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New Hampshire State Plan
Final Report
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Submitted by the
New Hampshire Department of Agriculture, Markets & Food
In cooperation with selected Project Partners

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Activities Performed
The New Hampshire Dept. of Agriculture, Markets & Food received funding under the 2014 Special Crop Block Grant Program in October 2014. Nine projects were approved for funding. Individual project reports follow.

Project 1

Project Title: Promoting SNAP/ EBT Redemption at Merrimack County Winter Farmers' Markets
Project Partner Organization: Merrimack County Conservation District
Final Report

Project Summary
Fresh, nutritious local foods can now be obtained in New Hampshire year-round at winter farmers' markets. As interest in local foods has grown, SNAP recipient purchases have remained low. Merrimack County Conservation District aims to increase SNAP purchases of fruits and vegetables at winter farmers' markets through a Double-Up Veggie Bucks SNAP coupon program at Merrimack County winter farmers' markets. The Specialty Crop Block Grant will help to fund program promotion and outreach with outside funds funding the double up coupons. This project increased sales to specialty crop producers, increased attendance at winter farmers' markets, increased the use of nutritious food by SNAP recipients, and educated SNAP recipients on how to prepare and use whole, unprocessed specialty crop produce for home consumption.

This project was not built on previous Specialty Crop Block Grants.

Project Approach
During this project, Merrimack County Conservation District and partners worked towards increasing the sales of specialty crops at winter farmers' markets in Merrimack County, NH. MCCD worked towards increasing SNAP/ EBT sales and utilization of the Granite State Market Match (formerly Double Up Veggie Bucks) at winter farmers markets through promotion, outreach, nutrition education, and marketing. This project utilized its numerous partners to reach each potential venue in order to bring in new customers and to expose consumers to specialty crop producers in Merrimack County. These included printed advertisements, flyers, emails, social media campaigns, meetings at social service agencies, information in newsletters, and rack brochures, television advertising, posters, banners, and incentives money with the assistance of Wholesome Wave & NH Food Bank. Individual specialty crop producers also increased promotion through social media marketing, passing out flyers, and promoting the winter farmers' markets on events such as a local television program called "Cook's Corner" or on local radio shows where farmers would talk about their products and the winter farmers' markets they sold them in. Given that Granite State Market Match is only used on fresh fruits

and vegetables, all marketing, promotion, and education was focused on the promotion of these specialty crops.

The project also aimed to increase the SNAP/ EBT incentive programs. In the course of the project, MCCD now promotes specialty crops and the SNAP program at three winter farmers' markets and special winter markets in the county as other towns look into starting a winter farmers' market.

Specialty Crop Block Grant funds were used solely to enhance specialty crops as marketing and outreach for SNAP recipients and Granite State Market Match incentive funds were exclusively for fresh fruits and vegetables. Market managers ensured that SNAP incentive funds were solely for specialty crops, cooking/ nutrition classes focused on specialty crops, and marketing and outreach for the program was solely for specialty crop enhancement. Specialty crop recipes were distributed as well. *Note- Double Up Veggie Bucks was renamed Granite State Market Match as a collaborative effort with NH Food Bank and Wholesome Wave programs throughout the State of New Hampshire.

Goals and Outcomes Achieved
Below is the goal set out for the SBCG and the outcomes achieved.

Goal: Increase SNAP sales during the winter farmers' market making an economic impact to specialty crop growers in additional sales per market.

The data below reflects only the amounts that directly went through one of MCCD's systems, i.e. payments to the vendor or our SNAP data. MCCD surveyed the individual vendors that are still in business (e.g. Lewis Farm switched owners, etc), and all vendors stated that sales went up post 2014 and have remained steady but were either unwilling or unable due to record keeping to give exact amounts of the increase. All vendors stated that the program's promotion of specialty crops, in their opinion, contributed to the increase in sales. One vendor now accepts SNAP on his own and he attributes that as a reason for a decrease in the use of our program but has increased his overall sales at the winter farmers' markets the farm is at and at his own farmstand.

The below data is from the FM Tracks program that MCCD utilizes through the Wholesome Wave/ NH Food Bank Granite State Market Match program.

2016/2017 Data

- Payments Distributed $13,319
- Payments Redeemed $12,625
- Incentives Distributed $714
- Incentives Redeemed $1,110
- Transactions 400

- Customers 376

2015/2016 Data

- Payments Distributed $12,606
- Payments Redeemed $12,079
- Incentives Distributed $1,095
- Incentives Redeemed $92
- Transactions 420
- Customers 409

In terms of overall payments to winter farmers' markets vendors, the data is as follows:

Average payments to specialty crop producers per year through MCCD program:

2017- $460.27

2016- $$364

2015- $331

2014- $129.13

Overall sales through the MCCD terminals in each year including all vendors including vendors that sold specialty crops and non-specialty crops (unable to separate the two amounts):

2016/2017 Markets: $16,526

2015/2016 Markets: $10,117

2014/2015 Markets: $6,561

2013/2014 Markets: $4,830

Overall, MCCD believes it accomplished the goals of the grant by increasing the sales of specialty crops and increasing the sales to SNAP customers at winter farmers' markets. There is still more work to do in terms of opening more winter farmers' markets, especially in neighborhoods where low-income families have better access. Placement of winter farmers' markets is difficult due to high rents in some areas and few community areas willing to give a location to a winter market. But, for the markets we worked with, we were able to accomplish our goals and maintain the increases we got but would like to see greater growth of markets throughout NH for even higher usage of the Granite State Market Match Program and overall specialty crop agricultural sales within NH.

Beneficiaries

The beneficiaries of this project include:

1. The winter farmers' markets in Concord, Contoocook, Danbury, and New London that benefited from the additional outreach increasing the number of customers that came to the markets.
2. The specialty crop vendors at the farmers' markets. Data previously in the report was derived from vendors who sold only specialty crops as the vendor nor MCCD could not differentiate sales of specialty crops versus non-specialty crops though those vendors also benefited in the project due to the promotion of part of what they were selling at the markets. These vendors included:
    - Vegetable Ranch, Warner, NH
    - Lewis Farm, Concord, NH
    - Hackleboro Orchard, Canterbury, NH
    - Warner River Produce, Webster, NH
    - Worksong Farm, Hopkinton, NH
    - Surowiec Farm, Sanbornon, NH
    - Micro Mamas, Concord, NH
    - Breakwind Farm, Hopkinton, NH
    - Brookford Farm, Canterbury, NH
    - Will N Roses, Weare, NH
    - Meadowview Farm, Gilmanton, NH
    - Bee Fields Farm, Wilton, NH
    - Maple Ridge Farm, Loudon, NH
    - Huntoon Farm, Danbary, NH
    - Autumn View Farm, Canaan, NH
    - Gage Hill Sugar Shack, Hopkinton, NH

Number of specialty crop block grant farmer beneficiaries:
Winter Farmers' Market at Cole Garden- 13 farms
Contoocook Farmers' Market- 4 farms
Danbury Farmers' Market- 4 farms
New London Farmers' Market- 2 farms

3. The SNAP/ EBT customers who otherwise would not be able to purchase from these winter farmers' markets without this program. These consumers also benefited from the incentive funds available through the Granite State Market Match program.
4. All customers at the winter farmers' markets who were able to purchase specialty crops which were generally more nutritious and health for the consumers.

Transactions through the MCCD SNAP/ EBT Terminal:
2014/2015:250
2015/2016:409
2016/2017:376

5. Attendees of the Cooking Matters courses that MCCD hosted in conjunction with NH Food Bank and UNH Cooperative Extension, which increased nutrition and cooking education to specialty crop consumers at the winter farmers' markets. This program also came with its own incentives of $10 per person to purchase specialty crops at the markets.

Lessons Learned

Many lessons were learned in this project. Some of these lessons included:

1. The biggest jump in specialty crop sales was in the first year of the project. Though outreach and marketing continued and, with the campaign conducted by Wholesome Wave and NH Food Bank, grabbed a much larger audience in the last year, sales were maintained rather than increased. It appears that the initial outreach obtained the result of increased sales of specialty crops at winter farmers' market, both SNAP and regular sales, and the remainder of the grant maintained that increase.
2. More winter farmers' markets are needed to reach a broader audience, such as in our food deserts and areas with more SNAP families. The problems in increasing winter farmers' markets include not enough season extension by local farmers and difficulties accessing good locations for winter farmers' markets.
3. Difficulties in tying the data directly to the outreach due to other extenuating circumstances such as the poor weather during the 2015/2016 market season and less produce available in the 2017/2018 market season.
4. Word of mouth is still the number one reason SNAP/ EBT customers report hearing about the Granite State Market Match program though this word of mouth included from social service and health care workers who this campaign also targeted.

Contact Person

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Project 2

Project Title: Organic Specialty Crop Cost of Production: Assessment & Education
Project Partner Organization: Northeast Organic Farming Association of New Hampshire
Final Report

Project Summary

Based on one-on-one interviews with NH farmers, as part of an evaluation of farms around the state, the need to conduct crop-specific comparative analysis to inform beginning farmers as well as established farmers so as to create profitable and effective management plans was necessary to improve efficiency and competitiveness resulting in economic viability of the farms. The Northeast Organic Farming Associations (NOFA) of New Hampshire, Vermont and

Massachusetts have completed a 30-month project to work with 36 organic specialty crop growers to conduct multi-year enterprise analyses of nine specialty crops, focusing on the management practices that significantly affect organic costs of production. The implemented changes from the enterprise analysis will result in productivity enhancement, cost containment, and innovative specialty crop production practices. Findings will be translated into educational deliverables including fact sheets and enterprise budgets, and will be shared through 18 workshops and a variety of shared publications. This project did not build on a previously funded project with the SCBGP.

Project Approach

The project began by hiring a project coordinator in 2015. The project coordinator was tasked with first identifying 9 and ultimately 10 organic farms in NH interested in participating in the research. The farms were given business books including one specific to enterprise analysis and also trained by the project coordinator on how to track their crops using provided templates. The basic concepts of farm profitability were reviewed as well as emphasizing necessary tracked data. Farmers shared their personal farm economics, equipment, history and management techniques. In the winter of 2016 follow-up visits were scheduled with all farms in order to create a Practice Crop Budget for one crop. This enabled farmers to get a jumpstart on their crop tracking by calculating marketing, tractor and overhead costs which remained the same for the next growing season. The practice crop budgets were shared with NOFA VT and MA. The project coordinator made visits to each farm at least twice per year to review data and make sure data was being collected correctly and uniformly. A tech consultant for the project, provided by NOFA VT, also visited with several of the NH farmers and offered further guidance on data collection. Two years of data on a variety of specialty crops was collected. The data has been collated into fact sheets for each crop and is now available for any farm to access. Fact sheets for carrots, winter squash, potatoes, lettuce and onions are available now along with information on whole farm financial ratios, crop profitability comparisons and tips for tracking cost of production. Workshops will be conducted as well, not only to inform other farms about the data, but to teach them how to do their own crop enterprise analysis.

Goals and Outcomes Achieved

GOAL 1: Increase the number of organic specialty crop farmers utilizing enterprise analysis to track and assess profitability of nine key specialty crops (GOAL) from 0 (BENCHMARK) to 36 (total from all three states) (TARGET) measured by the number of multi-year enterprise analysis created with technical assistance consultants (PERFORMANCE MEASURE).

Ten NH farms used enterprise analysis to successfully track nine specialty crops for two growing seasons. The farms were trained on how to track these crops by the project coordinator and tech consultant.

GOAL 2: Work with specialty crop growers to develop enterprise budgets and fact sheets about production factors and market considerations affecting profitable production for nine specialty crops

Budgets for each of the 10 participating farms in NH were developed in the first year of the project. Final fact sheets have been developed containing cost of production factors with three main factors identified that affect crop profitability: crop yield, price of the yield and production expenses.

GOAL 3: Increase production of nine specialty crops among organic farmers (GOAL) by sharing profit enhancing production strategies at 18 (total from all three states, New Hampshire will host 6) workshops, attended by at least 20 participants each (TARGET and PERFORMANCE MEASURE). After workshops, survey 80% of participants to determine if plans for production of specialty crops increased by 5% from before the hosting of workshops (BENCHMARK). The enterprise budgets and fact sheets will also be made available on the NOFA-NH website, the interstate NOFA web-site and regional newspaper The Natural Farmer, and shared with partner organizations.

NH organized two summer workshops in 2017 to review the results and steps of the study as well as touring two farms who were part of the study. The farms were New Earth Farm in Colebrook, NH on August 17, 2017 and Picadilly Farm in Winchester, NH on August 22, 2017. Unfortunately both events had no participants so were cancelled. We cannot report that we achieved this goal during the grant period. At least three regional workshops will be rescheduled for 2018, post grant period. The fact sheets are available now on our website and will be available on the NOFA.org site soon.

Beneficiaries

Beneficiaries to this project are certainly the ten participating farms as they learned how to track crops using enterprise analysis and can make adjustments at their farms to increase profitability. Other beneficiaries will be farmers who participate in upcoming workshops and new farmers deciding on what to grow. We don't currently have data to support the previous statement as the workshops have not been conducted and no evaluation results have been collected. The project results could also inform future projects such as equipment and tool sharing programs or labor sharing programs, both of which were significant factors in farm or crop profitability.

Lessons Learned

NOFA NH got a late start on this project due to losing our executive director, who had planned to oversee the project. This late start resulted in not being able to offer workshops at times farmers could attend (August) during the grant period therefore not collecting information on goal three of the project. However, we plan to offer these workshops post grant period during the winter and collect stated information and share those results.

Contact Person

Renee Ciulla acted as the project coordinator. Her e-mail is begreen618@hotmail.com
Stacey Purslow, NOFA NH board member, oversaw the project. Her e-mail is Stacey.purslow@unh.edu

Project 3

Project Title: NH Farmer's Market Association New Hampshire Public Radio Air Time
Project Partner Organization: New Hampshire Farmers' Market Association
Final Report (previously submitted)

Project Summary
The New Hampshire Farmers Market Association (NHFMA) will purchase a Premium Plan series of air time spots on NHPR (New Hampshire Public Radio) promoting Specialty Crops at our NH farmers markets during the summer of 2015.

Radio campaigns were implemented during premium air time on New Hampshire Public Radio. The campaign targeted specific audiences, including direct consumers with two calls to action. The first call to action was to encourage consumers to visit their local farmers market for the purpose of buying New Hampshire's specialty crops. The second call to action (both being equally important), was to drive traffic to the NHFMA web site to find out more about specialty crops, and where they could locate New Hampshire's specialty crops. The program was successful with several measurable outcomes detailed in this report.

This campaign furthered the organization's mission: "To educate consumers on the benefits of a healthy lifestyle acquired through locally grown agricultural products and understand the social, environmental and economic benefits of this lifestyle to themselves as well as farmers", by driving consumers to find out more about specialty crops and where to find them, both by visiting our web site as well as seeking direct sales outlets.

This campaign furthered the NHFMA organization's mission: "To educate consumers on the benefits of a healthy lifestyle acquired through locally grown agricultural products and understand the social, environmental and economic benefits of this lifestyle to themselves as well as farmers", by driving consumers to find out more about specialty crops and where to find them, both by visiting our web site as well as seeking direct sales outlets. The specific issue was to create awareness for consumers as to where to find and purchase specialty crop items throughout the State of New Hampshire.

The Importance and Timeliness:
The important nature of this radio campaign was that it was statewide and addressed the majority of popular specialty crop items produced in New Hampshire. NHPR is a highly respected statewide radio station with high integrity content and messaging. The timeliness was acutely planned to coincide with the availability of specific specialty crops, announcing them individually as they became available, not only creating consumer awareness about specialty crops themselves, but also giving the information about where they could purchase them. The radio campaigns played throughout the week, but also they were always played during NHPR's FoodStuffs segment, which boosted the ability to reach the local food

demographic.

This project was not built on a previously funded project.

Project Approach
As promised in our Work Plan, the radio campaign did air four times per week with premium placement. Half of the messages aired during drive time, with the other half during midday programming, early evening, and weekend afternoons.

Unusual Development 1: NHPR aired the campaign during their *Foodstuffs* Segment, which aired on Thursdays on *All Things Considered* and Saturdays during *Weekend Edition*. The *Foodstuffs* Segment features high quality local foods stories. A few unique stories that they discussed included local breweries opening, refugee farming, farmers markets food diversity (featuring ginger root), and more. It was very fitting for NHPR to air the announcement during *Foodstuffs* as it was heard by our target market of local food consumers and enthusiasts.

Unusual Development 2: The campaign included a free rotating banner ad on the nhpr.org web site. The banner was to rotate with all of nhpr's other advertisers banners, generating randomly upon the loading of each web page. During the initial launch of the campaign, the NHFMA board was not seeing our banner ad rotating through the web site with any consistency. As a result, nhpr agreed to add a static banner ad on the foodstuff page, uniquely by itself. (A static ad means our ad remained on that page with no other ads competing, or rotating with it.).

In order to enrich the repetitiveness of a long term radio campaign, the Work Plan included developing a 6 month campaign to alternate information throughout the harvest season. In order to specifically address specialty crops, NHFMA and NHPR together created a radio campaign that announced which specialty crops were available. Below is a list of specialty crops that were announced as the campaign progressed through the harvest season:

May 15	Rhubarb & asparagus
June 1	Strawberries
July 1	Blueberries
July 15	Tomatoes
July 22	Sweet Corn
August 1	Peaches
August 7	Watermelon
August 15	Raspberries & Blackberries
Sept. 1	Apples
Oct. 1	Pumpkins
Oct. 15	Onions, Garlic, storage potatoes, winter squashes

Goals & Outcomes Achieved

In our Work Plan, we submitted a traffic report from 2013 which gave a baseline traffic indication with which to measure results. See appendix for a copy of the baseline.

As promised, NHFMA measured the success of the campaign by tracking visits to the web site, with 2015 traffic below:

2015 Traffic Report from NHFMA Web Site (source: *Google Analytics*)

Month Index	Users	Pageviews	Pages / Session	Hits
Jan	321	888	2.35	892
Feb	698	1450	1.84	1464
Mar	850	1805	1.84	1824
Apr	2055	3480	1.55	3526
May	2519	4031	1.44	4081
June	2152	4008	1.70	4042
0007	1693	3113	1.65	3147
0008	833	1580	1.69	1588
0009	610	1143	1.71	1153
0010	367	653	1.53	663

Of the above Users, 138 people clicked on the link to the Specialty Crops page (see chart below). In looking at the total site page visits, most of the site pages received under 20 visits. But for the two pages affiliated with this grant, the traffic was significantly higher at 150 (find your market page) and 138 (specialty crop page) direct visits to those pages. This is a remarkable indication as to the success of the radio campaign as the reports are illustrating that visitors were seeking those two specific pages as opposed to all of the other pages of the web site.

Reaching New Consumers

Over the course of the time frame, there were 14,388 total users who visited the web site. Of that amount, 12,446 users had never visited the site before, which represents a capture of 86.5% new consumers reached.

Banner Impressions
There were 22,919 total banner impressions that appeared on the nhpr.org web site during the six month campaign. Of those impressions, there were 52 click-throughs, or visitors who visited the nhpr.org web site who then clicked the banner ad to arrive at the specialty crops page of the nhfma.org web site. The average time that these visitors spent on this page was 2 minutes and 46 seconds.

In 2015, there were 12,446 new visitors to the web site out of 14,388 total visitors. During the first four months of the radio campaign, the page views jumped from an average of 1,253 per month to an average of 3,658 per month. This indicates a gain of 2,405 new consumers per month during those four months, equaling **9,620 new specialty crop consumers** seeking and discovering information about specialty crops for the three beneficiary Associations. The jump from 1,253 visitors per month to 3,658 visitors per month represents a growth of 191%, which greatly exceeds the 25% growth expectation in our goal.

Beneficiaries
The Work Plan identified beneficiaries as The NH Fruit Growers Association, the Vegetable and Berry Association and the NH Maple Association.

Lessons Learned

1) SITE TRAFFIC REPORTING
The NH Farmers Market Association switched traffic measuring software platforms between 2014 and 2015 as we switched web site hosts and our existing solution was no longer available. In 2014, we used Webalizer traffic reporting software. Webalizer counts a unique visitor based on a 30 minute period. So if a unique visitor comes to the site and leaves, it counts as one unique visitor for those 30 minutes. The server resets after a half hour, and if that unique visitor comes back again, Webalizer counts it as a unique visitor again. Google, on the other hand, counts a unique visitor in a much more complex manner which involves a number of google algorithms meant to measure sales campaigns and long term user retention. Instead of a 30 minute unit of measure, google looks at cookies indefinitely, and in most cases Google is counting a unique visitor only once for an indefinite period of time (until a user clears their cookies which is not foreseeable). As a result, the google unique visitor reports (such as 138 to specialty crops page) is dismally low compared to the way Webalizer measured site traffic.

In summary, although we were able to complete the Work Plan and measure Unique Visitors to the web site, the two different metrics created extra means of measuring results.

2) SPECIALTY CROPS
Although the harvest schedule was traditional in timing, apples were ready prior to Sept. 1. Garlic, onions and potatoes were available much earlier in the season due to the hoop house growers. Perhaps there could be an informative campaign for consumers to check with their

favorite farmer to see what is available, as new techniques make more specialty crops available throughout the year.

3) LANDING PAGES WITH SPECIFIC URLS NEEDED
It may have proven more robust to create an entire web site called nhspecialtycrops.com, as opposed to creating two pages from our main web site. This way the radio campaign could have said, "visit nhspecialtycrops.com for more information" as opposed to "visit nhfma.org for more information" so that unique traffic to that web site could have better indicated radio campaign success. This would have involved a bigger investment up front in order to create a separate web site.

Contact Information
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Additional information
In attached appendix, Project 3

Project 4

Project Title: Specialty Crop Safety: From Field to Market
Project Partner Organization: Small & Beginner Farmers of New Hampshire

Project Summary
Food safety affects every vegetable and fruit grower. Some growers will be subject to the new Food Safety Modernization Act (FSMA) rules, but all growers are receiving food safety pressure from buyers. Growers understand the need for improving produce handling but are concerned about the economic and labor related impacts FSMA could create.

Small and Beginner Farmers of New Hampshire sought to prepare small and beginning specialty crop growers for the anticipated changes in food safety regulations and to provide access to expensive, otherwise unattainable equipment to improve their food handling practices in a safe, timely, and economic manner. Three regional workshops were made available for growers to learn about safe handling procedures for greens and root vegetables from harvest to market. Demonstration of a barrel washer for root vegetables and a bubble washer for greens allowed participants hands-on practice in using the equipment.

This project builds upon the last three Specialty Crop Block Grants. The first grant in 2011 was designed to raise awareness of specialty crops among NH farmers and provide basic growing and marketing skills for these crops. The second grant in 2012 provided training in growing mushrooms, business planning, CSA development, and exposure to equipment designed for

handling specific specialty crops. This included demonstrating assembly and use of two types of vegetable washers: a bubble washer for greens and a barrel washer for root vegetables. The third grant in 2013 helped NH specialty growers by establishing two banks of small tools and seasonal equipment for a small rental fee.

While growers felt that the bubble washer was economically attainable, the barrel washer posed a much larger financial burden. However, a regional sharing arrangement on a barrel washer would help meet growers' needs to bring clean, high quality produce to market. Three barrel washers were placed into the SBFNH's shared equipment pool and made available for rent to member growers in NH throughout the year. The caretakers for the three barrel washers were selected in accordance with existing SBFNH policy and are: Red Manse Farm in Loudon, NH, Mivida Gardens in Silver Lake, NH, and Work Song Farm in Hopkinton, NH.

Project Approach

Three workshops were held, demonstrating the use of the barrel washer, as well as a bubble washer for greens. Emphasis was placed on the safe handling of food, equipment, and technology. Many of our members currently engage in homesteading and small scale farming. Some would like to expand their business but lack the knowledge and equipment resources to do so.

Cleaning root crops on a farm can be challenging, as these crops tend to mature during cooler weather and it can become a race against the cold weather to get the produce washed and put into storage for the winter. Small farms can save time and labor by using mechanical washers for produce. Barrel washers are ideal for many root crops, such as potatoes, carrots, and beets, while the bubble washer is a significant improvement for growers who were previously washing greens in five gallon buckets. Not only does this not meet the food safety requirements from regulators, it is also very labor intensive and makes it difficult to provide a high-quality product.

The use of the bubble washer and the barrel washer significantly decreases the amount of time washing produce and at the same time, minimizes handling of the product, which reduces the potential for food contamination. Efficient use of time through the use of mechanical washers allows small scale farms to expand their operation and increase sales, thus ensuring the viability of their business.

Goals and Outcomes Achieved

Goal One: *Increase knowledge on the part of specialty crop growers of food safety issues inherent in greens and root vegetables production from field to market.*

Goal Two: *Improve quality and safety of marketed greens and root vegetables offered by specialty crop growers. Reduction of labor costs (payroll or grower's time) of these growers.*

The project benefited a wide range of NH farmers, from specialty crop growers to diversified farms. Workshop participants indicated on the evaluation forms that they would be willing to share the presented information to friends and fellow farmers and encourage them to make

use of the mechanical washers. Fifteen bubble washers were available for direct purchase at a discounted rate. As the anticipated lifespan of the barrel washers is projected to be 15 to 20 years, the barrel washers can be expected to be used numerous times. As interest in farming continues, we expect more people to pursue agricultural enterprises. This would only increase the demand for rental of the barrel washer.

Beneficiaries also include NH consumers, as more effective and improved crop handling from the field to market will not only help by reducing cost, but also increases the quality and safety of the products. These products are typically found at farmer's markets, CSAs, on-farm, restaurants, and institutions.

Expected Measurable Outcomes

Goal One
Increased knowledge on the part of specialty crop growers of food safety issues inherent in greens and root vegetable production from field to market.

Outputs
1) Three workshops focused on food safety issues of greens and root vegetables from field through preparation for market. 2) Four newsletter articles highlighting food safety in harvest and preparation of these crops.

Performance measures
1) Attendance by participants at workshops. 2) Distribution of at least 450 newsletters via print, digital distribution and on the SBFNH website.

Outcomes/Targets
At least 75% of participants per workshop have complete written evaluations, with a 20% self-reported gain in knowledge of food safety issues involved in harvest and market preparation. 2) Four articles have been distributed in a total of 1350 newsletters.

Performance Monitoring Plan
Participant registrations, written evaluations and oral feedback will be tracked by Project Manager or delegate before, during and after each workshop. Distribution of newsletters will be tracked by the newsletter editor, using existing digital (MailChimp mailing metrics or equivalent) and hard copy statistical measures (mailing lists and printer-postal invoices) at time of distribution (currently bimonthly).

Goal Two
To improve quality and safety of marketed greens and root vegetables offered by specialty crop growers. Reduction of labor costs (payroll or grower’s time) of these growers.

Output

Demonstration of proper use of bubble and barrel washers to growers. Sale of subsidized bubble washers to 12 growers. Placement of three barrel washers into SBFNH equipment pool.

Performance measures
Completed written or telephone evaluations. Completion of required SBFNH agreements by caretakers of barrel washers.

Benchmarks
At least ten bubble washer recipients have completed written or telephone evaluations post workshop. Caretakers of the barrel washers have reported conditions, number of rentals and renters' feedback to the State Council annually.

Outcomes/Targets
Evaluations show that 85% of respondents have expressed satisfaction with the level of improved quality and cleanliness of their greens and reduction of labor. The barrel washers rented or used by the caretakers have a 90% satisfaction rate on similar metrics 100 times per year.

Performance Monitoring Plan
Distribution of bubble washers were tracked by Kit Assembler. Evaluations and oral feedback were tracked by Project Manager or delegate after each workshop. Tracking of barrel washer statistics are overseen by the SBFNH State Leader and the State Council.

Beneficiaries

Our target beneficiaries for this project was for the lower resource specialty crop grower of greens and root vegetables, particularly members of SBFNH, non-member small or beginning farmers, someone considering farming, their families and customers. We expect that the beneficiaries will share the information presented through the project at an estimated rate of three or four per participant. The project has helped these growers by increasing their knowledge of safe handling of these crops and providing access to otherwise unaffordable specialized washing equipment. Membership in our organization, despite its name, is not limited to NH growers. We have members in Maine and Vermont who will benefit from the project.

Estimated Numbers of Beneficiaries. Initially, the project benefited at least 30 to 40 workshop attendees, fifteen of whom will be able to purchase bubble washers at a discounted rate. We expect participants will share the information presented with their families and fellow farmers at a conservatively estimated rate of three or four per attendee. We have documented this level of sharing in past projects via workshop evaluation questions about information sharing.

We estimate we will be able to publicize the food safety principles and availability of this equipment in our newsletter, on our website and via our active e-mail discussion list to 4,000 specialty crop growers over the life of the project. Project information was detailed on our website and in at three to six articles in our newsletter, which has an online and print circulation of 450 members and agricultural partners in

NH and VT (e.g. Co-op Extension, NRCS, FSA, Conservation Districts and NH Farm Bureau). SBFNH members have observed growers reading the newsletters many times in agricultural partners' waiting rooms across the state. Industry standard is 2.5 readers times the circulation rate, making our readership about 1125 per issue. We publish six times per year and hand out an additional 400 newsletters at workshops, NH Farm & Forest Expo, growers' conferences and other agricultural events.

Lessons Learned
While the workshops were beneficial and informative, attendance was lower than expected. One contributing factor was that there was a large participation in the demonstration of assembly and use of both a barrel and bubble washer back in 2012. Those growers had already attended the workshop and thus did not feel a need to attend a subsequent one.

A severe state-wide drought significantly impacted attendance, as growers faced a very challenging growing season. Many either did not plant or significantly reduced the size of their fall storage crop planting. Therefore, they did not have a need for a large capacity mechanical washer this season.

In order to reach out to those who were interested in attending one of the workshops but could not, we will post a video tutorial on how to use the barrel washer on the SBFNH website. This would not only instruct potential users of the equipment but would also serve as a refresher to those who are already familiar with it.

We will continue to publicize grant activities in our newsletter and on our website and to use those avenues to disseminate information about specialty crops presented in our workshops.

Local foods continue to be in demand, and changes in food safety regulations require that growers understand and reduce microbial risks during the production of produce. Every grower needs to identify and reduce these risks, from field to market. With the implementation of FSMA, understanding and reducing these risks are crucial to the success of the farm operation.

SBFNH has continued to advertise the bubble washers and root barrel washers through the 2016 SCBG. We have planned three equipment workshops in 2018. The barrel and bubble washers will be featured in all three of these workshops as well as equipment from past SCBG's. We believe that these grants have common goals and the equipment workshops continue to advertise and educate on past grants.

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Project 5

Project Title: Table Grape Cultivars and Training Systems for New Hampshire

Project Partner Organization: University of New Hampshire Cooperative Extension, Dr. Becky Sideman, Extension Professor and Specialist, Sustainable Horticulture
Final Report

Project Summary

In 2012, 61 farms in NH reported producing a total of 94 acres of grapes (NASS, 2014). Almost all were used for wine or juice production; virtually no table grape production exists in the state. In NY, over 3,000 tons of grapes are harvested annually for fresh table use (Reisch 2003). We believe that the direct market potential for table grapes in NH is high, and that adoption thus far has been limited by lack of availability of cold-hardy table grapes, lack of information about which varieties are hardy and productive in NH, and lack of information about training systems suitable for those varieties. Several hardy seedless varieties have been released within the last two decades, and preliminary research indicates that some of these are well suited to production in southern NH.

Pruning and training are essential for grapes to produce a good yield of high quality fruit. The training system determines the framework and structure of the grapevines, and affects the type of pruning that will need to take place annually. Choice of training system is critical to success with a vineyard. Training systems affect not only the potential yields and quality of the grape crop, but also labor requirements and ease of management, the degree to which vines are predisposed to winter injury, light interception by fruits and foliage, and more. Training systems are often selected based on growth habit and performance of varieties in a given site. The cold-hardy table grape cultivars tend to be vigorous, with a more trailing growth habit than the cold-hardy wine grapes grown in NH, and as such, are likely suited to different training systems than those which predominate in wine grape production. Research to determine the optimum training systems for table grapes in our climate has not been done.

This project built directly upon the results of the successful SARE Farmer Grant FNE10-692 (Seedless table grape variety evaluation grown on VSP training system), which was originally funded in 2010. In FNE10-692, the farmer investigator John Lastowka worked with technical advisor George Hamilton and established a planting of sixteen table grape cultivars trained using a vertical shoot positioning (VSP) system, and evaluated their growth and yields over a three-year period. They found that some varieties were well-adapted to the research site in Merrimack, NH (zone 5B), and that others performed poorly and experienced winter injury. Most adapted cultivars were highly vigorous with a trailing growth habit, which would suggest that other training systems may be more suitable and less labor-intensive than the VSP system.

Project Approach

In this project, we established a research table grape vineyard to evaluate eight table grape cultivars under three training systems: vertical-shoot positioning (VSP), top-wire cordon (TWC) and modified Munson (MM). During the granting project period, we evaluated winter hardiness, incidence of diseases, plant vigor, and yields of the eight cultivars planted. Because establishment of vines using different training systems is a long-term process and the TWC and MM vines have not yet produced full yields, the comparison between training systems will take

place after the end of the granting period. Our primary goal was to produce research-based information on which to base recommendations for growers interested in establishing table grapes in NH, and to disseminate this information to growers throughout the region. We estimate the 279 participants have accessed the information that we have produced from this project. Eventually, we expect that the project will result in increased acreage of table grapes in NH and increased access to local table grapes by NH consumers.

B. Sideman, Extension professor, co-designed the experiment and was responsible for day-to-day vineyard management, data collection and analysis. G. Hamilton, Extension field specialist, co-designed experiments, and prepared preliminary variety report fact sheet based on pre-project work. E. Ford, Woodman Farm manager, was responsible for vineyard maintenance and pesticide applications.

Goals and Outcomes Achieved

Our original goal was: Current and prospective NH table grape growers will learn which table grape cultivars are best adapted to NH, and which training systems that are best suited (most effective, least laborious) for use with these cultivars. Towards this goal, we identified significant differences between varieties in several traits: vine vigor, hardiness, susceptibility to four diseases, and young-vine yield and fruit quality. We have not yet been able to make comparisons between training systems, because of the length of time required to implement different training systems and observe results.

A Preliminary variety trial report was prepared and distributed to growers. The report (https://extension.unh.edu/resources/files/Resource006259_Rep8964.pdf) describes our current results, and was accessed by 133 growers during the past year (December 2016-2017). In this, we showed how varieties differed in their winter hardiness and overall vigor, and described the significant differences in susceptibility to three out of four common diseases of grapes in Northern New England. The publication will be refined and updated with yield data (in winter 2018) and training system information in subsequent years. Our Table grape enterprise budget requires yield data from 3-year old and older vines, and therefore will be produced in 2019, after the conclusion of this grant.
Two articles with broader distribution were also published:
NH Agricultural Experiment Station Press Release, Sept. 5, 2017.
https://colsa.unh.edu/nhaes/article/2017/09/grapes
Growing Produce, Sept. 26, 2017. http://www.growingproduce.com/fruits/grapes/new-england-researchers-study-viability-of-seedless-table-grapes-varieties/

Project results were also presented at several workshops and on-farm twilight meetings.

- G. Hamilton. Table Grapes for New Hampshire. NH Vegetable & Berry Growers' Association Meeting, Feb 2015, Manchester NH. – 79 growers
- G. Hamilton. Table Grapes for New Hampshire. New England Vegetable and Fruit Conference, Dec 2015, Manchester NH. – 40 growers
- NHAES Twilight Meeting, June 19, 2017. Woodman Farm, NH Agricultural Experiment Station, Durham NH. (15 researchers, 2 producers)

- Seedless Tables Grapes and Fall Strawberries Twilight Meeting, Sept. 13, 2017. Woodman Farm, NH Agricultural Experiment Station, Durham NH. (10 producers)

ORIGINAL TARGET #1: At least 100 growers will attend workshops and meetings where results are presented, and at least 75% of the growers that attend will have a gain of knowledge as a result of these meetings. In our post-meeting evaluation in February 2015, 95% reported a gain of knowledge and awareness about seedless table grapes, and 26% reported that they were intrigued by the idea of growing table grapes and that they were considering experimenting with this crop.

ORIGINAL TARGET #2: We expect that at least 50 growers annually will access the published research reports. Our Preliminary variety trial report was accessed by 133 growers during the past year (December 2016-2017).

ORIGINAL TARGET #3: At least 5 growers will establish table grape plantings with the intent to sell fruit during the next two years. Over the project period, we are aware of five new plantings of table grapes at varying commercial scales, located in NH and northern MA, and are aware of two more in the planning phases. We decided to delay our comprehensive "post-project survey" until after our outreach for the project is complete, because it is critical to have preliminary information about the best training systems before we start trying to encourage growers to plant new vineyards.

Beneficiaries

- The primary beneficiaries of this group are growers that are interested in growing table grapes in Northern New England. Secondary beneficiaries include consumers, who will have increased access to local table grapes.
- We estimate the 279 growers have directly accessed the information that we have produced from this project, but several hundred additional people have learned about the project from press releases and industry articles.

Lessons Learned

We obtained all original project goals within the project time period, but have not yet realized the full potential of this project. While this is not unexpected, because of the long-term nature of this project, it does make it difficult to quantify economic impacts part-way through the project, at the end of the funding period.

We were surprised by poor performance in this experiment of one variety that was very promising in preliminary experiments, and this underscored the need for trials to be conducted in multiple sites, using different planting materials and growing practices.
An ancillary benefit from this project is that it provided training opportunities for several undergraduate and graduate students, as well as Extension staff, in viticulture. This included not only basic grapevine management, but also insect and disease identification and management, and vineyard weed management.

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Project 6

Project Title: Monadnock Menus - Wholesale Market Expansion Project
Project Partner Organization: Cheshire County Conservation District (CCCD)
Final Report

Project Summary
This project proposed to address the following needs:

- Identify the remaining barriers and opportunities to increasing sales of specialty crops to wholesale buyers.
- Match product specifications, product expectations, price points, and inventory selection to engage more wholesale buyers.
- Develop sufficient and reliable product inventory so that wholesale buyers find it worthwhile to purchase more local specialty crops throughout the year.
- Assess opportunities for consistent and profitable sales throughout the winter months through light processing, use of seconds, and cold storage.
- Develop a smarter aggregation and distribution infrastructure to keep price points low and improve logistics.

Importance and timeliness of the project
Farm-to-institution efforts are spreading throughout the region. Groups like Farm to Institution New England (FINE) have identified the need to have a better understanding of the wholesale supply chain including: production for institutional markets, aggregation and distribution systems, and addressing the winter gap.

Monadnock Menus (MM) is an aggregation and distribution service for local farmers. With this project, MM aimed to identify new avenues to better serve existing buyers of specialty crops, reach new wholesale buyers, and boost local specialty producers' ability to scale up and diversity production to meet market need.

This project did build on a previously funded project through the SCBGP. The previous work funded through the SCBGP focused on creating a pilot farm to school distribution service. This service continued after the grant period and evolved into the Monadnock Menus Food Hub. The work during this grant period has significantly enhanced the Monadnock Menus Food Hub. It has strengthened the web platform, provided technical support and resources, as well as provided needed supplies and equipment to Specialty Crop producers and specialty crop buyers that will allow for the purchase of more NH grown specialty crops.

Project Approach
With this grant funding, Monadnock Menus worked in concert with partner organization Food Connects to address the identified needs of local wholesale food buyers and local specialty crop producers through the following tasks and activities:

Task 1: Increase market access for NH specialty crop wholesale buyers: Through efforts to identify product needs that weren't being fulfilled by existing systems, translating those needs into producer cultivation, onboarding, training, and outreach, and monitoring the effects of that work in MM's specialty crop sales data.

Task 2: Refining existing products and developing new products targeted to identified needs: MM leveraged its market research to help local specialty crop producers refine the pack and presentation of existing products and to identify new products with high buyer demand in the MM network. Further, in response to mid-project buyer and producer feedback, and in special partnership with Harlow Farm, MM developed and implemented its first wholesale standards guide for specialty crop producers, aiming to increase buyer confidence in the accuracy and consistency of product listings, and to help producers better understand how to meet buyers' specific quality and pack demands. Finally, MM generated a suite of branded "producer posters" for each of its New Hampshire specialty crop producers. This marketing push was designed to drive specialty crop sales and help buyers better tell the stories of the local food and farmers in which they invest.

Task 3: Increase access to processing and storage equipment and improve web platform: With grant dollars, MM launched a set of projects to improve the backend, technical capacity of its own operations as well as those of its vendors. It partnered with local food e-commerce technology provider Harvest to Market (harvesttomarket.com) to implement numerous major improvements and new features aimed at improving buyer access to and understanding of specialty crops, enhancing buyers' user experience and overall satisfaction with the food hub, breaking down technological obstacles hindering producer engagement, and increasing efficiency and efficacy of market administration. It used grant funds to provide processing equipment to institutional specialty crop buyers to increase their capacity to use whole, locally-grown specialty crops. And it furnished specialty crop producers with harvesting, post-harvest handling, and processing equipment to improve the volume potential, efficiency, and, ultimately, the profitability of their operations.

The e-commerce revamp project was the only grant task whose outcome could have benefited any product type other than specialty crops, because MM's e-commerce site holds and handles all of MM's inventory, including non-specialty items. This overlap was unavoidable. However, MM does attest that all the improvements made to the e-commerce site were designed and carried out with only specialty crop listings, sales, marketing, and reporting in mind, and with a unique eye for the needs and requests of specialty crop producers and specialty crop buyers active in MM deliveries.

Goals and Outcomes Achieved

Below is a survey of the numerous goals achieved through this project.

Task 1: Increase market access for NH specialty crop wholesale buyers
Review existing studies and reports

In August and September 2015, a review of existing literature on institutional wholesale specialty crop buyer needs was performed in order to identify likely targets for specialty crop enhancement and development. Special attention was given to the NOFA Farm to Institution report from 2012, Windham Farm & Food's Target Crops project, and the report generated by the University of Vermont on the top 10 local products purchased by Vermont schools.

Conduct market research through online surveys and face to face interviews with MM buyers
In September 2015 to January 2016, in-person interviews were held with three MM institutional specialty crop buyers to begin to identify barriers to specialty product purchasing and potential .

Building on feedback generated from interviews, in January 2016, 24 existing MM specialty crop buyers (institutional and non-institutional) were surveyed through an online questionnaire on interviews yielded insights on the importance of finding labor-saving products or methods in local food procurement. Institutional buyers proved especially sensitive to higher or volatile pricing of specialty crops, Some key crops (e.g. carrots, potatoes, lettuce) available in the region could meet buyers' basic price constraints, but presented challenges in the form of labor required to convert from whole to usable form.

Outcomes
Outcome: Increase number of wholesale buyers of specialty crops from 16 to 25
As of November 2017, Monadnock Menus had over 36 active buyers of wholesale specialty crops over the previous 12 months of sales.

Outcome: Increase dollars sold of specialty crops from $30,770 to $80,000.
Sales of specialty crops through MM have increased dramatically across the board since the beginning of the grant period. Sales of fresh fruits and berries have increased from a total of $9,111 in 2015 to $23,373 in 2016, to a projected $32,000 in 2017 -- a 351% growth. Sales of fresh vegetables have increased from $29,598 in 2015, to $53,788 in 2016, to a projected $45,000 in 2017, showing total growth of between 52% and 81%. Sales of lightly processed vegetables have not changed in any significant way, due to the reasons spelled out in the Lessons Learned section, below.

In total, specialty crop sales (including herbs, mushrooms, lightly processed items) have grown from $40,356 in 2015 to $80,437 in 2016, to a projected $80,000 in 2017 -- nearly 2x growth.

Outcome: 75% of existing MM specialty crop producers see improved wholesale market access as a positive development in their business model.

According to the final survey of specialty crop producers, 72.8% of respondents believe that selling through Monadnock Menus has helped them, some or a lot, to increase market access and sales.

Task 2: Refining existing products and developing new products targeted to identified needs
New products that can meet market gaps will be marketed and sold through MM.
Literature review, interviews, and surveying of wholesale specialty crop buyers from September 2015 to September 2016 highlighted special need, particularly among institutional buyers, for the following products:

- Combined "CSA-type" produce boxes for low-income housing buying club buyers
- Wider range of case/pack sizes to increase accessibility of key crops
- Key root vegetables at a lower price point (potatoes, carrots, beets)
- Other staple produce items at a lower price point (lettuce, apples)
- Lightly-processed fresh or frozen key vegetables and berries (diced potatoes, coined carrots, frozen berries, diced beets, lettuce filets, shredded cabbage)
- Develop, produce, and distribute marketing materials to increase revenues of specialty crops.

At Monadnock Menus' annual meeting in early February 2017 and in interviews performed afterward, more than 10 buyers expressed strong desire for materials, especially high-quality posters, to help market the origin and credentials of the local specialty crops they were purchasing through MM. From April 2017 to November 2017, Monadnock Menus developed a suite of posters highlighting its 10 most high-volume specialty crop producers (see Lessons Learned, below). A professional photographer was hired to generate a suite of photos of the producers, their products, and their farms/operations. The photos are now fully owned by Monadnock Menus as well as the individual producers. Full sets of the printed posters were distributed to 25 MM specialty crop buyers in November 2017, and extra posters were printed and made available to all buyers for free through MM's online ordering system.

Outcomes
Outcome: Increase the number of specialty crop products (value added - frozen/ lightly processed) sold from 9 to 13, and increase the sales of lightly processed/ frozen product from $5,713 to $10,000.

In 2017, 13 distinct lightly-processed and frozen specialty crop products were sold, although total sales value decreased to $3,463 annually, due to supply inconsistencies and limitations (see Lessons Learned, below).

Speaking in terms of all specialty crops, the diversity of MM's specialty crop product offerings -- in terms of crop types and tiers, pack sizes, and pack types -- have increased in proportion with sales. In 2015, MM offered a total of 239 vegetable SKUs over the course of the year. In 2016, total SKUs numbered 379 (a 58.5% increase over 2015), and in 2017 335 SKUs were offered (an

increase of 40% over 2015). SKU count for fruits/berries has increased, too: from 26 in 2015, to 37 in 2016, to 55 in 2017, a total increase of 111%.

Outcome: 50% of buyers report high satisfaction with newly developed products
MM buyers were surveyed in 2017 about their general response to the trajectory of product offerings from 2015 to present. Of the respondents, 53.3% said that the specialty crop product offerings available now are serving their needs better or much better than the offerings in 2015. Note that this data comes from buyers across the spectrum: from institutional food service, to retail outlets, to workplace lunch programs, to buying clubs. Interpolated over all of MM's buyers in 2016 and 2017, the data implies that 35 wholesale buyers in southern NH are more satisfied with and better served by MM's local specialty crop offerings now than they were at the beginning of the grant period.

Develop wholesale standards guides on top-priority products
At Monadnock Menus' annual meeting in early February 2017 and in interviews performed afterward, more than 12 buyers and three specialty crop producers requested that MM implement a program to clarify expectations and standards for quality, grading, and pack sizes/type for specialty crops that had histories of inconsistency in the Monadnock Menus network. In June to August of 2017, MM designed an initial set of guides codifying MM's standards for three of the highest-priority crops from the targeted list: carrots (loose and bunched), beets (loose and bunched), and all herbs. The standards were adapted from the popular Wholesale Success guide published by FamilyFarmed. The standards were translated into an easily-accessible poster format in order to give producers and their staff the clearest possible reference point for handling and packing specialty crop products to MM's standards. Full-scale photos were prioritized in the design of the posters, giving packing staff the ability to make real-time, like-to-like grading judgements. Posters were printed on waterproof/rip-proof material and bound, to maximize the lifespan of the product in high-intensity farm environments. Eleven specialty crop producers received printed and bound copies of the guides in November 2017. Of the 11 farms, 100% reported satisfaction or high satisfaction with the look and quality of the posters (average score 4.5/5); 100% reported satisfaction or high satisfaction with the clarity, accuracy, and usefulness of the information conveyed (score: 4.5 out of 5); and 90% reported satisfaction or high satisfaction with the pilot guides, overall (score: 4 out of 5).

Task 3: Increase access to processing and storage equipment and improve web platform
Identify needs and purchase processing equipment for specialty crop producers and buyers
In April 2017, nine MM institutional specialty crop buyers and 11 New Hampshire specialty crop producers were offered the opportunity to request access to processing and handling equipment through a free lease program. Five buyers requested equipment of a wide range of items, including food-grade storage tubs, immersion blenders, industrial mixers, and salad spinners. Buyers received requested items (with a value totaling $4,851) through a free lease program (administered by the CCCD) in August to November of 2017. In addition, five NH vegetable producers requested equipment for harvesting, post-harvest handling, and

processing of specialty crops. Among their requests were a cooler control unit, high-impact pallet-sized plastic storage bins, mechanical greens harvesters, shelving and racking, and an electric industrial onion topper. The producers received their requested equipment (with a value totaling $13,418) through a free lease in August to October of 2017.

Improve the web infrastructure based on identified needs of buyers and producers of specialty crops

In January 2016, MM buyers were surveyed to identify perceived deficiencies in MM's online e-commerce system (Harvest to Market) that were hindering buyers' ability or desire to purchase locally-produce specialty crops, or restricting vendors' ability to adequately list and market their specialty crops for purchase. From March 2016 to November 2017, in partnership with the developers of Harvest to Market, the following improvements/features were implemented in the Harvest to Market system:

Completely new buyer, vendor, and market manager interface including new design, layout, color scheme, typography, & branding: Modernizing and cleaning the user interface to improve all-around user experience and attract buyers to interact more freely with the system.
Special pricing feature: To allow specialty crop producers and market managers to customize pricing structures on particular crops or crop families, for specific buyers or buyer segments. This allows for much more efficient offering of promotions and sale runs, as well as special low-priced loss-leader items targeted to price-constrained buyers like schools, hospitals and nursing homes.

Complete responsive design for desktop and mobile viewing via Android, iPhone, or other small screens: In response to numerous specialty crop buyer requests for mobile access to the purchasing system.

Electronic label generation: With this feature launched in June 2017, more than 90% of all products distributed by Monadnock Menus are now labeled with a detailed, fully traceable label indicating place of origin, destination, ship date, order number, case size, and product details.
New intuitive and robust, yet simple, search feature (across all markets) for state, town, market, vendor, and product selection: As well as a new and standardized inventory selection menus for buyer, vendor, and market manager interfaces

Improved newsletter feature set: To give market managers more freedom and efficiency in designing weekly/monthly electronic marketing materials to regularly communicate news and specials on specialty crop products to buyers.

Splits feature: To allow specialty crop producers and vendors to sell full cases of specialty crops through portioned sales to multiple buyers.

Modernized login, cart-building, and checkout functionality: To lower barriers to entry and use for the average specialty crop wholesale buyer.

Numerous back-end feature improvements for increased administrator efficiency: Allowing market admins and account-holding specialty crop producers to more effectively and efficiently manage, market, and modify specialty crop listings.

Outcome: 50% of buyers and producers report improved access to needed processing and storage equipment that allow for increased sales of specialty crops.
MM was unable to survey for this data point using any valid methodology. All of MM's institutional buyers and all of MM's specialty crop producers were offered access to storage and processing equipment through the free lease program. Of the eleven identified specialty producers, five (45%) requested and received harvest, post-harvest, and/or storage equipment. Of the nine identified institutional buyers, five (55%) requested and received kitchen processing equipment.

Outcome: 50% of buyers and producers report improved ease of use and improved aesthetics of web platform that allow for increased sales of specialty crops.

Buyers and vendors were surveyed in November 2017 on the effect the Harvest to Market e-commerce site improvements have had on their activities with MM. Of the buyer respondents, 80% reported that the website looks better or significantly better than it did at the beginning of the grant period (December 2015); and 81.25% reported that it is easier to access and purchase specialty crops through Harvest to Market today than it was at the beginning of the grant period. Of the produce vendors surveyed, 80% report that Harvest to Market is easier or much easier to use to sell specialty crops than it was two years ago, and 90% report that the aesthetics e-commerce site have improved or significantly improved in that time.

Beneficiaries
The CCCD's and Monadnock Menus' Wholesale Market Expansion Project directly benefited 11 New Hampshire specialty crop producers, who received equipment and technical assistance in developing production systems to meet local demand. In aggregate, the project contributed to boosting the viability and development of southwestern New Hampshire's working lands and rural economy over the last two years. In addition, all of the materials and outcomes generated through the grant activities (equipment, wholesale guideline posters, producer marketing posters, label generation capability, and website improvements) will remain useful for and beneficial to producers and specialty crop sales for several years, at least. Going forward, those outcomes will also act as templates for further materials development: MM will use the producer poster templates to refresh marketing materials on an annual or bi-annual basis, and any new specialty crop producers that join MM will be included in future design rounds. In short, the completed grant activities have set the stage for long-term maturation of the MM network and increasing benefit to NH specialty crop producers.

The project also benefited 47 specialty crop wholesale buyers (particularly at schools, hospitals, and other institutions) in southwest New Hampshire. Through those kitchens, cafeterias, retail outlets, and restaurants, the project benefited uncountable thousands of eaters -- including students, patients, prisoners, and low-income housing residents.

Lessons Learned

Implementation of the Wholesale Market Access Project, as defined in Monadnock Menus' initial grant proposal, was adapted and refined in response to three major factors: staff turnover within the management of Monadnock Menus and partner organization Food Connects; unforeseen changes in partner farms' ability and interest in expanding production of lightly-processed fresh and frozen specialty crop options; and new directions requested by the network's buyers and vendors mid-way through the project.

Harlow Farm, one of the named primary partners in the grant, was, at the beginning of the grant period, the primary driver in the development and production of lightly-processed, locally-grown specialty crops. In early 2016, they suffered from major turnover in management. They subsequently de-prioritized their value-added section to focus on scaling fresh wholesale production. The project's initial aim to expand locally-sourced offerings of lightly-processed fruits and veggies therefore was left with no clear, realistic path forward. One other specialty crop producer in the network (New Dawn Farm) repeatedly expressed interest in developing a lightly-processed value-added line in response to customer need. However, their intentions faced major obstacles that proved insurmountable in terms of our initial stated goals: as a new, very small farm, New Dawn did not -- and still does not -- have the resources to build from scratch the commercial kitchen/processing space they would need. Further, they do not have the farm production volume potential to achieve economies of scale necessary to create lightly-processed products at a reasonable price point. Monadnock Menus worked with them to identify equipment (supplied through the free lease program) that would help them scale and diversify overall specialty product offerings for MM buyers. However, without the kitchen/processing space in place, the relatively limited funds available for equipment in the grant could not possibly help them move toward fresh or frozen light processing of vegetables for commercial sale.

In response to the above challenges, CCCD and Monadnock Menus shifted focus to increasing the diversity and accessibility of specialty crop offerings through strategies like mixed produce boxes, more variation of case size, and developing systems for targeted sourcing of high-impact commodity specialty crops from out-of-network suppliers.

Finally, in late 2016/early 2017, through meetings, surveys, and interviews, MM buyers and producers requested that MM focus resources on developing materials to assist in the listing, sale, and marketing of specialty crops. Buyers wanted to be able to better relate the stories of the food they sourced to their end customers; and vendors wanted to improve their brand recognition and, ultimately, their sales. Further, both buyers and vendors wanted MM to clarify expectations on the quality, grading, and pack size requirements for online listings of specialty crops. Our activities focused on developing marketing materials and wholesale guides emerged

from this direct feedback, and ultimately displaced some of the initial effort invested in lightly-processed product expansion.

Overall, the activities MM pursued in this grant revealed several lessons:
Light processing of specialty crops at a price point that is accessible to the most likely users (institutional buyers) can only be achieved in New England at large scales and with highly specialized, very expensive equipment. Currently, there are two production facilities in the area that are able to produce lightly processed fruits and vegetables at something approaching the required price points: the Vermont Food Venture Center in Hardwick, VT; and the Western Massachusetts Food Processing Center in Greenfield, MA. Neither facility is in NH, but both are within accessible range for MM's sourcing. Both facilities' production is just now coming online, and will be available for purchase at scale in January, for the first time since the beginning of this grant period. MM has begun talks with both facilities to begin sourcing key products (diced carrots, diced beets, diced mixed root vegetables, shredded cabbage, diced potatoes) in early 2018 for sale to MM's schools, hospitals, and other institutional specialty crop buyers.

One of the most important elements involved in helping food service and retail buyers increase their sales of NH specialty crops is marketing those farms and products and building consumers' valuation of these products. Wholesale buyers of all kinds are very busy people/teams, and most struggle to find time to tell compelling stories about the local food they are serving. Our launching of producer marketing materials for buyer use is a major first step to addressing these buyers' storytelling needs.

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Additional Information
Please see attached Appendix file, Project 6, 2014

Project 7

Project Title: Creating a Farm Food Safety Toolbox
Project Partner Organization: University of New Hampshire Cooperative Extension, Dr. Catherine Violette, Extension Professor and Specialist, Food & Nutrition
Final Report

Project Summary
According to 2011 CDC estimates, each year approximately 1 in 6 Americans or 48 million people get sick from eating contaminated food, 128,000 are hospitalized, and 3,000 die

(https://www.cdc.gov/foodborneburden/2011-foodborne-estimates.html). A small but significant subset of these illnesses are outbreaks, where 2 or more people fall ill from eating food from the same source. A 1998-2008 study of outbreaks affecting nearly 272,000 people over 10 years, indicated that 46% of the outbreaks were attributable to produce. The study authors concluded that efforts were needed to prevent produce contamination (Painter et.al. Attribution of foodborne illnesses, hospitalizations, and deaths to food commodities by using outbreak data, United States, 1998-2008. *Emerging Infectious Diseases*. 2013;19(3):407-415).

Public concern over these illnesses and outbreaks, prompted Congress to pass the Food Safety Modernization Act (FSMA) of 2011 (http://www.fda.gov/Food/GuidanceRegulation/FSMA/default.htm) which requires the FDA to set science based standards for produce farmers and food processing operations. After a thorough public comment period and two revisions, the final implementation regulations were released in 2015 and 2016. One of the 7 rules of FSMA, the Produce Safety Rule, is likely to impact New Hampshire's larger fruit and vegetable growers, who are almost all specialty crop producers. Another of the rules, the Preventive Controls for Human Food rule, is likely to impact food processors some of whom process specialty crops. Smaller operations that are not directly impacted by the regulations are likely to find that in order to maintain certain wholesale markets, they, too, will need to assess food safety risks and make changes in their operations to prevent and/or mitigate these risks.

New Hampshire agriculture is diverse and includes farms that produce a variety of specialty crops. According to the 2012 Census of Agriculture there are 4,391 farms in New Hampshire, 665 of them grow vegetables and 428 raise tree fruit, nuts, and berries. The majority of NH farms are small with an average total sales of $43,477/year (http://www.agcensus.usda.gov/Publications/2012/#full_report). While food safety is important to growers, there is concern within the agricultural community that the FSMA regulations will negatively impact their business, specifically due to the challenge of understanding the rules and the cost of compliance.

The intense focus on food safety after the release of the proposed produce rules and during the public comment period has increased awareness of food safety issues in fruit and vegetable production and processing and has created an opportunity for educators to assist fruit and vegetable producers, including both exempt and non-exempt producers. Farm and food businesses have from 1 to 6 years to come into compliance from the dates in 2015 and 2016 when the rules were finalized, however, we felt the sooner they had the needed information the better they could plan.

Even prior to the beginning of needs assessment, it seemed likely from conversations with clients that certain types of information would be needed. For example, information on common foodborne illnesses and the pathogens and conditions that cause them would be needed as well as food safety information and resources on assessing food safety risks. To comply with the rules farmers would need access to basic food safety information and resources on the six broad topic areas included in the proposed produce rules, including:

agricultural water; biological soil amendments of animal origin; health and hygiene; domesticated and wild animals; equipment, tools and buildings; and sprouts and training. Further, farmers would need to know how to operationalize these food safety principles through best management practices.

When the grant was originally written in late 2014, UNHCE Field Specialists were already fielding food safety questions from farmers. For example, five farms contacted us looking for produce wash station floor plans because they planned build a wash station in the next year or two and wanted to make sure it would meet the eventual standards, or because they felt they would need to upgrade their wash stations once the regulations become final.

To meet the needs of both farms and processors that have to comply with the regulations, and those who just want to be sure their operations are as safe as possible, we created an online farm food safety toolbox of information and resources that farmers, processors and the services providers that work with them can easily access.

Project Approach
The objectives of this project were to:

- Assess New Hampshire farmers/produce growers' food safety education, information and resource needs.
- Based on the needs assessment results, access, collect or create research-based information and resources needed to implement produce safety practices.
- Collaborate with New England Extension and academic colleagues of the New England Produce Safety Coalition to develop and launch an online toolbox to be housed on the New England Food Entrepreneurs (NEFE) website.
- Assess the effectiveness of the food safety toolbox in helping New Hampshire farmers to plan and implement food safety practices.

Prior to receiving funding for this project Catherine Violette worked with three food safety field specialists to create a paper and online survey to assess produce growers' food safety information and resource needs. Heather Bryant and two other UNH Cooperative Extension colleagues on the fruit and vegetable team reviewed it and field tested it with 5 farmers, after which the survey was conducted and 70 people responded to it. Rather than run a second survey and with prior approval of the NH Department of Agriculture, Markets and Food, Catherine Violette and a graduate student hired for the project re-analyzed the results of that survey to identify information and resource needs that could be addressed in the Toolbox. For example less than half of respondents reported that they test their irrigation water, so we identified the toolbox needed information on testing requirements under FSMA and information on how to conduct tests. Also approximately half of respondents reported not yet knowing if and where their operations would fall under FSMA, so we identified the toolbox needed information to help growers answer that question.

Catherine Violette and Heather Bryant also worked with three members of Extensions Community and Economic Development team to create and carry out two focus groups to specifically ask produce growers what kinds of information and features they wanted us to include in the Toolbox. The results of the focus groups made it very clear that farms felt they needed more information on what specifically FSMA would require and how to determine if their operations needed to comply. Participants also identified a need for training resources and signage on health and hygiene for farm workers, farm visitors, and customers. Further they wanted the toolbox to be searchable, easy to navigate, easy to read, have no microprint, not bog down [on slow internet connections], be usable across devices and contain videos in addition to written materials.

Even after adding the focus groups we feel slightly short of our goal to get 100 produce growers to help us identify information and resource needs. Conversations with our New England Extension Colleagues and our participation in another survey that was carried out by the New England Produce Safety Coalition showed that this is a common challenge. Some growers have reported feeling they don't know enough about what they will need to do under FSMA to be able to tell us anything that will help us. Others have indicated they are tired of surveys in general and surveys about food safety specifically. A number of partners around the region have dubbed this issue "survey fatigue".

Prior to this project, UNHCE was hosting a website for New England Food Entrepreneurs (NEFE) (http://extension.unh.edu/nefe/starting_a_food_business/index.html) which was originally developed as part of a collaboration between Extension professionals from all 6 New England states. With help from web developers at UNH, Heather Bryant and Catherine Violette redesigned the NEFE site so that it could also host the toolbox (https://nefoodproducers.org/). During that process we took the input from the survey and focus groups and used it to outline the basic structure and major categories we wanted for the toolbox. We showed that draft to a farmer who had participated in the focus groups and he felt the first page had too many categories and was a little overwhelming. Based on that feedback, we scaled the design back to the 9 major categories that now make up the Toolbox (https://nefoodproducers.org/farm-food-safety-toolbox). The web developers then created the website structure and trained our team to populate it.

The process of building the website is simple to describe but it took longer than anticipated. Many meetings and phone conversations occurred before the website had the look and the functionality that we had envisioned. While the site does have a functioning search feature, we were unable to achieve the ease of searching that the focus group participants requested and we had hoped for.

Catherine Violette contacted our Extension colleagues in the other five New England States, and received assistance updating the contact person and best web landing site for each state. We also received suggestions of resources to link to. While there are certainly a number of resources that ultimately ended up in the Toolbox which were developed outside of New

England, there is a definite focus on resources from the Northeast. This helps assure the information is scale and crop appropriate.

To populate the website, we worked with an Administrative Assistant to load the information we already had from our own work and that of our New England partners and hired a graduate student to search out additional information farmers had requested during the needs assessment but that we didn't yet have. Catherine Violette and Heather Bryant proofread the choices and added additional material where we identified gaps.

The final phase of the project was to conduct focus groups with a scavenger hunt style activity to allow participants to evaluate the website. Recruiting participants for this was challenging. First the delays in building the website pushed the evaluation phase into the farmers' busy season, so some interested farms simply could not spare a person to attend. We also believe the survey fatigue described above contributed to this difficulty.

The focus groups identified a few edits that we were able to make right away. Participants wanted information on how to determine if your operation needed to comply with FSMA featured more prominently on the main landing page. They also wanted the photos on that first page to be clickable. Some suggestions were made for additional informational material that simply doesn't exist yet. However, there are organizations that are working on creating new material and those items can be added as they are published. For example one focus group identified a need for training videos that would meet the FSMA requirement for worker training. The Produce Safety Alliance based at Cornell is working on that, but the videos are unlikely to be available for some time.

Goals and Outcomes Achieved

Goal 1: Determine Specialty Crop producers' food safety knowledge, information and resource needs.
Performance Measure 1: 100 Specialty Crop producers across New Hampshire will complete a needs assessment survey (online or paper format).
Benchmark: At present, we are not aware of any formal studies that assess the food safety and resource needs of Specialty Crop producers.
Target: This needs assessment survey will establish a baseline of food safety and information resource needs.

Goal 1 Performance Monitoring Plan

The needs assessment survey will be drafted and submitted to the members of the NEPSC for review. The survey will then be revised and pre-tested with 5-10 Specialty Crop producers to assess the clarity of the questions. The online survey will be developed and analyzed using Qualtrix® a survey format available to and supported by the University of New Hampshire.

Goal 1 Outcomes Achieved

- 80 growers/Specialty Crop producers participated in the food safety needs assessment (70 completed the survey, 10 participated in a focus group interview). Although we did not

meet our ambitious 100 producer target, the 80 participating provided the baseline of food safety and information resource needs to develop the online toolbox.

- With prior approval of the NH Department of Agriculture, Markets and Food, results of a food safety survey administered in either an online or written format to NH farmers from October 2014 through February 2015 were used to meet this outcome. Because the survey was intended for NH growers only, it was not submitted to the members of the NEPSC for review. The draft survey was reviewed by 3 UNH Cooperative Extension Food & Agriculture colleagues and 5 farmers. After incorporating the comments of these volunteer reviewers, the survey and protocol were reviewed and approved by the UNH Institutional Review Board for the Protection of Human Subjects in Research (#6096). Seventy (70) surveys were completed. All surveys were entered into a Qualtrix ® database for analysis. A report of the results is attached.
- In addition to the survey, we conducted two (2) focus group interviews with Specialty Crop farmers to determine their food safety information and resource needs as well as preferred formats for the online food safety toolbox.
    - Heather Bryant and Catherine Violette met on 8/6/15 to develop the protocol and questions for the focus group interview sessions.
    - The draft protocol and questions were reviewed by three (3) UNH Cooperative Extension colleagues experienced in developing and implementing focus group interviews. The protocol and questions were revised and submitted to the UNH Institutional Review Board for the Protection of Human Subjects in Research for approval (#6304). Once approved, we began recruiting for the three sessions to be held in a northern NH location (N. Haverhill), central location (Boscawen), and southern location (Brentwood).
    - The focus group session scheduled for November 9, 2015 in N. Haverhill was cancelled due to lack of enrollment. The focus group interview in Boscawen took place on November 13, 2015 with 5 farmers participating. The focus group session in Brentwood took place on November 18, 2015 with 5 farmers participating.
    - Focus group session notes and audio recordings were transcribed. A summary of the suggestions made by farmers for the format and content of the Toolbox is attached.
    - We submitted a proposal to conduct another focus group interview during the Northeast Organic Farming Association-NH winter conference on January 30, 2016. The proposal was accepted, but unfortunately, no farmers participated in the two sessions scheduled during this meeting. Further efforts to recruit farmers to participate in a focus group interview were unsuccessful.

<u>Goal 2:</u> Assess the impact of the Food Safety Toolbox on Specialty Crop producers' food safety practices.
<u>Performance Measure 2</u>: 30 New Hampshire Specialty Crop producers will be recruited via the needs assessment survey and/or by each county-based Food and Agriculture Field Specialist in NH (approximately 3-5/county) to participate in the evaluation of the Toolbox website and its impact on food safety practices.
<u>Benchmark:</u> Each farmer who participates will be asked to thoroughly review the Toolbox website and assess both the content and format. Further, a post/pre survey design will be

distributed to these farmers to assess the impact of the information and resources in the Toolbox on the Specialty Crop producers' food safety practices after reviewing and using the Toolbox information and resources.
Target: 20% of the Food Safety Toolbox users will indicate they have made a change in a food safety practice.

Goal 2 Performance Monitoring Plan
Volunteers to participate in the impact assessment of the Toolbox will be recruited via the needs assessment survey. Additional volunteers representing a variety of specialty crops and size of farm will be recruited by county-based Food and Agriculture Field Specialists. These volunteers will complete online/paper pre and post questionnaires to assess the impact of the Toolbox on their food safety practices. The surveys will be drafted, reviewed by Food and Agriculture Specialists and Field Specialists and NEPSC members, revised, and pre-tested.

All surveys and protocols will be approved by the UNH Institutional Review Board (IRB) for the Use of Human Subjects in Research.

The first step in achieving this goal was to create the Toolbox.

- A student was hired in early 2016 to search for available farm food safety information and resources identified as important by the participants in the survey and focus groups.
- In May and August of 2016, Catherine Violette and Heather Bryant met with web developers at UNH to share with them our draft layout for the toolbox website and get their input on how it might be achieved.
- A mock-up of the prototype was delivered in mid-October, 2016 and revisions were finished in the late fall and early winter of 2017.
- Catherine Violette and Heather Bryant worked with the student over the spring and summer of 2017 to populate the toolbox with the types of resources identified as important in the surveys and focus groups.

The second step was to evaluate the Toolbox.

- A delay in receiving the website format and then populating it, compressed the time available to assess the impact of the Food Safety Toolbox on Specialty Crop producers' food safety practices. A protocol and forms were developed to evaluate the website and submitted to UNH's IRB for approval. The evaluation survey was designed as a "scavenger hunt" style activity to test the usability of the site. After completing the activity producers then participated in a group discussion to evaluate the site overall in terms of usability and relevance of the content.
- Once approved, we asked the UNH Cooperative Extension Food & Agriculture Field Specialists to help us recruit volunteers. Unfortunately, September is one of the Specialty Crop producers' busiest months so we were unable to recruit 30 volunteers.
- In September of 2017 two evaluation sessions were held with a total of 5 farmers and one Food Safety Extension Field Specialist. In September and October of 2017, the

results of these evaluation sessions were assessed and final edits were made to the site to address the challenges identified by the evaluation participants, see attached.

- None of the participants in the evaluation sessions indicated a willingness to change food safety practices. In fact several said they were reassured by what they read on the toolbox that they were doing the right thing. Thus our goal to have 20% of users indicate a willingness to change practice was not met. However, Heather Bryant has a long standing working relationship with one of the participants and over the years she has seen him make a number of changes to his operation to improve food safety, most notably he is currently constructing a new wash station as the old one is too small for his growing business. Throughout the planning and construction process he has spent time asking questions and researching features his new wash station needs to have to be as food safe and FSMA compliant as possible. When asked directly did he make changes on his farm because of the toolbox he correctly said no, but if asked if the totality of information he has accessed over the years regarding farm food safety has changed any of his practices he would say yes. He is a leader in the agricultural community on farm food safety but he is not the only farm we have observed making thoughtful changes after research.
- The Toolbox is now running live at https://nefoodproducers.org/farm-food-safety-toolbox or see attached for a screen shot of the front page.

Beneficiaries

The Farm Food Safety Toolbox benefits both food safety educators and specialty crop producers in New Hampshire and New England. Food safety educators in Cooperative Extension can use the site to locate food safety resources quickly and easily and share with growers.

The five specialty crop producers who participated in testing and evaluating the site indicated that the Farm Food Safety Toolbox would be of benefit to them for two reasons. First, the resources are vetted by UNH Cooperative Extension so they know the links represent research-based information. Second, vetted resources located on one website will save them time trying to locate what information they need when they need it.

At this point we are unable to assess the number of people who have benefited from the site, because we only gained the ability to track hits in late January 2018. However, according to the 2012 census of agriculture, there were 1,093 produce growers in NH, and 9,638 produce growers in New England, nearly all of them would qualify as specialty crop producers. If 10% of them visit the site per year and 20% of those benefit from the information contained in it, we could see 193 beneficiaries per year.

Lessons Learned

The planning and execution of the Online Farm Food Safety Toolbox provided two important lessons learned.

First, our enthusiasm to have specialty crop growers participate in the needs assessment and testing/evaluation of the website lead us to set a higher target of potential participants (as indicated in our proposal) than we could reasonably achieve. We did not meet the projected number of participants for either activity. The response to the written/online survey was good, however, the response to the in-person listening sessions were low to moderate.

There are several possible explanation for this. First, as FSMA is a new regulation, there were a number of projects beginning around the same time as ours, and more still in the planning stages. Like us, many of these projects need good baseline data which has meant there are a number of surveys competing for the growers' limited time leading us to wonder if we are seeing the impact of "survey fatigue." Second, growers in New Hampshire are still trying to determine how FSMA will impact them and their food safety practices. One evaluation participant pointed out that without a better understanding of how FSMA will impact their farm, it's hard to know what food safety information they need. It is possible that this challenge dis-incentivized growers who weren't sure their input was of value.

Finally, due to unforeseen delays in designing the website, the evaluation sessions were held during September, one of growers' busiest months of their year. This negatively affected participation. Since there is much demand on specialty crop growers' time, incentives can be helpful but time of year/day of in-person activities seemed to impact participation the most in this project.

Second, the Online Farm Food Safety Toolbox website design was created by an exchange of services between Cooperative Extension and a campus-based website design group. We are delighted by the final design, including its appeal and utility. However, the process of communicating our needs and translating them into the final product was time consuming, repetitive, and often frustrating. For future grantees, we would recommend that website design be included in the project budget.

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Additional Information
Please see attached Appendix file, Project 7, 2014 Appendix 1, 2, 3, 4

Project 8

Project Title: Enhancing the Competitiveness of New England Specialty Crops through Regional Collaboration
Project Partnering Organization: NH Dept. of Agriculture, Markets & Food; the New England States Departments of Agriculture; Harvest New England Association
Final Report

Project Summary
Schools, hospitals, restaurants, and other institutions are more conscious about where the food they're serving is sourced from. Consumers are demanding local food and transparency about

where their food is grown. State and federal contracts are including language which stress the importance of buying local or regional food before buying nationally or even internationally.

To meet those demands and requirements schools, institutions, and restaurants are looking to purchase more regional specialty crops but are struggling to do so. This is an area of purchasing which is becoming more and more important yet harder to accomplish.

From an industry perspective, producers are hungry for and always say there is a need for education and educational opportunities. Evaluations from previous HNE-sponsored conferences reinforce this desire. Direct buying and one-on-one meetings with buyers are very uncommon but are expected to be positively received by the industry.

This project broke down barriers to regional specialty crop purchases at the wholesale level by:
Component 1, Producer Education: specialty crop producers had the opportunity to better understand the wholesale buying and marketing opportunities at the 2015 and 2017 Harvest New England Agricultural Marketing Conference and Trade Show.

Component 2, Consumer Education: educating consumers during HNE Day at the 2015, 2016, 2017 Big E, New England's' largest agricultural exposition, on the importance of regional food, where they can source it, and the importance of demanding it. This was accomplished through the *Passport to New England* where consumers, both adults and children, had the opportunity to learn about New England specialty crops by engaging in agricultural trivia in each state.

Component 3, Producer Buying Opportunities: Harvest New England in partnership with multiple state-specific groups provided one-on-one matchmaking meetings between wholesaler buyers and wholesale specialty crop producers.

This project built on previously funded projects and complimented and enhanced previous worth through the following:
Component 1, Producer Education, Harvest New England Ag Marketing Conference and Trade Show was a component previously funded by the USDA SCBG-FP program. The 2011 and 2013 conference was extremely well received. The survey conducted at the 2013 conference concluded that 78% of respondents said they had an increase in sales as a result of marketing techniques learned at the 2011 and 2013 conference. The difference between the previously funded conference and the 2017 conference is the specific topic of focus. The focused area in 2011 and 2013 was direct to consumer sales. 2014 SCBG funds has allowed us to build upon the previously established conference and shift the focus for the 2015 and 2017 conference to wholesale marketing and marketing opportunities. New speakers, new tracks, and new seminars and workshop were developed for the 2015 and 2017 conference respectively. The 2011 and 2013 HNE Conference has had great significance to the industry, resulting in a positive impact and change, and is important to the target audience. A record attendance number reinforced the importance of the regional conference. Through continued funding, HNE had the opportunity to expand educational opportunities beyond direct-to-consumer topics and further develop and expand the conference for specialty crop producers.

Project Approach

Component 1, Producer Education, Harvest New England Ag Marketing Conference and Trade Show

In August 2014, the HNE board began planning the 2015 Harvest New England Agricultural Marketing Conference and Trade Show to be held in February 2015. The committee reached out to the Food to Institution New England (FINE) and the MA Association of Agricultural Commissions to create a conference which would work towards solely enhancing the competitiveness of New England specialty crops through wholesale channels. .

A total of 29 breakout sessions and two general sessions were provided to nearly 500 producers, which reported being a specialty crop producer, selling specialty crops or working with specialty crop producers and over 300 trade shower exhibitors and conference presenters.

The keynote speaker, Jonathan Raduns from FreshExpress presented on marketing strategies to improve sales for fresh fruits and vegetables. The general session speaker on day two discussed how to work with and think like a millennial to improve your business.

Other breakout sessions included:
Branding your product and building a strong brand
Breaking into the institutional market
Merchandising and display techniques
Establishing contracts with institutions
Finding grant and loans
Benefits of a marketing co-op
Working with food hubs and processing centers
Business succession
Pros and cons of wholesaling to grocery stores and national chains
What farmers need to know about selling to a distributor
Budgeting
Successful value-added products
Capitalizing on the farm to table experience

Planning for the 2017 conference began in 2016. The planning committee thought that adding a hands-on options would be well received and two tour agendas featuring specialty crop farms were assembled and promoted. In the end, only enough participants attended to run one tour.

In December, information was released throughout the region by all of the six New England state departments of agriculture. The extent of the promotion in each state varied. Most included email distribution, information in an agency publication, on agency websites and communication to specialty crop commodity associations in each state. Information was also posted on the Harvest New England website and distributed to all previous conference attendees.

New this year, a Facebook event was developed and managed by the New Hampshire Department of Agriculture in conjunction with the registration manager that was hired. This was the first time, HNE had a presence on social media.

Again this year, scholarships were offered through ME Dept of Ag's SCBG allocation to the conference.

The keynote speaker selected was Craig Ostbo from Koopman Ostbo Marketing Communications in Portland, OR. Mr. Ostbo was the keynote speaker at the National Specialty Crop Block Grant Coordinators Conference in August 2015 and he was willing to travel to the Northeast to be the keynote and general session speaker at the 2017 HNE Conference. His presentations were all very well received and had a great response by attendees.

Component 2, Consumer Education, Harvest New England Day at the Big E HNE Day at the Big E was held again this year on September 29, 2017. All the materials produced for the 2016 event were purchased in a larger, more cost effective in 2016 quantity which allowed for the purchase of materials needed for the event in 2016 and 2017.

The postcards (passports) were distributed on the front lawns of the New Hampshire and Massachusetts/Rhode Island buildings. Here, HNE staff encouraged and explained to Big E attendees how the program worked. The program ran from 10:00 a.m. to 4:00 p.m. Passport go-ers had until 5:00 p.m. to turn in their completed passport in exchange for a reusable bag which promoted New England grown specialty crops.

It was decided the logistics of the program would remain the same as 2015 and 2016; users would pick up their passport and find the stamping location within each building. They would be asked one or two questions about specialty crops within their state to obtain a stamp. Once all six stamps were collected they would complete three additional questions on the postcard about specialty crops and redeem the passport for a reusable specialty crop-themed bag.

Component 3, Producer Buying Opportunities, Matchmaking One-on-Ones:
In October 2015, the Harvest New England board began discussions for the buyer/supplier one-on-one meetings. It was determined a New Hampshire meeting executed by the New Hampshire Department of Agriculture, Markets, and Food representing Harvest New England would be held in 2016.

One-on-one specialty crop buyer and supplier meetings were held on February 18, 2016, from 1-4pm.

13 were specialty crop vendors and 17 buyers of specialty crops participated. A follow up survey was issued.

Goals and Outcomes Achieved

	AWARDED	**ACTUAL**

GOAL	To educate specialty crop producers and provide buying opportunities between specialty crop producers and wholesale buyers to increase sales and consumption of New England grown specialty crops.	We certainly reached our goal of educating specialty crop producers and providing buying opportunities between specialty crop producers and wholesale buyers with the intention of increasing sales and consumption of New England grown specialty crops.
PERFORMANCE MEASURE	Each component will have a specific performance measure to ensure the overall goal is met. *Component 1:* Specific questions on the evaluation form asking if specialty crop producers are better aware of how to work with wholesalers and institutions and market their specialty crop products as a result of attending the conference. *Component 2:* The number of consumers who complete the passport during the 2015, 2016, and 2017 Big E and the responses to the follow up survey which ask participant to assess their change in knowledge about regionally grown specialty crops and where to source them. *Component 3:* The number of wholesalers and New England producers who participate in the one-on-one buying meetings and follow up survey results afterward.	*Component 1:* Questions were added to the conference evaluation specific to wholesale buying and purchasing and to measure if there was an increase in specialty crop sales as a result of knowledge gained at the HNE Conference. *Component 2:* The number of passports were counted and a follow up survey was answered by participants at the time of participation to assess their change in knowledge. *Component 3:* A post survey was completed which yielded the results below.
TARGET	Overall, there will be a 15% increase in the amount of New England grown product consumed and purchased.	Data provided by the National Ag Statistic Services is a challenge to compare. The 2012 census vs. the annual surveys do not provide data on the same categories or information on a state and regional level. Therefore it is hard to determine the actual increase in

		the amount of New England grown product consumed and purchased. However, based on the outcomes mentioned below, one can conclude there has been an increase in purchases and consumption of specialty crops throughout the region though that exact number cannot be determined.

Major successful outcomes in quantifiable terms:
Component 1, Producer Education, Harvest New England Ag Marketing Conference and Trade Show According to survey respondents, the benefits of attending the 2015 and/or 2017 Harvest New England Conference are extensive including:
58.33% ('15) and 63.16% ('17) of people said it was a great or really great conference
36.08% ('15) and 42.6% ('17) of people said their knowledge improved quite a bit or even a ton as a result of attending
64% of people said they are better aware of how to work with wholesalers and institutions as result of attending
16.87% ('15) and 5.83% ('17) were socially disadvantaged farmers and 19.12% ('15) and 36.46% ('17) have been faming for less than 10 years
Component 2, Consumer Education, Harvest New England Day at the Big E On average, 95% had a change in knowledge about what a specialty crop as a result of participating in the program, 80% said they will eat and buy more New England grown specialty crops and that they now know where to buy New England grown specialty crops. Participants were from the six New England states in addition to New York, Florida, George, Minnesota, Michigan, Tennessee, Pennsylvania, California, Ohio, Texas, Hawaii, and New Jersey.

Component 3, Producer Buying Opportunities
While only 5 of the 13 responded, they felt they had developed good leads and a number of them reported buyer follow up after the event.
An average of eight new buyer contacts were reported by specialty crop producers.
The producers and buyers did not report sales figures as a result of the event.

Beneficiaries
For each component of this project, the following beneficiary groups can be identified:
Component 1, Producer Education, Harvest New England Ag Marketing Conference and Trade Show
New England specialty crop producers, aprox 750 total in 2015 and 2017.

Component 2, Consumer Education, Harvest New England Day at the Big E:
New England specialty crop producers
Fairgoers at the 2015, 2016, and 2016 Harvest New England Day at the Big E.

Component 3, Producer Buying Opportunities

Eight NH specialty crop producers
Thirteen NH wholesale specialty crop buyers

Lessons Learned
Component 1, Producer Education, Harvest New England Ag Marketing Conference and Trade Show Outreach and marketing is key to the success of the conference. In 2017, a registration manager was hired to assist with conference administration (not paid for with Specialty Crop Block Grant Funds) and it made a huge difference. HNE board members were able to promote the conference better and spend more time identifying speakers, etc. We offered a scholarship program (paid for by ME Dept of Ag's SCBG allocation to the conference) and we could have awarded more scholarships but did have enough qualifying applicants. The tours were a nice offering but didn't have the response we were hoping for.

Component 2, Consumer Education, Harvest New England Day at the Big E: The one area that HNE always falls short on is staffing and/or volunteers. HNE members worked the event with only one break throughout the day. Given it's a very outgoing and interactive job, it turns out to be a rather exhausting day. More volunteers would make it a more effective and enjoyable event for all.

The final lesson learned is to understand the resources provided by USDA NASS. It's unfortunate we were unable to truly identify the percentage increase in specialty crop consumption throughout the region because information available did not facilitate that.

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Project 9

Project Title: Continuation of the Buy Local Agriculture Campaign partnership with NH Division of Travel & Tourism Development, Featuring Specialty Crop Promotion

Project Partnering Organization: NH Dept. of Agriculture, Markets & Food, Applicant
Final Report (previously submitted)

Project Summary
The New Hampshire public continues to be interested in and willing to buy local products, including specialty Crops. The goal of this project was to connect consumers with producers. The program emphasis was on activities that promote specialty crops. Partner funding allowed other sectors of the industry to participate in this "Buy Local Agriculture" campaign.

Our work is making it easier for consumers to identify New Hampshire specialty crops products and their sources, as well as building demand for New Hampshire agricultural products. Our partnership with NH Division of Travel & Tourism Development (NHDTTD) has been successful in connecting the consumer to New Hampshire agriculture on many levels. The number of farms in New Hampshire has grown 5% since 2007 (Census of Agriculture, 2012) which illustrates the increasing demand for local products and the increasing number of farms attempting to meet that demand. This is indeed positive news when the national trend is a 4% decline in farm numbers.

This funding successfully built on previous SCBG funded activities that promoted and featured specialty crops using this common logo in various media:

The logo has become recognized through this ongoing campaign and tandem promotion supported with other funds, as identifying New Hampshire agriculture and specifically, specialty crops. This funding allowed us to try new media channels and expand our reach using new creative platforms.

While we appreciate that these funds have allowed us to expand our marketing efforts, we have not relied on these funds exclusively for marketing in New Hampshire. State funds and support from other partners form the base of our marketing activities and these programs will continue whether or not SCBG funds are available.

Project Approach
The New Hampshire's Own logo has become a recognized identification of New Hampshire Agricultural products. This project continued the campaign which helps producers showcase

their products to a growing customer base. For our **Buy Local Specialty Crop** marketing campaign we developed specific tag lines to accompany the logo to emphasize seasonal crops. Advertising was created for use on social media platforms and on television, featuring the logo and changeable taglines. We adopted existing television spots in some cases and added the logo and specific taglines. (see examples, Appendix Project 9)

The SCBG funds were used specifically for the benefit of specialty crops. Advertising paid for with SCBG funds featured fruits, vegetables, flowers, maple, wine, Christmas trees and a call to buy these local specialty crop products. Separate funds from NH Tourism and the NH Dept. of Agriculture, Markets & Food focused on non-specialty crops marketing activities.

The SCBG funds have allowed us to establish an effective partnership with the NH Division of Travel & Tourism Development which has resulted in agricultural activities being featured when the state is promoted to potential visitors. Our partners see the value that agriculture brings to their state promotion efforts and have been willing to contribute financially toward the total "Buy Local" promotion program. Funding amounts available from the SCBG program have varied over the years and we have adjusted our projects accordingly. With available SCBG funds, we strive to do new activities or make improvements to existing efforts such as re-design a publication or expand participation by farmers.

Goals and Outcomes Achieved

The overall goal of the "**Continuation of the Buy Local Agriculture Campaign Partnership with NH Division of Travel & Tourism Development"** is to build upon the success of the program as it has been established and promoted in previous years to build awareness of agriculture and agricultural products and to increase sales of these products. The specific goal of the use of these SCBG funds is building awareness and sales of NH specialty crops.

Our performance measure was to see a 5 percent increase in Specialty Crop farm cash receipts at the end of the project and we have exceeded that. The benchmark was $82,711,000 at the time of application (New England Agricultural Statistics Service, 2011, Crops minus Hay and All Other Crops). We are adjusting the original benchmark to the figure shown for 2014 by USDA Economic Research Service (ERS) as this agency is now the source for the information. The updated benchmark number for 2014 is $94,346,000. New Hampshire Specialty Crop cash receipts are currently at $99,346,000, a six percent increase over our updated benchmark, based on 2015 USDA ERS that was published in August 2016.

Beneficiaries

The potential Specialty Crop beneficiaries for this project are listed below:

428 commercial tree fruit (138) and berry growers (347) marketing through harvest your own, farm stand operations and some farmers' markets (US Census of Agriculture, 2012)
665 vegetable growers marketing through farm stands, harvest your own and farmers markets (US Census of Agriculture, 2012)

529 greenhouse and nursery growers marketing through on-site retail outlets, farm stands and farmers' markets (US Census of Agriculture, 2012)
491 maple producers (US Census of Agriculture, 2012)
158 farms with colonies of honeybees (US Census, 2012)
223 Christmas tree growers (US Census of Agriculture, 2012)
22 NH wineries (NH Winery Association, 2013)

Lessons Learned

The response to our advertising campaign particularly through social media channels was very exciting. We worked with a new advertising contractor via our tourism partnership, and this group brought new ideas to the campaign and greatly expanded our reach and interaction. We were even able to get more traction from our television spots by promoting them on social media. We feel this has been a particularly successful campaign and is guiding our activities moving forward.

Please see Appendix, Project 9 for advertising examples utilized in this campaign.

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