

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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

Exhibit C

**OBJECTIVE DESCRIPTION OF VARIETY
Ryegrass (*Lolium* spp.)**

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

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. 0/8/9/ or 0/9/9/) when number is either 99 or less or 9 or less. Descriptions of characters should represent those that are typical for the variety. Measured data must be for SPACED PLANTS. Give additional description for all characteristics that cannot be adequately described in the form below. Append all pertinent comparative trial and evaluation data.

Cultural Conditions

All measurements must be on spaced plants with a minimum of (30 cm) between plants. A minimum of 30 plants and 60 data points must be used for all measurements. Plants must be established no later than the previous fall for spring and summer measurements. Trials should be irrigated and stem rest control practiced. Cultural conditions must be stated in comment section and plant number / data points shown in all tables.

1. SPECIES

- _____ 1 = *L. multiflorum* (annual or italian) includes Westerwoldicum 2 = *L. perenne* (Perennial) 3 = *L. rigidum* (includes Wimmeria)
- 4 = Hybrid (of species): _____
- 5 = Other (specify): _____

2. PLOIDY

- _____ 1 = Diploid 2 = Tetraploid 3 = Other (specify): _____

3. DURATION

- _____ 1 = Annual or Biennial 2 = Short lived perennial (3-4 Years) 3 = Perennial (more than 4 years)

STANDARD CULTIVARS – Choose cultivars from same species, ploidy level and usage.

L. MULTIFLORUM		L. PERENNE		L. RIGIDUM	HYBRID
DIPLOID	TETRAPLOID	DIPLOID	TETRAPLOID		
1 = GULF	4 = TETRONE	8 = LINN	14 = CONDESSA	17 = WIMMERA 62	18 = OREGREEN
2 = MARSHALL	5 = MERITRA RVP	9 = MANHATTAN	15 = CITIDEL		19 = BISON
3 = SURREY	6 = CARUMBA	10 = ELKA	16 = FANTOON		
	7 = URBANA	11 = PENNFINE-EARLY		20 = _____	(Specify species and ploidy)
		12 = MANHATTAN II			
		13 = PINNACLE			

4. MATURITY (When 50% of plants in the variety have at least 3 spikes emerged from boot.) Use standards from above for comparison

___ ___ Calendar Day.
 ___ 1 = Very Early () 5 = Medium () 9 = Very Late ()
 ___ Days Earlier Than ___
 ___ Same as ___
 ___ Days Later Than ___

ANTHESIS DATE (When 50% of plants in the variety have at least 3 spikes in anthesis.)

___ ___ Calendar Day.
 ___ Days Earlier Than ___
 ___ Same as ___
 ___ Days Later Than ___

5. PLANT HEIGHT (Post - Anthesis) Middle tiller. Not to include tallest 3 heads.

Mature Height (ground to top of spike - straightened.)

___ ___ cm High ___
 ___ Shorter Than ___
 ___ Same As ___
 ___ Taller Than ___

Flag Leaf Height (Ground to collar of flag leaf.)

___ ___ cm High ___
 ___ Shorter Than ___
 ___ Same As ___
 ___ Taller Than ___

6. TURF DENSITY (Tiller density - specify clipped / unclipped, growth conditions and plant age.)

___ ___ Tillers per Plant
 ___ ___ Less Tillers Than ___
 ___ ___ More Tillers Than ___

7. LEAF CHARACTERISTICS

Flag Leaf (After anthesis.)

___ ___	cm Length (ligule to tip)	___ ___	mm Width (at 1 cm from collar)
___ ___	cm Shorter Than ___	___ ___	cm Narrower Than ___
___ ___	Same As ___	___ ___	Same As ___
___ ___	cm Longer Than ___	___ ___	mm Wider Than ___

Flag Leaf at Boot Stage * percent plants with:

___ ___	Deflexed	___ ___	Semi-erect
___ ___	Recurve	___ ___	Erect
___ ___	Horizontal		

7. LEAF CHARACTERISTICS (continued)

Sheath Length of Flag Leaf (Flag Leaf Collar to Subtending Node.)

_____ cm Length
 _____ cm Shorter Than _____
 _____ Same As _____
 _____ cm Longer Than _____

Genetic Foliage Color (Summer)

_____ Leaf Color 1 - 9 2 = Elka 3 = Pennfine 5 = Manhattan
 6 = Pinnacle 9 = Dark Green

_____ Vernation (On vegetative tillers) 1 = Leaves Rolled
 2 = Leaves Semi-Rolled
 3 = Leaves Folded

_____ % Plants With Anthocyanin In Lower Leaf Sheath (at 3 - 8 tiller stage)

8. SPIKE (Post - Anthesis) Spikelet and Glume measurements must be in lower 1/3 of Spike.

_____ mm Spike Length (tip to internode)
 _____ mm Shorter Than _____
 _____ Same As _____
 _____ mm Longer Than _____
 _____ Number of Spikelets/Spike _____ Number of Florets/Spikelet
 _____ Less Than _____ _____ Less Than _____
 _____ Same As _____ _____ Same As _____
 _____ More Than _____ _____ More Than _____
 _____ mm Length of Spikelets _____ mm Length of Outer Glume
 _____ mm Less Than _____ _____ Less Than _____
 _____ Same As _____ _____ Same As _____
 _____ mm More Than _____ _____ Mm More Than _____

PERCENTAGE PLANTS WITH:

Rachis : _____ % Smooth _____ % Rough
 Spike Color : _____ % All Green _____ % With Anthocyanin
 Lemma : _____ % Awned _____ mm Awn Length
 Anther Color:
 (Pre-Dehiscent) _____ % White Or Beige Anthers _____ % Yellow Anthers
 _____ % Purple Anthers

9. SEED – From PVP nursery (not commercial sample). All seed must be processed similarly. Specify how data collected.

_____ mg per 1,000 seeds
 _____ mm Total Length of 10 seeds
 _____ mm Total Width of 10 seeds
 _____ mm Lemma Length (average of 50) _____ mm Lemma Width (average of 50)
 _____ mm Less Than _____ _____ mm Less Than _____
 _____ Same As _____ _____ Same As _____
 _____ mm More Than _____ _____ mm More Than _____

10. SEEDLING CHARACTERS

___ ___ % Plants with Anthocyanin in Coleoptile

___ ___ % Albinos

11. ROOT AND PLANT CHARACTERS

___ ___ Growth Habit 1- 9 1=Prostrate 9=Upright

___ ___ % of Plants with Fluorescent Roots – Unlifted/Bright

___ ___ % of Plants with Fluorescent Roots – Lifted/Hidden

12. DISEASE (0 = Not Tested, 2 = Highly Susceptible, 4 = Moderately Susceptible, 6 = Moderately Resistant, 9 = Highly Resistant)

Specify disease causing organism (Species)

___ Crown Rust (*Puccinia coronata*)

___ Dollar Spot (*Sclerotinia*)

___ Brown Patch (*Rhizoctonia*)

___ Leaf Spot (*Helminthosporium*)

___ Stem Rust

___ Snow Mold (*Typhula*)

___ Red Thread (*Corticium*)

___ Other (Specify) _____

13. INSECT (0 = Not Tested, 2 = Highly Susceptible, 4 = Moderately Susceptible, 6 = Moderately Resistant, 9 = Highly Resistant)

___ Please Specify: _____

Must specify with or without endophyte present

14. Give resemblance value in left column and variety code number in the right column for variety with which comparison is made (1 = less than, 2 = same as, 3 = more erect, more resistant, denser, more persistent, darker or greater height.)

<u>Resemblance</u>	<u>Character</u>	<u>Similar Variety</u>
___	Plant Habit (erectness)	___
___	Tillering Rate of Seedlings	___
___	Leaf Color	___
___	Seedling Growth Rate	___
___	Shoot Density	___
___	Mower Shredding Resistance	___

1 = Gulf 2 = Wimmeria 62 3 = Linn

4 = Pelo 5 = Norlea 6 = Aberystwyth S-23

7 = Manhattan 8 = Pennfine

18. Give Area Of Adaptation And Intended Use _____

19. Give Area Test Results Presented From _____

20. COMMENTS: