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Exhibit C

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

OBJECTIVE DESCRIPTION OF VARIETY
Bermudagrass (Cynodon spp.)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
ADDRESS (Street and No. or RD No., City, State, and Zip Code, 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 spaces provided. Place a zero in the first box (e.g. 0/9/9 or 0/9/) when number is either 99 or less or 9 or less. The symbol "▲" indicates decimal. Characteristics described, including numerical measurements, should represent those that are TYPICAL for the variety. Comparisons to standard varieties must be made under the same conditions. Append all pertinent comparative trial and evaluation data. Measured data should be for unclipped spaced plants that represent the application variety, the most similar variety, and one standard cultivar, or replicated unclipped plots or individual unclipped pots if grown in a greenhouse. Data should be obtained from mature plants (specify age of plants when measured). A minimum of 30 plants and 60 data points should be used for all measurements. Specify growing conditions and experimental design. Give location of test area.

STANDARD CULTIVARS Use cultivars from same species and ploidy level

1 = Seeded Common
2 = Guymon
3 = Mirage
4 = Tifway
5 = Tifgreen
6 = Midiron
7 = Coastal
8 = Coastcross-1
9 = Giant
10 = other (Specify species)_____

SPECIFIC VARIETIES USED FOR COMPARISON AS CHECK VARIETIES IN THIS APPLICATION: Use standard regional check varieties that are adapted to your area. One of the comparison varieties must be the most similar variety (MSV) used in Exhibit B.

MSV 1. _____Variety 2. _____Variety 3. _____

1. SPECIES: (With comparison varieties for use below - use varieties within species of application variety)

1 = C. dactylon var. dactylon
2 = C. dactylon var. aridus
3 = C. transvaalensis
4 = C. dactylon X C. transvaalensis _____
5 = Other (Specify). _____

Is this an F1 hybrid? _____
Is this for turf or forage use? _____
Is this seed or clonally propagated? _____

2. CYTOLOGY:

___ ___ 2n Chromosome Number

Ploidy: (1 = diploid 2 = Tetraploid 3 = triploid 4 = Other (Specify)_____)

Application Variety	MSV Variety 1	Comparison Variety 2	Comparison Variety 3

3. ADAPTATION: (0= Not tested; 1= Inadequately Tested; 2= Not Adapted; 3 = Adapted)

☐ Northwest	☐ North Central	☐ Northeast	☐ Other _____
☐ West Central	☐ Central	☐ East Central	☐ Other _____
☐ Southwest	☐ South Central	☐ Southeast	☐ Other _____

4. RHIZOMES 1 = None (Coastcross -1) 4 = Weakly Rhizomatous (Coastal) 6 = Moderately Rhizomatous (Common) 9 = Heavy Rhizomatous

Application Variety	MSV Variety 1	Comparison Variety 2	Comparison Variety 3

Amount of spread in 1 year cm

5. STOLONS AND SHOOTS:

Specify site, season and growing conditions: _____

Anthocyanin pigmentation (cool temperature). Examples: present in Common, absent in Midland.

Or

Application Variety	MSV Variety 1	Comparison Variety 2	Comparison Variety 3

Percent of plants with anthocyanin pigmentation

Stolon internode length cm. Measure from between 3rd and 4th fully extended nodes from apical meristem.

Stolon internode diameter mm. Measure from center of 3rd fully extended internode from apical meristem.

Number of growing points at a mature node. Recommend 4th node.

Specify which node was counted.

Length of longest stolon cm

Or

Stolon length mm. Measure from the stolon apical meristem to the 5th node of the central stolon.

6. LEAF BLADE:

Color : (1 = Light Green (Bayshore, Seeded Common) 3 = Light Medium Green 5 = Medium Green (Guymon)
7 = Medium Dark Green (Everglades, Tifway) 9 = Dark Green (Tifgreen, Sunturf))

Application Variety	MSV Variety 1	Comparison Variety 2	Comparison Variety 3

Other Color (1 = Bluegreen (Tifdwarf, No Mow) 2 = Grey Green 3 = Other (specify))

Percent plants with other color

7. INFLORESCENCE (Specify site, season, and growing conditions). Inflorescence length cm. The length of the racemes on the inflorescence.

Application Variety	MSV Variety 1	Comparison Variety 2	Comparison Variety 3

Number of racemes per inflorescence.

Number of whorls per inflorescence.

Percent of plants with more than one whorl of branches/inflorescence.

Percent of inflorescences with more than 1 whorl.

Spikelets per raceme.

Spikelet spacing on raceme mm Measured from bottom 1/3 of spike.

Raceme density [number of racemes/ (0.2m)2]

Percent of plants with spike anthocyanin

Stigma color % plants with white stigmas. Measure within 24 hours after anthesis.

Stigma color % plants with light purple stigmas. Measure within 24 hours after anthesis.

Stigma color % plants with purple stigmas. Measure within 24 hours after anthesis.

Anther color % plants with purple anthers. Measure within 24 hours after anthesis.

Anther color % plants with yellow anthers. Measure within 24 hours after anthesis.

Anther color % plants with other (specify). Measure within 24 hours after anthesis.

Head exertion cm. Measure from the base of the inflorescence to the flag leaf.

Peduncle length cm. Measure internode from base of whorl to first node.

7. INFLORESCENCE (cont.)

First internode length cm.

Application Variety	MSV Variety 1	Comparison Variety 2	Comparison Variety 3

Flag leaf sheath length cm. Measure from node to flag leaf base.

8. PLANT HEIGHT (Specify site, time, growing conditions).

Plant height cm. Measure at maturity, using the tallest inflorescence per plant and hold out to furthest extension for measurement.

Application Variety	MSV Variety 1	Comparison Variety 2	Comparison Variety 3

Vegetative height cm. Height of vegetation excluding seedheads, measure at seedhead maturity.

9. SEED, LEMMA, AND GLUME: Use seed harvested from PVP nursery, not commercial seed lots.

Glume length mm

Application Variety	MSV Variety 1	Comparison Variety 2	Comparison Variety 3

Glume width mm

Lemma length mm

Lemma width mm

Glume/lemma length ratio

Lemma keel hair number (use 1 = absent; 5=several; 9 = many).

Lemma keel hair length (use 1 = absent; 5=short; 9 = very long).

Lemma margin hair number (use 1 = absent; 5=several; 9 = many).

Lemma margin hair length (use 1 = absent; 5=short; 9 = very long).

9. SEED, LEMMA, AND GLUME: (cont.)

Seed length mm (naked caryopses).

Application Variety	MSV Variety 1	Comparison Variety 2	Comparison Variety 3

Seed width mm (naked caryopses).

Explain if samples are blown and unhulled or hulled. _____

Weight of 100 seed mg

Number of seeds per gram

10. LOW TEMPERATURE TOLERANCE (Winter hardiness)

1 = Low or 100% injury (Coastcross-1, Common)
4 = Moderately Low (Coastal, Brazos)
6 = Moderately High (Tifway, Guymon, Tifdwarf)
9 = High or no injury (Midiron, Midland)

Application Variety	MSV Variety 1	Comparison Variety 2	Comparison Variety 3
_____	_____	_____	_____

11. DISEASE AND INSECTS (0=Not Tested, 1=Susceptible, 2=Moderately susceptible, 3=Moderately resistant, 4=Resistant):

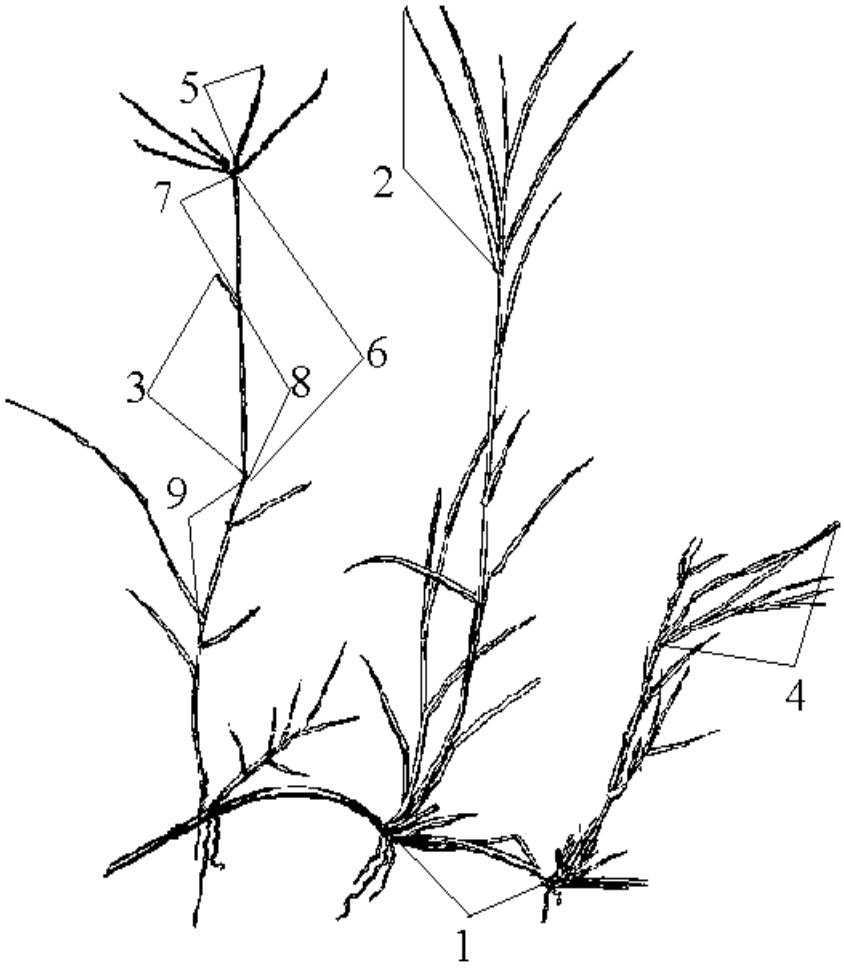
	Brown patch (Rhizotonia solani)		Aphids
	Dollar spot (Sclerotinia homoeocarpa)		Bermudagrass mite (Eriophyes cynodoniensis)
	Fading out (Curvularia spp.)		Chinch bugs
	Leafspot (Bipolaris spp.)		Ground pearl (scale)
	Rusts (Puccinia spp.)		Grubs
	Spring Dead Spot (Pathogen indefinite)		Thrips
	Zonate leafspot (D. gigantea)		Whitefly
	Other: _____		Other: _____

12. INDICATE THE SEED PROPAGATED VARIETY THAT MOST CLOSELY RESEMBLES THE APPLICATION VARIETY FOR THE FOLLOWING CHARACTERS: For each of the following characters, indicate the degree of resemblance by placing in the column marked "D.R." one of the following numbers.

1 = Application variety is less than comparison variety; 2 = Same as; 3 = More than, better, greater, darker, etc.

CHARACTER	VARIETY	D.R.
Rate of Spread		
Sod Density		
Color		
Cold Tolerance		

13. SPECIFY LOCATION, GROWING CONDITIONS, AND EXPERIMENTAL DESIGN BELOW. Include location, age of plants, date of data collection (with daylength if possible), management conditions, experimental design etc.). Attach more paper if needed.



Bermuda grass *(Cynodon dactylon)*

1. Stolon internode length
2. First fully extended leaf of upright growth
3. Flagleaf length
4. First fully extended leaf from tip of stolon
5. Inflorescence length
6. Peduncle length
7. Head exsertion
8. Sheath length
9. First internode length

REFERENCE

Parker, Kittie F., An Illustrated Guide to Arizona Weeds. Drawings by Lucretia Breazeale Hamilton. Tucson, University of Arizona Press [1972]. xii, 338 p. illus.