U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY
Field Bean (*Phaseolus vulgaris* L.)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME

ADDRESS *(Street and No. or RD No., City, State, Zip Code, and Country)*	FOR OFFICIAL USE ONLY
	PVPO NUMBER

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Provide data for all characters unless indicated as "optional". Place numbers in the boxes for the characters or numerical values that best describe this variety. Measured data should be the mean of an appropriate number of well spaced (15-20 cm) plants. The Royal Horticultural Society or any recognized color standard may be used to determine plant color. Designate the color system used below.

COLOR SYSTEM USED:

LOCATION OF THE TEST(S) TO EVALUATE THIS VARIETY:

1. MARKET CLASS:

CLASS	CHECK
1 = Navy (Pea)	Seafarer
2 = Small White	Aurora
3 = Black	Midnight
4 = Pinto	UI-114
5 = Great Northern	UI-59
6 = Small Red	NW-59
7 = Pink	Viva
8 = Cranberry	UI-50
9 = Dark Red Kidney	Montclaim
10 = Light Red Kidney	Redkloud
11 = Yellow Eye	Steuben
12 = Other (Specify_____	

2 = MATURITY:

☐ 1 = Early (80-90 days) 2 = Medium (90-100 Days) 3 = Late (> 100 Days)

☐☐☐ Days from Planting to Harvest Maturity

☐☐☐☐ Heat Units from Planting to Harvest Maturity (Optional). Specify Base Temperature Used: _____

☐☐☐ Days from Planting to Harvest Maturity of Check Variety (Use Check Appropriate to Market Class Shown in Item 1)

3. PLANT HABIT:

TYPE

1 = Ia Bush-determinate, Strong and Erect Stem and Branches
2 = Ib Bush-determinate, Weak Stem and Branches
3 = IIa Erect Growth Habit-indeterminate, Guides (Runners) short or not developed
4 = IIb Erect Growth Habit-indeterminate, Guides Medium to Long, with no Ability to Climb
5 = IIIa Vine-indeterminate, Short Guides with no ability to Climb
6 = IIIb Vine-indeterminate, Long Guides with Ability to Climb
7 = IVa Indeterminate Climbing, Pods Distributed Throughout the Plant
8 = IVb Indeterminate Climbing, Pods Concentrated on the Upper Part of the Plant

☐☐☐ Average Height of Mature Plant, in cm.

☐☐☐ Average Height of Check Variety, in cm. (Use Same Check as Above)

☐ Pod Position: 1 = Low (Lower Pods Touching Soil Surface)
2 = High (Lower Pods not Touching Soil Surface)
3 = Scattered (Not Concentrated High or Low)

☐ Adaptability to Machine Harvest: 1 = Adapted 2 = Not Adapted

☐ Lodging Resistance: 1 = Good 2 = Fair 3 = Poor

4. LEAFLET MORPHOLOGY: (Use terminal Leaflet of a Fully Expanded Trifoliolate)

☐ 1 = Smooth 2 = Wrinkled ☐ 1 = Dull 2 = Glossy 3 = Semi-glossy 4 = Variable

Shape: 1 = Ovate 2 = Lanceolate 3 = Deltoid 4 = Cordate 5 = Rhomboid

☐

Apex of Leaflet: 1 = Acute 2 = Acuminate 3 = Cuspidate 4 = Obtuse

☐

Base of Leaflet: 1 = Obtuse 2 = Oblique 3 = Cordate 4 = Cuneate 5 = Attentuate

☐

5. FLOWER COLOR AND DAYS TO BLOOM:

☐ Color of Standard: 1 = White 2 = Cream 3 = Pink 4 = Blue 5 = Purple

☐ Color of Keel: 1 = White 2 = Cream 3 = Pink 4 = Blue 5 = Purple

☐ Color of Wings: 1 = White 2 = Cream 3 = Pink 4 = Blue 5 = Purple

☐☐ Days to 50% Bloom

6. POD MORPHOLOGY: (Green Pod Morphology Optional)

Green Mature

☐ ☐ Color Pattern: 1 = Solid 2 = Striped 3 = Blotched 4 = Mottled 5 = Other _____

☐ ☐ Primary Color: 1 = Purple 2 = Red 3 = Green 4 = Yellow 5 = Tan 6 = Brown 7 = Other _____

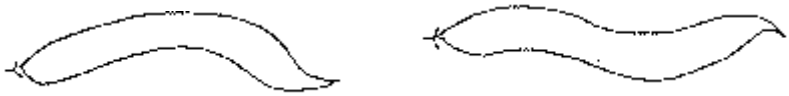
☐ ☐ Color Modifier: 1 = Light 2 = Light Medium 3 = Medium 4 = Medium Dark 5 = Dark

☐ ☐ Secondary Color: 1 = Purple 2 = Red 3 = Green 4 = Yellow 5 = Tan 6 = Brown 7 = Other _____

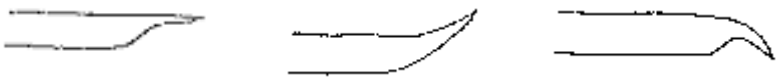
☐ ☐ Cross Section Shape: 1 = Flat 2 = Pear 3 = Round 4 = Figure Eight

☐ ☐ Pod Curvature 1 = Straight 2 = Slightly Curved

3 = Curved 4 = Recurved



☐ ☐ Pod Beak Orientation: 1 = Straight 2 = Curved Upward 3 = Curved Downward 4 = Variable



Average Beak Length, in cm. _____

☐ ☐ Constrictions: 1 = None 2 = Slight 3 = Deep

☐ • ☐ Average Number of Seeds per Pod

7. SEED COLOR:

☐ 1 = Shiny 2 = Dull 3 = Semi-shiny 4 = Variable

☐ 1 = Monochrome 2 = Polychrome

☐☐ Primary Color: 1 = White 2 = Yellow 3 = Buff 4 = Tan 5 = Brown 6 = Pink 7 = Red 8 = Purple 9 = Blue 10 = Black 11 = Other _____

☐☐ Secondary Color: 1 = White 2 = Yellow 3 = Buff 4 = Tan 5 = Brown 6 = Pink 7 = Red 8 = Purple 9 = Blue 10 = Black 11 = Other _____

☐ Color Pattern: 1 = Solid 2 = Splashed 3 = Mottled 4 = Striped 5 = Flecked 6 = Dotted

☐ Hilar Ring: 1 = Absent 2 = Present

☐☐ Hilar Ring Color: 1 = White 2 = Yellow 3 = Buff 4 = Tan 5 = Brown 6 = Pink 7 = Red 8 = Purple 9 = Blue 10 = Black 11 = Other _____

8. SEED SHAPE AND WEIGHT:

☐ Shape of Seed Taken From Middle of Pod: 1 = Round 2 = Oval 3 = Cuboid 4 = Kidney 5 = Truncate Fastigate

☐☐ Dry Seed Weight in g/100g Seeds (Adjusted to 12% Moisture)

9. ANTHOCYANIN PIGMENTATION:

1 = Absent
2 = Present

☐ Flowers ☐ Stems ☐ Pods ☐ Seeds

☐ Leaves ☐ Petioles ☐ Peduncles ☐ Nodes

10. DISEASE RESISTANCE: 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

☐ Anthracnose (*Colletotrichum lindemuthianum*)

- ☐ Race Alpha ☐ Race Beta ☐ Race Gamma
- ☐ Race Delta ☐ Race Epsilon ☐ Race Lambda
- ☐ Race Kappa ☐ Specify Race _____

☐ Bean Rust (*Uromyces appendiculatus*)

- ☐ Race 38 ☐ Race 39 ☐ Race 40 ☐ Race 44
- ☐ Race 45 ☐ Race 46 ☐ Race 49 ☐ Race 50
- ☐ Race 51 ☐ Race 52 ☐ Race 54 ☐ Race 56
- ☐ Race 59 ☐ Race 72

☐ Powdery Mildew (*Ersiphe polygoni*)

☐ Fusarium Root Rot (*Fusarium solani* f. sp. *phaseoli*)

☐ Pythium Root Rot (*Pythium* spp.)

☐ Aphanomyces Root Rot (*Aphanomyces euteiches*)

☐ Rhizoctonia Root Rot (*Rhizoctonia solani*)

☐ Pythium Blight or Aereal Pytium (*Pythium ultimum*)

☐ Angular Leaf Spot (*Isariopsis griseola*)

☐ Bacterial Wilt (*Corynebacterium flaccumfaciens* subsp. *flaccumfaciens*)

☐ Bacterial Brown Spot (*Pseudomonas syringae* pv. s*yringae*)

☐ Common Bacterial Blight (*Xanthomonas campestris* pv. *phaseoli*)

10. KNOWN DISEASES REACTION (Continued):

☐ Halo Blight (Pseudomonas *syringae* pv. *phaselicola*)

☐ Race 1 Race 2 ☐

☐ Clover Yellow Vein Virus (CYVV)

☐ Bean Common Mosaic Virus (BCMV)

☐ BV1 ☐ NY15 ☐ NL2 ☐ NL3

☐ NL4 ☐ NL8 ☐ Florida ☐ Idaho

☐ Mexican ☐ Western ☐ Type

☐ Other (Specify) _____

☐ Yellow Bean Mosaic Virus (BYMV)

☐ Curly Top Virus (BCTV)

☐ Other (Specify Disease and Race or Strain _____

☐ Other (Specify Disease and Race or Strain _____

☐ Other (Specify Disease and Race or Strain _____

☐ Other (Specify Disease and Race or Strain _____

11. KNOWN INSECT/NEMATODE RESISTANCE:

☐ Aphid ☐ Root Knot Nematode

☐ Leafhopper ☐ Seed Corn Maggot

☐ Lygus ☐ Thrips

☐ Pod Borer ☐ Weevils

☐ Other (Specify) _____

☐ Other (Specify) _____

☐ Other (Specify) _____

12. KNOWN PHYSIOLOGICAL STRESS REACTION: 1 = Susceptible 2 = Resistant 3 = Tolerant 4 = Avoidance

☐ Heat ☐ Cold ☐ Drought ☐ Air Pollution ☐ Other (Specify) _____

COLOR: Royal Horticultural Society Colour Chart; Munsell book of color or any recognized color fan may be used to determine color of the described variety.

13. COMMENTS: