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

**Exhibit C**

**OBJECTIVE DESCRIPTION OF VARIETY  
Garden 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:**

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g.,    or  ) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties centered in the same trial. Measured data should be for SPACED PLANTS. Ranges should also be given. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: \_\_\_\_\_.

Please answer all questions for your variety; lack of response may delay progress of your application.

**1. TYPE:**

1 = Garden      2 = Flageolet      3 = Romano

**2. MARKET MATURITY:**

<input style="width: 20px; height: 20px;" type="text"/> Days to Edible Pods	<u>Comparison Varieties</u>			
<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> Heat Units to Edible Pods	1 = Tender crop      2 = Kentucky Wonder			
<input style="width: 20px; height: 20px;" type="text"/> Number of Days Earlier Than	3 = Gold rush      4 = Slenderette			
Same As	5 = Gitana      6 = Provider			
<input style="width: 20px; height: 20px;" type="text"/> Number of Days Later Than	7 = Bush Blue Lake 290			
<table style="border-left: 1px solid black; border-right: 1px solid black; border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;"><input style="width: 100%; height: 100%;" type="text"/></td></tr> <tr><td style="width: 20px; height: 20px;"><input style="width: 100%; height: 100%;" type="text"/></td></tr> <tr><td style="width: 20px; height: 20px;"><input style="width: 100%; height: 100%;" type="text"/></td></tr> </table> Comparison Variety	<input style="width: 100%; height: 100%;" type="text"/>	<input style="width: 100%; height: 100%;" type="text"/>	<input style="width: 100%; height: 100%;" type="text"/>	8 = Other (Specify Below) _____
<input style="width: 100%; height: 100%;" type="text"/>				
<input style="width: 100%; height: 100%;" type="text"/>				
<input style="width: 100%; height: 100%;" type="text"/>				

**3. PLANT:**

cm Spacing Between Plants in a Row

Habit      1 = Determinate  
2 = Indeterminate, Erect Stem and Branches  
3 = Indeterminate with Weak and Prostrate Stem and Branches  
4 = Indeterminate Climbing Habit with Weak, Long, and Twisted Stem and Branches

cm Height

cm Shorter Than

Same Height As

cm Taller Than

<input style="width: 100%; height: 100%;" type="text"/>
<input style="width: 100%; height: 100%;" type="text"/>
<input style="width: 100%; height: 100%;" type="text"/>

 Comparison Variety

**Use Comparison Varieties from Section 2**

3. PLANT: (continued)

cm Spread

cm Narrower Than

Same Width As

cm Wider Than

} Comparison Variety

Use Comparison Varieties from Section 2

Pod Position: 1 = Low 2 = High 3 = Scattered

Bush Form (Illustrated Below)



1 = Spherical Bush Form                      2 = Stem Bush Form                      3 = Wide Bush Form                      4 = High Bush Form

5 = Other (Specify) \_\_\_\_\_

4. LEAVES:

Surface: 1 = Dull      2 = Glossy      3 = Indeterminate

Size: 1 = Small (Gitana)      2 = Medium      3 = Large (Tender Crop)

Color: 1 = Light Green (as Light or Lighter than Gold Rush)  
2 = Medium Green  
3 = Dark Green (as Dark or Darker than Bush Blue Lake 290)

5. ANTHOCYANIN PIGMENT:

(1 = Absent      2 = Present)

<input type="text"/>	Flowers	<input type="text"/>	Stems	<input type="text"/>	Pods	<input type="text"/>	Seeds
<input type="text"/>	Leaves	<input type="text"/>	Petioles	<input type="text"/>	Peduncles	<input type="text"/>	Nodes

6. FLOWER COLOR AND DAYS TO BLOOM:

<input type="text"/>	Color of Standard	<b>Flower Color Choices</b> 1 = White    2 = Cream 3 = Pink    4 = Lilac 5 = Purple   6 = Blue 7 = Other (Specify) _____
<input type="text"/>	Color of Wings	
<input type="text"/>	Color of Keel	
<input type="text"/> <input type="text"/>	Days to 50% Bloom	

7. PODS (Edible Maturity):

Exterior Color: (Fresh)

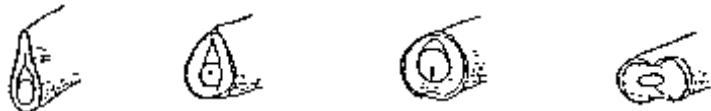
1 = Light Green (as Light or Lighter than Provider)  
 2 = Medium Green  
 3 = Dark Green (as Dark or Darker than Bush Blue Lake 290)  
 4 = Yellow (Gold Rush)  
 5 = Green-red Variegated (Horticultural)  
 6 = Other (Specify) \_\_\_\_\_

Processed Pods (Exterior Color): 1 = Light (Tender Crop)      2 = Dark (Bush Blue Lake 290)

Dry Pod Color: 1 = Buckskin (Sprite)      2 = Green, Persistent Chlorophyll (Hystyle)

7. PODS (continued):

Cross Section Pod Shape: (Middle of the Pod)    1 = Flat    2 = Heart (Pear)    3 = Round    4 = Figure Eight



- Crease Back:    1 = Present    2 = Absent
- Pubescence:    1 = None (Slenderette)    2 = Sparse    3 = Considerable (Provider or Sprite)
- Constriction (Interlocular Cavitation):    1 = None    2 = Slight    3 = Deep
- mm Spur Length
- Fiber:    1 = None (Bush Blue Lake 290)    2 = Sparse    3 = Considerable (Sprite)
- Number of Seeds per Pod
- Suture String:    1 = Present    2 = Absent
- Seed Development: 1 = Slow (Bush Blue Lake 290)    2 = Medium    3 = Fast (Provider)
- Machine Harvest:    1 = Adapted    2 = Not Adapted




Percent sieve size distribution at optimum maturity for not-flat pods

	4.76 to 5.76mm	5.76 to 7.34mm	7.34 to 8.34mm	8.34 to 9.53mm	9.53 to 10.72 mm	>10.72mm
	%	%	%	%	%	%
3 Sieve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	cm Length		mm width		Total mm Thickness	
4 Sieve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	cm Length		mm width		Total mm Thickness	
5 Sieve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	cm Length		mm width		Total mm Thickness	
6 Sieve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	cm Length		mm width		Total mm Thickness	

8. SEED COLOR:

- Seed Coat Luster:    1 = Shiny    2 = Dull    3 = Semi-Shiny    4 = Variable
- Seed Coat:    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 \_\_\_\_\_
- Seed Coat Pattern: 1 = Solid    1 = 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 \_\_\_\_\_

9. SEED SHAPE AND SIZE:

Hilum View:            

                                  1 = Elliptical    2 = Oval    3 = Round

Cross Section:    1 = Elliptical    2 = Oval    3 = Cordate    4 = Round

9. SEED SHAPE AND SIZE: (continued)



<input type="checkbox"/>	gm/100 Seeds	} Comparison Variety
<input type="checkbox"/>	gm/100 Seeds Lighter Than	
<input type="checkbox"/>	gm/100 Seeds Same As	
<input type="checkbox"/>	gm/100 Seeds Heavier Than	

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

Anthracnose (*Colletotrichum lindemuthianum*)

<input type="checkbox"/>	Race Alpha	<input type="checkbox"/>	Race Beta	<input type="checkbox"/>	Race Gamma
<input type="checkbox"/>	Race Delta	<input type="checkbox"/>	Race Epsilon	<input type="checkbox"/>	Race Lambda
<input type="checkbox"/>	Race Kappa	<input type="checkbox"/>	Specify Race _____		

Bean Rust (*Uromyces appendiculatus*)

<input type="checkbox"/>	Race 38	<input type="checkbox"/>	Race 39	<input type="checkbox"/>	Race 40	<input type="checkbox"/>	Race 44
<input type="checkbox"/>	Race 45	<input type="checkbox"/>	Race 46	<input type="checkbox"/>	Race 49	<input type="checkbox"/>	Race 50
<input type="checkbox"/>	Race 51	<input type="checkbox"/>	Race 52	<input type="checkbox"/>	Race 54	<input type="checkbox"/>	Race 56
<input type="checkbox"/>	Race 59	<input type="checkbox"/>	Race 72				

Powdery Mildew (*Erysiphe 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. *syringae*)

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

Halo Blight (*Pseudomonas syringae* pv. *phaseolicola*)

<input type="checkbox"/>	Race 1	<input type="checkbox"/>	Race 2
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Clover Yellow Vein Virus (CYVV)

Bean Common Mosaic Virus (BCMV)

<input type="checkbox"/>	BV1	<input type="checkbox"/>	NY15	<input type="checkbox"/>	NL2	<input type="checkbox"/>	NL3
<input type="checkbox"/>	NL4	<input type="checkbox"/>	NL8	<input type="checkbox"/>	Florida	<input type="checkbox"/>	Idaho
<input type="checkbox"/>	Mexican	<input type="checkbox"/>	Western	<input type="checkbox"/>	Type		
<input type="checkbox"/>	Other (Specify) _____						

**10. DIESAES (Continued):**

- 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. INSECT RESISTANCE:** 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

- |  |   |
|--|---|
| <input type="checkbox"/> Aphid                 | <input type="checkbox"/> Root Knot Nematode |
| <input type="checkbox"/> Leafhopper            | <input type="checkbox"/> Seed Corn Maggot   |
| <input type="checkbox"/> Lygus                 | <input type="checkbox"/> Thrips             |
| <input type="checkbox"/> Pod Borer             | <input type="checkbox"/> Weevils            |
| <input type="checkbox"/> Other (Specify) _____ |   |
| <input type="checkbox"/> Other (Specify) _____ |   |
| <input type="checkbox"/> Other (Specify) _____ |   |

**12. PHYSIOLOGICAL RESISTANCE:** 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

- |  |                                |                                  |
|--|--------------------------------|----------------------------------|
| <input type="checkbox"/> Heat                  | <input type="checkbox"/> Cold  | <input type="checkbox"/> Drought |
| <input type="checkbox"/> Air Pollution         | <input type="checkbox"/> Ozone |                                  |
| <input type="checkbox"/> 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:**