FoodHub profile as specified above, and then get in touch with us at 503-742-4685 or info@clackamasfarmonestop.com to have your business, agency, organization, or institution added to the Farmgate.

What you can do

Once you have been listed in the Farmgate, growers in Clackamas County will begin seeing your profile page in their search results, and contacting you in regards to the services or support you are able to offer.

As a FoodHub Member, there are several other tools to help you connect with growers and wholesale food buyers:

The **Marketplace** is for instant connections: When you create a post about an event or service you have available, that post becomes visible to buyers and sellers in your geographic area, making it easy for you to get the word out.

Not sure how many buyers or sellers are near you? Use the **Member Directory** to get a handle on how many Members are in your area.

WHO IS SUPPORTING GROWERS IN CLACKAMAS COUNTY?

As of January 2016, the businesses, agencies, organizations, and institutions below are listed in the ONEStop Farmgate, and are working in Clackamas County to support local growers. New partners will be added reguarly. Get in touch to learn more about the services they provide.

- *1000 Friends of Oregon*
- *Clackamas Community College*
- *Clackamas County*
- *Clackamas County Soil & Water Conservation District*
- *Cogan, Owens, Greene*
- *Ecotrust*
- *Friends of Family Farmers*
- *Hansen Family Farms*
- *James Beard Public Market*
- *Modern Convenience Food Stores*
- *New Seasons Market*
- *Northwest Food Processors Association*
- *Oregon City Farmers Market*
- *Oregon Department of Agriculture*
- *Oregon Environmental Council*
- *Oregon Farm Loop*
- *Oregon Food Bank*
- *Oregon Solutions*
- *Oregon State University*
- *Our Table Coop*
- *Pitkin-Winterrowd Farms*
- *Siri & Son Farms*
- *Multnomah County Board of Commissioners*
- *Thompson Farms*
- *USDA Natural Resources Conservation Service*
- *USDA Rural Development*

OUTREACH TOOLS

The more people who join and use the Clackamas County ONEStop Farmgate, the more robust it will be. We've developed these sample emails, frequently asked questions, talking points, and a one-pager to help you spread the word about the Portal and build the community.

SAMPLE EMAIL FOR SPECIALTY CROP GROWERS

Use the sample text below if you want to encourage growers in your area to start accessing resources:

Dear (GROWER NAME) –
My name is (YOUR NAME) and I'm writing to introduce you to a new tool that has been developed specifically to help farmers in Clackamas County access resources and support. It's called the Clackamas County ONEStop Farmgate and is hosted on the website FoodHub. Check it out here: www.clackamasfarmonestop.com

Clackamas County is committed to facilitating connections between growers and the resources they need in order to be successful. Recently, the County collaborated with the team at FoodHub to combine the wonderful resources available to Clackamas County growers with the powerful search capabilities of FoodHub, to make it easier than ever for farmers to get the help they need.

I hope you'll join FoodHub – it's free! – and use this new site to start connecting with resources and partners in our area.

Sincerely,
(YOUR NAME)

SAMPLE EMAIL FOR COMMUNITY PARTNERS

Use the sample text below if you want to encourage a community partner to be listed in the Farmgate and make their resources, knowledge, or expertise more easily accessible to Clackamas County growers:

Dear (PARTNER NAME) –
My name is (YOUR NAME) and I'm writing to introduce you to a new tool being used by farmers in Clackamas County to access resources and support. It's called the Clackamas County ONEStop Farmgate and is hosted on the website FoodHub. Check it out here: www.clackamasfarmonestop.com

In order for farmers in Clackamas County to be successful, they need to build relationships with partners like you! I hope you will consider joining FoodHub and letting farmers in our county know that you are able to support them. You can call 503-742-4685 or email info@clackamasfarmonestop.com to be included in the new site.

Please join FoodHub – it's free! – and helping our farmers access the tremendous resources available to them from partners like you.

Sincerely,
(YOUR NAME)

SAMPLE TEXT FOR NEWSLETTERS

Use the sample text below if you want to share information about the ONEStop in your business, agency, or organization's newsletter:

NEW RESOURCE FOR FARMERS IN CLACKAMAS COUNTY

Launched in Spring 2016, the Clackamas County ONEStop Farmgate on FoodHub is a new website designed to make it easier for specialty crop growers to find the resources they need to be successful. The website makes it simple for growers to search for and find resources and information from public, private, nonprofit, educational, and philanthropic entities. The site is built on FoodHub - a website developed to help wholesale food buyers and sellers do business - and has been designed to meet the specific needs of specialty crop growers in Clackamas County. For more information visit www.clackamasfarmonestop.com

SAMPLE SOCIAL MEDIA POSTS

Use the sample text below if you want to share information about the ONEStop via social media:

FACEBOOK

Check out this new website from Clackamas County: The ONEStop Farmgate is designed to make it easier for farmers to find the resources they need to be successful. www.clackamasfarmonestop.com

We're excited to be listed in the Clackamas County ONEStop Farmgate--a new website designed to make it easy for farmers to search for resources and information. Please help spread the word! www.clackamasfarmonestop.com

Farmers, check out this great new resource from Clackamas County. The ONEStop Farmgate makes it easy to get your questions answered: www.clackamasfarmonestop.com

TWITTER

New fr @clackamascounty! The #ONEStop makes it easy for farmers to find resources, be successful: www.clackamasfarmonestop.com

We're excited to be part of the @clackamascounty #ONEStop! New site for farmers needing support: www.clackamasfarmonestop.com

Farmers, check out this new tool from @clackamascounty. #ONEStop makes it easy to find answers to all your Qs: www.clackamasfarmonestop.com

Frequently Asked Questions

1. Who is the ONEStop Farmgate designed for?
   The Farmgate is designed to make it easy for specialty crop growers (fruits, vegetables, tree nuts, and nursery crops) in Clackamas County to access the resources they need to be successful. In the future, the site may be expanded to include resources for growers of non-specialty crop items, as well.

2. How much does it cost to use the site?
   The site is free to use and does not require a FoodHub membership. If you do want to join FoodHub, membership is also free. Please limit accounts to one per business, organization, agency, or institution, and share login information as needed.

3. I'm a community partner in Clackamas County. How can I get listed in the ONEStop Farmgate?
   Community partners listed in the Clackamas County ONEStop Farmgate are FoodHub Members (join for free at food-hub.org), and have resources or information to share with growers in Clackamas County. Before you can be listed in the Farmgate, you must update your profile and include information about the resources you are able to provide. Once that's been done, get in touch with us at 503-742-4685 or info@clackamasfarmonestop.com to have your business, agency, organization, or institution added to the Portal.

4. Who do I call if I have questions?
   For questions about accessing resources in Clackamas County, or to be listed in the Farmgate, call 503-742-4685 or email info@clackamasfarmonestop.com. For questions about joining FoodHub and/or adding or updating information in your profile, call 1-855-FOODHUB or email meet@food-hub.org.

5. Who developed the Clackamas County ONEStop Farmgate?
   The Clackamas County ONEStop Farmgate is hosted on FoodHub, and was made possible by a partnership between Clackamas County, Cogan Owens Greene, Ecotrust, and many others. This project was supported by the Specialty Crop Block Grant Program at the Oregon Department of Agriculture (ODA). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the ODA.

Talking Points

- **The focus of the ONEStop Farmgate is connecting Clackamas County growers with the resources and support they need to be successful.**
  With the site, growers can search for resources and connect directly with partners via the contact information found in the search results and on partner profile pages. Growers can search for specific questions, or browse the various resources via seven resource headings on the lefthand side of the page. Growers can also read through a list of Frequently Asked Questions and answers, to see what types of information other growers have requested in the past.

- **There are many partners working together throughout the county to support Clackamas County growers.**
  As of January 2016, there are over 20 partners listed in the site. These partners are committed to providing resources and support for growers in Clackamas County. More information about each partner can be found on their FoodHub profile pages.

- **The Clackamas County ONEStop Farmgate is free to use.**
  FoodHub is a project of Ecotrust and is free to join for buyers, sellers, and associates (community partners) throughout the region. As the host of the Clackamas County ONEStop Farmgate, FoodHub is happy to provide this service for free to buyers, sellers, and associates looking to connect with one another.

- **A FoodHub account is not required to search the Farmgate.**
  You do not need a FoodHub account in order to access the site. However, a free membership is required in order to use the rest of the FoodHub website, including the marketplace, product search, and member profiles.

- **The Farmgate was funded in part by a Specialty Crop Block Grant from the Oregon Department of Agriculture.**
  This project was supported by the Specialty Crop Block Grant Program at the Oregon Department of Agriculture (ODA). The Specialty Crop Block Grant aims to enhance the competitiveness of specialty crops including fruits and vegetables. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the ODA. The goal of the Clackamas County ONEStop Farmgate is to connect Clackamas County growers with the resources they need to be successful.

- **Access the Portal at ClackamasFarmONEStop.com**

ANSWERS at your FINGERTIPS

Finding resources to support your farm business is easier than ever with the Clackamas County ONEStop Farmgate! ClackamasFarmONEStop.com

EST ONE STOP 2015

HELP FOR GROWERS

Step 1: Search

Farmers: Search the ONEStop Farmgate for the specific resource you need, or just peruse the site and get an idea of the services that are out there to support your business.

Partners: If you have services to offer to growers in Clackamas County, complete a FoodHub profile and then email info@clackamasfarmonestop.com or call 503-742-4685 to get listed in the ONEStop Farmgate.

Step 2: Connect with real people to get real help

The Farmgate is online, available 24-7, and is quick and easy to navigate. If you can't find the answer you're looking for in the site itself, it's easy to find a phone number for the right person to call.

Step 3: Join FoodHub for extra benefits

FoodHub is proud to host the ONEStop Farmgate and offer free memberships to local food buyers and sellers. Get down to business in mere minutes when you join today.

ClackamasFarmONEStop.com

Powered by FOOD HUB

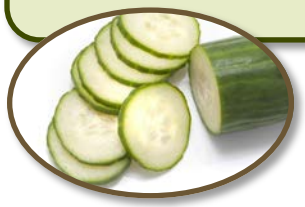
ODA-S07 Expanding the Market for Vegetable CSAs with Institutional Partnerships

Attachment 1: Refrigerator Pickles

How to Make Quick Pickles

ZENGER farm

1 Slice your vegetables. Thinner slices will absorb the flavors faster.



2 Use this recipe to make enough brine to cover your vegetables.

- 1 cup vinegar (try white, apple cider or red wine vinegars)
- 1 cup water
- 2 tablespoons sugar or honey
- 1 tablespoon salt

3 Bring the mix to a boil and dissolve everything.

4 Pour the mixture over your vegetables. Add herbs and spices for more flavor.

5 Let the container cool completely before covering, then refrigerate for 2 days to let the flavors enter the vegetables.

Your pickles will keep in the refrigerator up to 2 months!

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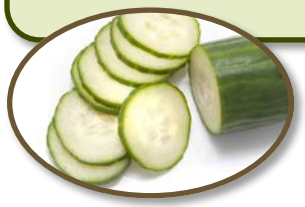

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Try pickling:

Asparagus	Cucumbers	Radishes
Beets	Fennel	Summer Squash
Beans	Garlic Scapes	Turnips
Broccoli	Melon Rind	Zucchini
Cabbage	Onions	
Carrots	Peas	
Cauliflower	Peppers	

Try these herb & spice combos:

- Dill, Garlic, and Spicy Pepper Flakes
- Dill, Mustard Seed, and Peppercorns
- Bay Leaf, Peppercorns, and Onions
- Mustard Seed, Turmeric, Celery Seed and Peppercorns
- Cinnamon, Allspice and Cloves
- Juniper Berries, Coriander, Mustard Seed and Peppercorns

Funded by the Oregon Department of Agriculture's Specialty Crop Block Grant Program.

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Funded by the Oregon Department of Agriculture's Specialty Crop Block Grant Program.

ODA-S08 Fresh is Best: Improving Direct Sales of Produce

Attachment 1: GG Eat Local Community Group Conversations
Attachment 2: Gorge Grown Infographic-Revision
Attachment 3: Farmers Market data
Attachment 4: Why Buy Local advertisement

EAT LOCAL CONVERSATION FINDINGS

JULY 2015

BACKGROUND

The local food movement developed messaging based on communications research 15 years ago which identified ‘fresh & tasty’ as the primary motivator. This has been the dominate topic in the category ever since.

Yet, since that time, many more books, movies and ideas have been introduced (including SuperSize Me, Food Inc, Michelle Obama’s Move It initiative, Jaime Oliver’s TV show, and countless segments on shows such as The Daily Show).

And in the Gorge, we have seen the introduction of 9 different farmers’ markets, 26 CSAs and many more value-added products.

This research was designed to revisit consumers’ current perceptions of local food to explore a wider range of potential messages.

Ultimately, this will inform ads to promote local food in the Gorge.

OBJECTIVE

Overall goal:

To identify the most effective messages to inspire people to eat more local food

METHODOLOGY

- **Conversations with 7 local community groups throughout the Gorge from May - June, 2015**
  - The Dalles Women For Agriculture, May 19
  - White Salmon Bethel Church, May 19
  - Stevenson Eagles, May 21
  - Goldendale Odd Fellows, May 26
  - The Dales Moose Lodge, May 27
  - Mosier Grange, June 8
  - The Dalles Economic Development Committee, June 12
- **63 respondents total**
- **Discussions ranged from 15 minutes to an hour with most in the 20 – 30 minute range**
- **Topics mainly focused on reactions to a number of statements/facts about local food**

FINDINGS

FINDINGS

- **Perceptions of Local Food**
- **Barriers**
  - Convenience
  - Variety
  - Cost
- **Reactions to Messages**
  - Economic
  - Self-Reliance
  - Freshness & Flavor
  - Packaging
  - Health & Community
- **Summary**
- **Recommendations**

PERCEPTIONS OF LOCAL FOOD

PERCEPTIONS OF LOCAL FOOD

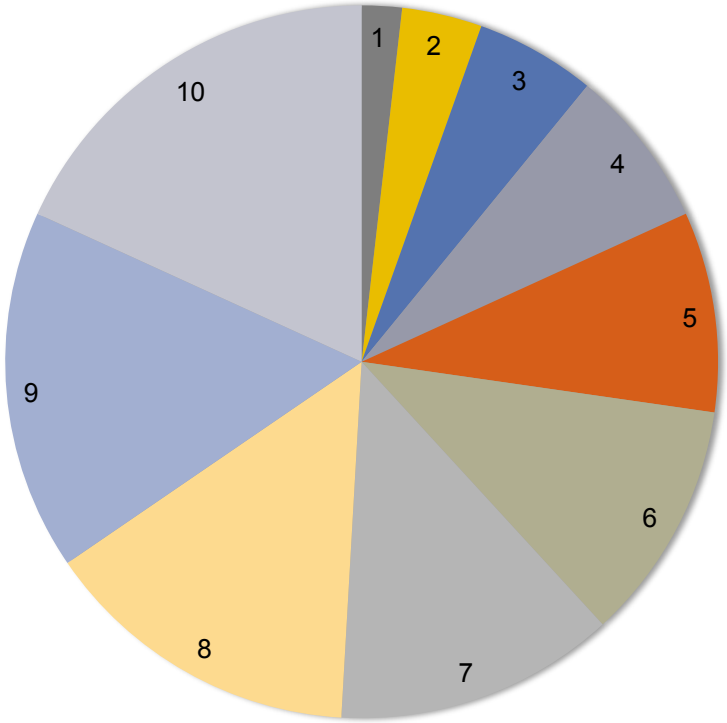
- **Most understood the definition of local food as food that is grown in the Gorge**

- **When asked what first popped into their heads, crops were top of mind**
  - *Cherries, apples, pears, peaches, fruit, wheat, organic*

- **Followed by where to buy: farm stands, farmers markets**
  - *There are a few food stands -like if I have relatives from out of town, I'll take them to Sandoz Farms, Rasmussens, or Evans Fruit Stand on East side of town.*

IMPORTANCE

At the beginning of each group, we asked people to rank the importance of local food to them personally on a scale of 1 -10 with 1 being not at all important and 10 being extremely



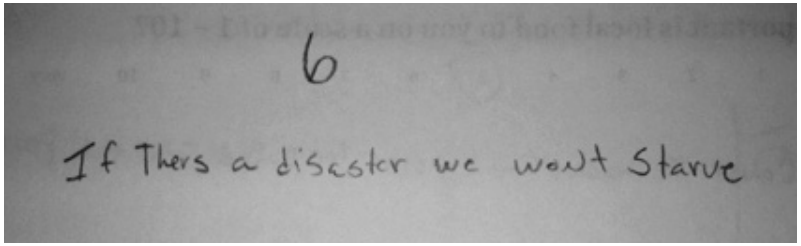
How important is local food to you on a scale of 1 - 10?

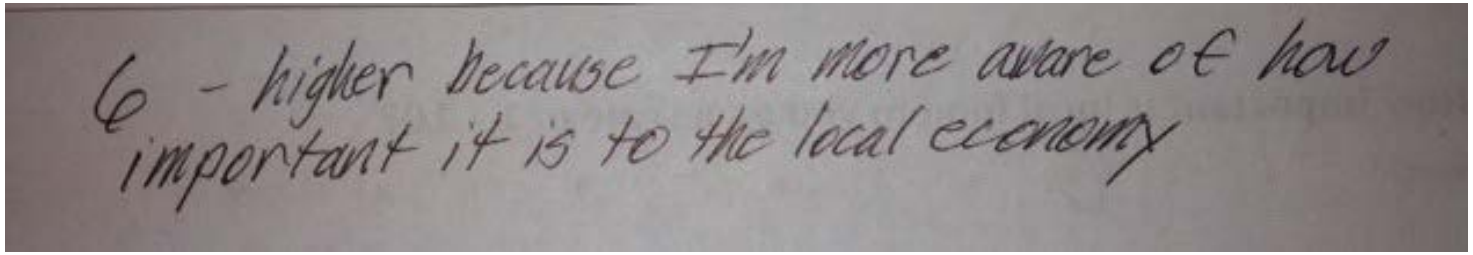
- **In general most feel positively about local food with over 80% ranking 5 or above**

IMPORTANCE

- **Those who ranked higher (8 - 10) tended to cite economics as their reason**
  - *9 - it brings a lot of business and jobs and tourists*

- **At the end of each discussion, we asked the respondent to tell us again how they ranked the importance of local food**
- **Overall, 20 respondents (32%) had increased their score**
- **Most by a single point (but 6 respondents raised their score by 2 or more points)**





AS PEOPLE
(ONE GROUP ONLY)

- **We asked the Economic Development Committee of the The Dalles to describe the personality of each food type:**
  - Fast Food and Non-Local were both men while Local and Organic were women
  - While Non-Local was in a 3-piece suit, Local & Organic were farmers

- **How they would interact at a party:**
  - *Organic makes us feel good*
  - *Fast food is sitting on the couch*
  - *Fast food and non-local want to beat up local*

  -I see it the opposite. A traditional market can feature local food to bring people in. So, local is complimenting to non-local.

- **They did see competition between local and organic**
  - *Price. If you're looking for that thing that is healthier, and can't get to the market, it's easier to pick up organic.*
  - *I know two farmers who tried to go organic and it's hard when you place them next to non-organic farms– they just couldn't do it because the chemicals drift over.*

Fast Food
Male in his late 50s
greasy, lethargic, in clown costume

Non- local Food
Mail in his 30s-40s
3 piece suit

Local Food
Woman in overalls, plaid, boots, hat;
Runs 100 miles hour; playing in the dirt; introvert

Organic
Woman in her 40s
Harried and worn out (organic requires set of standards so they have more to deal with, more labor intensive)

PERCEPTIONS

- **Overall we found general positive feelings about local food with no negative stereotypes or political associations**

BARRIERS

Increase Interest
Goal: Buy More Local Food
Increase Access

BARRIERS

- **Although the perceptions of local food are high, there are several barriers that keep them from buying more**
  - *I think of it higher but from what I actually do, the number is lower.*
  - *It's cheaper and simpler to just go out and buy it.*
  - *10 - because if you do home grown gardening and you buy at the farmers markets or go to the farms direct, it's all fresh. It's all good. ("And is that how you shop?") Not really.*

- **Barriers break down into 4 main categories:**
  - Convenience
  - Variety
  - Cost
  - Other

BARRIERS

Convenience

- **Local food is seen to take more time and thought to purchase – it is always an extra stop**
  - *I have limited time to shop – convenience ("So when you think local food you think you have to go to the farmers market?") yes. I'd have to go to at least to 2 to 3 places.*
  - *Especially when we're running errands because it definitely takes an intentional effort and you have to be very focused and very intentional and put that as the first choice in every food decision.*
  - *Everyone likes the convenience of going to the grocery store.*
- **Many think it requires visiting many individual farms**
  - *You have to be willing to spend an entire day traveling to shop. It's hard to eat and shop local.*
  - *I don't know where all the farms are.*
- **Or remembering/planning an extra visit to the farmers' market**
  - *It's hard to get local produce - I'm not in The Dalles every Saturday.*
  - *Local food is important but guess what, I go to Trader Joes or Costco and I buy as much organic as I can. Because I can. The local food comes to me 4 – 6 weeks of the summer, that ain't getting it. If it was that important to me, I'd starve to death.*

BARRIERS

<u>Convenience Cont.</u>

- **All told us that when they find local food at the grocery store, they will choose it over the other options**
  - *When I go shopping, I don't put much thought into it. I know what I want and can get in and out. But if I see something there that's local, I'll tend to gravitate to that if it's in the same place I'm going anyway.*
- **When it comes to shopping 'local' is often seen as the town they live in vs the wider Gorge**
  - *We try very hard to buy and eat local. But sometimes we go to The Dalles for lunch.*
- **Some did not own cars which made it difficult to eat healthy in general**
- **Coops (a set store open all week) and CSAs (delivered to you) were seen as solutions to many of the issues with convenience**
  - *The food co op has proved to be successful in other communities. And can be year round.*
  - *CSAs come to you!*

BARRIERS

Variety

- **When thinking about buying local, some jump to the thought that they need to eat 100% locally which would cut them off from foods they love that are not grown here or from staples they need in the winter**
  - *Can you buy all local? Can we buy what we need? We don't have a 365 day growing season. We don't have that much choice.*
  - *Kiwis, bananas and other things.*
- **There is also the feeling that the types of foods grown in the area are limited…**
  - *We need a bigger variety and more of it. Like I hardly ever see a nectarine or a plumb around here.*
  - *There's the farmers market but there's usually only about 5 or 6… It's a small venue. You're only going to get certain things - they only have they don't have a variety of things.*
- **…and not always consistent**
  - *It isn't necessarily as dependable. I'm used to getting something, you don't know year after year if it's going to be produced.*
  - *Use to go to get Asparagus -and they stopped growing it. So now we have to go to Tri Cities –it's frustrating.*

BARRIERS

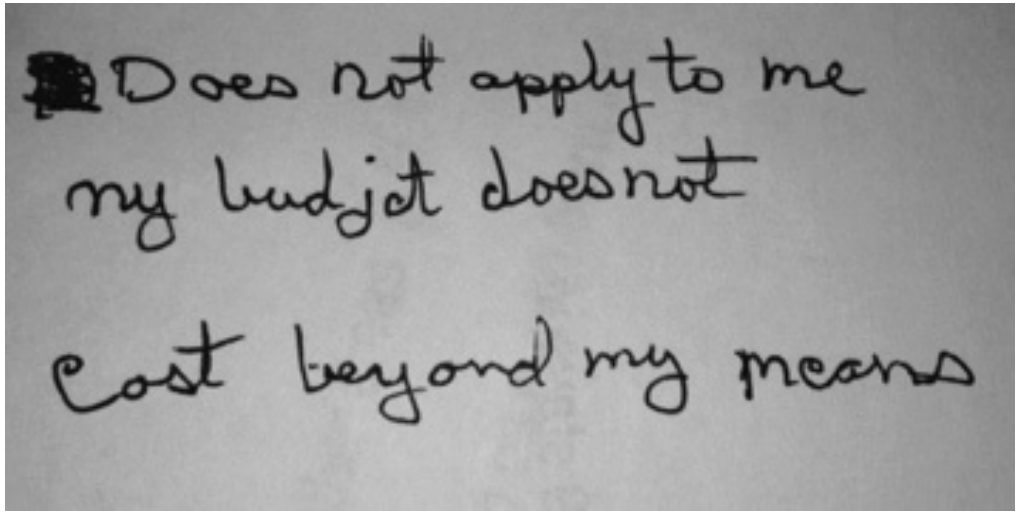
Variety Cont.

- **Quantity was also an issue for one group -linked to variety but also to lower prices**
  - *I go to the Red Barn in Portland and they have tons of vegetables. I'll get red peppers at 10 for a buck sometimes…I mean I get 3 to 7 heads of lettuce at one time – I get the choice of 9 different lettuces. Corn on the cobb, they got them in big bins the size of half of this room and you go and pick out what you want. Melons. It's the amount. That farmers market, they have 12 apples out there –that isn't conducive to what I want.*
  - *You would definitely see people here buy fresh produce in the Gorge if we had it in abundance.*
- **In general, the commitment to local food brings a sacrifice in comparison to the other choices**
  - *They're hard to find things locally that work as substitutes. Pears work for a lot of things and I work really hard to eat local and to eat canned and what I got but you get appetite fatigue. You get so tired of canned stuff.*
  - *So I think that's why we're so spoiled by such abundance, crazy abundance. I mean I bought strawberries - I'm growing strawberries - but I really wanted some strawberries so I bought some and they were from California.*
  - *So I think a lot of it that we're not forced to and we have so many incredible choices that we're lazy humans and a lot time we just go for the quick and easy.*

BARRIERS

<u>Cost</u>

- **It's hard to vote with your dollars if you don't have the dollars to vote with**
  - *The problem is that there's a dollar sign and that's the problem.*
  - *The prices have to be competitive. Unfortunately, you have to be cheaper.*



BARRIERS

Others

- **One person was concerned that local may be less sustainable**
  - *I've heard there may be more negative environmental impacts if everything was grown locally just because there's less economies of scale and more small transportation moving less amounts at one time.*
- **Another was concerned about safety of small farms**
  - *I'm going to bring in a perspective from the big farmers. Yes, it might be healthier to have it local grown because they don't have all those chemicals but there's things that can come into that plant that can give you a disease that chemicals take care of. And so how do we know that proper care of that fruit by local farmers, what do they have to meet what's the standard?*
- **Interestingly, a focus on meat may be a way to bring in a group of people who would otherwise not be engaged**
  - *I don't eat a lot of vegetables – I'm just not a vegetable person. So garden stuff, you know, what does that do for me. But I do like meat and I would like to help eat more locally and know what's in my food and have less process in my meals. Local meat.*
  - *If you're not in the market for tomatoes or whatever, and we have a huge garden ourselves so we do that.*

Increase Interest
Goal: Buy More Local Food
Increase Access
Convenience
Cost
Variety

REACTIONS TO MESSAGING

REACTIONS TO MESSAGES

This research gathered reactions to 13 different messages. The presentation of these evolved along the way based on audience feedback – weeding out the weaker ones and pairing others for context (see appendix for layouts)

- **Most of the messages were seen as new and interesting**
- **People told us that simply reading the full list was thought-provoking**
- **In general the more specific stats were seen as more powerful than the general statements**
- **In the end, the messages fell into 5 main groups**
  - Economic
  - Self-Reliance
  - Freshness & Flavor
  - Packaging
  - Health & Community

ECONOMIC

1. Eating local is good for the local economy

- For every $100 spent at a farmers' market, $62 stays in the local economy and $99 stays in the state.
- Farmers earn 72% more when you buy direct.
- If 20% of the fruit, vegetables & meat we consumed in the Gorge were purchased direct from a local farmer, we'd keep $9.6 million in our local economy.

Awesome!

1. Eating local is good for the local economy

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It makes me think about local

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Makes you want to spend more at home so local economy will improve.

ECONOMIC

<u>Eating local is good for the local economy</u>

- **This territory had the broadest reach of all of the messages**
  - *It went up for me (in importance) because now I'm more aware of how important it is to the local economy.*
  - *I agree wholeheartedly.*
  - *Even though you have to go out of town to buy the product. The money stays in the area.*
- **While they agreed with the message, specific statistics were seen to be the most powerful way of bringing it to life.**

<u>If 20% of the fruit, vegetables & meat we consumed in the Gorge were purchased directly from a local farmer, we'd keep $9.6 million in our local economy</u>

- **This was the most popular of the economic statements – primarily due to the clear amount ($9.6) that returns to the economy**
  - *Wow - that would be great. I want to support that.*
  - *Yeah we're not paying the fuel prices for all the shipping to bring the food from out in the Mid West.*
- **Some were also concerned they couldn't find enough options to reach the 20%**
  - *Can we buy what we need locally in the Gorge year round? We don't have a 365 day growing season.*

ECONOMIC

<u>For every $100 spent at a farmers' market, $62 stays in the local economy and $99 stays in the state</u>

- **This was also a strong statistic that makes the economic relationship clear**
  - *Another good reason for local food.*
  - *Keeping it local is not keeping it corporate.*
  - *I like that one a lot because it makes me feel like if I go spend $5 or $10, I'm doing something. And coming from a business background, I understand the crucial importance of local business and keeping the money running… but I like that one because if I go spend $10 at the farmers' market, you can just feel it staying there.*
  - *And it goes beyond the farmer. It goes to what's needed on his farm and for his family and it keeps the money flowing within the community beyond the farmer.*

ECONOMIC

<u>Farmers earn 72% more when you buy direct</u>

- **Supporting farmers was an appealing factor related to economics**
  - *The economics give me a warm and fuzzy feeling. The whole support and connect and knowing your farmer and where your food comes from. That just gives me this warm happy feeling.*
  - *Eliminate the middleman/woman.*
  - *It costs us less and they make more. And when they make more, they make more.*
  - *Because when they sell to a store, the store is going to buy as cheaply as they can.*
  - *Huge. Compelling. I'd buy local more.*
- **Note: some saw local farmers as being rich –primarily based on the large cherry and wheat companies**
  - *Positive because it's trying to promote keeping the farm sustainable. I thought on the other side it could be taken as negative as some people thinking that farmers make way too much money.*
  - *The farmers I know make too much money anyway. When they have a bad year they go to Hawaii 3 x instead of 4 so I'm not really concerned about them*
  - *I want to support the guy who's going to put in an acre of asparagus and I want him to make some money.*

ECONOMIC

- **Overall, while most took these facts at face value, some wanted to know more of the details about the statistics**
  - *If it's local, how come it doesn't all stay in?*
  - *Good economic fact but lacks context - how big is economy?*
  - *Good, direct, does raise questions about where 38% goes*
- **In general, a bit of context is needed within communications to connect the dots - even pairing stats under the umbrella of 'good for the economy' helped to minimize confusion.**
  - Note: follow up questions can also be a sign of interest – a more robust section on the website would be a good follow up for the ads

SELF RELIANT

3. Eating local is good for the local economy
4. 97% of the food we eat in the Gorge is shipped in from other area
5. In the case of an energy crisis or natural disaster, we could be cu
6. The Gorge was once self reliant and can be again
7. Eating Local is healthier
8. Farmers earn 72% more when you buy direct
9. Local tomatoes taste like local tomatoes should
10. For every $100 spent at a farmers' market, $62 stays in the loca

SELF-RELIANT

- **This was the second most popular territory. While not as broad, it had a deeper effect on many. It's made up of three different facts:**

  97% of the food we eat in the Gorge is shipped in from other areas

  In the case of an energy crisis or natural disaster, we could be cut off from our food supply

  The Gorge was once self reliant and can be again

  - *I went to a 6 from a 5 because in case of a disaster, we wouldn't starve.*
  - *That is not good, but if we grow locally we would not have to worry.*
  - *Good reason to grow local!!*

SELF-RELIANT

<u>97% of the food we eat in the Gorge is shipped in from other areas</u>

- **On it's own, this statistic is surprising and brings to mind the benefits of local to the economy**
  - *We are an Ag area but don't eat much of it? Cost/diesel for all that shipping.*
  - *I hadn't heard that before but it's quite easy to realize 'oh yeah, we don't grow a lot.'*
  - *Too bad. It would be nice if it was more local.*
  - *We would create some jobs in this community which we desperately need.*
  - *Wish it was less but at least we can get a great variety.*
  - *We literally have everything shipped in here to the Gorge. So that doesn't surprise me but I didn't realize it was 97%.*
  - *Surprising but so what? Tell me more - what the caring context is. How does that relate to other areas?*

SELF-RELIANT

<u>In the case of an energy crisis or natural disaster, we could be cut off from our food supply</u>

- **But when paired with this fact, the two become a powerful concept**
  - *We would definitely be cut off in the case of a natural disaster.*
  - *Yeah, all our food is shipped in from somewhere else. That's a true statement.*
  - *Because a few years back when this area in here was flooded and the outlying towns were cut off, I was working for the Sherriff's department and the only way we got through was with 4WD vehicles.*
  - *Cause it's more of a true statement right now because of what we're looking at with the droughts – and this year, I was close to the Idaho border and they're already pulling their potato crops because they're going to lose them. So I see it coming.*

SELF-RELIANT

- **While some felt it wouldn't be an issue be cut off…**
  - *In the case of an emergency then we'll just eat cherries and wheat. And wine!*
  - *I think we could muddle through.*
  - *Not really a scary thought. I need to go on a diet.*
- **Others found the idea to be a bit negative and scary.**
  - *"It puts a negative thought in my head and a little bit of a fear. Oh, yeah, I better think about that."*

<u>The Gorge was once self reliant and can be again</u>

- **The addition of this perspective brings it all together to turn the fear into a positive direction**
  - *I love that.*
  - *It would be awesome if we were.*
  - *It needs to be.*
  - *People who rely on Walmart, Safeway, Winco… people shop there because it's all they've ever known. I remember growing up where we had neighbors who look out for each other and that's what I would like to see come back again.*

SELF-RELIANT

- **For many it brought to mind the changes in the way grocery stores stock**
  - *It's a nation-wide trend for the grocery stores to stock less food than they used to. It's like 3 days is all they're allow to anymore. When I was a kid there were rows of boxes behind it, now there's maybe one more behind that one and just a bunch of space. If it goes dry, it'll be dry in a day or two*
  - *If you showed up at Fred Meyer 3 days into a disaster where the truck hasn't shown up, there 's no milk, there's no bread -it's pretty evident pretty quickly that nobody keeps any surplus*
  - *The general trend in the last few years is that food retailers don't warehouse. And we've heard that over and over again. So if it's not brought in on a regular basis, we'll run out in a very short time*

SELF-RELIANT

- **And several told stories of how food was approached in the past**
  - *I know in the not too distant past, farming in The Dalles had a huge market in Portland. They had the ability to grow huge amount of vegetables and cows and had a ready market in Portland.*
  - *Now people have lost the way of doing, the will of doing it. There isn't nearly the amount of canning and freezing there used to be.*
  - *When we first moved out here in 71, we went to the different fruit farms and they kids and I did a lot of canning. But then they grew up and left and I stopped because it's cheaper and simpler to buy it.*

SELF-RELIANT

- **And while appealing, some questioned the idea that we can go back to the way it was in the past**
  - *I would love to be self sustainable again – the ability to do that is complicated and I don't know we could ever really get there.*
  - *We're probably talking about the 30s and 40s and 50s when we had our cannery going here. That's been a long time ago.*
  - *Your statement 'it can be again' is a question. Cost wise and quantity wise, to reinstate dairies, to start milling our own wheat, making our own flour… we don't have the means to produce seasonings… I don't think in today's economic world that you would see a dairy try to start up in the Gorge – just not the quantity or the feed.*
  - *You couldn't purchase the property. You would have had to have inherited it.*
  - *The complaint on agriculture people. We have lots of land where we could put a pig farm, for instance. And I'll be it wouldn't take much time before they wouldn't make it.*
  - *A lot of work.*
  - *Not in today's climate.*
  - *It's gotten too easy to buy things from other places.*

- **A new model or description is needed in order to visualize how this would work**

SELF-RELIANT

<u>4 companies process 80% of the beef we eat; 4 retailers sell 50% of our groceries; and 3 companies own 50% of the world's seeds</u>

- **This message is not integral to the other three but for many, it is a powerful statement that adds motivation and context**
  - *That's unacceptable. That sucks. We hate that. Because it's a monopoly and gets rid of variety.*
  - *This one intrigues me… I don't know but it looks like it's big business all the way around. I think big business should be put down to small business.*
  - *Good grief, awfully centralized.*
  - *The concentration of wealth in the hands of the few – I'd rather see it spread out to people who actually do work.*

SELF-RELIANT

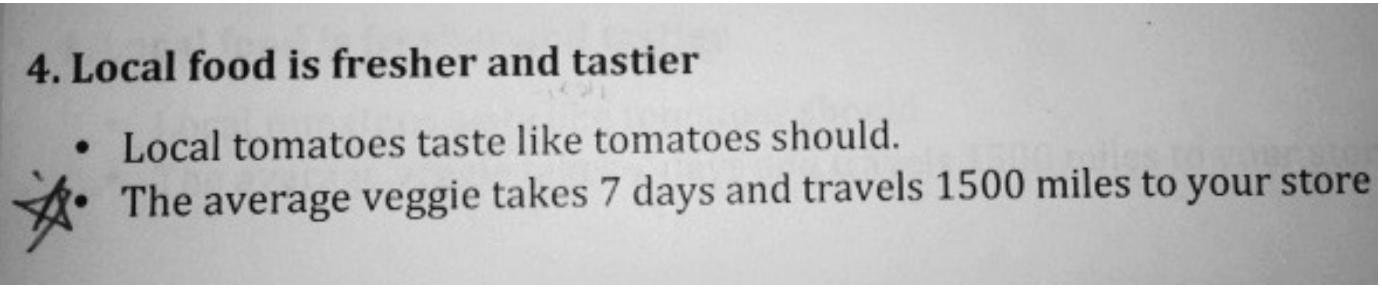
<u>4 Companies Cont.</u>

- **Note: One group had a different reaction, seeing large as bringing economies of scale.**
  - *And those of us who have Ag background know that there are economies of scale and that it's more efficient to get bigger and better and to consolidate. So that's not necessarily bad.*
  - *The bigger the company, they'll identify processes that make it run more efficiently so it's almost better to have a big company who know what they're doing than a million little companies who haven't quite got up to that point.*
  - *And it gets food to the masses. At an affordable cost.*
- **And they also questioned the ability for individual choices to make changes to the big picture**
  - *Small voices/choices cannot change world view.*
  - *Don't feel like I would personally make a difference.*

SELF-RELIANT

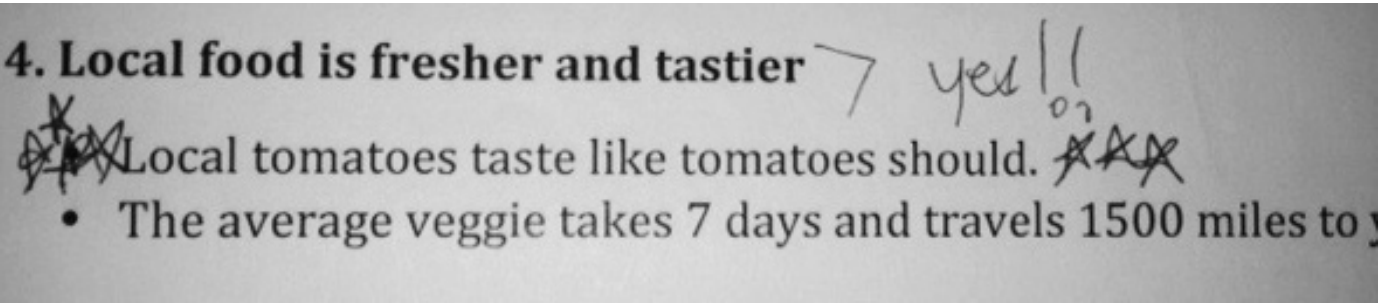
- **Overall, the territory of self reliance is about building in the long term, which requires the ability to think beyond immediate cost**
  - *We have too many people who are wondering where their dollar is going to be tomorrow.*
  - *They're not looking down the road. I can' sell them on something that is out there. I can sell them on 'we can take care of each other. We can support each other. This is your neighbor.' I can sell that.*
  - *Yeah, that's long term planning and most people are in immediate crisis mode.*

FRESH & TASTY



4. Local food is fresher and tastier

- Local tomatoes taste like tomatoes should.
- The average veggie takes 7 days and travels 1500 miles to your store



4. Local food is fresher and tastier yes!!

Local tomatoes taste like tomatoes should.

- The average veggie takes 7 days and travels 1500 miles to

FRESH & TASTY

- **Fresh & tasty is still a valuable benefit of local food**
  - *Local because tastes fresher and better (2nd Respondent: You didn't know that?) Yeah, but it's interesting to me.*
  - *Fred Meyer gets local cherries but they'll go to Portland first and then come here. I go personally to Orchard View Farms to pick my box up and those cherries vs the taste of Fred Meyers are totally different. They are so much fresher. They last so much longer. They are so much better.*
  - *That first round of freshness is gone just in the transport.*

<u>Local tomatoes taste like tomatoes should</u>

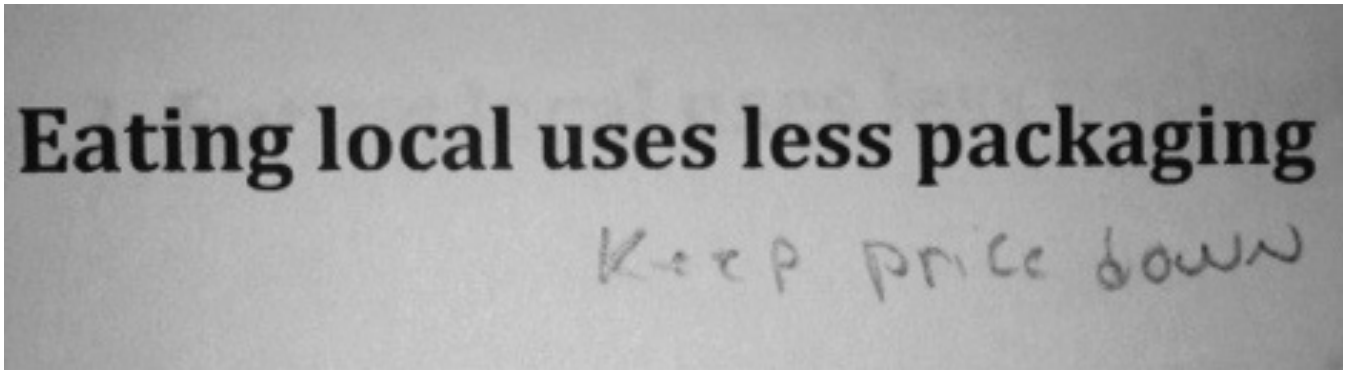
- **And this statement was seen as true**
  - *I agree with the tomatoes wholeheartedly. Fresh tomatoes taste like tomatoes should. You can definitely tell the difference.*
  - *Local tomatoes are better.*

FRESH & TASTY

<u>The average veggie takes 7 days and travels 1500 miles to your store</u>

- **But this stat was seen a new way in to this territory**
  - *A lot of the times the produce in the store doesn't taste very good is when it leaves to be shipped here it's not actually ripe yet. It ripens on the truck in the process of getting here. So it's not actually ripening the way it's suppose to.*
  - *There's a lot of food from Mexico so that's probably right. I think we should be growing more local. Freshness.*
  - *Whoa! What a waste. Compelling to me. I'd buy local more.*

PACKAGING



PACKAGING

- **While this was a positive message in general…**
  - *Clearly it's better that less packaging is going to be better for our environment.*
  - *That makes less waste go into the land and water dumps.*
  - *That is one of the great things about local.*
  - *You have less shipping, you have less packaging.*
  - *Then you have less waste as well.*

- **With many equated less packaging to lower cost…**
  - *That true…they use a lot less packaging which makes everything cost less. Every time you use a plastic package, like with grapes and all that, you are using an oil base. So guess what, we're paying double time for that.*

- **Ultimately this topic was less motivating or differentiating than the others**
  - *I don't understand that. Is that because it's in a bucket and you get it from the farmers market?...*
  - *I don't really worry about it.*
  - *A lot of produce isn't packaged at the store either.*
  - *Packaging is not a deciding factor.*

HEALTH / COMMUNITY

- **These two areas were the weakest of the options– possibly because they were broad statements, lacking specific stats**

<u>Eating local is healthier</u>

- **This claim is not immediately agreed with**
  - *To an extent. A carrot is still a carrot*
  - *But need to explain why.*
  - How? Too many assumptions
- **But is stronger when paired with 'fresh'**
  - *Picking a riper stage rather than when it's green and letting it ripen on the truck.*
  - *If you said fresher and healthier. Because healthier sounds like a medical claim.*
  - *Fresh food = healthier food most of the time*

<u>Eating local builds community</u>

  - *Good but not connected to eating, growth*
  - *Being able to talk to the farmer is very good!*
  - *I like the idea - can we have one bit of something a little more tangible*

Increase Interest

Increase Access

Economic
Self-reliance
Fresh & Tasty

Convenience
Variety
Cost

SUMMARY

SUMMARY

Overall we found general positive feelings about local food with no negative stereotypes or political associations.

But for most there was a big gap between thoughts and action. The main barriers listed were lack of convenience, high cost and low variety.

That said, we found that there is clearly room to shift perceptions with approximately 1/3 feeling that local food was more important to them after the discussions.

Most of the messages were seen as new and interesting, indicating that simply exposing these facts to a broader audience will have some effect.

The Economic messaging had the broadest appeal and is a strong motivator to buy local. Supporting local farmers was an important factor related to this territory.

The Self-Reliant message was the second most popular territory. While not as broad, it appears to have the strongest effect on some.

Freshness & Taste remain important, with the 1500 mile statistic as a new way to demonstrate this benefit.

And, while important in general, Packaging, Community & Health claims were simply not as motivating as the others.

RECOMMENDATIONS

RECOMMENDATIONS

Use infographics – to highlight the specific facts in a way that is visual and not overwhelming

Use bright colors – to balance out the serious nature of the stats

Connect the dots as much as possible, spelling out the details of what this means for the Gorge

End with easy next steps / solutions to the issues raised

10 Reasons Why to Buy Local Food

Better for the local economy

1. If 20% of the fruit, veggies & meat we eat in the Gorge were purchased directly from a local farmer, we'd keep **$9.6 million extra** in the Gorge.

2. For every $100 spent at a farmers' market, $62 stays in the Gorge and $99 stays in the State.

3. Farmers earn 72% more when you buy direct.

Builds a self-reliant Gorge

4. 4 companies process 80% of the beef we eat; 4 retailers sell 50% of our groceries; and 3 companies own 50% of the world's seeds.

5. 98% of the food we eat in the Gorge is shipped in from other areas.

6. In case of a natural disaster or energy crises, we could be cut off from our food supply.

Greener

7. Buying local food, uses less packaging.

Fresh & tasty

8. The average non-local veggie is picked before ripe and travels 1500 miles over 7 days to get to your store.

9. Local tomatoes taste like tomatoes should.

Builds community

10. People who shop at farmers markets have an average of 10 interactions vs 3 at a grocery store. That includes getting to know their farmer and how their food is grown.

LOCAL GORGE GROWN

Local food is good for the local economy.

Here's how it works. Each time you go shopping you can either choose :

Food that's grown outside the Gorge

This is most food. 98% of food in the Gorge is shipped in from other areas.

These farms and companies are based in other places and so their profit go there and are invested in those towns.

Food that's grown in the Gorge

This is food you buy at farmers markets, farm stands or CSAs. Gardens count too.

These farms and companies are based here and so their profits stay here and are invested in our community.

If 20% of the fruit, veggies & meat we eat in the Gorge were purchased directly from a local farmer, we'd keep $9.6 million extra in the Gorge.

LOCAL

GORGEGROWN

98% of the food we eat in the Gorge is shipped in from other areas.

So?

In the case of a natural disaster or energy crisis, we could be cut off from our food supply.

Great. Does this mean we all have to become farmers again and get up to milk the cow every morning so we have our own food?

It just means buying more from our local farmers markets, farm stands or CSAs. Or grow a garden, if you want.

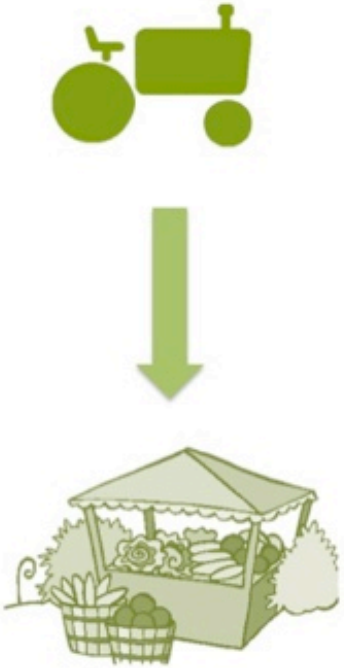
There are only a few local farmers now – how are they supposed to feed everyone?

If you buy from them now – not only do you get fresh fruit & veggies that taste better – you'll help them grow. And the more they grow, the more new farmers will start up, the more variety we'll have, and the lower the prices. And soon we can have a vibrant local food system that's easy.

The Gorge was once self-reliant and we can be again.

LOCAL GORGE GROWN

Farmers earn 72% more when you buy direct.



85% of U.S. farmers need a second job to support their family. Buying direct from a farmers market, farm stand or box delivery gives local farmers more for their crop. Which they turn around and invest in the Gorge.

LOCAL
GORGE GROWN

The average veggie
travels 1500 miles
and takes 7 days to
reach the grocery store shelves.
[you]
LOCAL
GORGE GROWN
(local food is fresher & tastier)

APPENDIX

Reason to Eat Local #14:

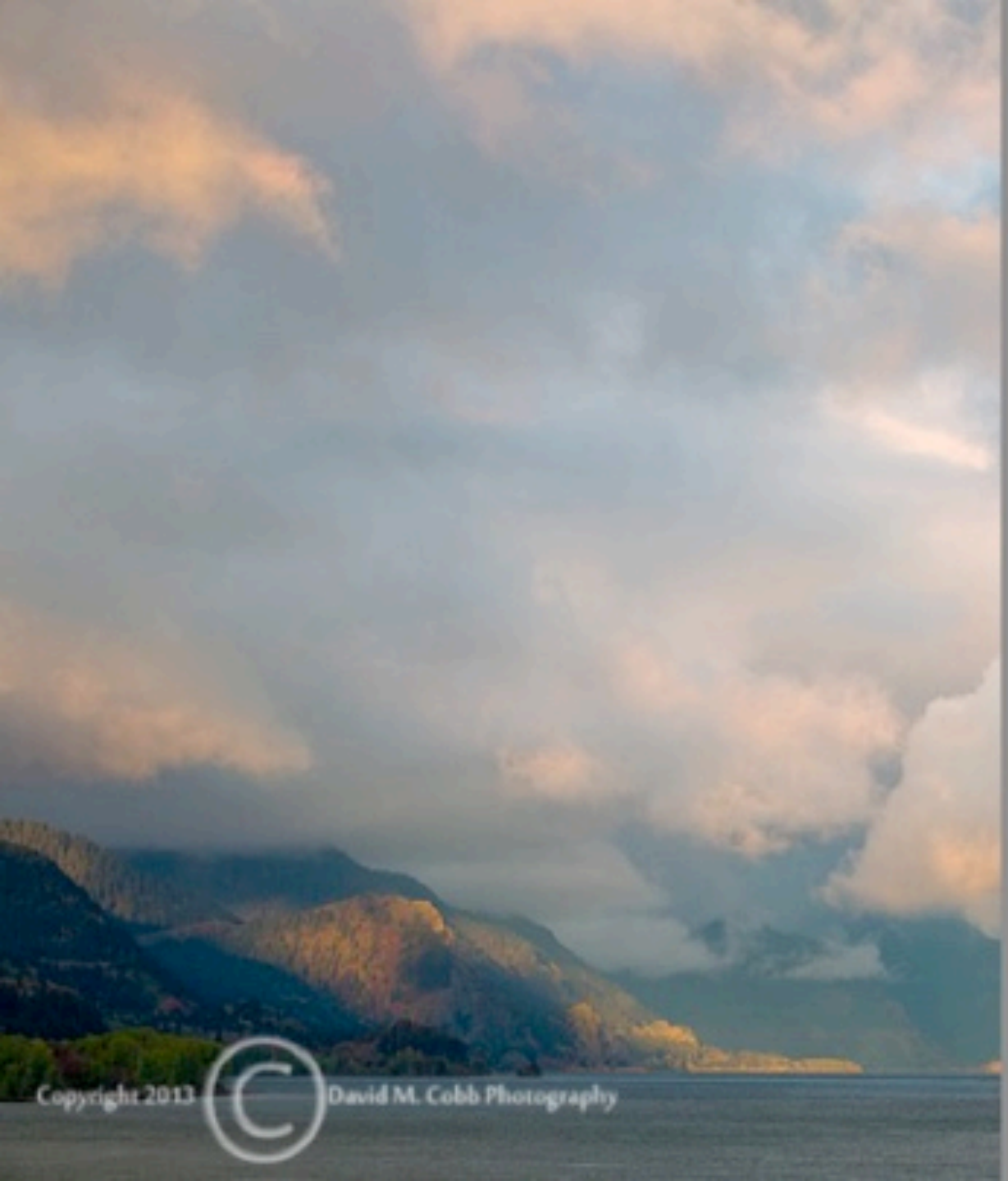
For every $100 spent at a farmers' market, $62 stays in the **local economy** and $99 stays in the state.

Reason to Eat Local #12:

Farmers earn 72% more when you buy direct.

Reason to Eat Local #3:

4 companies process 80% of the beef we eat; 4 retailer sell 50% of our groceries; 3 companies own 50% of the world's seeds.



Reason to Eat Local #1:

If 20% of the fruit, vegetables & meat we consumed in the Gorge were purchased direct from a local farmer, we'd keep $9.6 million in our local economy.

Reason to Eat Local #8:

97% of the food we eat in the Gorge is shipped in from other areas

Reason to Eat Local #4:

Eating local is good for the local economy

Reason to Eat Local #7:

Eating local builds community

Reason to Eat Local #5:

In the case of an energy crisis or natural disaster, we could be cut off from our food supply

Reason to Eat Local #18:

Eating local uses less packaging

Reason to Eat Local #11:

Eating Local is healthier

Reason to Eat Local #13:

Local tomatoes taste like tomatoes should

Reason to Eat Local #19:

The average veggie takes 7 days and travels 1500 miles to your store.

1. If 20% of the fruit, vegetables & meat we consumed in the Gorge were purchased direct from a local farmer, we'd keep $9.6 million in our local economy

2. 4 companies process 80% of the beef we eat; 4 retailer sell 50% of our groceries; and 3 companies own 50% of the world's seeds

3. Eating local is good for the local economy

4. 97% of the food we eat in the Gorge is shipped in from other areas

5. In the case of an energy crisis or natural disaster, we could be cut off from our food supply

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7. Eating Local is healthier

8. Farmers earn 72% more when you buy direct

9. Local tomatoes taste like local tomatoes should

10. For every $100 spent at a farmers' market, $62 stays in the local economy and $99 stays in the state

11. Eating local uses less packaging

12. The average veggie takes 7 days and travels 1500 miles to your store

How important is local food to you on a scale of 1 – 10?

not at all 1 2 3 4 5 6 7 8 9 10 very

Why?:

1. Eating local is good for the local economy

- For every $100 spent at a farmers' market, $62 stays in the local economy and $99 stays in the state.
- Farmers earn 72% more when you buy direct.
- If 20% of the fruit, vegetables & meat we consumed in the Gorge were purchased direct from a local farmer, we'd keep $9.6 million in our local economy.

2. The Gorge was once self-reliant and we can be again

- 4 companies process 80% of the beef we eat; 4 retailer sell 50% of our groceries; 3 companies own 50% of the world's seeds.
- 97% of the food we eat in the Gorge is shipped in from other areas
- In the case of an energy crisis or natural disaster, we could be cut off from our food supply

3. Eating local uses less packaging

4. Local food is fresher and tastier

- Local tomatoes taste like tomatoes should.
- The average veggie takes 7 days and travels 1500 miles to your store

GORGE GROWN LOCAL

REASONS TO SHOP AT YOUR LOCAL Farmer's MARKET

IF **20%** OF THE FRUIT, VEGETABLES & MEAT WE CONSUMED IN THE GORGE WERE PURCHASED DIRECTLY FROM A LOCAL FARMER, = WE'D KEEP **$9.6 million** IN OUR LOCAL ECONOMY

FOR EVERY **$100** SPENT AT A FARMERS' MARKET, **$62** STAYS IN THE LOCAL ECONOMY **$99** STAYS IN THE STATE

FARMERS MAKE **72% more** WHEN YOU BUY DIRECT

BETTER FOR LOCAL ECONOMY

3 COMPANIES OWN **50%** OF THE WORLD'S SEEDS

4 RETAILERS SELL **50%** OF OUR GROCERIES

4 COMPANIES PROCESS **80%** OF THE BEEF WE EAT

INCREASED SELF-RELIANCE

98% OF THE FOOD WE EAT IN THE GORGE IS SHIPPED IN FROM OTHER AREAS

IN THE CASE OF AN ENERGY CRISIS OR NATURAL DISASTER, WE COULD BE CUT OFF FROM OUR FOOD SUPPLY

THE AVERAGE VEGGIE TAKES **7 DAYS** AND TRAVELS **1,500 MILES** TO YOUR STORE

LOCAL TOMATOES TASTE LIKE TOMATOES SHOULD

EATING LOCAL USES LESS PACKAGING

FRESH & TASTY GREENER

PEOPLE WHO SHOP AT FARMERS MARKETS HAVE AN AVERAGE OF **10 INTERACTIONS** AT FARMERS MARKETS **VS.** **3 INTERACTIONS** AT A GROCERY STORE.

THAT INCLUDES GETTING TO KNOW THEIR FARMER AND HOW THEIR FOOD IS GROWN.

GORGE GROWN LOCAL

BUILDS COMMUNITY

Thanks to our Sponsors!

Pfriem Family Brewing - Mosier Creek Condos - Kidsense
Centerpointe Community Bank - Full Sail Brewery – Idiot's Grace
Celilo Restaurant & Bar - Copper West Properties – Gorge Networks
Memaloose Winery - Mt. Hood Podiatry – Bisnett Insurance
Pacific Northwest Federal Credit Union - Grow Organic
Indian Creek Family Eye Care

Farmers' Markets

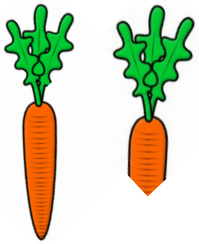
2015 By The Numbers

GORGE GROWN

$358,411

Contributed to our local economy

1,324



Pounds of fresh food donated

92

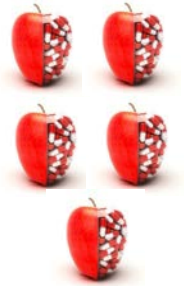
Farmers' markets hosted

LOCAL FOOD FIRST

www.gorgegrown.org

78

Family farms and local businesses supported



$4,494

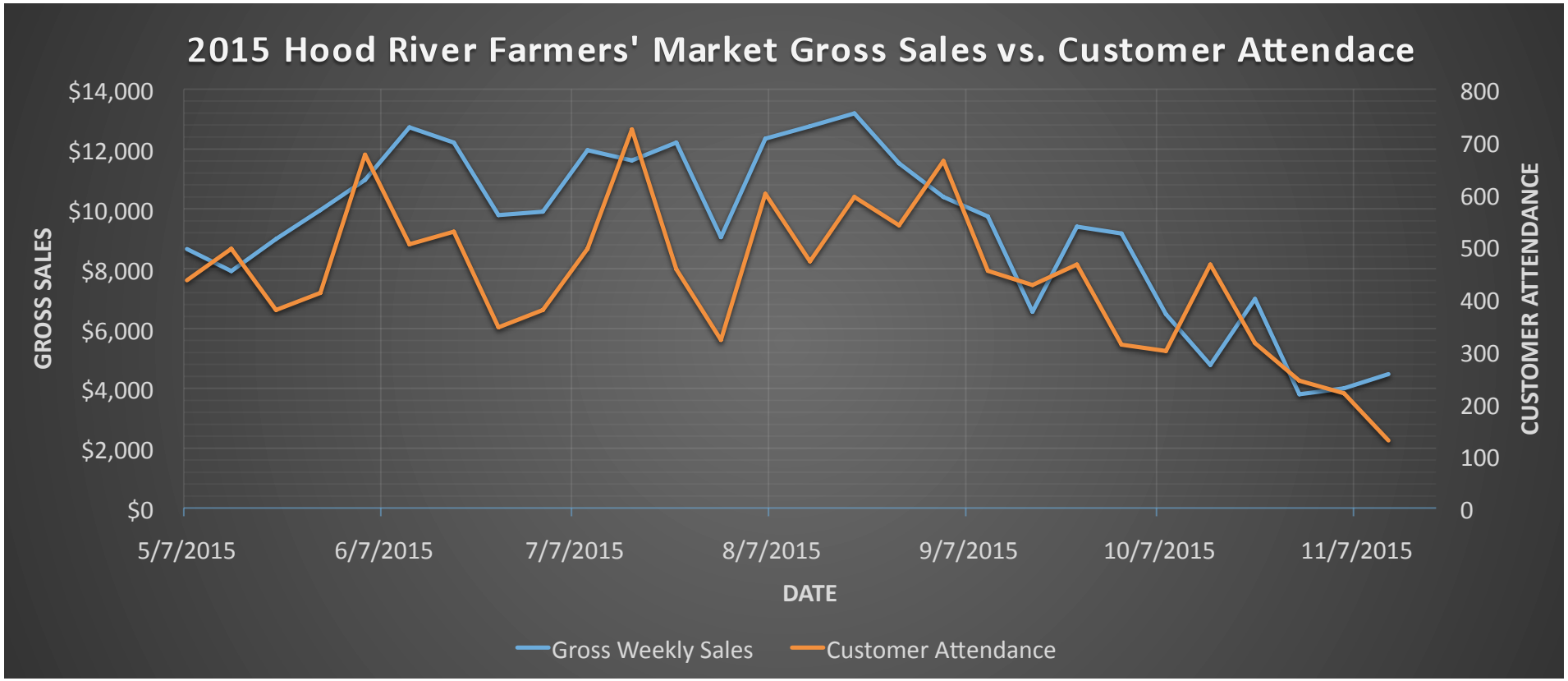
Spent on produce through the Veggie Rx, POP Club, and SNAP match programs

26,468

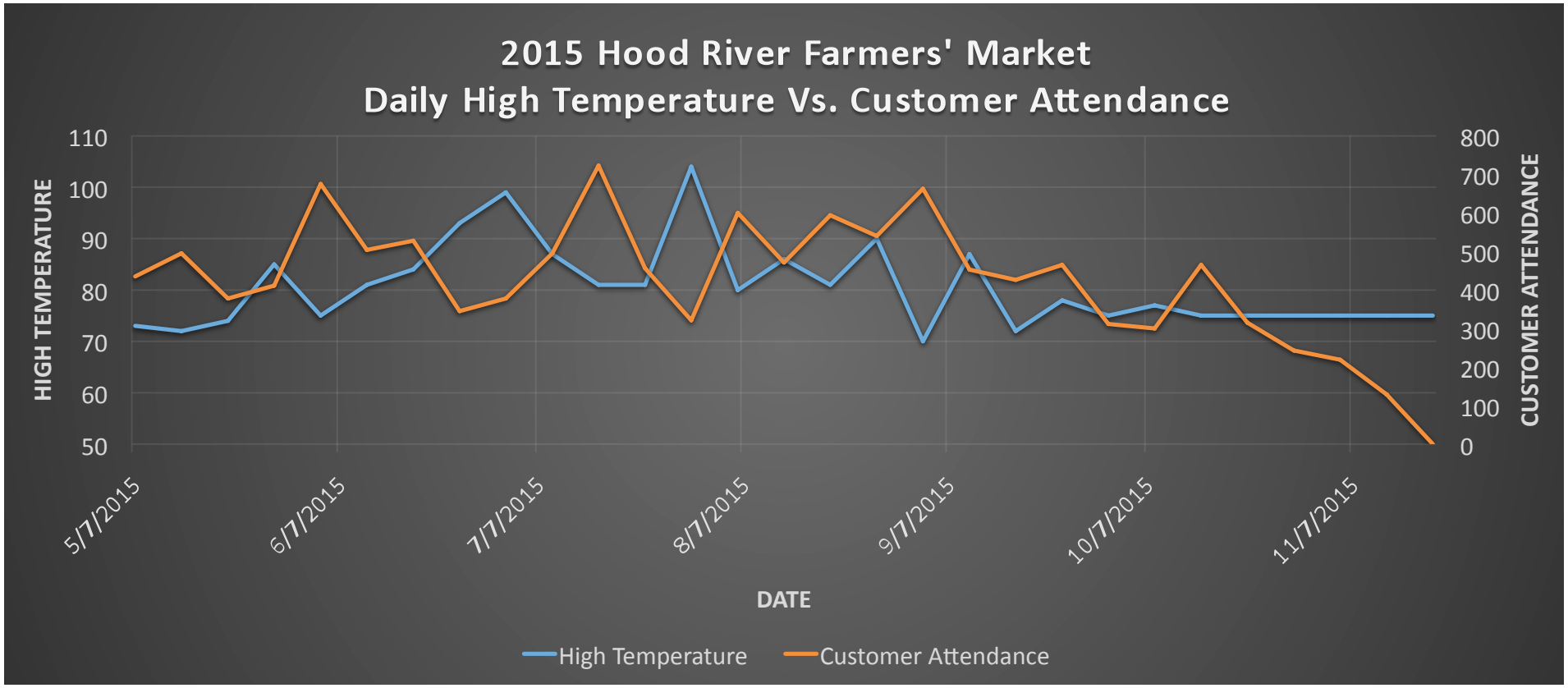
Customer visits at Gorge Grown farmers' markets

2015 Gorge Grown Farmers' Markets

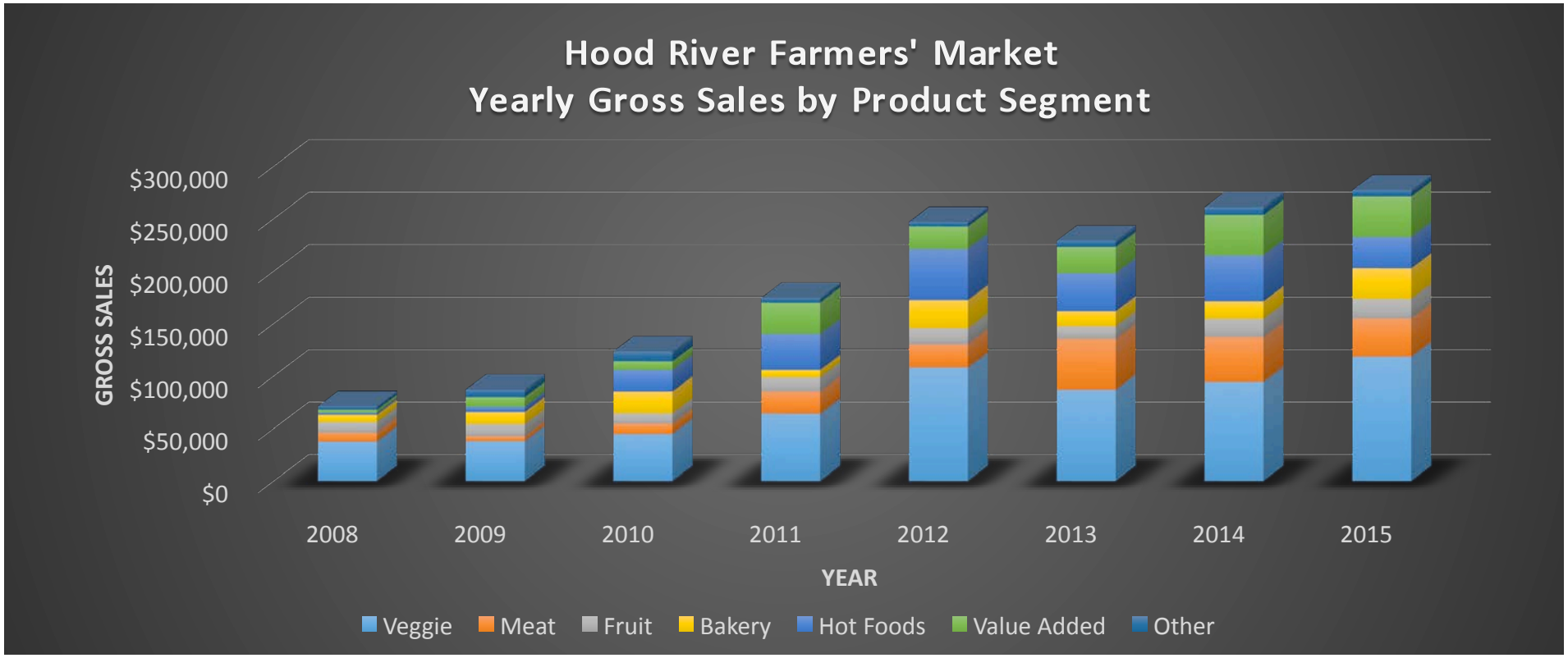
	Hood River Farmers' Market	Hood River Saturday Market	Mosier Farmers' Market	Mercado del Valle (Odell)	Mobile Farmers' Market	Total
Market Days	29	17	15	14	16	92
Gross Sales	$270,858	$ 62,402	$ 16,786	$ 4,800	$3,565	$358,411
Customer Attendance	12,554	11,322	2,442	1,318	150	26,468
Average number of vendors	28.7	14.9	9	2	1	N/A
SNAP redemption	$656	$25	$210	$211	$37	$1,139
Veggie Rx Redemption	$1,458	$302	$280	$172 $893 POP Club	$250	$2,462



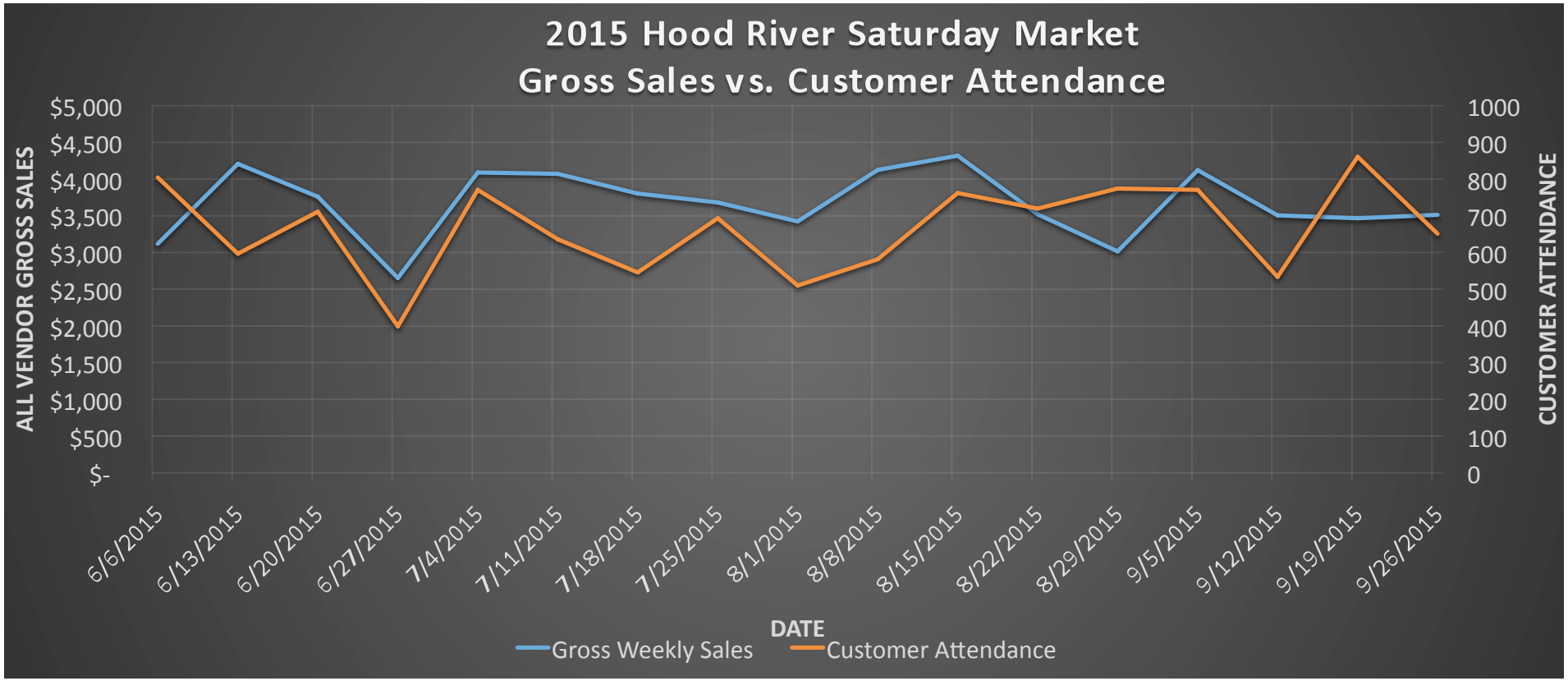
This graph shows all vendors' weekly gross sales (blue) and weekly customer attendance (orange) for 2015. It appears to show that when customer attendance drops, so do sales. However, it also shows that when customer attendance is high, sales do not necessarily increase. Note that both sales and attendance drop significantly once school starts in the fall.



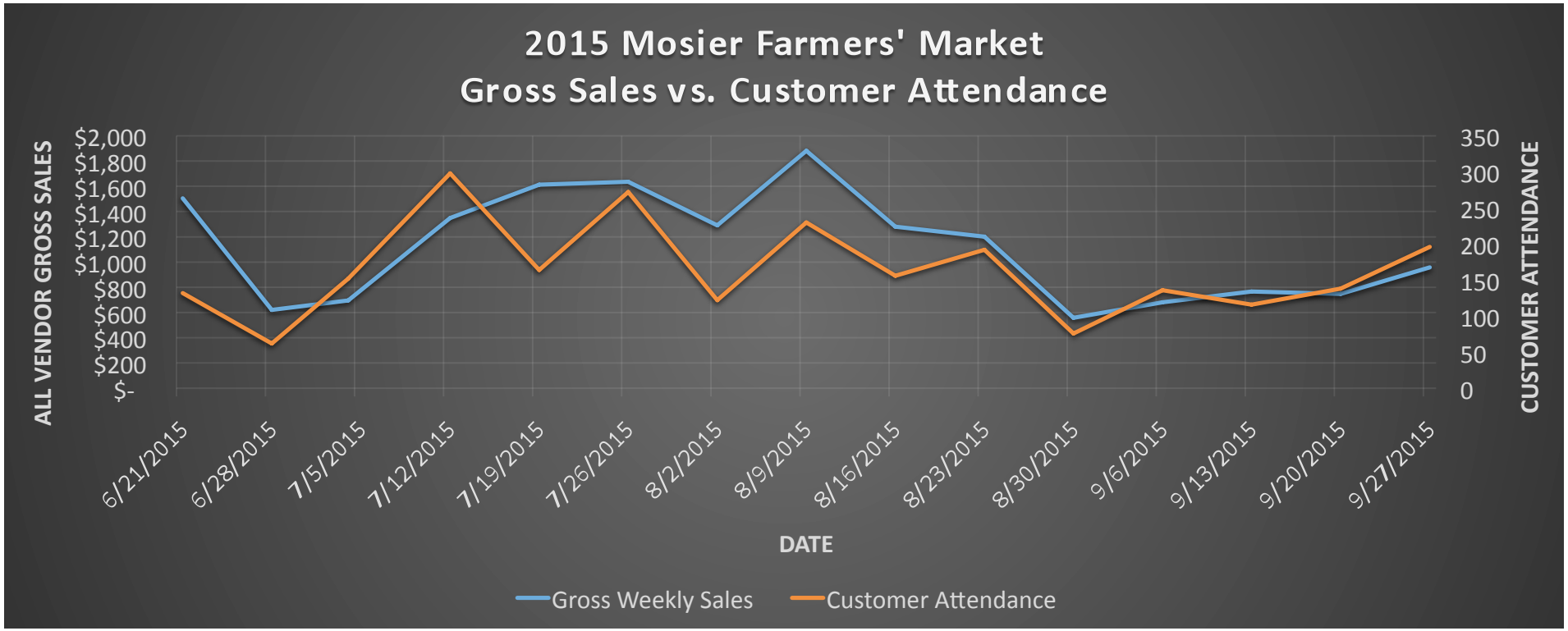
This graph shows daily high temperatures (blue) vs. customer attendance (Orange) in 2015. It shows that on particularly hot days, shopper visits decline sharply. It appears that shopper visits decline most significantly when the temperature is 90 degrees or higher.



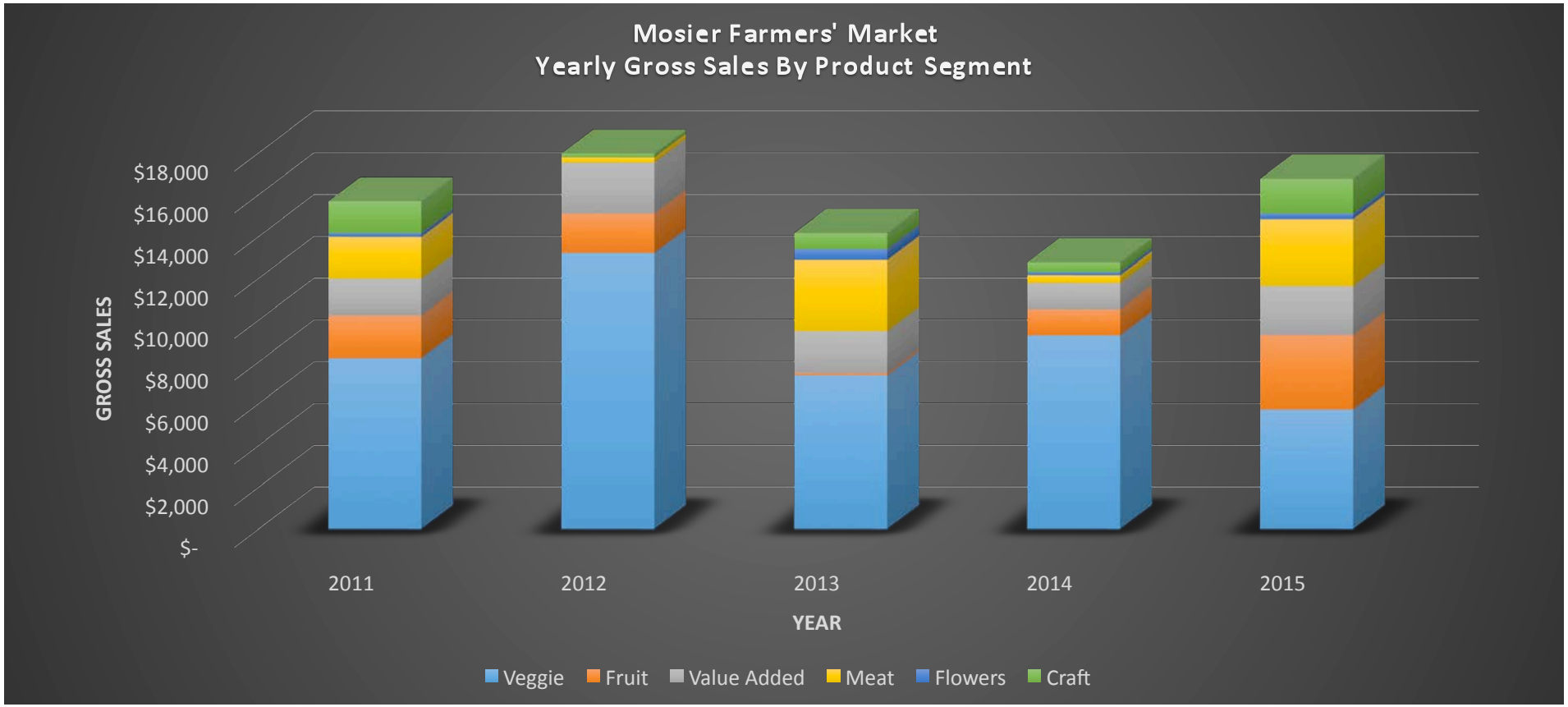
This graph shows yearly gross sales broken down into product segments. It shows that veggie sales make up the majority of market sales every year. “Value added” includes cheese, honey, and processed items. “Other” includes cut flowers and community table sales.



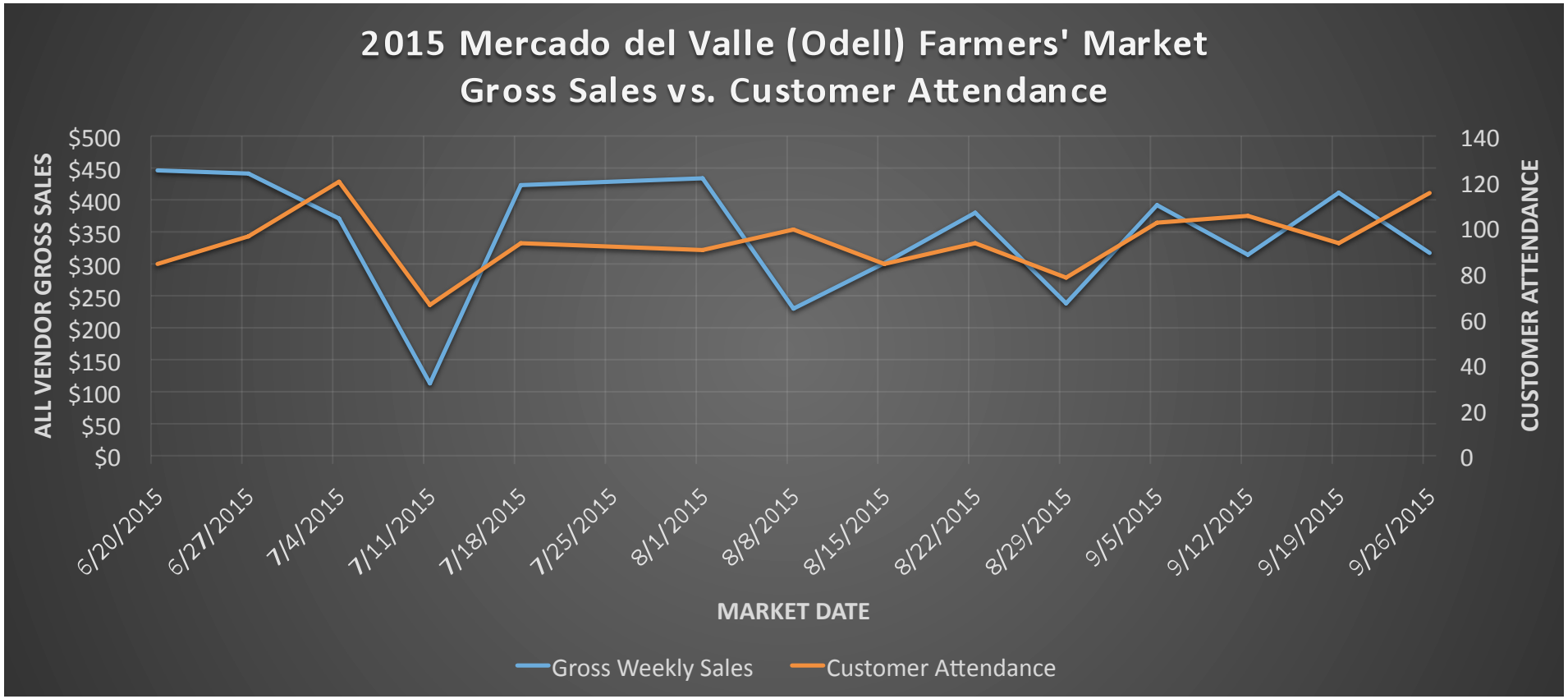
This graph shows all vendor gross sales (blue) vs. customer attendance (orange) for the 2015 HR Saturday Market. Both figures stay relatively consistent throughout the season, despite hot temps. It also shows that when attendance drops, so do sales.



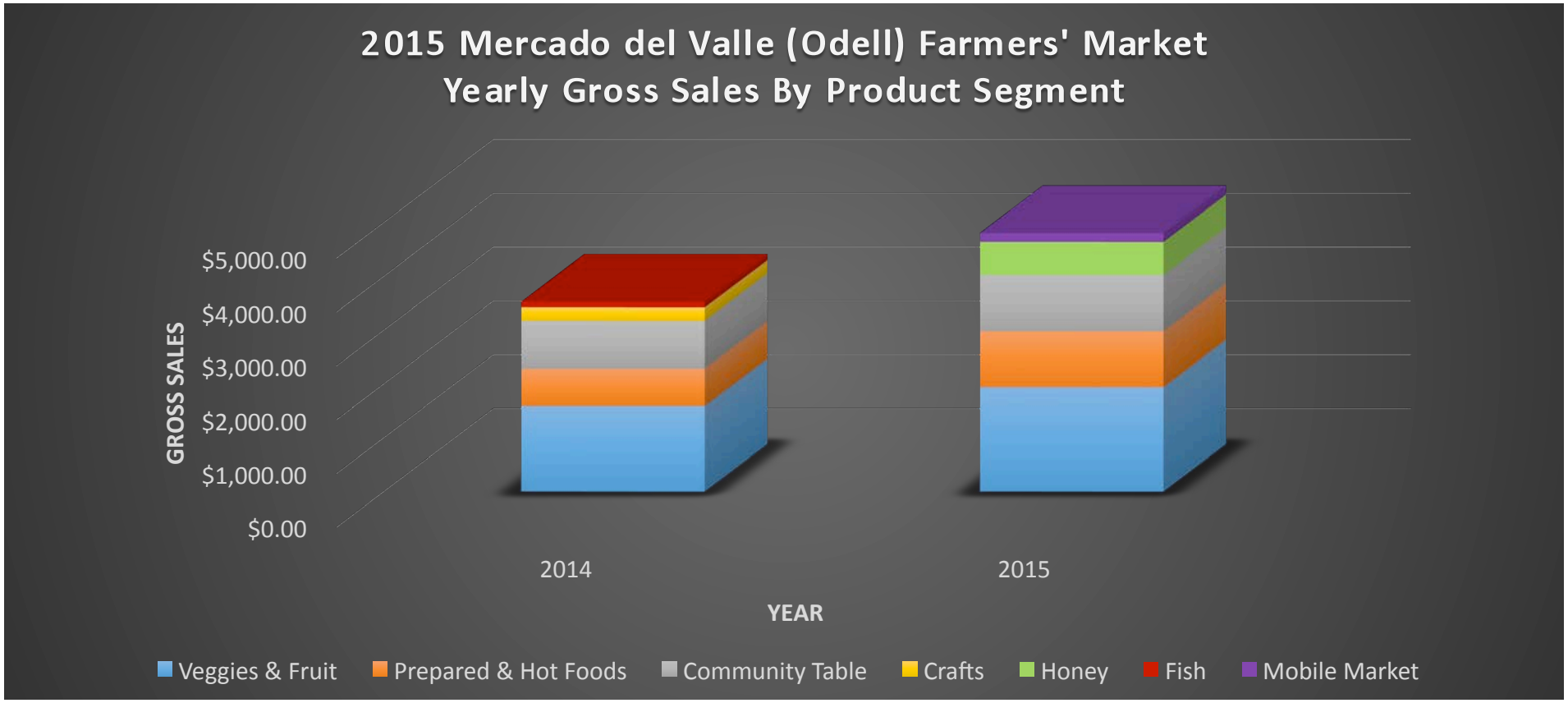
This graph shows the 2015 Mosier Market's all vendor gross sales (blue) vs. customer attendance (orange). It appears to show that attendance spikes every other week, suggesting that people shop at the market every other week. Overall, sales and attendance seem to follow each other closely.



This graph shows yearly gross sales that the Mosier market by product segment. Veggie sales always make up the largest portion of sales, followed by fruit, meat, and value added products.



This graph shows all vendor gross sales (blue) vs. customer attendance (orange) for the 2015 Mercado del Valle. It shows that attendance is relatively consistent but when it drops, so do sales.



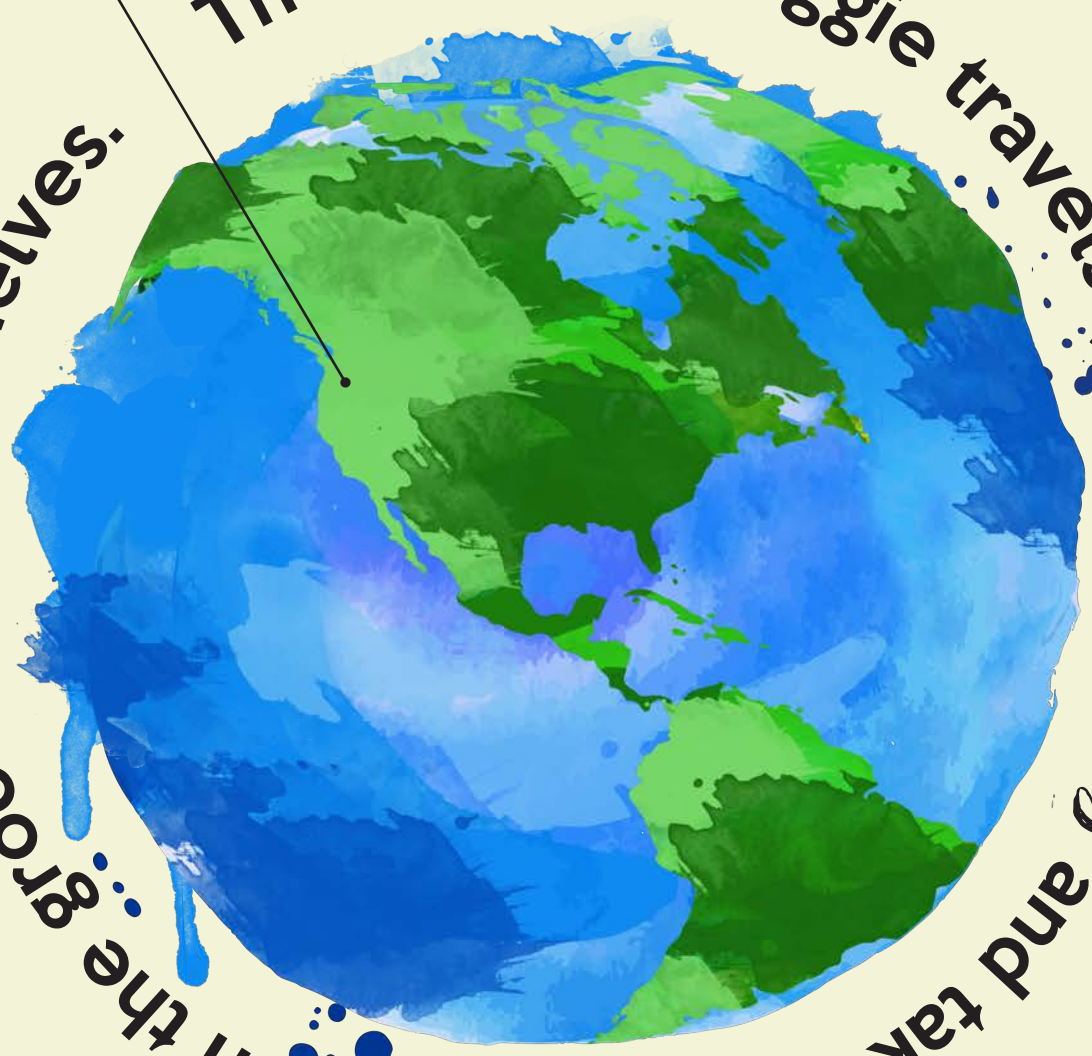
This graph shows yearly gross sales at the Mercado del Valle by product segment. Again, veggies make up the majority of sales. Note that the community table also contributes a significant amount of sales.

LOCAL

FARMERS'
MARKET

Why BUY Local TOMATOES?

Because Local Food is Fresher and Tastier



LOCAL FOOD FIRST

GORGE GROWN

www.gorgegrown.org

Sponsored by the Oregon Department of Agriculture — USDA Specialty Crop Block Grant

ODA-S09 Columbia Gorge Cider Makers Expansion Support

Attachment 1: Organizational Marketing Strategy

Attachment 2: Supplemental materials:workshops agendas

Organizational and Marketing Strategy

Mission: The Gorge Cider Society supports a healthy cider industry made up of both growers and producers, provides opportunities to make connections throughout the supply and distribution chain, and promotes Columbia River Gorge cider.

Values and Vision:

1. We strive to make world class ciders with distinct, regional personality.
2. Gorge cider is authentic.
3. Our connection to this land and each other is evident through strong ties with the local agricultural community.
4. The Gorge cider community is made up of healthy businesses contributing to the local economy and creating local jobs.
5. The Cider Society supports a strong cider region, organization, and businesses.

Goals:

Goal 1: Support successful cider businesses in the Gorge. Starting and growing a small business is a challenge, but as a group we can bring in resources, collectively speak to those challenges, and share lessons learned.

Goal 2: Put the Gorge on the map as a cider destination. There is a growing and diverse local cider industry in the Gorge that makes this a great place to come explore cider, learn about a variety of styles, and even get a chance to taste the different apple varieties that go into making that cider. Coming together to share this with consumers will provide more impact to each individual cidery's marketing efforts.

Goal 3: Share knowledge about cider with our consumers. As the cider market continues to grow and change, educating consumers about the variety of styles and flavor profiles can support added interest in drinking new ciders at a variety of price points.

Goal 4: Develop a robust Cider Society organization to support these goals. To move toward these goals, the Cider Society must ensure it's structure, policies, finances, and partnerships are creating a foundation for implementing these tactics.

Consumer & Market Trends

Cider Category: In the US, the cider category continues to be a very small segment of the beverage market at only about 1% of the combined beer/cider market. Cider has grown significantly over the last five years, but in 2016 the overall market decreased. This loss is driven by the large brands, while the industry has continued to see growth in the local and regional brands. Additionally, the broader beverage market has continued to grow, and is growing at a faster rate in Oregon than nationwide. In our area, cider continues to outsell flavored malt beverages (FMBs). The positive implications of these trends for the industry locally are already playing out, with the Oregon market in particular and the broader Pacific Northwest market for cider much more developed than in many areas of the country. The US Association of Cidermakers will be developing more fine grained research on market trends in the coming years so that producers can better understand local and regional markets versus the broad stroke national trends. This information will provide some helpful context for the Cider Society as it becomes available.

Who is buying: The ranks of cider drinkers are growing rapidly. Five years ago, there were only 5 million cider drinkers in the US, now that number tops 18 million. So, who are these purchasers? It depends. Overall, they tend to be younger-with a focus on the 21 to 40 demographic for the national market. That said, the cider market is differentiated based on product as well. For those making a higher end product accessing the typical winery consumers-older, more affluent-is a strong opportunity. Unlike with beer and wine, who are overwhelmingly drunk by men and women respectively, cider is consumed on a fairly equal basis with only a slight imbalance toward women.

What experience are Cider Consumers looking for: Cider consumers are interested in exploring the cider industry and better knowing what they are consuming. They want an experience that shows them where the fruit came from, the cidermaking process, and who is making the cider going into their glasses. They also want to know what food to pair with it, and how to classify it. These consumers overlap significantly with those coming to the Gorge to explore the craft breweries and small wineries in the Gorge.

Who is coming to the Gorge: Gorge visitors are coming for recreation and adventure more so than to other regions in Oregon. They are also coming to explore food and beverage options more than to Oregon as a whole. Many who come to Oregon are motivated by culinary festivals, are interested in exploring craft food and beverage production. Travel to the Gorge has continued to grow as measured by demand for lodging and revenue for lodging. Building on these visitors and their stays can bring increased traffic and spread the word about the Gorge cider region. This work must also acknowledge the strong support of local customers and partners for industry growth and development.

Strengths and Opportunities	Weaknesses and Threats
• Continued growth in overall cider market—with significant growth in the craft and regional brands more than the national • Ethic of collaboration and education within cider industry locally • Craft cider market still growing and defining itself • 12 cideries (and counting!), 440 orchards • Cideries have distinct brands and personalities but are all tied to the Gorge • The presence of orchards and close connection to their long history in the Hood River Valley and Columbia River Gorge set us apart from tasting rooms in urban areas and tell a powerful story. • Leverage significant tourism growth in the region—fastest growth in Oregon—focused on adventure and recreation • Gorge reputation for craft beverage • Quality product and authentic, compelling stories to tell • Growing industry with major players conducting significant marketing campaigns spreads the word about cider in general • Existing festival—CiderFest has grown each year since inception and continues to educate and draw consumers to the region	• Small businesses with limited resources to contribute to associations currently • Growing-but still small-industry in the region • The organization is young as well—not yet formalized but moving in that direction. • Both industry (NW Cider Association) and destination marketing organizations (Chambers) exist—need to clearly differentiate value and find ways to collaborate with these entities to strengthen our work • Consumer education on cider is low • need to define what it is so that consumers know what to look for—bigger scale effort even if we do our part! • Regulatory challenges for small producers in a bi-state market

Goals and Strategies

	Strategies	Actions	Time Frame. Responsibility. Partners.
Goal 1: Support successful cider businesses in the Gorge	**Strategy 1a: Provide an opportunity for quality networking.**	Continue to incorporate networking opportunities into Cider Society meetings.	Timeframe: Ongoing Responsibility: Cider Society, members. Partners:
		Create or support more opportunities to bring orchardists and cidermakers together	Timeframe: Ongoing. Responsibility: Cider Society. Partners: NWCA, OSU Extension, CGFG
		Explore opportunities to gather with wine and beer industry groups as well as with other cideries and orchardists.	Timeframe: Winter 2018. Responsibility: Cider Society, Partners: BiG, CGWA
	Strategy 1b: Host business development educational opportunities.	Consider informal topics/discussions at meetings to create more intentional networking around items important to many Cider Society participants	Timeframe: Ongoing Responsibility: Cider Society Advisory Team, Membership. Partners:
		Leverage existing expertise and contacts in the region to address challenges/concerns and opportunities as they arise.	Timeframe: Ongoing. Responsibility: Membership. Partners: NWCA, OSU Extension, CGFG, BiG, CGWA.
	Strategy 1c: Explore opportunities for equipment sharing with interested cideries.	Explore other organization's approaches to equipment sharing to determine the best framework this activity.	Timeframe: Winter 2018. Responsibility: Staff, _____. Partners:
		Identify specific items that would be of interest to host in an equipment sharing program.	Timeframe: Winter 2018. Responsibility: Partners:

	Strategies	Actions	Responsibility, Partners, Time Frame
Goal 2: Put the Gorge on the map as a cider destination	**Strategy 2a: Collectively market the Gorge as a cider destination.**	Explore collective ad buys for cideries interested in participating.	Timeframe: Winter 2017/8. Responsibility: Partners:
		Bring Gorge Cider to target markets through tap takeovers and participation in festivals.	Timeframe: Winter Decisions for 2017 Festivals. Specific bars for tap takeovers. Responsibility: Partners:
		Build social media presence to promote the region as a cider destination as well as individual member cideries.	Timeframe: Ongoing. Responsibility: Partners:
	Strategy 2b: Bring cider enthusiasts to the Gorge.	Work with cideries to promote their individual events collectively.	Timeframe: Ongoing. Responsibility: Partners:
		Continue publishing the Gorge Cider Route Map.	Timeframe: Spring each year. Responsibility: Partners:
		Leverage other regional destination marketing activities to support bringing cider enthusiasts or explorers to the area.	Timeframe: Ongoing. Responsibility: Partners:
	Strategy 2c: Act as an information source about Gorge cider.	Build relationships and contacts with key media outlets.	Timeframe: Ongoing. Responsibility: Partners:
		Work with cideries to develop taster cards/brief overviews of each cidery's approach to cider making to have available for those with taps and on GCS website.	Timeframe: Fall 2017. Responsibility: Partners:
		Develop culinary partnerships in order to share information about gorge cider, bring cider to consumers in a new way, and highlight that cider pairs well with a variety of foods.	Timeframe: Ongoing. Responsibility: Partners:
		Participate in local farmers markets to engage and educate consumers. Rotate	Timeframe: Summer 2017. Responsibility: Partners

		Continue to host and develop Cider Society website.	Timeframe: Fall 2016 update, ongoing maintenance. Responsibility: Staff, Slopeswell Cider. Partners:

Goal 3: Share knowledge about cider with our consumers. about cider with our consumers.	**Strategies**	**Actions**	**Responsibility, Partners, Time Frame**
	Strategy 3a: Host events and sensory tastings that provide in-person education.	Explore hosting a tasting that would bring enthusiasts to the Gorge to explore. Ensure it is differentiated from CiderFest.	Timeframe: 2018. Responsibility: Partners:
		Work with individual cideries and partners to host sensory tastings.	Timeframe: Quarterly. Responsibility: Crush. Partners:
	Strategy 3b: Have an educational presence at appropriate events locally and in the broader region.	Explore opportunities to have more educational information at local and regional festivals.	Timeframe: Winer 2017 decisions about 2017 spring/summer festivals. Responsibility: Partners:
		Explore opportunities to participate in “cider makers dinner” with farm to table type events with cider pairings.	Timeframe: 2017 Responsibility: Partners:

	Strategies	Actions	Responsibility, Partners, Time Frame
Goal 4: Develop a robust Cider Society organization to support these goals.	**4a. Implement the structure that best allows the Cider Society to meet its goals.**	Review goals and actions, and determine what-if any-legal structure would be required to support achieving them.	Timeframe: Summer 2017. Responsibility: Advisory Committee, Staff. Partners:
		Develop by-laws and policies that support implementing above activities.	Timeframe: Fall 2017. Responsibility: Advisory Committee, Staff. Partners:
		Create and implement a membership structure that not only creates financial resources for collective activities but also supports organizational sustainability.	Timeframe: Fall 2017 Responsibility: Advisory Team, Staff. Partners:
	4b. Ensure the Cider Society has appropriate financial planning and resources.	Explore financial resources that support achieving the Cider Society's goals including tiered membership dues, public membership, sponsorships, grants, fundraiser events, etc.	Timeframe: Ongoing. Responsibility: Advisory Team, Staff. Partners:
		Create an annual budget to track spending and target fundraising.	Timeframe: Winter Summer 2017 Advisory Team, Staff. Partners:
		Explore key partnerships that leverage existing assets and opportunities to support meeting the Cider Society's goals.	Timeframe: Ongoing. Responsibility: Advisory Team, Staff, Cideries. Partners:

Potential Resources and Partners:

Travel Oregon: Travel Oregon has well developed destination marketing strategies that the Gorge Cider Society should leverage from regional branding to collective marketing efforts and a strong web and social media presence. Travel Oregon also recently conducted a Rural Tourism Studio process in the Columbia River Gorge. This process identified culinary and agri-tourism as a key component of the visitor economy and provides a venue for regional collaboration around this work. In addition, bi-annually Travel Oregon hosts two grant programs that could support initiatives by the Gorge Cider Society. The Wine Country License Plate Matching Grants program focuses on wine and culinary tourism efforts. And the general Matching Grants Program supports broader new tourism efforts. Gorge Cider Society activities would align with both of these grant programs.

Local Chambers of Commerce and the Columbia River Gorge Visitors Association: Each of these groups works to promote the Gorge as a great place to visit-and live. They work to connect local businesses to resources and address collective issues. Local Chambers can be a resources for marketing initiatives as well as broader business efforts. Several of the six local chambers also have small grants programs for activities that encourage visitors to extend their stay. Additionally, several have agri-tourism committees or events that could provide a place to showcase the cider industry and orchardists.

Oregon Department of Agriculture & Washington State Department of Agriculture: Specialty Crop Block Grants: ODA has supported the development of the GCS through this program and these programs could continue to be a resource moving forward for specific campaigns and opportunities.

Columbia Gorge Fruit Growers: The Columbia Gorge Fruit Growers is a non-profit organization of 440 growers and 20 shippers that produce and distribute tree fruit in the five-county Mid-Columbia region. They work with a broad range of issues, including marketing efforts such as the Hood River Fruit Loop.

USDA, Rural Development: USDA has several programs aim to support businesses, and in particular value-added agricultural businesses, that could be utilized to support the efforts mentioned above. This work could include marketing efforts as well as business support. Through programs like the Value Added Producer Grant and the Rural Business Development Grant programs potential resources are available through both Oregon and Washington offices.

Mid-Columbia Economic Development: MCEDD works to support a thriving economy made up of diverse business opportunities in-line with the region's rural qualities, values, and natural resources. Value-added agriculture and food manufacturing is one industry cluster focus of their work. They can be seen as a resource for business development and assistance as well as industry organization development.

Northwest Cider Association: The NWCA is an industry group representing cideries throughout the Pacific Northwest on legislative issues, research needs and promoting the industry to consumers. They are a partner in supporting the cider industry in the area and have strong social media and web presences that can help highlight businesses as well as support addressing regulatory and legislative challenges.

US Association of Cider Makers: This national industry organization brings together the cider industry around research, education, marketing, and addressing federal legislative challenges. With a local Executive Director and Board Member, there are significant opportunities for collaboration to support and highlight Gorge Cider businesses.

Beverage Industry Organizations: In the Gorge, there is a strong craft beverage industry. Breweries in the Gorge (BiG) and the Columbia Gorge Winegrowers Association are both organizations that represent segments of the broader beverage industry. There are potential opportunities to work together to promote the region as a whole and address shared issues.

Cider Society Identity System

Blue Collar Agency | July 21, 2015

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A solid brand identity system supports all other efforts and creates a common thread for Gorge Cider Society.

- Conveys you are established
- Increases credibility
- Creates excitement among targeted audiences
- Makes you memorable/helps you stand out
- Shows commitment & sense of personal pride for your work

Brand Purpose

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Rooted. Passionate. Artistic. Authentic.

Take an aimless wander around the Columbia River Gorge and you quickly realize how heavily our beautiful region is dependent on fruit. In fact, wherever you are in the US, if you're eating a delicious apple, pear, or cherry, chances are it was grown here.

Our ciders are a beautiful collision of old-world, traditional styles, alchemy and innovation. While we each have different styles, we rally around a common goal: Creating honest and authentic cider by using local, natural ingredients.

Our passion for crafting cider is evident in the dirt under our fingernails and the stains on our clothes. And while getting dirty in the orchard or experimenting in the workshop is just another sign of a hard day's work, for us, nothing is better than drinking the fruits of our labor—in the form of cider.

Campaign Narrative

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Rooted.

Between the twin peaks of Mt. Hood in Oregon and Mt. Adams in Washington, the Columbia River Gorge offers an endless variety of world-class fruit grown by local farmers and orchardists.

Our connection to this land is evident in everything we do and everything we are. Like the pioneers who came before us, we work tirelessly to perfect our craft and make sure that the choices we make today ensure a better tomorrow.

We are rooted together in common goals. To uplift the local orchardists and help each other form connections to create locally sourced, delicious hard cider.

Attribute #1

Rooted → United

Established

Local

Campaign Narrative

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Passionate.

Our passion for cider is what drives us from the comfort of our beds at dawn for another day of labor. We wouldn't have it any other way.

From seed to cider, the process at times can be a bit experimental and unpredictable, but the final outcome is a delicate, artisan glass of perfection. Making all the hard work, trial and error, worth it.

Attribute #2

Passionate → Hard Work
Training
Aspiration

Campaign Narrative

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Artistic.

To us, crafting cider is art. Cider pears and apples can be tart, tannic, or downright inedible in their natural form. These characteristics provide the complexity and depth we need to make our world-class ciders.

Some embrace the taste variations each growing season can bring—each year a different vintage. Others treat cider like a discipline. Taking on the formidable task of perfecting their recipe, even with the challenging variables.

Attribute #3

Artistic → Pleasing
Refined
Expressive

Campaign Narrative

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Authentic.

There's an old saying: "The apple doesn't fall far from the tree." We couldn't agree more.

Each cidery's unique personality traits pour into every glass—each of us has our own innovative flare on this old world process.

Our local-first attitude helps us produce varieties of cider that are the envy of the world—and distinctively ours. The combination of climate, soil, and the ever-watching shadows of Mount Hood and Adams make us genuine.

Attribute #4

Authentic → Home Grown
Pure
Credible

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COLUMBIA RIVER GORGE

CIDER SOCIETY

True to Our Roots

Horizontal Mark

COLUMBIA RIVER GORGE

CIDER SOCIETY

True to Our Roots

Vertical Mark

Logo

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CIDER
SOCIETY

Vertical Mark

CIDER SOCIETY

Horizontal Mark

True to Our Roots

Tagline Mark

Logo

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Brandon Grotesque

https://www.myfonts.com/fonts/hvdfonts/brandon-grotesque/

AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRrSsTtUuVvWwXxYyZz
1234567890\$%^*(+@!?>#

Regular

Italic

Bold

Brandon Grotesque should be used for headlines and may be used for subheads.

Chaparral Pro

https://www.myfonts.com/fonts/adobe/chaparral/

AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRrSsTtUuVvWwXxYyZz
1234567890\$%^*(+@!?>#

Regular

Italic

Bold

Chaparral Pro should be used primarily for body copy.

Typography

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Morning Sun	Bittersweet	Dirt Hugger	Morning Dew	Bittersharp
#f9a31a R-249 G-163 B-26 C-0 M-41 Y-99 K-0	#640b10 R-100 G-11 B-16 C-34 M-99 Y-91 K-52	#3a322d R-58 G-50 B-45 C-62 M-63 Y-67 K-60	#ece8e1 R-236 G-232 B-225 C-7 M-6 Y-9 K-0	#bcd530 R-188 G-213 B-48 C-31 M-0 Y-100 K-0

Brand Colors

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Photography Samples

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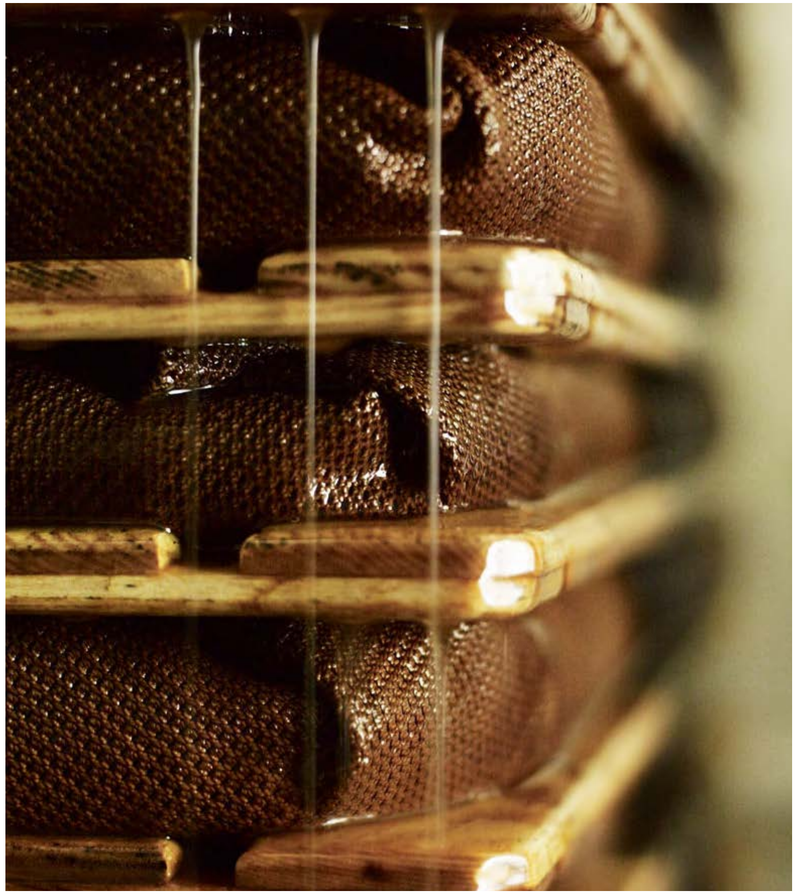

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Take an aimless wander around the Columbia River Gorge and you quickly realize how heavily our beautiful region is dependent on fruit. In fact, wherever you are in the US, if you're eating a delicious apple, pear, or cherry, chances are it was grown here.

Our ciders are a beautiful collision of old-world, traditional styles, alchemy and innovation. While we each have different styles, we rally around a common goal: Creating honest and authentic cider by using local, natural ingredients.

Our passion for crafting cider is evident in the dirt under our fingernails and the stains on our clothes. And while getting dirty in the orchard or experimenting in the workshop is just another sign of a hard day's work, for us, nothing is better than drinking the fruits of our labor—in the form of cider.

Long Description

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Our ciders are a beautiful collision of old-world, traditional styles, alchemy and innovation. While we each have different styles, we rally around a common goal: Creating honest and authentic cider by using local, natural ingredients.

Social

True to Our Roots

Short Description

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#GorgeCider #CiderSociety

Hashtags

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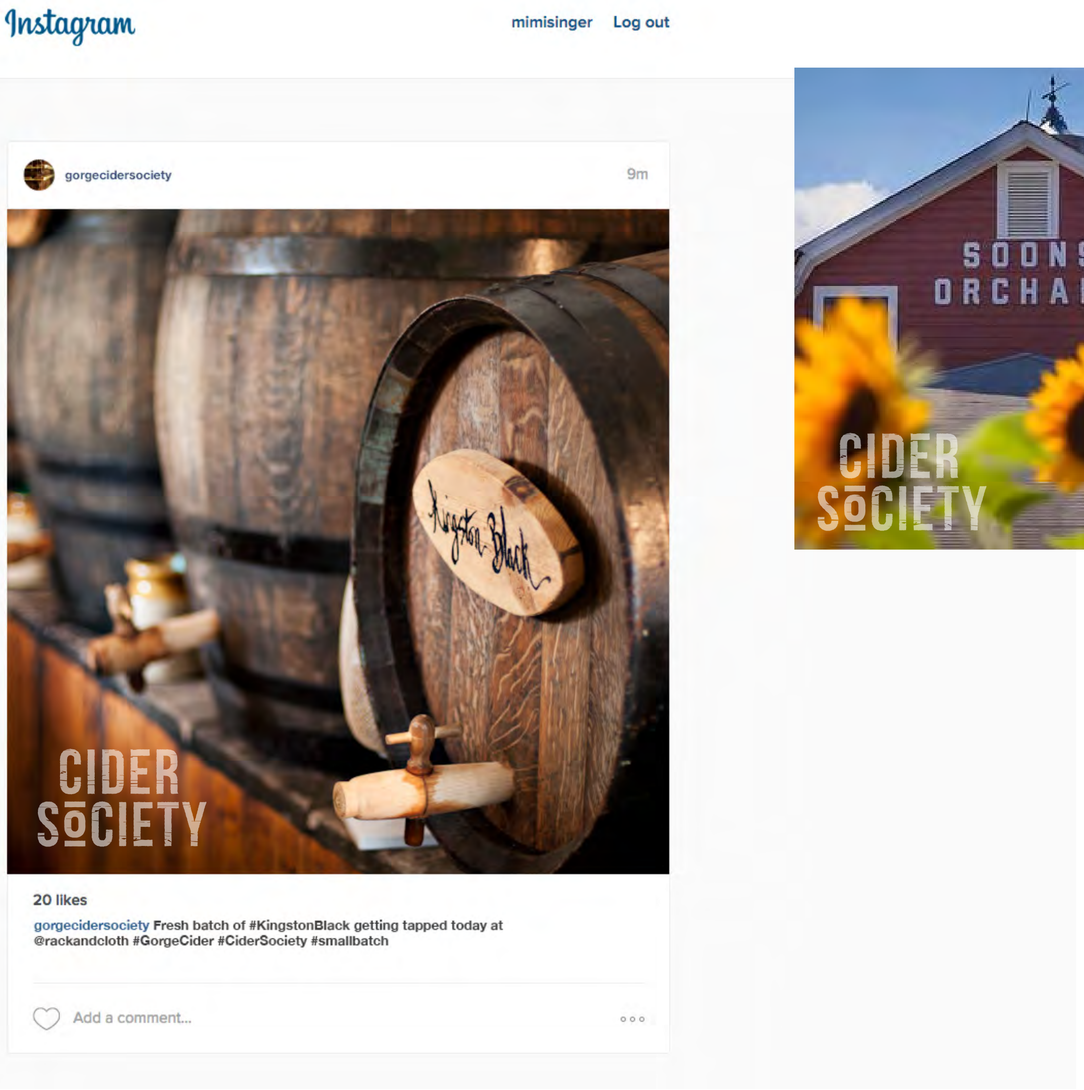

Instagram

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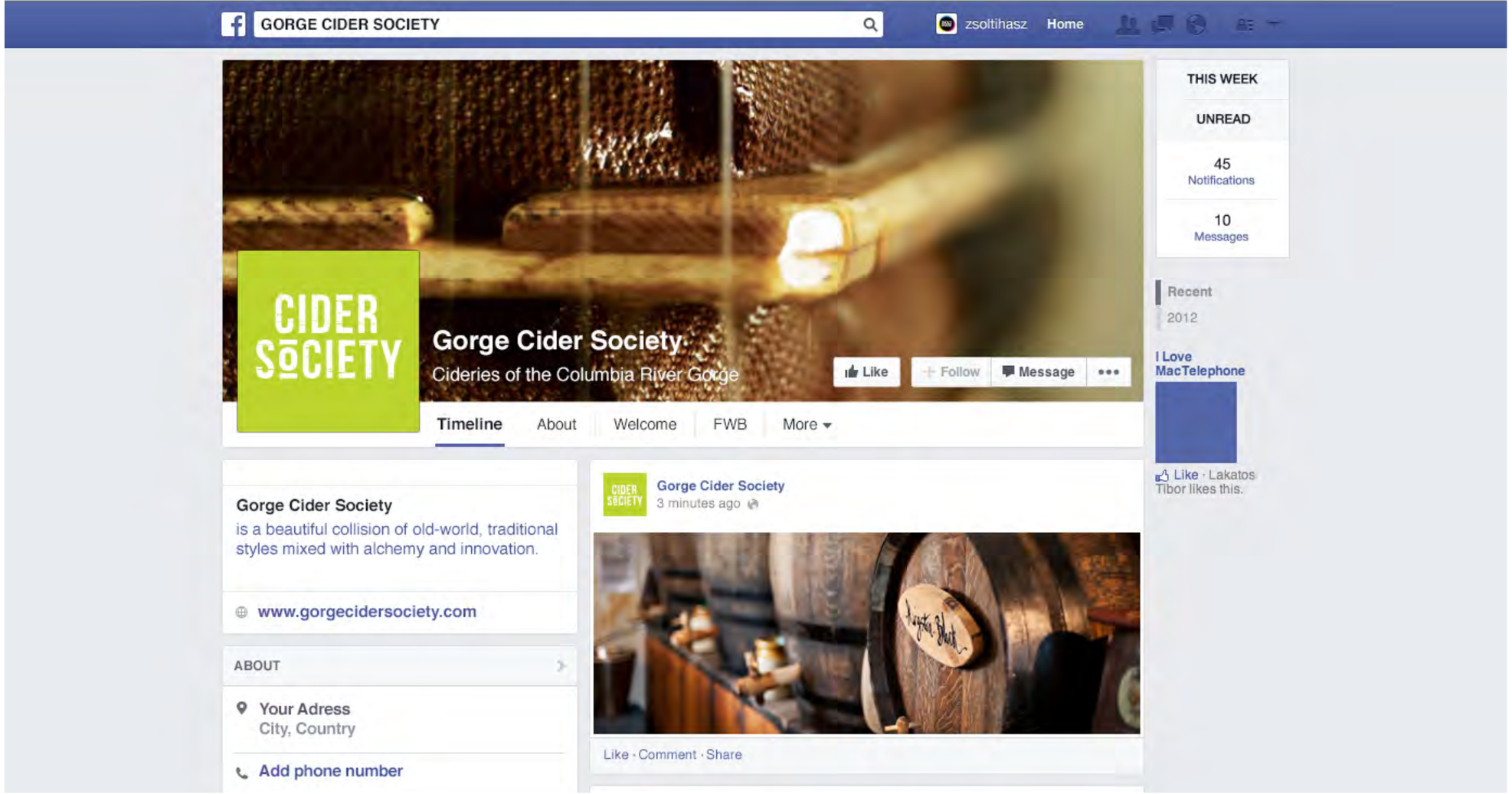

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Event Souvenirs

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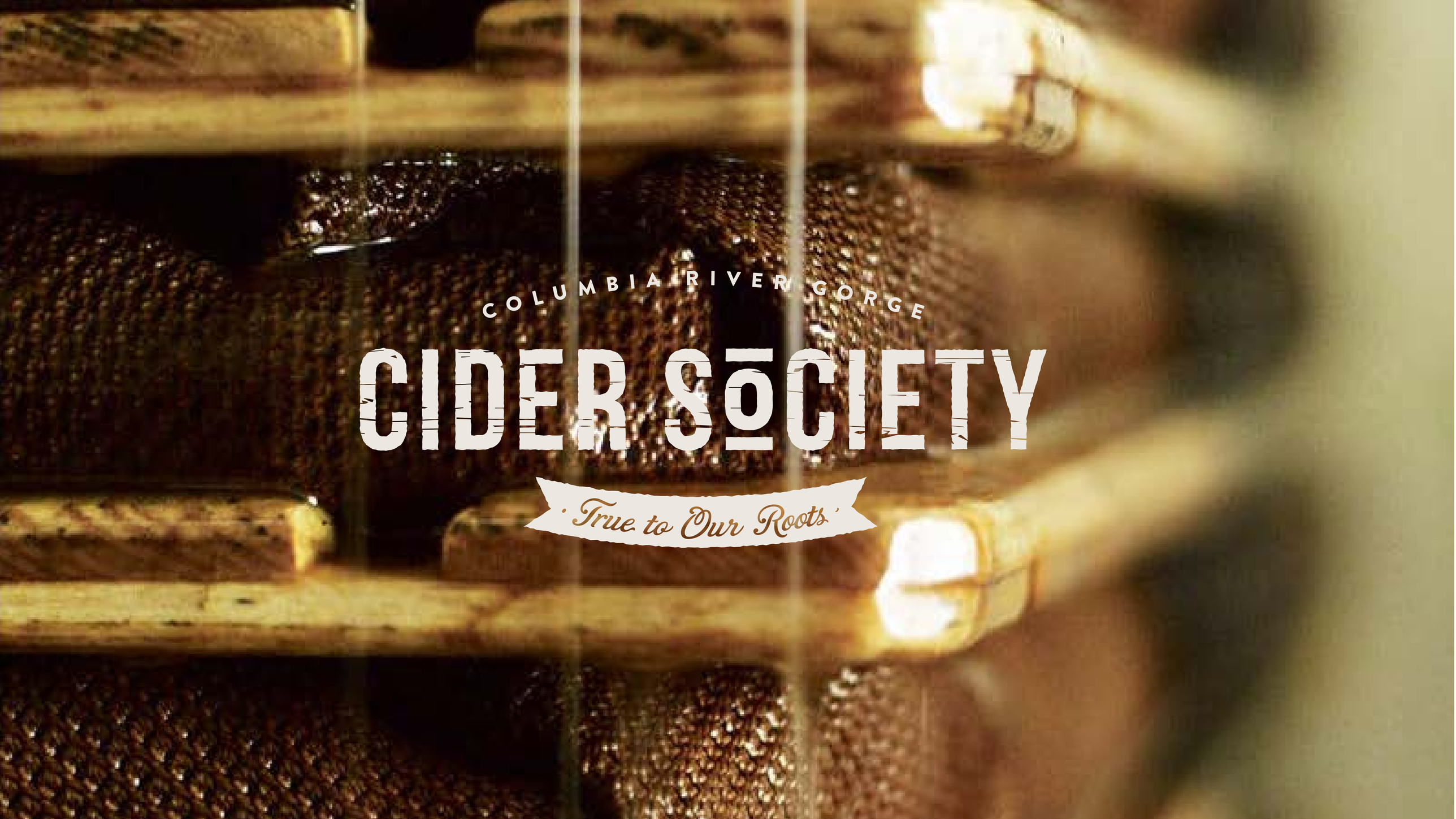
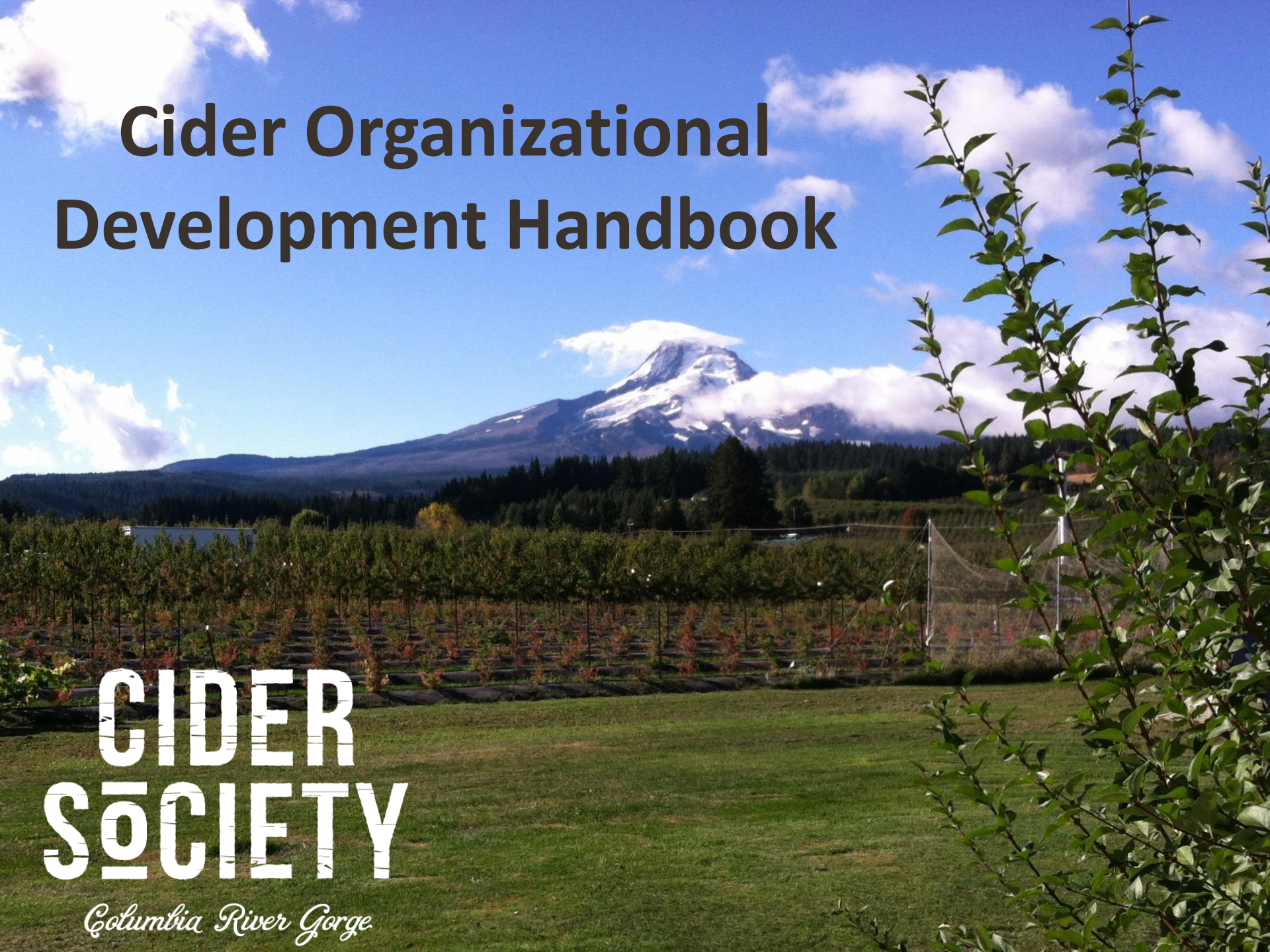

COLUMBIA RIVER GORGE
CIDER SOCIETY
True to Our Roots

Cider Organizational Development Handbook



CIDER SOCIETY

Columbia River Gorge

This document is a summary of the best practices we compiled and the lessons learned as the Gorge Cider Society began. It is intended to provide a roadmap for others seeking to build a cider industry organization. Some of the questions asked are specific to cider but the hope is that the format will be useful for others in the beverage and value-added agricultural sectors as well.

Path to Developing an Industry Organization

- **Getting Started:** Current Conditions, Potential Partners and Research/Outreach
- **Foundations:** Vision, Mission, Values
- **Structure:** Functional and Legal
- **Engagement:** Membership + Sponsorship

Getting Started: Current Conditions, Partnerships, Research, Outreach

Current Conditions

The cider industry continues to grow in the craft beverage segment, and in the Northwest. However, as you explore developing a local organization to promote your cider industry, encourage visitors to explore, or identify opportunities for collaboration, there are some key questions that should be asked. These include:

- Who is engaged and interested in developing an organization?
- What are their interests in coming together?
- What geography are you looking to serve?
- What potential resources are there to support this development?

Potential Partners?

Several questions to ask about partners:

- Are there organizations doing the work your group is interested in doing? Could they meet the need you are seeking to fill? If yes, explore partnerships!
- If no, what sets you apart? What is the niche you are working to fill that is different?

Potential Partners?

Ideas for partnerships: NW Cider Association (several states) or equivalent in your area, US Association of Cider Makers (national), chambers of commerce, destination marketing organizations, agricultural industry organizations for tree fruit or other ag relevant to your product, winegrowers or brewers organizations, local economic development entities.

Research + Outreach

We reached out to these organizations to learn from what they do and identify potential partnership opportunities with local groups:

Northwest Cider Association – Made Here

Columbia Gorge Winegrowers

MCA

Hudson Valley Cider Alliance – Apples Fermented & Distilled

Great Lakes Cider and Perry Association

Research + Outreach

Key feedback we received about the value of forming an industry organization:

- Opportunities to magnify impact together on marketing efforts, engaging the supply chain, etc.
- “Driving distance” key to collaboration on equipment, marketing, events, and more.
- Partnerships & engagement with other organizations and stakeholders can add value to your work.
- Single source for media & industry contact makes telling the story of your industry easier.
- Activities already undertaken at a more appropriate geography (ex: federal and state lobbying, cider standard formation, etc.) do not need to be reinvented for your geography.

The survey we used to guide our conversations is attached if you want to do some additional research in your area!

Foundations: Vision, Mission and Values

(Draft) Vision, Mission and Values

Developing a mission statement, vision for the future, and organizational values are key to ensuring that your forming group has a clear direction and that there is buy-in from the industry you are looking to serve for that direction.

- **Vision:** Where you see your industry and organization in 5 years, 10 years, or 20. This is the why you are doing what you are doing.
- **Mission Statement:** Clearly states the core purpose and focus of the organization. This is the how you want to get there.
- **Values:** Clarifies core principles and priorities.

Structure: Legal + Functional

Structure: Functional

The structure your organization takes should be guided by what you hope to accomplish.

- What activities do you need to undertake to accomplish your vision?
- How do you want to make decisions?
- What type of organizational structure is needed to move these activities forward?
- What structure do you have the capacity to support?

Structure: Functional

Structural Ideas: Advisory Team/Board; Project specific committees; appointed liaisons with other organizations; Executive Director.

Decision-Making Formats: Robert's Rules, Democratic, Consensus, etc.

Structure: Legal

To develop a robust and sustainable organization, an informed decision on legal framework will be required. This structure determines what limitations you have on activities, tax liabilities, ability to accept donations, and eligibility for funding sources, in addition to ensuring that the organization has a strong foundation developed with bylaws and policies.

Below are several formats we explored as we developed our organization.

Structure: Non-Profit Formation

Option 1: Move toward formal non-profit 501(c)6. This is a membership organization. This allows the organization to work for the benefit of its members rather than a broader public good.

- Pros: Control over own finances, direction, long term sustainability; staff to work on putting these things together currently.
- Cons: overhead costs can add up (insurance, book keeper, registration with the state/federal government, etc.).

Examples: Chambers of Commerce , industry associations, etc.

Structure: Affiliate

Option 2: Further explore opportunities to partner/affiliate with local or regional entities. This could be as a local chapter, or as an opportunity to incubate your organization until you are able to become sustainable on your own.

- Pros: lower overhead through leveraging existing org. infrastructure; opportunities to learn from partner organization's experience.
- Cons: could mean less local control, flexibility.

Structure: No Legal Framework

Option 3: Continue to collaborate without a formal organization but with partnership and fiscal management from existing local entities

- Pros: lowest overhead.
- Cons: more dependent upon support organizations for moving group forward which creates uncertainty; can hamper ability to move projects forward if they require significant funds or donations.

Structure: Lessons

The Cider Society's parent agency currently is a governmental entity. For most things, this works well. Challenges are:

- When considering hosting events that serve alcohol, this can be a slightly more difficult entity type.
- Finding partners who are experienced with the alcohol regulations and permitting who are willing to participate is vital to moving these efforts forward.
- One crucial resource for work as an organization is developing is grant funding. Eligibility for different programs will depend on legal structure often.

Structure: Bylaws and Policies

The decisions you make about structure will inform development of bylaws and policies. If you are an affiliate or partnering with another organization to support your efforts, their policies and bylaws could provide these structures for your group and utilizing them might be required. If you work to set up your own organization, both bylaws that outline your organizational, functional, and legal structure and policies that guide day-to-day operations will be needed. Examples can be found using similar organizations as a template and/or legal assistance.

Engagement: Membership + Sponsorship

Engagement

Determining your potential membership and sponsorship pool are critical steps to understanding your new organization's capacity as it develops. It is vital to ensure your engagement provides value to them as well as supporting your organization's vision.

Engagement: Membership

A few common themes to think about when developing a membership strategy:

- Tiered structures allow companies large and small to have access to the organization.
- Consider if there are different categories, such as cider memberships and orchard memberships, that would be key to getting the needed stakeholders engaged for a robust organization.
- Explore if a consumer facing membership option would bring value, and/or revenue, to your association.
- Partner organizations sometimes explore reciprocal membership opportunities or separate membership categories as a way to stay connected affordably.
- If you are developing a variety of membership types, consider how they will impact your decision-making structure.

Engagement: Sponsorship

A few common themes to think about when developing a sponsorship strategy:

- Again, tiered structures allow companies large and small to have access to the organization and connect with the member businesses.
- Consider suppliers and service providers your cideries work with often as well as businesses within the local cider industry. Ideas: insurance, equipment, inputs, marketing, etc.
- Develop strong benefit packages that entice companies or individuals to step up their support.

Wrap Up

The Gorge Cider Society hopes that the information and questions above will help guide you through the process to determine if a local industry organization would be valuable for your area!

Thank You + Recognition

This document was created with support from a Specialty Crop Block Grant through the Oregon Department of Agriculture.

Photo credits to: Victoria Wright.

Association Research Questions

Background

1. How long has your association been in existence?

2. Circumstances that caused you to organize/formalize?

3. What type of organization are you? (501c?? or other type?)

4. What would you have done differently at the outset? Are there any pitfalls to avoid?

Membership/Structure Q's

5. How many members do you have?

6. What types of membership and dues structure do you have in place

7. Most popular/valuable benefits provided to your members?

Revenue/Sustainability

8. What are your revenue streams? Approximate breakdown by percentage of categories (membership, sponsorship, grants, other)

9. What types of sponsorships do you have? What have been the most effective tools to attract sponsorships? What has been the strongest value proposition for your sponsors?

10. Are there any key partnerships you have formed?

11. What, if any, grant programs have you found useful?

<u>Collaboration</u>

12. How do you work with other industry organizations at different geographic levels (ie local org working with greater regional, national?

13. Have you done any research related to value you've had on your local economy?

14. Do you have any other advice? Or resources we should explore?

Columbia Gorge Cider Society
Advisory Team Meeting
Minutes
January 10, 2016
4:30pm to 5:30pm

Attendees: Bruce Nissen, Sam Bailey, Katrina McAlexander

Gorge Cider Route Map Update

- Group agreed on general structure of listings
- Conversation around cidery only vs orchard inclusion
  - Focus of map is cider promotion, so make sure it remains narrowly focused enough to promote cider
  - Orchards in the process of getting hard cider production up and running could be eligible for inclusion as they are committed to the process and likely have a public facing operation already through their fruit stands. Noted that don't want to overlap with Fruit Loop too much as general orchard and fruit stands are included there.
  - Noted connection to cider is important for inclusion even if orchards.
  - Mission is to create a cider industry that incorporates both growers and producers---so should be on the map.
- Icons
  - Think idea is OK as it provides easily understood info on the destinations for trip planning.
  - Encouraged to keep very simple
  - Didn't see the purpose for the meat info as it wasn't cider related. Fruit should be incorporated however.
- Agreed with strategy for printing and distribution.
  - Sam noted they go into Portland regularly and can take maps there.
  - Felt like we could run through maps relatively quickly with the events and additional distribution but that reflecting changes was important
  - Noted might need higher costs to cover booth fees etc for a presence at events if we wanted to do something formal
- Costs
  - Felt that covering printing costs wasn't adequate for sustainability and the value provided, so decided to go with $100 for fee to be on the map.

Cider Society Strategic Planning

- Question about how much buy in there is for mission and values. Carrie noted they had been through two meetings worth of iterations and at the last meeting some good buy in for the process.
- Noted that the values encompassed vision and we didn't need a separate vision statement. All agreed on this.

- Carrie will send out doc for strategic plan and all will provide feedback/edits and send to Carrie for incorporation prior to the next meeting.

General Updates

- Marketing Plan
  - $5,000 additional budget there as Blue Collar had determined they did not need to be compensated. Carrie noted we would be able to use the funds for products related to the plan. Blue Collar was recommending website development, asset development (photos/videos), and facebook post boosts.
- CiderCon + Bus Tour
  - Planning for bus tour completed essentially. Looks like the tours in general will have good attendance.
  - Carrie will be at the conference helping out.
- CiderCamp:
  - We also got some flexibility for updating the CiderCamp conversation.
  - Trina noted that when they hosted Japanese orchardists last year Mt View was one of their favorite stops because it was hands on—they got to press juice. She asked if that was the case with the CiderCamp activities. Bruce noted that attendees got to put a cider together from a whole variety of ingredients at his place. Carrie noted that they have been able to press at Rack & Cloth.

Columbia Gorge Cider Society
Advisory Team Meeting
Minutes
February 8, 2016
4:30pm to 6:30pm

Attendees: Sam Bailey, Katrina McAlexander, Jeff Nicol, John Metta, Guntram Jordan

SCBG Concept Application

Carrie asked for feedback on the grant ideas.

Katrina suggested hosting a cider dinner. Pair each course with cider from a different cidery and focus on farm to table food with a caterer. She noted they'd be happy to host something like that. She felt it could be a good fundraiser with ticket sales, and maybe a silent auction.

Group discussed CiderCamp inclusion. Carrie noted the grant supported only a small portion of the CiderCamp budget, and it's the cider that is covered. John and Jeff noted that was the easiest thing to donate. The group decided not to include as part of the grant because:

- Little support is provided by the grant
- Income is unsure given last year's outcomes and uncertainty with this year's approach
- Group did discuss coordinating CiderCamp with other activities going on that get heavily promoted in the region.

Jeff asked if there are ways to incorporate some of the events with Historic Highway events with the 100th anniversary coming up.

Group discussed public/consumer membership.

- Suggested asking NWCA if that portion of their membership is strong or if it could be challenging to grow this category.
- Group discussed whether membership could be set up kind of like a wine club, with part of it being getting cider only available in bottles as one of the benefits.
- Also discussed challenges with this given can't send alcohol across state lines, and the fact that MCEDD can't be the fiscal agent for a program like this.
- Ideas around swag/discounts for alcohol that can be given/picked up at tasting rooms.

Map Discussion:

- Group liked the idea of updating the format, including some advertising with additional space.
- Generally liked the idea of having some incentive to visit many of the cideries.

Cider Education:

- Sam & Guntram noted they were planning to host a cider education class working with community ed once a quarter for the 2016, so can use that as match.

General Conversation:

- Discussed need for additional, diversified funding as the industry is too small currently to support staff, etc
- Interest in additional grant opportunities. Carrie noted leverage with pretty much all funds would be a good idea. Discussed research done on how other cider org's have been funding themselves.
- Interest in fundraising events and pursuing sponsorships.
- Carrie noted this was why she wanted to focus back in on strategic planning, so that we could outline broader goals and strategies to guide project decisions, and then figure out funding sources.

Marketing Funding

- Group gave OK for the utilization of the marketing allocation as presented.

Columbia Gorge Cider Society
Advisory Team Meeting
Agenda
March 28, 2016
5:00pm to 6:00pm
Crush Cider Cafe

Attendees: Sam Bailey, Bruce Nissen, John Metta, Steve Funk, Katrina McAlexander

1. **Cider Society Strategic Planning**
   - Group discussed draft goals and strategies provided for their review.
   - Katrina noted that she wanted to see additional focus on supporting new cideries through the process of getting up and running as it is a challenging thing to do. She noted that mentorship and networking might be a good focus area.
   - The group discussed further developing partnerships both with local chambers and with other cider related groups to support implementing some of the strategies.
   - Sam and Guntram noted that they are looking forward to hosting sensory analysis classes, and think that could be a good strategy related to teaching-and learning-more about cider.
   - The group also discussed the wealth of knowledge in the region and through each person's networks. They focused on the ability to learn a lot from their colleagues and interest in moving more of that along.

2. **General Updates**
   - Cider Fest: Carrie noted that she was working with the Hood River Chamber to support the event through volunteer recruitment. She noted that they are in need of volunteers to help set up on Friday, work during the event, and help take down afterwards. The group noted they would reach out to their networks.
   - 2016-2018 SCBG Application: Carrie noted that the initial concept proposal had been submitted and that they would hear back shortly.
   - Survey: Carrie noted that she had a draft survey as a follow up from last year's interviews to collect updates. It included information on production, distribution/on premise sales questions, and interest in topics for meetings. The group encouraged her to include a question on jobs/FTE as well. It helps tell the story of the industry's impact.
   - Next Cider Society Meeting: Carrie proposed April 11th for the next Cider Society meeting. The group concurred.

Meeting adjourned at 6:02pm.

Columbia Gorge Cider Society
Full Group Meeting
4-11-2016
Crush Cider Café, Hood River

Attendees: Sam Bailey (Crush Cider Café), Brady Jacobson (Mt. Hood Organic), John Metta (Slopeswell Cider), Jeff Nicol (Slopeswell Cider), Kelly McCune (Runcible Cider), Rob McCune (Runcible Cider)

Updates

Carrie noted that she had submitted an application for the next round of **SCBG funding** for the group and that she should hear back shortly to find out if the Cider Society & MCEDD were invited to submit a full application.

She requested those that haven't filled out the survey to update baseline statistics about the region's cideries please do so. It can be found here.

Carrie noted that the **Gorge Cider Route** maps are printed and being distributed. There are several boxes at Crush Cider Café where people can pick up copies. She is requested support getting them out to partners in your area.

Gorge Cider Adventure—the day-long even replacing CiderCamp—will be October 8th, 2016. The Cider Society will be partnering with Skamania Lodge and finishing up the event at the Lodge's Celebration of Beer.

Carrie asked for feedback from the NWCA Cidermakers & Orchardist's Meet & Greet hosted up at Kiyokawa Orchards. Sam noted she felt like it was a good discussion and tour. The variety of speakers with different perspectives on the panel provided some good insights. And getting out into the orchard was a great addition.

Strategic Plan

The group reviewed the strategic plan draft provided by Carrie.

Jeff noted that he wanted to make sure that the strategies and goals could pertain not just to cidermakers but also to growers and others in the supply chain like Wyeast Labs. He felt like they reflected this broader group of potential members and partners.

The group walked through the goals and discussed proposed and additional strategies. Carrie encouraged strategies that might seem further out in time/resources as well so that we can look forward.

"Goal 1: Support successful cider businesses in the Gorge" Feedback:

- Discussed importance of the networking time. John noted that the networking piece might also be educational as everyone involved in the industry locally has expertise that the group and others in

the region can leverage. John also noted that it can be challenging to find a topic that is relevant to everyone, so it might be better to keep the business development speakers relatively informal.

- Group discussed potential for equipment sharing moving forward.
- Kelly noted she has a contact with the PSU craft beverage program that she might be able to pull out for an event.

"Goal 2: Put the Gorge on the map as a cider destination" Feedback:

- Discussed hosting a Gorge Cider event in addition to CiderFest. Sam noted she could shut down the parking lot at Crush for something.
- Potential for doing a group ad buy for print advertising. Noted that if we got a page as a region, it might make print advertising a more affordable opportunity.
- Kelly noted that this is a really unique region with interesting stories to tell, and that this is something we should highlight in our marketing efforts.

"Goal 3: Share knowledge about cider with our consumers" Feedback:

- Brady noted that she liked inclusion of the educational events and sensory tastings.
- The group discussed opportunities to attend events as the Cider Society rather than individually. This could be a way to have a presence at these large events at a lower expense.

Sam noted we should explore our relationship with NWCA further. Ensure we are working together where we can increase impact and avoiding duplication of efforts.

Group noted that there was not an organizational development goal proposed. Carrie noted she would add a draft of this one in for the next iteration.

Carrie let the group know she would incorporate this feedback into the draft and get it out to the rest of the group for additional input.

Columbia River Gorge CiderCon Bus Tour

Sponsored by Hood River Juice Company

Tour time: approx. 8:15 AM to 7 PM from pick up to drop off at Portland Hilton

NOTE: Closed toed shoes and full length pants required for tour at Ryan's, and suggested for tromping around orchards in February!

A day of cider exploration in the beautiful Columbia River Gorge! Lunch is included.

Step on Guides: John Metta (Spoke & Sail Cider Co., HR—541-399-1032) and Guntram Jordan (Crush Cider Café, HR)

8:30AM: Leave Hilton – Sue Husch should be there if you have any questions about departure.

- 15.6 miles - 30 minutes travel Link to map from Hilton to McM;

9AM: Arrive at McMenamins Edgefield - Contact Davis Palmer, 503-341-1987

- One hour for tour
- Meet at front of hotel
- Likely split into two groups
- facility history; McMenamin's approach—draft, direct to consumer only; production in house at the winery but also have a distillery; etc

10:15AM: Leave for Hood River

- travel time from Edgefield: Approx. 50 minutes Link to map from McM to HRJ

11:15AM Arrive Ryan's/Hood River Juice Company—Contact: Kristy Long 971-300-5447 (cell)

NOTE: Closed toed shoes and full length pants required...no bags or photography in production area, so leaving these on the bus might be easiest.

- 1.5 hours for tour:
- Meet in old Sanctuary---for paperwork and Q&A and slide show with the quality assurance folks
- Split into groups for tour of parts of the facility

12:30PM Leave HR Juice for Spoke & Sail—10 minutes or less for travel up the hill Link to map

12:40PM Arrive at Spoke & Sail

- LUNCH LOCATION. Lunch by Kickstand Coffee & Kitchen.
- Tasting, tour production area & front of house—small scale cidery.

2:00PM Leave Spoke & Sail for Mt. Hood Organic—text Brady when you leave Hood River please!

- straight travel time is 24 minutes. An additional 10 added in for cushion/or for the detour loop around Odell to see packing houses (if running late, skip this!).
- Link to map from S&S to Orchard

- Fun facts for our tour guides: Basics on Orchard Industry in Region:
    - First fruit trees to the region in 1854, first commercial orchard in 1876
    - 440 growers and 20 shippers of tree fruit in the Mid-Columbia
    - 25,000 acres and 225,000 tons of cherries, apples, pears in the 5-county region, 10% apples, 50% pears, 40% cherries
    - The Mid-Columbia fruit-growing region in Hood River and Wasco counties accounts for 40% of the "winter" pears, 20% of the Bartlett "summer" pears and about 20% of the sweet cherries produced in the United States.
    - This fruit production has a farm gate value of approximately $80 million with an additional $80 million in gross value added
    - HR Valley—15,000 acres planted—pears the vast majority today but started out as mostly apples
    - Hood River County leads all 3,300 counties in the United States in pear production. The Dalles fruit growing district is the largest concentration of sweet cherry acreage in the U.S.
    - Difference in growing season in lower and upper Hood River Valley: 40 days

2:40PM Arrive at Mt Hood Organic—contact: Brady Jacobson (cell: 541-490-7487)

- 1 hour for tour, discussion, tasting
- Meet at the Apple House down at the end of the drive.
- Overview of their orchard (biodynamic, heirloom varieties) and cider approach with Brady & Nate
- Tasting

3:40PM Leave Mt. Hood Organic for Jester & Judge

- Travel time approx 50 minutes (note: go through Cascade Locks--more predictable timing than Hwy 14). Link to map

4:30PM Arrive at Jester & Judge—contact: Bruce Nissen (cell: 530-613-3942)

- 1 hour for tour, discussion, tasting
- Larger scale production overview
- Contract bottling/co-packing and contract cidermaking as part of business model

5:30PM Leave for Portland, Hilton

- Travel Time – approx. 1 hour Link to Map from J&J to Hilton

Between 6:30PM and 7:00PM depending on traffic—arrive at the Hilton

EXPLORE HOOD RIVER VALLEY'S CIDER SCENE

NEW CRAFT BEVERAGE INDUSTRY BLOSSOMS IN OREGON'S FRUIT BELT

by *Jeff Alworth*

photography by Leah Nash

Updated on February 28th, 2016

Stefan Guemperlein operates the tiniest cidery in the valley — Gorge Cyder House — from the back of his deli, *Ovino Market & Delicatessen*, in Hood River. A German who recalls drinking cider in Bavaria in his youth, Guemperlein's love of Italian wines brought him to the apple. Now he makes naturally fermented cider, slow-aged to rich complexity. A star in his lineup is the spicy Lost Lake, made with honey.

Cider has been a growing presence in restaurants and on grocery shelves, a potion sitting at the nexus where artisanal beverages meet the farm-to-table movement. Curiously, Portland and the Willamette Valley have been the center of the cider world over the past decade — not the gentle valleys and slopes around Hood River synonymous with heirloom orchards. All that is changing, and quickly, as a trove of new cideries have cropped up in and around the Hood River Valley.

Led by orchardists whose families have been cultivating apples, pears and cherries for generations, these new cideries are showcasing the bright, farm-fresh flavors of tree-ripened fruit. The cider makers see their product as a natural extension of their long connection to the land, and they have formed a colorful, supportive network. If you're in the Hood River Valley, hunt them up and stop in for a glass.

JEFF ALWORTH

Jeff Alworth has been writing about Oregon beer for fifteen years, and his recent work has appeared in Draft and Sunset Magazine. He has been blogging at "Beervana" since 2006. In Spring 2012, Chronicle Books will release The Beer Tasting Toolkit, his beginner's guide to blind tasting. He is currently writing The Beer Bible for Workman Publishing.

While it doesn't have its own tasting room, Hood River Ciderworks cider, made from fruit from the Bickford family farm, is available at Hood River

ckfords have farmed in the Hood River Valley for five generations, and they've been making wine for more than a ards to fermented use in 2013. Local winemaker Rich Cushman makes a Comice pear perry and two versions of ake fussy products, instead crafting familiar apple varieties into delicate, effervescent ciders.

McMenamins Keeps the Beat

by *Eileen Garvin* / November 16th, 2015

When you're grooving on the concert lawn at McMenamins' Edgefield with 4,999 other happy souls, it's easy to believe that this company, known for its historic and quirky hotel properties, knows a thing or two about music. But take a look at...

Continue reading this story...

1 The Gorge White House
a *Shopping* (within *Attractions*)
2 Fox-Tail Cider
a *Cidery* (within *Eat & Drink*)
3 Hood Valley Hard Cider
a *Cidery* (within *Eat & Drink*)
4 OVINO Wine & Cider Company
a *Winery & Wine* (within *Eat & Drink*)
5 Brian's Pourhouse
a *Restaurant* (within *Eat & Drink*)

Map data ©2016 Google Report a map error

1. *The Gorge White House*

2. *Fox-Tail Cider*

3. *Hood Valley Hard Cider*

4. *OVINO Wine & Cider Company*

5. *Brian's Pourhouse*

These maps and directions are for planning purposes only. You may find that construction projects, traffic, or other events may cause road conditions to differ from the map results. For travel options, weather and road conditions, visit *tripcheck.com*, call 511 (in Oregon only), 800.977.6368 or 503.588.2941.

COMMENTS

JP says...

Couple more stops to check out in town in Hood River: Slopeswell Cider Co. @ 1021 12th St, Hood River, OR 97031 (open 5p-9p, Thu-Sat), and Crush Cider Cafe @ 1020 Wasco St, Hood River, OR 97031 (open at noon, Wed-Sun).

Written on April 8th, 2016 / *Flag this Comment*

Close

Celebrate Hood River's Cider Scene

by *Eileen Garvin*

Updated on September 24th, 2015

Spring is here, and that means an explosion of pink and white blossoms in the orchards of the Hood River Valley. But there's something else blooming out there too — a burgeoning craft cider scene.

In the past two years, the Hood River region has seen the birth of nine local cideries and reportedly has three more in the works. Local cider makers, many of whom have experience in beer brewing and winemaking industries, see the new trend as a natural outgrowth of the bounty of apples and pears in the region, including many heirloom varieties that are ideal for cider.

"It's all fun with fermentation. Yeast and sugar— they are a powerful duo," says Brian Perkey, who had a long career in beer brewing before starting *Hood Valley Hard Cider* in Parkdale.

Perkey also sees the cider trend as part of the local food movement. "There are a lot of folks who are interested in the product we have to offer here," Perkey says.

Get taste of this sweet and tart new industry at the second annual **Hood River Hard Pressed Cider Fest** on Saturday, April 11, from noon to 7 p.m. The event is open to all ages and admission is $5 (children under 14 get in for free); it costs an additional $5 for a cider glass and 4 drink tokens. Tickets are available online at *hoodriver.org/hard-pressed-cider-fest*.

More than 20 regional cideries will be on hand, including Rack and Cloth, Gorge Cyder House, Hood Valley

Hard Cider, Foxtail, HR Ciderworks and The Gorge White House — all from Hood River, Parkdale and Mosier. Attendees will enjoy food, live music and kids' activities at the event, which will be held south of Hood River in the orchards and fruit packing district.

The Cider Fest takes place on the first weekend of the Hood River Valley Blossom Time, which runs from April 11-26. For details about Blossom Time and Cider Fest, visit *HoodRiver.org*.

EILEEN GARVIN

Eileen Garvin lives and writes in Hood River. When she's not hunched over her keyboard or digging in the garden, you can find her mountain biking, kiteboarding, hiking, skiing or camping somewhere in Oregon.

McMenamins Keeps the Beat

by *Eileen Garvin* / November 16th, 2015
When you're grooving on the concert lawn at McMenamins' Edgefield with 4,999 other happy souls, it's easy to believe that this company, known for its historic and quirky hotel properties, knows a thing or two about music. But take a look at...

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Are we talking hard cider or non-alchoholic apple cider?

Does the term Cideries refer to hard cider?

Written on February 24th, 2016 / *Flag this Comment*

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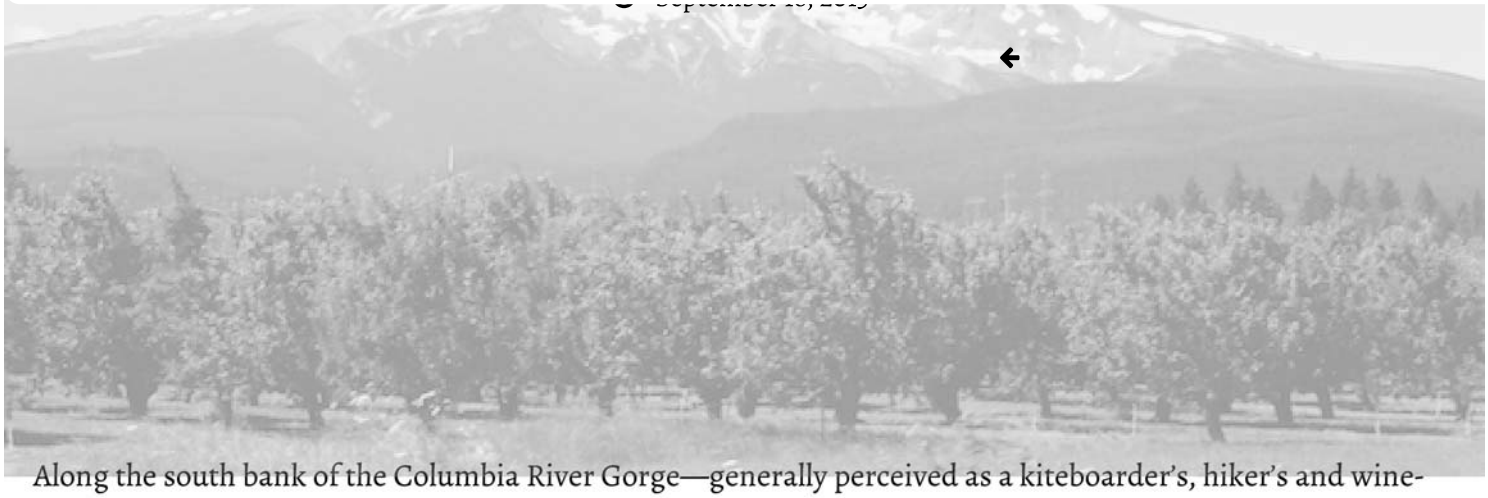
The Gorge's New Cider Trail



Along the south bank of the Columbia River Gorge—generally perceived as a kiteboarder's, hiker's and wine-lover's dream come true—we are witnessing a new farm-fresh industry take root. Whether you're gluten-free, an adventurous beer drinker looking for the "Next Big Thing" or simply a devotee of full-flavored liquid artistry, the Hood River Valley's newest craze is in the pomme of your hand. Following the late summer harvest and accounting for fermentation times, count on cider season in early autumn.

photo by Brian Yeager

What starts as Highway 35 in Hood River is a scenic journey through orchards and U-pick farms known as the Fruit Loop. Before long, travelers discover Fox Tail Cider (2965 Ehrck Hill Drive, Hood River) and its family-friendly tasting room with its own adjacent produce stand. They serve several interesting products, each made in the production facility visible through portrait windows, from the all-apple Sir Isaac that's juicy and tart, yet fairly dry, to the all-pear Pyrus Perry that's subtler and drier still. The peach-blended Fuzzy Haven is the customer favorite. No reason to rush your samples or pints when lawn games such as cornhole and ladder ball outside.

photo by Brian Yeager

Spoke and Sail (1021 12th Street, Hood River) is the new cider joint from local cider veteran duo John Metta and Stefan Guemperlein. Although the focus is on Old World cider styles, don't miss Spoke and Sail's honey cider (technically called a cyser) that tastes as good as a beeswax candle smells. The dry-hopped Knee Dropped Hops is a good gateway cider for beer enthusiasts, as it features the grassy and floral flavors they prefer. A recent visit yielded a special sample of a cider featuring locally grown cherries and whole cinnamon bark. Full disclosure: Next summer, I'm organizing an event called Kriekfest that will feature some thirty beers and ciders all made with cherries and Spoke and Sail's creation, after another year of aging in an oak cask, will be among them.

photo by Brian Yeager

Also new to town is The Barrel Room, the exclusive tasting room for Logsdon Farmhouse Ales and Ciderworks (101 4th Street, Hood River). David Logsdon is famous on a couple of accounts. He was Full Sail Brewery's original brewer in 1987. Now, he is the co-founder of Wyeast Yeast Labs and is running Logsdon Farmhouse Ales in his red barn, just outside downtown. Ciderworks carries on his love of all things funky and rural by creating ciders such as Wilde Appel that will have fans of Normandy-style ciders heading straight to the new tasting room and bottle shop.

photo by Brian Yeager

It's worth noting that all of the above cidermakers use some of their own fruit but also buy apples from other farmers in the area to keep up with production demand for their lovely drink. Rack and Cloth (1104 First Avenue, Mosier), however, uses only estate-grown apples for their limited offerings. Located five miles east of Hood River, visitors to their tasting room, the Mercantile, keep their fingers crossed that they'll be able to choose from at least two ciders: the clean, dry Stony Pig and the tart, rustic PommePomme. Rounding out the farm-to-bottle experience are their wood-fired pizzas and other culinary treats. The patio is one of the most leisurely ways to spend a lazy afternoon (Thursdays through Sundays only) imaginable.

Brian Yaeger
1859 beer writer

Tailored Coffee Roasters (https://www.1859oregonmagazine.com/other/startup-tailored-coffee-roasters-eugene-oregon)

Athlete Profile: Diego Valeri (https://www.1859oregonmagazine.com/other/athlete-profile-diego-valeri)

Hood River Hard-Pressed Cider Fest

April 16 @ 12:00 pm - 7:00 pm

$10.00

« Northwest Wine Encounter

Westside Warehouse District Scavenger Hunt »

Hood River Hard-Pressed Cider Fest has announced its 2016 lineup of 20 local and regional craft cideries. Of the 20 cideries, six are new to the festival, including two newly launched Hood River cideries, Spoke & Sail Cider Co. and Crush Cider Cafe.

To accompany the ciders, festival-goers can dig into offerings from the area's vibrant food scene, ncluding Apple Valley BBQ, Leah's Lunch, and Solstice Wood Fire Caf¨¦. The daylong event also features a lineup of local music, from an old-time string band to honky-tonk country and rock, and a kids' area, complete with a bouncy house – guaranteeing a great time for the whole family. Spring showers aren't a problem, as the tasting takes place in a covered hall.

Hood River Hard-Pressed Cider Fest is the anchor event for Hood River Blossom Time, a month-long celebration of the beauty and agricultural heritage of the area. Check out a full calendar of Blossom Time events at HoodRiver.org.

2016 Hood River Hard-Pressed Cider Fest Participating Cideries
New for 2016

2 Towns Ciderhouse – Corvallis, OR
Apple Outlaw – Applegate, OR *
Atlas Hard Cider Co. – Bend, OR
Crush Cider Caf¨¦ – Hood River, OR *
Finnriver Farm & Cidery – Chimacum, WA *

CIDERCRAFT MAGAZINE

Photo courtesy of Hood River County Chamber of Commerce

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In Preview: Hood River Hard-Pressed Cider Fest

by Kenneth Clarkson

Spring is upon us and there is no better way to relax than with cider and good tunes. Here in the Pacific Northwest we are no stranger to April's intermittent showers. But don't fret because the third annual Hood River Hard-Pressed Cider Fest takes place within a covered tasting hall. Good music and delicious cider await you.

At the festival there will be 20 cideries participating, and over 40 ciders on tap. The day-long event will host local Oregonian music acts and food trucks galore. And, the best part about the festival? It's kid friendly. That's right, you don't have to pay the babysitter this time. Bring the kids and enjoy a nice evening with the whole family.

Fox-Tail Cider, Rogue Cider, Tieton Cider Works and Jester & Judge are just a few of the producers pourin' at the event. As for the music, the line-up starts off with The June Bug Boys and concludes with Hood River's very own The Wasco Bros.

Tickets range from $5 to $10. The festival takes place April 16 rain or shine.

KOIN 6
Watching out for you

Hood River hosts 3rd annual Hard-Pressed Cider Fest

More than 20 cideries will be participating

Kohr Harlan

Published: April 15, 2016, 10:26 am | Updated: April 15, 2016, 1:55 pm

Hard Pressed Cider Festival is happening this weekend in Hood River. (KOIN)

HOOD RIVER, Ore. (KOIN) — The Hard-Pressed Cider Fest (http://hoodriver.org/cider-fest/) is taking place in Hood River on Saturday for the third year in a row.

Eleven cideries are based in Hood River, using local apples to make the cider. Pears, peaches, ginger and cherries are just some of the things the apples are mixed with to make the tasty alcoholic beverage.

KOHR HARLAN
@kohrhKOIN

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Fox Tail Cidery in Hood River previewing this weekend's Hard Pressed Cider Festival. #KOIN6News @Foxtailcider

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More than 20 cideries will be participating (not all local), with more than 40 ciders on tap.

Most of ciders contain 5-10.2% alcohol.

The event is kid friendly. It takes place from 12-7 p.m. at 3315 Stadelman Drive.

CIDER

Hood River Hard-Pressed Cider Fest Announces 2016 Lineup

By Samurai Artist | March 8, 2016

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I believe this will be the 3rd annual Hood River Hard-Pressed Cider Fest in 2016, featuring a lineup of more than 40 ciders from local and regional craft cideries on Saturday, April 16, in the rural area of the gorge at Stadelman Fruit. Of the 20 cideries, six are new to the festival, including two newly launched Hood River cideries, Spoke & Sail Cider Co. and Crush Cider Cafe. Together, the more than 40 ciders that showcase the wide variety of styles coming out of the Pacific Northwest's booming cider scene.

More from the press release:

"Set in the scenic Hood River Valley among blossoming apple, pear and cherry orchards, Hood River Hard-Pressed Cider Fest gives people the chance to see and experience first-hand where so many of these ciders get their start," said Mike Glover, CEO, Hood River County Chamber of Commerce. "We love bringing all of these unique cideries together under one roof and giving people a taste of the tremendouse depth and scope of ciders being crafted in the area. It's a great way to see what styles the cideries are working on and to discover new favorite brands and tastes – from hops-based ciders to French Champagne-style ones."

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To accompany the ciders, festival-goers can dig into offerings from the area's vibrant food scene, including Apple Valley BBQ, Leah's Lunch, and Solstice Wood Fire Café. The daylong event also features a lineup of local music, from an old-time string band to honky-tonk country and rock, and a kids' area, complete with a bouncy house – guaranteeing a great time for the whole family. Spring showers aren't a problem, as the tasting takes place in a covered hall.

Hood River Hard-Pressed Cider Fest is the anchor event for Hood River Blossom Time, a month-long celebration of the beauty and agricultural heritage of the area. Check out a full calendar of Blossom Time events at HoodRiver.org.

2016 Hood River Hard-Pressed Cider Fest Participating Cideries
New for 2016

2 Towns Ciderhouse - Corvallis, OR
Apple Outlaw - Applegate, OR *
Atlas Hard Cider Co. - Bend, OR
Crush Cider Café - Hood River, OR *
Finnriver Farm & Cidery - Chimacum, WA *
HR Ciderworks - Hood River, OR
Jester & Judge - Stevenson, WA
Portland Cider Co. - Oregon City, OR
Fox-Tail Cider - Hood River, OR
Neigel Vintners Cider - East Wenatchee, WA
Rack & Cloth - Mosier, OR
Red Tank Cider - Bend, OR *
Reverend Nat's Hard Cider - Portland, OR
Rogue Cider - Newport, OR
Schilling Cider - Auburn, WA
Spoke and Sail Cider Co. - Hood River, OR *
Swift Cider - Portland, OR *
The Gorge White House - Hood River, OR
Tieton Cider Works - Yakima, WA
Wandering Aengus Ciderworks - Salem, OR

Hood River Hard-Pressed Cider Fest Event Details

When: Saturday, April 16, 2016
Where: 3315 Stadelman Drive, Hood River, OR
Hours: Noon-7 PM
Tickets:

$10 – Full event pass. Includes: entry into Cider Fest, entry into 21+ Cider Garden, four (3.5oz) taste tokens, and commemorative glass.
$5 – Entry only. Adult entry into Cider Fest event; ages 14 and under are free. Does not include commemorative glass and tokens.

Purchase tickets online: HoodRiver.org/ciderfest

Entertainment line-up
Noon – 1:15 pm: Junebug Boys
1:45 – 3:00 pm: Anderson Gould Trio
3:30 – 4:45 pm: Tracy Klas Band
5:15 – 6:45 pm: The Wasco Bros.

Photo Credit: Adam Lapierre

About Hood River, Oregon
Located at the crossroads of the spectacular Columbia River Gorge National Scenic Area and the magnificent Cascade Range and just an hour from Portland, Hood River is wildly gorge-ous, offering outdoor recreation, dramatic vistas, historic landmarks, bountiful fruit and fantastic food, wine, beer and cider. The Hood River County Chamber of Commerce supports economic and tourism development in Hood River, Cascade Locks, Odell, Parkdale, Pine Grove, and Mount Hood. hoodriver.org

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Samurai Artist

Founder of The New School and most frequent contributor Ezra Johnson-Greenough has worked in the craft beer industry for almost 10 years, doing everything from illustrating beer labels to bartending at renowned beer bars and breweries like Belmont Station, Apex, Laurelwood and Upright Brewing. He has also had a hand in creating events like the Portland Fruit Beer Festival, Portland Beer Week, and the Brewing up Cocktails series. He is available for freelance consultation in marketing, events, graphic design and branding. Contact: SamuraiArtist@NewSchoolBeer.com

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Hard-Pressed Cider Fest planned April 12

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As of Friday, March 7, 2014

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Artisan ciders will be the main attraction at Hood River Chamber of Commerce's first Hard-Pressed Cider Fest on Saturday, April 12. This event is an opportunity for seasoned and novice cider drinkers alike to sample cider from Hood River County's very own cider makers as well as a variety of additional Northwest cideries (check in at hoodriver.org/hard-pressed-cider-fest for cider list). A menu of local cuisines, produce and arts vendors, a kid's area, and a local line-up of music from bluegrass to classic rock, guarantees a great time for the whole family.

The fest runs from noon to 6 p.m. and will be held in Odell at Mt. Defiance Fruit, 3351 Stadelman Drive. Also on hand will be local cuisine, from smoked barbecue to American pub fare to gluten-free and vegetarian dishes. Attendees may pre-purchase tickets at Brown Paper Tickets to secure quick entry into the event.

Admission for those 21 and over is $10 and includes cider glass and four taste tokens. For those 20 and under and designated drivers, admission is free.

"We are very excited about the expanding cider industry in the area, the Cider Fest is an opportunity to highlight and celebrate the art of cider making. We hope to see the event grow exponentially in the next few years." said Ashley Huckaby May, event coordinator of the Hood River County Chamber of Commerce, which puts on the event.

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'Rallying point' Cider Fest sells out

0

Photo by Patrick Mulvihill.
Hood River's Wasco Bros. started the tunes at Hard-Pressed Cider Fest on Saturday.

As of Tuesday, April 19, 2016

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Last weekend's third Annual Hood River Hard-Pressed Cider Fest, a Hood River County Chamber of Commerce event, drew approximately 3,000 people to the Odell fruit packing district. The family-friendly celebration was full of cider-seeking locals and visitors from open to close, according to event coordinator Ashley Huckaby May.

A total of 44 ciders from 22 cideries accompanied live music and the food from local vendors, including Odell's Michoacan Grill and Parkdale's Apple Valley BBQ. Mt. Defiance Fruit Company, built in 2013, hosts the event, using space that come August will fill with fruit and trucks delivering it.

Brian Thompson of Sandy said he came because his wife wanted to check out the ciders, but the event was an eye-opener for him.

'There are so many distinct flavors. It's hard to imagine all the possibilities. I want to make my own now," said Thompson, drinking the pear-watermelon cider that had a line snaking around two sides of the room by early afternoon. (It's from Neigel Vintners, Wenatchee Valley).

The event was packed, but FoxTail cider maker Bob Fox, whose family owns the facility, said that combined with refinements to parking, the venue can take on more people. Fox said there is an additional storage space that can be opened up, and the entry tents could be moved out from under the outdoor covered area to make more room.

Local cider makers said the event was not only a showcase for local ciders but a chance for people to taste, in one place, the wide variety that Oregon and the Northwest have to share.

Nationally, cider sales rose 40 percent in 2015, and a 12 percent increase is expected in 2016, according to the Northwest Cider Association.

"I like this because it's kind of a rallying point for local ciders, because we're all really busy doing our stuff and when do we have the chance otherwise?" said Brian Perkey of Parkdale's Hood Valley Cider (the first to bottle local cider, c. 2012). "Plus, we bring in all these visiting ciders."

The Hood River County Chamber of Commerce added Cider Fest to its calendar of events in 2014. The Chamber also puts on the annual Hood River Hops Fest, Hood River Harvest Fest, Hood River Holidays and the Roy Webster Cross-Channel Swim events.

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Capital Press
The West's Ag Website

Hard cider makes an easy connection between urban and rural

Eric Mortenson • **Capital Press**
Published on April 20, 2016 10:51AM
Last changed on April 22, 2016 9:17AM

ODELL, Ore. — About 3,200 people packed the Hard-Pressed Cider Fest here April 16, which itself isn't that unusual. In terms of consumer tastes and response, hard cider is following in the successful Pacific Northwest footsteps of regional beer and wine.

The news may lie in who attended. Anecdotally, at least, the crowd's demographics leaned heavily to young and urban. Cider makers say the same kind of people who like microbrews and fine wine also like hard cider.

And rural producers, generally, are glad they do. In some cases, especially with niche markets, winning the favor of city buyers can lead to success.

"Seattle and Portland are really good about trying new things," said Bob Fox, who manages Fox-tail Cider in the Hood River Valley, where the festival was held. He said many of the people stopping at his tasting station were from those cities, and from Bend and the Tri-Cities area as well.

Fox is a fifth-generation orchardist, an operation that began with his great-great-grandfather, August Paasch. He said he grows "pears and cherries, apples, peaches and what-not."

Looking to diversify operations, the family branched off a new business and began making Fox-tail Cider in 2012.

"So far, so good," Fox said. "People keep drinking it, so we keep making it. It's a good agricultural product. I think it helped out with the apple market."

Hood River vineyard owner and winemaker Rich Cushman said hard cider is a good fit for the valley. With the cornucopia of fruit grown nearby, much of which can be used to make or flavor cider, the valley ought to lay claim to the title of the U.S. "cider capital," he said.

"I think we should be all over that in Hood River," he said.

Cushman said there is "huge interest" in cider and demand is strong. "We need more staff to really serve the market that's out there for us."

Cushman teamed with high school classmate Steve Bickford, an orchardist and vineyard owner, to form Hood River Ciderworks in 2013. Valley residents, long familiar with traditional, fresh-market pear and apple production, appear to have embraced wine, cider and other new forms of value-added agriculture.

"They now recognize that diversity in business is a good thing to have here, rather than focus solely on one business segment like lumber or something," Cushman said. "Some other counties, that was their entire ball of wax and they're still struggling."

Attendance data for the cider fest is limited, but interesting. Of the 384 tickets sold online, 41 percent were

bought by people residing in Portland or its suburbs; another 12 percent were from the Vancouver, Wash., area. A smattering were from Seattle; people living in or near Hood River bought 22 percent of the online tickets, according to the Hood River Chamber of Commerce.

Industry observers say production of hard cider — the alcoholic cousin of sweet apple cider — is growing rapidly, especially in the West.

Cider's rapid acceptance by consumers comes even as some producers are hastily pursuing and planting old English and French variety cider apples. Most hard cider made today is from repurposed dessert apples, flavored in some cases with berries, rhubarb, tangerine and more. Fox and Cushman aren't convinced it's necessary to use traditional cider apples; Fox believes boutique cideries will spring up to claim that niche.

A retired Cornell University apple researcher, cider maker and professor, Ian Merwin, described the Northwest cider scene as "a total free-for-all, no rules."

He estimated that people in Oregon, Washington and California drink 80 percent of the hard cider consumed in the U.S. Speakers at the U.S. Cider Association's annual convention, held in Portland in February, said cider accounts for 1.7 percent of alcohol sales nationally, but about 4 percent in Portland and Seattle.

The February convention attracted about 1,200 cider makers, apple growers, distributors and others from 44 states and eight countries.

In related news, the Northwest Cider Association announced Emily Ritchie will become the group's executive director effective May 2.

Ritchie, now the association's program manager, previously was a marketing and sales associate for Truitt Family Food in Salem and directed the Oregon FoodCorps program at the Oregon Department of Agriculture.

Online

http://www.foxtailcider.com/home.html

http://bit.ly/1YrUK4s

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ODA-S10 Create Production Standards for the Northwest Cider Industry

Attachment 1: NW Heritage Cider Provenance
Attachment 2: NW Heritage Mark application
Attachment 3: NWCA Certification Variations
Attachment 4: NW Heritage Perry Provenance

CONVENTION ESTABLISHING STANDARDS
REGARDING THE PROVENANCE OF

NORTHWEST HERITAGE CIDER

TABLE OF CONTENTS

Mission

Article 1: Name of the product

Article 2: Type of product

Article 3: Description and definition of the product

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Article 6: Best practices

Article 7: Sweetness categories of cider

Article 8: Controlling structure

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MISSION

The goal of the Northwest Cider Association (NWCA) is to establish standards of provenance for the industry in order to defend, promote and develop ciders from the Northwest and inform consumers of the reasons why ciders from the Northwest are of exceptional quality. By complying with the articles of this Convention Establishing Standards Regarding the Provenance of Northwest Heritage Cider (Convention), cider makers prove their commitments to the production of a quality cider representing a region and their "savoir-faire." Only members of the NWCA are eligible to use the "Northwest Heritage Cider" logo.

ARTICLE 1:
NAME OF THE PRODUCT

According to the mission of this Convention, it is asked to protect the appellation "Northwest Heritage Cider" by complying to the following articles.

ARTICLE 2:
TYPE OF THE PRODUCT

Alcoholic beverage made from the fermentation of apples.

ARTICLE 3:
DESCRIPTION OF THE PRODUCT

Definition:

"Northwest Heritage Cider" is an alcoholic cider produced using primarily NW ingredients, including at least 95 percent (by volume) of single-strength juice from whole apples grown and processed in the Northwest. Ingredients allowed in the remaining 5 percent of the total finished blend are limited to apple juice concentrate from fruit grown and processed in the Northwest, Northwest honey, sugar, and processing aids (i.e., sulfites, yeast, yeast nutrients). Sugar and processing aids are the only ingredients that may originate outside the Northwest. No other ingredients are allowed, and the end-product must maintain the character and natural state of cider. In addition, the cider must be produced and packaged in the Northwest, by a company legally incorporated or organized in the Northwest, with a physical presence in the region. To have a "physical presence" in the Northwest, a company must have management and production activities in the Northwest.

"Northwest" is defined in Article 4 below.

ARTICLE 4:

GEOGRAPHY

For the purposes of this Convention, the ”Northwest” is defined as a geographic region including Washington, Oregon, Idaho, and Montana in the United States, and the Canadian province of British Columbia.

ARTICLE 5:

ELEMENTS SHOWING THE PRODUCT IS A “NORTHWEST HERITAGE CIDER”

A. Identification

Cider maker members of the NWCA who comply with the articles of this Convention may apply the “Northwest Heritage Cider” logo on the label of the qualifying cider. The logo will serve to promote “Northwest Heritage Cider” and show the commitment the maker has taken to produce quality ciders. The logo will allow a consumer to identify a quality cider produced in the Northwest. Furthermore, the cider maker is encouraged to apply the logo to better inform the consumer about what he/she is buying.

B. Geographic bound / Identity of the Northwest

The agriculture industry is critical to the quality of life and the economic vitality of the Northwest. A wide variety of crops, livestock, and dairy products are produced for consumption in the United States and as a major exporting region to all corners of the globe. The Northwest is a leading producer of specialty crops including apples. This has inspired the region to become an important producer of craft cider.

ARTICLE 6:

BEST PRACTICES

Cider maker members of the NWCA who apply this Convention are encouraged to follow the best practices set up by the industry, including following a Hazard Analysis Critical Control Point (HACCP) plan, and to promote the compliance to these best practices. Best practices are not meant to be definitive and can be amended following the amendment procedure in Article 9.

NWCA also encourages cider makers to reference the NWCA Cider Toolkit available online.

ARTICLE 7:

SWEETNESS CATEGORIES OF CIDERS

In order to facilitate consumer education, cider maker members of the NWCA are encouraged to describe a cider, if possible, with a consistent language on sweetness:

Example language:

RESIDUAL SUGAR	DRY	OFF DRY (Semi-Dry)	MEDIUM	MEDIUM SWEET	SWEET
g/l	0-4	4-9	9-20	20-40	40+
%	0-0.4	0.4-0.9	0.9-2	2-4	>4
SPECIFIC GRAVITY	1.000-1.002	1.002-1.004	1.004-1.009	1.009-1.019	>1.019

The sweetness categories listed in this Convention are not meant to be exhaustive and the list can be amended following the amendment procedure in Article 9.

ARTICLE 8:

CONTROLLING STRUCTURE

The cider maker is responsible for self-regulating and for certifying compliance with the articles of this Convention, which is necessary before the cider maker may use the “Northwest Heritage Cider” logo on any product. The cider maker must submit a request to NWCA for certification under this Convention. Upon approval of the request, NWCA will enter into an agreement with the cider maker, allowing him/her to use the “Northwest Heritage Cider” logo. Under the terms of the agreement, NWCA will grant the cider maker a revocable, non-exclusive license to use the logo and the cider maker will agree to comply with the articles of this Convention. NWCA will retain the right to do inspections or request proof of compliance with the articles of Convention and may revoke the agreement at any time if NWCA determines the articles of the Convention are not being met.

ARTICLE 9:

ADOPTION AND AMENDMENT

This Convention must be adopted by a majority vote of the NWCA membership and may be amended from time to time by a majority vote of the NWCA membership. A vote may occur at a regularly scheduled membership meeting or via email.

Application for
Northwest Heritage Label

Name: _____
Company: _____
Address: _____
Phone: _____
Email: _____

Is your cidery a member of NWCA? Yes ☐ No ☐

How many types of cider are you applying for? (there is no limit on the number) _____

How many types of perry are you applying for? _____

Cider

Name: _____
Type: _____
Volume: _____

Name: _____
Type: _____
Volume: _____

Name: _____
Type: _____
Volume: _____

Perry

Name: _____
Type: _____
Volume: _____

Name: _____
Type: _____
Volume: _____

Name: _____
Type: _____
Volume: _____

CERTIFICATION STATEMENT

I, _____, certify on behalf of _____, have read the Conventions Establishing Standards Regarding the Provenance of Northwest Heritage Cider and Northwest Heritage Perry and certify the listed products are produced in accordance with the articles of the Conventions, including

- *The product is made from primarily from Northwest ingredients;*
- *The product is made with 95 percent or more (by volume) of single-strength juice from whole apples (or pears) grown and processed in the Northwest; and*
- *All remaining ingredients (5 percent or less of the finished blend) are limited to apple (or pear) juice concentrate from fruit grown and processed in the Northwest, Northwest honey, sugar, and processing aids (i.e., sulfites, yeast, yeast nutrients). Sugar and processing aids are the only ingredients that may originate outside the Northwest.*

I further represent that the listed products will continue to qualify as Northwest Heritage Cider or Perry as long as the logo is used on the product label, marketing materials, or as otherwise allowed by the NWCA License Agreement.

Please submit this form and a processing fee for $75 to NABC: P.O. Box 2924
Mount Vernon, WA 98273-2924

NORTHWEST HERITAGE CIDER
NWCA CERTIFIED

NORTHWEST HERITAGE CIDER
NWCA CERTIFIED

NORTHWEST HERITAGE CIDER
NWCA CERTIFIED

NORTHWEST HERITAGE CIDER
NWCA CERTIFIED

NORTHWEST HERITAGE PERRY
NWCA CERTIFIED

NORTHWEST HERITAGE PERRY
NWCA CERTIFIED

NORTHWEST HERITAGE PERRY
NWCA CERTIFIED

NORTHWEST HERITAGE PERRY
NWCA CERTIFIED

CONVENTION ESTABLISHING STANDARDS
REGARDING THE PROVENANCE OF

NORTHWEST HERITAGE PERRY

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MISSION

The goal of the Northwest Cider Association (NWCA) is to establish standards of provenance for the industry in order to defend, promote and develop perries from the Northwest and inform consumers of the reasons why perries from the Northwest are of exceptional quality. By complying with the articles of this Convention Establishing Standards Regarding the Provenance of Northwest Heritage Perry (Convention), perry makers prove their commitments to the production of a quality perry representing a region and their "savoir-faire." Only members of the NWCA are eligible to use the "Northwest Heritage Perry" logo.

ARTICLE 1:
NAME OF THE PRODUCT

According to the mission of this Convention, it is asked to protect the appellation "Northwest Heritage Perry" by complying to the following articles.

ARTICLE 2:
TYPE OF THE PRODUCT

Alcoholic beverage made from the fermentation of pears.

ARTICLE 3:
DESCRIPTION OF THE PRODUCT

Definition:

"Northwest Heritage Perry" is an alcoholic perry produced using primarily NW ingredients, including at least 95 percent (by volume) of single-strength juice from whole pears grown and processed in the Northwest. Ingredients allowed in the remaining 5 percent of the total finished blend are limited to pear juice concentrate from fruit grown and processed in the Northwest, Northwest honey, sugar, and processing aids (i.e., sulfites, yeast, yeast nutrients). Sugar and processing aids are the only ingredients that may originate outside the Northwest. No other ingredients are allowed, and the end-product must maintain the character and natural state of perry. In addition, the perry must be produced and packaged in the Northwest, by a company legally incorporated or organized in the Northwest, with a physical presence in the region. To have a "physical presence" in the Northwest, a company must have management and production activities in the Northwest.

"Northwest" is defined in Article 4 below.

ARTICLE 4:

GEOGRAPHY

For the purposes of this Convention, the ”Northwest” is defined as a geographic region including Washington, Oregon, Idaho, and Montana in the United States, and the Canadian province of British Columbia.

ARTICLE 5:

ELEMENTS SHOWING THE PRODUCT IS A “NORTHWEST HERITAGE PERRY”

A. Identification

Perry maker members of the NWCA who comply with the articles of this Convention may apply the “Northwest Heritage Perry” logo on the label of the qualifying perry. The logo will serve to promote “Northwest Heritage Perry” and show the commitment the maker has taken to produce quality perries. The logo will allow a consumer to identify a quality perry produced in the Northwest. Furthermore, the perry maker is encouraged to apply the logo to better inform the consumer about what he/she is buying.

B. Geographic bound / Identity of the Northwest

The agriculture industry is critical to the quality of life and the economic vitality of the Northwest. A wide variety of crops, livestock, and dairy products are produced for consumption in the United States and as a major exporting region to all corners of the globe. The Northwest is a leading producer of specialty crops including pears. This has inspired the region to become an important producer of craft perry.

ARTICLE 6: BEST PRACTICES

Perry maker members of the NWCA who apply this Convention are encouraged to follow the best practices set up by the industry, including following a Hazard Analysis Critical Control Point (HACCP) plan, and to promote the compliance of these best practices. Best practices are not meant to be definitive and can be amended following the amendment procedure in Article 9.

NWCA also encourages perry makers to reference the NWCA Cider Toolkit available online.

ARTICLE 7:

SWEETNESS CATEGORIES OF PERRIES

In order to facilitate consumer education, perry maker members of the NWCA are encouraged to describe a perry, if possible, with a consistent language on sweetness:

Example language:

RESIDUAL SUGAR	DRY	OFF DRY (Semi-Dry)	MEDIUM	MEDIUM SWEET	SWEET
g/l	0-4	4-9	9-20	20-40	40+
%	0-0.4	0.4-0.9	0.9-2	2-4	>4
SPECIFIC GRAVITY	1.000-1.002	1.002-1.004	1.004-1.009	1.009-1.019	>1.019

The sweetness categories listed in this Convention are not meant to be exhaustive and the list can be amended following the amendment procedure in Article 9.

ARTICLE 8:

CONTROLLING STRUCTURE

The perry maker is responsible for self-regulating and for certifying compliance with the articles of this Convention, which is necessary before the perry maker may use the “Northwest Heritage Perry” logo on any product. The perry maker must submit a request to NWCA for certification under this Convention. Upon approval of the request, NWCA will enter into an agreement with the perry maker, allowing him/her to use the “Northwest Heritage Perry” logo. Under the terms of the agreement, NWCA will grant the perry maker a revocable, non-exclusive license to use the logo and the perry maker will agree to comply with the articles of this Convention. NWCA will retain the right to do inspections or request proof of compliance with the articles of Convention and may revoke the agreement at any time if NWCA determines the articles of the Convention are not being met.

ARTICLE 9:

ADOPTION AND AMENDMENT

This Convention must be adopted by a majority vote of the NWCA membership and may be amended from time to time by a majority vote of the NWCA membership. A vote may occur at a regularly scheduled membership meeting or via email.

ODA-S12 Promotion of U.S. Grown Public Hop Varieties to Domestic Brewers

Attachment 1: 2016 USA Hops Statistical Report

2016

STATISTICAL REPORT

RELEASED JANUARY 2017
VERSION 2

PRESENTED BY
HOP GROWERS OF AMERICA

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Conversions used while compiling
the data presented in this document:

1 hectare = 2.4711 acres
1 acre = 0.405 hectares
1 kilogram = 2.2046 pounds
1 pound = 0.45 kilograms
1 metric tonne = 2204.6 pounds
1 hectoliter = 21.997 gallons
1 zentner = 110.23 pounds

Editor's Note: ***For 2016 the North American Hop Acreage chart on pages 4-5 has been enhanced to include estimates for 25 additional states and 7 Canadian provinces, in addition to the three Pacific Northwest states where commercial hops were traditionally grown. Data for Oregon, Washington and Idaho was provided by the USDA-NASS from annual grower surveys. Estimates for the remaining states were provided to Hop Growers of America by a network of growers, researchers, Extension specialists, brewers, and hop marketers. We will continue to expand and refine data collection for these and other new hop producing states in future years, including the addition of yield and production calculations.***

Special thanks to members of the Great Lakes Hop Working Group and Hop Growers of America Small Grower Council for their assistance in estimating acreage for many of these additional states.

Report prepared by: Ann George for Hop Growers of America, Inc.
P.O. Box 1207, Moxee, WA. 98936, USA
Telephone (509) 453-4749 Fax: (509) 457-8561
E-mail: info@usahops.org Website: www.usahops.org

EXECUTIVE SUMMARY

As brewers continue to demand more aroma hops, US hop acreage and production increased again this year, while average yield per acre continued to decline, largely due to the increasing share of the crop planted to lower yielding varieties, along with new and replanted acreage yielding less than a mature crop. Still, the 2016 hop harvest saw an 11% increase (8.3 million more pounds), just short of 89 million pounds.

According to the USDA National Agriculture Statistics Service (NASS) National Hop Report, released on December 16, production increased 11% in 2016, rising in all three major producing states of Idaho, Oregon, and Washington, following a 16.5% increase in this year's acreage. Ultimately, 2016 saw a 94 pound drop in yield per acre. A combination of baby acreage, lower yielding aroma varieties, poor high alpha variety performance, and pests/disease/climate challenges contributed to this decrease.

Since 2012 (5 years) US hop acreage has increased 72%, with a corresponding production increase of 51% and yield decrease of 21%. During that period the variety balance has shifted from roughly 50-50 alpha and aroma/dual purpose hops in 2012 to over 80% aroma/dual purpose varieties in 2016.

There has been much discussion regarding price increases, but the limited availability of price data for the US crop provides little insight into these impacts on growers. It is well understood that lower yielding varieties must be priced higher to maintain a consistent gross income per acre. As shown in the following chart, the gross return per acre finally caught up with the true cost of production this year (as estimated in the 2015 Washington State University PNW Hop Cost of Production Study). The WSU study estimated the annual cost of producing standard trellis hops under drip irrigation in the PNW at $9,806 per acre (including fixed costs).

Year	PNW Acres Harvested	PNW Production (pounds)	Yield	Value of production ($1,000)	Gross $ per acre
2010	31,289	65,492,600	2,093	$214,589	$6,858
2011	29,787	64,781,600	2,175	$203,378	$6,828
2012	29,683	58,911,400	1,985	$186,876	$6,296
2013	35,288	69,246,100	1,962	$232,308	$6,583
2014	38,011	70,995,900	1,868	$260,627	$6,857
2015	43,633	78,846,000	1,807	$345,388	$7,916
2016	50,857	87,139,600	1,713	$498,420	$9,800

Source: USDA-NASS, prepared by HGA

Growers have experienced dramatic increases in the cost of production in recent years, including expansion of harvesting and production capacity, updating equipment, support of proprietary hop breeding programs through royalties and other contributions, increasing labor costs (including health care and other benefits), etc. Administrative and operating costs associated with food safety, sustainability and best practices compliance and other customer requirements have also increased.

NORTH AMERICAN HOP ACREAGE BY STATE/PROVINCE AND VARIETY (FIVE YEARS)

STATE/PROVINCE & VARIETY	ACRES HARVESTED					2015-16
	2012	2013	2014	2015	2016	% +/-
ARIZONA	*	*	*	1.0	1.0	0.00%
CALIFORNIA	*	*	65.0	85.0	130.0	52.94%
COLORADO	*	*	*	125.0	200.0	60.00%
CONNECTICUT	*	*	*	*	15.0	
IDAHO #						
Apollo™	*	291.0	285.0	286.0	235.0	-17.83%
Bravo™	*	136.0	126.0	166.0	151.0	-9.04%
Calypso	*	*	*	81.0	81.0	0.00%
Cascade	*	628.0	821.0	770.0	788.0	2.34%
Centennial	*	57.0	74.0	*	*	
Chinook	*	324.0	344.0	358.0	418.0	16.76%
Citra®, HBC 394	*	19.0	91.0	412.0	576.0	39.81%
Crystal	*	*	29.0	*	123.0	
El Dorado®	*	14.0	63.0	205.0	227.0	10.73%
Mosaic®, HBC 369	*	*	*	272.0	496.0	82.35%
Simcoe®, YCR 14	*	*	67.0	199.0	232.0	16.58%
Super Galena™	*	275.0	161.0	92.0	69.0	-25.00%
Zeus	*	548.0	662.0	661.0	580.0	-12.25%
Experimental	*	5.0	41.0	72.0	9.0	-87.50%
Other Varieties	*	1,059.0	979.0	1,289.0	1,663.0	29.01%
TOTAL IDAHO #	2,596.0	3,356.0	3,743.0	4,863.0	5,648.0	16.14%
ILLINOIS	*	*	10.0	30.0	30.0	0.00%
INDIANA	*	*	8.0	25.0	50.0	100.00%
IOWA	*	*	*	30.0	40.0	33.33%
KENTUCKY	*	*	*	*	20.0	
MAINE	*	*	10.0	11.5	24.0	108.70%
MARYLAND	*	*	*	15.0	15.0	0.00%
MICHIGAN	*	*	300.0	320.0	650.0	103.13%
MINNESOTA	*	*	20.0	26.0	73.0	180.77%
MONTANA	*	*	1.0	1.0	12.0	1100.00%
NEBRASKA	*	*	12.0	17.0	24.0	41.18%
NEW HAMPSHIRE	*	*	*	*	2.0	
NEW JERSEY	*	*	*	*	15.0	
NEW YORK	*	*	150.0	250.0	300.0	20.00%
NORTH CAROLINA	*	*	30.0	40.0	30.0	-25.00%
NORTH DAKOTA	*	*	*	*	2.0	
OHIO	*	*	30.0	50.0	70.0	40.00%
OREGON #						
Cascade	346.0	423.0	961.0	1,085.0	1,211.0	11.61%
Centennial	208.0	249.0	443.0	631.0	723.0	14.58%
Chinook	*	*	*	129.0	107.0	-17.05%
Citra®, HBC 394	*	*	*	246.0	654.0	165.85%
Crystal	*	*	*	377.0	423.0	12.20%
Fuggle	*	91.0	*	85.0	141.0	65.88%
Golding	*	194.0	234.0	238.0	*	
Liberty	83.0	*	*	210.0	*	
Magnum	58.0	104.0	176.0	199.0	151.0	-24.12%
Mt. Hood	226.0	221.0	269.0	288.0	324.0	12.50%
Nugget	1,570.0	1,667.0	1,363.0	1,484.0	1,460.0	-1.62%
Perle	*	55.0	100.0	*	*	
Simcoe®, YCR 14	*	*	*	191.0	330.0	72.77%
Sterling	*	122.0	130.0	209.0	228.0	9.09%
Super Galena™	175.0	204.0	125.0	82.0	*	
Tettnanger	61.0	*	*	133.0	122.0	-8.27%
Willamette	905.0	553.0	564.0	661.0	833.0	26.02%
Experimental	*	35.0	*	*	*	
Other Varieties	759.0	917.0	1,045.0	364.0	1,058.0	190.66%
TOTAL OREGON #	4,391.0	4,835.0	5,410.0	6,612.0	7,765.0	17.44%
PENNSYLVANIA	*	*	*	5.5	15.0	172.73%
RHODE ISLAND	*	*	*	*	10.0	
VERMONT	*	*	25.0	45.0	25.0	-44.44%
VIRGINIA	*	*	25.0	30.0	30.0	0.00%

STATE/PROVINCE & VARIETY	ACRES HARVESTED					2015-16
	2012	2013	2014	2015	2016	% +/-
WASHINGTON #						
Azacca™, ADHA-483	*	*	79.0	175.0	506.0	189.14%
Ahtanum™	176.0	211.0	194.0	145.0	155.0	6.90%
Apollo™	874.0	701.0	700.0	708.0	735.0	3.81%
Bravo™	528.0	493.0	584.0	569.0	573.0	0.70%
Cascade	2,380.0	4,237.0	4,837.0	4,935.0	5,582.0	13.11%
Centennial	1,478.0	1,869.0	2,836.0	3,770.0	4,359.0	15.62%
Chinook	1,215.0	1,415.0	1,297.0	1,300.0	1,415.0	8.85%
Citra®, HBC 394	538.0	1,296.0	1,670.0	2,335.0	3,264.0	39.79%
Cluster	546.0	802.0	728.0	666.0	623.0	-6.46%
Columbus/Tomahawk®	2,223.0	2,336.0	1,738.0	1,673.0	1,416.0	-15.36%
Comet	*	*	*	108.0	163.0	50.93%
Crystal	154.0	214.0	181.0	131.0	191.0	45.80%
El Dorado®	*	82.0	82.0	243.0	396.0	62.96%
Galena	954.0	440.0	306.0	295.0	262.0	-11.19%
Glacier	56.0	98.0	126.0	155.0	145.0	-6.45%
Golding	*	105.0	94.0	53.0	*	
Jarrylo™, ADHA-881	*	*	75.0	122.0	131.0	7.38%
Magnum	*	*	*	108.0	*	
Millennium	397.0	420.0	113.0	*	*	
Mosaic®, HBC 369	*	382.0	671.0	1,528.0	2,029.0	32.79%
Mt. Hood	120.0	168.0	150.0	130.0	88.0	-32.31%
Northern Brewer	120.0	170.0	131.0	123.0	*	
Nugget	875.0	395.0	265.0	202.0	186.0	-7.92%
Palisade®, YCR-4	264.0	132.0	223.0	454.0	580.0	27.75%
Simcoe®, YCR 14	940.0	1,298.0	1,819.0	2,916.0	3,769.0	29.25%
Summit™	*	2,844.0	2,522.0	1,620.0	1,769.0	9.20%
Super Galena™	959.0	771.0	606.0	351.0	310.0	-11.68%
Tettnanger	76.0	95.0	*	*	*	
Vanguard	59.0	76.0	58.0	84.0	*	
Warrior®, YCR-5	195.0	180.0	192.0	*	*	
Willamette	692.0	522.0	595.0	698.0	728.0	4.30%
Zeus	2,953.0	3,277.0	3,375.0	2,989.0	2,502.0	-16.29%
Experimental	*	258.0	392.0	316.0	567.0	79.43%
Other	3,924.0	1,810.0	2,219.0	3,256.0	5,000.0	53.56%
TOTAL WASHINGTON #	22,696.0	27,097.0	28,858.0	32,158.0	37,444.0	16.44%
WISCONSIN	*	*	120.0	170.0	297.0	74.71%
TOTAL PACIFIC NORTHWEST	**29,683.0**	**35,288.0**	**38,011.0**	**43,633.0**	**50,857.0**	**16.56%**
TOTAL NON-PNW US	*	*	**881.0**	**1,277.0**	**2,106.0**	**64.92%**
TOTAL UNITED STATES	**29,683.0**	**35,288.0**	**38,892.0**	**44,910.0**	**52,963.0**	**17.93%**
BRITISH COLUMBIA				79.0	79.0	0.00%
MANITOBA				5.0	5.0	0.00%
NEW BRUNSWICK				20.0	20.0	0.00%
NOVA SCOTIA				15.0	15.0	0.00%
ONTARIO				60.0	90.0	50.00%
PRINCE EDWARD ISLAND				7.5	7.5	0.00%
QUEBEC				70.0	123.0	75.71%
TOTAL CANADA				**256.5**	**339.5**	**32.36%**
TOTAL NORTH AMERICA	**29,683.0**	**35,288.0**	**38,892.0**	**45,166.5**	**53,302.5**	**18.01%**

Figures for WA, OR and ID from USDA-NASS 2016 National Hop Report, released on December 16, 2016. Information for other states/provinces are estimates provided to Hop Growers of America by various sources and include several varieties.

SOURCE: USDA-NASS (for Idaho, Oregon and Washington) and Hop Growers of America (for remaining state estimates). Prepared by HGA.

[1] Prior to 2013, only State totals were published for Idaho to avoid disclosure of individual operations.

[2] "Other Varieties" includes data to avoid disclosure of individual operations.

HOP YIELDS BY STATE AND VARIETY (FIVE YEARS)

STATE & VARIETY	YIELDS (POUNDS PER ACRE) 2012	2013	2014	2015	2016	2015-16 % +/-
IDAHO						
Apollo™	*	2,230	2,004	2,062	1,893	-8.20%
Bravo™	*	2,430	2,579	2,625	2,359	-10.13%
Calypso	*	*	*	1,710	1,937	13.27%
Cascade	*	1,224	1,746	1,633	1,585	-2.94%
Centennial	*	1,004	754	*	*	
Chinook	*	1,801	1,673	1,850	1,712	-7.46%
Citra®, HBC 394	*	1,011	1,200	1,271	1,213	-4.56%
Crystal	*	*	2,186	*	1,678	
El Dorado®	*	971	1,144	1,125	1,658	47.38%
Mosaic®, HBC 369	*	*	*	2,278	2,204	-3.25%
Simcoe®, YCR 14	*	*	969	1,576	1,335	-15.29%
Super Galena™	*	2,201	2,165	2,189	1,872	-14.48%
Zeus	*	3,049	2,891	2,909	2,761	-5.09%
Experimental	*	2,800	1,366	1,269	1,000	-21.20%
Other Varieties[2]	*	1,063	1,354	1,348	1,174	-12.91%
Total Idaho[1]	1,745	1,740	1,847	1,794	1,646	-8.25%
OREGON						
Cascade	1,802	1,483	1,402	1,994	1,597	-19.91%
Centennial	1,779	1,585	1,095	1,352	1,235	-8.65%
Chinook	*	*	*	1,861	1,675	-9.99%
Citra®, HBC 394	*	*	*	980	1,047	6.84%
Crystal	*	*	*	2,011	2,216	10.19%
Fuggle	*	827	*	1,066	1,021	-4.22%
Golding	*	1,148	955	837	*	
Liberty	2,519	*	*	1,360	*	
Magnum	2,519	1,406	1,077	1,572	1,493	-5.03%
Mt. Hood	1,737	1,567	1,450	1,276	1,463	14.66%
Nugget	1,897	2,053	1,978	1,888	1,925	1.96%
Perle	*	1,178	1,057	*	*	
Simcoe®, YCR 14	*	*	*	1,678	1,969	17.34%
Sterling	*	1,621	1,423	1,344	1,626	20.98%
Super Galena™	2,763	1,852	2,309	2,340	*	
Tettnanger	1,493	*	*	1,242	1,193	
Willamette	1,663	1,491	1,453	1,226	1,573	28.30%
Experimental	*	1,734	*	*	*	*
Other Varieties[2]	1,253	1,931	1,426	1,609	1,546	-3.92%
Total Oregon	1,885	1,764	1,520	1,613	1,596	-1.05%
WASHINGTON						
Azacca™, ADHA-483	*	*	1,704	1,872	1,870	-0.11%
Ahtanum	1,489	1,647	1,680	1,557	1,012	-35.00%
Apollo™	2,655	2,926	2,649	2,738	2,225	-18.74%
Bravo™	2,647	2,860	2,768	2,824	2,671	-5.42%
Cascade	1,972	1,723	1,824	1,936	1,727	-10.80%
Centennial	1,354	1,554	1,347	1,145	1,355	18.34%
Chinook	1,699	1,987	1,815	1,793	1,420	-20.80%
Citra®, HBC 394	1,342	1,405	1,570	1,541	1,543	0.13%
Cluster	1,965	1,948	1,825	1,705	1,700	-0.29%
Columbus/Tomahawk®	2,452	2,571	2,629	2,524	1,969	-21.99%
Comet	*	*	*	1,780	949	-46.69%
Crystal	1,184	1,286	1,366	1,183	1,475	24.68%
El Dorado®	*	1,761	2,206	2,154	1,904	-11.61%
Galena	1,742	1,969	1,801	1,968	1,692	-14.02%
Glacier	1,461	1,258	1,202	996	1,168	17.27%
Golding	*	1,010	772	854	*	
Jarrylo™, ADHA-881	*	*	1,548	1,541	1,408	-8.63%
Magnum	*	*	*	1,255	*	
Millennium	2,017	2,266	1,996	*	*	
Mosaic®, HBC 369	*	1,709	2,225	2,036	2,326	14.24%
Mt. Hood	1,264	1,161	1,333	1,069	1,075	0.56%
Northern Brewer	1,443	1,256	1,244	991	*	
Nugget	1,679	1,931	1,538	1,927	1,774	-7.94%
Palisade®, YCR-4	2,356	2,790	2,469	1,950	2,228	14.26%
Simcoe®, YCR 14	1,679	1,682	1,542	1,540	1,673	8.64%
Summit™	*	1,873	2,105	1,969	1,648	-16.30%
Super Galena™	2,645	2,816	2,562	2,729	2,501	-8.35%
Tettnanger	1,003	755	*	*	*	
Vanguard	1,280	1,349	1,455	1,223	*	
Warrior®, YCR-5	1,968	2,169	1,821	*	*	
Willamette	1,359	1,240	1,130	1,007	1,277	26.81%
Zeus	2,565	2,940	2,811	2,819	2,469	-12.42%
Experimental	*	1,562	1,625	1,545	1,592	3.04%
Other Varieties[2]	1,993	1,697	1,418	1,603	1,662	3.68%
Total Washington	2,047	2,025	1,936	1,849	1,748	-5.46%
Total Pacific Northwest	**2,175**	**1,985**	**1,868**	**1,807**	**1,713**	-5.20%

SOURCE: USDA-NASS. Prepared by HGA. State and variety yields for production outside of the Pacific Northwest are not reported.

[1] Prior to 2013, only State totals published for Idaho to avoid disclosure of individual operations.

[2] "Other Varieties" includes data to avoid disclosure of individual operations.

HOP PRODUCTION BY STATE AND VARIETY (FIVE YEARS)

STATE/PROVINCE & VARIETY	HOP PRODUCTION (POUNDS)					2015-16
	2012	2013	2014	2015	2016	% +/-
IDAHO						
Apollo™	*	649,000	571,100	589,600	444,900	-24.54%
Bravo™	*	330,500	324,900	435,700	356,200	-18.25%
Calypso	*	*	*	138,500	156,900	13.29%
Cascade	*	768,900	1,433,100	1,257,800	1,248,900	-0.71%
Centennial	*	57,200	55,800	*	*	
Chinook	*	583,400	575,400	662,200	715,500	8.05%
Citra®, HBC 394	*	19,200	109,200	523,700	698,500	33.38%
Crystal	*	*	63,400	*	206,400	
El Dorado®	*	13,600	72,100	230,600	376,300	63.18%
Mosaic®, HBC 369	*	*	*	619,700	1,093,400	76.44%
Simcoe®, YCR 14	*	*	64,900	313,600	309,800	-1.21%
Super Galena™	*	605,400	348,500	201,400	129,200	-35.85%
Zeus	*	1,670,800	1,913,900	1,922,800	1,601,100	-16.73%
Experimental	*	14,000	56,000	91,400	9,000	-90.15%
Other Varieties[2]	*	1,125,900	1,325,500	1,737,900	1,951,600	12.30%
Total Idaho[1]	4,778,200	5,837,900	6,913,800	8,724,900	9,297,700	6.57%
OREGON						
Cascade	623,500	627,100	1,347,400	2,163,000	1,934,500	-10.56%
Centennial	370,000	394,600	485,200	853,300	893,200	4.68%
Chinook	*	*	*	240,000	179,200	-25.33%
Citra®, HBC 394	*	*	*	241,000	684,700	184.11%
Crystal	*	*	*	758,100	937,200	23.62%
Fuggle	*	75,300	*	90,600	143,900	58.83%
Golding	*	222,700	223,500	199,300	*	
Liberty	126,700	*	*	285,600	*	
Magnum	146,100	146,200	189,600	312,900	225,500	-27.93%
Mt. Hood	392,600	346,200	390,000	367,600	473,900	28.92%
Nugget	2,978,000	3,422,000	2,696,400	2,802,100	2,810,900	0.31%
Perle	*	64,800	105,700	*	*	
Simcoe®, YCR 14	*	*	*	320,500	649,900	102.78%
Sterling	*	197,800	185,000	280,800	370,800	32.05%
Super Galena™	483,600	377,800	288,600	191,900	*	
Tettnanger	91,100	*	*	165,200	145,600	-11.86%
Willamette	1,504,700	824,700	819,500	810,300	1,310,000	61.67%
Experimental	*	60,700	*	*	*	
Other Varieties[2]	951,300	1,770,600	1,490,100	585,600	1,636,000	179.37%
Total Oregon	7,667,600	8,530,500	8,221,000	10,667,800	12,395,300	16.19%
WASHINGTON						
Azacca™, ADHA-483	*	*	134,600	327,600	946,400	188.89%
Ahtanum	262,000	347,500	326,000	225,800	156,900	-30.51%
Apollo™	2,320,600	2,051,400	1,854,300	1,938,600	1,635,600	-15.63%
Bravo™	1,397,400	1,409,900	1,616,700	1,606,700	1,530,500	-4.74%
Cascade	4,693,000	7,300,000	8,821,000	9,553,300	9,638,800	0.89%
Centennial	2,001,000	2,905,200	3,818,800	4,317,300	5,908,600	36.86%
Chinook	2,064,200	2,812,300	2,354,300	2,331,100	2,008,900	-13.82%
Citra®, HBC 394	721,900	1,820,300	2,622,500	3,597,200	5,035,000	39.97%
Cluster	1,073,000	1,562,000	1,328,600	1,135,700	1,058,800	-6.77%
Columbus/Tomahawk®	5,451,700	6,006,100	4,569,200	4,223,400	2,787,900	-33.99%
Comet	*	*	*	192,200	154,700	-19.51%
Crystal	182,300	275,300	247,200	155,000	281,700	81.74%
El Dorado®	*	144,400	180,900	523,500	754,000	44.03%
Galena	1,662,000	866,300	551,000	580,600	443,300	-23.65%
Glacier	81,800	123,300	151,500	154,400	169,300	9.65%
Golding	*	106,000	72,600	45,300	*	
Jarrylo™, ADHA-881	*	*	116,100	188,000	184,400	-1.91%
Magnum	*	*	*	135,500	*	
Millennium	800,800	951,600	225,600	*	*	
Mosaic®, HBC 369	*	652,800	1,493,200	3,111,600	4,720,400	51.70%
Mt. Hood	151,700	195,000	199,900	139,000	94,600	-31.94%
Northern Brewer	173,100	213,500	163,000	121,900	*	
Nugget	1,468,700	762,800	419,500	389,200	330,000	-15.21%
Palisade®, YCR-4	622,100	368,300	550,600	885,200	1,292,500	46.01%
Simcoe®, YCR 14	1,578,000	2,183,400	2,805,800	4,489,500	6,305,100	40.44%
Summit™	*	5,326,600	5,308,300	3,189,600	2,914,500	-8.62%
Super Galena™	2,536,400	2,171,500	1,552,400	957,800	775,300	-19.05%
Tettnanger	76,200	71,700	*	*	*	
Vanguard	75,500	102,500	84,400	102,700	*	
Willamette	940,400	647,100	672,500	703,100	929,300	32.17%
Warrior®, YCR-5	383,800	390,400	349,700	*	*	
Zeus	7,575,900	9,635,700	9,488,400	8,426,300	6,178,500	-26.68%
Experimental	*	402,900	637,000	488,400	902,700	84.83%
Other Varieties[2]	8,172,100	3,071,900	3,145,500	5,217,800	8,308,900	59.24%
Total Washington	46,465,600	54,877,700	55,861,100	59,453,300	65,446,600	10.08%
Total Pacific Northwest	**58,911,400**	**69,246,100**	**70,995,900**	**78,846,000**	**87,139,600**	10.52%
Other States Estimate[3]	*	*	*	1,249,000	1,500,000	20.10%
Canada Estimate[3]	*	*	*	256,500	340,000	32.55%
North America Estimate	**58,911,400**	**69,246,100**	**70,995,900**	**80,351,500**	**88,979,600**	10.74%

SOURCE: USDA-NASS. Prepared by HGA. [1] Prior to 2013, only State totals published for Idaho to avoid disclosure of individual operations.
[2] "Other Varieties" includes data to avoid disclosure of individual operations.
[3] Production outside of PNW estimated at 1,000 pounds per acre for acreage identified in June 2016.

PACIFIC NORTHWEST HOP ACREAGE BY STATE (10 YEARS - IN ACRES)

YEAR	WASHINGTON	OREGON	IDAHO	TOTAL
2007	22,745	5,270	2,896	30,911
2008	30,595	6,370	3,933	40,898
2009	28,924	5,764	4,030	39,726
2010	24,336	4,622	2,331	31,289
2011	23,320	4,202	2,265	29,787
2012	22,696	4,391	2,596	29,683
2013	27,097	4,835	3,356	35,288
2014	28,858	5,410	3,743	38,011
2015	32,158	6,612	4,863	43,633
2016	37,444	7,765	5,648	50,857

SOURCE: USDA-NASS. Prepared by HGA.

PACIFIC NORTHWEST AVERAGE HOP YIELD (TEN YEARS)

	POUNDS PER ACRE			
YEAR	WASHINGTON	OREGON	IDAHO	TOTAL
2007	2,049	1,811	1,417	1,949
2008	2,072	1,569	1,841	1,971
2009	2,533	1,948	1,943	2,383
2010	2,147	1,791	2,129	2,093
2011	2,200	1,908	2,408	2,175
2012	2,047	1,746	1,841	1,985
2013	2,025	1,764	1,740	1,962
2014	1,936	1,520	1,847	1,868
2015	1,849	1,613	1,794	1,807
2016	1,748	1,596	1,646	1,713

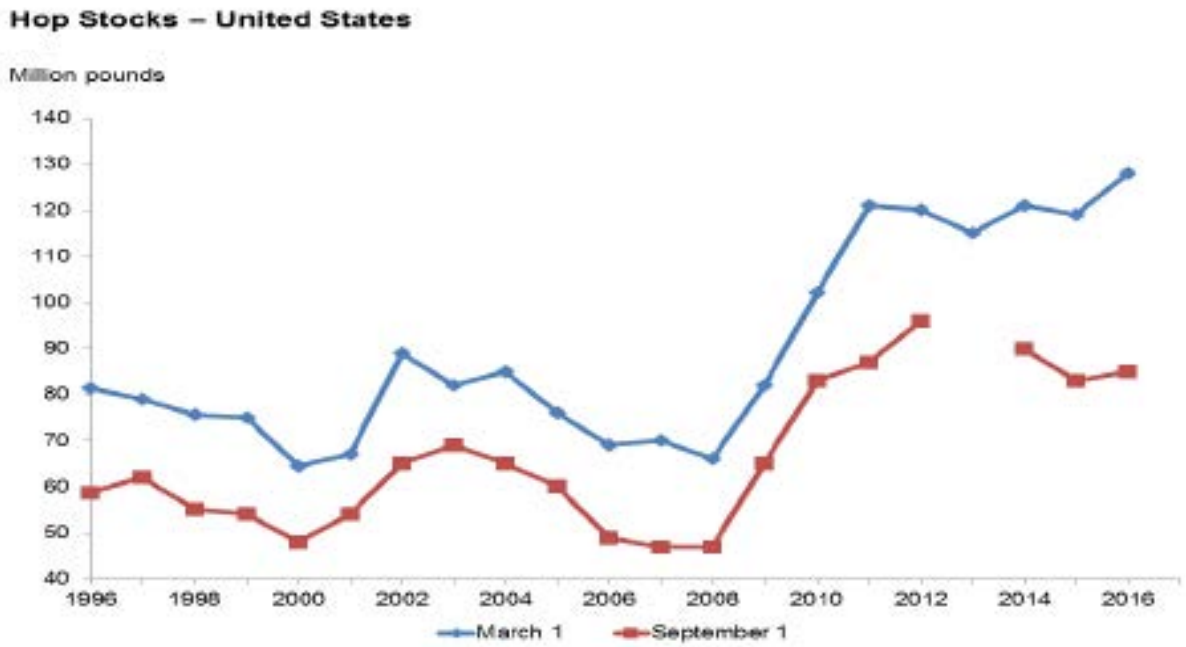
SOURCE: USDA-NASS. Prepared by HGA.

U.S. HOPS: SEASON AVERAGE PRICE & TOTAL CROP VALUE

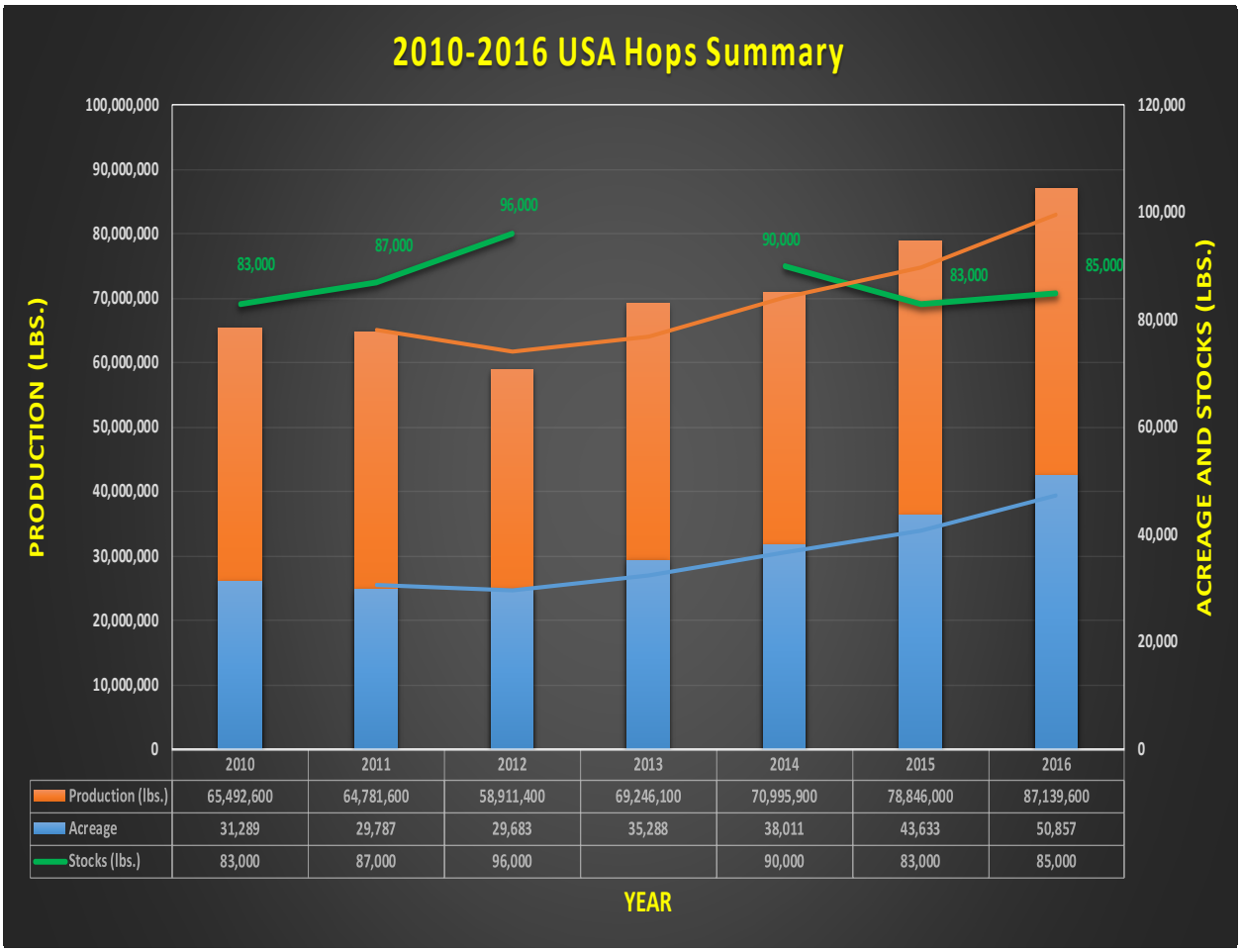
	SEASON AVERAGE PRICE				U.S.	Total Crop
Marketing Year	Washington	Oregon	Idaho	U.S.	Production	Value
	- - - - - - - - - - - - - - - ($ / pound) - - - - - - - - - - - - -				(Lbs. x 1,000)	(x 1,000)
2007	$2.94	$3.31	$2.77	$2.99	60,253	$179,978
2008	$4.08	$3.75	$4.00	$4.03	80,630	$325,092
2009	$3.54	$3.63	$3.75	$3.57	94,678	$337,874
2010	$3.11	$3.96	$3.89	$3.28	65,493	$214,589
2011	$3.06	$3.79	$2.93	$3.14	64,782	$203,378
2012	$3.10	$3.91	$2.69	$3.17	58,911	$186,876
2013	$3.37	$3.76	$2.62	$3.35	69,246	$232,308
2014	$3.73	$4.07	$2.72	$3.67	70,995	$260,627
2015	$4.71	$3.24	$3.53	$4.38	78,846	$345,388
2016	$5.84	$5.25	$5.50	$5.72	87,140	$498,420

SOURCE: USDA-NASS. Prepared by HGA.

U.S. HOPS STOCKS (20 YEAR and 7 YEAR LOOK)



SOURCE: USDA-NASS.



	2010	2011	2012	2013	2014	2015	2016
Production (lbs.)	65,492,600	64,781,600	58,911,400	69,246,100	70,995,900	78,846,000	87,139,600
Acreage	31,289	29,787	29,683	35,288	38,011	43,633	50,857
Stocks (lbs.)	83,000	87,000	96,000		90,000	83,000	85,000

SOURCE: USDA-NASS. Prepared by NASS.

2016 HOP INSPECTION REPORT

YEAR	WASHINGTON	OREGON	IDAHO	TOTAL
2012	236,025	39,233	19,312	294,570
2013	266,356	35,388	28,412	330,156
2014	271,891	38,592	34,137	344,620
2015	284,461	47,202	42,301	373,964
2016	329,539	59,641	47,123	436,303

TABLE 2. Number of Bales in Each Leaf & Stem Category – 2016

	0%	1%	2%	3%	4%	5%	6%	7%	TOTAL	AVERAGE
WA	237,520	74,116	10,842	2,698	399	267	0	0	325,842	0.42%
OR	46,134	9,675	3,025	498	309	0	0	0	59,641	0.31%
ID	39,028	7,601	262	100	60	72	0	0	47,123	0.19%
Total	322,682	91,392	14,129	3,296	768	339	0	0	432,606	0.31%
% of Total	75%	21%	3%	1%	0%	0%	0%	0%	100%	

TABLE 3. Number of Bales in Each Seed Category – 2016

	0%	1%	2%	3%	4%	5%	6%	7+%	TOTAL	AVERAGE
WA	152,241	84,061	44,210	22,772	11,550	5,431	1,703	3,936	325,904	1.08%
OR	15,274	7,405	5,092	5,407	4,941	5,121	4,773	11,566	59,579	3.17%
ID	36,204	5,232	1,323	1,294	1,399	1,097	240	334	47,123	0.56%
Total	203,719	96,698	50,625	29,473	17,890	11,649	6,716	15,836	432,606	1.31%
% of Total	68%	19%	6%	3%	1%	1%	1%	1%	100%	

SOURCE: State Hop Inspection Labs. Prepared by HGA.

U.S. HOP LEAF. STEM & SEED CONTENT PERCENTAGE (10 YEARS)

Year	**WASHINGTON** Leaf & Stem	**OREGON** Leaf & Stem	**IDAHO** Leaf & Stem	**U.S. AVERAGE %**	
				Leaf & Stem	Seed Content
2007	0.18	0.20	0.23	0.19	0.83
2008	0.34	0.22	0.03	0.31	1.85
2009	0.12	0.25	0.15	0.14	0.82
2010	0.17	0.15	0.04	0.16	1.31
2011	0.14	0.09	0.02	0.12	1.34
2012	0.33	0.16	0.05	0.29	0.66
2013	0.28	0.34	0.23	0.28	0.68
2014	0.32	0.18	0.09/1.11	0.30	0.64
2015	0.42	0.51	0.32	0.42	0.78
2016	0.33	0.31	0.19	0.31	1.31

SOURCE: State Hop Inspection Labs. Prepared by HGA.

IHGC AROMA ACREAGE (FIVE YEARS)

COUNTRY	AROMA ACREAGE (IN ACRES)					2015-16
	2012	2013	2014	2015	2016	% +/-
Australia	128	158	158	217	247	13.64%
Austria	477	462	460	462	462	0.00%
Belgium	175	173	190	205	220	7.23%
China	853	494	741	618	494	-20.00%
Czech Rep.	10,413	10,045	9,902	10,253	10,826	5.59%
France	922	741	808	899	941	4.67%
Germany	22,489	21,733	22,732	23,908	24,867	4.01%
New Zealand	655	712	712	811	877	8.23%
Poland	988	1,132	1,253	1,391	1,530	9.95%
Romania	151	151	156	156	168	7.94%
Russia	208	208	208	208	208	0.00%
Serbia	84	84	84	84	84	0.00%
Slovakia	529	430	339	339	339	0.00%
Slovenia	2,634	2,535	2,728	2,973	3,242	9.06%
South Africa	0	0	0	0	0	0.00%
Spain	0	0	0	0	0	0.00%
Ukraine	853	932	764	764	764	0.00%
UK - England	1,965	1,965	1,740	1,690	1,693	0.15%
USA	15,558	19,996	24,711	33,738	43,000	27.45%
IHGC Total	59,082	61,950	67,683	78,714	89,960	14.29%

SOURCE: IHGC Economic Commission November report. US hop acreage estimates are based on USDA-NASS August Pre-Harvest Estimates report. Numbers may not total exactly due to rounding and standard/metric conversions.

IHGC ALPHA ACREAGE (FIVE YEARS)

COUNTRY	ALPHA ACREAGE (IN ACRES)					2015-16
	2012	2013	2014	2015	2016	% +/-
Australia	988	951	850	988	1,100	11.25%
Austria	94	106	143	143	143	0.00%
Belgium	215	217	175	161	148	-7.69%
China	9,108	6,919	5,807	5,066	4,448	-12.20%
Czech Rep.	151	133	116	106	114	6.98%
France	163	146	131	121	82	-32.65%
Germany	18,397	17,162	17,051	17,345	17,925	3.35%
New Zealand	247	222	203	148	141	-5.00%
Poland	2,471	2,093	1,972	1,940	2,039	5.10%
Romania	445	445	450	462	474	2.67%
Russia	133	133	133	133	133	0.00%
Serbia	82	82	82	82	82	0.00%
Slovakia	0	0	0	0	0	0.00%
Slovenia	91	86	89	62	57	-8.00%
South Africa	1,216	1,216	1,038	1,038	1,038	0.00%
Spain	1,260	1,194	1,285	1,320	1,325	0.37%
Ukraine	208	203	148	148	148	0.00%
UK - England	633	633	551	519	519	0.00%
USA	15,249	15,227	13,299	11,500	9,981	-13.21%
IHGC Total	51,152	47,168	43,523	41,282	39,896	-3.36%

SOURCE: IHGC Economic Commission November report. Prepared by HGA. US hop acreage estimates are based on USDA-NASS August Pre-Harvest Estimates report. Numbers may not total exactly due to rounding and standard/metric conversions.

IHGC TOTAL ACREAGE (FIVE YEARS)

COUNTRY	TOTAL ACREAGE (IN ACRES)					2015-16
	2012	2013	2014	2015	2016	% +/-
Australia	1,117	1,110	1,008	1,206	1,488	23.39%
Austria	571	568	603	605	618	2.08%
Belgium	390	390	366	366	385	5.27%
China	9,961	7,413	6,548	5,684	4,942	-13.05%
Czech Rep.	10,564	10,178	10,018	10,359	11,800	13.91%
France	1,085	887	939	1,021	1,134	11.11%
Germany	40,887	38,895	39,782	41,253	45,802	11.03%
New Zealand	902	934	914	959	1,018	6.18%
Poland	3,460	3,225	3,225	3,329	3,791	13.89%
Romania	596	596	605	618	667	7.97%
Russia	341	341	341	341	390	14.37%
Serbia	166	166	166	166	195	17.78%
Slovakia	529	430	339	339	339	0.14%
Slovenia	2,726	2,622	2,817	3,035	3,667	20.84%
South Africa	1,216	1,216	1,038	1,038	1,038	0.00%
Spain	1,260	1,194	1,285	1,320	1,339	1.47%
Ukraine	1,060	1,134	912	912	912	0.00%
UK - England	2,597	2,597	2,291	2,209	2,224	0.67%
USA	30,807	35,223	38,010	45,238	52,980	17.11%
IHGC Total	110,233	109,119	111,207	119,994	134,729	12.28%

SOURCE: IHGC Economic Commission November report. Excludes new acreage (not harvested). Numbers may not total exactly due to rounding and standard/metric conversions. US hop acreage estimates are based on USDA-NASS August Pre-Harvest Estimates report.

IHGC HOP ACREAGE AND PRODUCTION 2016

	HOP ACREAGE (acres)				HOP PRODUCTION (pounds)			
COUNTRY	AROMA	ALPHA	NEW	TOTAL	AROMA	ALPHA	TOTAL	Alpha MT.
Australia	247	1,100	141	1,488	451,943	1,984,140	2,436,083	130
Austria	462	143	12	618	806,884	251,324	1,058,208	38
Belgium	220	148	17	385	244,711	216,051	460,761	17
China	494	4,448	0	4,942	661,380	9,259,320	9,920,700	300
Czech Rep.	10,826	114	860	11,800	15,454,246	198,414	15,652,660	305
France	941	82	111	1,134	1,543,220	158,731	1,701,951	27
Germany	24,867	17,925	3,010	45,802	48,942,120	45,194,300	94,136,420	4,650
New Zealand	877	141	0	1,018	1,496,923	253,529	1,750,452	75
Poland	1,530	2,039	222	3,791	2,184,759	3,452,404	5,637,162	225
Romania	168	474	25	667	121,253	268,961	390,214	18
Russia	208	133	49	390	202,823	154,322	357,145	9
Serbia	84	82	30	195	127,867	167,550	295,416	11
Slovakia	339	0	0	339	332,895	0	332,895	8
Slovenia	3,242	57	368	3,667	5,291,040	167,550	5,458,590	135
South Africa	0	1,038	0	1,038	0	1,807,772	1,807,772	108
Spain	0	1,325	15	1,339	0	2,072,324	2,072,324	108
Ukraine	764	148	0	912	881,840	176,368	1,058,208	30
UK - England	1,693	519	12	2,224	2,204,600	992,070	3,196,670	100
USA	43,000	9,981	0	52,980	66,283,504	22,332,598	88,616,102	4,097
IHGC Total	89,960	39,896	4,873	134,729	147,232,006	89,107,727	236,339,734	10,391

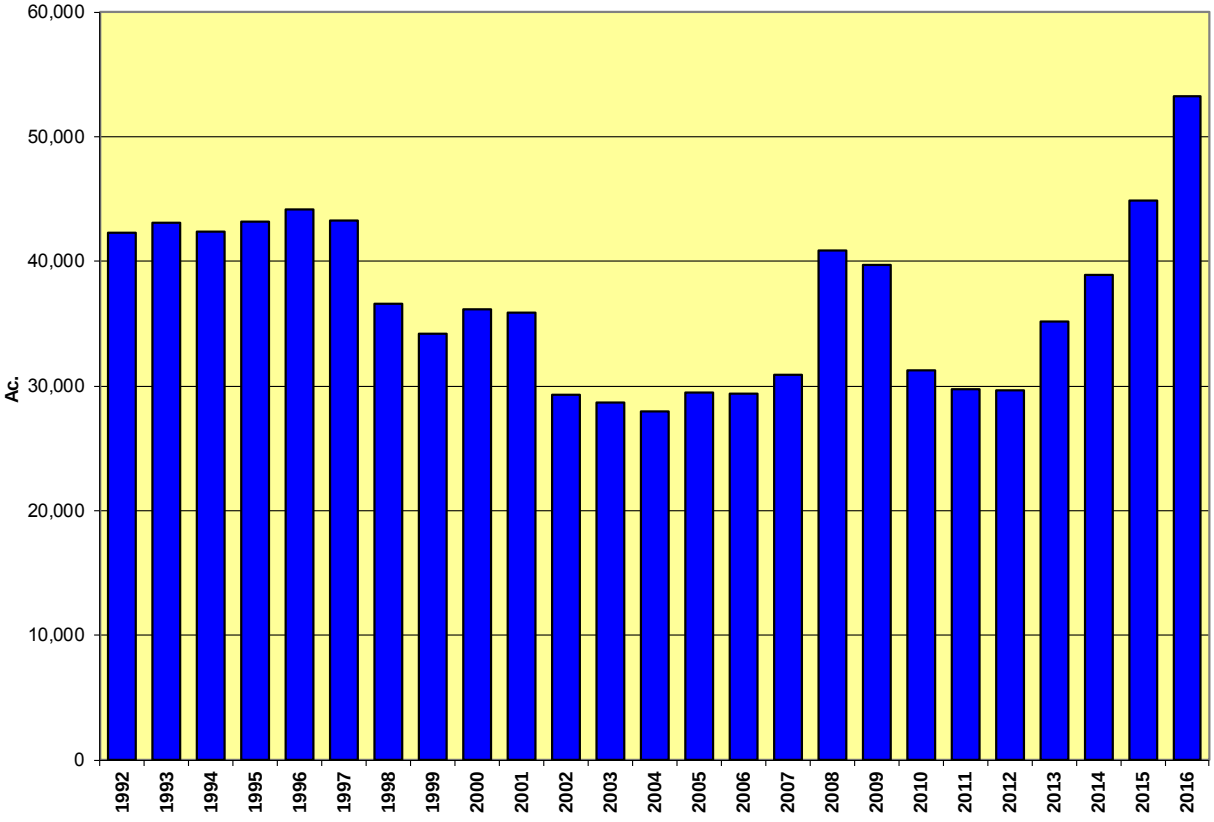
SOURCE: IHGC Economic Commission November 2016 report. US hop acreage estimates are based on August 2016 USDA-NASS Pre-Harvest Estimate report. IHGC Total Acreage includes baby acreage (not included in separate aroma and alpha tables). Numbers may not total exactly due to rounding and standard/metric conversions.

U.S. & GERMAN ALPHA ACID PRODUCTION (10 YEARS)

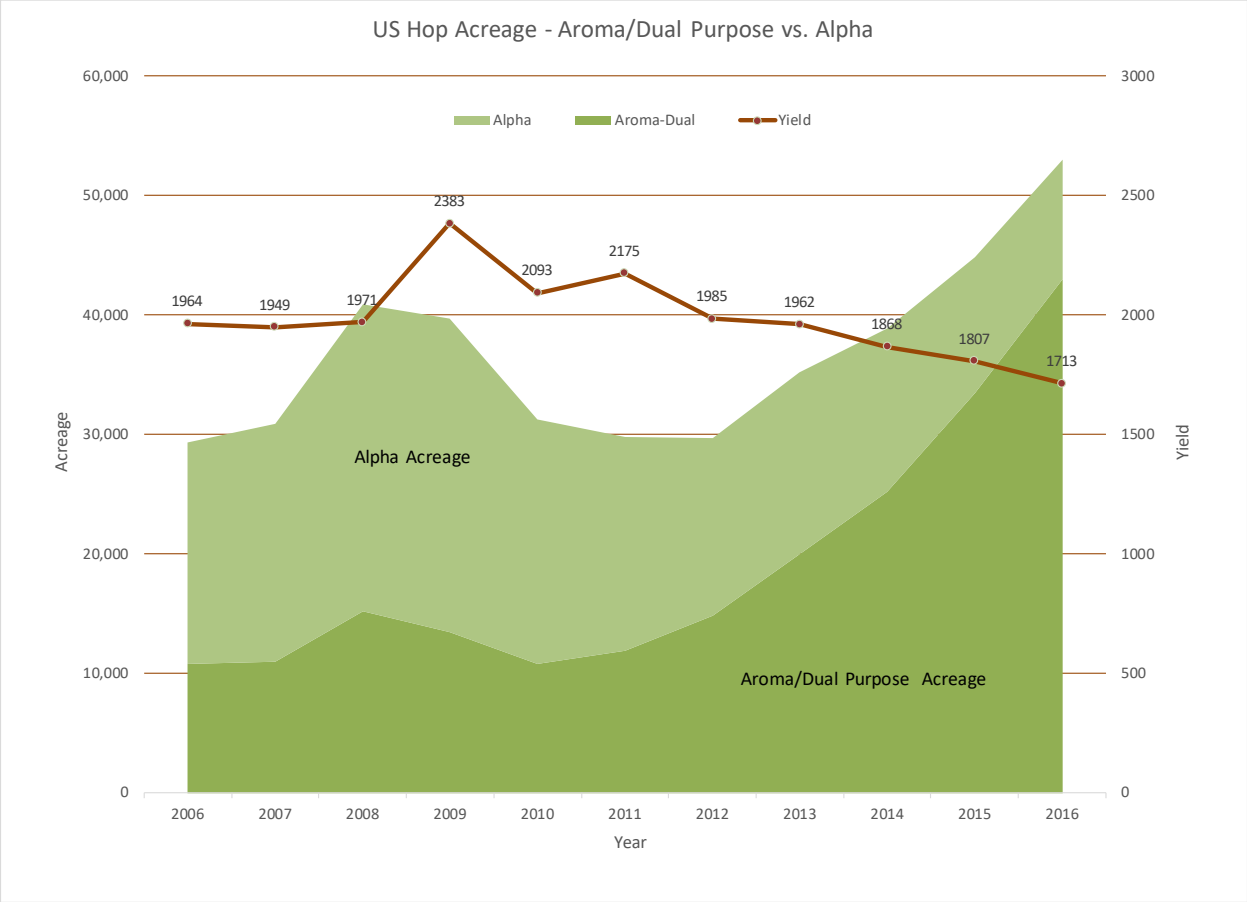
YEAR	UNITED STATES				GERMANY			
	Pounds of Hops (x 1,000)	MT Hops	MT Alpha	Avg. Alpha %*	Pounds of Hops (x 1,000)	MT Hops	MT Alpha	Avg. Alpha %*
2007	58,988	26,757	3,280	12.3%	70,854	32,139	2,880	9.0%
2008	80,630	36,574	4,150	11.3%	70,854	32,139	4,100	12.8%
2009	91,491	41,500	4,690	11.3%	87,104	39,510	3,520	8.9%
2010	64,954	29,463	3,517	11.9%	75,177	34,100	3,600	10.6%
2011	64,992	29,480	4,308	14.6%	82,673	37,500	4,400	11.7%
2012	61,249	27,782	3,500	12.6%	76,059	34,500	3,850	11.2%
2013	69,246	31,410	3,680	11.7%	60,746	27,554	2,680	9.7%
2014	70,996	32,204	3,541	11.0%	74,956	38,500	4,104	10.7%
2015	80,351	36,447	3,856	10.6%	62,170	28,200	2,700	9.6%
2016	88,616	40,196	4,097	10.2%	94,136	42,700	4,650	10.9%

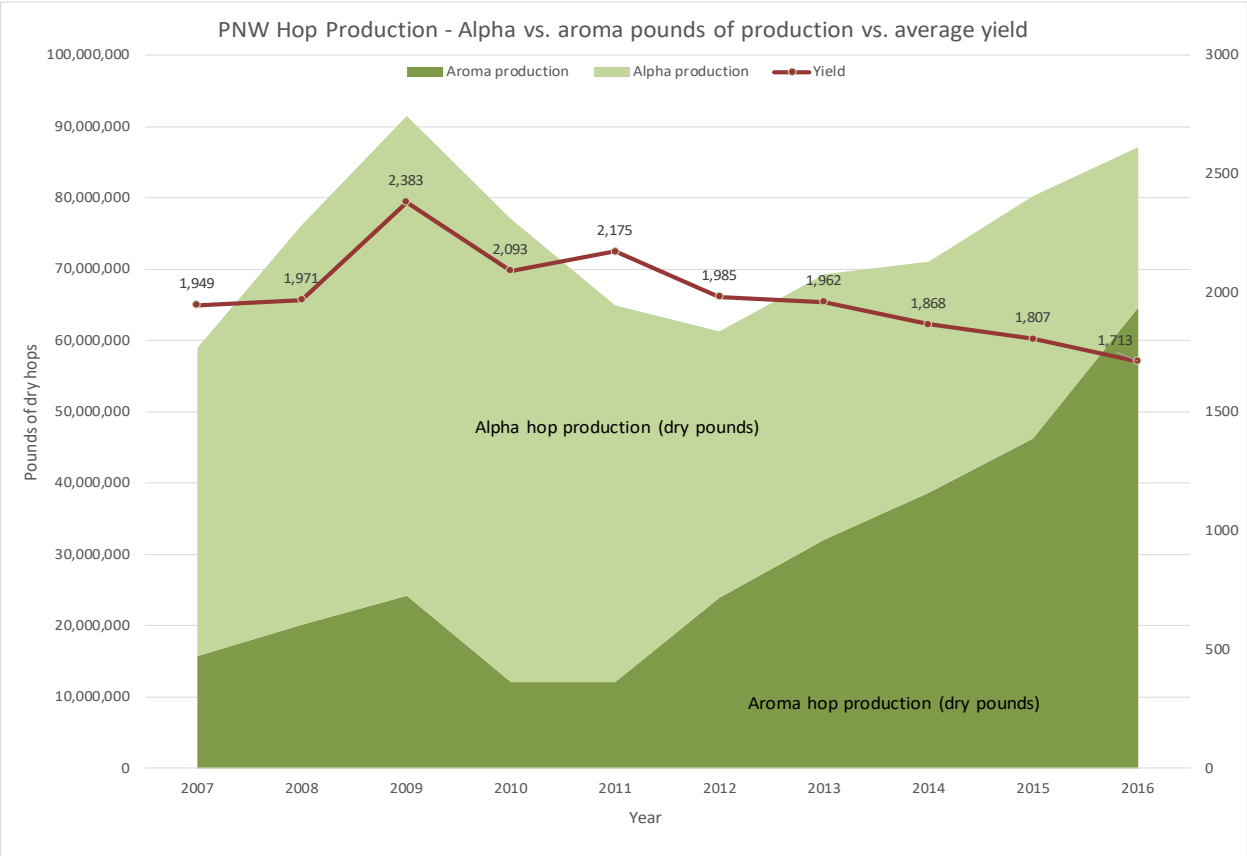
SOURCE: Estimates from IHGC 2016 November Economic Commission report. Prepared by HGA.
*Figures presented in the chart are the result of dividing the estimated MT Alpha by MT Hops for each year. This does not represent an estimate based on any type of analytical procedure.

US HOP ACREAGE (1992-2016)

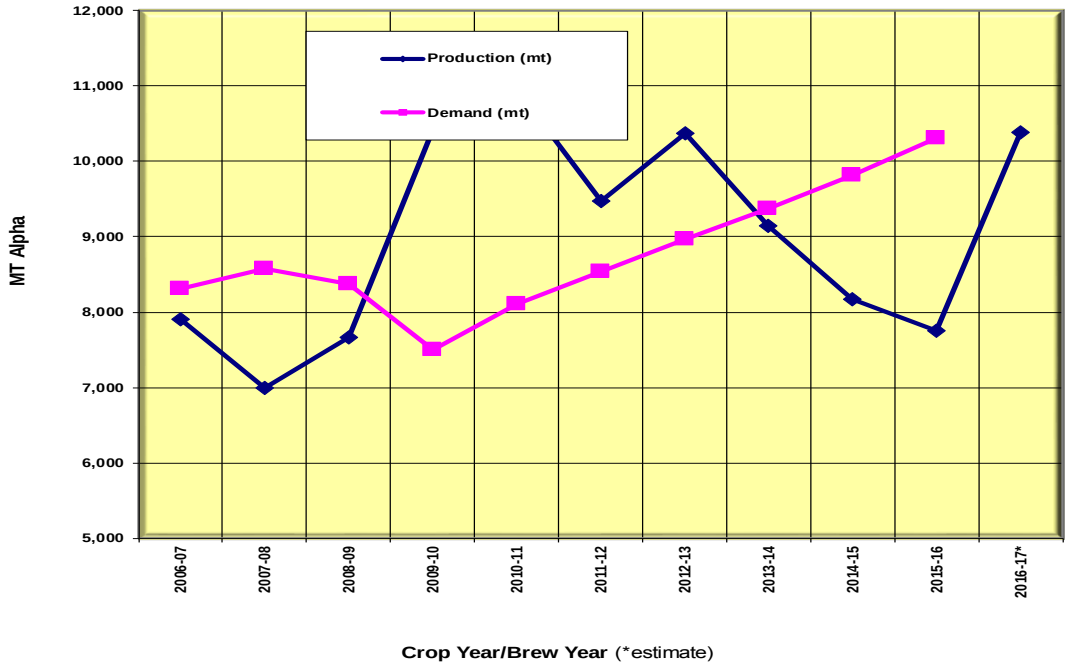


SOURCE: USDA-NASS and HGA Hop Acreage Reports


US Hop Acreage - Aroma/Dual Purpose vs. Alpha
Alpha
Aroma-Dual
Yield
Acreage
Yield
Year
Alpha Acreage
Aroma/Dual Purpose Acreage
1964
1949
1971
2383
2093
2175
1985
1962
1868
1807
1713
60,000
50,000
40,000
30,000
20,000
10,000
0
3000
2500
2000
1500
1000
500
0
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

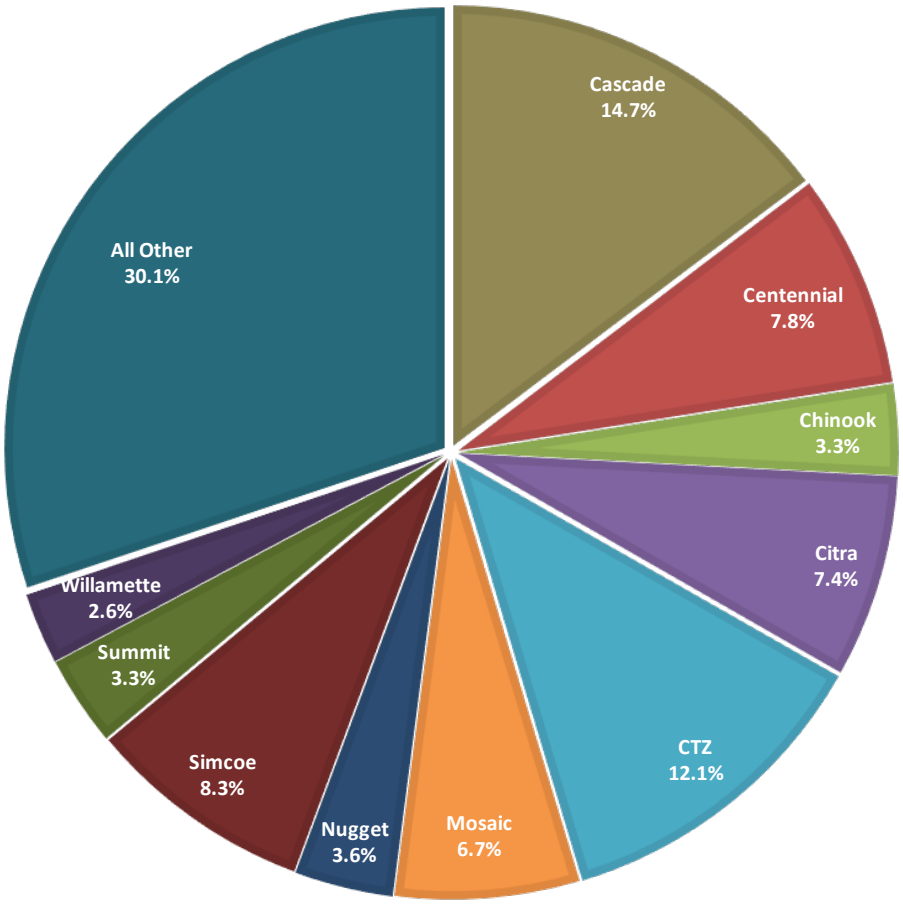

PNW Hop Production - Alpha vs. aroma pounds of production vs. average yield
Aroma production
Alpha production
Yield
Pounds of dry hops
Year
Alpha hop production (dry pounds)
Aroma hop production (dry pounds)
1,949
1,971
2,383
2,093
2,175
1,985
1,962
1,868
1,807
1,713
100,000,000
90,000,000
80,000,000
70,000,000
60,000,000
50,000,000
40,000,000
30,000,000
20,000,000
10,000,000
0
3000
2500
2000
1500
1000
500
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

WORLD ALPHA PRODUCTION & DEMAND



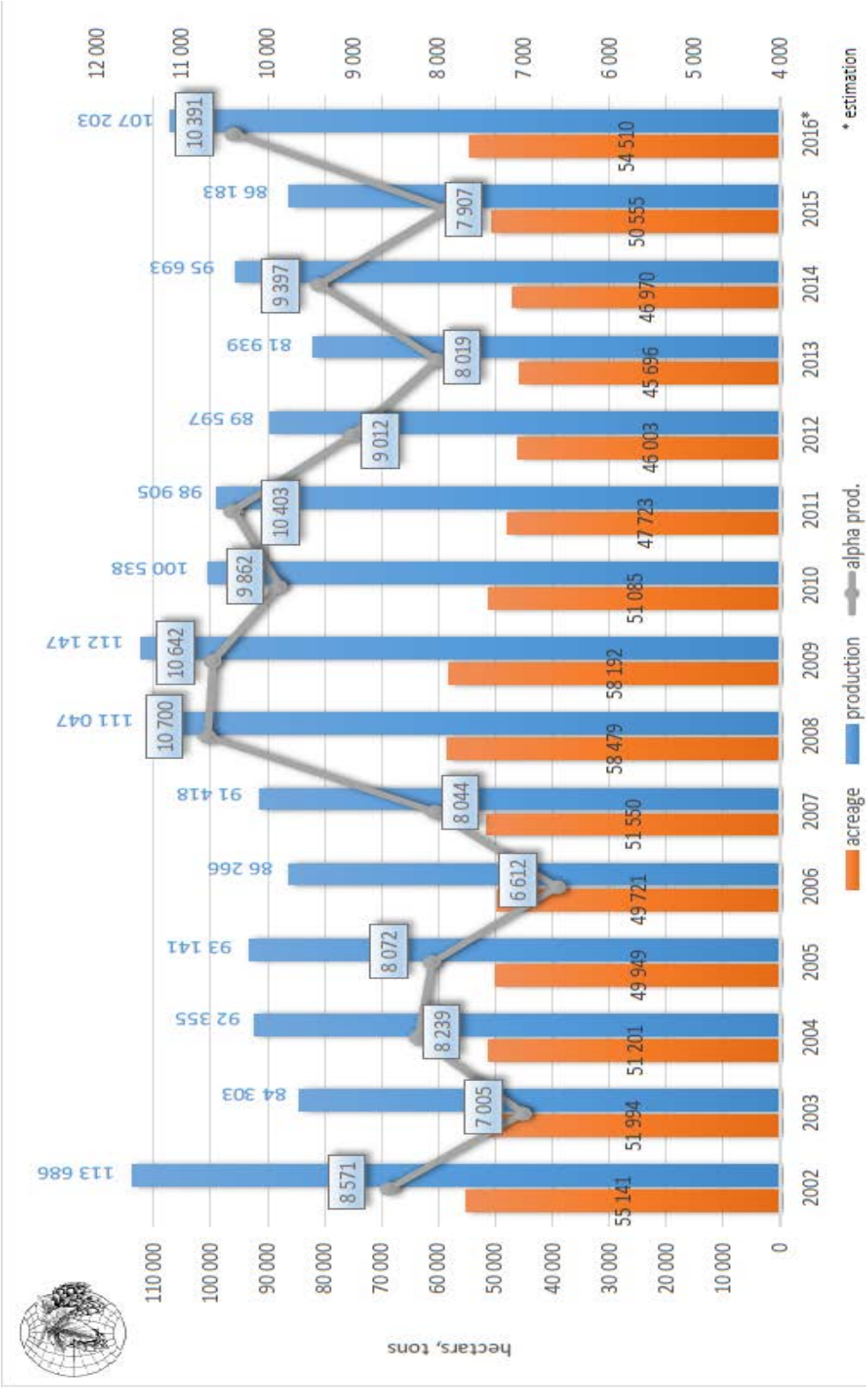
SOURCE: Barth Report. 2015-16. Prepared by HGA.

MAJOR US HOP VARIETIES – 2016 (% of US Production)



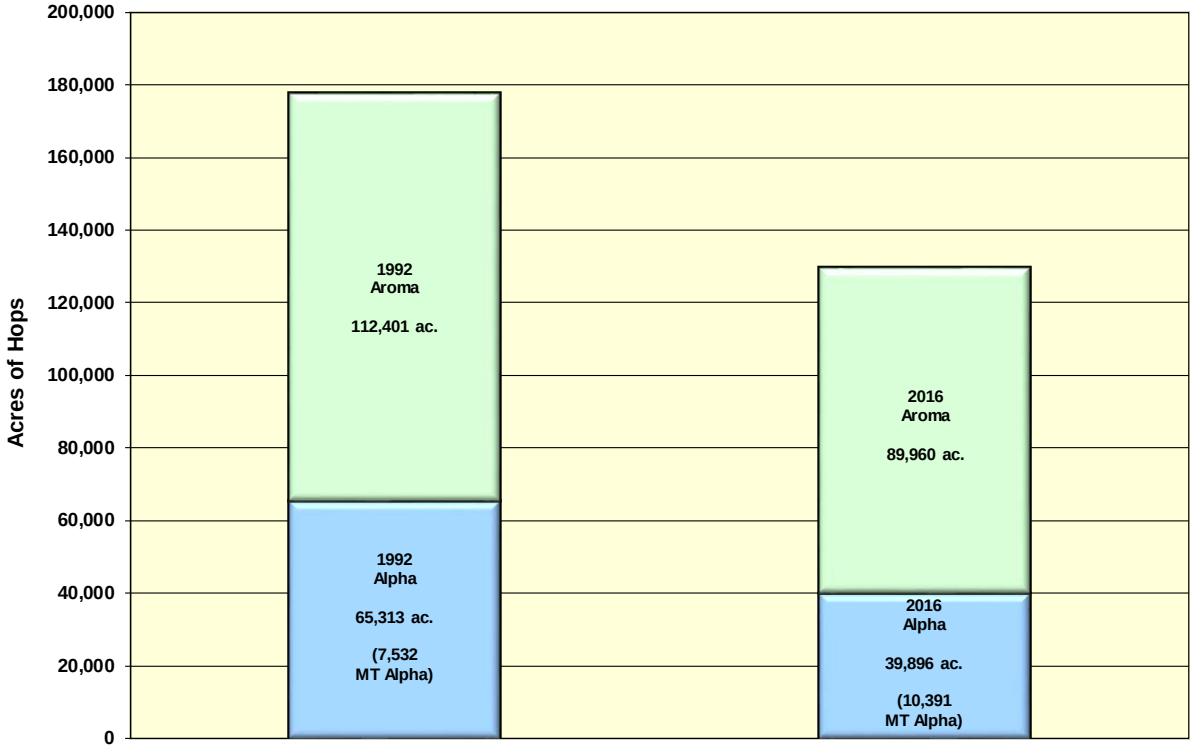
SOURCE: USDA-NASS. Prepared by HGA.

COMPARISON OF IHGC CROPS 2002-2016



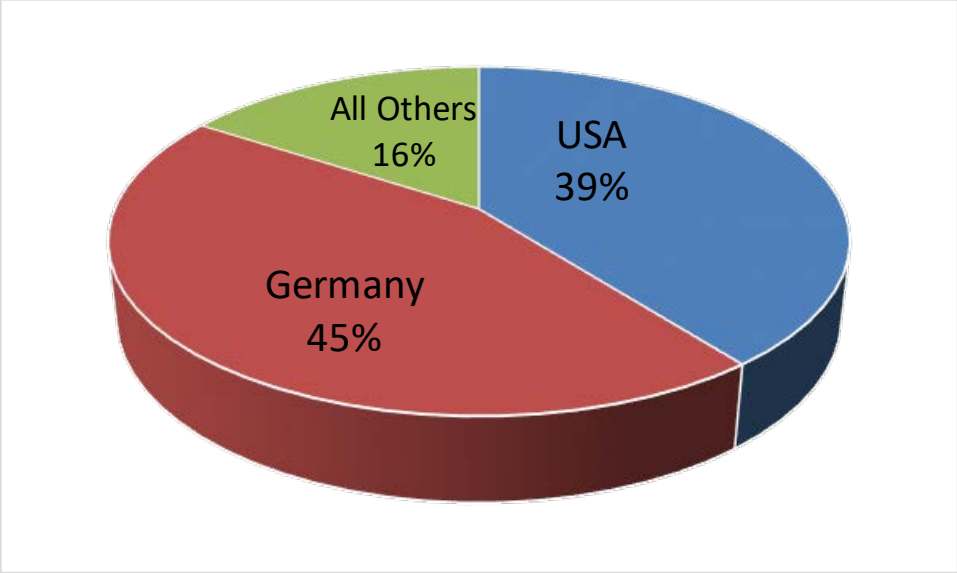
IHGC November 2016 Report

COMPOSITION OF WORLD HOP ACREAGE - 1992 VERSUS 2016



SOURCE: IHGC November Report and USDA NASS December National Hop Report. Prepared by HGA.

WORLD'S LARGEST ALPHA PRODUCERS - 2016



SOURCE: IHGC November Report. Prepared by HGA.

WORLD HOP ACREAGE & PERCENT SHARE (acres)

COUNTRY	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Germany	41,376	43,269	43,902	44,749	43,818	40,887	38,895	39,782	41,253	45,958
	34%	33%	33%	36%	38%	37%	35%	34%	34%	34%
UK-England	2,619	2,718	2,669	2,669	2,750	2,597	2,597	2,291	2,209	2,212
	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Czech Rep.	12,832	12,664	12,479	12,398	10,952	10,564	10,178	10,018	10,359	11,800
	11%	10%	9%	10%	10%	10%	9%	9%	9%	9%
Europe	17,313	17,236	16,222	16,186	13,178	11,842	11,897	14,881	11,711	13,015
(rest)	14%	13%	12%	13%	12%	11%	11%	13%	10%	10%
USA	30,911	39,263	40,126	31,247	28,787	29,683	35,288	38,892	45,238	52,980
	25%	29%	30%	25%	25%	27%	32%	34%	38%	39%
China	13,912	14,322	14,322	14,322	11,016	9,961	7,413	6,548	5,684	4,942
	11%	11%	11%	11%	10%	9%	7%	6%	5%	4%
World	3,047	3,633	3,991	3,941	3,620	3,575	3,650	3,508	3,544	3,793
(rest)	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%
World Totals	122,010	133,105	133,711	125,512	114,121	109,109	109,918	115,920	119,994	134,700

Europe (rest): Austria, Belgium, France, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Ukraine.
World (rest): Australia, New Zealand, Russia, South Africa.
SOURCE: IHGC Economic Commission November 2016 report. US figures estimated prior to publication of USDA-NASS National Hop Report. Prepared by HGA.

WORLD HOP PRODUCTION & PERCENT SHARE (pounds x 1,000)

COUNTRY	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Germany	70,854	87,104	68,894	75,177	82,673	76,059	60,746	84,657	62,170	94,136
	35%	36%	28%	34%	38%	39%	34%	41%	33%	40%
England	3,108	2,976	3,197	3,197	3,351	3,217	2,723	2,205	2,866	3,197
	2%	1%	1%	1%	2%	2%	2%	1%	2%	1%
Czech	12,414	14,771	14,109	16,204	13,779	9,480	11,750	13,007	10,582	15,653
	6%	6%	6%	7%	6%	5%	7%	6%	6%	7%
Europe (rest)	20,891	23,115	22,780	21,398	17,077	14,777	14,202	17,791	14,874	18,466
	10%	9%	9%	10%	8%	7%	8%	9%	8%	8%
USA	58,989	76,235	91,491	64,954	64,992	61,316	69,343	70,997	80,203	88,616
	29%	31%	38%	29%	30%	31%	39%	34%	42%	37%
China	29,762	35,494	35,494	35,494	29,982	26,334	13,228	13,228	13,228	9,921
	15%	14%	15%	16%	14%	13%	7%	6%	7%	4%
World (rest)	5,489	5,324	6,927	7,068	5,939	6,309	6,446	6,231	6,444	6,351
	3%	2%	3%	3%	3%	3%	4%	3%	3%	3%
World Totals	201,507	245,019	242,892	223,492	217,793	197,492	178,438	208,116	190,367	236,340

Europe (rest): Austria, Belgium, France, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Ukraine.
World (rest): Australia, New Zealand, Russia, South Africa.
SOURCE: IHGC Economic Commission November 2016 report. US figures estimated prior to publication of USDA-NASS National Hop Report. Prepared by HGA.

U.S. HOP EXPORTS, TOP 40 COUNTRIES (2011/21 through 2015/16)

(In pounds; extract is converted to fresh hop equivalent at a ratio of 4:1)

2015/16 Rank	Country	2011/12 (Sep-Aug)	2012/13 (Sep-Aug)	2013/14 (Sep-Aug)	2014/15 (Sep-Aug)	2015/16 (Sep-Aug)
1	United Kingdom	6,799,717	7,172,078	8,261,823	7,837,874	10,685,144
2	Mexico	5,096,867	9,036,307	6,605,269	10,188,001	8,038,715
3	Germany	5,560,940	5,130,157	2,918,700	3,868,010	5,226,058
4	Belgium-Luxembourg	5,503,179	4,627,723	4,897,348	4,125,290	3,709,498
5	Brazil	4,755,591	4,056,505	3,976,037	3,579,425	3,568,843
6	China	2,223,803	2,862,702	3,603,455	4,116,692	3,458,171
7	Canada	1,950,430	1,788,390	2,434,785	2,685,451	3,186,120
8	South Korea	1,253,989	1,173,961	1,644,869	1,460,121	2,089,982
9	Colombia	2,243,424	2,223,362	2,520,986	1,776,044	1,972,696
10	Japan	1,626,130	1,815,948	1,603,642	2,133,193	1,970,492
11	Australia	1,342,174	1,070,344	1,055,573	1,014,567	1,349,009
12	Hong Kong	1,441,823	1,046,755	1,297,200	951,295	1,200,637
13	Dominican Republic	762,138	766,547	890,006	574,084	925,060
14	Venezuela	1,224,888	2,886,292	1,950,650	1,486,797	923,957
15	Peru	1,075,635	949,751	711,432	949,972	900,368
16	Vietnam	553,581	385,368	377,431	513,457	840,843
17	Russia	488,544	416,012	445,554	365,085	742,958
18	Argentina	1,091,950	985,907	886,479	983,262	727,525
19	Philippines	679,244	600,760	363,101	652,127	679,685
20	South Africa	506,843	427,035	369,495	591,721	591,721
21	Guatemala	316,804	287,262	166,229	242,729	441,586
22	Chile	614,428	741,855	459,443	368,392	419,760
23	Ireland	369,495	349,433	17,857	184,086	402,564
24	Ecuador	442,688	398,596	523,377	424,831	337,969
25	Indonesia	166,669	213,407	198,416	116,845	295,860
26	Cambodia	70,548	129,191	86,201	129,852	211,644
27	India	158,953	395,950	219,801	173,504	199,959
28	New Zealand	83,555	74,516	50,486	323,418	194,007
29	Netherlands	366,188	102,294	294,317	142,639	142,860
30	Costa Rica	165,126	153,442	27,999	24,912	139,773
31	Paraguay	44,974	107,586	4,630	33,510	120,593
32	Honduras	61,289	146,166	67,902	78,044	114,861
33	Thailand	428,799	168,433	466,057	550,935	110,011
34	Malaysia	114,640	135,805	110,231	101,413	108,467
35	Panama	188,495	71,209	161,158	111,554	102,294
36	Turkey	90,830	38,581	37,920	113,759	100,090
37	Uruguay	83,776	24,692	63,714	42,549	92,153
38	El Salvador	98,106	77,823	73,414	75,619	89,508
39	Singapore	113,318	88,626	55,997	130,514	75,839
40	Bolivia	80,248	153,221	162,040	154,103	68,343
	All Other Countries	1,765,682	1,105,618	1,597,910	1,507,080	711,432
	Grand Total	**52,005,501**	**54,385,612**	**51,658,934**	**54,882,754**	**57,267,054**

Source: USDA Foreign Agricultural Service - Global Agricultural Trade System, http://www.fas.usda.gov/gats/default.aspx.
Prepared by Bryant Christie Inc.

U.S. HOP EXPORTS BY PRODUCT (TOP 40) – 2015/16

2015/16 Rank	Country	Extract (Converted to Raw Hop Equivalent)	Fresh/Dried	Ground	Pellets	Grand Total
1	United Kingdom	5,855,477	2,475,791	2,425	2,351,450	10,685,144
2	Mexico	7,573,319	0	55,336	410,060	8,038,715
3	Germany	3,284,888	173,504	0	1,767,666	5,226,058
4	Belgium-Luxembourg	1,405,667	263,452	0	2,040,378	3,709,498
5	Brazil	1,272,508	0	3,748	2,292,587	3,568,843
6	China	3,064,425	0	5,291	388,454	3,458,171
7	Canada	427,697	168,213	705,700	1,884,511	3,186,120
8	Korea, South	1,982,397	0	5,952	101,633	2,089,982
9	Colombia	918,005			1,054,691	1,972,696
10	Japan	628,758	18,078	0	1,323,655	1,970,492
11	Australia	641,104	54,234		653,671	1,349,009
12	Hong Kong	876,558	441	0	323,639	1,200,637
13	Dominican Republic	915,359		0	9,700	925,060
14	Venezuela	918,005		0	5,952	923,957
15	Peru	413,587	134,702		352,078	900,368
16	Vietnam	815,710		0	25,133	840,843
17	Russia	464,734			278,223	742,958
18	Argentina	328,048	0		399,478	727,525
19	Philippines	311,293	0	0	368,392	679,685
20	South Africa	557,329	0	0	34,392	591,721
21	Guatemala	414,469	0	0	27,117	441,586
22	Chile	175,488	441	0	243,831	419,760
23	Ireland	325,402	5,071		72,091	402,564
24	Ecuador	262,791		0	75,178	337,969
25	Indonesia	255,736	0		40,124	295,860
26	Cambodia	211,644			0	211,644
27	India	95,240			104,720	199,959
28	New Zealand	117,286	25,133	0	51,588	194,007
29	Netherlands	40,565	2,205	0	100,090	142,860
30	Costa Rica	132,277	882	3,968	2,646	139,773
31	Paraguay	85,539	0		35,053	120,593
32	Honduras	110,231			4,630	114,861
33	Thailand	91,712	0	0	18,298	110,011
34	Malaysia	108,467	0		0	108,467
35	Panama	85,539	0	0	16,755	102,294
36	Turkey	88,185	0	0	11,905	100,090
37	Uruguay	45,856		661	45,636	92,153
38	El Salvador	73,193	2,425	1,323	12,566	89,508
39	Singapore	66,139		0	9,700	75,839
40	Bolivia	40,565			27,778	68,343
	All Other Countries	417,115	17,417	10,141	266,759	711,432
	Grand Total	**35,898,310**	**3,341,988**	**794,546**	**17,232,211**	**57,267,054**

Source: USDA Foreign Agricultural Service - Global Agricultural Trade System, http://www.fas.usda.gov/gats/default.aspx.
Prepared by Bryant Christie Inc.

U.S. IMPORTS OF HOPS (FIVE YEARS)

(In pounds; extract converted at 4:1 ratio)

2015/16 Rank	Country	2011/12	2012/13	2013/14	2014/15	2015/16
1	Germany	4,483,541	5,402,868	4,773,890	5,743,483	7,192,360
2	United Kingdom	1,008,174	1,328,065	1,150,152	2,366,001	2,131,429
3	Australia	720,250	634,490	1,105,839	1,058,660	1,453,949
4	New Zealand	668,221	333,780	933,878	807,333	676,599
5	Czech Republic	136,246	283,735	223,549	318,127	179,456
6	Slovenia	95,019	113,097	171,520	178,354	173,724
7	Belgium-Luxembourg	0	0	882	6,834	57,541
8	France	45,636	23,810	132,057	140,875	49,163
9	South Africa	0	882	3,527	2,205	24,912
10	China	0	544,983	829,820	229,942	14,991
11	Italy	8,818	2,205	26,015	47,620	13,228
12	Canada	78,925	14,991	0	2,425	11,244
13	Poland	12,346	11,684	7,496	5,952	7,937
14	Latvia	0	0	0	0	6,614
15	Ethiopia	4,409	2,205	0	441	4,630
16	Argentina	1,102	1,764	0	3,748	0
17	India	0	0	0	2,866	0
18	Peru	0	0	3,086	0	0
19	Slovakia	0	0	0	31,747	0
20	Spain	0	0	20,283	4,409	0
21	Switzerland	0	4,409	0	0	0
	Grand Total	**7,262,688**	**8,702,968**	**9,381,992**	**10,951,021**	**11,997,776**

Source: USDA Foreign Agricultural Service - Global Agricultural Trade System, http://www.fas.usda.gov/gats/default.aspx.
Prepared by Bryant Christie Inc.

WORLD BEER PRODUCTION BY BREWERY (TOP 10) – 2011-12 (MILLION HL)

Brewery	2014 Production	2014 % Share	2015 Production	2015 % Share
ABInBev	411.5	21.0%	409.9	21.2%
SABMiller	187.8	9.6%	191.3	9.9%
Heineken	181.3	9.3%	188.3	9.7%
Carlsberg	122.8	6.3%	120.3	6.2%
China Res. Snow Breweries	118.4	6.0%	117.4	6.1%
Tsingtao Brewery Group	76.2	3.9%	70.5	3.6%
Molson-Coors	59.0	3.0%	58.1	3.0%
Yanjing	53.1	2.7%	48.3	2.5%
Kirin	46.6	2.4%	43.1	2.2%
BGI/Groupe Castel	31.7	1.6%	29.8	1.5%
Top 10 total	**1,288.4**	**65.8%**	**1,277.0**	**65.9%**

The top 3 brewing groups control 40.8% of the market share, up from 39.9% in 2014.

The top 40 brewing groups worldwide represented 82.8% market share in 2014, increasing to 83.5% in 2015.

Source: Barth Report 2015-16

WORLD BEER PRODUCTION (FIVE YEARS - MILLION HL)

	2012	2013	2014	2015	2016*
Germany	94.6	94.4	95.6	95.7	96.0
Russia	97.2	88.9	76.6	73.0	75.3
Great Britain	42.0	42.4	41.2	44.1	44.3
Poland	37.8	39.6	39.2	39.8	39.9
Spain	33.0	33.1	33.5	34.8	36.2
Netherlands	24.3	23.7	23.7	23.7	23.9
France	18.9	18.7	18.8	20.5	21.5
Czech Republic	18.3	18.6	19.7	20.1	20.1
Ukraine	30.0	27.6	24.5	19.4	18.6
Belgium	18.5	18.1	18.0	18.3	18.6
Romania	17.9	16.6	16.5	16.1	15.9
Italy	12.7	12.7	13.0	15.4	15.6
Austria	8.9	9.2	9.2	9.3	9.4
Turkey	10.0	8.0	10.1	9.0	9.0
Ireland	8.3	8.0	8.0	7.3	8.0
Hungary	5.0	6.0	6.2	6.5	6.6
Other Europe	49.7	36.2	23.9	21.7	27.9
Total Europe	**544.6**	**531.1**	**518.8**	**516.6**	**522.8**
USA	230.1	224.6	225.9	225.0	225.0
Brazil	132.0	134.2	134.5	138.0	131.1
Mexico	81.5	82.0	82.0	90.0	95.0
Colombia	22.3	22.3	22.0	22.7	23.0
Canada	19.5	22.6	22.6	22.7	22.7
Venezuela	21.7	22.2	22.4	21.0	19.0
Argentina	16.8	16.8	16.3	18.1	18.0
Other Americas	63.6	66.2	68.1	86.4	83.3
Total Americas	**569.6**	**572.2**	**574.1**	**592.4**	**589.3**
P.R. China	490.0	506.0	493.0	471.6	451.3
Japan	55.3	57.2	53.9	53.8	53.8
Vietnam	29.7	32.0	35.4	39.3	36.5
Thailand	23.9	21.0	22.4	25.5	26.5
South Korea	19.0	19.4	20.8	18.8	19.0
India	19.2	20.0	20.0	20.5	20.7
Philippines	15.8	16.2	17.0	17.2	17.3
Other Asia	135.8	158.7	151.9	143.5	125.4
Total Asia	**685.8**	**708.7**	**701.9**	**693.5**	**675.4**
South Africa	31.3	31.5	31.5	32.1	32.4
Nigeria	23.5	25.0	27.0	27.0	27.1
Other Africa	77.9	86.4	99.6	102.6	106.1
Total Africa	**119.4**	**127.9**	**141.1**	**144.1**	**147.6**
Australia	17.2	17.3	16.9	16.2	16.4
New Zealand	3.2	2.9	2,8	2.8	2.9
Oceania	1.2	1.5	1.4	1.4	1.4
Total Australia	**21.6**	**21.7**	**21.1**	**20.4**	**20.7**
WORLD TOTALS	**1,941.0**	**1,961.5**	**1,957.0**	**1,967.1**	**1,955.7**

Source: S.S. Steiner 2016 Guidelines for Hop Buying

ODA-S13 Farm to Science; Celebrating Oregon Fruits, Vegetables, and Culinary Herbs and Spices

Attachment 1: Summative Evaluation Report

Attachment 2: Farm to Science logos

Summative Evaluation Report

Farm to Science Initiative

Prepared for OMSI

Taline A. Kuyumjian
Engagement Research and Advancement
March 2016

With generous support from the USDA Specialty Crop Block Grant Program.

Also included is *Harvest Fest 2016 Summative Evaluation: Supplement to the Farm to Science Programming and Events Summative Evaluation*, prepared by Taline A. Kuyumjian, Oregon Museum of Science and Industry.

OVERVIEW OF SUMMATIVE REPORTS

In 2014, the Oregon Museum of Science and Industry (OMSI) received funding from the Oregon Department of Agriculture (ODA) Specialty Crop Block Grant Program (SCBGP), to enhance the competitiveness of Oregon's specialty crops. OMSI submitted an application for a season of activities which aimed to address the need for increased awareness of the breadth and diversity of crops grown throughout the state. The application advocated that a more aware and educated consumer base will allow the specialty crop industry to continue to grow. With funding, OMSI was able to provide engaging and far-reaching educational experiences for families to learn about the range, diversity, and value of Oregon specialty crops. The hope was that activity participants would become consumers who make informed and healthful food purchasing choices. OMSI worked in close partnership with a group of local specialty crop producers and advocacy organizations to increase public awareness of and interest in Oregon's vibrant specialty crop industry, with the hope of increasing specialty crop sales.

The *Farm to Science* season of activities took place during the height of the 2015 growing season (June-October, 2015). Activities which contributed to the *Farm to Science* season included: *OMSI After Dark*, Food Science Demos, *Meet a Farmer* Tabling, Food Science Labs, Science Pubs, Better Bites, and Harvest Fest. Activities offered through *Farm to Science* sought to benefit the Oregon specialty crop industry, with its focus on raising the visibility of eligible specialty crops through a variety of education methods and partnerships. The *Farm to Science* project was intentionally designed to target and support a range of organizations, including producers, farmers, commissions, and industry advocates.

The OMSI Research and Evaluation team conducted a summative evaluation study of the initiative with visitors throughout the summer. A few months later, OMSI sought to amend its award with a no-cost extension into 2016. It was identified that Harvest Fest provided an opportunity for OMSI to strengthen relationships with specialty crop vendors across Oregon, increase awareness of specialty crops and specialty crop seasonality with the public, and test food festivals as a platform for specialty crop engagement on a larger scale. Prolonging the grant period allowed OMSI to repeat Harvest Fest in October 2016, giving the team a full year to prepare. Similar to the first grant year, this event date was selected to utilize as many partners as possible, catching vendors at the end of the season when most of the area's major farmer's markets have ended.

A summative study is typically conducted in the final year of a project to better understand the effectiveness of a project at achieving its intended impacts. This summative report is divided into two parts: a complete summative evaluation report of Farm to Science activities in 2015, and a supplemental summative evaluation report of the 2016 Harvest Fest. Taline Kuyumjian (OMSI) led both studies.

Summative Evaluation Report: Farm to Science Initiative begins on the next page (2).

Harvest Fest 2016 Summative Evaluation: Supplement to the Farm to Science Programming and Events Summative Evaluation begins on page 29.

Summative Evaluation Report

Farm to Science Initiative

March 2016

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Summative Evaluation

FARM TO SCIENCE

MARCH 2016

Oregon Museum of Science and Industry
Engagement Research and Advancement

In 2015, Oregon Museum of Science and Industry (OMSI), with funding from USDA Specialty Crop Block Grant Program, sought to develop, implement and sustain a multi-layered season of activities that would increase public audience's awareness of and interest in Oregon specialty crops. This season of programming was called Farm to Science. The goal was for activity participants to become informed consumers who make healthful and local food purchasing choices.

ACTIVITIES

- OMSI After Dark
- Food Science Demos
- Meet a Farmer Tabling
- Food Science Labs
- Science Pubs
- Better Bites
- Harvest Fest

TARGET STUDY POPULATION

Adults who participated in select Farm to Science activities, June-September, 2015.

EVALUATION PURPOSE

Measure and report on the extent to which the project met its goals to increase participants' awareness of and interest in Oregon's vibrant specialty crop industry.

STUDY DESIGN

- Retrospective pretest
- Asked to indicate awareness, interest, and/or behavior after activity participation and prior to activity in same questionnaire

DATA COLLECTION

- Paper & iPad surveys
- Administered after adults participated in a Farm to Science activity

ABOUT SURVEY RESPONDENTS

OMSI Everyday Encounters with Science

There were 189 respondents.

69% of respondents were female.

61% of respondents were 25-44 years old.

27% of respondents were OMSI members.

IMPACT

Farm to Science activities significantly impacted participants' awareness of what a specialty crops is, and the types and seasonality of specialty crops.

Farm to Science activities may have helped sustain already-strong levels of intentionality and motivation towards desired purchasing behaviors.

99% *of participants are interested in purchasing crops in season after their participation in the activity.*

91% *of participants firmly agreed that purchasing locally is of value to the Oregon agricultural community after their participation in the activity.*

87% *of participants sustained interest and motivation to purchase food based on where it was produced after their participation in the activity.*

84% *of participants agreed that participating in Farm to Science activities taught them about specialty crops.*

82% *of participants intended to sustain existing habits towards adapting grocery lists based on crop seasonality after their participation in the activity.*

68% *of respondents increased their awareness of what fruits, vegetables, nuts and plants are considered specialty crops after their participation in the activity.*

AWARENESS Statistically significant impact was most often found when participants were asked questions about specialty crop awareness.

INTEREST This season of activities was effective at making respondents more interested in knowing where their food is coming from and more motivated purchase more food local to Oregon.

MOTIVATION Participating in Farm to Science activities helped sustain already-strong levels of intentionality and motivation towards purchasing crops locally.

FUTURE OPPORTUNITIES

- What kind of an impact could Farm to Science activities have in other communities or with a more diverse group of participants?
- What other outcomes does ODA hope to see from the Oregon population related to purchasing?
- How can future Farm to Science programming or other OMSI partnerships with ODA build on the findings explored in this summative evaluation?

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Without all of you this report would not be possible.

PROJECT BACKGROUND AND GOALS

In 2014, the Oregon Museum of Science and Industry (OMSI) received funding from the Oregon Department of Agriculture (ODA) Specialty Crop Block Grant Program (SCBGP), to enhance the competitiveness of Oregon's specialty crops. OMSI submitted an application for a season of activities which aimed to address the need for increased awareness of the breadth and diversity of crops grown throughout the state. The application advocated that a more aware and educated consumer base will allow the specialty crop industry to continue to grow. With funding, OMSI was able to provide engaging and far-reaching educational experiences for families to learn about the range, diversity, and value of Oregon specialty crops. The hope was that activity participants would become consumers who make informed and healthful food purchasing choices. OMSI worked in close partnership with a group of local specialty crop producers and advocacy organizations to increase public awareness of and interest in Oregon's vibrant specialty crop industry, with the hope of increasing specialty crop sales.

The *Farm to Science* season of activities took place during the height of the 2015 growing season (June-October, 2015). Activities which contributed to the *Farm to Science* season included: *OMSI After Dark*, Food Science Demos, *Meet a Farmer* Tabling, Food Science Labs, Science Pubs, Better Bites and a Harvest Fest. Appendix A provides more details on event and program themes. Activities were slowly rolled out throughout the season to accommodate the wide variety of experiences offered. The season kicked-off in June with a cider-themed OMSI After Dark. Food Science Demos, Food Science Labs and Meet a Farmer Tabling began started in July. A Better Bites event was hosted in August. September brought the addition of Science Pubs to regular scheduling, and the season's capstone event, Harvest Fest. *Farm to Science* wound down in October with a continuation of Food Science Demos before the season closed at the end of the month.

Activities offered through *Farm to Science* sought to benefit the Oregon specialty crop industry, with its focus on raising the visibility of eligible specialty crops through a variety of education methods and partnerships. The *Farm to Science* project was intentionally designed to target and support a range of organizations, including producers, farmers, commissions, and industry advocates.

EVALUATION PURPOSE

The goal of the *Farm to Science* project was to develop, implement and sustain a multi-layered season of community engagement programming that would increase public audience awareness of Oregon specialty crops, with the assumption that it would lead to an increase in the sales of Oregon specialty crops. The purpose of this summative evaluation was to measure and report on the extent to which the project met its goals to increase participants' awareness of and interest in Oregon's vibrant specialty crop industry.

EVALUATION QUESTIONS

This summative evaluation was guided by three evaluation questions.
To what extent and in what ways did participation in a *Farm to Science* program or event impact participants':

- Awareness of the types of specialty crops grown in Oregon, where they are grown, and when they are in season?
- Understanding of the value of purchasing crops locally and when in season?
- Interest and motivation to purchase crops locally and when in season?

METHODOLOGY

STUDY DESIGN

Information provided and analyzed was self-reported by participants through a retrospective pretest design. Respondents were asked to indicate their awareness, interest, and anticipated behavior after activity participation, as well as recall their awareness, interest, and behaviors prior to the program in the same questionnaire.

DATA COLLECTION

Based on piloting and programmatic/event design, the Interest and Awareness Survey (see Appendix B) was administered in two formats pending activity need and data collector preference. For free-flow activities, where visitors could come and go at any time, the Interest and Awareness Survey was administered via an iPad using the Survey Gizmo platform and/or via a paper copy. These activities included Food Science Demos, Meet a Farmer Tabling, OMSI After Dark, and Harvest Fest. For more structured activities, where there was a clear start and end time, paper surveys were distributed to all participants to ensure the highest response rate possible. These activities included Food Science Labs, Science Pubs, and Better Bites. Across all programs and events, surveys were administered after adults engaged in a specific *Farm to Science* activity. Examples of this include: the conclusion of a Science Pub, after participating in a Food Science Demo in Theory or at an event, or after talking with a farmer at Meet a Farmer Tabling.

The overall target sample size was between 200-250 adult participants. An attempt was made to get a proportionate number of sample participants from each of the activities offered. Data collectors aimed to approach every eligible visitor, as they become available throughout their shifts. In a group, only one visitor per group was invited to complete the survey.

After an adult finished participating in the activity, the data collector approached (sometimes with the support of educators or volunteer facilitators) and asked the adult if they might be interested in participating in a short survey on their experience with the activity. When multiple activities occurred simultaneously, the evaluator would wait until the individual or group completed all of the activities they wished and then approached.

INFORMED CONSENT

Prior to distributing the survey, the data collector outlined the purpose of the survey to potential participants, how the information would be used, and asked the individual if they agreed to participate. Those who verbally agreed were surveyed. Both versions of the survey, digital (iPad) or written (paper), took approximately five minutes for respondents to complete. Demographic information (age, gender, educational level, area of residence) was documented, but more personal information, such as the name or address of the visitor, was not requested. During analysis visitors were only identified by case number.

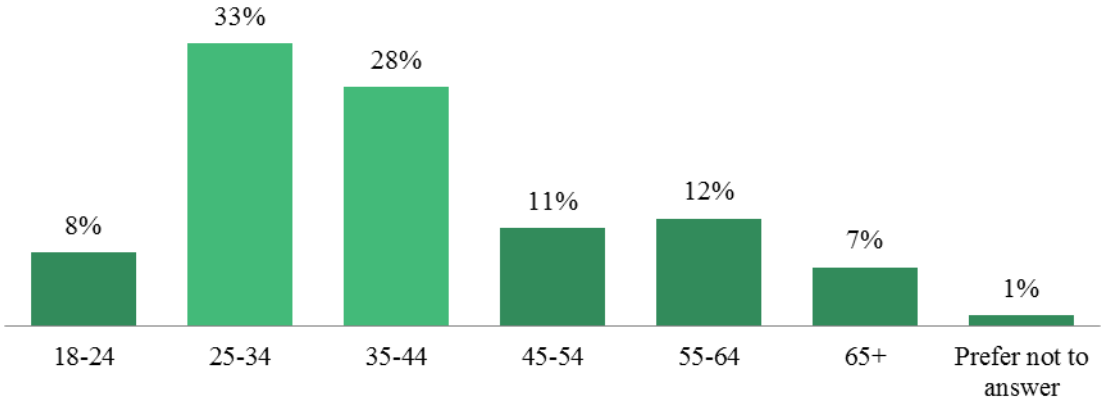
SAMPLE

The Interest and Awareness Survey was distributed at 11 activities between June and September 2015. The number of data collection points selected was proportionate to the range of activities offered, and aimed to gather a sample which was representative across the variety of experiences. A total of 189 *Farm to Science* participants opted to take the survey. Among the 189 responses, 156 surveys were fully completed and 33 were partially completed.

Demographics were optional and collected after participants completed the survey. Most people (94%, n=178) opted to provide demographic information.
Among the sample, 69% (n=130) identified as female, 23% (n=44) identified as male, 2 preferred not to answer and 1 identified as "Other."

Participants were asked to indicate their age range. Responses are shown in Figure 1.

FIGURE 1: AGE RANGES OF RESPONDENTS
More than half of respondents were between 25-44 years old.



Respondents were also asked to self-report which ethnic and racial groups they identified with. Regarding self-identified ethnic identity, where four options were given and respondents could choose one, a majority of respondents (83%) self-identified as "Not Hispanic of Latino," some (9%) preferred not to answer or weren't sure, and a few (7%) identified as "Hispanic or Latino." Respondents were given seven options to select for racial identity. Among the options, most (87%) selected "White." Both "Asian" and "Prefer not to answer" represented 4% of the sample. Some respondents (3%) were not sure of their racial identity. There were 3 respondents who identified as "American Indian or Alaska Native" and one who identified as "Black or African American." None of the respondents identified as "Native Hawaiian or Other Pacific Islander."
Finally, participants were asked to share if they were OMSI members or not. Among the respondents, 73% were not OMSI members. Accordingly, the remaining 27% of respondents to the question indicated they held OMSI membership.

ANALYSIS

Given the large sample size, data was analyzed in SPSS Statistics Software to assess normalcy, as well as to understand the statistical significances between post and retrospective pre questions.

Normalcy tests were run for all paired questions. Results were first analyzed through a visual inspection of the Q-Q plots. Given the larger sample sizes, results for normalcy were verified through a calculation of the Skewness z scores. If pairs were found to be symmetrical and fall within the normal ranges of +/-2.58, then a paired *t*-test was conducted to compare the means between the two related groups. If pairs fell outside of range of symmetry, then a Sign test was conducted to determine whether there is a median difference between paired observations (Ghasemi and Zahediasl 2012). After data was tested for normalcy and statistical significance, tests to measure distribution of responses were conducted in Excel for individual questions and question pairings. Demographic analytics were similarly conducted.

LIMITATIONS

Data was not analyzed for each individual activity, but instead aggregated to share findings about impact across the whole initiative.

Anecdotal comments and observations during data collection across the project seemed to indicate that participants may have felt that the content presented at events (ex: Better Bites, Science Pubs) was more loosely connected to Oregon specialty crops than was presented during programming efforts (ex: Demos, Labs). Often, if a visitor strongly felt there was no connection between the event they just attended and the Interest and Awareness Survey, they opted not to respond or complete their survey. Because this summative evaluation focused on the overall impact aggregated across all programs and events, the extent to which these comments and theorized perceptions may have influenced the findings was not analyzed.

FINDINGS

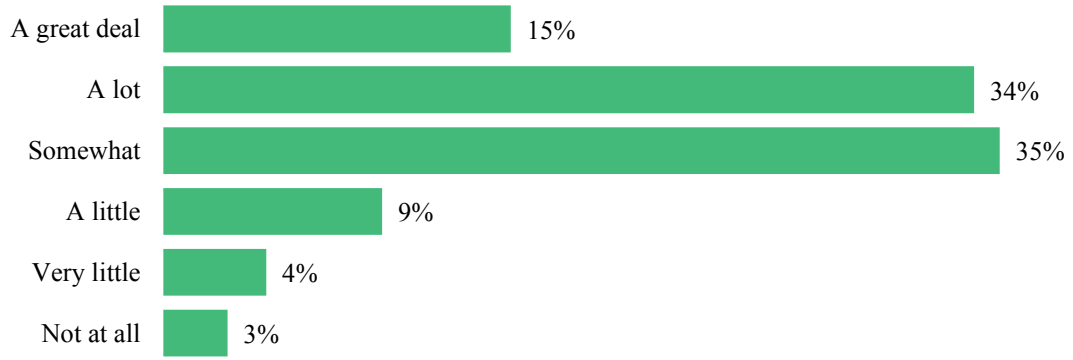
The aim of this summative evaluation was to measure the extent to which the project met its goals to increase participants' awareness of Oregon specialty crops and their interest in purchasing Oregon specialty crops. Survey questions were designed to better understand how aware participants were of what products were considered specialty crops, basic comprehension of specialty crop seasonality, and to gauge interest and motivation in purchasing Oregon specialty crops. Across most questions, respondents were given a 6-point Likert-style scale to complete, with 1 being low and 6 being high. Scales measured for self-reported awareness levels, agreement levels, confidence levels, interest levels and degrees of intentionality. Given the retrospective pre/post nature of this survey, respondents were initially asked to provide a rating based on how they felt after activity participation. They were then prompted to think back to how they would have answered the same question or prompt prior to participation. Accordingly, findings will first report the post responses, and then compared to the retrospective pre responses. In the following sections, the findings from across the survey questions are grouped by specialty crop awareness, seasonality awareness, and interest in specialty crops.

AWARENESS OF OREGON SPECIALTY CROPS

The survey began by asking respondents to indicate the extent to which they felt participation in the *Farm to Science* activity shaped their awareness of what a specialty crop is. Though to varying degrees, a majority of respondents (82%, n=155) agreed that participation in the *Farm to Science* activities shaped their awareness of what a specialty crop is. Figure 2 shares the distribution of responses.

FIGURE 2: AWARENESS OF SPECIALTY CROPS AFTER PARTICIPATION

Farm to Science Activities increased participants' awareness of specialty crops.

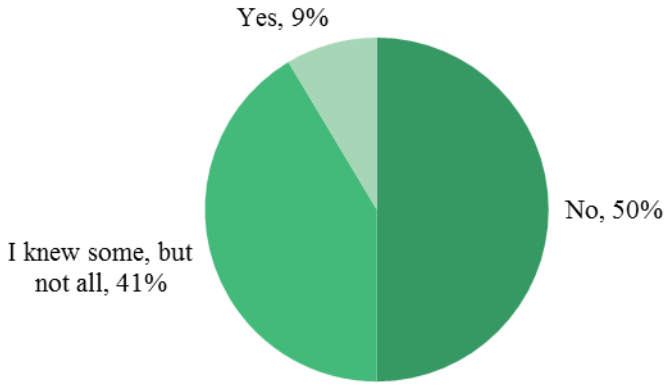


To gather baseline knowledge of specialty crops prior to participation, participants were asked to respond to the definition of specialty crops[1]. Specifically, they were asked to indicate if this is the definition they would have used prior to participation. Figure 3 demonstrates that exactly half the respondents (n=93) had some awareness, or complete awareness, of what a specialty crop is, based on how much they felt they would have agreed with the ODA definition of a specialty crop prior to their participation in activities.

[1] The definition used (United States Department of Agriculture, Agricultre Marketing Service n.d.): "Specialty crops can be any fruit or vegetable, tree nut, dried fruit, horticulture, and/or a nursery crop (including floriculture), excluding field and grain crops, oil seed crops, forage crops, and fiber crops. A specialty crop's primary function has to be related to what it is (ex: food, medicinal purposes, and/or aesthetic gratification) in order to be considered specialty crops."

FIGURE 3: AWARENESS OF THE DEFINITION OF SPECIALTY CROPS PRIOR TO PARTICIPATION

Half of respondents participated in activities with some prior knowledge of what a specialty crop is.



PAIRED QUESTIONS

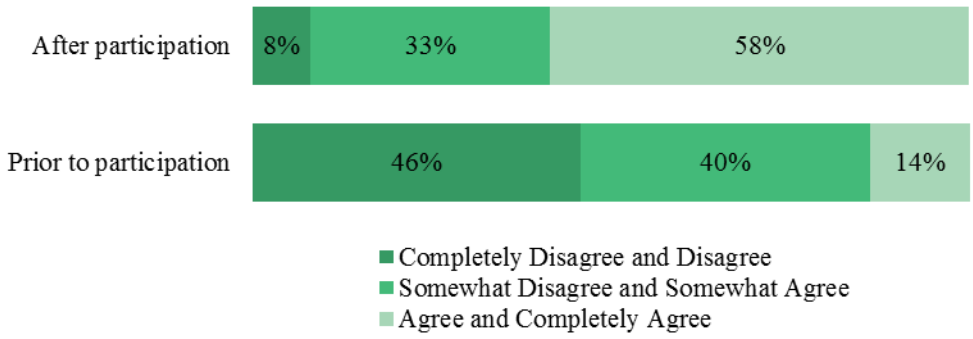
To better understand the nuances within respondents' stated awareness levels with specialty crops before and after activity participation, respondents were asked additional questions about discussing specialty crops. This initiated a series of pre/post questions that respondents would engage in for the remainder of the survey.

CONFIDENCE EXPLAINING WHAT A SPECIALTY CROP IS

As a means of measuring awareness, respondents were asked if they felt more confident explaining what a specialty crop is to another adult after activity participation. The mean rating for all responses after activity participation was 4.49 (N=185). When asked to think about how they would have felt prior to activity participation, the mean rating was 2.77 (N=186). The change between the two means was statistically significant, $t(184) = 15.300$, $P < 0.0005$[2]. Figure 4 shows a summary of the distribution of responses across possible answer selections.

FIGURE 4: POST/PRE COMPARATIVE FOR CONFIDENCE EXPLAINING SPECIALTY CROPS

Participation in Farm to Science activities made a significant number of respondents feel more confident discussing specialty crops with other adults.

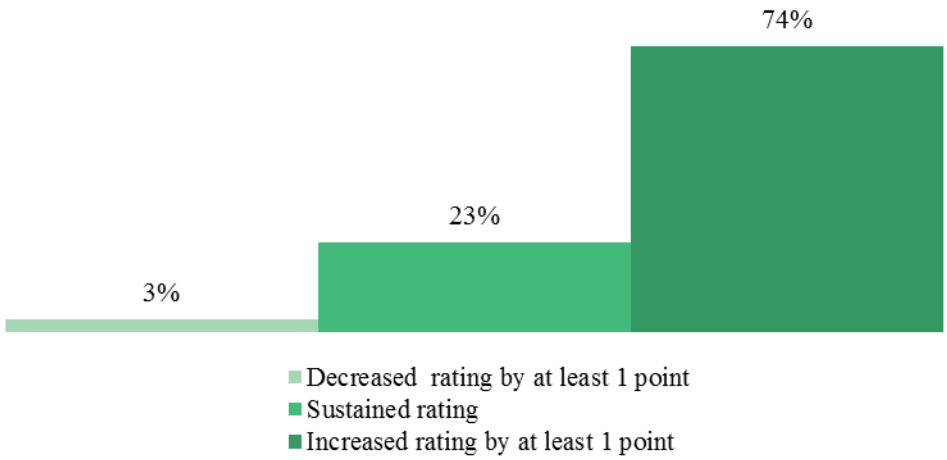


[2] Added information on visual inspections of Q-Q plots, calculation of z-scores, results of paired *t*-tests and exact Sign tests for this and all paired prompts can be found in Appendix C.

Because respondents were selecting ratings on a Likert-style scale, shifts in responses could vary in degree (no points to five points) and direction (positive or negative). Data was matched to determine positive and negative shifts between post and retrospective-pre ratings. The largest change among responses was the increase in confidence from retrospective pre to post. Below, Figure 5 illustrates the specific shifts in confidence levels that respondents experienced.

FIGURE 5: PRE/POST CHANGE IN CONFIDENCE EXPLAINING WHAT A SPECIALTY CROP IS

Though to varying degrees, a significant percentage of respondents reported an increase in agreement with the prompt.

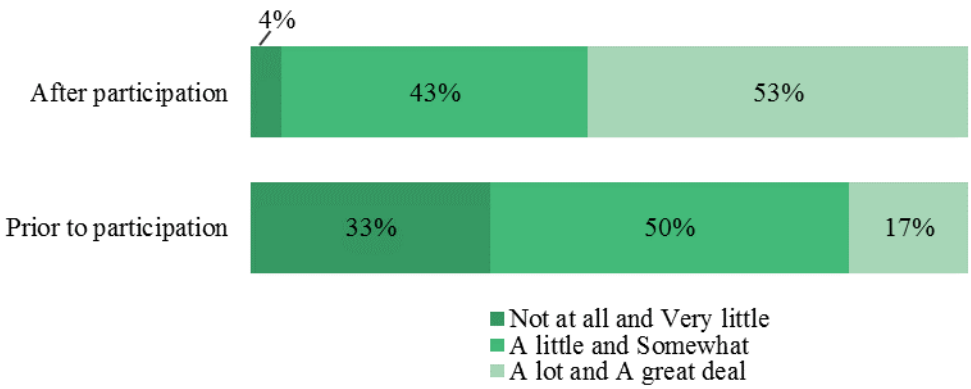


AWARENESS OF WHICH FRUITS, VEGETABLES, NUTS AND PLANTS ARE OREGON SPECIALTY CROPS

The following paired statements honed in on how aware participants were of Oregon specialty crops. Participants were asked to rate how aware they were of what fruits, vegetables, nuts and plants are considered Oregon specialty crops. The mean rating for all responses after activity participation was 4.44 (N=185). When asked to think about how aware they felt prior to activity participation the mean rating was 3.19 (N=186). The change in means was statistically significant, $t(184) = 15.300$, $P < 0.0005$. Figure 6 shows the distribution of responses for how participants answered post-activity participation and how they imagined they would answer prior to participation.

FIGURE 6: POST/PRE COMPARATIVE FOR AWARENESS OF WHAT ARE CONSIDERED OREGON SPECIALTY CROPS

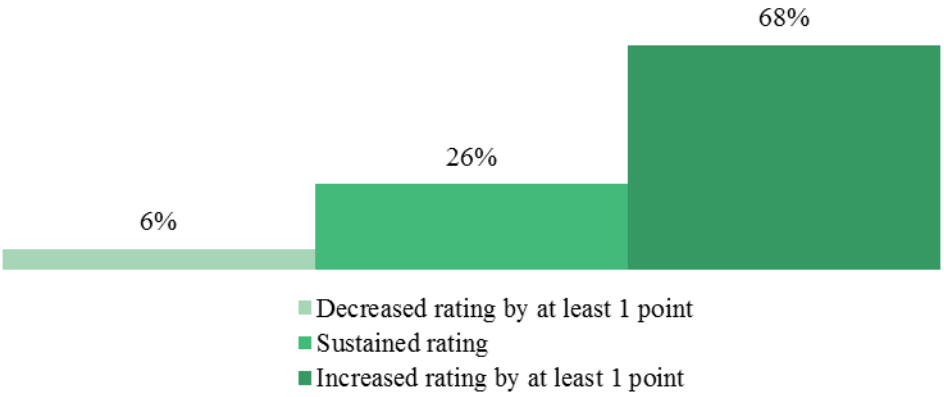
Activity participation significantly increased awareness for which fruits, nuts and vegetables are considered Oregon specialty crops.



As demonstrated above, many individuals felt more aware following participation. Because respondents were selecting ratings on a Likert-style scale, shifts in responses could vary in degree (no points to five points) and direction (positive or negative). Data was matched to determine positive and negative shifts between post and retrospective-pre ratings. The largest shift was an increase in awareness from retrospective pre to post, as seen in Figure 7.

FIGURE 7: CHANGE IN AWARENESS OF WHAT IS CONSIDERED A SPECIALTY CROP AFTER ACTIVITY PARTICIPATION

Though to varying degrees, a significant percentage of respondents reported an increased awareness of what fruits, vegetables, nuts and plants are considered Oregon specialty crops.



SEASONALITY OF OREGON SPECIALTY CROPS

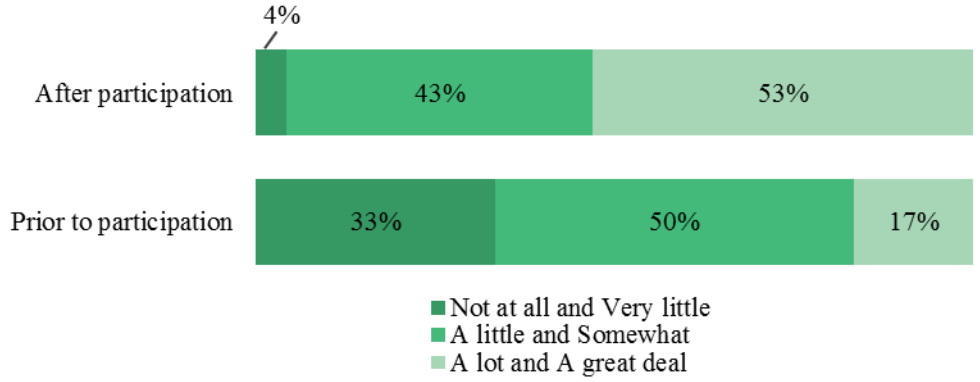
Beyond a general awareness of specialty crops and local crops, was an interest in measuring what participants knew about specialty crop seasonality. Therefore, the next pairing sought to elicit what visitors knew about seasonality of Oregon specialty crops.

CONFIDENCE TALKING ABOUT SPECIALTY CROP SEASONALITY

As a means of measuring awareness, respondents were asked to rate how confident they would be talking with another adult about the different seasons various specialty crops are harvested in. The mean rating for all responses after activity participation was 3.84 (N=186). When asked to imgaine how they would have respondend prior to participation, the mean rating was 3.09 (N=185). The change in means was statistically significant, **p** = .000. Figure 8 shows the distribution of responses for how participants answered post-activity participation and how they imagined they would answer prior to participation.

FIGURE 8: POST/PRE COMPARATIVE FOR CONFIDENCE DISCUSSING SPECIALTY CROP SEASONALITY

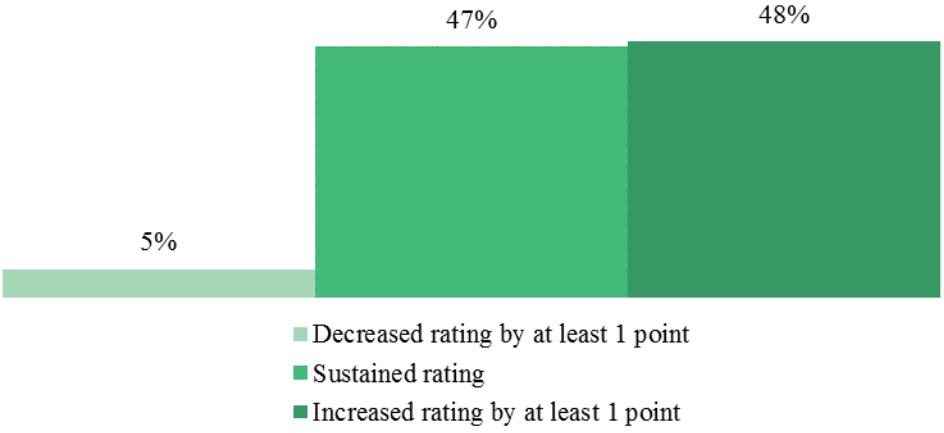
A significant number of respondents increased confidence discussing seasonality of specialty crops after particiaption.



As demonstrated above, many individuals felt more confident following participation. Because respondents were selecting ratings on a Likert-style scale, shifts in responses could vary in degree (no points to five points) and direction (positive or negative). Data was matched to determine positive and negative shifts between post and retrospective-pre ratings. Figure 9 showcases how ratings changed following activity participation.

FIGURE 9: CHANGES IN CONFIDENCE LEVELS DISCUSSING SEASONALITY

Almost equal percentages of participants increased, to varying degrees, or sustained confidence levels discucssing specialty crop seasonality.



INTEREST AND MOTIVATION FOR PURCHASING OREGON SPECIALTY CROPS

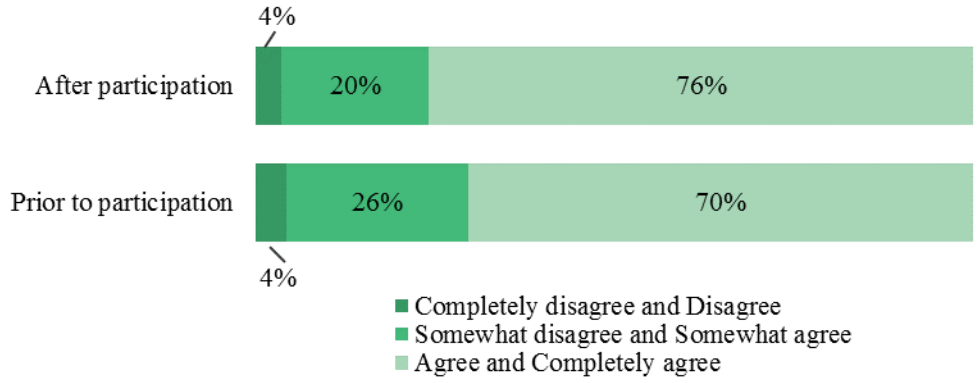
The survey concluded by asking respondents the extent to which they agreed with six paired statements related to purchasing behaviors, interest and motivations. These questions aimed to explore how interested participants were in purchasing locally, how this interest may impact their purchasing decisions and what may motivate them to purchase locally, before and after participation in the activity.

WHEN I GO TO THE GROCERY STORE, I WANT TO KNOW WHERE MY FOOD WAS PRODUCED

The first pair of prompts asked respondents to share the extent to which they agreed with the statement, "When I go to the grocery store, I want to know where my food was produced," after their participation in the activity. The mean rating for all responses after activity participation was 5.00 (N=166). When asked how they would have responded prior to their participation in the activity, the mean rating was 3.09 (N=165). The change in means was statistically significant, **p** = .005. Figure **10** shows the distribution of responses for how participants answered post-activity participation and how they thought they would answer prior to participation.

FIGURE 10: PRE/POST COMPARATIVE FOR INTEREST IN KNOWING WHERE FOOD WAS PRODUCED WHEN GROCERY SHOPPING

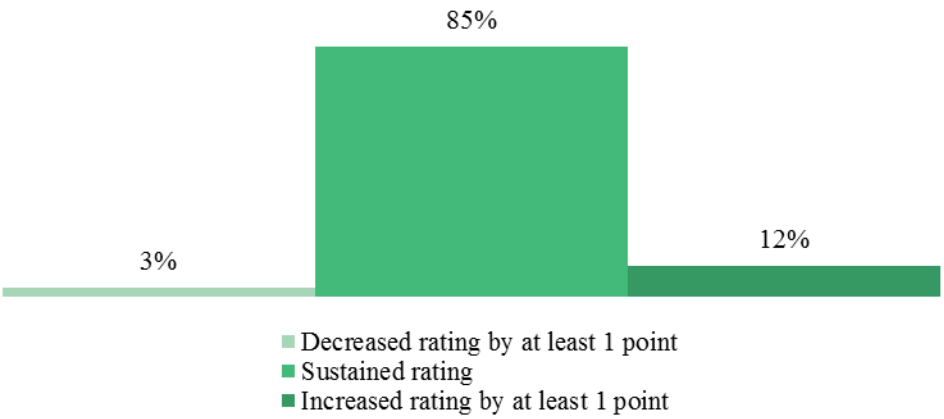
Activity participation significantly increased general agreement with wanting to know where food was produced.



Many individuals were interested in knowing where their food was produced following activity participation. Because respondents were selecting ratings on a Likert-style scale, shifts in responses could vary in degree (no points to five points) and direction (positive or negative). Data was matched to determine positive and negative shifts between post and retrospective-pre ratings. Below, Figure 11 showcases how ratings changed following activity participation.

FIGURE 11: CHANGES IN INTEREST FOR KNOWING WHERE FOOD IS PRODUCED WHEN GROCERY SHOPPING

Though there was a significant increase in interest, many participants sustained their level of interest in knowing where their food is produced when grocery shopping.

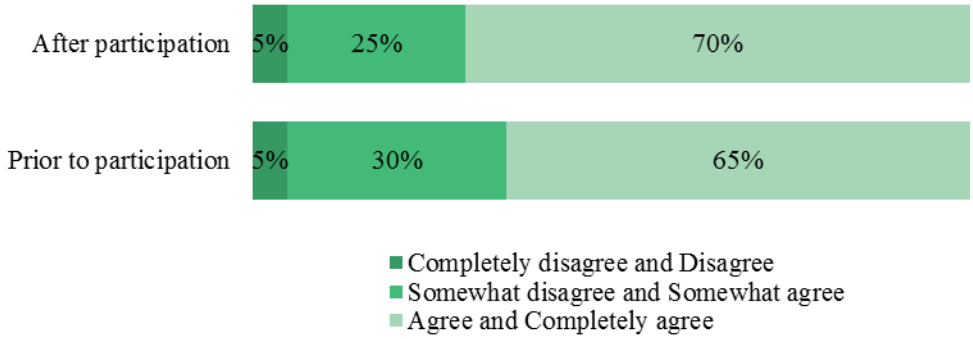


KNOWING WHERE MY FOOD IS PRODUCED PLAYS A ROLE IN MY DECISION TO PURCHASE IT

The second pair of prompts asked respondents to share the extent to which they agreed with the statement, "Knowing where my food is produced plays a role in my decision to purchase it," after their participation in the activity. The mean rating for all responses after activity participation was 4.79 (N=165). When asked to imgaine how they would have respondend prior to participation, the mean rating was 4.70 (N=164). The change in means was not statistically significant, **p** = .064. Figure 12 shows the distribution of responses for how participants answered post-activity participation and how they imagined they would answer prior to participation.

FIGURE 12: PRE/POST COMPARATIVE FOR DECIDING TO PURCHASE FOOD BASED ON WHERE IT WAS PRODUCED

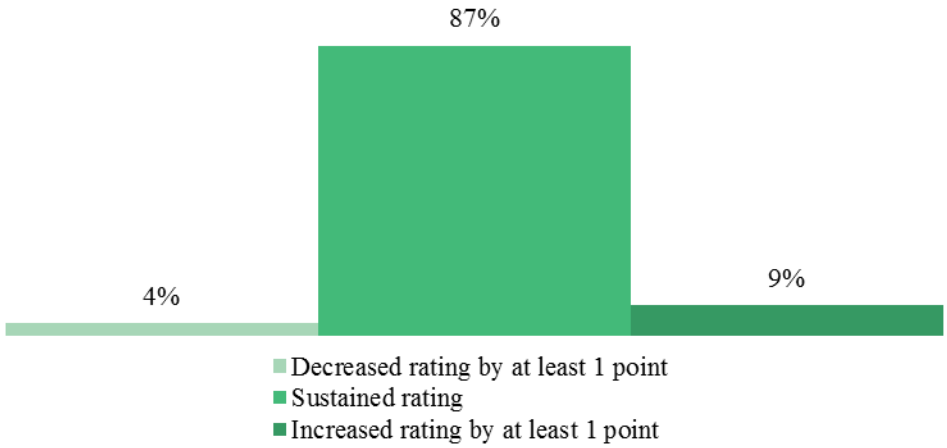
Though not significant, there was a slight increase in general interest in knowing where food is produced when purchasing after activity participation.



Because respondents were selecting ratings on a Likert-style scale, shifts in responses could vary in degree (no points to five points) and direction (positive or negative). Data was matched to determine positive and negative shifts between post and retrospective-pre ratings. Below, Figure 13 showcases how ratings changed following activity participation.

FIGURE 13: CHANGE IN MOTIVATION TO KNOW WHERE FOOD IS PURCHASED PRIOR TO PURCHASE

Most participants sustained interest and motivation to purchase food based on where it was produced after Farm to Science activities.

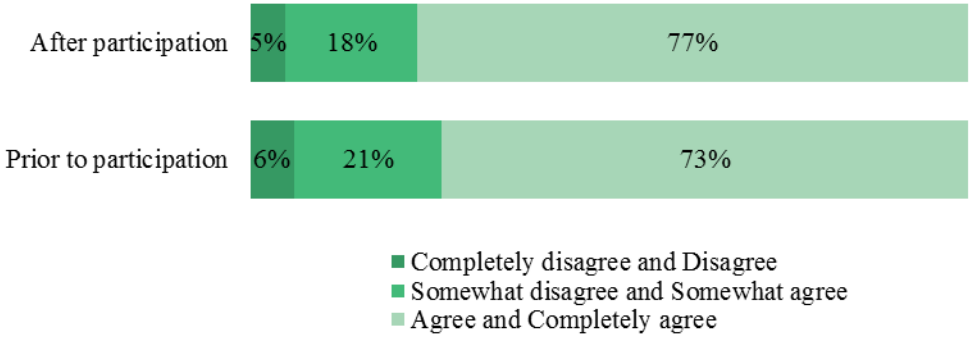


I TRY TO PURCHASE FRUIT, VEGETABLES, NUTS AND PLANTS THAT ARE LOCAL TO OREGON

The third pair of prompts asked respondents to share the extent to which they agreed with the statement, “I try to purchase fruit, vegetables, nuts and plants that are local to Oregon,” after their participation in the activity. The mean rating for all responses after activity participation was 4.91 (N=164). When asked to imgaine how they would have respondend prior to participation, the mean rating was 4.84 (N=165). The change in means was statistically significant, $t(162) = 1.641$, $P < 0.0005$. Figure 14 shows the distribution of responses for how participants answered post-activity participation and how they imagined they would answer prior to participation.

FIGURE 14: PRE/POST COMPARATIVE IN INTEREST IN PURCHASING FRUIT, VEGETABLES, NUTS AND PLANTS LOCAL TO OREGON

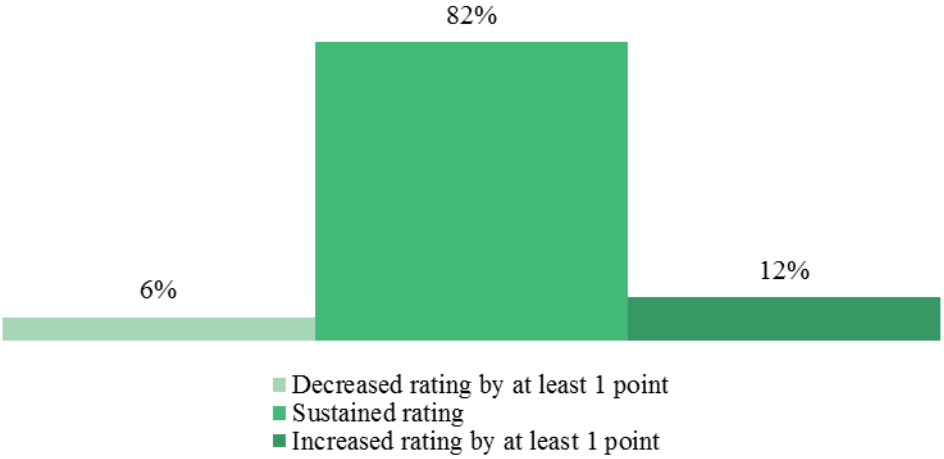
Though to different extents, almost the same percentage of respondents indicated they agreed with the statement both after and prior to activity participation.



As demonstrated above, most individuals have been and continue to be interested in purchasing food local to Oregon. Because respondents were selecting ratings on a Likert-style scale, shifts in responses could vary in degree (no points to five points) and direction (positive or negative). Data was matched to determine positive and negative shifts between post and retrospective-pre ratings. Figure 15 showcases how ratings changed following activity participation.

FIGURE 15: CHANGES IN INTEREST IN PURCHASING FRUIT, VEGETABLES, NUTS AND PLANTS LOCAL TO OREGON

Most participants sustained their already high levels of interest purchasing specialty crops local to Oregon.

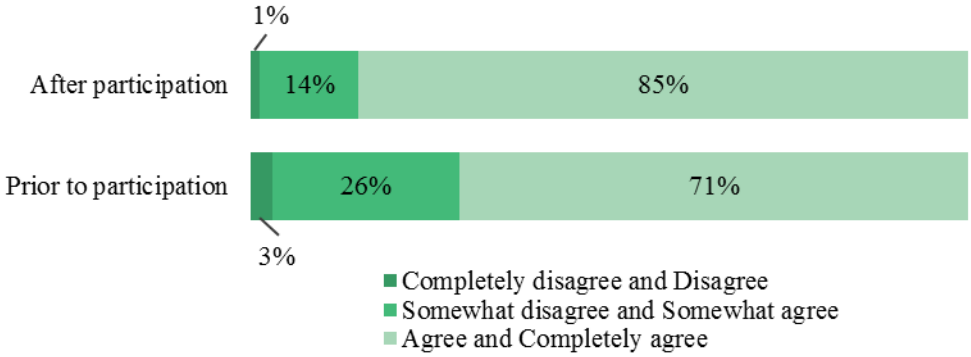


WHEN I GO GROCERY SHOPPING, I WILL THINK ABOUT IF THE FOOD I'M BUYING IS IN SEASON

The fourth pair of prompts asked respondents to share the extent to which they agreed with the statement, "When I go grocery shopping, I will think about if the food I'm buying is in season," after their participation in the activity. The mean rating for all responses after activity participation was 5.11 (N=165). When asked to imgaine how they would have respondend prior to participation, the mean rating was 4.86 (N=165). The change in means was statistically significant, **p** = .000. shows the distribution of responses for how participants answered post-activity participation and how they imagined they would answer prior to participation.

FIGURE 16: PRE/POST COMPARATIVE OF INTEREST IN FOOD SEASONALITY WHEN GROCERY SHOPPING

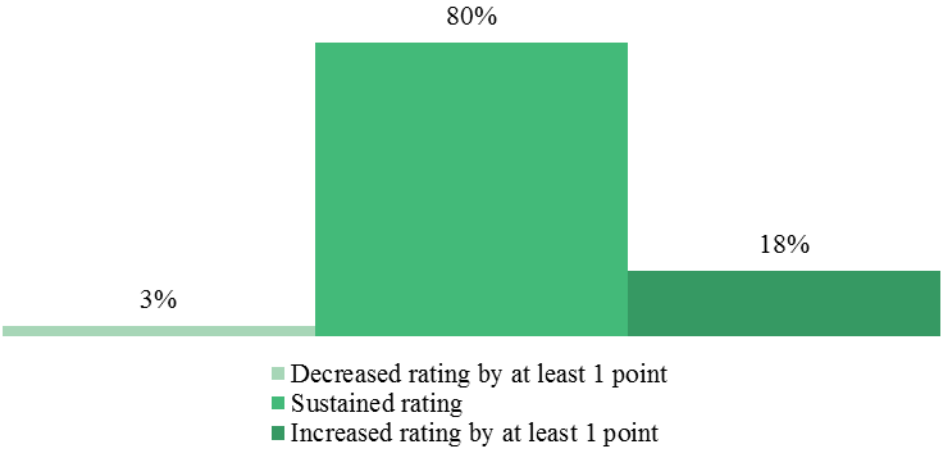
The largest increase was in the number of respondents who agreed to having a general interest in knowing if the food they purchase is in season after activity participation.



As demonstrated, most individuals agreed that activity participation has made them more interested in considering food seasonality when grocery shopping. Because respondents were selecting ratings on a Likert-style scale, shifts in responses could vary in degree (no points to five points) and direction (positive or negative). Data was matched to determine positive and negative shifts between post and retrospective-pre ratings. Below, Figure 17 showcases how ratings changed following activity participation.

FIGURE 17: CHANGE IN INTEREST IN IF FOOD IS IN SEASON WHEN PURCHASING

Though some participants increased intrest in thinking about if their food is in season, most participants sustained their already high levels of interest.



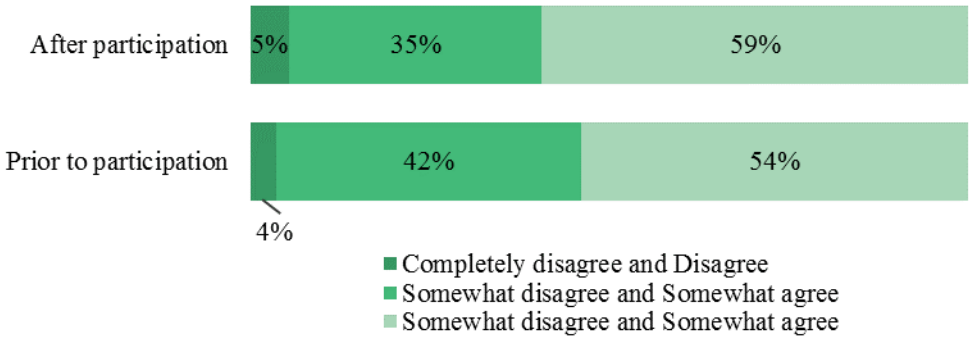
I ADAPT MY GROCERY LIST BASED ON WHAT FOODS ARE IN SEASON

The fifth pair of prompts asked respondents to share the extent to which they agreed with the statement, “I adapt my grocery list based on what foods are in season,” after their participation in the activity. The mean rating for all responses after activity participation (N=165) was 4.68. When asked to imgaine how they would have respondend prior to participation, the mean rating was (N=165) 4.59. The change in means was not statistically significant, **p** = .045. Figure 18 shows

the distribution of responses for how participants answered post-activity participation and how they imagined they would answer prior to participation.

FIGURE 18: POST/PRE COMPARATIVE FOR MOTIVATION TO ADAPT GROCERY LIST BASED ON SEASONALITY

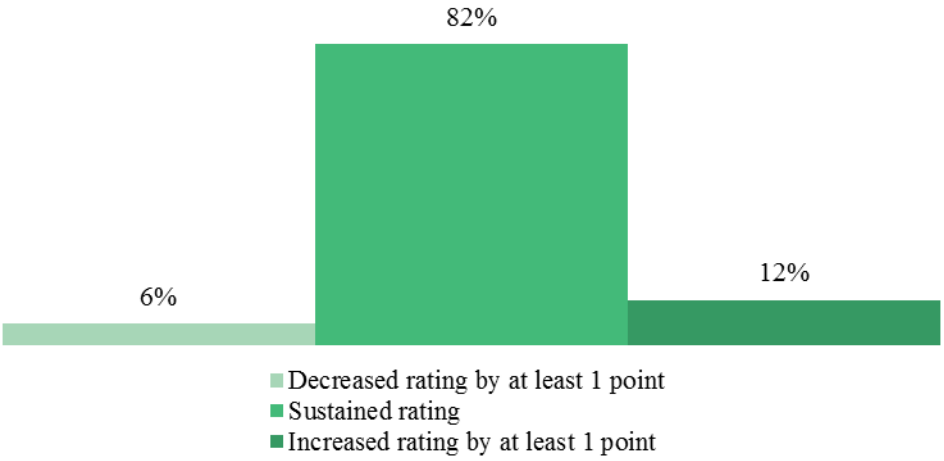
Some respondents were already motivated to adapt grocery lists based on seasonality and maintained this motivation after participation in the activity.



Because respondents were selecting ratings on a Likert-style scale, shifts in responses could vary in degree (no points to five points) and direction (positive or negative). Data was matched to determine positive and negative shifts between post and retrospective-pre ratings. Below, Figure 19 showcases how ratings changed following activity participation.

FIGURE 19: CHANGE IN MOTIVATION TO ADAPT GROCERY LIST BASED ON SEASONALITY

Most participants intend to sustain existing habits of adapting grocery lists based on seasonality.



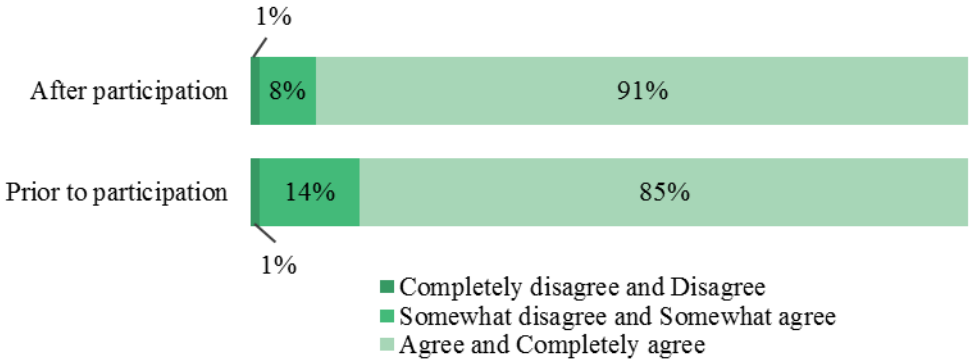
PURCHASING FOOD AND PLANTS PRODUCED LOCALLY IS OF VALUE TO THE OREGON AGRICULTURAL COMMUNITY

The sixth and final pair of prompts asked respondents to share the extent to which they agreed with the statement, “Purchasing food and plants produced locally is of value to the Oregon agricultural community,” after their participation in the activity. The mean rating for all responses after activity participation was 5.44 (N=165). When asked to imgaine how they would have

respondend prior to participation, the mean rating was 5.27 (N=165). The change in means was statistically significant, **p** = .000. Figure 20 shows the distribution of responses for how participants answered post-activity participation and how they imagined they would answer prior to participation.

FIGURE 20: PRE/POST COMPARATIVE FOR BELIEF THAT PURCHASING FOOD AND PLANTS PRODUCED LOCALLY IS OF VALUE

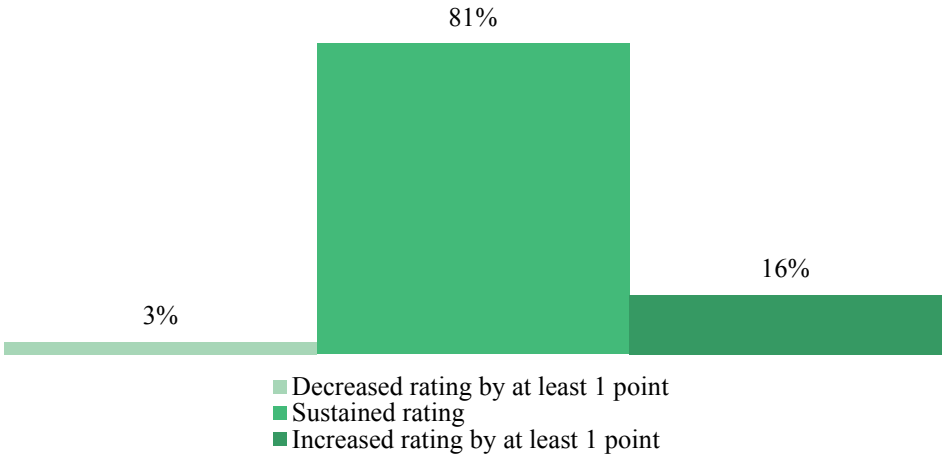
Almost all respondents believed, to varying degrees, that purchasing local food and plants is of value to the community and sustained this belief after program participation.



Because respondents were selecting ratings on a Likert-style scale, shifts in responses could vary in degree (no points to five points) and direction (positive or negative). Data was matched to determine positive and negative shifts between post and retrospective-pre ratings. Below, Figure 21 showcases how ratings changed following activity participation.

FIGURE 21: CHANGE IN BELIEF THAT PURCHASING FOOD AND PLANTS PRODUCED LOCALLY IS OF VALUE

Though some participants increased their belief that purchasing local is of value to the community, most participants sustained their already high levels of belief.



SUMMARY OF FINDINGS

The findings from this summative evaluation show that participants had varying degrees of interest and awareness around specialty crops, both generally and specific to Oregon, as well motivations for purchasing such products locally or in season prior to program participation. *Farm to Science* programing was able to build on these varying entry points and make significant impact by raising participants' awareness of what a specialty crops is, the types of crops and the seasonality of specialty crops in Oregon. When measuring awareness before and after activity participation, the study revealed that participants typically felt they had a higher level of awareness of specialty crops after the experience. When describing their baseline awareness prior to participation, 50% claimed not to have any and 41% only claimed to have some.

Awareness specifically increased around understanding what a specialty crops is and what crops are native to Oregon. For example, 84% of respondents reported that participating in *Farm to Science* activities shaped their awareness in some capacity. At 69%, there was a significant increase in awareness among respondents of what crops are local to the state. Activities also impacted participants' confidence in talking about specialty crops. A significant number or respondents (74%) reported an increase in comfort explaining to other adults what a specialty crop is. For more nuanced topics, such as crop seasonality, there was a 48% increase in comfort talking about it.

Prior to experiences with *Farm to Science* activities, participants already had relatively high levels of agreement with statements around their motivation, behaviors and understanding of the value related to purchasing crops locally and when in season. Across the various prompts, mean ratings fell between "Somewhat agree" (4) and "Completely agree" (6). Rather than significantly impacting these already-high levels of agreement, activities were successful at sustaining them. Sustainment levels across all prompts fell between 80-87%.

DISCUSSION

The overarching focus of *Farm to Science* activities was to increase awareness of Oregon specialty crops, and interest in purchasing Oregon specialty crops. Summative evaluation revealed that participants who interacted with *Farm to Science* were able to increase awareness and interest of specialty crops after activity participation. This held true for respondents who claimed to have some awareness of the specialty crops industry, as well as for those who admittedly had little to none. A deeper look at some of the pre/post paired questions and prompts revealed a significant shift or increase in interest and awareness, while others provided evidence of sustained levels of interest and awareness following activity participation. Additionally, summative evaluation confirmed that many participants exhibit desirable purchasing behaviors that are beneficial to the Oregon agricultural community. These include the intent to purchase locally, an interest in purchasing seasonally and agreement that purchasing locally is of value to sustaining this community.

WHERE *FARM TO SCIENCE* ACTIVITIES MADE A SIGNIFICANT IMPACT

Questions related to specialty crop awareness were more likely to provide evidence of a statistically significant impact on participants than other questions were. Across these paired questions probing at awareness is a running theme of increasing confidence discussing various aspects of the specialty crop industry. Baseline concepts, such as what a specialty crop is, and more focused questions on the specific products which are included in the industry and the seasonality of the crops were explored in these questions. Significant increases in response to these questions validate claims made at the beginning of the survey about activity participation increasing their awareness of specialty crops. Furthermore, significant increases for more basic awareness questions may indicate that this is the largest gap visitors have when approaching *Farm to Science* activities. That additional significant shifts occurred for more focused, nuanced aspects of the specialty crop industry may confirm that activities were well-structured to support visitors as they learned more about specialty crops. These added shifts may also mean that this is a good starting point for visitors who have a stronger understanding of specialty crops.

FARM TO SCIENCE ACTIVITIES HELPED SUSTAIN INTEREST

Though some of the paired prompts did not return a statistically significant change between post and retrospective pre responses, findings do provide valuable information for consideration. The prompts in reference had a common theme of behavior and motivation related to purchasing locally and purchasing seasonally. Rather than encouraging visitors towards desired purchasing behaviors or changing shopping motivation, *Farm to Science* activities may have helped sustain what the data has shown to be already-strong levels of intentionality and motivation. One conclusion from this might be that these desired behaviors pre-date participation in *Farm to Science* activities for many participants. It is worth noting that this sustained belief may also be a reflection of the type of person who chooses to attend a food science-related activity and may already be of the inclination to be interested and motivated towards desired purchasing behaviors.

CONSIDERATIONS

Aside from successful Farm to Science activity design, there may have been some external contributing factors to the impacts made. For example, all individuals self-selected to participate in the *Farm to Science* activity prior to learning about the evaluation. Following participation, individuals were asked to complete a survey; the respondents who accepted are reflected in this summative evaluation. Individuals who initially choose to participate in *Farm to Science* activities and subsequently participate in a related study may be more inherently interested in the topic

than other general visitors to OMSI. Further, and as mentioned in the project application, residents in Portland, Oregon have a reputation for mindful purchasing habits (local, organic produce and meats); it may be that general visitors have strong tendencies towards an interest or awareness in the specialty crop industry. With these considerations, it becomes interesting to think about the potential for similar programs and events related to specialty crops:

- What kind of an impact could *Farm to Science* activities have in other communities or with a more diverse group of participants?
- Given that participants generally come to activities with some understanding of what specialty crops are and a tendency to purchase locally, what other opportunities between the *Farm to Science* initiative and ODA might deepen the interest, behaviors and intentions of this existing group through more in-depth programs?
- What other purchasing outcomes does ODA hope to see from the Oregon population related to purchasing? In what ways can future *Farm to Science* programming or other OMSI partnerships with ODA build on the outcomes explored in this summative evaluation?

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Summative Evaluation Report

Supplement to the *Farm to Science Programming and Events* Summative Evaluation

November 2016

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PROJECT BACKGROUND AND GOALS

In 2014, the Oregon Museum of Science and Industry (OMSI) received funding from the Oregon Department of Agriculture (ODA) Specialty Crop Block Grant Program (SCBGP), to enhance the competitiveness of Oregon's specialty crops. OMSI submitted an application for a season of activities which aimed to address the need for increased awareness of the breadth and diversity of crops grown throughout the state. The application advocated that a more aware and educated consumer base will allow the specialty crop industry to continue to grow. With funding, OMSI was able to provide engaging and far-reaching educational experiences for families to learn about the range, diversity, and value of Oregon specialty crops. The hope was that activity participants would become consumers who make informed and healthful food purchasing choices. OMSI worked in close partnership with a group of local specialty crop producers and advocacy organizations to increase public awareness of and interest in Oregon's vibrant specialty crop industry, with the hope of increasing specialty crop sales.

The *Farm to Science* season of activities took place during the height of the 2015 growing season (June-October, 2015). Activities which contributed to the *Farm to Science* season included: *OMSI After Dark*, Food Science Demos, *Meet a Farmer* Tabling, Food Science Labs, Science Pubs, Better Bites, and Harvest Fest. Activities offered through *Farm to Science* sought to benefit the Oregon specialty crop industry, with its focus on raising the visibility of eligible specialty crops through a variety of education methods and partnerships. The *Farm to Science* project was intentionally designed to target and support a range of organizations, including producers, farmers, commissions, and industry advocates.

The OMSI Research and Evaluation team conducted a summative evaluation study of the initiative with visitors throughout the summer in 2015. A few months later, OMSI sought to amend its award with a no-cost extension into 2016. It was identified that Harvest Fest provided an opportunity for OMSI to strengthen relationships with specialty crop vendors across Oregon, increase awareness of specialty crops and specialty crop seasonality with the public, and test food festivals as a platform for specialty crop engagement on a larger scale. Prolonging the grant period allowed OMSI to repeat Harvest Fest in October 2016, which is the focus of this report, giving the team a full year to prepare. Similar to the first grant year, this event date was selected to utilize as many partners as possible, catching vendors at the end of the season when most of the area's major farmer's markets have ended.

EVALUATION PURPOSE

The purpose of this supplemental evaluation report is to build on findings from 2015's summative evaluation of the ODA *Farm to Science Initiative*, and look deeper at where activities were sustaining high levels of desired behaviors. Research has proven that there is a link between involvement at food festivals and participant purchase of organic foods (Organ, Koenig-Lewis and Probert 2015). This year's Harvest Fest provided a unique opportunity to conduct an exploratory study which responds to this research by using program evaluation to put a focus on the relationship between food festivals and the purchase of specialty crops. Research also shows that this relationship can be measured via emotional response to participation and shifts in attitude (Lee and Yun 2015). As such, this evaluation sought to learn from Harvest Fest visitors their emotional motivations for purchasing specialty crops, and how participation at the event contributes to these motivations. Specific study aims also sought to look at the emotional connection to locality of specialty crops (which is where most respondents indicated sustained behavior in the 2015 summative report).

EVALUATION QUESTIONS

- What does engagement with specialty crops look like at Harvest Fest?
  - *Measure of Success:* Many visitors will report discussing food preparation, knowledge sharing, and taking part in practical demonstrations.
- What does involvement with specialty crops look like at Harvest Fest?
  - *Measure of Success:* Many visitors will report personal concern about where their food is sourced from.
- What kind of emotional responses are Harvest Fest participants having towards the purchase of specialty crops?
  - *Measure of Success:* Most visitors will report experiencing positive emotions *(*happy, excited, pleased, content, pleasantly surprised) while at Harvest Fest.
  - *Measure of Success:* Very few visitors will report that they had a negative emotional experience (annoyed, disappointed, unfulfilled, frustrated) while at Harvest Fest.

METHODOLOGY

STUDY DESIGN

All information was self-reported by participants through an exit survey after attending Harvest Fest. Respondents were asked to recall their engagement and involvement with Harvest Fest activities, their emotional response to Harvest Fest, their awareness of and interest in specialty crops, and their intended purchasing behavior regarding specialty crops following attendance.

DATA COLLECTION

Harvest Fest occurred on Sunday, October 2, 2016, from 10 AM to 4 PM. Though the event was free, this date was selected to coincide with OMSI's *$2 Sunday*. On this day, admission to OMSI is reduced in an effort to make the museum more accessible. Harvest Fest was held in a vacant lot on OMSI's property. This lot is situated on the southern end of OMSI's campus, along the waterfront and near public transportation hubs. Appendix A provides a map of the lot, including the entrances/exits where data collectors were stationed. Data collection occurred between 1-4 PM, when event participation was anticipated to be the highest. A total of four data collectors were present, with two data collectors per entrance/exit.

Data was collected via a paper exit survey. As an adult (those who appeared to be 18 or older) walked towards the Harvest Fest exits, a data collector approached and asked if they might be interested in participating in a short survey. Data collectors outlined the purpose of the survey, including how the information will be used (*to gather feedback on their experience to help us make future Harvest Fests better, both for the visitor and for communicating about Food Science initiatives*), and asked the individual if they agreed to participate. Those who verbally agreed were given the paper survey to complete.

In addition to this study's data collection efforts, additional data collection was occurring in OMSI's lobby for an unrelated study. To minimize impact on the visitor experience, study leads coordinated efforts and distributed stickers to survey participants and their visitor groups. By asking participants to wear these stickers, data collectors across both projects were able to identify groups that had already provided data and to consider this when approaching them. As such, for Harvest Fest data collection, once a visitor finished completing a survey, the data collector thanked the participant, and asked them if they were heading into the museum. If the respondent stated that they were, they were offered a sticker to indicate their study participation. If they stated that they were not, a sticker was not offered. Data collectors for the Harvest Fest study shared that they did not see anyone wearing a data sticker prior to their participation in this study.

Visitors were only identified by survey number—demographic information (age, gender, racial and ethnic identity) was documented, but identifiable information, including the name or address of the visitor, was not requested.

SAMPLE

The overall target sample size was 30–45 adult participants; however, the actual sample size exceeded this goal with 115 responses. Among the 115 responses, 110 surveys were fully completed and 5 were partially completed.

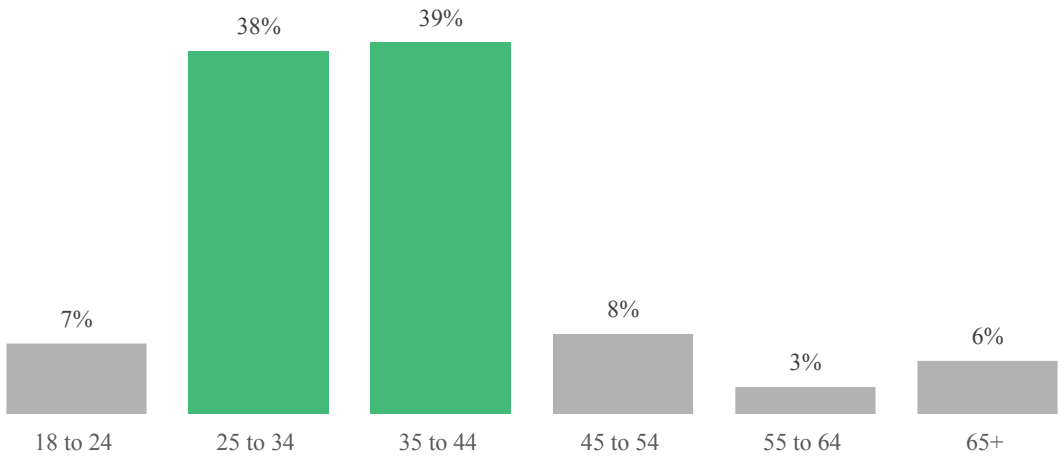
Demographics were optional and collected after participants completed the survey. Most people (95%, *n* = 109) opted to provide demographic information.

Among the sample, 58% (*n* = 67) identified as female, 30% (*n* = 35) identified as male, four individuals indicated that they identified with multiple genders, and one person indicated that they preferred not to answer. There were eight no-responses to this question.

Participants were asked to indicate their age range. Responses are shown in Figure 22.

FIGURE 22: AGE RANGES OF RESPONDENTS, N=109

Over two-thirds of respondents were between 25-44 years old.



Respondents were also asked to self-report which ethnic and racial groups they identified with. Regarding self-identified ethnic identity, where four options were given and respondents could choose one, a majority of respondents (79%) self-identified as “Not Hispanic of Latino,” some (12%) preferred not to answer or weren’t sure, and a few (9%) identified as “Hispanic or Latino.” Respondents were given seven options to select for racial identity. Among the options, most (83%) selected “White.” Almost 10% of respondents identified as “Asian.” Nearly 8% indicated that they either preferred not to answer, or were not sure. Cumulatively, the remaining ethnic categories (“American Indian or Alaska Native,” “Black or African American,” and “Native Hawaiian or Other Pacific Islander”), were represented by 5% of respondents. Respondents could select more than one racial identity, which is why percentages exceed 100%.

Finally, participants were asked to share whether or not they were OMSI members. Among the respondents, 67% were not OMSI members. Accordingly, the remaining 33% of respondents to the question indicated they held OMSI membership.

FINDINGS

The aim of this supplemental summative evaluation was to measure how positive emotional engagement with Harvest Fest supported the extent to which *Farm to Science* met its goals to increase participants' awareness of Oregon specialty crops and their interest in purchasing Oregon specialty crops. Survey questions were designed to better understand what attendees were doing at Harvest Fest, how aware respondents were of what products were considered specialty crops, and to gauge interest and motivation in purchasing Oregon specialty crops.

Across most questions, respondents were given a 6-point Likert-style scale to complete, with 1 being low and 6 being high. Scales measured for self-reported awareness levels, agreement levels, confidence levels, interest levels and degrees of intentionality.

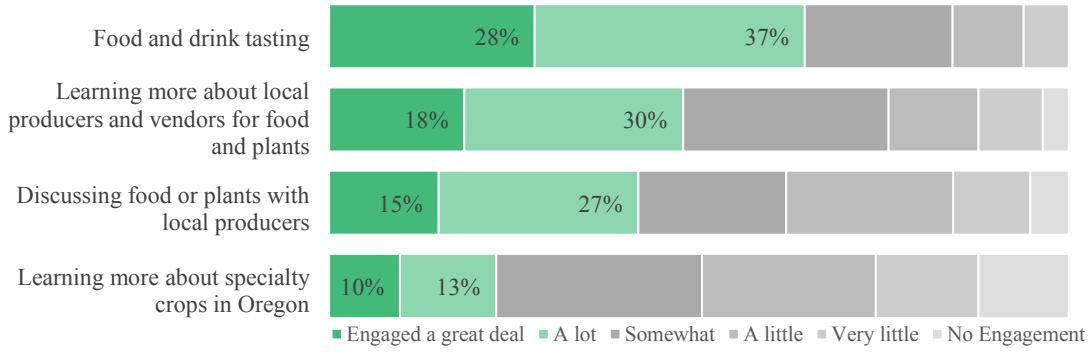
In the following sections, the findings from across the survey questions are grouped by Harvest Fest engagement, emotional engagement, specialty crop awareness, and intended purchasing behaviors.

RESPONDENT ACTIVITY AT HARVEST FEST

The project team was interested in seeing which of the various ways to interact with Harvest Fest were the most utilized by visitors. Respondents were given a list of several options and asked to indicate on a 1–6 scale (1 = No Engagement, 6 = Engaged a great deal), the extent to which they interacted with each option. Below, Figure 23 and Figure 24 respectively show the activities most and least engaged with.

FIGURE 23: ACTIVITIES RESPONDENTS INDICATED THEY MOST INTERACTED WITH, N=115

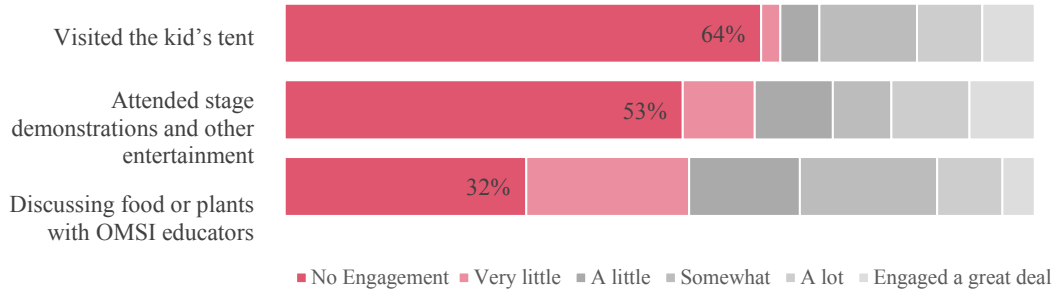
Most respondents deepened their engagement with vendors beyond sampling products to learning about where to purchase local foods and plants, as well as Oregon specialty crops.



At least 65% of respondents participated in introductory behaviors, such as food and drink tasting with event vendors. Many visitors went on to deepen this engagement by interacting with vendors to learn more about the products they were selling. Though many visitors interacted with specialty crop vendors, only 23% of survey respondents indicated that learning about specialty crops was something they actively did while at Harvest Fest.

FIGURE 24: ACTIVITIES RESPONDENTS INDICATED THEY LEAST INTERACTED WITH, N=115

More than two-thirds of respondents did not interact with the kid's tent, and more than half did not attend timed experiences on the event stage.

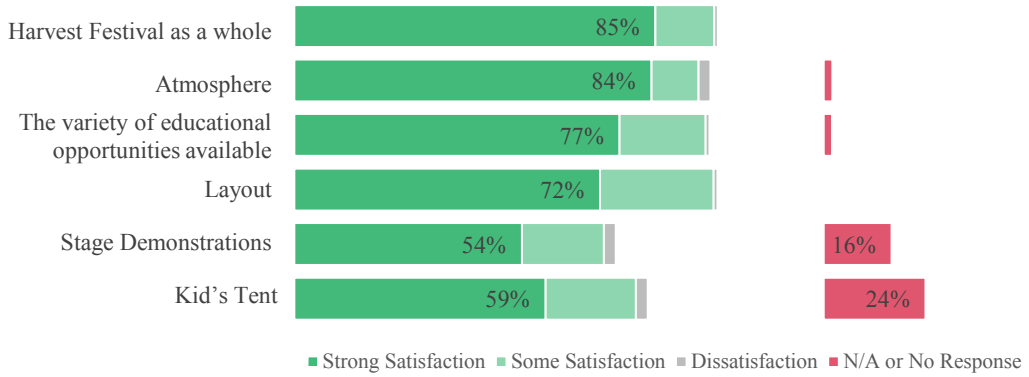


Nearly two-third of respondents indicated that they did not interact with the kid's tent while at Harvest Fest. While probes for motivation were not included, a deeper look at the data reveals that nearly half of visitors (45%, *n* = 52 of 115) were in adult-only groups. Of those fifty-two visitors, 94% (*n* = 49) did not visit the tent at all. It may be that adult-only groups intentionally avoided the kid's tent because they did not have any youth in their group.

Paired with asking respondents what they did at Harvest Fest was a question asking them how satisfied they were with event activities. Respondents were provided a list of event features, and asked again to rate on a 1–6 scale (1 = Complete dissatisfaction, 6 = Complete satisfaction). Findings are shared in Figure 25, and grouped to show Strong Satisfaction (5 and 6 rating), Some Satisfaction (3 and 4 rating), and Dissatisfaction (1 and 2 rating). Many respondents opted to leave select activities blank or write in that this was something they had not participated in. As such, a fourth category for reporting was created: N/A or No Response.

FIGURE 25: RESPONDENTS' SATISFACTION WITH VARIOUS HARVEST FEST FEATURES, N=108

Though not as many visitors engaged with stage demonstrations or the kid's tent, respondents still felt satisfied with the Harvest Fest experience and other educational opportunities.



Respondents were very satisfied with Harvest Fest, with 99% reporting being strongly to somewhat satisfied with the event as a whole. The second most satisfactory experience was the variety of educational opportunities available, with 97% of respondents reported being strongly to somewhat satisfied with. That 24% of respondents indicated they did not engage with the kid's

tent, and 16% indicating the same for stage demonstrations, supports previous interpretations of data about why they may have had lesser engagement.

Respondents were given the opportunity to explain what they found to be satisfactory about their visit. Roughly a third of participants (80%, *n* = 36) opted to provide written feedback. Comments highlighted many topics, but can be categorized as satisfactory, neutral, and dissatisfactory, with most comments erring towards satisfactory.

TABLE 1: ASPECTS OF HARVEST FEST WHICH WERE OR WERE NOT SATISFACTORY

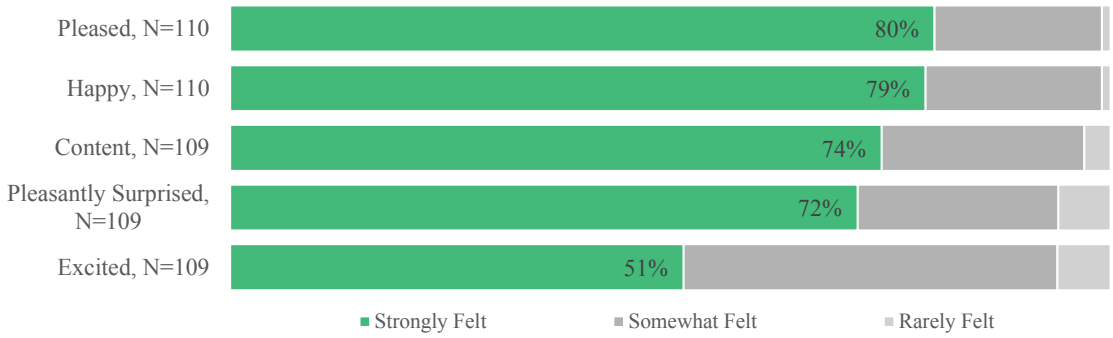
Satisfactory	Neutral	Dissatisfactory
Vendor variety. Responses were generally positive, though there was a clear interest in having a greater variety represented. **Fun.** General comments indicate that the event was enjoyable and that they would return again. **Educational.** Activities were of value, and occasionally called out by name. However, there is an interest for more activities that are appropriate for children under 3.	**Advance notice.** A handful of participants wished they knew about Harvest Fest in advance, sharing that stumbling upon the event impacted the amount of time they were able to spend there.	**Event setup**. Feedback highlighted difficulties navigating the gravel, hearing the stage demonstrations, and that the event felt small.

EMOTIONAL ENGAGEMENT WITH HARVEST FEST

Beyond knowing what activities drew respondents and how satisfactory Harvest Fest was, there was an express interest in learning the kind of emotional reactions they were having while there. Research has shown that positive emotional experiences are a stronger indicator of whether a person will follow through with expressed intended behaviors at food festivals (Organ, Koenig-Lewis and Probert 2015). As encouraging Harvest Fest attendees towards continued purchase of Oregon specialty crops is a project goal, emotional reactions were explored. Respondents were given a list of nine emotions which research has linked to being strong indicator behaviors, and asked to rate the extent to which they felt each emotion while at the event using a 1–6 scale (1 = Not at All, 6 = A Great Deal). Findings for the positive emotions are shared in Figure 26, and grouped to show Strongly Felt (5 and 6 rating), Somewhat Felt (3 and 4 rating), and Rarely Felt (1 and 2 rating).

FIGURE 26: EXTENT TO WHICH RESPONDENTS FELT POSITIVE EMOTIONS AT HARVEST FEST

Visitors had strong, positive emotional responses towards Harvest Fest. They enjoyed the event, but didn't necessarily find it to be exciting.

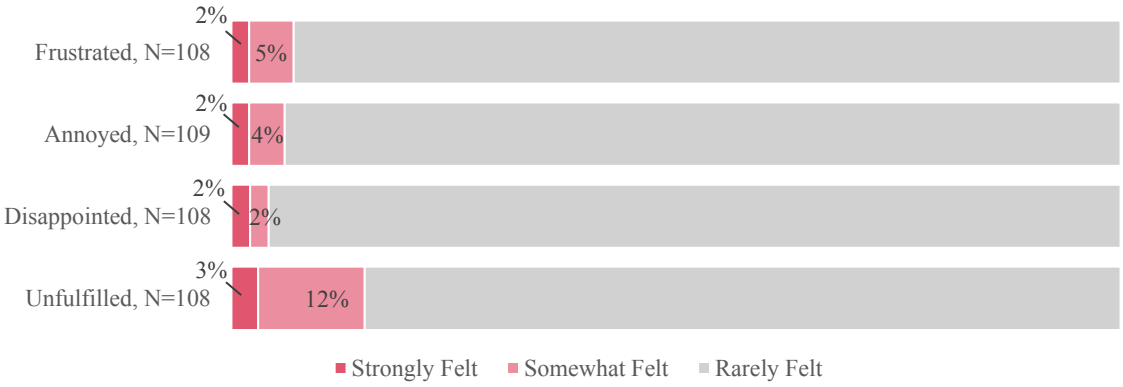


Overwhelmingly, respondents felt strong, positive emotions while at Harvest Fest. Ninety-nine percent of respondents indicated feeling pleased and happy at Harvest Fest, with nearly 80% strongly feeling those emotions. While the event was clearly enjoyable, responses do indicate that it was not always exciting for respondents, as 6% expressed feeling that emotion rarely or never.

Findings for the negative emotions are shared in Figure 27, and grouped to show Strongly Felt (5 and 6 rating), Somewhat Felt (3 and 4 rating), and Rarely Felt (1 and 2 rating). In an effort to better illustrate differences between generally small percentages, the segments of the bar graph are not to scale.

FIGURE 27: EXTENT TO WHICH RESPONDENTS FELT NEGATIVE EMOTIONS AT HARVEST FEST

Visitors rarely, if at all, felt negative emotions while at Harvest Fest.



With the exception of feeling unfulfilled, most negative emotions were experienced to any extent by less than 7% of respondents. Fifteen percent (*n* = 16) indicated they felt unfulfilled, sometimes strongly so, while at Harvest Fest.

Respondents were given the opportunity to share when or why they felt any of the emotions. Only 53% (*n* = 24) opted to provide written feedback. Rather than using the comments as a place to

explore specific emotional responses, visitors used this as a place to notate their thoughts (often without context). Comments highlighted many topics, but can be categorized as things respondents liked and areas to improve.

TABLE 2: ASPECTS OF HARVEST FEST WHICH WERE OR WERE NOT SATISFACTORY

Things respondents liked	Areas to improve
• The general atmosphere and friendly nature of the event • The vendors and variety of products • The social opportunities available • That it was good for kids • That it was free • That it was a place to get information	• Easier navigation and smaller layout • That there be more than one food cart • Making the event more accessible with American Sign Language • More “featured vendors” than Pestaurant • The ability to buy items being demonstrated • More food science • It felt crowded

SPECIALTY CROP AWARENESS

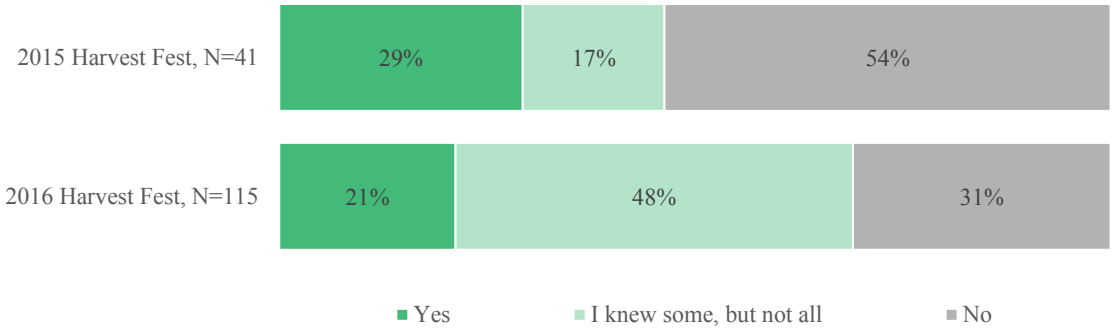
The aim of the overarching summative evaluation and this supplemental study was to measure the extent to which the project met its goals to increase participants’ awareness of Oregon specialty crops and their interest in purchasing Oregon specialty crops. Survey questions from the full summative study were designed to better understand how aware participants were of what products were considered specialty crops, basic comprehension of specialty crop seasonality, and to gauge interest and motivation in purchasing Oregon specialty crops. A few of these questions were repeated in this supplemental study. Doing so allows for a deeper look at how effective the entire Harvest Fest is in achieving these impacts. As appropriate, findings are shared in comparison to the 2015 Harvest Fest data. An important distinction between the two datasets is the difference in data collection methods. Data were collected at the 2015 Harvest Fest immediately after a participant interacted with an OMSI educator-led demo. Data were collected at the 2016 Harvest Fest as visitors were leaving the entire event.

To gather baseline knowledge of specialty crops prior to participation, participants were asked to respond to the definition of specialty crops.[3] Specifically, they were asked to indicate if this is the definition they would have used prior to participation. Figure 28 demonstrates that many respondents (69%, n = 78) had some awareness, or complete awareness, of what a specialty crop is, based on how much they felt they would have agreed with the ODA definition of a specialty crop, prior to their participation in activities.

[3] The definition used (United States Department of Agriculture, Agricultre Marketing Service n.d.): “Specialty crops can be any fruit or vegetable, tree nut, dried fruit, horticulture, and/or a nursery crop (including floriculture), excluding field and grain crops, oil seed crops, forage crops, and fiber crops. A specialty crop’s primary function has to be related to what it is (ex: food, medicinal purposes, and/or aesthetic gratification) in order to be considered specialty crops.”

FIGURE 28: FAMILIARITY WITH SPECIALTY CROP DEFINITION PRIOR TO HARVEST FEST

Respondents attending the 2016 Harvest Fest reported higher levels of familairity with the definition of a specialty crop prior to attending the festival than in 2015.

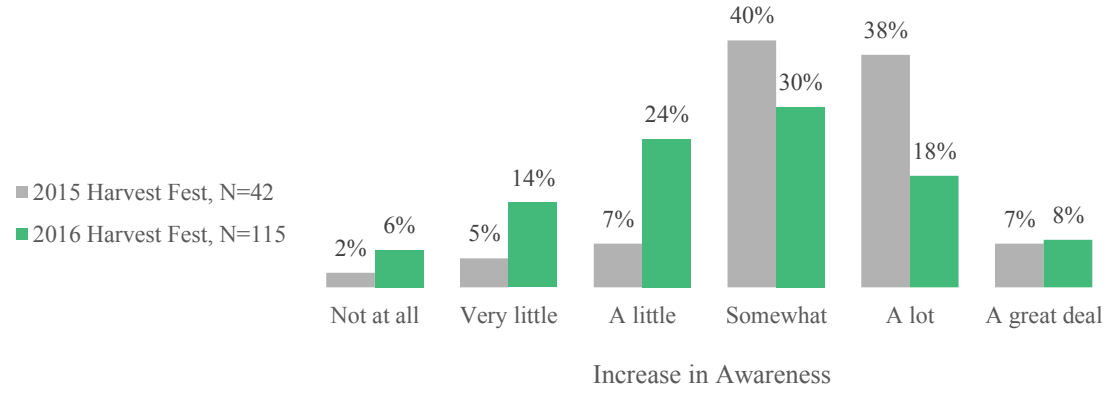


This number shows an increase over respondents to the 2015 Harvest Fest, where only 46% (*n* = 18) felt they would have agreed to some extent with the definition. People surveyed in the 2015 study were leaving facilitated demos by OMSI educators; this finding could mean that these individuals opted to participate in the demo specifically to learn more about the event and products represented.

The survey also asked respondents to indicate the extent to which the Harvest Fest shaped their awareness of what a specialty crop is.[4] Though to varying degrees, most respondents (80%, *n* = 92) indicated that attending Harvest Fest had a little to a great deal of impact on their awareness of what a specialty crop is; a total of 20% (*n* = 23) said it had very little or no impact. Figure 29 shares the distribution of responses in comparison to the 2015 Harvest Fest data.

FIGURE 29: AWARENESS OF SPECIALTY CROPS AFTER ATTENDING HARVEST FEST

Compared to the 2015 Harvest Fest, the 2016 Harvest Fest had less of an impact on respondents' awareness of what a specialty crop is.



At first glance it may appear that the 2015 Harvest Fest proved to be more effective at increasing respondents' awareness of a specialty crop. However, when considering that 68% of respondents to the supplemental study indicated that they felt they knew the definition of a specialty crop prior

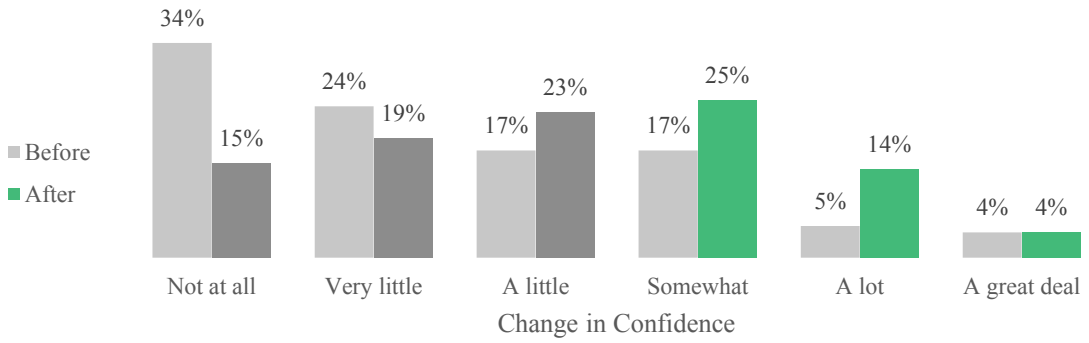
[4] The full summative study, conducted in 2015, asked respondents to indicate the extent to which participation in the *Farm to Science* activity shaped their awareness of what a specialty crop is.

to their attendance, it may mean that there was little for them to change, deepen, or increase during the 2016 event.

As a means of measuring awareness, respondents were asked if they felt more confident explaining what a specialty crop is to another adult after activity participation. Using a retrospective pre/post-test design, respondents were first asked to indicate their current level of confidence and then think back to what their confidence level would have been prior to attending Harvest Fest. They were given a 1–6 scale to use (1 = Not at all, 6 = A great deal). Figure 30 shows the distribution of responses across possible answer selections.

FIGURE 30: CONFIDENCE DISCUSSING SPECIALTY CROPS AFTER 2016 HARVEST FEST, N = 110

After attending Harvest Fest 2016, 43% of respondents felt at least somewhat confident explaining what a specialty crop is to other adults.

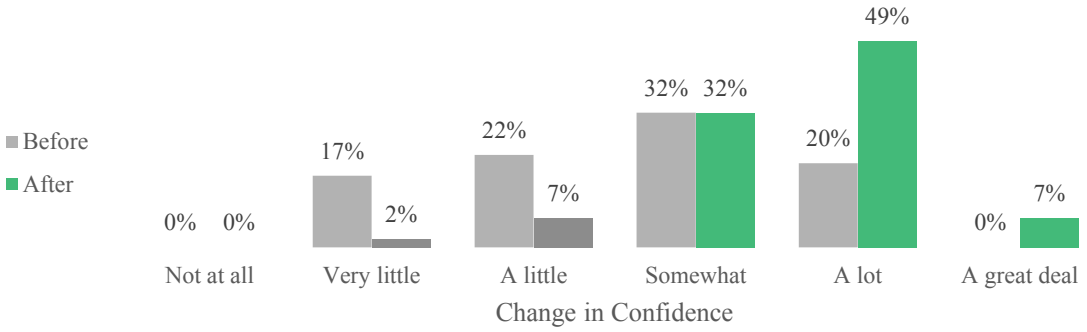


Prior to attending Harvest Fest, 58% of respondents felt little to any confidence in their ability to discuss specialty crops with other adults. This number decreased to 34% after attending. While there does not appear to be a shift in how many respondents felt very confident, there was an increase from some to a lot of confidence between retrospective pre (22%) and post (39%) data.

Looking at similar data from the 2015 Harvest Fest, it is easy to see that attending the event in either a focused capacity (ex: a facilitated demo) or in general can increase respondents' confidence levels. Following interaction with OMSI educators, confidence increased from 52% (*n* = 21) to 88% (*n* = 36) of respondents feeling somewhat to a great deal confident. Figure 30 shows a summary of the distribution of responses across possible answer selections.

FIGURE 31: CONFIDENCE DISCUSSING SPECIALTY CROPS AFTER 2015 HARVEST FEST, N=41

In 2015, attendance to Harvest Fest, increased 88% of respondents' confidence explaining what a specialty crop is toother adults.

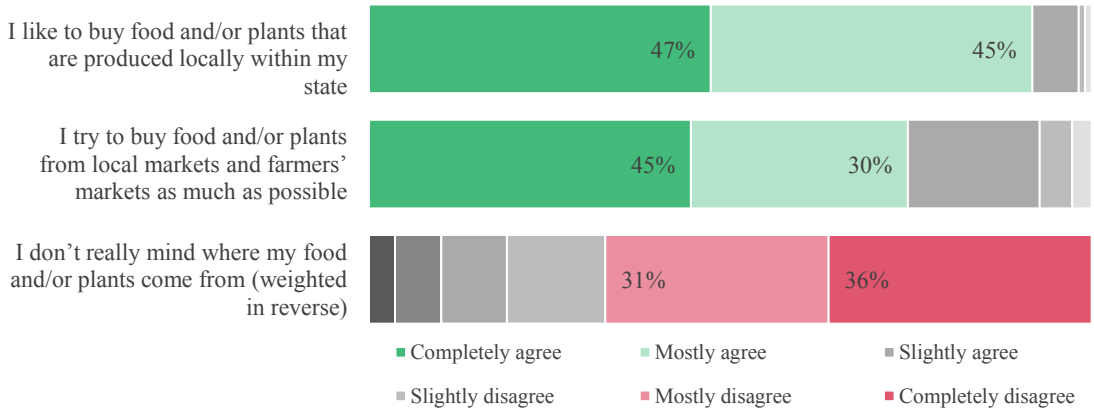


RESPONDENTS' CURRENT & INTENDED PURCHASING BEHAVIORS

Finally, the exit survey included questions asking the extent to which respondents agreed with statements related to purchasing behaviors, interest and motivations. These questions aimed to explore how interested participants were in purchasing locally, how this interest may impact their purchasing decisions and what may motivate them to purchase locally, before and after participation in the activity. Figure 32 shows what respondents' current purchasing behaviors are.

FIGURE 32: RESPONDENTS' CURRENT PURCHASING BEHAVIORS, N=110

Though only 67% indicate they care where their food and plants come from, over 92% make an effort to purchase their food local to their state and 75% try to do so from local vendors.



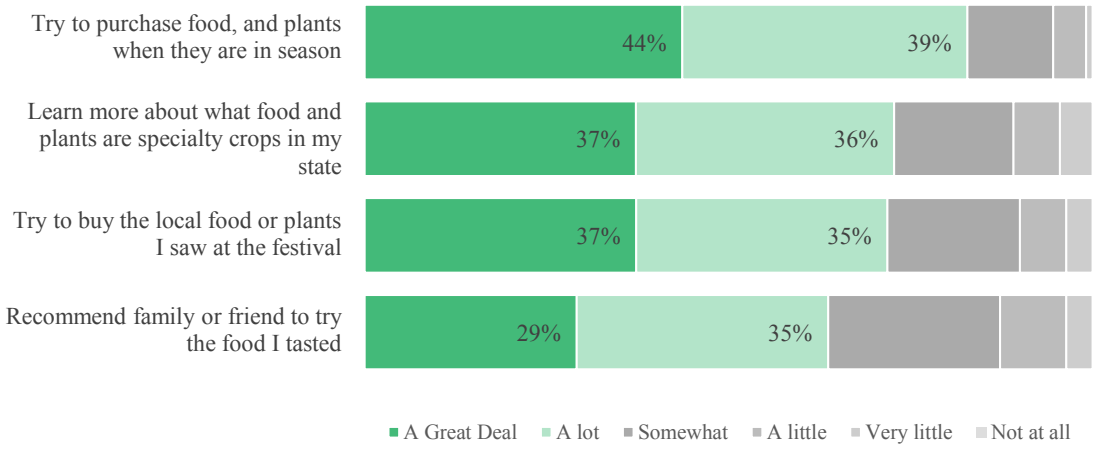
Ninety-two percent (*n* = 101) of respondents agreed, often completely or strongly, that they try to purchase their food and plants local to their state. An additional 75% (*n* = 82) completely or strongly agreed that they prefer to purchase from local vendors. Further, 67% (*n* = 74) of respondents indicated that they care, strongly, about where the food and plants they purchase are sourced from.

Respondents were given the opportunity to share more about their purchasing behavior. Almost a third of participants (32%, *n* = 37) opted to provide written feedback. Comments generally spoke to purchasing local (68%, *n* = 25 of 37), purchasing organic (24%, *n* = 9 of 37), and cost (16%, *n* = 6 of 37). Two respondents mentioned that they try to buy seasonally.

Given that the project is interested in promoting the purchase of Oregon specialty crops, it was important to ask attendees how much they intended to exhibit desired purchasing behaviors. Figure 33 show the extent to which respondents intend to purchase local and continue learning about the foods and plants exhibited at Harvest Fest.

FIGURE 33: RESPONDENTS' INTENDED PURCHASING BEHAVIORS, N=110

Over 50% of respondents indicated a strong intention to purchase seasonally, purchase locally, educate themselves, and to educate others about food, plants, and vendors they interacted with at Harvest Fest.



Most respondents revealed an intention to exhibit desired behaviors following Harvest Fest. The behavior that appears to be of most interest, or is perhaps the most feasible to sustain, is purchasing items when they are in season. Eight-three percent (*n* = 91) shared strong intention to do this. Interestingly, many respondents (73%, *n* = 80) expressed interest in learning more about specialty crops specifically, and 72% (*n* = 79) would like to purchase items they saw at Harvest Fest in the future. Respondents expressed interest in sharing what they learned and sampled with others, but to a lesser extent than the other desired behaviors.

DISCUSSION

The overarching focus of *Farm to Science* activities was to increase awareness of Oregon specialty crops, and interest in purchasing Oregon specialty crops. Summative evaluation revealed that participants who interacted with Farm to Science were able to increase awareness of and interest in specialty crops after activity participation. This held true for respondents who claimed to have some awareness of the specialty crop industry, as well as for those who admittedly had little to none. Additionally, summative evaluation confirmed that many participants exhibit desirable purchasing behaviors that are beneficial to the Oregon agricultural community. These include the intent to purchase local, an interest in purchasing seasonally and agreement that purchasing locally is of value to sustaining this community.

This supplemental study aimed to build on those findings, and look deeper at where activities were sustaining high levels of desired behaviors via an exploratory study which focuses on the relationship between attending Harvest Fest and the purchase of specialty crops. Evaluation also sought to learn from Harvest Fest visitors their emotional motivations for purchasing specialty crops, and how participation at the event contributes to this.

AWARENESS OF SPECIALTY CROPS AND LOCAL VENDORS INCREASED

Harvest Fest exceeded its goal of encouraging participants to engage deeply and to become involved with vendors and specialty crops. Engagement at Harvest Fest included respondents self-reporting that they discussed food, shared knowledge with others, and took part in the demonstrations made available to them. Eighty-five percent of respondents participated in basic engagement activities, such as food and drink tasting with vendors. Many deepened this engagement to talk with vendors or OMSI educators about the products or food science represented. Slightly more than a quarter of respondents (27%) reported deep engagement with more passive activities, such as stage demonstrations. Respondents expressed an interest in sharing their experiences with others. Over 88% of respondents plan on recommending food they tasted at Harvest Fest. Additionally, attending Harvest Fest increased respondents' confidence in discussing specialty crops with other adults by 17%. Further iterating this, is the finding that 97% of respondents reported being strongly to somewhat satisfied with the variety of educational opportunities available. Respondents valued the opportunity to learn at Harvest Fest, and by engaging with basic Harvest Fest activities they are acquiring the tools they need to share what they're learning with others.

Many respondents went on to deepen their relationship with Harvest Fest from engagement to deep involvement, and demonstrated a personal concern for learning more about where their food is sourced from. Indeed, 98% of respondents indicated somewhat to a strong preference for

KEY IMPACTS

Respondents valued the educational opportunities available at Harvest Fest.

Engaging with Harvest Fest activities gives visitors the tools they need to share what they are learning about specialty crops with others.

Harvest Fest satisfied visitors' pre-existing preferences for purchasing local foods from local vendors, allowing them to either build new relationships with vendors or deepen existing ones.

Visitors intend to share what they learned at Harvest Fest with others. That they overwhelmingly had a strong, positive emotional reaction to Harvest Fest is a strong indicator that they will follow-through on this.

purchasing products local to them, with 81% agreeing to varying extents that they actively care where their food comes from. Many respondents, 93%, further specified that not only do they want their food to be local, they have a preference for purchasing products from local vendors (farmer's markets, co-ops, locally-owned grocery stores). Harvest Fest allows both preferences to be met by bringing together local products and local vendors for attendees. Not only did respondents express a deep interest in knowing where and from whom their food products are being purchased, 90% also indicated that they were somewhat to a great deal likely to try to purchase the products they saw at Harvest Fest, specialty crops local to Oregon, in the future. By attending Harvest Fest, many attendees were able to build relationships with vendors who are able to provide for them food products that are desirable to them: known to be sourced locally, and from local vendors.

VISITORS HAD POSITIVE EXPERIENCES AT HARVEST FEST

An additional aim of this study was to understand what kind of emotional reactions visitors were having at Harvest Fest, with the understanding that this may impact the success of the grant's larger goal of encouraging the purchase of Oregon specialty crops in the future. Overwhelmingly, respondents displayed positive emotional responses to their time at Harvest Fest. In fact, 99% of respondents indicated feeling pleased and happy at Harvest Fest, with nearly 80% strongly feeling those emotions. Conversely, 93% of respondents rarely or never felt negative emotions during the event. At most, 15% of respondents felt somewhat or strongly unfulfilled. This strong, positive emotional reaction to Harvest Fest is a strong indicator that visitors will likely follow-through on their expressed intention to purchase products they interacted with at Harvest Fest, purchase products local to them and from local vendors, to learn more about specialty crops, and to recommend items to others.

FUTURE CONSIDERATIONS

Though Harvest Fest was successful, there are always opportunities to grow. Respondents indicated an interest in seeing greater variety in vendors represented. Future versions of the event could aim to find a balance between representing vendors local to the region and statewide vendors. In doing so, a greater variety of Oregon specialty crop vendors to purchase from and learn from are made accessible to participants. This, in turn, may increase excitement over the variety or products available, and further encourage them towards continued purchase of these products. Additionally, some comments were made about event accessibility. Efforts should be made to provide walking pathways that are easier to navigate for individuals with limited mobility or with strollers. At times the event felt "small," or "tight." Should future Harvest Fests be hosted in the same lot, spacing vendor tents and activities throughout the lot may help relieve some of these feelings. Finally, there was notably lower engagement with stage demonstrations and the kid's tent than with other activities. Reasons for lower engagement were not fully captured, but are likely related to the perception that these activities are exclusively for families. An additional challenge may be the limited opportunities to interact with stage demonstrations (i.e., they are timed and not always available to visitors, especially when they arrive late or are with vendors). Increasing perceived or actual opportunities to interact with stage demonstrations and the kid's tent could increase overall usage and satisfaction with these activities.

Overall, the event is enjoyed by attendees for its educational opportunities and connection to local specialty crop providers, and has much potential to continue building on this success.

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APPENDIX A: DESCRIPTION OF EVENTS AND PROGRAMS: *FARM TO SCIENCE*, CELEBRATING OREGON FRUITS AND VEGETABLES

1. **OMSI After Dark**
   The season of events will begin with OMSI After Dark on June 24, 2015 (7-11pm), Cider and Seeds.

   Treat yourself to child-free, brain-building science fun at OMSI After Dark. Check out live demos, new featured exhibits, and old favorites. Sample tasty snacks and sweets along with beer, wine, and craft soda, and talk to regional food and beverage artisans about the science behind them. It's geeks gone wild! (21-and-over only.)

   Cost:
   OAD + Ciderfest: Non-members $25; OMSI members $15; OAD members $5
   OAD Only: Non-members $13; OMSI members $6.50; OAD members Free

2. **Season of Programs**
   June 24th through October 4th
   Wednesday through Sunday 11 a.m. to 2 p.m.

   Hands-on demos and activities featured in the OMSI eatery *Theory* will highlight Oregon specialty crops through exploring related technological advances, sustainability and the science behind healthful choices related to seasonality and diversity of specialty crops. Specific activities will range from taste tests to meeting and learning from farmers.

   Food Science Labs
   Intimate, small group classes with OMSI educators that last for about an hour and explore different scientific processes and skills. Examples include, learning how to graft vegetable plants and exploring the natural dyeing process using specialty crops!

   Food Science Demos
   Food Science Demos feature hands-on activities and experiments all about the science behind the food we eat. Visitors can test foods for protein, learn how much sugar is in certain drinks, test soil pH for planting vegetables, put together a map of Oregon agriculture and much, much more!

   Meet a Farmer Tabling
   Meet a Farmer offers visitors the chance to come face to face with the people who bring us delicious, fresh, and local produce throughout the year to learn about the science and technology behind farming!

3. **Better Bites**
   In partnership with the National College of Natural Medicine, OMSI presents Better Bites – a seasonal cooking series focused on cooking for healthy solutions.
   August 13 taught attendees how to grow, purchase and utilize local produce. Guest Chef Chris Starkus of Urban Farmer.

   Cost: $25 includes small plate meal, wine and beer

4. **Science Pub**
   Quench your thirst and feed your head. Learn about cutting-edge topics in science and technology from leading experts, in an interactive, informal atmosphere where there's no such thing as a dumb question. Everyone has fun at Science Pub, from those completely unfamiliar with science to self-identified "science geeks."

   All four September Science Pubs will focus around food science. The dates and locations are as follows:

   September 10, 2015 at Cozmic, Eugene (6pm)
   The Life of Hops; Ninkasi Brewery
   September 14, 2015 at Hollywood Theatre, Portland (7pm)
   Food Entrepreneurism – Portland Style; Michael Morrissey, Director, Food Innovation Center, Professor, Food Science and Technology, OSU
   September 15, 2015 at OMSI, Portland (7pm)
   The Quince: An Unexpected Journey; Hernan Lorenzi, PhD, assistant professor in the bioinformatics department at the J. Craig Venter Institute
   September 28, 2015 at The Venetian Theatre, Hillsboro (7pm)
   It's More Than Just Soil: Understanding Grape Terroir; Elizabeth Tomasino, PhD, assistant professor in food science and technology, OSU
   Cost: $5 suggested donation

5. **Harvest Fest (10am-5pm)**
   The Harvest Fest will be on on September 27, 2015, and showcase specialty crop farmers and producers through a series of educational booths and featured demonstrations. The festival will feature a central stage with a working kitchen, at which local chefs and food preparation experts demonstrate how to prepare local specialty crops. The festival will be held on OMSI's bridge property outside to the south of the main building.

   Cost: free; museum admission not included

APPENDIX B: INTEREST AND AWARENESS SURVEY

OMSI Activity Feedback Survey

Please rate the extent to which you agree by circling the most appropriate response.

1. How much has your participation in this activity shaped your awareness of what a specialty crop is?

Not at all	Very little	A Little	Somewhat	A Lot	A Great Deal

2. I feel confident in my ability to explain to another adult what a specialty crop is, now that I have participated in this activity.

Completely Disagree	Mostly Disagree	Slightly Disagree	Slightly Agree	Mostly Agree	Completely Agree

3. **Think back to before you participated in this activity**, how confident would you have felt explaining to another adult what a specialty crop is?

Not at all	Very little	A Little	Somewhat	A Lot	A Great Deal

4. Specialty crops can be any fruit or vegetable, tree nut, dried fruit, horticulture, and/or a nursery crop (including floriculture), excluding field and grain crops, oil seed crops, forage crops, and fiber crops. A specialty crops' primary function has to be related to what it is (ex: food, medicinal purposes, and/or aesthetic gratification) in ordered to be considered specialty crops.

   Prior to participating in this activity, is this how you would have defined a specialty crop?

Yes	No	I knew some, but not all.

5. Now that you have participated in this activity, how aware are you of what fruits, vegetables, nuts and plants are considered Oregon specialty crops?

Not at all	Very little	A Little	Somewhat	A Lot	A Great Deal

6. **Imagine you have never engaged in this activity**, how aware would you say you are of what fruits, vegetables, nuts and plants are Oregon specialty crops?

Not at all	Very little	A Little	Somewhat	A Lot	A Great Deal

7. Now that you have participated in this activity, how confident would you be talking with another adult about the different seasons various specialty crops are harvested in?

Not at all | Very little | A Little | Somewhat | A Lot | A Great Deal

8. **Imagine you have never engaged in this activity**, how confident would you be talking with another adult about the different seasons various specialty crops are harvested in?

Not at all | Very little | A Little | Somewhat | A Lot | A Great Deal

9. Now that you have participated in this activity, please rate the extent to which you agree with the statements below. *Place an X in the box which you most agree with.*

	Completely Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Completely Agree
When I go to the grocery store, I want to know where my food was produced.						
Knowing where my food is produced plays a role in my decision to purchase it.						
I try to purchase fruit, vegetables, nuts and plants that are local to Oregon.						
When I go grocery shopping, I will think about if the food I'm buying is in season.						
I adapt my grocery list based on what foods are in season.						
Purchasing food and plants produced locally is of value to the Oregon agricultural community.						

10. **Think back to before you visited OMSI today**, how much would you agree with the statements below? *Place an X in the box which you most agree with.*

	Completely Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Completely Agree
When I go to the grocery store, I want to know where my food was produced.						
Knowing where my food is produced plays a role in my decision to purchase it.						

I try to purchase fruit, vegetables, nuts and plants that are local to Oregon.						
When I go grocery shopping, I think about if the food I'm buying is in season.						
I adapt my grocery list based on what foods are in season.						
Purchasing food and plants produced locally is of value to the Oregon agricultural community.						

Demographics

1. What gender do you most identify with? (*Circle below*)

   Male Female Other (please specify)_____ Prefer not to answer

2. What is your age? (*Circle below*)

   18-24 25-34 35-44 45-54 55-64 65+ Prefer not to answer

3. Including yourself, how many adults, teens and children are in your group today?

   Adults (18+): _____ Teens (13-17): _____ Children (7-12): _____ Children (0-6): _____

4. What is your ethnicity? (*Circle below*)

   Hispanic or Latino Not Hispanic or Latino Not Sure Prefer not to answer

5. What is your race? (*Circle all that apply*)

   American Indian or Alaska Native Asian Native Hawaiian or Other Pacific Islander Black or African American White Not sure Prefer not to answer

6. What is your zip code? _____

7. Do you have an OMSI membership? (*Circle below*)

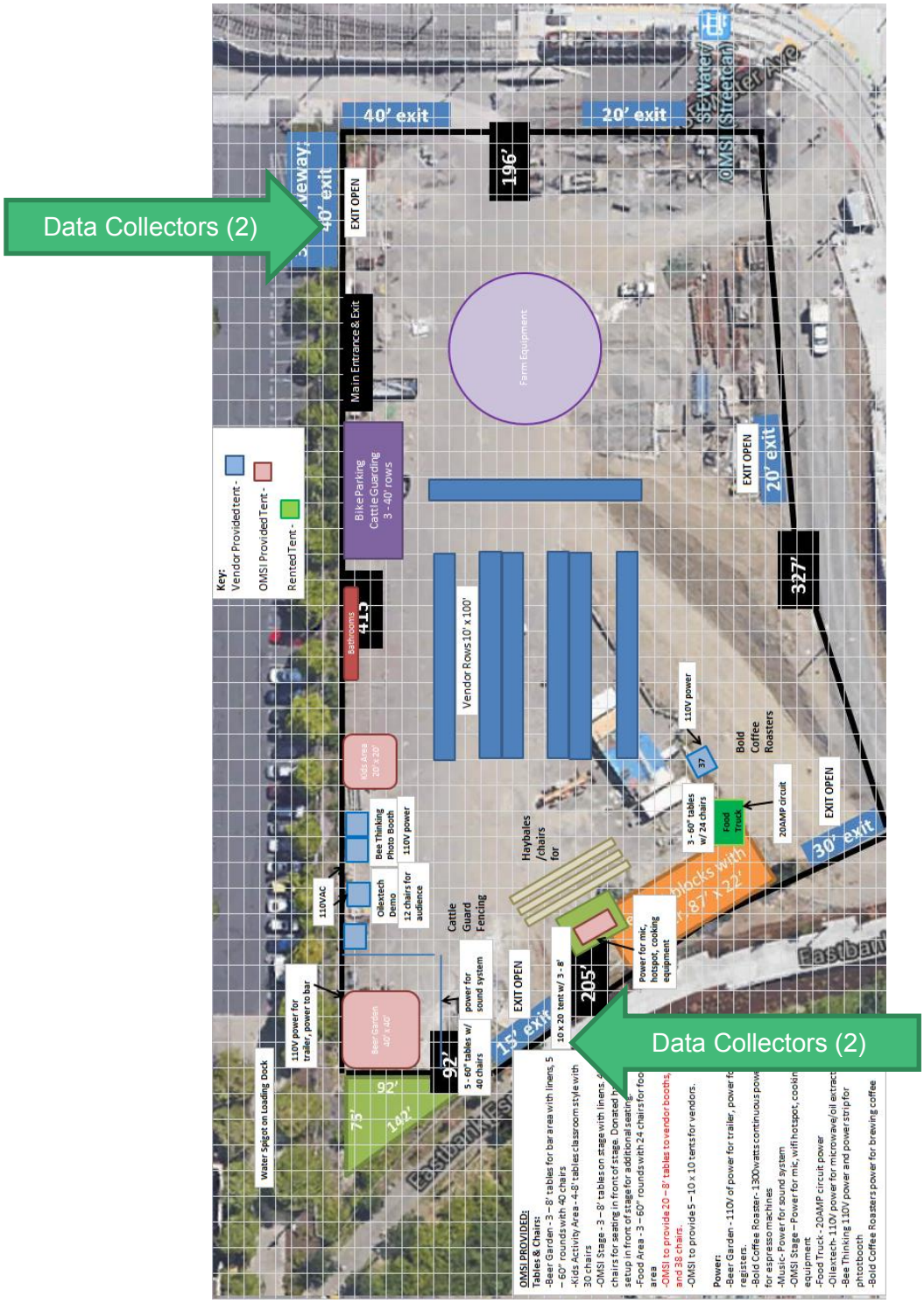
   Yes No

APPENDIX C: CHART OF PAIRED STATEMENTS, TEST SCORES, MEANS AND SIGNIFICANCE

To better understand the nuances within respondents' stated awareness levels with specialty crops before and after activity participation, respondents were asked additional questions about discussing specialty crops. Tests for normalcy and statistical significance were administered in SPSS to better understand the change between the pre and retrospective post responses. After tests were run, a visual inspection of the Q-Q plot was administered. A calculation of the z-score was conducted to confirm normalcy after the visual inspection was conducted. If the data was considered normal, then a paired *t*-test was administered to determine statistical significance. If the data was not considered normal, an exact Sign test was administered to determine statistical significance.

Pairings	Question or Statement	z-score	Normal	t-test or Sign test	Statistically Significant	Means
Pair 1	Confidence levels explaining to another adult what a specialty crop is.	1.39	Yes	$t(184) = 15.300$, $P < 0.0005$	Yes	Post – 4.49 Pre – 2.77
Pair 2	Awareness of what fruits, vegetables, nuts and plants are considered Oregon specialty crops.	0.326	Yes	$t(184) = 15.300$, $P < 0.0005$	Yes	Post – 4.44 Pre – 3.19
Pair 3	Confidence levels talking with another adult about the different seasons various specialty crops are harvested in.	4.444	No	$\mathbf{p} = .000$	Yes	Post – 3.84 Pre – 3.09
Pair 4	When I go to the grocery store, I want to know where my food was produced.	10.152	No	$\mathbf{p} = .005$	Yes	Post – 5.00 Pre – 4.89
Pair 5	Knowing where my food is produced plays a role in my decision to purchase it.	7.764	No	$\mathbf{p} = 0.64$	No	Post – 4.79 Pre – 4.70
Pair 6	I try to purchase fruit, vegetables, nuts and plants that are local to Oregon.	-1.573	Yes	$t(162) = 1.641$, $P< 0.0005$	Yes	Post – 4.91 Pre – 4.84
Pair 7	When I go grocery shopping, I will think about if the food I'm buying is in season.	8.854	No	$\mathbf{p} = .000$	Yes	Post – 5.11 Pre – 4.86
Pair 8	I adapt my grocery list based on what foods are in season.	-3.489	No	$\mathbf{p} = .045$	Yes	Post – 4.68 Pre – 4.59
Pair 9	Purchasing food and plants produced locally is of value to the Oregon agricultural community.	7.006	No	$\mathbf{p} = .000$	Yes	Post – 5.44 Pre – 5.27

APPENDIX D: HARVEST FEST EVENT MAP



APPENDIX E: EXIT SURVEY INSTRUMENT

11. We'd like to know more about what you did while at Harvest Festival. Please indicate the extent to which you took part in the following activities.

	Not at all	Very little	A Little	Somewhat	A Lot	A Great Deal
Food and drink tasting						
Discussing food or plants with **local producers**						
Discussing food or plants with **OMSI educators**						
Learning more about specialty crops in Oregon						
Visited the kid's tent						
Learning more about local producers and vendors for food and plants						
Attended stage demonstrations and other entertainment						

12. How much has attending Harvest Fest shaped your awareness of what a specialty crop is?

Not at all Very little A Little Somewhat A Lot A Great Deal

13. How confident do you feel explaining to another adult what a specialty crop is, now that you have attended Harvest Fest?

Not at all Very little A Little Somewhat A Lot A Great Deal

14. **Think back to before you attended Harvest Fest**, how confident would you have felt explaining to another adult what a specialty crop is?

Not at all Very little A Little Somewhat A Lot A Great Deal

15. Specialty crops can be any fruit or vegetable, tree nut, dried fruit, horticulture, and/or a nursery crop (including floriculture), excluding field and grain crops, oil seed crops, forage crops, and fiber crops. A specialty crop's primary function has to be related to what it is (ex: food, medicinal purposes, and/or aesthetic gratification) in order to be considered specialty crops.

    Prior to attending Harvest Fest, is this how you would have defined a specialty crop?

Yes No I knew some, but not all.

16. We'd like to know more about you and how you shop for food or plants which may be specialty crops. Please indicate how much you agree with the statements about purchasing.

	Completely Disagree	Mostly Disagree	Slightly Disagree	Slightly Agree	Mostly Agree	Completely Agree
I like to buy food and/or plants that are						

produced locally within my state						
I try to buy food and/or plants from local markets and farmers' markets as much as possible						
I don't really mind where in the world my food and/or plants come from						

We're interested in learning more about how you shop. Please write in telling us about your selections.

17. We'd like to know what you thought about Harvest Fest, in general. Please indicate how satisfied you were with the following aspects.

	Not at All	Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Satisfied	Completely Satisfied
Layout						
Stage Demonstrations						
Kid's Tent						
Atmosphere						
The variety of educational opportunities available						
Harvest Festival as a whole						

We're interested in learning more about your experience. Please write in telling us about your selections.

18. Thinking about the time you spent at Harvest Festival, please indicate the extent to which you felt the following emotions

	Not at All	Very little	A Little	Somewhat	A Lot	A Great Deal
Happy						
Pleasantly surprised						
Pleased						
Excited						
Content						
Unfulfilled						
Annoyed						
Disappointed						
Frustrated						

We're interested in hearing what prompted these emotions. Please write in telling us about your selections.

19. How likely do you think you are to do the following things, now that you have visited Harvest Festival?

	Not at All	Very Little	A Little	Somewhat	A Lot	Very Likely

Recommend family or friend to try the food I tasted.						
Try to buy the local food or plants I saw at the festival.						
Try to purchase food, and plants when they are in season.						
Learn more about what food and plants are specialty crops in my state.						

Demographics

1. What gender do you most identify with?

2. What is your age? (*Circle below*)

18-24 25-34 35-44 45-54 55-64 65+ Prefer not to answer

3. Including yourself, how many adults, teens and children are in your group today?

   Adults (18+): _____ Teens (13-17): _____ Children (7-12): _____ Children (0-6): _____

4. What is your ethnicity? (*Circle below*)

Hispanic or Latino Not Hispanic or Latino Not Sure Prefer not to answer

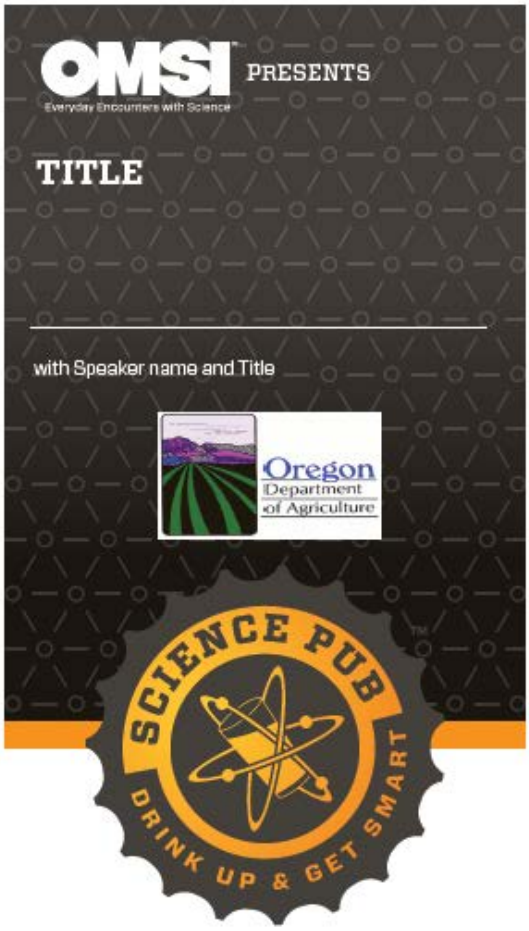
5. What is your race? (*Circle all that apply*)

American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Black or African American	White	Not sure	Prefer not to answer

6. What is your zip code? _____

7. Do you have an OMSI membership? (*Circle below*)

Yes No



Empirical Theater at OMSI
1945 SE Water Ave. | Portland
Come early to get food, drinks, and to find a seat!

Science Pub OMSI is a monthly event that is open to anyone and everyone. No RSVP or scientific background required. Just bring your curiosity, sense of humor, and appetite for food, drinks, and knowledge!
$5.00 suggested cover charge at the door.
For more information visit: www.omsi.edu/sciencepub

ODA-S14 Oregon Potato Promotions in Vietnam

Attachment 1: FY16-International-Marketing-Presentation-Part-IUSPB
Attachment 2: USPBTariffSummary2014
Attachment 3: AgTC Busy in San Francisco and Washington DC

International Marketing

August 2015

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Good Morning

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International Marketing

FY16 Marketing Strategies

- Restructure the strategies based on consumer targets
- Keep the strategic approach the same
- Add new markets as appropriate
- All programs cover all products

International Marketing Strategies

- Increase the use of US potatoes and potato products through new channels, new applications and the introduction of new products
- Protect and grow US market share by demonstrating and promoting the superior quality, variety, versatility and availability of US potatoes and potato products
- Resolve market access barriers
- Increase the consumption of US potatoes by informing the consumer of the positive nutrition story of US potatoes

International Marketing Strategies

- In conjunction with state potato organizations, increase the participation in export markets of US growers, shippers and processors
- Address food safely issues and create a positive image for US potatoes
- Protect US market share in established markets through maintenance programs
- Establish programs in new markets based on exit and entry criteria developed to assure the highest rate of investment of program dollars

FY16 International Scorecards

International - Ingredient

FY 16 Scorecard – Year-to-Date (July 15-June 16) | International Ingredient Marketing Program Scorecard

International - Seed

FY 16 Scorecard – Year-to-Date (July 15-June 16) | International Seed Marketing Program Scorecard

International - PPM

FY 16 Scorecard – Year-to-Date (July 15-June 16) | International PPM Marketing Program Scorecard

International - Retail

FY 16 Scorecard – Year-to-Date (July 15-June 16) | International Retail Marketing Program Scorecard

International - Foodservice

FY 16 Scorecard – Year-to-Date (July 15-June 16) | International Foodservice Marketing Program Scorecard

Overall USPB Foodservice Strategies

- Increase the use of US potatoes and potato products through new channels, new applications and the introduction of new products
- Protect and grow US market share by demonstrating and promoting the superior quality, variety, versatility and availability and US potatoes and potato products
- In conjunction with state potato organizations, increate the participation in export markets of US growers, shippers and processors
- Address food safety issues and create a positive image for US potatoes
- Protect US market share in established markets through maintenance programs
- Drive increased usage of US table-stock potatoes, dehydrated and frozen potato products at foodservice through education of the benefits, the introduction of new uses and new products as well as the pursuit of new channels.

Strategy	*Activities*	*Measurement*	*Year to Date Results*
Drive Increased Usage of US Potatoes	EMP Technical Assistance Activities: in Burma and Cambodia	**# of new foodservice / HRI** using US potato products: BM 2, CB 6	YTD: Q1: Q2: Q3: Q4:
	Foodservice Trade Education & PR activities: trade shows / culinary events, trade PR, newsletters, new product seminars, merchandising, trade website, foodservice research & educational materials, trade mission, etc.	**# of new foodservice operators and/ or importers & distributors** purchasing US potato products: CA 1, CH 2, ID 2, JA 2, MY 2, MX 4, RP 2, KS 2, TW 1, TH 1, VM 2	YTD: Q1: Q2: Q3: Q4:
	Foodservice Menu Development activities: Chef/ culinary experts, Generic Potato Seminars, Specific Use / Menu Presentations, Culinary activities, Foodservice Partnerships, Menu Development RTM, CIA Training Napa, Foodservice GBI Asian Chef Challenge, etc.	**# of new menu items / applications developed and featured at HRI** with US potatoes: CA 1, CH 20, ID 12, JA 12, MY 15, MX 4, RP 22, KS 15, TW 2, TH 15, VM 2	YTD: Q1: Q2: Q3: Q4: ***Be sure to include:*** • *# of items or menu launched (should be more of application than just stand-alone fry)* • *name of company launching items/ products (with # of outlets/ stores company launched these at)* • *Do NOT duplicate with other measurement under "Establish US fries"- Switch, upgrade or addition. This is a different goal.* • *Role of USPB in this accomplishment*
		# of alternative channels being	YTD: Q1:

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Trade Stats & Market Update

FY15 International Market Factors

- Expanding Competition ↓
- Increasing Demand ↑
  - Economic Uncertainty ↓
- West Coast Port Slowdown ↓
- Tighter US Supplies ↓
- Strong Dollar ↓

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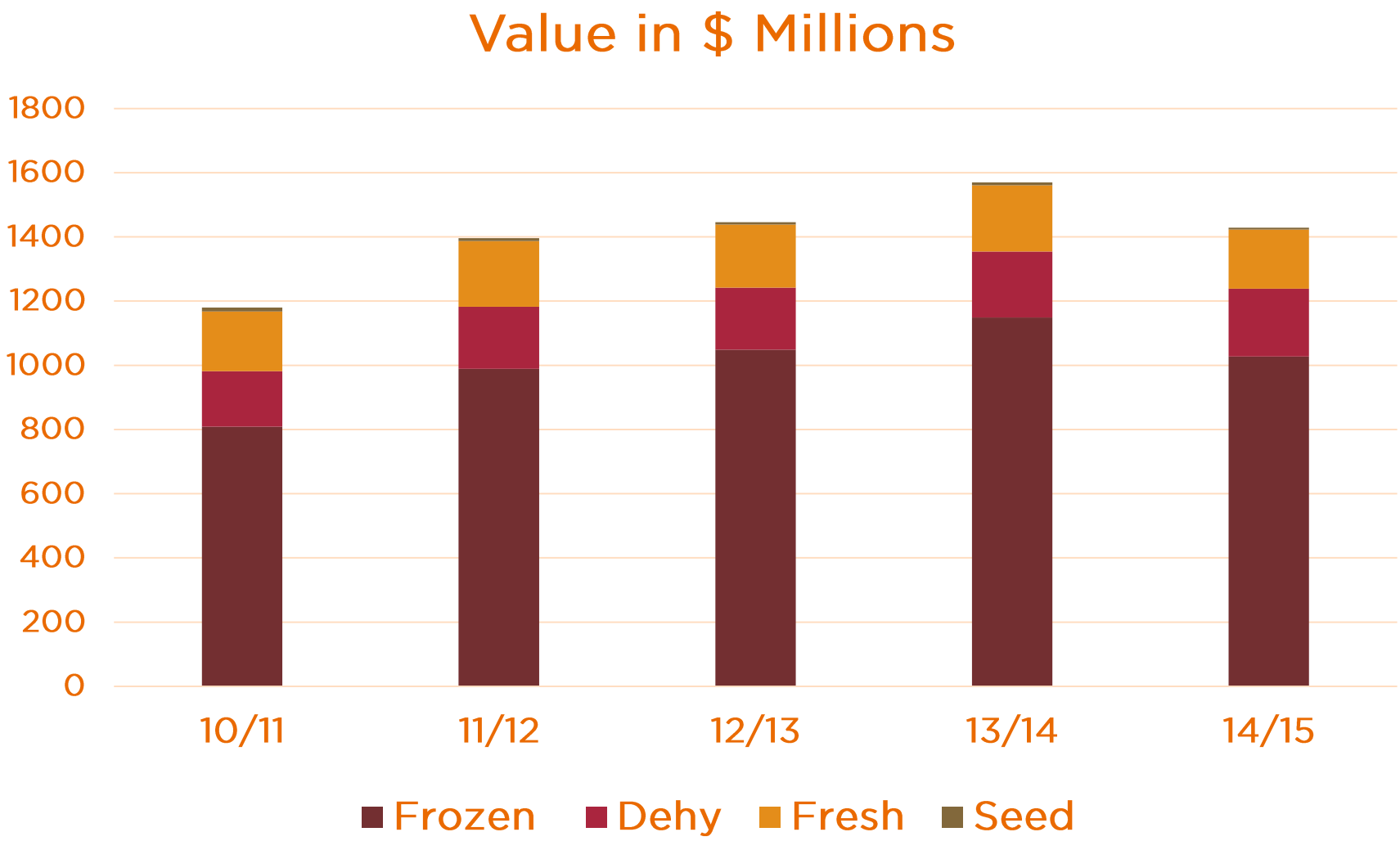
U.S. Dollar Strength

Market	12 Months	Two Years	2002
Canadian Dollar	20%	27%	-17%
Euro	23%	22%	-10%
Japanese Yen	22%	26%	5%
S. Korean Won	12%	4%	-2%
Mexican Peso	24%	29%	65%
Singapore	11%	9%	-21%

FY15 Exports: Value



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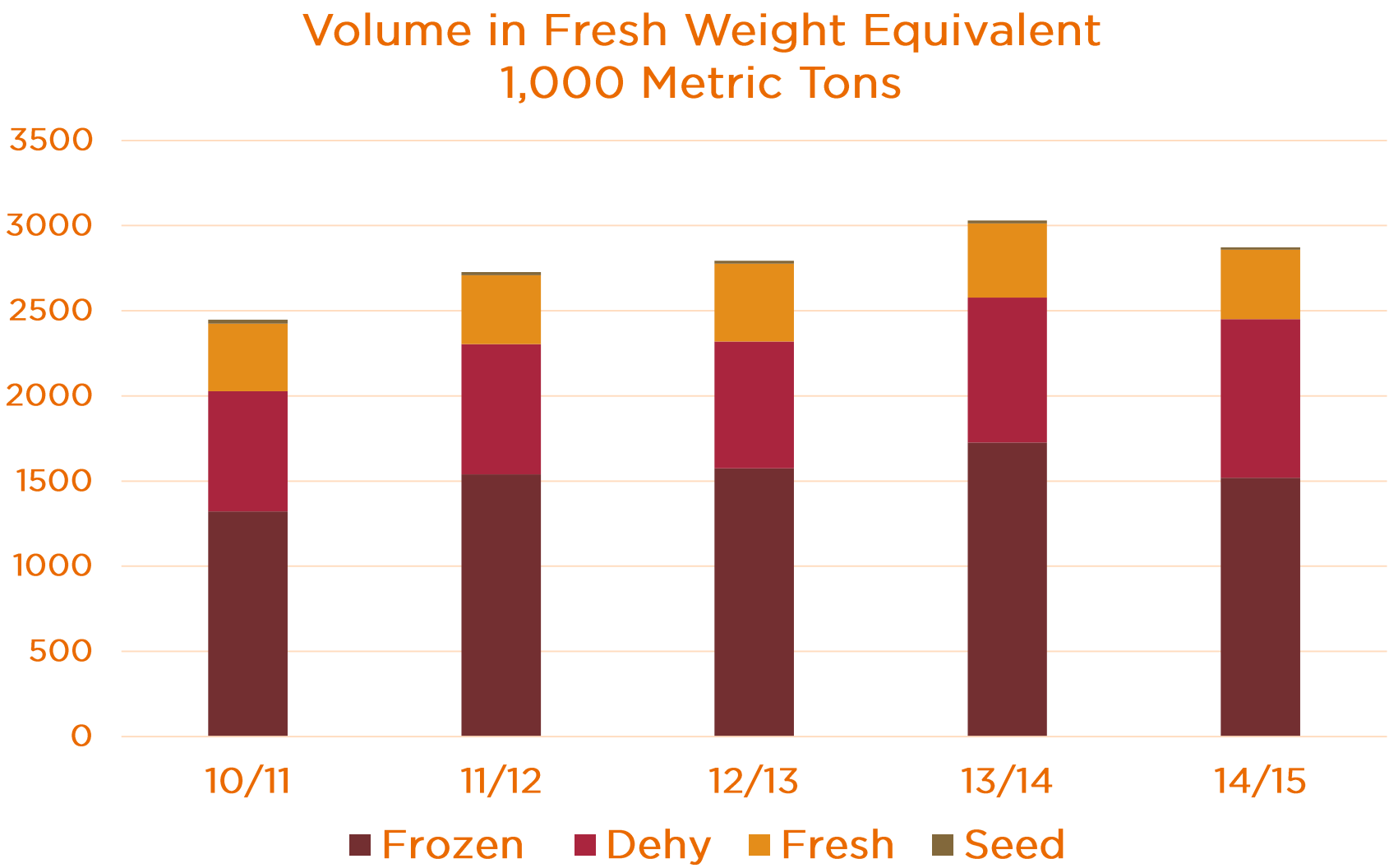
FY15 Exports: Volume



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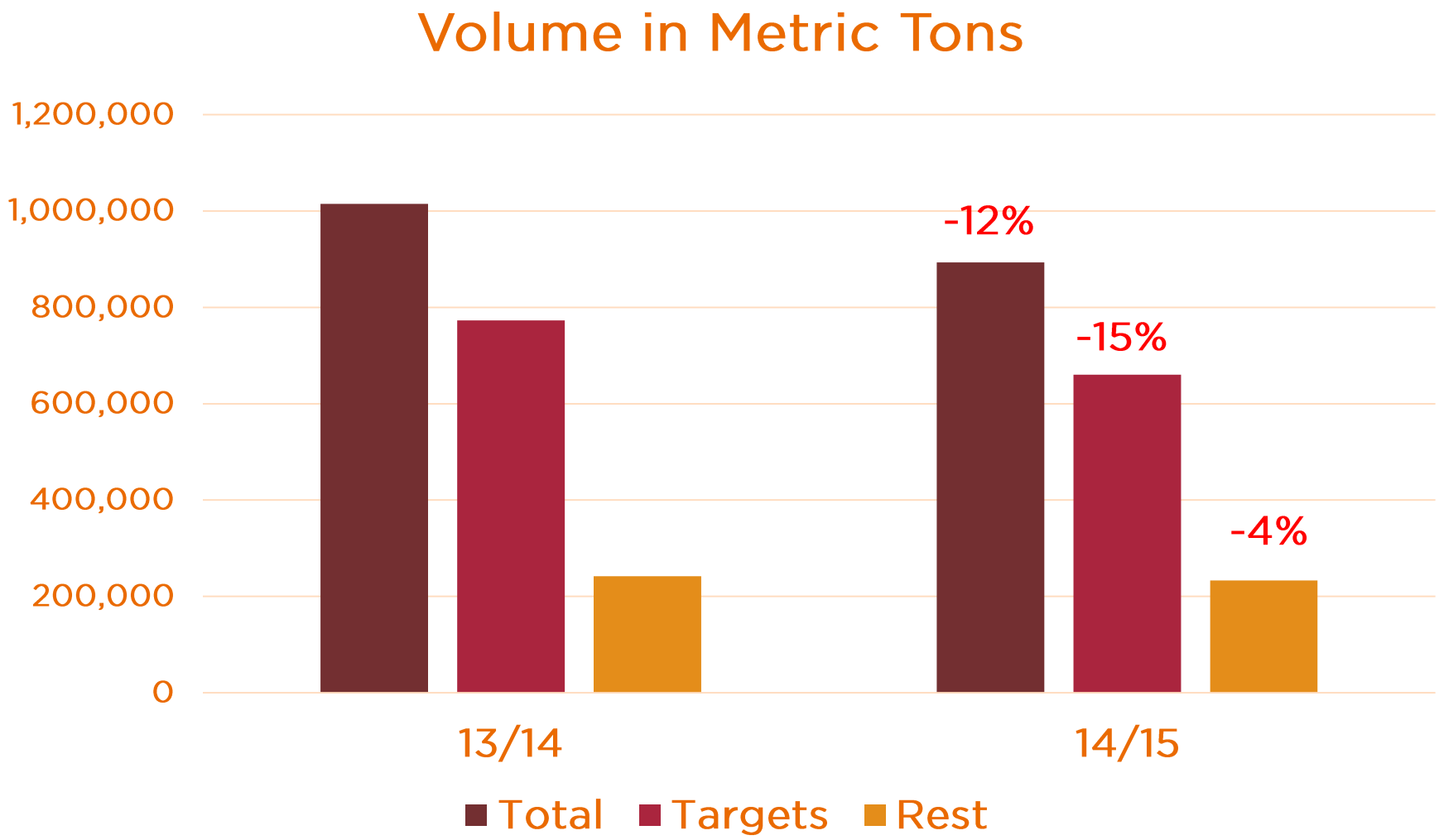
FY15 Exports: Frozen



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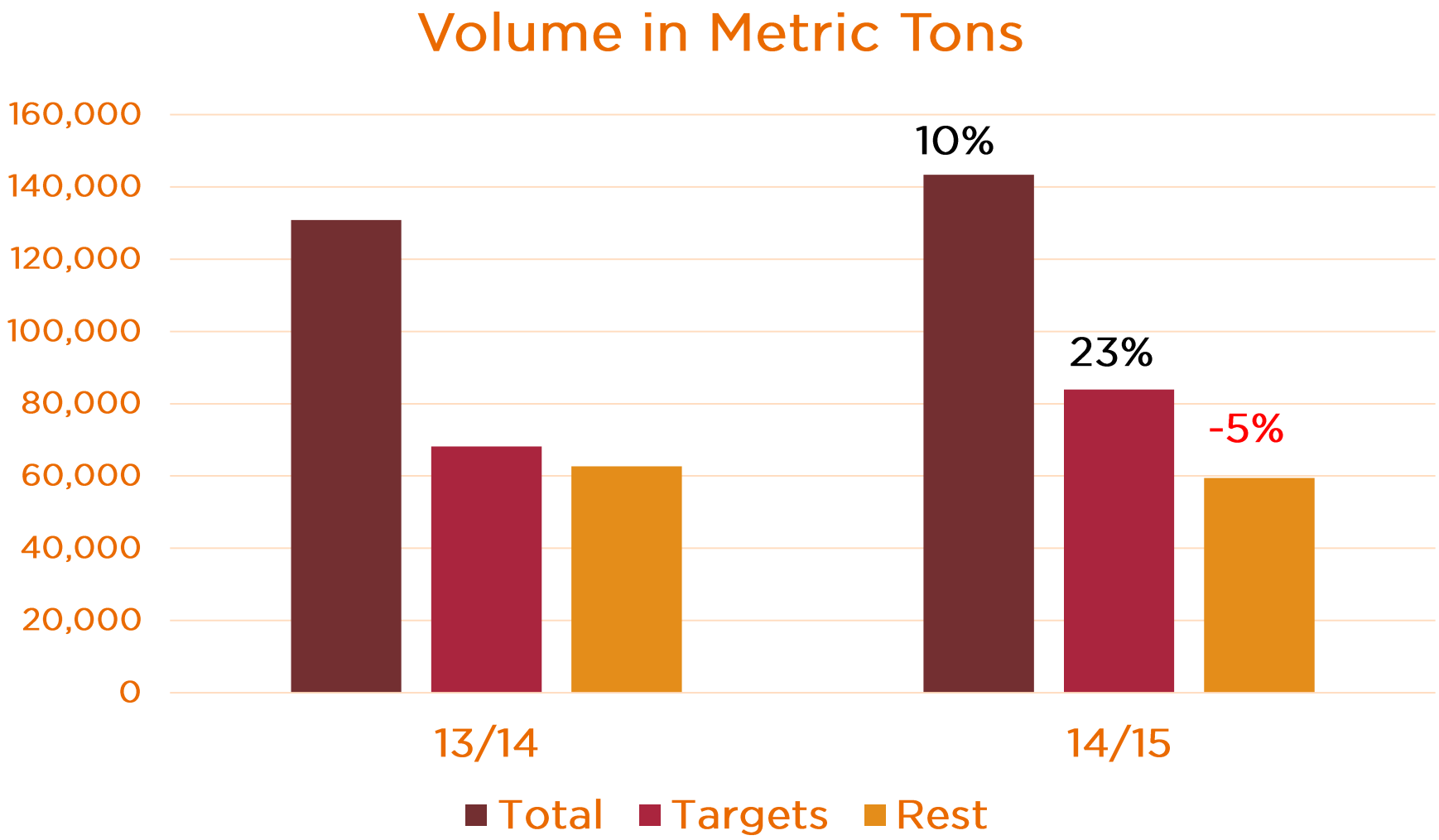
FY15 Exports: Dehy



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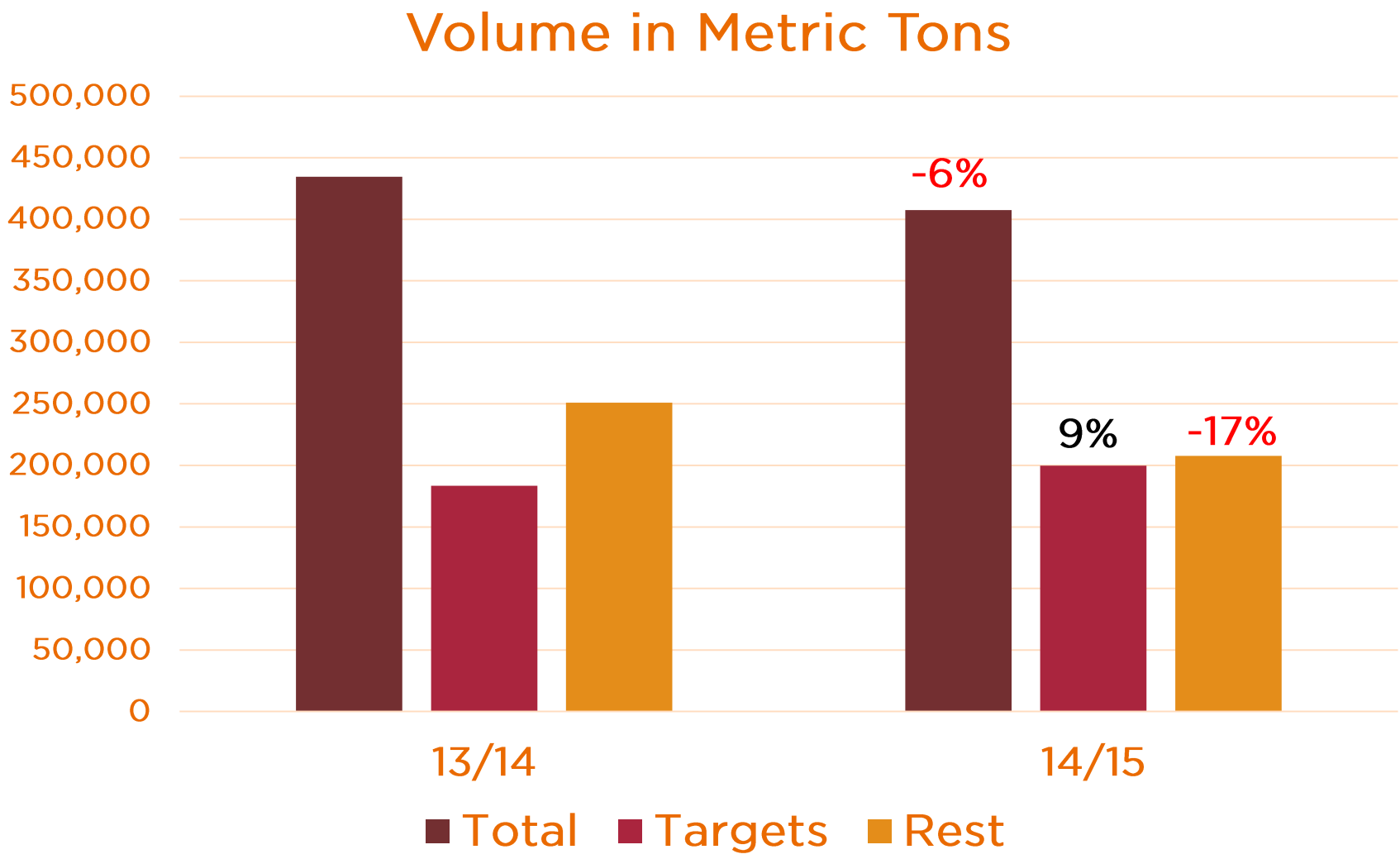
FY15 Exports: Fresh



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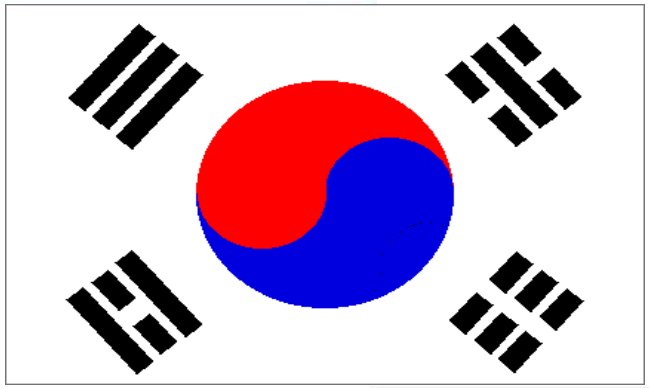
Market Access

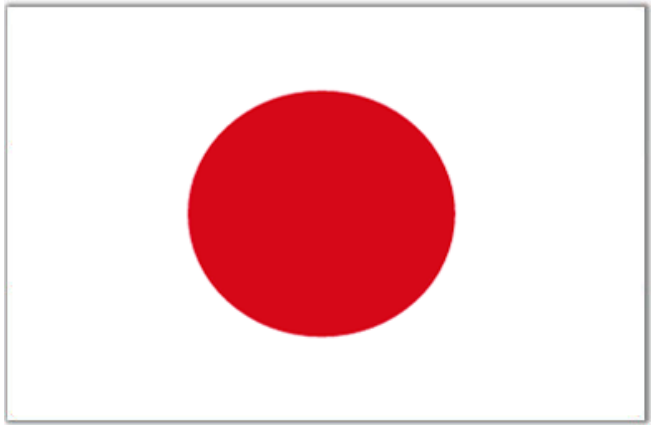
Chipping Away at Obstructions in Asian Markets

- China

- Korea



- Japan



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Success: Expand Beyond Port Access in Japan

- Overland Shipping Permitted
- Refer Drain Holes Plugged
- First Shipments Arrived Successfully

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Japan Requires Refer Holes Plugged Overland

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Funding: Address Rot Breakdown in Trade

- $118,000 Technical Assistance for Specialty Crops (TASC) grant
- Educate Foreign Governments about Rot Breakdown
  - Quality Issue, Not Food Safety
  - Utilize Experts
- Secure Agreements
  - Allow Destruction by Processing
  - Ease Customs Clearance

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Seed

Seed Program Strategy

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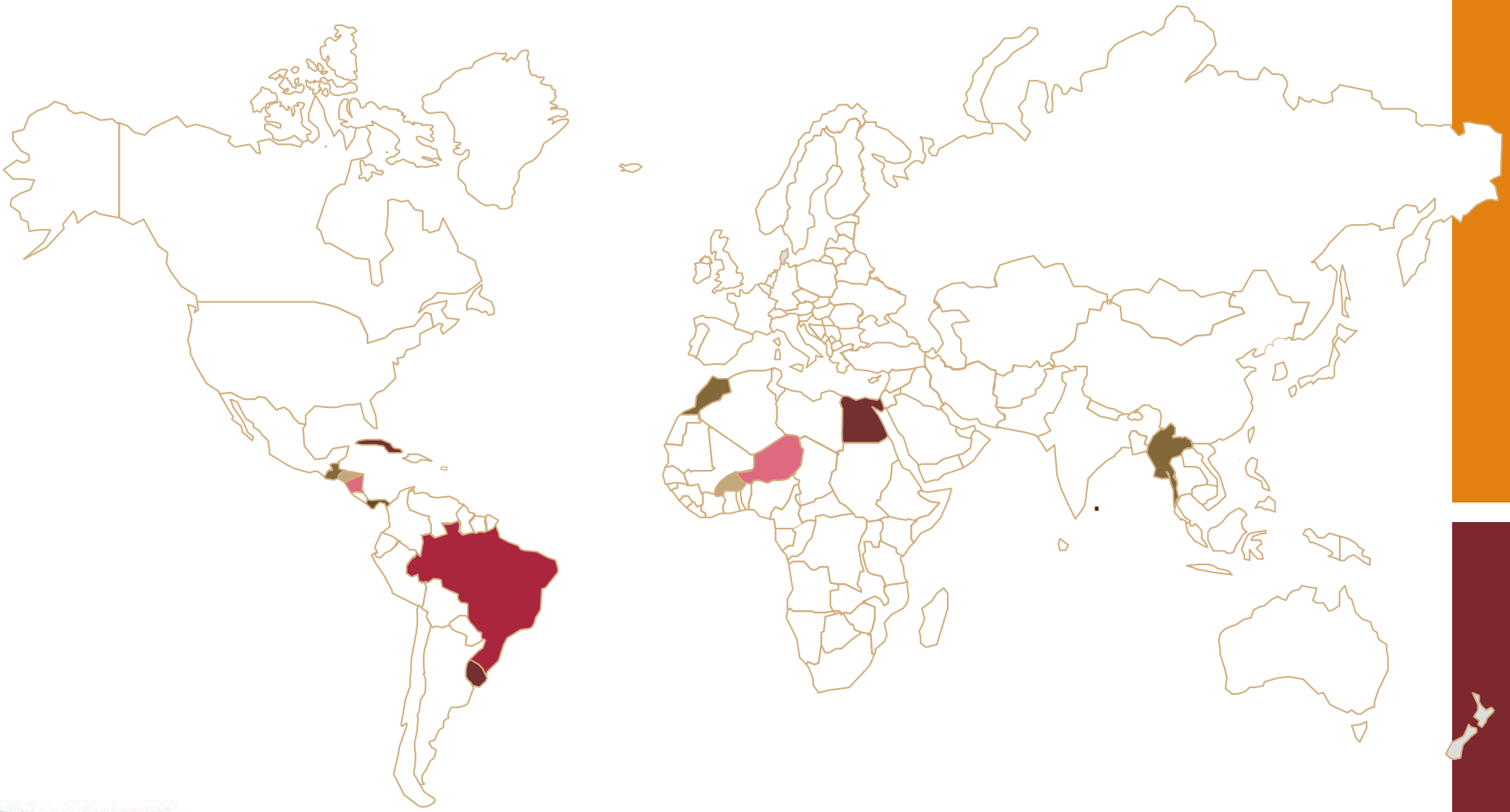
Seed Potato
Target and Maintenance Markets



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Maximizing Return on Grower Investment

Seed Symposium and Reverse Trade Mission

California – Idaho - Maine

July
2015

UNITED STATES Potato BOARD

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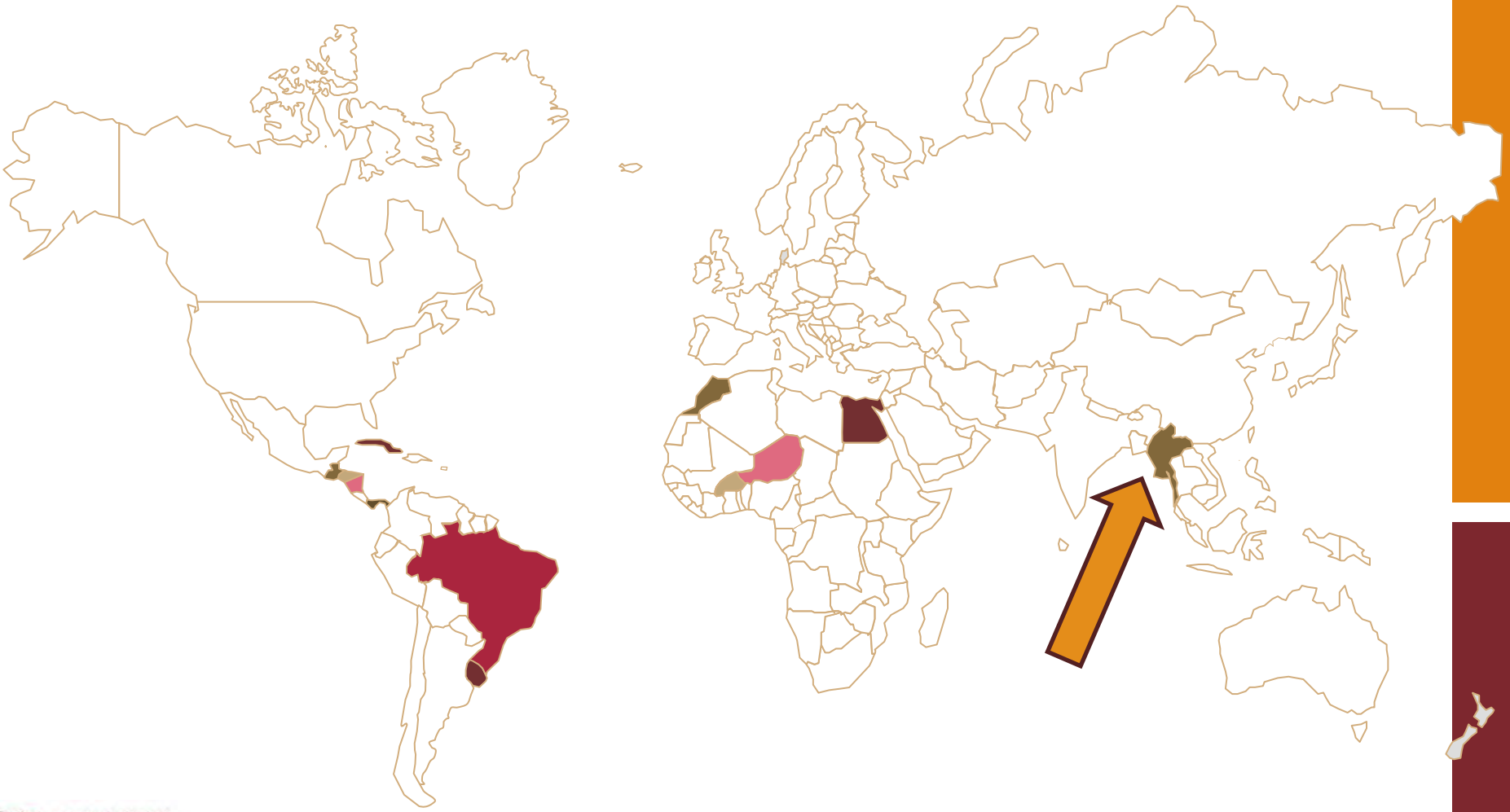
New Seed Potato Target Market: Myanmar



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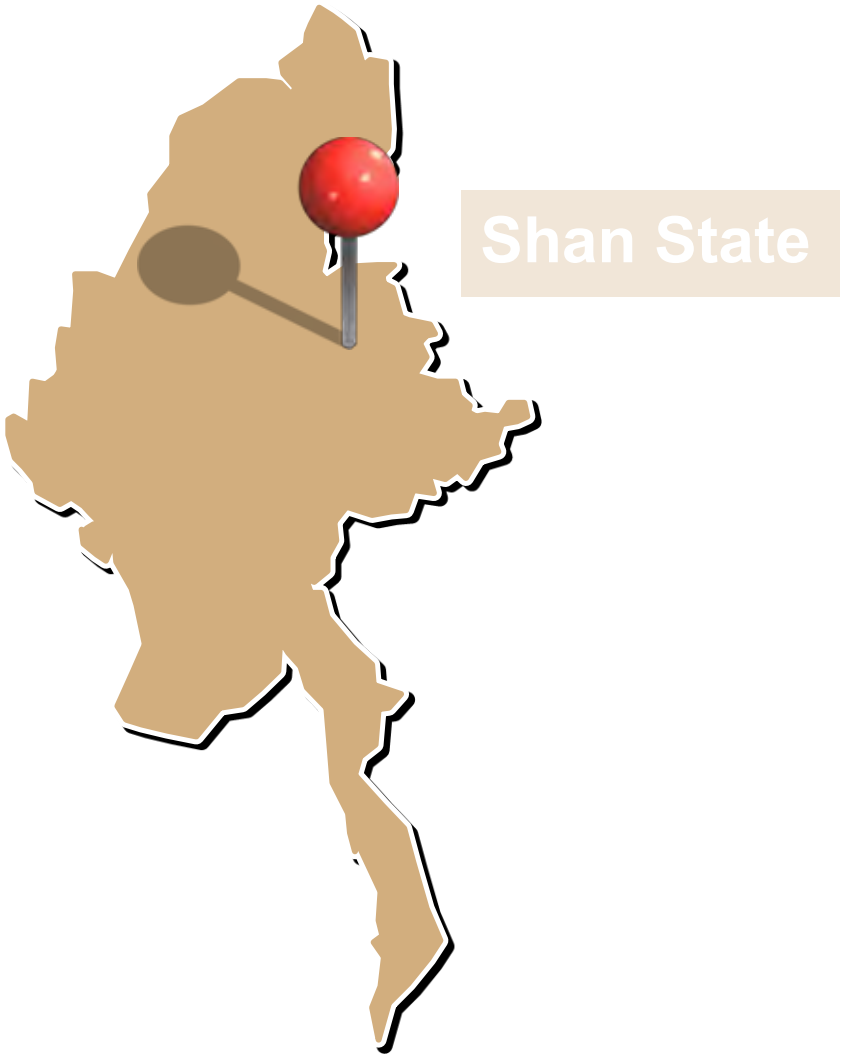
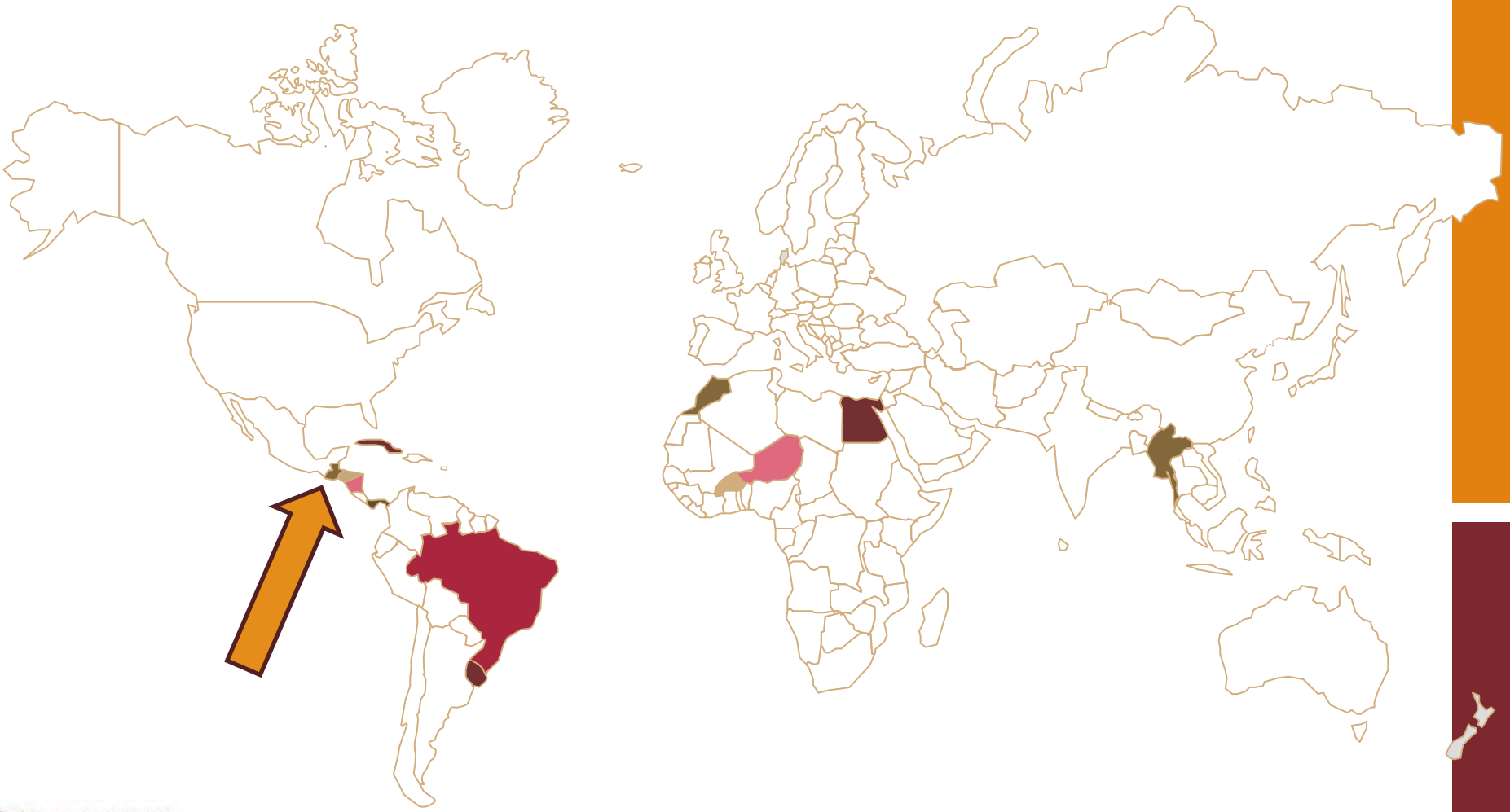
Myanmar (Burma)



New Seed Potato Target Market: Guatemala



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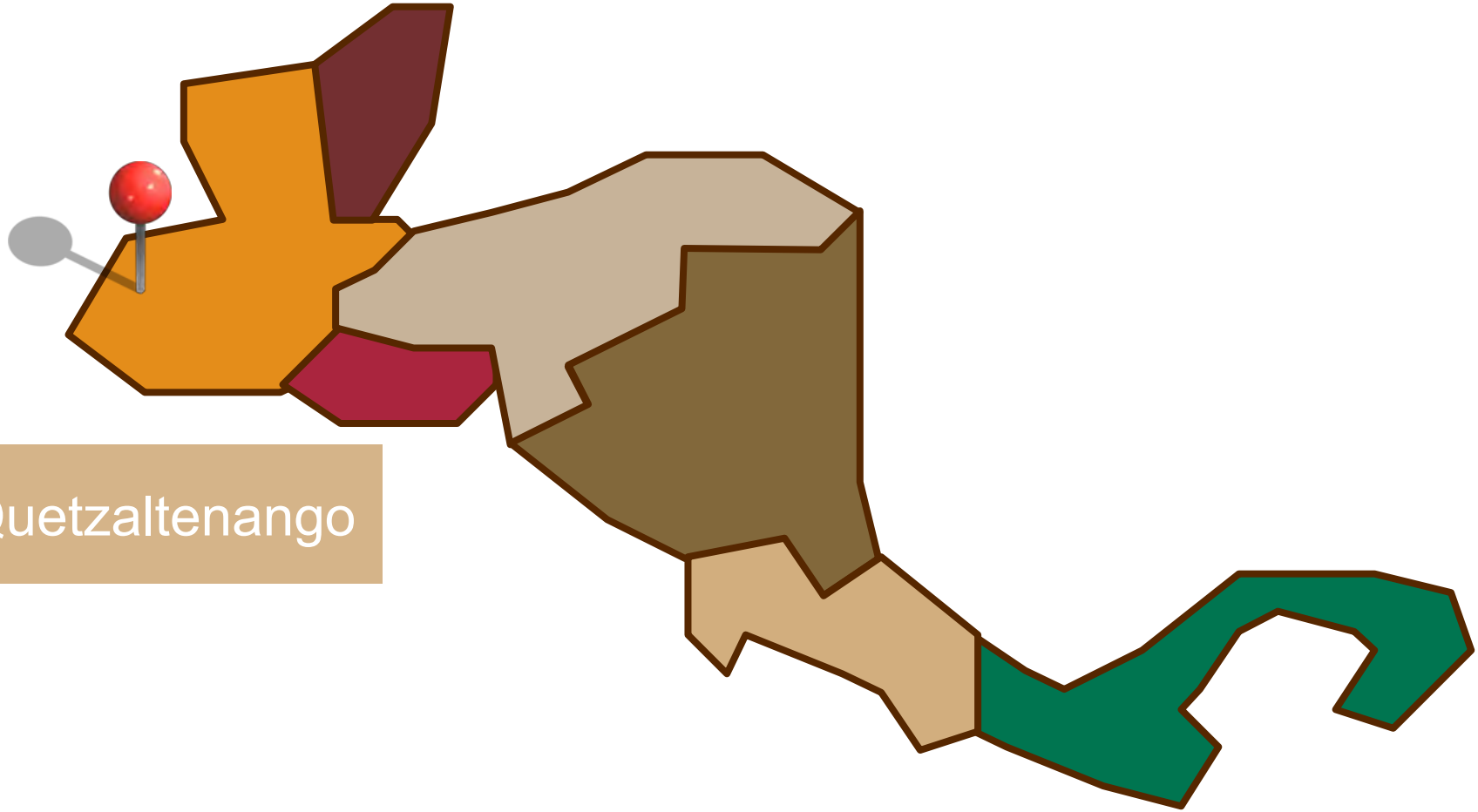
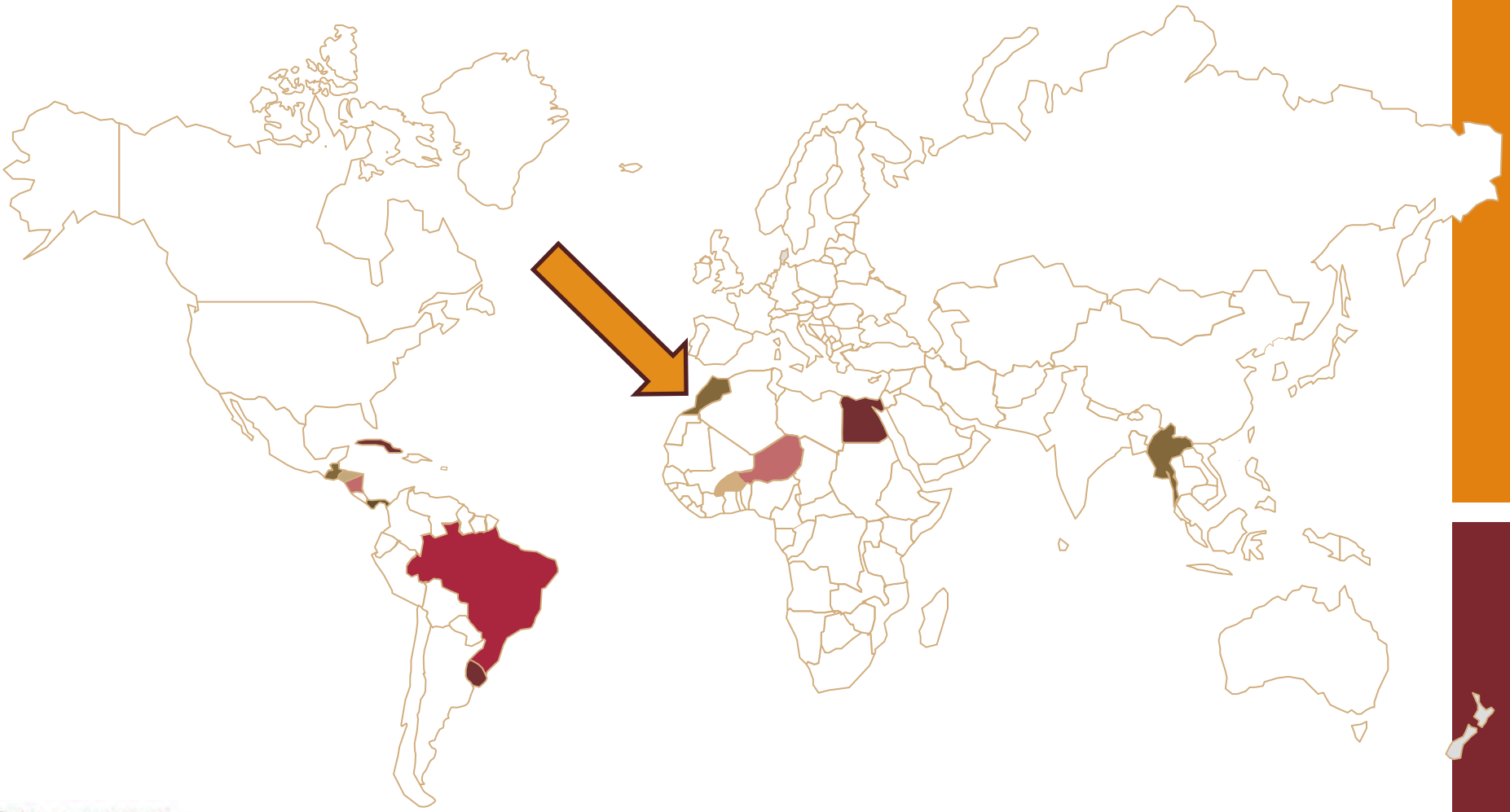
Guatemala



Quetzaltenango

New Seed Potato Target Market: Morocco



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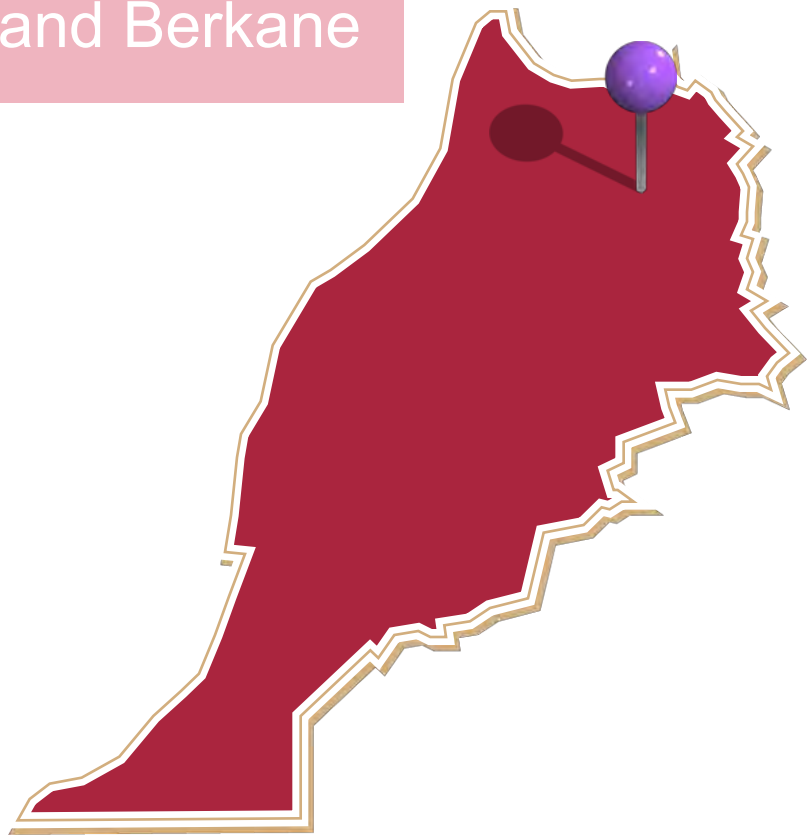
Morocco

Meknes and Berkane



Foodservice

Foodservice Program Strategy

- Drive increased usage of US table-stock potatoes, dehydrated and frozen potato products at foodservice through education of the benefits, the introduction of new uses and new products as well as the pursuit of new channels.

- Protect and grow US market share by demonstrating and promoting the superior quality, variety, versatility and availability.

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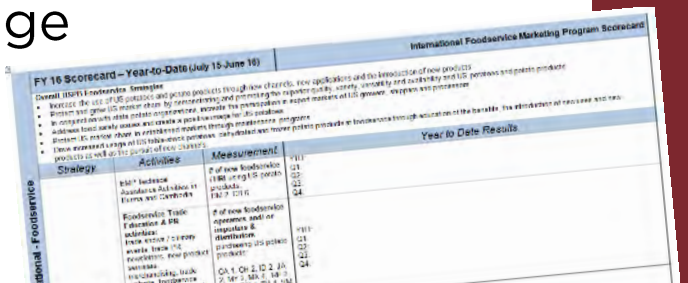
FY15 Highlights & Successes!

- **Trade education & PR** generating interest in US potatoes and positively impacting foodservice trade

- **Menu development work** driving increased usage
  - 88 new items / menus launched (frozen)
  - 50 companies launching new menus (dehy)
  - 15 menu items featured at HRI (table-stock)
  - 17 alternative channels tapped (frozen)

- **Foodservice promotions** increasing usage



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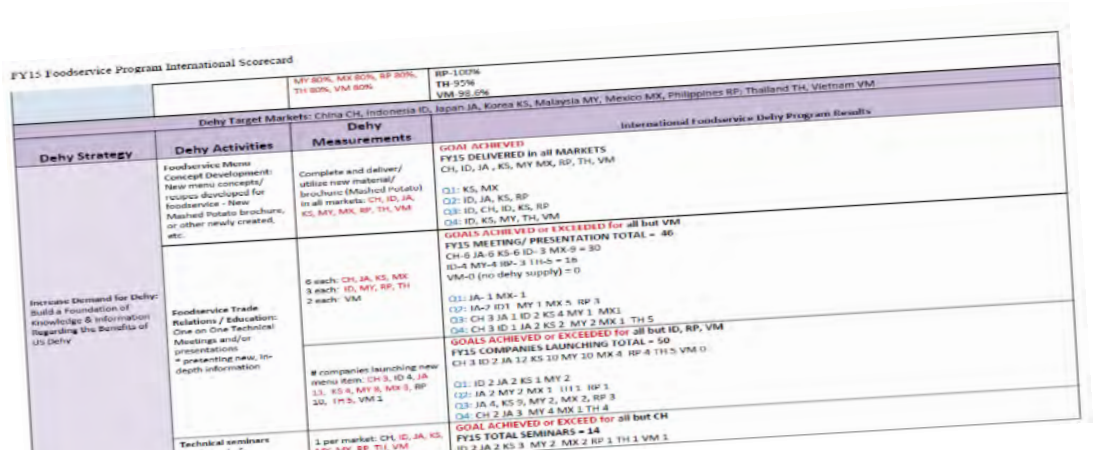
FY15 Highlights & Successes!

- **Technical training & support** helping to protect & grow market share
  - 42 switches to US or upgrades (frozen)
  - 40 operations adding additional item (frozen)
  - 2 new importers or products imported (dehy)

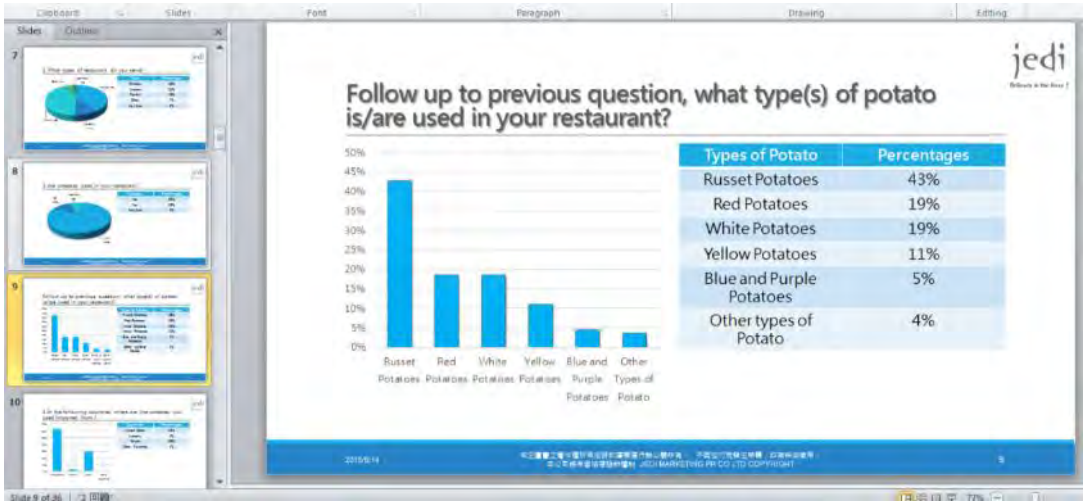
- **Importer/ Distributor RTM** leading to knowledge, loyalty and new purchases



FY15 Foodservice Program International Scorecard

		MY 80%, MX 80%, RP 80%, TH 80%, VM 80%	RP-100% TH-95% VM 98.6%
Dehy Target Markets: China CH, Indonesia ID, Japan JA, Korea KS, Malaysia MY, Mexico MX, Philippines RP, Thailand TH, Vietnam VM			
Dehy Strategy	**Dehy Activities**	**Dehy Measurements**	**International Foodservice Dehy Program Results**
Increase Demand for Dehy: Build a Foundation of Knowledge & Information Regarding the Benefits of US Dehy	Foodservice Menu Concept Development: New menu concepts/ recipes developed for foodservice - New Mashed Potato brochure, or other newly created, etc.	Complete and deliver/ brochure (Mashed Potato) in all markets: CH, ID, JA, KS, MY, MX, RP, TH, VM	GOAL ACHIEVED FY15 DELIVERED in all MARKETS CH, ID, JA , KS, MY MX, RP, TH, VM Q1: KS, MX Q2: ID, JA, KS, RP Q3: ID, CH, ID, KS, RP Q4: ID, KS, MY, TH, VM
	Foodservice Trade Relations / Education: One on One Technical Meetings and/or presentation * presenting new, in-depth information	6 each: CH, JA, KS, MX 3 each: ID, MY, RP, TH 2 each: VM	GOALS ACHIEVED or EXCEEDED for all but VM FY15 MEETING/ PRESENTATION TOTAL = 46 CH-6 JA-6 KS-6 ID- 3 MX-9 = 30 ID-4 MY-4 RP- 3 TH-5 = 16 VM-0 (no dehy supply) = 0 Q1: JA- 1 MX- 1 Q2: JA-7 ID1 MY 1 MX 5 RP 3 Q3: CH 3 JA 1 ID 2 KS 4 MY 1 MX1 Q4: CH 3 ID 1 JA 2 KS 2 MY 2 MX 1 TH 5
		# companies launching new menu item: CH 9, ID 4, JA 10, KS 4, MY 8, MX 3, RP 10, TH 5, VM 1	GOALS ACHIEVED or EXCEEDED for all but ID, RP, VM FY15 COMPANIES LAUNCHING TOTAL = 50 CH 3 ID 2 JA 12 KS 10 MY 10 MX 4 RP 4 TH 5 VM 0 Q1: ID 2 JA 2 KS 1 MY 2 Q2: JA 2 MY 2 MX 1 TH 1 RP 1 Q3: JA 4, KS 9, MY 2, MX 2, RP 3 Q4: CH 2 JA 3 MY 4 MX 1 TH 4
	Technical seminars	1 per market: CH, ID, JA, KS, MY, MX, RP, TH, VM	GOAL ACHIEVED or EXCEED for all but CH FY15 TOTAL SEMINARS = 14 ID 2 JA 2 KS 3 MY 2 MX 2 RP 1 TH 1 VM 1

Trade Education & PR – Taiwan Culinary



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Japan – SMAPO – Japan Airlines

Discover World Potato Dishes
with POTATO AIRLINES!

Welcome aboard
POTATO AIRLINES

Uniflex Marketing, Inc.
June 2015

Korea – Customized Menu Presentations

Foodservice Promotions

Types of:

- Generic Promotional materials
- Cooperative Sales Promotions
- Tie-in/Umbrella Promotions

Malaysia – US Potato Culinary Festival

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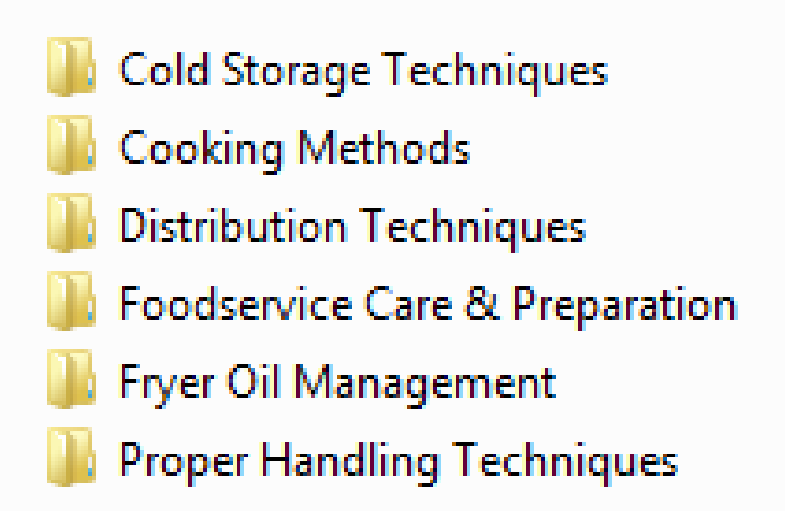
Technical Training & Support

- OSTs
- WBUS
- New frozen training video



Importer / Distributor RTM – May 2015

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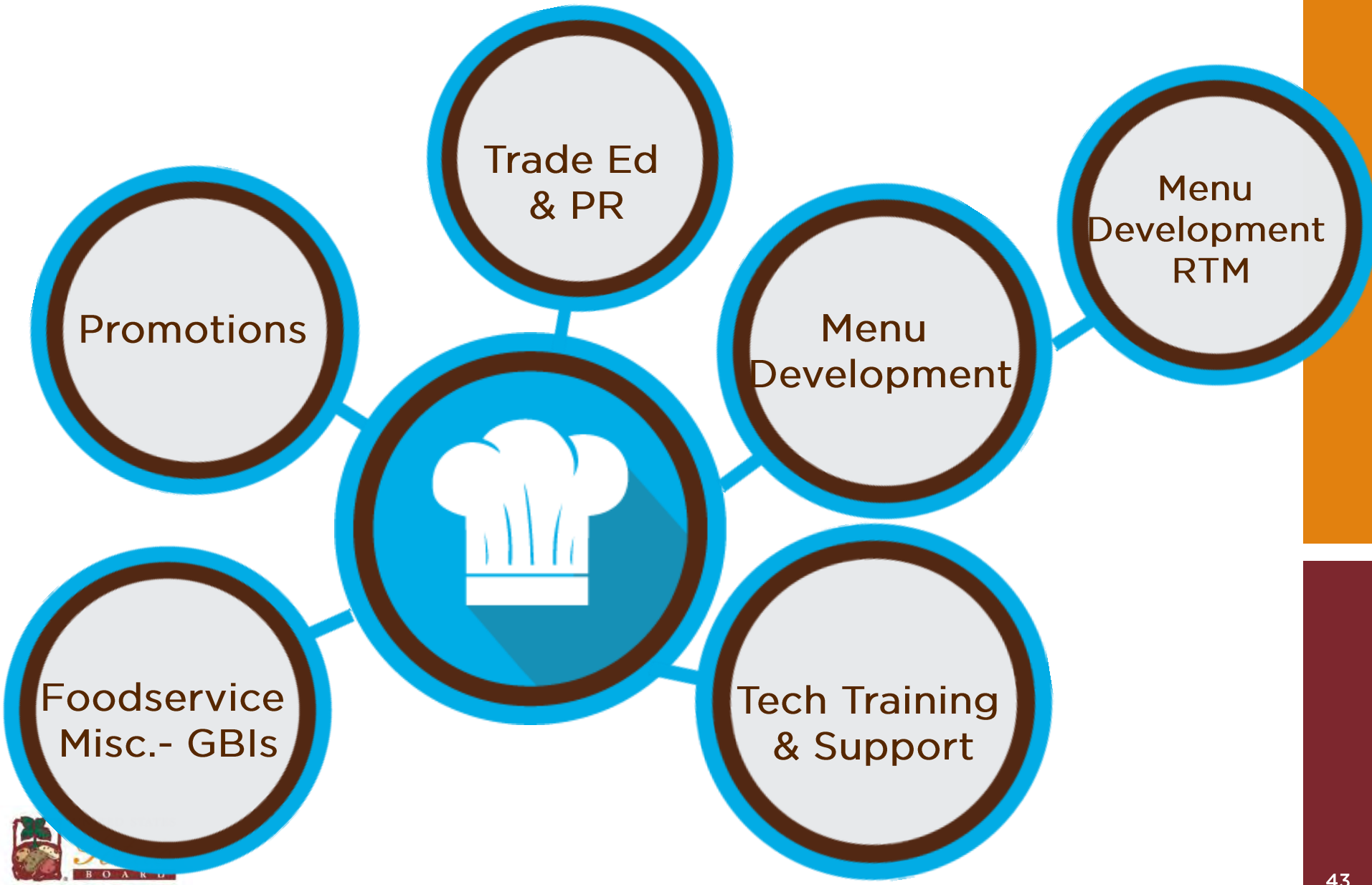
FY16 Foodservice Program Activities



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FY16 What's the Focus???

Drive Increased Usage

Protect and Grow US Market Share

- All potato products
- Condensed scorecard
- Product specific technical training and seminars
- Focus on student/young chef potato exposure & training
- Culinary institute work
- Continue to gain back market share

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FY16 What's Coming Up?

- Oct 2015- International chef mini-RTM + joining CIA
- GBI regional chef contest
- Spring 2016- Menu Development RTM
- Mexico trade shows & CANIRAC event
- Malaysia Food & Hotel trade show

Comments, Questions or Thoughts?

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Fresh Potatoes (HS 0701.90)

	Tariff Rate Quotas (if applicable)	2014 Applied Tariff	TRQ Amount	Within TRQ Tariff	Out of TRQ Tariff	Taxes & Fees
Argentina		10%				* Import Statistics Fee: 0.5% based on CIF * VAT: 10.5-21% based on duty-paid value and type of good * Advanced VAT: 0-12.7% based on duty-paid value, depends on importer registration statues, the type of good, and the end use * Anticipated Profits Tax: 3% based on duty-paid value * Customs Computer Service Usage Fee: 10 ARP per import/transaction * Cargo Handling Fee: Applicable on goods entering the Port of Buenos Aires. 3 USD per ton for containerized cargo, 1.125 USD per ton for solid bulk cargo * Gross Revenues Tax: 1.5% based on duty-paid value
Brazil		10%				*Brazil applies a common external tariff (CET) of 0-15.5% *17-18% Merchandise Circulation Tax *7.6% Social Security Tax (Cofins) *International Trade System Usage Fee of 185 BRL for each import declaration with an additional charge per item in that declaration
Canada		Free				5% goods and services tax (GST) based on duty-paid value; the provinces of New Brunswick, Newfoundland and Labrador, and Nova Scotia apply a harmonized sales tax (HST) of 12-15% instead of GST
Chile		Free				19% Value Added Tax (VAT) on all import goods based on cost, insurance, and freight (CIF) + duty
China		13%				13% of duty-paid value; Hong Kong levies no import tariffs or duties on potato imports
Colombia		Free				
Costa Rica			348 MT	Free	45%	1% Surcharge Tax on the basis of assessment is cost, insurance and freight; some products also face a sales tax of 13% of duty-paid value
Cuba		10%				
Dominican Rep.		5%				
El Salvador		4%				13% value added tax (VAT) applied on CIF + duty
Guatemala			750	6%	12.7%	12% value added tax (VAT) on all shipments based on cost, insurance, and freight (CIF) + duty
Honduras		6%				some products are subject to a 0.5% customs service administration fee
India		30%				*Additional Duty of Excise (ADE): 1% based on CIF *Education Cess and Secondary and Higher Education Cess (Ed Cess 1) (1 of 2): 3% based on duty + ADE *Education Cess and Secondary and Higher Education Cess (Ed Cess 2) (2 of 2): 1% based on duty + ADE + Ed Cess 1 *Additional Duty of Customs (ADC): 4% based on duty paid value + ADE
Indonesia		20%				10% value added tax (VAT) on most products
Israel	0701.90 (fresh) (Jan-April, except those entering under a TRQ)	1.615 ILS/kg, but not more than 195.5%	5,000,000 MT (allotted to all WTO members)	1.411 ILS/kg	1.411 ILS/kg, but not more than 195.5%	Exempt from 16% value added tax (VAT). A 1.02% Port Tax based on CIF applies.
	0701.90 (fresh) (May-December, except those entering under a TRQ)	1.394 ILS/kg, but not more than 195.5%				
Jamaica		40%				*Customs User Fee: 2% of CIF *Standard Compliance Fee: 0.3% of CIF *Environmental Levy: 0.5% of CIF
Japan		4.3%				5% consumption tax (general excise tax) is levied on all imported goods
Malaysia		Free				
Mexico		Free				
Nicaragua		6%				*Consular Fee: $20-$50 depending on product *Import Service Fee: $1 per ton or fraction thereof
Panama			796 MT	Free	81%	
Peru		Free				
Philippines		40%				*Processing Fees based on cost, insurance, and freight (CIF): CIF Value ≤ 250,000 Pesos = 250 Peso processing fee; CIF Value of 250,000 - 500,000 Pesos = 500 Peso processing fee; CIF Value of 500,000 - 750,000 Pesos = 750 Peso processing fee; CIF Value > 750,000 Pesos = 1,000 Peso processing fee. *12% VAT based on CIF value + duty + import processing fee + documentary stamp fee on all import shipments
Russia		13%				10-18% Value Added Tax (VAT) calculated on the sum of the cost of the product plus customs duty is levied on all imported potato products. Russia also charges a Customs Procedure Fee ranging from $16.49 - $3,297.60 depending on the consignment value.
Saudi Arabia	Jan 1 - May 31	15%				15 SAR/1000 net kg Port Service Charge
	Apr 1 - Dec 31	Free				
Singapore		Free				7% Goods & Services Tax (GST) based on the CIF value (cost, insurance, and freight)
South Africa		0.0044 ZAR/kg				
South Korea	Table Potatoes		3,183MT	Free	304%	
	Chipping Potatoes (Dec 1 - Apr 30)	Free				
	Chipping Potatoes (May 1 - Nov 30)		15,800MT	30%	304%	
Taiwan		15%				5% value added tax (VAT) based on duty-paid value; a 0.04% Trade Promotion Service Fee based on cost, insurance, and freight (CIF); and an 80 TWD Harbor Fee for shipments of 1.25 metric tons or more
Thailand			32,555 MT	Free	125% or 6.25 THB (0.20 USD)/kg; whichever is higher	7% value added tax (VAT) on all imported goods based cost, insurance, freight (CIF) + duty
United Kingdom	0701.90.50: Potatoes, fresh or chilled Jan 1-May 15	9.6%				
	0701.90.50: Potatoes, fresh or chilled: May 16-June 30	13.4%				
	0701.90.90: Potatoes, fresh or chilled: Other	11.5%				
	0701.90.10: Potatoes, fresh or chilled: Other: for the manufacture of starch	5.8%				
Uruguay		10%				*23% VAT based on cost, insurance, freight (CIF) + duty *Consular Fee: 2% based on duty-paid value *Agricultural Products and Livestock Transfer Tax: 1.5% (varies depending on product) based duty-paid value *Import Commission - BROU: 2.5% based on duty-paid value *Social Security Contribution: 3.6525% based on duty-paid value (actually 3% on 121.75% of duty-paid value) *Preferential Service Fee: 0.2% of duty-paid value to a maximum of 50 USD *Import permit fee ranging from $12 - $600, depending on shipment value
Venezuela		15%				1% Customs Handling Charge on all imports based on the duty-paid value; 12% value added tax (VAT) on CIF
Vietnam		20%				5-10% Value Added Tax (VAT) based on cost, insurance, freight (CIF) + duty; Vietnamese Customs frequently charge import duties on inflated reference prices as opposed to invoice prices

Frozen (HS 2004.10)

	HS Specifications (if applicable)	2014 Applied Tariff	TRQ Amount	Within TRQ Tariff	Out of TRQ Tariff	Taxes & Fees
Argentina		14%				* Import Statistics Fee: 0.5% based on CIF * VAT: 10.5-21% based on duty-paid value and type of good * Advanced VAT: 0-12.7% based on duty-paid value, depends on importer registration statues, the type of good, and the end use * Anticipated Profits Tax: 3% based on duty-paid value * Customs Computer Service Usage Fee: 10 ARP per import/transaction * Cargo Handling Fee: Applicable on goods entering the Port of Buenos Aires. 3 USD per ton for containerized cargo, 1.125 USD per ton for solid bulk cargo * Gross Revenues Tax: 1.5% based on duty-paid value
Brazil		25%				*Brazil applies a common external tariff (CET) of 0-15.5% *17-18% Merchandise Circulation Tax *7.6% Social Security Tax (Cofins) *1.65% Social Integration Program Tax (PIS/Pasep) *International Trade System Usage Fee of 185 BRL for each import declaration with an additional charge per item in that declaration
Canada		Free				5% goods and services tax (GST) based on duty-paid value; the provinces of New Brunswick, Newfoundland and Labrador, and Nova Scotia apply a harmonized sales tax (HST) of 12-15% instead of GST
Chile		Free				19% Value Added Tax (VAT) on all import goods based on cost, insurance, and freight (CIF) + duty
China		13%				15-17% of duty-paid value; Hong Kong levies no import tariffs or duties on potato imports
Colombia		Free				16% Value Added Tax (VAT)
Costa Rica		Free				1% Surcharge Tax on the basis of assessment is cost, insurance and freight; some products also face a sales tax of 13% of duty-paid value
Cuba		25%				
Dominican Rep.		Free				16% taxbased on the duty-paid value of the shipment; Customs Service Fee of 0.4% of cost, insurance, and freight (CIF)
El Salvador		Free				13% value added tax (VAT) applied on CIF + duty
Guatemala		Free				12% value added tax (VAT) on all shipments based on cost, insurance, and freight (CIF) + duty
Honduras		Free				12% sales tax based on cost, insurance, freight (CIF) + duty on all potato products other than fresh and seed potatoes; some products are also subject to a 0.5% customs service administration fee
India		30%				*Additional Duty of Excise (ADE): 1% based on CIF *Education Cess and Secondary and Higher Education Cess (Ed Cess 1) (1 of 2): 3% based on duty + ADE *Education Cess and Secondary and Higher Education Cess (Ed Cess 2) (2 of 2): 3% based on duty + ADE + Ed Cess 1 *Additional Duty of Customs (ADC): 4% based on duty paid value + ADE
Indonesia		5%				10% value added tax (VAT) on most products
Israel	2004.10.90 (frozen fries)		250 MT	Free	45%, but not less than 2.295 ILS/kg	16% value added tax (VAT) based on cost, insurance, freight (CIF) + duty and a 1.02% Port Tax based on CIF
	2004.10.10: Products of flour or meal	Free				
	2004.10.20: Homogenized food preparations (frozen)	Free				
Jamaica	2004.10.10: Frozen fries in packages no less than 50 kilograms	Free				*General Consuption Tax: 22.5% of cost, insurance, and freight (CIF) *Customs User Fee: 2% of CIF *Standard Compliance Fee: 0.3% of CIF *Environmental Levy: 0.5% of CIF
	2004.10.90: Frozen fries in packages less than 50 kilograms	20%				
Japan		8.5%				5% consumption tax (general excise tax) is levied on all imported goods

Frozen (HS 2004.10)

	HS Specifications (if applicable)	2014 Applied Tariff	TRQ Amount	Within TRQ Tariff	Out of TRQ Tariff	Taxes & Fees
Malaysia	2004.10.10: Potatoes, cooked otherwise than by steaming or boiling in water (prepared or preserved otherwise than by vinegar or acetic acid, frozen)	Free				5% sales tax based on cost, unsurance, and freight (CIF) + duty
	2004.10.20: Potatoes: infant and baby food	Free				
	2004.10.30: Potato flour-based products	Free				
	2004.10.91: Other potatoes in air tight container	Free				5% sales tax based on cost, unsurance, and freight (CIF) + duty
	2004.10.99: Other	Free				5% sales tax based on cost, unsurance, and freight (CIF) + duty
Mexico	2004.10: Potatoes, cooked, (prepared or preserved otherwise than by vinegar or acetic acid, frozen)	Free				
Nicaragua		Free				*15% VAT based on duty paid value *Consular Fee: $20-$50 depending on product *Import Service Fee: $1 per ton or fraction thereof
Panama	2004.10.10: Frozen french fries in packages under 1 kg	10%				
	2004.10.20: Frozen french fries in packages over 1 kg		3,937 MT	Free	8%	
	2004.10.30: Hash browns	9%				
Peru		Free				16% general sales tax (GST) based on cost, insurance, and freight (CIF) + duty and a 2% Municipal Promotion Tax (IPM) on CIF + duty
Philippines		10%				*Processing Fees based on cost, insurance, and freight (CIF): CIF Value ≤ 250,000 Pesos = 250 Peso processing fee; CIF Value of 250,000 - 500,000 Pesos = 500 Pesos processing fee; CIF Value of 500,000 - 750,000 Pesos = 750 Peso processing fee; CIF Value > 750,000 Pesos = 1,000 Peso processing fee. *12% VAT based on CIF value + duty + import processing fee + documentary stamp fee on all import shipments
Russia		13.7% (but not less than 0.068 EUR/kg)				10-18% Value Added Tax (VAT) calculated on the sum of the cost of the product plus customs duty is levied on all imported potato products; Russia also charges a Customs Procedure Fee ranging from $16.49 - $3,297.60 depending on consignment value
Saudi Arabia		5%				15 SAR/1000 net kg Port Service Charge
Singapore		Free				7% Goods & Services Tax (GST) based on the CIF value (cost, insurance, and freight)
South Africa		20%				14% value added tax (VAT) based on 110% of freight on board (FOB) + duty + excise
South Korea		Free				10% value added tax (VAT) based on cost, insurance, freight (CIF) + duty
Taiwan	2004.10.11.00.70: Potato sticks for immediate packing of 1.5 kg or more (prepared or preserved other than by vinegar or acetic acid, frozen)	12.5%				5% value added tax (VAT) based on duty-paid value, a 0.04% Trade Promotion Service Fee based on cost, insurance, and freight (CIF), and an 80 TWD Harbor Fee for shipments of 1.25 metric tons or more
	2004.10.19.00.90: Other potato chips (prepared or preserved other than by vinegar or acetic acid, frozen)	12.5%				
	2004.10.90.00.10: Other potatoes, prepared or preserved other than by vinegar or acetic acid, frozen)	18%				
Thailand		30%				7% value added tax (VAT) on all imported goods based cost, insurance, freight (CIF) + duty
United Kingdom	2004.10.10 (frozen fries)	14.4%				20% Value Added Tax (VAT) on some processed potato products
	2004.10.91: Potatoes prepared or preserved otherwise than by vinegar or acetic acid, frozen: In the form of flour, meal of flakes	7.6% + Variable Component				
	2004.10.99: Potatoes prepared or preserved otherwise than by vinegar or acetic acid, frozen: Other	17.6%				
Uruguay	204.10.10.00: Cooked otherwise than by steaming or boiling in water, frozen	14%				*23% VAT based on cost, insurance, freight (CIF) + duty *Consular Fee: 2% based on duty-paid value *Agricultural Products and Livestock Transfer Tax: 1.5% (varies depending on product) based duty-paid value *Import Commission - BROU: 2.5% based on duty-paid value *Social Security Contribution: 3.6525% based on duty-paid value (actually 3% on 121.75% of duty-paid value) *Preferential Service Fee: 0.2% of duty-paid value to a maximum of 50 USD *Import permit fee ranging from $12 - $600, depending on shipment value
Venezuela		20%				1% Customs Handling Charge on all imports based on the duty-paid value; 12% value added tax (VAT) on CIF
Vietnam		13%				5-10% Value Added Tax (VAT) based on CIF + duty; Vietnamese Customs frequently charge import duties on inflated reference prices as opposed to invoice prices

Dehydrated Potatoes (HS 1105.20)

	HS Specifications (if applicable)	2014 Applied Tariff	TRQ Amount	Within TRQ Tariff	Out of TRQ Tariff	Taxes & Fees
Argentina		12%				* Import Statistics Fee: 0.5% based on CIF * VAT: 10.5-21% based on duty-paid value and type of good * Advanced VAT: 0-12.7% based on duty-paid value, depends on importer registration statues, the type of good, and the end use * Anticipated Profits Tax: 3% based on duty-paid value * Customs Computer Service Usage Fee: 10 ARP per import/transaction * Cargo Handling Fee: Applicable on goods entering the Port of Buenos Aires. 3 USD per ton for containerized cargo, 1.125 USD per ton for solid bulk cargo * Gross Revenues Tax: 1.5% based on duty-paid value
Brazil		12%				*Brazil applies a common external tariff (CET) of 0-15.5% *17-18% Merchandise Circulation Tax *7.6% Social Security Tax (Cofins) *1.65% Social Integration Program Tax (PIS/Pasep) *International Trade System Usage Fee of 185 BRL for each import declaration with an additional charge per item in that declaration
Canada		Free				5% goods and services tax (GST) based on duty-paid value; the provinces of New Brunswick, Newfoundland and Labrador, and Nova Scotia apply a harmonized sales tax (HST) of 12-15% instead of GST
Chile		Free				19% Value Added Tax (VAT) on all import goods based on cost, insurance, and freight (CIF) + duty
China		15%				15-17% of duty-paid value; Hong Kong levies no import tariffs or duties on potato imports
Colombia		Free				16% Value Added Tax (VAT)
Costa Rica	1105.20.10: Potato flakes and granules	Free				1% Surcharge Tax on the basis of assessment is cost, insurance and freight; some products also face a sales tax of 13% of duty-paid value
	1105.20.20: Potato peletts	Free				
Cuba		15%				
Dominican Rep.		Free				16% taxbased on the duty-paid value of the shipment; Customs Service Fee of 0.4% of cost, insurance, and freight (CIF)
El Salvador		Free				13% value added tax (VAT) applied on CIF + duty
Guatemala	1105.20.10: Potato flakes and granules	Free				12% value added tax (VAT) on all shipments based on cost, insurance, and freight (CIF) + duty
	1105.20.20: Potato peletts	2%				
Honduras	1105.20.10: Potato flakes and granules	Free				12% sales tax based on cost, insurance, freight (CIF) + duty on all potato products other than fresh and seed potatoes; some products are also subject to a 0.5% customs service administration fee
	1105.20.20: Potato peletts	Free				
India		30%				*Additional Duty of Excise (ADE): 1% based on CIF *Education Cess and Secondary and Higher Education Cess (Ed Cess 1) (1 of 2): 3% based on duty + ADE *Education Cess and Secondary and Higher Education Cess (Ed Cess 2) (2 of 2): 3% based on duty + ADE + Ed Cess 1 *Additional Duty of Customs (ADC): 4% based on duty paid value + ADE
Indonesia	1105.20.00: Potato flour, meal, and powder	5%				10% value added tax (VAT) on most products
	1105.10.00: Potato flakes, granules, and pellets	5%				
Israel		Free				16% value added tax (VAT) based on cost, insurance, freight (CIF) + duty and a 1.02% Port Tax based on CIF
Jamaica		Free				*General Consuption Tax: 22.5% of cost, insurance, and freight (CIF) *Customs User Fee: 2% of CIF *Standard Compliance Fee: 0.3% of CIF *Environmental Levy: 0.5% of CIF
Japan		20%				5% consumption tax (general excise tax) is levied on all imported goods
Malaysia		Free				5% sales tax based on cost, insurance, and freight (CIF) + duty
Mexico		Free				15% VAT based on duty paid value
Nicaragua	1105.2010: Flakes and granules	Free				*Consular Fee: $20-$50 depending on product *Import Service Fee: $1 per ton or fraction thereof
	1105.20.20: Pellets	Free				
Panama		9%				
Peru		Free				16% general sales tax (GST) based on cost, insurance, and freight (CIF) + duty and a 2% Municipal Promotion Tax (IPM) on CIF + duty
Philippines		7%				*Processing Fees based on cost, insurance, and freight (CIF): CIF Value ≤ 250,000 Pesos = 250 Peso processing fee; CIF Value of 250,000 - 500,000 Pesos = 500 Pesos processing fee; CIF Value of 500,000 - 750,000 Pesos = 750 Peso processing fee; CIF Value > 750,000 Pesos = 1,000 Peso processing fee. *12% VAT based on CIF value + duty + import processing fee + documentary stamp fee on all import shipments
Russia		8.3%				10-18% Value Added Tax (VAT) calculated on the sum of the cost of the product plus customs duty is levied on all imported potato products; Russia also charges a Customs Procedure Fee ranging from $16.49 - $3,297.60 depending on the consignment value
Saudi Arabia		5%				15 SAR/1000 net kg Port Service Charge; HS 1105 products may be charged a higher rate
Singapore		Free				7% Goods & Services Tax (GST) based on the CIF value (cost, insurance, and freight)
South Africa		20%				14% value added tax (VAT) based on 110% of freight on board (FOB) + duty + excise
South Korea	1105.20.00.00 (This HS code is often used for products that the US believes should fall under HS 2005.2):Potato flakes, granules and pellets		5,305 MT	Free	275%	10% value added tax (VAT) on potato products based on duty-paid value
Taiwan		10%				5% value added tax (VAT) based on duty-paid value; a 0.04% Trade Promotion Service Fee based on cost, insurance, and freight (CIF); and an 80 TWD Harbor Fee for shipments of 1.25 metric tons or more
Thailand		30%				7% value added tax (VAT) on all imported goods based cost, insurance, freight (CIF) + duty
United Kingdom		12.2%				20% Value Added Tax (VAT) on some processed potato products
Uruguay		12%				*23% VAT based on cost, insurance, freight (CIF) + duty *Consular Fee: 2% based on duty-paid value *Agricultural Products and Livestock Transfer Tax: 1.5% (varies depending on product) based duty-paid value *Import Commission - BROU: 2.5% based on duty-paid value *Social Security Contribution: 3.6525% based on duty-paid value (actually 3% on 121.75% of duty-paid value) *Preferential Service Fee: 0.2% of duty-paid value to a maximum of 50 USD *Import permit fee ranging from $12 - $600, depending on shipment value
Venezuela		20%				1% Customs Handling Charge on all imports based on the duty-paid value; 12% value added tax (VAT) on CIF
Vietnam		30%				5-10% Value Added Tax (VAT) based on CIF + duty; Vietnamese Customs frequently charge import duties on inflated reference prices as opposed to invoice prices

Processed Dehydrated Potatoes (HS 2005.20)

	HS Specifications (if applicable)	2014 Applied Tariff	TRQ Amount	Within TRQ Tariff	Out of TRQ Tariff	Taxes & Fees
Argentina		14%				* Import Statistics Fee: 0.5% based on CIF * VAT: 10.5-21% based on duty-paid value and type of good * Advanced VAT: 0-12.7% based on duty-paid value, depends on importer registration statues, the type of good, and the end use * Anticipated Profits Tax: 3% based on duty-paid value * Customs Computer Service Usage Fee: 10 ARP per import/transaction * Cargo Handling Fee: Applicable on goods entering the Port of Buenos Aires. 3 USD per ton for containerized cargo, 1.125 USD per ton for solid bulk cargo * Gross Revenues Tax: 1.5% based on duty-paid value
Brazil		14%				*Brazil applies a common external tariff (CET) of 0-15.5% *17-18% Merchandise Circulation Tax *7.6% Social Security Tax (Cofins) *1.65% Social Integration Program Tax (PIS/Pasep) *International Trade System Usage Fee of 185 BRL for each import declaration with an additional charge per item in that declaration
Canada		Free				5% goods and services tax (GST) based on duty-paid value; the provinces of New Brunswick, Newfoundland and Labrador, and Nova Scotia apply a harmonized sales tax (HST) of 12-15% instead of GST
Chile		Free				19% Value Added Tax (VAT) on all import goods based on cost, insurance, and freight (CIF) + duty
China		15%				15-17% of duty-paid value; Hong Kong levies no import tariffs or duties on potato imports
Colombia		Free				16% Value Added Tax (VAT)
Costa Rica		16.40%				1% Surcharge Tax on the basis of assessment is cost, insurance and freight; some products also face a sales tax of 13% of duty-paid value
Cuba		15%				
Dominican Rep.		2%				16% taxbased on the duty-paid value of the shipment; Customs Service Fee of 0.4% of cost, insurance, and freight (CIF)
El Salvador		1.5%				13% value added tax (VAT) applied on CIF + duty
Guatemala		1.5%				12% value added tax (VAT) on all shipments based on cost, insurance, and freight (CIF) + duty
Honduras		Free				12% sales tax based on cost, insurance, freight (CIF) + duty on all potato products other than fresh and seed potatoes; some products are also subject to a 0.5% customs service administration fee
India		30%				*Additional Duty of Excise (ADE): 1% based on CIF *Education Cess and Secondary and Higher Education Cess (Ed Cess 1) (1 of 2): 3% based on duty + ADE *Education Cess and Secondary and Higher Education Cess (Ed Cess 2) (2 of 2): 3% based on duty + ADE + Ed Cess 1 *Additional Duty of Customs (ADC): 4% based on duty paid value + ADE
Indonesia		5%				10% value added tax (VAT) on most products
Israel	2005.20.10: Potatoes in the form of flour, etc.	Free				16% value added tax (VAT) based on cost, insurance, freight (CIF) + duty and a 1.02% Port Tax based on CIF
	2005.20.20: Homogenized preparations	Free				
	2005.20.90: Other	10.2%, but not less than 2.1675 ILS/kg				
Jamaica	2005.20.10: Processed potatoes in packages no less than 50 kilograms	Free				*General Consuption Tax: 22.5% of cost, insurance, and freight (CIF) *Customs User Fee: 2% of CIF *Standard Compliance Fee: 0.3% of CIF *Environmental Levy: 0.5% of CIF
	2005.20.90: Processed potatoes in packages less than 50 kilograms	20%				
Japan	2005.20.100: Mashed potatoes and potato flakes	13.6%				5% consumption tax (general excise tax) is levied on all imported goods
	2005.20.210 (potato chips): Potatoes, Other, in airtight containers not more than 10 kg each, including container	12%				
	2005.20.220: Potatoes, Other, Other	9%				

Processed Dehydrated Potatoes (HS 2005.20)

	HS Specifications (if applicable)	2014 Applied Tariff	TRQ Amount	Within TRQ Tariff	Out of TRQ Tariff	Taxes & Fees
Malaysia	2005.20.10: Potatoes: infant and baby food	Free				
	2005.20.90: Potatoes: in air tight containers	8%				5% sales tax based on cost, insurance, and freight (CIF) + duty
	2005.20.99: Potatoes: other	Free				5% sales tax based on cost, insurance, and freight (CIF) + duty
Mexico		Free				
Nicaragua		Free				*15% VAT based on duty paid value *Consular Fee: $20-$50 depending on product *Import Service Fee: $1 per ton or fraction thereof
Panama	2005.20.10: Potatoes: french fries (prepared or preserved otherwise than by vinegar or acetic acid, not frozen)	10%				
	2005.20.20: Potatoes: preparations in the form of meals, powders or flakes (prepared or preserved otherwise than by vinegar or acetic acid, not frozen)	10%				
	2005.20.90: Potatoes: other (prepared or preserved otherwise than by vinegar or acetic acid, not frozen)	32%				
Peru		Free				16% general sales tax (GST) based on cost, insurance, and freight (CIF) + duty and a 2% Municipal Promotion Tax (IPM) on CIF + duty
Philippines		7%				*Processing Fees based on cost, insurance, and freight (CIF): CIF Value ≤ 250,000 Pesos = 250 Peso processing fee; CIF Value of 250,000 - 500,000 Pesos = 500 Pesos processing fee; CIF Value of 500,000 - 750,000 Pesos = 750 Peso processing fee; CIF Value > 750,000 Pesos = 1,000 Peso processing fee. *12% VAT based on CIF value + duty + import processing fee + documentary stamp fee on all import shipments
Russia		13.5% (but not less than 0.068 EUR/kg)				10-18% Value Added Tax (VAT) calculated on the sum of the cost of the product plus customs duty is levied on all imported potato products; Russia also charges a Customs Procedure Fee ranging from $16.49 - $3,297.60 depending on the consignment value
Saudi Arabia		5%				15 SAR/1000 net kg Port Service Charge
Singapore		Free				7% Goods & Services Tax (GST) based on the CIF value (cost, insurance, and freight)
South Africa		20%				14% value added tax (VAT) based on 110% of freight on board (FOB) + duty + excise - fresh and seed potatoes exempt.
South Korea		8%				10% value added tax (VAT) on most potato products based on duty-paid value
Taiwan	2005.20.10.00.50: Potato sticks, in a package of 1.5 kg or more, not frozen	12.5%				5% value added tax (VAT) based on duty-paid value; a 0.04% Trade Promotion Service Fee based on cost, insurance, and freight (CIF); and an 80 TWD Harbor Fee for shipments of 1.25 metric tons or more
	2005.20.20.00.30: Potato chips and other sticks	15%				
	2005.20.90.00.80: Other potatoes, not frozen, prepared or preserved other than by vinegar or acetic acid	18%				
Thailand		30%				7% value added tax (VAT) on all imported goods based cost, insurance, freight (CIF) + duty
United Kingdom	2005.20.20 (chips)	14.1%				20% Value Added Tax (VAT) on some processed potato products (potato crisps, sticks, puffs, and similar products when packaged for human consumption without further preparation).
	2005.20.10: Potatoes prepared or preserved otherwise than by vinegar or acetic acid, not frozen: In the form of flour, meal of flakes	8.8% + Variable Component				
Uruguay	2005.20.91.00: Potatoes, prepared or preserved otherwise than by vinegar or acetic acid, not frozen, in airtight containers	14%				*23% VAT based on cost, insurance, freight (CIF) + duty *Consular Fee: 2% based on duty-paid value *Agricultural Products and Livestock Transfer Tax: 1.5% (varies depending on product) based duty-paid value *Import Commission - BROU: 2.5% based on duty-paid value *Social Security Contribution: 3.6525% based on duty-paid value (actually 3% on 121.75% of duty-paid value) *Preferential Service Fee: 0.2% of duty-paid value to a maximum of 50 USD *Import permit fee ranging from $12 - $600, depending on shipment value
Venezuela		14%				1% Customs Handling Charge on all imports based on the duty-paid value; 12% value added tax (VAT) on CIF
Vietnam	2005.20.10: Chips and sticks	18%				5-10% Value Added Tax (VAT) based on CIF + duty; Vietnamese Customs frequently charge import duties on inflated reference prices as opposed to invoice prices
	2005.20.90: Other	35%				

Seed Potatoes (HS 0701.10)

	HS Specifications (If applicable)	2014 Applied Tariff	TRQ Amount	Within TRQ Tariff	Out of TRQ Tariff	Taxes & Fees
Argentina		Free				* Import Statistics Fee: Exempt * VAT: 10.5-21% based on duty-paid value and type of good * Advanced VAT: 0-12.7% based on duty-paid value, depends on importer registration statues, the type of good, and the end use * Anticipated Profits Tax: 3% based on duty-paid value * Customs Computer Service Usage Fee: 10 ARP per import/transaction * Cargo Handling Fee: Applicable on goods entering the Port of Buenos Aires. 3 USD per ton for containerized cargo, 1.125 USD per ton for solid bulk cargo * Gross Revenues Tax: 1.5% based on duty-paid value
Brazil		Free				*Brazil applies a common external tariff (CET) of 0-15.5% *17-18% Merchandise Circulation Tax *7.6% Social Security Tax (Cofins) *International Trade System Usage Fee of 185 BRL for each import declaration with an additional charge per item in that declaration.
Canada		Free				5% goods and services tax (GST) based on duty-paid value; the provinces of New Brunswick, Newfoundland and Labrador, and Nova Scotia apply a harmonized sales tax (HST) of 12-15% instead of GST
Chile		Free				19% Value Added Tax (VAT) on all import goods based on cost, insurance, and freight (CIF) + duty
China		13%				13% of duty-paid value; Hong Kong levies no import tariffs or duties on potato imports
Colombia		Free				
Costa Rica		Free				1% Surcharge Tax on the basis of assessment is cost, insurance and freight; some products also face a sales tax of 13% of duty-paid value
Cuba		10%				
Dominican Rep.		Free				16% tax based on the duty-paid value of the shipment; customs Service Fee of 0.4% of cost, insurance, and freight (CIF)
El Salvador		Free				13% value added tax (VAT) applied on CIF + duty
Guatemala		Free				12% value added tax (VAT) on all shipments based on cost, insurance, and freight (CIF) + duty
Honduras		Free				Some products are also subject to a 0.5% customs service administration fee
India		5%				*Additional Duty of Excise (ADE): 1% based on CIF *Education Cess and Secondary and Higher Education Cess (Ed Cess 1) (1 of 2): 3% based on duty + ADE *Education Cess and Secondary and Higher Education Cess (Ed Cess 2) (2 of 2): 3% based on duty + ADE + Ed Cess 1 *Additional Duty of Customs (ADC): 4% based on duty paid value + ADE
Indonesia		Free				10% value added tax (VAT) on most products
Israel	0701.10: (June-Sept)		3,998 MT	Free	87.3%	16% value added tax (VAT) based on cost, insurance, freight (CIF) + duty and a 1.02% Port Tax based on CIF
	0701.10 (Oct.-May)			Free	9%	
Jamaica		Free				*Customs User Fee: 2% of CIF *Standard Compliance Fee: 0.3% of CIF *Environmental Levy: 0.5% of CIF
Japan		3%				5% consumption tax (general excise tax) is levied on all imported goods
Malaysia		Free				
Mexico		Free				
Nicaragua		Free				*Consular Fee: $20-$50 depending on product *Import Service Fee: $1 per ton or fraction thereof
Panama		Free				
Peru		Free				
Philippines	May be eligible for duty-free treatment upon submission of Certificate of Eligibility or Certificate of Accreditation	1%				*Processing Fees based on cost, insurance, and freight (CIF): CIF Value ≤ 250,000 Pesos = 250 Peso processing fee; CIF Value of 250,000 - 500,000 Pesos = 500 Pesos processing fee; CIF Value of 500,000 - 750,000 Pesos = 750 Peso processing fee; CIF Value > 750,000 Pesos = 1,000 Peso processing fee. *12% VAT based on CIF value + duty + import processing fee + documentary stamp fee on all import shipments
Russia		5%				10-18% Value Added Tax (VAT) calculated on the sum of the cost of the product plus customs duty is levied on all imported potato products; Russia also charges a Customs Procedure Fee ranging from $16.49 - $3,297.60 depending on consignment value
Saudi Arabia		Free				15 SAR/1000 net kg Port Service Charge
Singapore		Free				7% Goods & Services Tax (GST) based on the CIF value (cost, insurance, and freight)
South Africa		0.0044 ZAR/kg				
South Korea			1,898 MT	Free	212.80%	
Taiwan		Free				5% value added tax (VAT) based on duty-paid value; a 0.04% Trade Promotion Service Fee based on cost, insurance, and freight (CIF); and an 80 TWD Harbor Fee for shipments of 1.25 metric tons or more
Thailand			636 MT	Free	125% or 6.25 THB (0.2042 USD)/kg, whichever is higher	
United Kingdom		4.5%				
Uruguay		Free				*23% VAT based on cost, insurance, freight (CIF) + duty *Consular Fee: 2% based on duty-paid value *Agricultural Products and Livestock Transfer Tax: 1.5% (varies depending on product) based duty-paid value *Import Commission - BROU: 2.5% based on duty-paid value *Social Security Contribution: 3.6525% based on duty-paid value (actually 3% on 121.75% of duty-paid value) *Preferential Service Fee: 0.2% of duty-paid value to a maximum of 50 USD *Import permit fee ranging from $12 - $600, depending on shipment value
Venezuela		5%				1% Customs Handling Charge on all imports based on the duty-paid value; 12% value added tax (VAT) on CIF
Vietnam		Free				5-10% Value Added Tax (VAT) based on cost, insurance, freight (CIF) + duty; Vietnamese Customs frequently charge import duties on inflated reference prices as opposed to invoice prices

From: Peter Friedmann <info@agtrans.ccsend.com> on behalf of Peter Friedmann <mail@agtrans.org>
Sent: Monday, June 29, 2015 11:09 AM
To: jennifer@oregonspuds.com
Subject: AgTC: Busy in San Francisco and Washington DC

Agriculture Transportation Coalition
www.agtrans.org
202-783-3333 | info@agtrans.org

About the AgTC | Membership Info | AgTC Services | Issues | Contact AgTC

AgTC: Busy in San Francisco and Washington DC
June 29, 2015

There will be much more reported, but last week the 450 attendees, the Presidents (NA) of 7 ocean carriers, the leadership of the ILWU, Executive Directors of 6 major US ports, Commissioner Doyle of the Federal Maritime Commission, trucking executives, and of course 270 agriculture and forest products exporters large and small, engaged in 2.5 days of spirited discussion, well covered by the press, including the Wall Street Journal. PowerPoints are posted on our website, www.agtrans.org.

We plan smaller follow-up meetings with ILWU, terminal operators, port authorities (on PierPass and other matters) and ocean carriers, in coming weeks and months. Those will be intensive, focused on solutions, closed to the press, for interested AgTC members only.

HEADLINES AND LINKS TO ARTICLES

Exporters Tally the Damage from West Coast Port Delays
June 26, 2015
The Wall Street Journal
Erica Phillips
Click here to read the full article

Ag Shippers Express Frustration Over Port Congestion
June 29, 2015
American Shipper
Chris Dupin
Click here to read the full article

California Ports Moving Beyond Landlord Status to Address Productivity Problems
June 28, 2015
Journal of Commerce
Click here to read the full article

ILWU Local Leader: Liners Stopped Providing Chassis to Cut Union Jobs
June 27, 2015
Journal of Commerce
Bill Mongelluzzo
Click here to read the full article

West Coast Ag Exporters Told to Expect Few Port Productivity Gains Out of Labor Contract
June 27, 2015
Journal of Commerce
Bill Mongelluzzo
Click here to read the full article

FMC's Doyle Supports Increased Scrutiny of Pacific Port Agreement
June 26, 2015
American Shipper
Chris Dupin
Click here to read the full article

West Coast Ag Shippers Demand Reliability from ILWU, Employers
June 26, 2015
Journal of Commerce
Bill Mongelluzzo
Click here to read the full article

MEANWHILE IN DC, WORK CONTINUES BY MANY TO PREVENT ANOTHER PORT MELTDOWN

1. The Ports Performance Act (S. 1298) sponsored by Senator Thune (R - South Dakota), requiring ports and terminals to report productivity data, was approved by the Senate Committee on Commerce, Science & Transportation, likely to be included in the larger transportation bill considered by the Senate later this month.

2. Senator Gardner's (R- Colorado) bill, the Protecting Orderly and Responsible Transit of Shipments (PORTS) Act (S. 1519), is still in Committee. It would add "slowdown" to the elements for Taft-Hartley, and grant Governors the authority to invoke Taft-Hartley if the President does not.

3. Senator Risch (R-Idaho) introduced the " Preventing Labor Union Slowdowns Act of 2015" (S. 1630), the PLUS Act, developed by the terminal operating company at Port of Portland's Terminal

6, to amend the National Labor Relations Act to make intentional slowdowns by maritime unions an unfair labor practice. ITCSI's white paper, is on our website, under the Ports tab.

4. The Federal Maritime Commission voted to release a staff report on U.S. port congestion and related international supply chain issues, and ordered the submission of certain data and information from Pacific Coast ports. The report, "*U.S. Port Congestion & Related International Supply Chain Issues: Causes, Consequences & Challenges*", is to be posted on the FMC website.

Agriculture Transportation Coalition
1120 G Street, NW
Suite 1020
Washington, D.C. 20005

tel: 202-783-3333

fax: 202-783-4422
www.agtrans.org
info@agtrans.org

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ODA-S15 Bakery Seminars for Food Professionals in Hong Kong

Attachment 1: Appendix A-2
Attachment 2: Appendix B-2.xlsx
Attachment 3: Appendix C-2
Attachment 4: Appendix D-2
Attachment 5: Appendix E-2
Attachment 6: Appendix F -2
Attachment 7: Appendix G & H-2
Attachment 8: Appendix K Pre_post event survey results-2

Schedule

Day One: May 2, 2014 – Friday

7:30 AM	Welcome Breakfast at Hotel Deluxe – Introductions: Oregon Raspberry & Blackberry Commission and Washington Red Raspberry Commission
8:30 AM	Board buses to North Willamette Research and Extension Center (NWREC)
9:00 AM	Arrive NWREC, Dr. Chad Finn – USDA Breeding Program, history, goals of the program
	Dr. Pat Moore – WSU Machine Harvested Red Raspberry Breeding program and cultivars
	Outline of currently used blackberry/raspberry varieties and their characteristics
	Tour of breeding plots and other facilities
	Break for coffee, snacks
10:30 AM	Blind Tasting and Evaluation of Current and Future Berry Selections
11:30 AM	Roundtable Discussion – What Makes a Berry Right for Your Formulation or Recipe?
	How will Breeding Create the Berry of the Future and What Will it Look Like?
12 Noon	Lunch
1:00 PM	Dr. Yanyun Zhao – Value Added Processing of Berry Fruits for Health Promotion
2:00 PM	Nancy Hughes – Product/Recipe Development for today's consumer. What are they looking for and how blackberries and raspberries can supply those qualities
2:30 PM	Wrap up with OSU Breeding Program/ Food Science & Technology/ Nutrition Round table discussion with group – questions and ideas

3:30 PM	Return to PDX – break until 6PM
6:00 PM	Wine and Appetizers at Hotel Deluxe
7:00 PM	Gourmet Berry Dinner with Packers and ORBC Representatives at Park Kitchen, Portland

Day Two: May 3, 2014 – Saturday

	Breakfast on your own this morning!
8:30 AM	Walk to Oregon Culinary Institute
8:45 AM	Orientation and Welcome at OCI.
	Using caneberries in breakfast menus/products – Hands on cooking class
9:45 AM	Break – Tasting of items prepared in Hands on Cooking – beverages
10:00 AM	Blind Tasting and Evaluation of berry puree with Brian Yorgey
11:00 AM	Hands on Cooking Class – Using caneberries in savory items for lunch and dinner
12 Noon	Lunch – Tasting items prepared in Hands on Cooking – beverages
1:00 PM	Dr. Britt Burton Freeman – Health Benefits of Berries
2:00 PM	Dave Stuart – Marketing Raspberries and Blackberries – Why Now is the Time
3:00 PM	Break
3:30 PM	Round Table Discussion on Health Benefits and Marketing
	Seminar Evaluation Forms
4:00 PM	Group Photo
4:30 PM	Return to Hotel Deluxe
5:30 PM	Optional Dinner for those staying Saturday night at area

restaurant

2013/14
IQF BLACKBERRIES
5/2/14

	2 - Great 1 - OK 0 - Poor	COMMENTS
541		
985		
589		
517		
759		
655		
440		
392		
901		
065		
761		
616		
828		
483		
417		
230		
884		
846		

2013/14
IQF BLACKBERRIES
5/2/14

	2 - Great 1 - OK 0 - Poor	COMMENTS
097		
637		
121		
522		
850		
104		
244		
018		
228		
409		
308		

Speakers

Dr. Chad Finn is a small fruit breeder with the U.S. Department of Agriculture-Agricultural Research Service (USDA-ARS) in Corvallis, Oregon. Chad's research program has two broad objectives. The first is to develop new strawberry, blackberry, blueberry and raspberry (red and black) cultivars for the commercial industry. The second objective of his program is to collect and evaluate new germplasm, and as appropriate, incorporate it into breeding materials for use in his program and for others.

Britt Burton-Freeman, Ph.D. is the Director of Nutrition and Health Promoting Foods platform leader at the National Center for Food Safety and Technology (NCFST), Illinois Institute of Technology. Dr. Freeman has been involved in obesity and metabolic disease research for over 15 years, including basic science and clinical research in academic, biotechnology and drug development settings. Dr. Freeman's current research interests are in mitigating disease process through dietary approaches focused on the health promoting properties of whole foods. Speci¥c disease targets are vascular disease and obesity, including food intake regulation. In her current appointment, she leads a public health initiative with FDA/CFSAN to develop and provide underpinning science for comprehensive approaches using innovative processing solutions to support the availability of safe food with health opportunities.

Chef Christian Haldeman is Director of Education, Oregon Culinary Institute. With over 20 years experience, Chef Christian Haldeman has held management positions in both large and small-scale kitchens with duties including cost and labor control, production, and sanitation and safety; for buffet, banquet, and

¥ne dining settings. Graduating from Western Culinary Institute in 1998, he later became an associate instructor for the Garde Manger Kitchen. Most recently at the University Club of Portland, he managed the A La Carte Kitchen.

Nancy S. Hughes is a nationally recognized author and authoritative food consultant, who through 25 years of study, writing, recipe development and lecturing has built N.S. Hughes, Inc. into a valuable "go-to" resource for top food corporations and organizations. Nancy is the author of 11 cookbooks and a variety of food magazine articles. Through close collaborative efforts with editors and health organizations she works to reach consumers with healthy recipe choices.

David A. Stuart Ph.D. is Founder and Principal of "Food & Nutrient Impact, LLC", a located in Hershey PA focusing on research and advice on healthy foods, on cacao and on agricultural sustainability. He was active as a leader in the Chocolate Industry's Cocoa Biotechnology programs which have led to advances in variety cloning, new variety development and the Cocoa Genome which was published in 2010. Eight years ago, he developed the proposal leading to the Hershey Center for Health and Nutrition becoming Center Director.

Yanyun Zhao, Ph.D. is a professor of Food Science and Technology at Oregon State University and an Extension. Specialist in Value-Added Food Processing. Her research interest is in the area of value-added food processing by utilization of emerging food processing and packaging techniques. She especially interested in the development, characterization, and application of biodegradable and edible packaging materials, and use of edible coating, vacuum impregnation, and infusion technique for developing high quality, longer shelf-life, and value-added fruit and vegetable products. She is also interested in the quantification of bioactive compounds and antioxidant capacity of small fruit and fruit products associated with post-harvest storage and processing.

Dr. Pat Moore of Washington State University works with the cultivar development of raspberries and strawberries with emphasis on breeding for fresh harvest and processing and machine harvestable processing characteristics for raspberries. Dr. Moore has been a faculty member of WSU since 1987.

May 2-3, 2014

Portland, Oregon

Join the Oregon Raspberry & Blackberry Commission in beautiful Portland, Oregon for a two-day hands on educational seminar on using berries in new product and menu development, held at the Oregon Culinary Institute and the North Willamette Research & Extension Center..

Northwest Caneberries: Healthy Additions to Products & Menu Items

A Two-Day Free Educational Course!

We want to invite you to explore the benefits of caneberries and their uses in healthy products and menus from the ground up. Meet USDA berry breeders, give your input on new varieties of berries, explore raspberries & blackberries by cooking with top NW chefs, hear in depth information from scientists, marketers and packers on how and why to use berries in products & menus

Learn from experts about:

- **the food science behind berry product use**
- **the nutrition that is found in virtually no other food**
- **the health benefit research currently being explored featuring berries**
- **marketing advice on why now is the time to add berries to your company's product or menu item**
- **Pack types available to help in development of new items**

Course registration, travel & lodging provided !

Please contact: Cat McKenzie catmc@peak.org to apply and confirm your attendance - space is limited.

Northwest Caneberries – Healthy Additions to Products and Menu Items
May 2-3, 2014 – Portland, OR

Application for Seminar

First Name_____

Last Name _____

Name as it would appear on badge _____

Job Title_____

Company/Organization _____

Address_____

City_____

State/Zip Code _____

Work phone_____

Cell_____

Email_____

Which of the following best describes the primary product produced or the service performed at your company? (Select ONE only - highlight to choose)

1. Prepared Foods/Meals/Side Dishes
2. Prepared Specialties: Ketchup, sauces, gravies, condiments, peanut butter, seasonings, flavors & syrups, oils, salad dressings, mayonnaise and pickled products, etc
3. Fruits & Vegetables
4. Meat, Poultry, Seafood
5. Dairy Foods: Including ice cream & frozen desserts, novelties, fluid milk & beverages, cheese products, cultured products, butter or margarine products, powdered products, other dairy foods
6. Bakery Products

7. Cereal and Grain-Based Products
8. Beverages
9. Snack Foods: Chips & pretzels, nuts/trail mix, extruded snacks, other snack foods
10. Candy & Confectionery Products
11. Manufacturer of Ingredients/Nutritional Ingredients
12. Specialty Nutritional Products
13. Foodservice
14. Testing Labs, Universities, Government
15. Other (please specify)

_____

2.

Which of the following best describes your job title? (Select ONE only - highlight to choose)

1. Research & Development/Product Development (President/VP of R&D, Food Tech, Chemist, Flavor Room Manager, Lab Tech, Design Manager, Research Chef, Tech Services Manager, Project Manager)
2. QA/QC (Quality Assurance Manager, Quality Control Manager, QA/QC Personnel)
3. Marketing/Sales
4. Corporate Management & Administration
5. Purchasing (VP Purchasing, Purchasing or Procurement
6. Director/Manager/Supervisor, Purchasing Agent, Grocery Buyer, Retail Buyer, Buyer)
7. Other (please specify)

_____

3**. Dietary Restrictions or Special Needs**

Do you have any Dietary Restrictions? Please indicate

_____

Do you have any Special Needs? Please indicate

_____

Pre Event Evaluation

1. Familiarity with blackberry and raspberry (caneberries) varieties from the northwest

	Very Unfamiliar	Unfamiliar	Neutral	Familiar	Very Familiar
How familiar are you with blackberries from the NW					
How familiar are you with raspberries from the NW					

2. Have you worked on products/menu items containing caneberries

☐ I have worked on products containing berries

☐ I have worked on menu items containing berries

☐ I have not worked on products or menu items containing berries

3. Does your company currently have a product or products that uses caneberries

☐ Yes
Please describe the product briefly

_____

_____

☐ No

4. Are you considering using caneberries in upcoming projects ?

☐ Yes

☐ No

5.What do you hope to gain from attending this event?
Check all that apply.

☐Information about using caneberries in new product/menu item development

☐New resources I can use right now for my company

☐Networking with others in the berry industry or food industry

Information on: (check all that apply)

- ☐Berry health benefits
- ☐Value-Added product uses for berries
- ☐New recipes or formulations
- ☐Breeding and cultivation information
- ☐Marketing strategies
- ☐Contacts for purchasing caneberries in the NW
- ☐Quality and distribution issues for NW berries
- ☐Blackberries
- ☐Raspberries

Thanks for Your Help!

Post Seminar Evaluation Survey

This seminar increased my knowledge of blackberries and raspberries.

Strongly Disagree	1	2	3	4	5	Strongly Agree

The event met my objectives for attending.

Strongly Disagree	1	2	3	4	5	Strongly Agree

The information gathered from these sessions can be applied to my business.

Strongly Disagree	1	2	3	4	5	Strongly Agree

The topics covered and speaker presentations were relevant to my objectives for attending.

Strongly Disagree	1	2	3	4	5	Strongly Agree

I am more likely to consider using caneberries from the northwest in my product/menu item development than before this seminar.

Strongly Disagree	1	2	3	4	5	Strongly Agree

I would recommend this seminar in the future to a colleague.

Strongly Disagree	1	2	3	4	5	Strongly Agree

Please rate the quality and content of the presented sessions or activities as to their value to you as an attendee. Please circle your response.

5-Excellent	4-Above Average	3- Average	2-Fair	1-Poor

	CONTENT	SPEAKER/ACTIVITY
Genetics/Plant Breeding – Chad Finn/Pat Moore	5 4 3 2 1	5 4 3 2 1
Blind Tasting/Evaluation of Berry Selections –Brian Yorgey	5 4 3 2 1	5 4 3 2 1
Value Added Processing of Berry Fruits for Health Promotion – Yanyun Zhao	5 4 3 2 1	5 4 3 2 1
Bringing it Home – Nancy Hughes	5 4 3 2 1	5 4 3 2 1
Hands on Cooking classes – Oregon Culinary Institute	5 4 3 2 1	5 4 3 2 1
Berry Health Benefits Research – Britt Burton Freeman	5 4 3 2 1	5 4 3 2 1
Berries: A Roadmap to Attract health-Minded Consumers – David Stuart	5 4 3 2 1	5 4 3 2 1

Please include any additional comments:

Pre Event Evaluation

1. Familiarity with blackberry and raspberry (caneberries) varieties from the northwest

	Very Unfamiliar	Unfamiliar	Neutral	Familiar	Very Familiar
How familiar are you with blackberries from the NW		3	5	2	
How familiar are you with raspberries from the NW		3	6	2	

2. Have you worked on products/menu items containing caneberries

9 ☐ I have worked on products containing berries
Nine attendees indicated they had worked on products containing berries

1 ☐ I have worked on menu items containing berries
One attendee indicated that they had worked on menu items containing berries

0 ☐ I have not worked on products or menu items containing berries
No attendees chose this statement

3. Does your company currently have a product or products that uses caneberries

8 attendees chose yes and 2 attendees chose no

☐Yes

Please describe the product briefly

Products described were: jams, sauces, baking mixes, candies, ice cream, condiments, frozen fruit pies, cookies, pastry items, purees, juice concentrates and dried berries and muffins.

One respondent indicated that their company no longer used caneberries but were interested in re-introducing them into their food line

---

☐ No

4. Are you considering using caneberries in upcoming projects ?

☐ Yes 10

☐ No

All respondents indicated that they were considering using caneberries in upcoming projects

5.What do you hope to gain from attending this event?
Check all that apply.

9 ☐Information about using caneberries in new product/menu item development

8 ☐New resources I can use right now for my company

9 ☐Networking with others in the berry industry or food industry

Information on: (check all that apply)

6 ☐Berry health benefits

4 ☐Value-Added product uses for berries

7 ☐New recipes or formulations

8 ☐Breeding and cultivation information

4 ☐Marketing strategies

8 ☐Contacts for purchasing caneberries in the NW

6 ☐Quality and distribution issues for NW berries

10 ☐Blackberries

10 ☐Raspberries

Thanks for Your Help!

Post Seminar Evaluation Survey

This seminar increased my knowledge of blackberries and raspberries.

Strongly Disagree	1	2	3	4	5	Strongly Agree

The event met my objectives for attending.

Strongly Disagree	1	2	3	4	5	Strongly Agree

The information gathered from these sessions can be applied to my business.

Strongly Disagree	1	2	3	4	5	Strongly Agree

The topics covered and speaker presentations were relevant to my objectives for attending.

Strongly Disagree	1	2	3	4	5	Strongly Agree

I am more likely to consider using caneberries from the northwest in my product/menu item development than before this seminar.

Strongly Disagree	1	2	3	4	5	Strongly Agree

I would recommend this seminar in the future to a colleague.

Strongly Disagree	1	2	3	4	5	Strongly Agree

Please rate the quality and content of the presented sessions or activities as to their value to you as an attendee. Please circle your response.

5-Excellent	4-Above Average	3- Average	2-Fair	1-Poor

	CONTENT	SPEAKER/ACTIVITY
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Berry Health Benefits Research – Britt Burton Freeman	5 4 3 2 1	5 4 3 2 1
Berries: A Roadmap to Attract health-Minded Consumers – David Stuart	5 4 3 2 1	5 4 3 2 1

Please include any additional comments:

ODA-S17 Native plants: connecting growers with gardeners and landscape professionals

Attachment 1: Evaluation Survey

Appendix 1

Evaluation surveys following workshops

Part 1: Home gardener audiences

Compiled values reflecting 120 attendees

25 June (Bend) 40 attendees, 17 respondents
1 Oct (Eugene) 10 attendees, 3 respondents
5 Nov (Portland) 40 attendees, 14 respondents
6 Nov (Philomath) 30 attendees, 11 respondents

Q1 - Rate the following workshop components (1=poor; 5=excellent)

Question	1 (poor)		2		3		4		5 (excellent)		Total
Site facilities and location	0.00%	1	2.22%	1	28.89%	13	33.33%	15	33.33%	15	45
Topics covered	0.00%	0	0.00%	0	20.00%	9	35.56%	16	44.44%	20	45
Depth of discussion for each topic	0.00%	1	0.00%	0	20.00%	9	40.00%	18	37.78%	17	45
Answers provided to questions	0.00%	0	2.22%	1	13.33%	6	11.11%	5	73.33%	33	45
Garden tour (25 June 2016)	0.00%	0	0.00%	0	6.25%	1	12.50%	2	81.25%	13	16
Live plants to examine (5 Nov 16)	0.00%	0	0.00%	0	14.29%	2	35.71%	5	50.00%	7	14
Nursery tour (6 Nov 16)	0.00%	0	9.09%	1	36.36%	4	45.45%	5	9.09%	1	11

Q2 - Indicate how interested you were in the workshop content (1=low; 5=high)

Question	1 (least interest)		2		3		4		5 (highest interest)		Total
Oregon Flora Project resources	4.44%	2	2.22%	1	20.00%	9	35.56%	16	37.78%	17	45
Ecological concepts	6.67%	3	4.44%	2	4.44%	2	33.33%	15	51.11%	23	45
Soil components (25 Jun 16)	5.88%	1	5.88%	1	17.65%	3	23.53%	4	47.06%	8	17
Garden design and development tips	0.00%	0	2.22%	1	17.78%	8	22.22%	10	57.78%	26	45
Plant materials and their commercial availability	4.44%	2	4.44%	2	13.33%	6	26.67%	12	51.11%	23	45
Pollinator information (6 Nov 16)	0.00%	0	9.09%	1	9.09%	1	18.18%	2	63.64%	7	11

Q3 - Will you use Oregon Flora Project information (oregonflora.org website, app, Flora book) as a resource about Oregon plants, gardening and plant ecology?

Answer	%	Count
no	0.00%	0
not likely	4.44%	2
unsure	4.44%	2
probably	31.11%	14
definitely	60.00%	27
Total	100%	45

Q4 - Did you like the amount of material presented and the length of the workshop?

Answer	%	Count
Prefer less material covered over a longer time	7.14%	3
Prefer same amount of material covered over a longer time	2.38%	1
Prefer more material covered over a longer time	9.52%	4
Liked the amount of material covered over the time allotted	80.95%	34
Total	100%	42

Q5 - How would you rank this workshop overall? (1=poor; 5=excellent)

Answer	%	Count
1 (poor)	0.00%	0
2	4.44%	2
3	15.56%	7
4	35.56%	16
5 (excellent)	44.44%	20
Total	100%	45

Part 2: Landscape professional audiences

Compiled values reflecting 55 attendees

17 Feb 17 (Bend) 25 attendees, 18 respondents

8 Mar 17 (Portland) 30 attendees, 30 respondents

Q1 - Rate the following workshop components (1=poor; 5=excellent)

Question	1 (poor)		2		3		4		5 (excellent)		Total
Site facilities and location	0.00%	0	0.00%	0	6.25%	3	54.17%	26	37.50%	18	48
Topics covered	0.00%	0	0.00%	0	10.42%	5	31.25%	15	58.33%	28	48
Depth of discussion for each topic	0.00%	0	0.00%	1	18.75%	9	39.58%	19	39.58%	19	48
Answers provided to questions	0.00%	0	0.00%	0	4.17%	2	35.42%	17	60.42%	29	48

Q2 - Indicate how interested you were in the workshop content (1=low; 5=high)

Question	1 (least interest)		2		3		4		5 (highest interest)		Total
Oregon Flora Project resources	0.00%	0	0.00%	0	4.17%	2	16.67%	8	79.17%	38	48
Ecoregions	0.00%	0	0.00%	0	6.25%	3	22.92%	11	70.83%	34	48
Biodiversity	0.00%	0	0.00%	0	4.17%	2	22.92%	11	72.92%	35	48
Water efficiency (17 Feb)	0.00%	0	0.00%	0	5.56%	1	5.56%	1	88.89%	16	18
Landscape design	0.00%	0	3.03%	1	9.09%	3	21.21%	7	66.67%	22	33

Q3 - Will you use Oregon Flora Project information (oregonflora.org website, app, Flora book) as a resource about Oregon plants, gardening and plant ecology?

Answer	%	Count
no	0.00%	0
not likely	0.00%	0
unsure	0.00%	0
probably	8.33%	4
definitely	91.67%	44
Total	100%	48

Q4 - How would you rank this workshop overall? (1=poor; 5=excellent)

Answer	%	Count
1 (poor)	0.00%	0
2	0.00%	0
3	4.25%	2
4	40.42%	19
5 (excellent)	55.32%	26
Total	100%	47

Figure 1

Gardening page on current Oregon Flora Project website
(http://oregonflora.org/gardening.php)

The webpage was launched 31 May 2016. It currently provides the availability of 587 native plant species at 28 retail and wholesale nurseries. The list can be organized by species common name, scientific name, nursery region, or offerings by any single nursery. Clicking for information displays the contact information and website of each nursery.

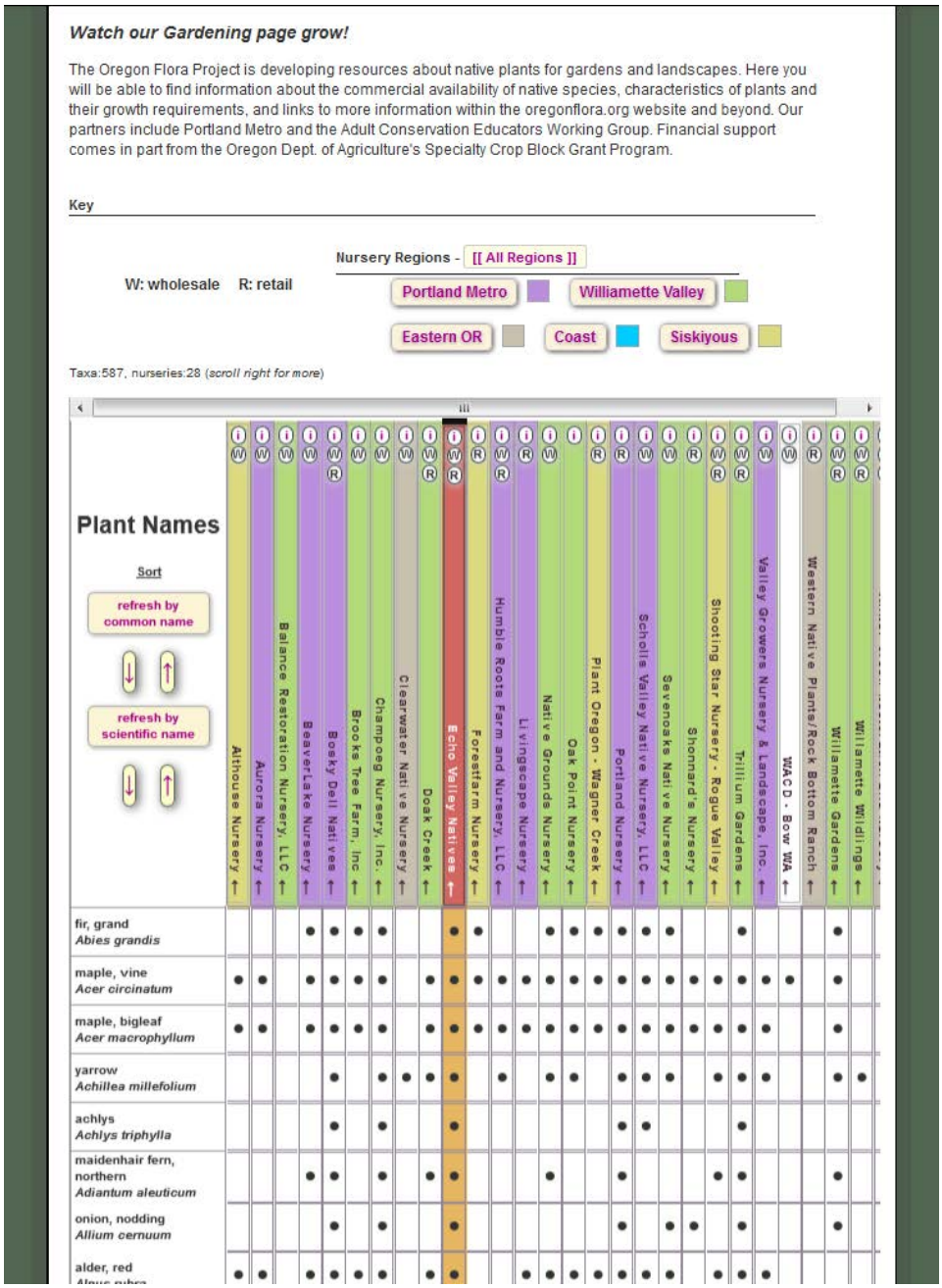
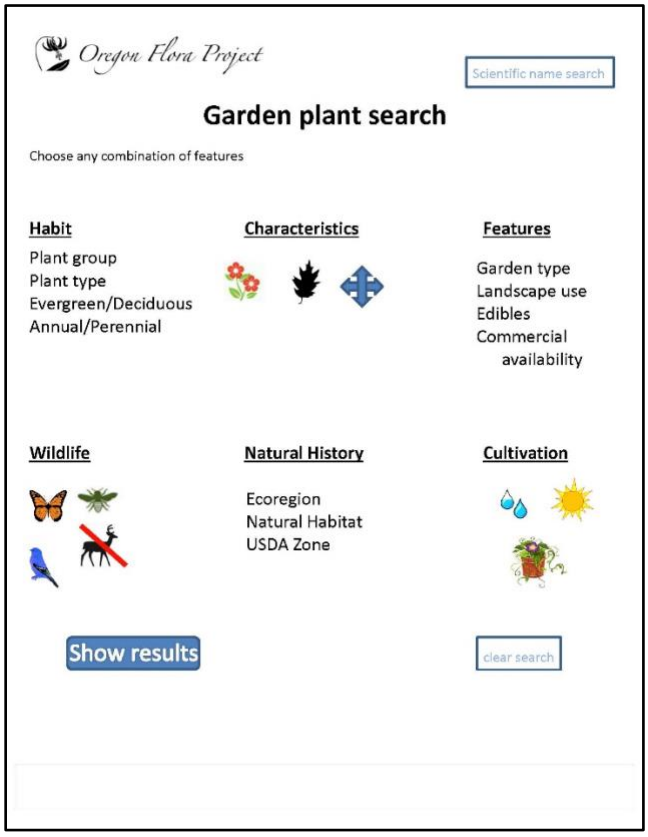


Figure 2

Mockup of garden search page on new *OregonFlora* website

Draft garden search page mockup. View showing expanded options of Bloom Color and Bloom Month available after the user selected "Flowers". Multiple character states can be selected for any character.



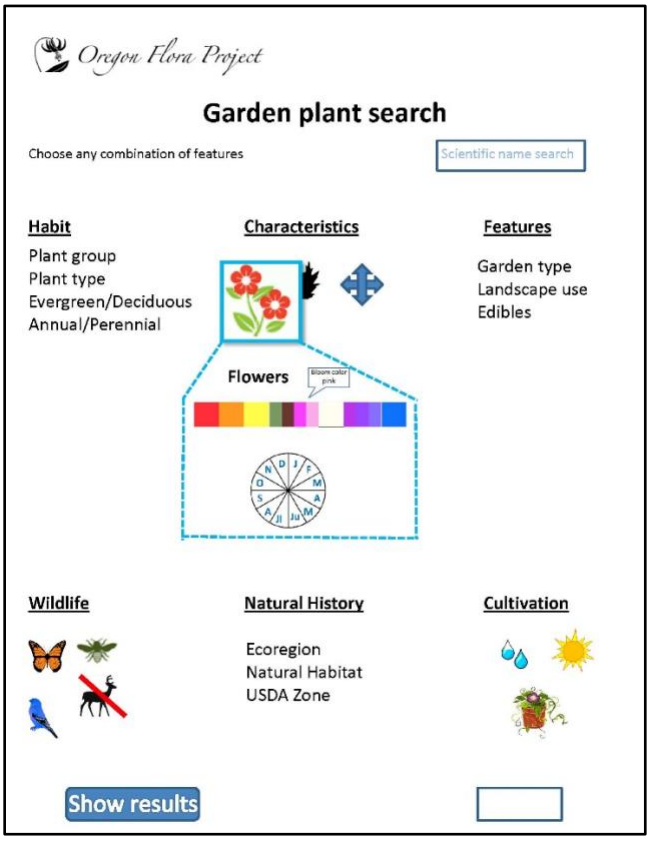


Table 1

Workshops presented

Date	Group	Location	# Attendees	Presenter
Workshops for home gardeners				
2/8/2016	Clackamas Co. Master Gardeners	Clackamas	110	LKH
2/11/2016	Polk Co. Master Gardeners	Dallas	21	LKH, LB
2/15/2016	Benton Co. Master Gardeners	Corvallis	39	LKH
3/7/2016	Klamath Basin Native Plant Society of OR	Klamath Falls	26	LKH
3/9/2016	Willamette Valley Native Plant Society OR	Salem	11	LKH, LB
4/14/2016	Linn Co. Master Gardeners	N. Albany	20	LKH, LB
6/25/2016	Wintercreek Nursery wkshp (2h)	Bend	40	LKH, RM
9/26/2016	Milwaukie Garden Club	Milwaukie	17	LKH
10/1/2016	Down To Earth Garden Store (1.5h)	Eugene	10	LKH, CL
10/20/2016	Yamhill Co. Master Gardeners	McMinnville	22	LKH
11/6/2016	Shonnard's Nursery (1.25h)	Philomath	30	LKH, JG, DM
11/5/2016	Portland Nursery (1.5h)	Portland	40	LKH, DAA
3/25/2017	Lincoln City Garden Club	Lincoln City	14	LKH
3/25/2017	Thicket Garden Center	Portland	8	DAA
Workshops for landscape professionals				
	Univ. Oregon Dept. of Landscape Architecture (landscaping; 2 hr)	Eugene	15	DAA
2/17/2017	Bend (landscaping; 6 hr)	Bend	25	LKH, DAA, RM, Bend Water Dept.
3/8/2017	Portland (landscaping; 4 hr)	Portland	30	DAA, LKH, RM, JH

LKH Linda Hardison
LB Lynda Boyer
RM Rick Martinson
CL Cynthia Lafferty
JG Jeremy Grimm
DM Darren Morgan
DAA Dennis Albert
JH Jane Hartline

Table 2 Handout for home gardening workshop in southern Willamette Valley

Species	Common	Habitat: Wetland (W), Riparian (R), Forest (F), Forested slopes (FS), Forest edge/thicket (T), Open grassland/prairie (G), Dry/rocky (Rk)	Shrub/herb/grass-like	Evergreen/ Deciduous	Perennial /Annual	Height mature in bloom (ft)	Width (ft)	Sunlight: sun (S), partial shade (PS), shade (SH)	Moisture: dry (D), moist (M), wet (W)	Bloom color	Bloom month	Reproduction: seed (S), bulb-like (B), runners (R
Berberis (=Mahonia) aquifolium	Tall Oregon Grape	F, FS	shrub	evergreen	Per	8	3.0	S, PS	D, M	yellow	Mar - May	S
Holodiscus discolor	ocean spray	F, FS, Rk	shrub	deciduous	Per	15	10	S, PS, SH	D, M	white	May - Aug	S
Philadelphus lewisii	Lewis' mockorange	F, FS, T	shrub	deciduous	Per	10	10	S, PS	D, M	white	May - Jul	S
Vaccinium ovatum	evergreen huckleberry	F	shrub	evergreen	Per	12	10	S, PS, SH	M	pink	Mar - Jul	S
Fraxinus latifolia	Oregon ash	W, R, F	tree	deciduous	Per	80	30	S, PS	M,W	greenish	Mar - May	S
Rhamnus purshiana	cascara	R, F, FS	tree	deciduous	Per	30	20	S, PS,	D, M	greenish	May - Jul	S

								SH				
Thuja plicata	western redcedar	F, FS	tree	evergreen	Per	250	50	PS	D, M			S
Quercus garryana	Oregon white oak	F, G, Rk	tree	deciduous	Per	75	60	S, PS	D, M		May - Jul	S
Festuca roemeri	Roemers fescue	T, G, R	grass-like	evergreen	Per	4	1.0	S	D	red/green	June	S
Juncus effusus	common rush	W, R, F	grass-like	evergreen	Per	2	1	S, PS	W	greenish	Apr-Jul	S
Blechnum spicant	deer fern	W, R, F	fern	evergreen	Per	3	3	S, PS	M, W			spores
Sidalcea campestris	Tall checkerbloom	G	herbaceous	evergreen	Per	6	2.0	S, PS	D, M	pink	May - Jul	S
Eriophyllum lanatum	Oregon sunshine	Rk	herbaceous	evergreen	Per	3	1.5	S	D, M	yellow	Apr - Sep	S/R
Gilia capitata	Blue gilia	G, Rk	herbaceous	n/a	Ann	3	0.5	S	D	blue	May - Sep	S
Symphiotrichum (=Aster) subspicatum	Douglas' aster	G, T, W	herbaceous	evergreen	Per	4	2.0	S, PS	M	purple to white	Jun - Oct	R/S
Asarum caudatum	wild ginger	R, F	herbaceous	evergreen	Per	0.5	1	PS, SH	M	maroon	Apr - Jul	S,R
Maianthemum stellatum	starry false Solomon's seal	R,FS	herbaceous	deciduous	Per	3	1	PS, SH	M	white	Apr - Aug	S, B

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http://oregonflora.org

ODA-S26 Putting Pears on the Menu

Attachment 1: Pear Eblast POSTCARD

Pears on the Menu

USA Pears

Pear Eblast POSTCARD.indd 1 5/12/2015 9:38:33 AM

USA Pears

presents

PEARS ON THE MENU

Bring the sweetness of the orchard to your guests year-round!

YOU'RE INVITED ON A TRIP TO BEAUTIFUL OREGON FROM OCTOBER 5-7, 2015,
TO EXPERIENCE THE HUB OF THE U.S. PEAR INDUSTRY DURING HARVEST SEASON,
ALL EXPENSES PAID BY USA PEARS.

- Walk orchards with growers in the stunning Columbia River Gorge region to see first-hand the harvesting and packing process.
- Hear from our ripening expert and learn how to perfect the operational process of using fresh pears at their peak of ripeness.
- Learn how to use the ten different pear varieties on the menu, from cocktails and appetizers, to salads, sides and desserts.
- Join some of Portland's best chefs for a culinary demo.
- Discover how this healthy, popular U.S.-grown fruit can go from a seasonal offering to a staple on your year-round menu.

Rsvp:

RESERVE YOUR SPOT TODAY

Space is limited.

Contact Amy Brown at
amyb@harvest-pr.com or 971.259.4750

Pear Eblast POSTCARD.indd 2 5/12/2015 9:38:59 AM

ODA-S28 Northwest Food Buyers' Alliance: Cultivating Large-Scale Regional Demand for Oregon grown Fruit, Vegetables & Tree nuts

Attachment 1: Summary statistics

Table 1. Summary statistics of fecal indicator bacteria (FIB) counts from all sampling sites by sampling events and regions (CA, WA, and OR).
(SD is standard deviation; N is the number of samples; and GM refers to geometric mean.)

		Fecal Indicator Bacteria (FIB)								
		Total Coliforms (MPN/100 mL)			*E. coli* (MPN/100 mL)			*E. coli* (CFU/100 mL)		
Sampling #	N	Mean	SD	GM	Mean	SD	GM	Mean	SD	GM
CA1	14	1288.19	874.15	934.42	23.70	56.03	4.97	7.08	16.79	2.37
CA2	10	33746.00	15648.18	30190.90	175.50	225.48	45.96	68.20	91.09	28.06
CA3	14	4503.00	4536.25	1672.53	61.49	136.40	9.41	7.01	12.42	2.31
CA4	19	8927.79	8098.38	5285.46	18.68	24.46	8.30	35.05	42.97	15.62
CA5	14	6272.36	9054.64	2466.96	25.51	23.10	16.88	35.36	27.20	25.64
WA6	10	2171.93	2148.75	1083.73	98.97	174.86	31.19	63.20	83.37	24.00
CA7	15	3266.50	5222.84	506.45	9.19	10.00	3.98	11.25	16.44	3.96
CA8	21	9014.29	7491.23	6503.44	18.67	33.42	8.74	19.61	24.99	10.59
WA9	7	1508.43	1196.88	1039.19	10.37	12.36	4.82	11.56	13.28	5.48
WA10	11	4195.05	3587.90	1686.13	50.71	46.94	21.73	35.89	32.19	16.36
WA11	8	454.13	688.92	76.52	6.43	6.42	3.50	6.46	6.11	3.31
WA12	13	11064.68	20400.47	2601.91	207.72	664.71	22.28	98.45	257.50	23.13
CA13	26	10658.08	11099.44	5803.94	12.02	18.52	4.11	16.26	27.28	5.48
CA14	26	21590.81	65151.72	975.54	99.72	386.89	7.94	50.78	202.30	5.33
CA15	19	28029.66	75455.62	1325.78	395.18	1350.60	25.06	117.52	295.84	21.17
WA16	8	1776.81	1147.52	674.58	7.16	9.38	2.99	6.74	5.33	4.12
OR17	9	2289.56	5532.24	19.51	28.92	57.35	5.93	10.07	13.95	3.98
WA18	17	2181.79	1746.95	770.92	17.58	11.43	12.29	16.34	12.46	10.55

Table 2. Correlations between fecal indicator bacteria (FIB) and the AllBac *Bacteroides* genetic marker

Correlations					
		Log_{10}AllBac GEC/100 mL	Log_{10} *E.coli* MPN/100 mL	Log_{10} *E.coli* CFU/100 mL	Log_{10} Total Coliforms MPN/100 mL
Log_{10} AllBac GEC per 100 mL	Pearson correlation	1	.042	.054	**.234****
	Sig. (2-tailed)		.512	.398	**.000**
	N	249	249	249	249
Log_{10} *E. coli* MPN per 100 mL	Pearson correlation	.042	1	.837**	.520**
	Sig. (2-tailed)	.512		.000	.000
	N	249	261	261	261
Log_{10} *E. coli* CFU per 100 mL	Pearson correlation	.054	.837**	1	.548**
	Sig. (2-tailed)	.398	.000		.000
	N	249	261	261	261
Log_{10} Total Coliforms MPN per 100 mL	Pearson correlation	.234**	.520**	.548**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	249	261	261	261

** Correlation is significant at the 0.01 level (2-tailed).

ODA-S30 Northwest Food Buyers' Alliance: Cultivating Large-Scale Regional Demand for Oregon grown Fruit, Vegetables & Tree nuts

Attachment 1: Buying Local at Scale: Fruits and Veg, 50 Tips for Foodservice Operators

Attachment 2: July alliance summer field trip email (using newly developed email template)

Attachment 3: One page flyer – Who We Are

EAT THE SEASON. EAT THE PLACE.

BUYING LOCAL

AT SCALE: Fruits & Veg

50 Tips

FOR FOODSERVICE OPERATORS

Photo Credit: Taylor Schefstrom

NORTHWEST FOOD BUYERS ALLIANCE

www.Food-Hub.org/NWFBA

Twitter: @NWFoodBuyers

Want to buy fruits, vegetables, herbs, and nuts grown and processed right here in Oregon, but don't think you have the budget or bandwidth to buy local?

Foodservice directors at schools, hospitals, colleges and universities, assisted living centers, and corporate cafes in Oregon who are members of the Northwest Food Buyers' Alliance are making it work!

LET'S SEE HOW.

GETTING STARTED

The Top 10

1. **Start where you are.** You're probably already buying some local fruits, vegetables, herbs, or nuts, especially when they're in season. Find out what! Ask your distributor, then tell your eaters what you're already doing *(even before you've made any changes)*. The momentum will help you build.

2. **Ask your distributor for "local" availability.** Most distributors now publish an availability list that highlights local produce, so all you need to do is ask for it.

3. **Fall in love with local flavor. Visit a farmers' market and immerse your senses in the sights and smells of fresh basil, crisp melons, greens of all kinds — sniff, touch, taste, and watch!** You may not buy there, but you'll gather important intel: what's in season *(and therefore abundant and most affordable)*? Which farmers are flexible, practical, and interested in wholesale? *(Hint: some farmers' markets let chefs in early!)*

4. **Not all fruit and vegetables are created equal — and that's a good thing!** Local fruits and veggies often vary in color, size, and nuance of flavor. Embrace your flexibility as a foodservice operator *(rather than grocery retailer, where every piece must be buffed and shined to "cosmetically perfect")*, and select for flavor.

5. **Celebrate all four seasons.** Make a menu for each season and give your customers a fresh take on your cuisine with each change in the weather. Roasted Brussels sprouts are comforting and sprightly mid-winter, but taste bland and out of place on a summer day.

6. **Pick the low-hanging fruit!** Oregon is the #1 supplier of hazelnuts nationwide, for example, so if you're buying them from Turkey *(or don't know where they're coming from)*, ask your distributor for Northwest nuts. Other easy local choices include fresh and frozen veggies *(green beans, corn, broccoli, cauliflower, peas, beets, peppers)*, berries *(blue, black, straw, marion)*, greens *(spinach, kale, salad greens)*, and tree fruit *(peaches, cherries, pears)*.

7. **Can't change the cafeteria right away? Start a local sourcing program with your catering menu.** Costs are likely easier to recoup and smaller quantities of unique, delicious ingredients *(ever tried a Jupiter grape?)* featured at a special event or meeting can draw new eaters into your main operation.

8. **Stick to your group purchasing contracts for items that aren't going to create ah-ha! moments** based on flavor anyway *(paper goods, pantry basics, etc.)*. Playing by the rules will buy you goodwill with the number-crunchers and the flexibility to get creative on the delicious veggie varieties that will wow your diners.

9. **Know the value of your decision to go local.** Local, seasonal, responsible produce may cost more at first, especially if you choose certified organic. With a value proposition firmly in mind, your menus and marketing materials can be crafted to reflect a cohesive strategy and message, resulting in buy-in and support from customers who might otherwise balk at price changes.

10. **Ask a farmer.** They will help you understand and explore which fruits and veggies are in season, what preparations work well for different varieties, what customers ask for and what they come back time and again to enjoy.

"Exploiting seasonality sometimes works to our advantage. Consumers don't buy much watermelon after Labor Day, which leaves Eastern Oregon farmers with a crop they can't sell. Kids love watermelon! So we buy delicious Hermiston watermelon at peak ripeness for a great price, while helping extend the season for local farmers (sometimes all the way to October). Win-win all around."

Gitta Grether-Sweeney, Portland Public Schools

1ST COURSE

Eat the Season

11. The secret trick that savvy foodservice directors know is to exploit seasonality. The best tasting fruits and vegetables are cheapest when they're most abundant locally, and with a little practice and operational tweaking, preserving the season can make that flavor available year-round.

12. Build flexibility into your menu by listing "seasonal vegetables" as sides — "seasonal fruit" at breakfast, and "seasonal toppings" on sandwiches or pizza. *(And then make sure what you're serving really is in season!)*

13. Buy late season tomatoes, eggplant, peppers, or tomatillos in bulk and roast in olive oil, salt, and fresh herbs, then freeze and add to soups, sauces, lasagna, enchiladas, or other creative vegetarian dishes throughout the year.

14. Cook up sauces and condiments bursting with abundant peak season flavor. Great for tomato and pizza sauce, Indian and Thai curries, kimchi, sauerkraut, and pesto.

Photo Credit: Mike Davis

15. Individually quick-freeze (IQF) berries by laying cleaned pieces out on a sheet pan in the freezer, then bag up in storage bags and drop summer brightness into a winter breakfast strata, dessert crumble, or berry compotes as an accompaniment to roast meat.

"Farmer calls me and says, 'I've got 1,000 lbs of eggplant, can you take it?' I say yes without hesitation, then I have my staff roast it all and turn it into baba ganoush. We menu it right away, but freeze most of it and use over time."
Kirk Mustain, Bon Appetit Management Company at University of Portland

2ND COURSE

FNV, the Gateway Foods

16. Accept substitutes. Luckily, massive local variety in the Northwest makes substitutions easy. *(Did you know Oregon grows 220 different varieties of food crops?)* No local spinach mid-winter? Try kale!

17. Pizza is a great vehicle for local vegetables, herbs, nuts, and greens. Thinly sliced roasted squash, fresh basil leaves, chopped hazelnuts, a drizzle of local honey — the creativity of pizza is limited only by your imagination!

Photo Credit: Taylor Schefstrom

18. **Rescue crooked carrots!** Millions of tons of perfectly edible, wholesome fruits and vegetables get wasted every year because their size, shape, or color don't match the food industry's stringent cosmetic standards. Those ugly ducklings will still taste delicious sliced, diced, chopped, or stewed.

19. **Take fresh tomatoes off deli sandwiches and sandwich bars mid-winter.** Imported winter tomatoes single-handedly define the stereotype of tasteless foodservice! Tomato jam or chutney made from late-harvest summer tomatoes is a great alternative on winter sandwiches. Can't make it in-house? Partner with a processor or co-packer to do it for you.

20. **Add a "Kitchen Sink Salad" to your menu.** Toss bits and bites of a wide variety of vegetables and greens together with a delicious dressing, and voila! You've gifted yourself with the flexibility to serve what you've got.

21. **Seek out farmers who have narrowed their crops to a few key vegetables that they grow well and consistently.** Farmers trying to grow too many different things — especially smaller, diversified farms — will likely be unreliable for large foodservice operations.

22. **Stabilize supply by partnering with a couple of reliable, good-sized local farmers for things you use weekly** — lettuce, onions, carrots, etc. They'll get a reliable customer and you'll get the quantity, pricing and delivery schedule that will free up your creative juices when unique ingredients come along.

23. **Ask distributors, processors or local farmers about the fate of "seconds" or "culls"** to find out what happens to their blemished bounty. Creative problem-solvers and good negotiators can make wasted fruit and veggies into culinary treasure at a great price.

24. **Save your scraps!** Vegetable peelings and trimmings can go into a Stock Box in the freezer for making broth. This is a great way to make sure you're not wasting all the nutritional goodness in those fresh veggies.

"We run a seasonal farm bar in our café where we showcase and highlight local farmers' stories and serve seasonal foods from our menu. This helps to draw attention to the local food we offer and provides a storyboard for our local farmers."

Scott Scales, Kaiser Permanente

3RD COURSE

Farm to Foodservice

25. No scratch kitchen? No problem! Look for local goods through local processors — think Stahlbush Island Farms and NORPAC — who freeze and can local fruits and vegetables.

26. Use your space to enthuse and educate. Repeat customers standing in a line for lunch are the perfect audience for telling the story of your food. Take them on a visual trip to the farm and introduce them to the people who are growing the salad greens, sweet crunchy carrots, fresh herbs, and local pumpkin seeds they're about to buy.

27. Be a collaborative storyteller. As you build relationships, gather bios and pictures of your farmers, along with images of their land and colorful crops. Repurpose those gorgeous veggies, and the real people who grew them, on your website, through social media channels, and in other marketing materials.

28. Define what "local" means to you. 100-mile diets were popularized a few years ago, but are impractical for most large operators. Mileage varies by product category — tomatoes may grow next door, but watermelon is best from the dry eastern side of the state. The USDA considers a 400-mile radius "local", which may be a useful guideline for your entire menu.

29. Can't find local produce? Join FoodHub (www.food-hub.org) for free and use it to search for local goods. You can also create your own buyer profile to help producers understand your needs and peruse the Marketplace to see what sellers have season by season.

30. Want to buy fruits and vegetables from a local farmer, but prefer to make purchases through your preferred partners? Ask your distributor to pick up your favorite farmers.

31. Localize your foodservice contracts. Want to meet a specified benchmark for local fruit and vegetable sourcing? Write that number into your RFP or contract renewal.

32. Buy the field. If you can commit to buying a high volume of produce from a farmer in the next growing season, you can lock in the best price and secure your supply. Your commitment will allow them to plan effectively and grow exactly what you need. Win-win!

33. Buy a chalkboard. Farm-direct veggies are inherently variable, so printing farm names on menus or glossy marketing materials can spur skepticism among savvy customers. List farmers and ranchers who contributed to the day or week's selections on a chalkboard instead.

"Staff support is critical in our mission to serve local, seasonal foods. We use a train-the-trainer model to help educate staff and build skill sets. Good stories helps us engage staff and customers. We hope our folks can always answer the question 'where's this from?'."

Fernando Divina, Oregon Health and Sciences University

4TH COURSE

Costing

34. Evolve to whole-menu costing, which allows you to manage to a bottom line, rather than comparing the cost of each produce item to its local or sustainable counterpart.

35. Love your foodservice contractor, but wish they were more on-board with local produce? Discuss local sourcing practices and costs with them ahead of contract renewal periods. Starting the conversations early will help you build a shared vision of what local means to you, and establish a commitment to a minimum percentage of local sourcing.

36. Meet with your producers and distributors on a regular basis to discuss needs and commitments in your produce contracts. *(And hold their feet to the fire if commitments aren't being met!)*

37. Test your way into costing for new recipes, veggie varieties, or producers through your catering operation first. The smaller scale will leave room to learn before growing your program.

5TH COURSE

Staffing

38. Local produce sourcing takes teamwork. Build alignment between producer, supplier, chef, kitchen, and service staff so that everyone is on the same page about both the big vision and the niggly details.

39. Education is king in a local kitchen. Provide opportunities for staff to gain training and skills they'll need to select produce, prepare whole products, or understand the characteristics of seasonal ingredients.

40. Hire for desire. Kitchen staff with a passion for local fruits and vegetables often demonstrate the necessary flexibility and curiosity to make it work.

41. Storytelling and marketing doesn't stop with diners. Use the same stories to educate and inspire staff. Hold pre-shift huddles to announce which local fruits and vegetables are on the menu today, where they came from, and who grew them.

"Our management team, all the way to the top, believes in local food first and foremost because it tastes better. With that shared value, we can be flexible and creative to make it work."

Andrew Roybal, University of Oregon

42. **Don't be afraid to make mistakes — create space for staff to innovate, practice, fail, and ultimately win on both flavor and budget.** Produce is a great place to start because the risk is relatively low and the potential for creative solutions is high.

43. **Really want to get the message across?** Invest in staff field trips to visit partner farms. Farmers offer a wealth of knowledge. Nothing will inspire your team like a trip through the field rows and hoop houses and time spent leaning against the truck with someone who works the land for a living.

6TH COURSE

Equipment

Photo Credit: Working Hands Farm

44. **Building a local fruit and veg program means working with the seasons,** so you'll need tools for canning, freezing, and fermenting. Preserving is the best way to access favorite flavors in the off-season.

45. **Invest in freezer storage.** If you're going to develop a strong local fruit and veggie supply, you'll benefit from all the frozen storage you can accommodate.

46. **Did we mention dehydrators?** Your house-made granola will sparkle with dried local fruit beyond the friendly and familiar cranberries.

"We use a variety of strategies to source local foods, including asking our distributors to identify local options, setting bid specifications for local products, and helping to coordinate deliveries to multiple drops in our network of facilities to make working with us more manageable for individual growers."

Lisa Vincent, Beaverton School District

7TH COURSE

Pro-Tips

47. **Two words: nimble menus.** Develop seasonal guidelines and a bank of successful dishes, but shift toward planning the specifics only 8-10 days out so you can capitalize on veggies that are fresh and abundant.

48. **Add value for farmers that deliver direct by hosting a drop-off location for their vegetable CSA** *(community supported agriculture)* at your site. Bonus: it reinforces your brand and reputation for being committed to fresh, local food, and helps reinforce fresh, seasonal eating among your diners.

"Food is a vital part of health, wellness, patient recovery and staff productivity, so it makes sense for us, as a health care facility, to support food production and distribution in a way that promotes human and environmental health. Our purchasing dollars bolster patient and staff health, feed local agriculture, circulate money in our community, and help build a local food system that reflects our commitment to holistic health and wellness."

Eecole Copen, Oregon Health and Sciences University

49. How many things can your team do with an apple? What are you doing with stems and stalks? Invest in culinary knowledge and skill. To make the most of local purchasing, you've got to be able to use everything you're getting.

50. If you work with several farmers who grow the same veggies, coordinate their seasons so each focuses on a smaller set of complementary products. Everyone will make more money, be more reliable, and more streamlined. Less overlap will reduce transaction costs for you, too.

"The most important piece for us is working with our foodservice contractor and their distributors to get data. You need more information to make better decisions."

Jenny McNamara, Portland State University

BONUS TIP!

51. Relationships matter. At its best, local sourcing feels very different from conventional ordering. As you develop relationships with farmers *(even if delivery is done through your distributor)*, it will start to feel like you are in partnership to deliver delicious, healthful, and affordable fruits and vegetables to your eaters.

NORTHWEST FOOD BUYERS ALLIANCE

JOIN US!

www.food-hub.org/nwfba

THANKS

ecotrust

OREGON TILTH

Oregon Department of Agriculture

Health Care Without Harm

Curated and edited by Ecotrust

Photography by Shawn Linehan (except as otherwise credited).

Hearty thanks to all the chefs, foodservice directors, and partners who contributed to this guide:
Amanda Oborne Amy Gilroy, Andre Uribe, Andrew Roybal, Chris Schreiner, David McIntyre, Emma Sirois, Eecole Copen, Fernando Divina, Gitta Grether-Sweeney, Jenna Newbrey, Jenny McNamara, Jon Arionus, Katy Pelissier, Kirk Mustain, Kristin Arychuk, Lisa Vincent, Scott Scales, Stacey Sobell, Susan Arakelian, Whitney Ellersick

Leah Gibson

From: Northwest Food Buyers Alliance <ssobell=ecotrust.org@mail204.atl81.rsgsv.net> on behalf of Stacey Sobell
Sent: Thursday, July 09, 2015 9:00 AM
To: Stacey Sobell
Subject: Join our foodservice field trip to Intel -- RSVP by 7/14

View this email in your browser

NORTHWEST FOOD BUYERS ALLIANCE

LOCAL SOURCING

Get out into the field

Join us for a half day exploring Intel's kitchens and Stone Boat Farm in Hillsboro

July 23rd, 2015 8:45am-1pm

Meet at the Food Innovation Center @ 8:45am (buses depart at 9am sharp!)
1207 NW Naito Pkwy # 154, Portland, OR 97209

Our summer field trip will take us out to Hillsboro to visit the Jones Farm Cafe on Intel's Campus, followed by a visit to one of the farms nearby that supplies the cafe. A professional photographer will join us on the tour to capture images for use in upcoming promotional materials, so wear something you like! (You'll be able to opt-out if you don't want to appear in pictures).

We'll provide a sack lunch and return to Portland by 1pm. Please RSVP as soon as possible and no later than July 14th as space is limited.

RSVP HERE by July 14th

SAVE THE DATE! Meet Local Suppliers

October 29, 2015

9am-noon

Building on the success of last year's vendor fair, this year's meeting will offer a line up of institution-ready producers as well as opportunities to engage distributors.

New Look

Doesn't this email look nice? The Alliance now has an official logo and is starting to look like a real thing. We'd love to hear what you think of the new look!

Our Partners

Twitter Website

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THRIVING LOCAL ECONOMIES.

VIBRANT RURAL & URBAN COMMUNITIES

EQUITABLE ACCESS TO GOOD FOOD.

These are the ideals that drive us.

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