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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
Orchardgrass (*Dactylis glomerata* 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. Fill unused columns with zeroes (e.g.

0	9	9
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 when number is 99). In comparisons to Potomac (standard variety) be sure to strike out the comparative term which does not apply [e.g. (longer)]; the value

0	0
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 should only be used to indicate that the varieties are equal. Characteristics described, including numerical measurements, should represent those that are TYPICAL for the variety. Any recognized color fan, e.g., Royal Horticultural Color Chart, may be used to determine plant colors; designate system used: _____.

Ranges of values are valuable and may be included with additional description elsewhere in the application. The minimum duration of tests should normally be two independent growing cycles. The tests should normally be conducted at one place. If any important characteristics of the variety cannot be seen at that place, the variety may be tested at an additional place. The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination. The size of the plots should be such that plants or parts of plants may be removed for measuring and counting without prejudice to the observations which must be made up to the end of the growing period. Each test should be designed to result in a total of at least 60 spaced plants. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions. Each test should consist of 60 single spaced plants arranged in 3 or more replicates.

Give locations of test area:

1. PLOIDY:

1 = Diploid (2N = 14) 2 = Tetraploid (2N=28) 3 = Other (Specify) _____

2. ADAPTATION (for forage or pasture):

1 = Northeast 2 = East Central 3 = Southeast 4 = North Central 5 = SouthCentral 6 = Pacific Northwest
7 = Southwest 8 = Other (Specify) _____

3. WINTER HARDINESS:

1 = Tender 5 = Intermediate 9 = Hardy

4. MATURITY:

Season: 1 = Very early (Boone) 2 = Early (Sterling) 3 = Midseason (Pennmead) 4 = Late (Pennlate)
5 = Very late (Masshardy)

Flowering date (50% bloom) compared to Potomac.....

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 Days (Earlier) (Later)

Beginning of spring growth compared to Potomac

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 Days (Earlier) (Later)

5. PLANT HEIGHT (From Soil Level to Top of Panicle):

cm tall: Compared to Potomac..... cm (Shorter) (Taller)

6. PLANT GROWTH TYPE (at maturity):

Type: 1= Prostrate (S-143) 2 = Intermediate (Pennmead) 3 = Erect (Boone)

Plant Width: Diameter across 2nd year plant (to tips of opposite panicles). Use same or comparable plants for plant height.

cm plant width; compared to Potomac..... cm (Narrower) (Wider)

Early leafiness: 1 = Panicle tillers exerted before barren tillers 2 = Panicle and barren tillers exerted together

No. panicle tillers at maturity

No. barren tillers at maturity

Leaf evaluation data: (Use same or comparable plants for both characters)

cm length of 5th internode below panicle (usually 1st noncontracted internode)

cm total straw length (to lowest branch of panicle)

7. LEAF:

Culm leaf attitude (at early boot): 1 = Erect (Orbit) 2 = Drooping (Potomac)

Leaf color:: 1 = Yellow green (Latar) 2 = Green (Sterling) 3 = Dark green (Potomac) 4 = Blue green (Sumas)

Leaf hairiness (% plants with each surface):

% Glabrous % Slightly pubescent % Pubescent

mm width (first leaf blade below flag leaf): Compared to Potomac..... mm (Narrower) (Wider)

mm length (first leaf blade below flag leaf); Compared to Potomac mm (Shorter) (Longer)

8. PANICLE (From lowest panicle branch to tip of rachis):

cm panicle length; compared to Potomac..... cm (Shorter) (Longer)

No. primary branches No. spikelets of lowest glomerule (spikelet cluster)

Cast (secondary color) of panicle: 1 = Yellowish 2 = Brown 3 = Purple 4 = Other (Specify) _____

Panicle Type: In the table below give percentage of plants with each panicle type. Panicle type is determined by the angles from the verticle formed by (A) the Rachis Tip and (B) the Lowest Branch.

(A) Angle of rachis tip (from verticle)

(B) Angle of lowest branch (from verticle)

	0° (Erect)	< 45°	> 45°
(< 30°)			
(30° - 90°)			
(> 90°)			

9. LEMMA (First spikelet of lowest cluster):

Lemma hairiness (% of plants with each surface):

% Glabrous % Pubescent

Lemma keel hairiness (% plants with each surface):

% Glabrous % Ciliate

% Plants with notched lemma apex mm depth apical notch

% Plants with lemma awns mm typical awn length

10. SEED:

<input type="text"/>	• <input type="text"/>	mm width; compared to Potomac	<input type="text"/>	mm (Narrower) (Wider)
<input type="text"/>	• <input type="text"/>	mm length; compared to Potomac	<input type="text"/>	mm (Shorter) (Longer)
<input type="text"/>	<input type="text"/>	mg per 1,000 pure seed; compared to Potomac.....	<input type="text"/>	mg (Lighter) (Heavier)

11. DISEASE AND INSECT RESISTANCE (Rate resistance 0 – 9, where 0 = Not Tested, 1 = 100% Susceptible, and 9= 100% Resistant):

<input type="text"/>	Powdery mildew (<i>Erysiphe graminis</i>)	<input type="text"/>	Stripe smut (<i>Ustilago striiformis</i>)
<input type="text"/>	Anthracoese (<i>Colletotrichum graminicola</i>)	<input type="text"/>	Other (Specify) _____

Rust and Leaf Spot: Specify as completely as possible including species and races where known. If generalized resistance or susceptibility is claimed (first box), include or append explanation. (0 = Not Tested, 1 – 9 = 100 Susceptible to 100% Resistant, respectively).

<input type="text"/>	Rust	Comments
<input type="text"/>	Stem rust (<i>Puccinia graminis</i>)	
<input type="text"/>	Crown rust (<i>P. coronata</i>)	_____
<input type="text"/>	Leaf rust (<i>P. rubigo-vera</i>)	_____
<input type="text"/>	Stripe rust (<i>P. glumarum</i>)	_____
<input type="text"/>	Leaf spot	_____
<input type="text"/>	Leaf streak (<i>Scolecotrichum graminis</i>)	_____
<input type="text"/>	Leaf blotch (<i>Stagonospora arenaria</i>)	_____
<input type="text"/>	Purple leaf spot (<i>Stagonospora maculata</i>)	_____
<input type="text"/>	Scald (<i>Rhynchosporium orthosporium</i>)	_____
<input type="text"/>	Leaf spot (<i>Ascochyta graminicola</i>)	_____
<input type="text"/>	Leaf spot (<i>Mastigosporium rubicosum</i>)	_____
<input type="text"/>	Leaf spot (<i>Helminthosporium</i> spp.)	_____
<input type="text"/>	Leaf spot (<i>Septoria</i> spp.)	_____
<input type="text"/>	Other	_____

12. INDICATE THE VARIETY THAT MOST CLOSELY RESEMBLES THE APPLICATION VARIETY FOR THE FOLLOWING CHARACTERS:

CHARACTER	VARIETY	CHARACTER	VARIETY
Leafiness		Seedling vigor	
Winter hardiness		Seed size	
Frost resistance		% Lignin	
Summer dormancy		Persistence	
Heat tolerance		Tillering	

REFERENCES:

R. G. Stapledon, Cocksfoot Grass (*Dactylis glomerata* L.) Ecotypes in Relation to the Biotic Factors. *Journal of Ecology* 16:71 – 104 1928.
 P. F. Parker, Genetic Variation in Diploid *Dactylis* in Panicle, Spikelet and Floret Characters. *Heredity* 24: 383 – 405 1969.

COMMENTS: