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**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

**EXHIBIT C**

**OBJECTIVE DESCRIPTION OF VARIETY  
SMOOTH BROMEGRASS (*Bromus inermis* Leyss.)**

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country)		<div style="background-color: #cccccc; padding: 2px;"><b>FOR OFFICIAL USE ONLY</b></div> PVPO NUMBER

Place the appropriate number that describes the varietal character of this variety in the spaces below. Fill unused spaces with zeros (e.g. 0 9 9) when number is 99). In comparisons to standard varieties, the value 0 0 should only be use to indicate that the varieties are equal. Characteristics described, including numerical measurements, should represent those which are TYPICAL for the variety. See EXPLANATORY NOTES at the end of form for characters marked with an asterisk (\*). Measured data should be for SPACED PLANTS. Any recognized color fan, e.g., National Bureau of Standards Circular 553 Supplement, may be used to determine plant colors; designate system used: \_\_\_\_\_ . Ranges of values may be included with additional description elsewhere in the application.

**NOTE:** For single plant data a minimum of 100 plants is suggested.

**1. STRAIN TYPE**

\_\_\_ 1 = Souther Type   2 = Intermediate   3 = Northern Type

**STANDARD COMPARISION VARIETIES**

1 = Lincoln (Southern)   2 = Manchar (Intermediate)   3 = Carlton (Northern)

**2. MATURITY**

Heading date (50% of plants emerged from boot).....	{ ___ ___ Days Earlier Than ..... ___ Standard Variety ___ ___ Days Later Than ..... ___ Standard Variety
Seed Ripening (panicle browning).....	{ ___ ___ Days Earlier Than ..... ___ Standard Variety ___ ___ Days Later Than ..... ___ Standard Variety

**3. JUVENILE HABIT**

\_\_\_ 1 = Prostrate Rosette   2 = Erect Tillers

**4. ADULT HABIT**

\_\_\_ Spread: 1 = Noncreep (Parkland) 2 = Spreading (Lincoln)

\_\_\_ CM Width (Diameter of 2<sup>nd</sup> year plant)..... {  
 \_\_\_ CM Narrower Than ..... Standard Variety  
 \_\_\_ CM Wider Than ..... Standard Variety

\_\_\_ Attitude of Outer Culms: 1 = Prostrate (Rebound) 2 = Ascending (Achenbach) 3 = Erect (Saratoga)

Proportion of mature culm types\* (STERILE vs. FERTILE CULMS): Enter the number of plants out of 100 (frequency) which show the indicate range of STERILE CULMS. Do not include immature culms.

	<u>&gt; 50% Sterile Culms</u>	<u>30-50% Sterile Culms</u>	<u>&lt;30% Sterile Culms</u>
Application Variety .....	___ % Plants	___ % Plants	___ % Plants
Standard Variety ___ .....	___ % Plants	___ % Plants	___ % Plants

**5. STERILE CULMS\*** (Same plants as FERTILE CULMS – at seed ripe stage)

\_\_\_ CM Height\* (From soil to mean level of uppermost leaf tips) ..... {  
 \_\_\_ CM Shorter Than ..... Standard Variety  
 \_\_\_ CM Taller Than ..... Standard Variety

\_\_\_ CM Leaf Elevation\* (Stem length from soil to lingules of uppermost leaves ..... ) {  
 \_\_\_ CM Lower Than ..... Standard Variety  
 \_\_\_ CM Higher Than ..... Standard Variety

\_\_\_ Number of Leaves/Culm\* (Between expanded internodes)

**6. FERTILE CULMS\*** (Same plants as STERILE CULMS – at seed ripe stage)

\_\_\_ Diameter: 1 = Fine (Carlton) 2 = Medium (Lincoln) 3 = Coarse (Sac)

\_\_\_ CM Height\* (From soil to mean level of panicle tips) ..... {  
 \_\_\_ CM Shorter Than ..... Standard Variety  
 \_\_\_ CM Taller Than ..... Standard Variety

\_\_\_ CM Length of Internode Below flag leaves ..... {  
 \_\_\_ CM Shorter Than ..... Standard Variety  
 \_\_\_ CM Longer Than ..... Standard Variety

Pubescence at Nodes: \_\_\_ % Plants Glabrous \_\_\_ % Plants Pubescent

\_\_\_ CM Leaf Elevation\* (Stem length from soil to lingules of flag leaves ..... ) {  
 \_\_\_ CM Lower Than ..... Standard Variety  
 \_\_\_ CM Higher Than ..... Standard Variety

**7. LEAF** (Leaf below flag leaf – on FERTILE CULM at heading date)

\_\_\_ Attitude: 1 = Drooping (Carlton) 2 = Ascending ( )

\_\_\_ Color: 1 = Light Green (Mandan 404) 2 = Medium Green (Saratoga) 3 = Dark Green (Achenbach)

\_\_\_ Anthocyanin Formation: 1 = Absent 2 = Slight 3 = Strong

\_\_\_ Waxy Bloom: 1 = Absent 2 = Slight 3 = Strong

Leaf Pubescence: (Indicate percentage of PLANTS with each type)

\_\_\_ % All Glabrous \_\_\_ % Only Lower Leaves Pubescent \_\_\_ % All Pubescent

\_\_\_ MM Maximum Width ..... {  
 \_\_\_ MM Narrower Than ..... Standard Variety  
 \_\_\_ MM Wider Than ..... Standard Variety



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**REFERENCE**

Zerebina, Z. N. 1931. Essay of a botanikal-agronomical study of awnless brome grass (*Bromus inermis* Leyss.). Bulletin of Applied Botany (Leningrad) 25(2): 203-352.

**OTHER**

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Lowe, C. C., et al. 1960. A regional approach to breeding and evaluation of smooth brome grass for use and adaptation in the northeast. Cornell Univ. Agric. Exp. Sta. Bull, 954.

Walton, P. D. and C. Murchison. 1979 A plant ideotype for *Bromus inermis* Leyss. In western Canada. Euphytica 28: 801-806

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**COMMENTS**