

**A REPORT OF THE
NATIONAL GRASS VARIETY REVIEW BOARD**



ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES

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APRIL 2013



NATIONAL GRASS
VARIETY REVIEW BOARD

ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES
(APRIL 2013)

The Association of Official Seed Certifying Agencies (AOSCA), National Grass Variety Review Board reviewed the following varieties on March 05, 2013, in Scottsdale, Arizona. The Board recommended the inclusion of these varieties for certification. Seed of these varieties may be certified, providing production meets all standards of the Certifying Agency of the jurisdiction in which the seed is grown.

All variety information, including descriptions, claims and research data to support any claim was supplied to the National Grass Variety Review Board by the applicants. The National Grass Variety Review Board makes judgments regarding recommendation of varieties for inclusion into certification based on the data supplied. Beyond this, the National Grass Variety Review Board takes no position on the accuracy or truthfulness of any description or claim made by the applicants.

Further information on current procedures, application forms and details regarding the National Grass Variety Review Board can be obtained from:

Chester Boruff, Chief Executive Officer
AOSCA
1601 52nd Ave., Suite 1
Moline, Illinois 61265

Telephone (309) 736-0120
Fax (309) 736-0115
E-Mail cboruff@aosca.org

Respectfully submitted,

Doug Boze, Chair
National Grass Variety Review Board

2013 AOSCA GRASS NVRB

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PLACING THE CURSOR OVER THE DESIRED VARIETY/EXPERIMENTAL DESIGNATION & CLICKING WILL TAKE YOU DIRECTLY TO THE SUMMARY DESCRIPTION.

Green Farm (Naehan 23)

1. **Variety name:** Green Farm Kind: Annual ryegrass
 Genus: Lolium Species: Multiflorum
 Experimental designation (s): Naehan 23
 Date submitted: 2012, December 27th
2. Green Farm was developed by the South Korean National Institute of Animal Science from a50 plant cross of plants selected from the varieties Hanamiwase, Florida 80, Grazer and Kospeed. Selection criteria included tolerance to low temperature. Breeder seed was first produced in 2007.
3. Green Farm is bred for forage (hay etc.) in anticipation of cultivation in regions with a higher temperature than -9° C minimum average air temperature in January in South Korea. Forage trials in South Korea indicate it is suitable for this purpose.

4. Growth & Morphology	Heading date-day/month		Plant height-cm		Flag leaf blade length-cm	
	2009		2009		2009	
	Cheonan	Yonchun	Cheonan	Yonchun	Cheonan	Yonchun
Traits						
<i>Green Farm</i>	21/April	4/May	95.2	94.7	16.8	19.3
<i>Florida 80</i>	7/May	13/May	94.2	92.1	19.1	19.6
<i>Hwasan 101</i>	23/May	29/May	100.0	101.9	30.9	35.3
<i>Kowinmaster</i>	6/May	14/May	92.1	100.3	25.3	22.4
LSD (.05)	3.63	2.28	4.52	4.33	2.40	2.68
CV	4.94	7.75	2.36	2.24	5.19	5.53

Data collected from: Spaced single plants _____ Plants in rows/solid seeding X

Variants to be expected and frequency: None observed

5. Primary Use	Forage Yields(DM) – kg/ha						Winter survival degree-1~9					
	Cheonan			Yonchun			Cheonan			Yonchun		
	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011
<i>Green Farm</i>	18,824	13,132	8,314	11,725	5,166	10,427	2	2	1	2	3	3
<i>Florida 80</i>	17,900	11,198	8,884	11,361	5,087	10,451	3	4	3	4	7	6
<i>Hwasan 101</i>	13,901	16,084	8,122	12,141	6,373	7,886	2	1	1	3	5	3
<i>Kowinmaster</i>	16,433	19,800	8,500	11,124	8,230	7,980	2	1	1	3	3	3
LSD (.05)	2,300.25	1,970.19	320.13	2,357.07	1,984.78	562.88	0.16	0.30	0.13	0.12	0.21	0.27
Variance	6.91	6.57	2.95	9.33	16.2	3.70	3.63	7.74	4.28	1.99	2.31	3.72

• Winter survival(1~9): 1=100%, 3=90% over, 5=89~60%, 7=59~20%, 9=21% below

• **Insert additional information for use by inspectors (if any):** _____

**If necessary, identify locations in line b) by the following key A: _____ B: _____

6. A portion of the original breeder seed is maintained by Smith Seed Services of Halsey, Oregon. When needed this seed can be used to generate additional breeder seed. Breeder seed will be used to establish foundation, registered and/or certified seed. Foundation and/or registered seed will be used to establish certified seed. Foundation, registered and certified class fields will be limited to one harvest.
7. The first certified seed will be offered for sale in 2013. Application will not be made for USA Plant Variety protection.



Ribeye (BAR LM95)

- Variety name:** Ribeye Kind: Annual Ryegrass
Genus: Lolium Species: multiflorum
Experimental designation (s): BAR LM95
Date submitted: 9 Jan 2013
- Ribeye was developed by Barenbrug USA, Inc. The germplasm used to develop “Ribeye” was selected from Gulf (~30%), Surrey (~36%), Florida Rust Resistant (~17%), and collection from wheat field near Lebanon, OR, designated as WH1 (~17%). Breeding method: A polycross and recurrent selection were used to develop the variety. Selection criteria: Early heading, uniform heading, freedom of foliar disease, high seed yield potential, plant vigor, plant size. First Breeder seed was produced in 1995.
- Ribeye has been tested for forage use in Florida and Texas. It has shown adaptation to those climatic zones.

4. Growth & Morphology	Heading Date in Julian Days 2012		Plant Height (cm) 2012		Flag Leaf Length (cm) 2012	
	Dever Conner, OR Albany, OR		Dever Conner, OR Albany, OR		Dever Conner, OR Albany, OR	
Traits	OR	Albany, OR	OR	Albany, OR	Dever Conner, OR	Albany, OR
Ribeye	127	131	167.2	137.8	25.6	24.3
Marshall	134	138	164.1	150.6	26.9	27.0
Tam 90	129	135	153.3	144.8	22.9	23.0
Surrey	129	134	142.1	134.4	25.2	26.3
Gulf	125	129	148.1	131.1	21.4	20.5
Florida Rust Resistant	119	121	135.1	115.3	23.1	22.5
LSD (.05)	1.74	1.88	12.62	8.74	2.13	2.78
CV	1.03	1.12	5.96	4.6	5.23	6.82

Data collected from: Spaced single plants Plants in rows/solid seeding

Variants to be expected and frequency: Not determined.

5. Primary Use?	Forage Yields Oven Dried (pounds/acre)				Gray leaf spot disease rating	
	Gainesville, FL		Overton, TX		Gainesville, FL	
	1998	1999	1998	1999	1997	1999
Ribeye	6760	2870	6578	7665	1.63	5
Marshall	7620	2730	6425	7270	1.75	5.5
Surrey	6500	2460	6882	6837	1.5	5.5
Gulf	6150	2650	6683	7878	1.38	5.1
Florida 80	5730	3410	----	----	1.25	5.2
Passerel	7130	3090	5848	7628	1.25	5.9
LSD (.05)	1210	870	1306	1202	0.2	0.7
CV	10.1	18.1	13.2	11.7	14.01	11.3

•Scale used to report traits (if appropriate): Gray leaf spot rating (0 = none, 10 = all top growth covered w/ gray leaf spot)

•Insert additional information for use by inspectors (if any): _____

- Breeder seed stock is maintained by West Coast Research Center, Barenbrug USA, Inc., Albany, OR, USA. Foundation stands may only be planted from breeder seed. Registered stands may be established from either Foundation or Breeder Seed. Foundation class fields will be limited to one harvest of Foundation production. Registered class fields will be limited to one harvest year. Certified class fields will be limited to one year of seed production. Additional years of seed production on a field area may be approved by the breeder or an individual designated by the breeder.
- If Ribeye is accepted by official seed certifying agencies, Certified seed will be first offered for sale spring of 2013. At this time Plant Variety Protection (PVP) will not be sought.



Pirouette II (BAR LP 4317)

- Variety name:** Pirouette II Kind: Perennial Ryegrass
Genus: Lolium Species: perenne
Experimental designation (s): BAR LP 4317
Date submitted: 08 Jan 2013
- The germplasm used to develop “Pirouette II” traces back, maternally, to Pirouette (~56%) and EKT 3848 (~44 %). EKT 3848 was comprised of the following European varieties: Barrage and Barlow. Pinnacle II and two ecotype collections (from Europe) were used as male parents only. Breeding method: polycrosses, turf/traffic selections and recurrent selection. Selection Criteria: turf qualities, dark green color, freedom from production diseases, and uniform heading. Breeder seed was declared and produced in 2004.
- Pirouette II has been tested for turf in IL, OR, PA, VA, WI. It has shown adaptation to those climatic zones.

4. Growth & Morphology Traits	Heading Date Julian Days		Plant Height (cm)		Flag Leaf Height (cm)	
	Albany, Oregon		Albany, Oregon		Albany, Oregon	
	2011	2012	2011	2012	2011	2012
Pirouette II	148	142	62.5	59.9	36.8	31.6
Pinnacle II	149	142	61.4	53.1	35.4	28.5
Barlennium	147	140	66.6	60.4	35.9	32.7
Pirouette	145	140	66	57	36.1	29.6
Pinnacle	142	137	71.6	58.1	35.7	29.6
LSD (.05)	2	2	5.58	4.98	4.54	3.57
Variance	1	1	4.57	4.69	6.88	6.43

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: not determined

5. Turf Use	Turf Quality (1-9)		Leaf Texture (1-9)		Genetic Color (1-9)	
	East Lansing, MI		East Lansing, MI		East Lansing, MI	
	2008	2009	2008	2009	2008	2009
Pirouette II	6.5	6.0	6.7	6.7	6.0	6.0
Barlennium	6.2	5.7	6.3	6.3	5.0	5.7
Manhattan 5 GLR	6.7	6.3	6.7	6.7	6.3	6.3
Mach I	6.5	5.9	6.3	6.3	5.7	5.7
Pinnacle	5.6	5.4	5.0	5.3	4.0	4.3
Premier	5.5	4.9	4.7	4.7	4.3	4.3
LSD (.05)	0.6	0.7	1.4	1.3	1.8	1.7
Variance	5.8	7.3	14.2	13.5	19.7	18.5

●Scale used to report traits (if appropriate): Turf Quality: 9 = best; Leaf Texture: 9 = finest; Genetic Color: 9 = darkest green

●Insert additional information for use by inspectors (if any):

**If necessary, identify locations in line b) by the following key - A: _____ B: _____

- Breeder seed stock is maintained by West Coast Research Center, Barenbrug USA, Inc., Albany, OR, USA. Foundation stands may only be planted from breeder seed. Registered stands may be established from either Foundation or Breeder Seed. Foundation class fields will be limited to 3 harvest of Foundation production plus an additional year as Registered seed. Registered class fields will be limited to 2 harvest years. Certified class fields will be limited to 4 years of seed production. Additional years of seed production on a field area may be approved by the breeder or an individual designated by the breeder.
- If ‘Pirouette II’ is accepted by official seed certifying agencies, Certified seed will be first offered for sale spring of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(A-9.1580)

1. **Variety name:** _____ Kind: Annual ryegrass
 Genus: Lolium Species: multiflorum
 Experimental designation (s): A-9.1580
 Date submitted: 7 January 2013

2. A-9.1580 originated from approximately 760 plants (88%) of Axcella, 80 plants (9%) of Marshall, and 20 plants (3%) of Gulf during summer 2005. Prior to pollination, approximately 90% of the Axcella plants were removed for poor seed production potential (few spikes produced) and less than 5 plants removed from each of Marshall and Gulf. Seed was harvested by individual plants as the maternal source. In Fall 2005, seedlings were grown of each source plant in the greenhouse and screened in two separate stress tolerance tests. Three hundred seventy two seedlings that survived the screening, with approximately equal numbers of each maternal source were space planted for harvest in 2006. Plants in 2006 were rogued for a fine leaf texture, with approximately 80% of the nursery removed prior to pollination, and seed bulked from the nursery for another cycle of greenhouse screening. Surviving plants were grown in the field in 2008 where prior to pollination, plants were rogued to remove plants with coarse leaf texture. In Fall 2008, approximately 1500 plants were subjected to low mowing in greenhouse trays and a field nursery was established in 2009 from the surviving plants. About 20 percent of the plants with coarse leaf texture were removed prior to pollination and seed from the remaining plants was bulked as the breeder seed of A-9.1580.
3. A-9.1580 has been tested in golf fairway winter overseeding trials in Arizona and North Carolina. It appears adapted for the overseeding market in these and similar environments.

4. Growth & Morphology Traits	Heading Date-DOY		Plant Height—cm		Flag Leaf Length—cm	
	Lebanon, OR		Lebanon, OR		Lebanon, OR	
	2011	2012	2011	2012	2011	2012
A-9.1580	143	129	101	38	52.3	27.6
Marshall	143	137	127	114.3	75.3	58.9
KB Supreme	147	139.7	129	119.3	82.2	66.9
TAG TA	144	136.3	107.5	113	56.0	56.9
LSD (.05)	2.1	19	9.0	8.1	15.5	3.0
CV (%)	0.8	2.8	4.1	14.3	12.6	9.3

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: About 5% plants may be shorter than most, occasional branched spikes.

5. Turf Use	Turf Quality ¹		Establishment rate (%) ²		Turf color ³		Turfgrass texture ⁴	
	2011		2011		2011		2011	
	AZ	NC	AZ	NC	AZ	NC	AZ	NC
A-9.1580	3.5	4.7	26	2.5	4.5	4.5	5.0	5.2
Double	7.0	4.7	21	2.3	6.0	7.3	6.0	7.5
Double Time	6.0	5.0	16	2.2	6.8	8.0	6.0	7.5
Nitro	8.3	7.2	9	2.5	6.5	7.3	7.3	8.0
LSD (.05)	0.9	1.3	9	0.3	0.9	0.7	0.7	0.4
CV (%), Range ⁵	5.5	15	24	9	3.5	7	2.8	4

¹Mean Quality Index as an average over four replications of scores 1 to 9, where 1=dead, 5=marginal, 6=acceptable, 9=best possible.
²Mean establishment cover provided as percentage of the plot.
³Mean color rating by visual score or comparison to color chart
⁴Mean turfgrass texture rating by visual as an average over four replications of scores 1 to 9, where 1=dead, 5=marginal, 6=acceptable, 9=best possible.
⁵ CV reported at NC; CV not reported at AZ, so range is reported.

6. Breeder seed of A-9.1580 annual ryegrass was first produced in 2009. A supply of A-9.1580 breeder seed is maintained in cold storage by Blue Moon Farms, LLC, Lebanon, OR. Enough breeder seed was produced in 2009 to last the anticipated life of A-9.1580. The Foundation, Registered, and Certified classes are permitted. Foundation seed fields may only be planted from breeder seed. Registered seed fields may be established from either Foundation or Breeder Seed. Certified fields may be established from Breeder, Foundation, or Registered Seed. The breeder, or an individual designated by the breeder, may approve additional years of seed production.

7. First certified seed will be available in 2013, but it is unknown if PVP will be sought.



Sungazer (B-10.0663)

1. **Variety name:** Sungazer Kind: Tall fescue
Genus: Festuca **Species:** arundinacea
Experimental designation (s): B-10.0663
Date submitted: 2 Jan 2013
2. Sungazer originated from individual plants from three populations. The plants trace to three populations (Pop 1-3). Pop 1: In 2003, turf plots were planted in North Carolina. The turf plot seed source was 55 half sib families derived from crosses between and among Rebel 3D, Rebel Sentry, and Rebel Jr made from 1999 to 2001. Surviving tillers were sent to Oregon in 2006. These plants interpollinated in 2007, were bulk harvested and 240 progeny were planted in 2007. Pop 2: In 2005, approximately 40 plants from Shelby and Paladin were planted and seed bulk harvested in 2006. Approximately 48 plants from the 2006 harvest were planted in the field in Fall 2007. Pop 3: In 2002 approximately 24 plants from each of Rebel IV, Rebel III, Shelby, and Rebel Pro and 51 half-sib families from crosses made in 1999-2001 between Rebel 3D, Five Point, and Rebel III were placed in the field with seed harvested in 2004 by maternal source. In 2005, plants were generated from the 2004 crosses, put in the field in 2006 by maternal source and harvested by maternal line in 2007. In Fall 2007, 24 plants of each maternal line was planted. Twelve plants were dug from Pop. 1, 18 from Pop. 2, and 34 plants from Pop. 3, and placed for proximity crossing in 2009. Seed was harvested in bulk and designated as breeder seed in 2009 of Sungazer.
3. B-9.1326 was tested for turf in North Carolina and has shown adaptation to those areas for lawn type turf and would be adapted in areas with similar climate and use.

4. Growth & Morphology	Julian Date Heading		Plant Height (cm)		Panicle Length (cm)	
	Lebanon, OR		Lebanon, OR		Lebanon, OR	
Traits	2011	2012	2011	2012	2011	2012
Sungazer	143	123	81.6	99	17.1	18.8
Rebel IV	144.6	123	96.2	111	18.5	20.2
KY 31	152.5	118	117	144	25.7	29
Rebel II	143.8	122	111.8	123	23.1	22.3
LSD (.05)	1.9	4.2	7.9	10.4	2	3.9
CV	0.7	1.9	4.6	5.1	5.4	9.9

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: | Any variants, up to 5%, would be slightly taller and lighter green in color

5. Turf Use	Quality (1-9*) 2011		Cover (1-100**) 2011		Color (1-9*) 2011		Texture (1-9*) 2011	
	A	B	A	B	A	B	A	B
Sungazer	6.5	5.8	95	84.5	7.1	5.7	6.9	7.0
Rebel IV	7.1	5.9	96.7	85.8	7	6.1	7.0	6
KY 31	4.1	4.0	95.5	92.6	3.8	3.9	5.1	5
Green Hornet	6.4	5.6	94.3	82.3	6.9	5.4	7	6
LSD (.05)	0.3	0.6	1.6	4.1	0.22	0.6	0.2	1
CV	13.9	17.6	4.9	9.9	6.4	17	5.0	5

*Rated on a scale of 1-9, 9=best. ** Rated on a scale of 1-100, 100=ideal	***	A: Lake Wheeler, NC	B:	Sand Hills, NC
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6. Breeder seed of Sungazer is maintained by Blue Moon Farms LLC, Lebanon, OR. Adequate breeder seed was produced to reproduce the variety for the life of the variety. Foundation, Registered, and Certified classes are permitted. Foundation stands may be planted only from breeder seed. Foundation class fields may be harvested for Foundation seed for a maximum of three years, followed by two years of Registered, and five years as Certified. Certified class fields produced from Registered or Foundation seed will be limited to seven years of certified production. Additional years of seed production may be approved by the breeder or the breeders designee.
7. Certified seed is anticipated to be available in spring of 2013. It is undecided if PVP will be sought.



(B-10.0979)

1. **Variety name:** _____ Kind: Annual ryegrass
Genus: Lolium **Species:** multiflorum
Experimental designation (s): B-10.0979, TAG 10.0979TA
Date submitted: 7 January 2013

2. From 2005 to 2007, small polycrossing nurseries of 200 to 500 plants were established in various combinations of the tetraploid annual ryegrass varieties TetraPro, Jumbo, Prine, and Faithful to obtain seed for a breeding source nursery. Overall, the largest components were approximately TetraPro (45%) and Jumbo (35%). These sources were individually cycled by phenotypic mass selection for two cycles each, but in close proximity of each other. Field selection was based on robust plants with apparent high seed yields. Winter screening of 1500 plants in each of the sources consisted of simulated low mowing by frequent clipping in the green house. About 500 of the surviving plants for each nursery were transplanted to the field for the phenotypic selection. In 2009, seven nurseries survived and were heavily selected (65% eliminated before anthesis) based on leafy plants and apparent high seed yield per plant. Seed from about 250 total plants from these final selection nurseries was bulked and labeled as B-10.0979. This seed bulk (B-10.0979) was designated breeder seed in 2009.
3. B-10.0979 has been tested in tested at Holly Springs, Newton, and Starkville, MS in 2011 and 2012, Poplarville, MS in 2012, and Overton, TX in 2012 and appears to be adapted to the Southern US pasture overseeding market.

4. Growth & Morphology	Heading Date — Day of Year Lebanon, OR		Plant Height—cm Lebanon, OR		Spike Length—cm Lebanon, OR	
	2011	2012	2011	2012	2011	2012
B-10.0979	147	137	124	126	31.6	30.1
TetraPro	146	136	115	126	33.8	31.5
Faithful	148	148	82	76	26.0	27.2
Blizzard	142	134	117	121	31.7	30.1
LSD (.05)	3.2	1.8	8.8	8.8	3.8	4.2
CV (%)	1.2	0.7	4.2	4.1	6.5	7.8

Data collected from: Spaced single plants Plants in rows/solid seeding _____

Variants to be expected and frequency:

About 3% plants may be shorter than most, and occasional branched spikes. There may also be about 4% diploid plants observed
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5. Primary Use	Forage Yield—lbs/A						Seasonal Yield Stability—b-value (slope of line)*					
	Holly Springs, MS		Newton, MS		Starkville, MS		Holly Springs, MS		Newton, MS		Starkville, MS	
Forage	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
B-10.0979	7359	6806	5846	7027	3889	3666	0.56	2.17	0.54	0.93	0.17	0.87
Jumbo	8348	5176	8797	7345	5024	3740	1.12	1.21	1.11	1.15	1.26	0.56
Nelson Tetraploid	8279	5384	7349	6568	6810	4378	0.94	1.27	0.81	0.41	0.86	1.11
Marshall	7573	4692	6414	7627	5581	4023	0.76	0.73	0.51	0.79	0.25	1.11
LSD (.05)	752	NS	1291	NS	1282	NS	0.17	0.31	0.37	0.25	0.63	0.07
CV (%)	14	NS	24	NS	14	NS	N/A	N/A	N/A	N/A	N/A	N/A

*The b-value is a measure of yield stability over the whole growing season, a value of 1.0 indicates a cultivar maintains yield relative to the mean of the trial for each cutting.

6. Breeder seed of B-10.0979 annual (Italian) ryegrass was first produced in 2009. A supply of B-10.0979 breeder seed is maintained in cold storage by Blue Moon Farms, LLC, Lebanon, OR. Enough breeder seed was produced in 2009 to last the anticipated life of the B-10.0979. The Foundation, Registered, and Certified classes are permitted. Foundation seed fields may only be planted from breeder seed. Registered seed fields may be established from either Foundation or Breeder Seed. Certified fields may be established from Breeder, Foundation, or Registered Seed. The breeder, or an individual designated by the breeder, may approve additional years of seed production.
7. First certified seed will be available in 2013, but it is unknown if PVP will be sought.



(B-8.1441)

1. **Variety name:** _____ Kind: Annual ryegrass
Genus: Lolium **Species:** multiflorum
Experimental designation (s): B-8.1441, TAG 8.1441, B-10.1041, B-10.141AR
Date submitted: 7 January 2013

2. From 1989 to 1993, recurrent selection was conducted for crown rust (*Puccinia coronata* Corda var. *coronata*) resistance. In each year, three ramets from about 300 plants showing little or no crown rust symptoms were selected in spring from a nursery of over 9000 spaced-plants at Gainesville, FL. More than 900 ramets from selected plants were sent to Corvallis, OR, in early May of 1989, 1990, and 1991. The ramets were subsequently field evaluated for seed production and resistance to stem rust (*P. graminis* Pers.:Pers.). Seed of selected plants was returned to Gainesville each fall to establish the 1990–1991 and 1991–1992 plantings. Selection criteria in the Oregon open-pollinated, stratified mass selection nursery was freedom of stem rust symptoms, total seed yield per plant, and average individual seed weight. In early Spring 2007, seed from the final selection nursery in 1993 was planted in greenhouse flats and approximately 2000 plants were transplanted to a nursery near Lebanon, OR. Selection in this nursery was based on large, leafy plants that had an upright growth habit. Plants not selected were cut from the nursery prior to anthesis. Open pollinated seed from selected plants were included in another 1500 plant nursery in 2008, along with about 300 plants originating from a segregating pool of Marshall and Gulf crosses initiated in 2004 that was cycled for foliage and seed productivity in Oregon for two years. Prior to anthesis, plants that were small or weak were cut from the nursery. Approximately 900 plants were left to inter-pollinate and seed from those plants was harvested and bulked. The seed bulk (B-8.1441) was designated breeder seed in 2008.
3. B-8.1441 has been tested in tested Holly Springs, Newton, and Starkville, MS in 2011 and 2012, Overton, TX in 2012, and Ardmore, OK in 2011 and appears to be adapted to the Southern US pasture overseeding market.

4. Growth & Morphology	Heading Date — Day of Year		Plant Height—cm		Spike Length—cm	
	Lebanon, OR		Lebanon, OR		Lebanon, OR	
Traits	2011	2012	2011	2012	2011	2012
B-8.1441	145	138	113	120	28.6	27.0
Axcella 2	146	136	84	102	22.1	22.8
Gulf	141	133	104	115	24.8	24.0
KB Supreme	147	140	114	119	31.2	28.3
LSD (.05)	2.4	1.3	10.3	7.5	2.3	2.8
CV (%)	0.9	0.5	5.5	3.7	4.8	6.4

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: | About 5% plants may be shorter than most, occasional branched spikes.

5. Primary Use	Forage Yield—lbs/A						Seasonal Yield Stability—b-value (slope of line)*					
	Holly Springs, MS		Newton, MS		Starkville, MS		Holly Springs, MS		Newton, MS		Starkville, MS	
Forage	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
B-8.1441	7454	5335	7177	7272	5525	3552	1.10	1.04	0.82	0.84	1.01	0.99
Marshall	6821	4692	6414	7627	5581	4023	0.76	0.73	0.51	0.79	0.25	1.11
Jackson	8132	5895	7942	6700	5046	4014	0.87	0.77	1.17	0.97	0.93	1.27
Jumbo	7596	5176	8797	7345	5024	3740	1.12	1.21	1.11	1.15	1.26	0.56
LSD (.05)	752	NS	1291	NS	969	NS	0.17	0.31	0.37	0.25	0.63	0.07
CV (%)	14	NS	24	NS	27.4	NS	N/A	N/A	N/A	N/A	N/A	N/A

*The b-value is a measure of yield stability over the whole growing season, a value of 1.0 indicates a cultivar maintains yield relative to the mean of the trial for each cutting.

6. Breeder seed of B-8.1441 Italian (annual) ryegrass was first produced in 2008. A supply of B-8.1441 breeder seed is maintained in cold storage by Blue Moon Farms, LLC, Lebanon, OR. Enough breeder seed was produced in 2008 to last the anticipated life of the B-8.1441. The Foundation, Registered, and Certified classes are permitted. Foundation seed fields may only be planted from breeder seed. Registered seed fields may be established from either Foundation or Breeder Seed. Certified fields may be established from Breeder, Foundation, or Registered Seed. The breeder, or an individual designated by the breeder, may approve additional years of seed production.

7. First certified seed will be available in 2013, but it is unknown if PVP will be sought.



(B-9.1476)

- Variety name:** _____ Kind: Orchardgrass
Genus: Dactylis **Species:** glomerata
Experimental designation (s): B-9.1476
Date submitted: 7 January 2013
- B-9.1476 was developed from the Corvallis, OR populations following the study described in Casler, et al. Crop Sci. 44:1601–1607. Five clones that produced no panicles at Ashland, WI or Charlottetown, PEI, Canada, but that had adequate spaced-plant seed yield in Corvallis were polycrossed in isolation to produce USDA-ARS germplasm seed, designated WO7-NF5, that was used to create a source nursery in fall of 2007 near Lebanon, OR. In Spring 2009 prior to anthesis approximately 75% of the nursery was removed leaving only plants that were vigorous and leafy, mostly free of foliar diseases, and that had the largest number of panicle bearing culms. Seed from these plants was bulked and the seed bulk (B-9.1476) was designated breeder seed in Fall 2009.
- B-9.1476 was tested for forage production in Tennessee and Kentucky and appears to be adapted to those environments.

4. Growth & Morphology Traits	Heading Date — Day of Year Lebanon, OR		Plant Height—cm Lebanon, OR		Panicle Length—cm Lebanon, OR	
	2011	2012	2011	2012	2011	2012
	B-9.1476	140	118	123	134	16.9
Prodigy	129	117	120	137	15.0	20.3
Hallmark	133	118	112	137	14.9	19.1
Pennlate	140	135	132	146	18.9	24.6
LSD (.05)	4.4	3.2	9.3	14.6	2.6	4.3
CV (%)	1.7	1.3	4.0	5.6	8.4	11.4

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: About 5% plants may be shorter than most, occasional branched spikes.

5. Primary Use: Forage	Forage Yield—(ton DM/acre)				Maturity rating ¹	
	Quicksand, KY		Greenville, TN		Quicksand, KY	Princeton, KY
	2011	2012	2010	2011	May 11, 2011	April 18, 2012
B-9.1476	3.71	1.72	1.64	2.75	37.0	29.5
Benchmark Plus	3.67	1.83	2.55	4.10	59.5	29.5
Persist	3.67	2.12	2.25	3.95	59.5	29.5
Potomac	3.73	1.95			49.8	30.0
LSD (.05)	0.74	0.41	0.56	0.92	5.7	1.2
CV (%)	13.11	14.30	13	14	8.3	2.9

¹Maturity rating scale: 37=flag leaf emergence, 45=boot swollen, 50=beginning of inflorescence emergence, 58=complete emergence of inflorescence, 62=beginning of pollen shed. See Table 4 of Kentucky published repots PR629 and PR645 for complete scale.

- Breeder seed of B-9.1476 orchardgrass was first produced in 2009. A supply of B-9.1476 breeder seed is maintained in cold storage by Blue Moon Farms, LLC, Lebanon, OR. Enough breeder seed was produced in 2009 to last the anticipated life of the B-9.1476. The Foundation, Registered, and Certified classes are permitted. Foundation seed fields may only be planted from breeder seed. Registered seed fields may be established from either Foundation or Breeder Seed. Certified fields may be established from Breeder, Foundation, or Registered Seed. Foundation and Registered class fields will be limited to three harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class production fields will be limited to seven years of seed production. The breeder, or an individual designated by the breeder, may approve additional years of seed production.
- First certified seed will be available in 2013. It is doubtful that PVP will be sought now, or in the near future.



(B-10.0655)

1. **Variety name:** _____ Kind: Tall fescue
Genus: Festuca **Species:** arundinacea
Experimental designation (s): B-10.0655
Date submitted: 2 Jan 2013

2. 10.0655 originated from individual plants from two populations (Pop 1-2). Pop 1: In 2002, the varieties Five Point, Rebel Jr, and Rebel Sentry were subjected to greenhouse trials with approximately 24 surviving tillers of each variety planted in the field, with seed harvested in 2003 and bulked. In fall 2003, plants from the 2003 seed were subjected to greenhouse trials, with 48 surviving plants planted in the field. Approximately 10% of the plants were removed for rust susceptibility with the remaining plants harvested and bulked in 2004. Plants from this seed were subjected to greenhouse trials with 48 surviving plants put in the field in 2008. Pop 2: Turf plots of Rebel Sentry, Rebel IV, Five Point, and Rebel 3D were planted in Texas in 2004. About ten tillers of each plot were selected in late 2005, placed in isolation in Oregon, with polycross seed produced in 2006. In 2006, plants grown from the 2006 harvest were subjected to greenhouse trials with 264 individual plants selected, field planted, and individually harvested in 2007. Based on seed production, seed from the seven higher yielding plants was bulked, and subjected to greenhouse trials. Twenty-four surviving plants were field planted in 2008 in proximity to Pop 1. Approximately 15% of the plants from each source were removed for rust susceptibility prior to interpollination of Pop 1 and Pop 2 in 2009. Seed was harvested from remaining plants and bulked, forming the breeder seed of 10.0655 in 2009.
3. B-9.1326 was tested for turf in North Carolina and has shown adaptation to those areas for lawn type turf and would be adapted in areas with similar climate and use.

4. Growth & Morphology	Julian Date	Julian Date	Plant	Plant	Panicle	Panicle
Traits	Heading	Heading	Height (cm)	Height (cm)	Length (cm)	Length (cm)
	2011	2012	2011	2012	2011	2012
B-10.0655	145.8	125	86.7	105	18.3	20.5
Rebel IV	144.6	123	96.2	111	18.5	20.2
KY 31	152.5	118	117	144	25.7	29
Rebel II	143.8	122	111.8	123	23.1	22.3
LSD (.05)	1.9	4.2	7.9	10.4	2	3.9
CV	0.7	1.9	4.6	5.1	5.4	9.9

Data collected from: Spaced single plants _____ Plants in rows/solid seeding _____

Variants to be expected and frequency: Any variants, up to 5%, would be slightly taller and lighter green in color

5. Turf Use	Quality (1-9*) 2011		Cover (1-100**) 2011		Color (1-9*) 2011		Texture (1-9*) 2011	
	A	B	A	B	A	B	A	B
B-10.0655	6.4	4.0	95	64.5	6.9	6.0	6.9	6.0
Rebel IV	7.1	5.9	96.7	85.8	7	6.1	7.0	6
KY 31	4.1	4.0	95.5	92.6	3.8	3.9	5.1	5
Green Hornet	6.4	5.6	94.3	82.3	6.9	5.4	7	6
LSD (.05)	0.3	0.6	1.6	4.1	0.22	0.6	0.2	1
CV	13.9	17.6	4.9	9.9	6.4	17	5.0	5

*Rated on a scale of 1-9, 9=best. ** Rated on a scale of 1 to 100, 100=ideal.*** A: Lake Wheeler, NC B: Sand Hills, NC

6. Breeder seed of B-10.0655 is maintained by Blue Moon Farms LLC, Lebanon, OR. Adequate breeder seed was produced to reproduce the variety for the life of the variety. Foundation, Registered, and Certified classes are permitted. Foundation stands may be planted only from breeder seed. Foundation class fields may be harvested for Foundation seed for a maximum of three years, followed by two years of Registered, and five years as Certified. Certified class fields produced from Registered or Foundation seed will be limited to seven years of certified production. Additional years of seed production may be approved by the breeder or the breeders designee.
7. Certified seed is anticipated to be available in spring of 2014. It is undecided if PVP will be sought.



Green Hornet (656)

1. **Variety name:** Green Hornet Kind: Tall fescue
 Genus: Festuca Species: arundinacea
 Experimental designation (s): 656
 Date submitted: 2 Jan 2013

2. Green Hornet tall fescue has four maternal lines as parental sources. The source plants came from turf plots of Rebel Sentry, Rebel IV, Five Point, and Rebel 3D planted in Texas in 2004. Approximately ten tillers of each plot were selected in late 2005, placed in isolation in Oregon, with polycross seed produced in 2006. From the 2006 seed, approximately 1000 plants were grown and subjected to greenhouse trials, with the approximate 30 survivors planted in a field polycross. This greenhouse – field cycle was repeated in 2007. In Fall 2009, twenty-nine plants from the 2007 planting were placed in isolation, with approximately 25% of the plants eliminated during Spring 2010, with seed from remaining plants bulked as 656 and declared breeders seed of Green Hornet in 2010.
3. Green Hornet was tested for turf in North Carolina and has shown adaptation to those areas for lawn type turf and would be adapted in areas with similar climate and use.

4. Growth & Morphology	Julian Date	Julian Date	Plant	Plant	Panicle	Panicle
Traits	Heading	Heading	Height (cm)	Height (cm)	Length (cm)	Length (cm)
	2011	2012	2011	2012	2011	2012
Green Hornet	143.9	123	89.5	105	19.1	21.1
Rebel IV	144.6	123	96.2	111	18.5	20.2
KY 31	152.5	118	117	144	25.7	29
Rebel II	143.8	122	111.8	123	23.1	22.3
LSD (.05)	1.9	4.2	7.9	10.4	2	3.9
CV	0.7	1.9	4.6	5.1	5.4	9.9

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: | Any variants, up to 5%, would be slightly taller and lighter green in color

5. Turf Use	Quality (1-9*) 2011		Cover (1-100**) 2011		Color (1-9*) 2011		Texture (1-9*) 2011	
	A	B	A	B	A	B	A	B
Green Hornet	6.4	5.6	94.3	82.3	6.9	5.4	7	6
Rebel IV	7.1	5.9	96.7	85.8	7	6.1	7.0	6
KY 31	4.1	4.0	95.5	92.6	3.8	3.9	5.1	5
B-10.0663	6.5	5.8	95	84.5	7.1	5.7	6.9	7
LSD (.05)	0.3	0.6	1.6	4.1	0.22	0.6	0.2	1
CV	13.9	17.6	4.9	9.9	6.4	17	5.0	5

*Rated on a scale of 1-9, 9=best. ** Rated on a scale of 1 to 100, 100=ideal.***A. Lake Wheeler, NC B. Sand Hills, NC

6. Breeder seed of Green Hornet is maintained by Blue Moon Farms LLC, Lebanon, OR. Adequate breeder seed was produced to reproduce the variety for the life of the variety. Foundation, Registered, and Certified classes are permitted. Foundation stands may be planted only from breeder seed. Foundation class fields may be harvested for Foundation seed for a maximum of three years, followed by two years of Registered, and five years as Certified. Certified class fields produced from Registered or Foundation seed will be limited to seven years of certified production. Additional years of seed production may be approved by the breeder or the breeders designee.
7. Certified seed is anticipated to be available in spring of 2013. It is undecided if PVP will be sought.



Phaeton (B-9.1327)

1. **Variety name:** Phaeton Kind: Perennial ryegrass
Genus: Lolium **Species:** Perenne
Experimental designation (s): B-9.1327
Date submitted: 2 Jan 2013

2. In 2007, plants were grown in a greenhouse. Three plants were each selected from Roadster, Acappella, Metropolitan, and Palmer III. Two plants were selected from Prelude III and Americas. Four plants were selected from LS2000 and six plants from Dazzle. One plant was selected each from Brightstar SLT and from Casper. The 96 remaining plants originated from plants from three cycles of a two step screening process initiated in 2001. Crosses were made between Palmer II, Prelude II, Palmer III, Prelude III, Yorktown II and Repell III, grown in a greenhouse trial with survivors taken to field nurseries, rogued for rust resistance and seed yield, and remaining plants bulk harvested for the next cycle of selection. In Fall 2008, the 124 plants were placed in a nursery with no more than ten percent roguing for rust susceptibility in spring 2009, with the remaining plants bulk harvested and designated breeders seed of B-9.1327.

3. Phaeton was tested in and is adapted to Oregon for lawn turf, and Texas.

4. Growth & Morphology	Julian Date	Julian Date	Plant	Plant	Spike	Spike
Traits	Heading	Heading	Height (cm)	Height (cm)	Length (cm)	Length (cm)
	2011	2012	2011	2012	2011	2012
Phaeton	141.3	139	54.7	59	15.5	15.9
Linn	135.2	129	66.0	68	18.5	16.7
Palmer III	144.6	140	58.5	58	16.3	16
Pavilion	150.9	147	55.9	55	15.1	15.2
LSD (.05)	4.0	2.9	4.9	5.5	1.6	1.7
CV	1.9	1.2	4.9	5.2	5.9	6.1

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: Any variants, up to 5%, would be slightly taller and lighter green in color

5. Turf Use	Quality* 2009-10		Density* 2009-10		Color* 2009-10		Texture* 2009-10	
	Texas	Oregon	Texas	Oregon	Texas	Oregon	Texas	Oregon
a) Phaeton	6.2	6.7	6.2	6.0	5.8	6.9	6.6	7.3
Palmer III	3.9	4.8	3.4	4.8	4.1	4	4.2	5.5
Palmer II	4.2	4.3	3.7	4.5	4.2	3	4.2	5.3
Linn	2.1	1.6	5.8	2	1.3	1.0	2.0	1.8
LSD (.05)	0.4	0.4	0.7	0.85	0.93	0.4	0.85	.5
CV	9.1	3.0	7.1	6.5	12.2	3.3	8.5	4.0

*Rated on a scale of 1-9, 9=best.

6. Breeder seed of Phaeton is maintained by Blue Moon Farms LLC, Lebanon, OR. Adequate breeder seed was produced to reproduce the variety for the life of the variety. Foundation, Registered, and Certified classes are permitted. Foundation stands may be planted only from breeder seed. Foundation class fields may be harvested for Foundation seed for a maximum of three years, followed by two years of Registered, and five years as Certified. Certified class fields produced from Registered or Foundation seed will be limited to seven years of certified production. Additional years of seed production may be approved by the breeder or the breeders designee.
7. Certified seed is anticipated to be available in spring of 2013. It is undecided if PVP will be sought.



(OG0506)

1. **Variety name:** _____ Kind: Orchardgrass
 Genus: Dactylis Species: glomerata
 Experimental designation (s): OG0506
 Date submitted: January 9, 2013

2. OG0506 orchardgrass was developed using phenotypic recurrent selection. Approximately 2000 plants from elite polycross progeny lines were established in a spaced-plant nursery at Franklin, TN. After 3 years of clonal evaluation for vigor, summer regrowth, and plant health, selected plants were established in a spaced-plant nursery at Touchet, WA for further evaluation for vigor, heading date, and seed yield potential. Syn-1 breeder seed of OG0506 was bulk harvested in 2006 from 15 elite plants in this nursery.
3. OG0506 is adapted to and intended for forage use in the north central, east central, and northwest United States. It has been tested in Indiana, Kentucky, Pennsylvania, Tennessee, Washington, and Wisconsin.

4. Growth and Morphology Traits	Flag leaf length (cm)		Flag leaf width (mm)		Heading Date (May 1 = 1)	
	Buck Creek, IN		Buck Creek, IN		Buck Creek, IN	
	2008	2009	2008	2009	2008	2009
OG0506	19.7	26.2	7.3	7.7	20.5	22.3
Benchmark Plus	17.2	21.5	5.9	7.2	19.5	20.3
Haymaster	17.9	25.0	6.8	8.2	27.3	27.0
LSD(.05)	2.3	2.5	0.7	0.8	2.1	1.8
CV(%)	11.1	9.0	9.7	9.0	8.6	7.2

Data collected from: Spaced single plants _____ Plants in rows/solid seeding X

Variants to be expected and frequency: None described

5. Primary Use	Forage Yields T/A Dry Matter				Foliar Disease: 1 = least	
	New Castle, KY		Franklin, TN		Buck Creek, IN	Franklin, TN
	2007	2008	2009	2010	2011	2009
Forage						
OG0506	3.78	6.54	6.83	4.31	4.3	2.3
Benchmark Plus	3.31	5.86	6.58	3.92	6.3	5.0
Haymaster	3.44	5.78	6.68	4.22	3.7	2.7
LSD(.05)	0.49	0.78	0.60	0.41	1.4	1.5
CV(%)	10.4	9.7	6.9	7.8	19.1	29.9

6. Seed increase of OG0506 is limited to breeder, foundation, and certified classes. Breeder seed was produced in 2006 (Syn-1) at Touchet, WA, and 2012 (Syn-2) at Lebanon, OR, sufficient for the life of the variety, and will be maintained by FFR Cooperative. Foundation fields may be established from breeder seed. Certified fields may be established from breeder or foundation seed. Stands of foundation and certified fields are limited to 3 and 5 years, respectively.
7. The first certified seed of OG0506 will be offered for sale in 2015. Plant variety protection will not be sought for this variety.



(OG0708DT)

1. **Variety name:** _____ Kind: Orchardgrass
Genus: Dactylis **Species:** glomerata
Experimental designation (s): OG0708DT
Date submitted: January 9, 2013

2. OG0708DT orchardgrass was developed using phenotypic recurrent selection. Plants from the varieties Benchmark Plus, Bruno, Paiute, Pawnee, Profile, Seco, and an FFR breeding line were selected from a 4th year yield trial managed to induce drought stress at Touchet, WA, and established in a spaced-plant nursery at Touchet. Following one year of evaluation for maturity, vigor, and seed yield potential, 35 selected plants were allowed to intercross. The syn-1 breeder seed was bulked harvested in 2008.
3. OG0708DT is adapted to and intended for forage use in the east central United States. It has been tested in Indiana, Kentucky, Tennessee, and Virginia.

4. Growth and Morphology Traits	Flag leaf length (cm)		Panicle length (cm)		Plant Height (cm)	
	Buck Creek, IN		Buck Creek, IN		Buck Creek, IN	
	2010	2011	2010	2011	2010	2011
OG0708DT	27.3	30.5	17.5	18.5	113.8	106.5
Benchmark Plus	29.8	25.8	19.5	17.5	114.8	103.0
Haymaster	29.5	31.5	21.0	20.5	112.5	107.0
LSD(.05)	3.7	3.4	2.2	2.4	6.3	7.4
CV(%)	10.7	9.2	9.6	10.3	4.8	5.9

Data collected from: Spaced single plants _____ Plants in rows/solid seeding X

Variants to be expected and frequency: None observed

5. Primary Use	Forage Yields T/A Dry Matter				Foliar Disease: 1 = least		
	New Castle, KY		Franklin, TN		Buck Creek, IN		Franklin, TN
	2010	2011	2009	2010	2011 ^{1/}	2011 ^{2/}	2009
Forage							
OG0708DT	7.49	7.39	6.83	3.95	3.3	3.3	2.3
Benchmark Plus	7.27	6.89	6.58	3.92	4.7	6.0	5.0
Haymaster	7.29	6.02	6.68	4.22	2.0	2.0	2.7
LSD(.05)	0.48	0.84	0.60	0.41	1.2	1.6	1.5
CV(%)	4.8	8.8	6.9	7.8	30.9	33.8	29.9

^{1/}2009 seeding.

^{2/}2010 seeding.

6. Seed increase of OG0708DT is limited to breeder, foundation, and certified classes. Breeder seed was produced in 2008 (Syn-1) at Touchet, WA, and 2012 (Syn-2) at Forest Grove, OR, sufficient for the life of the variety, and will be maintained by FFR Cooperative. Foundation fields may be established from breeder seed. Certified fields may be established from breeder or foundation seed. Stands of foundation and certified fields are limited to 3 and 5 years, respectively.
7. The first certified seed of OG0708DT will be offered for sale in 2015. Plant variety protection will not be sought for this variety.



(TF0402)

1. **Variety name:** _____ Kind: Tall Fescue
 Genus: Festuca Species: arundinacea
 Experimental designation (s): TF0402
 Date submitted: January 9, 2013

2. TF0402 tall fescue was developed using phenotypic recurrent selection. Plants from the varieties Brutus, Stockman, and three FFR breeding lines were selected from a 4-year old yield trial at Franklin, TN, and established in a spaced-plant nursery at Touchet, WA. After a year of clonal evaluation for vigor, seed yield rating, and dark-green color, 15 plants were removed and allowed to intercross in isolation. The syn-1 breeder seed was bulk harvested in 2006.
3. TF0402 is adapted to and intended for use as forage in the north central, east central, and northwest United States. It has been tested in Indiana, Kentucky, Pennsylvania, Tennessee, Virginia, Washington, and Wisconsin.

4. Growth and Morphology Traits	Plant Height (cm)		Flag leaf length (cm)		Heading Date (May 1 = 1)	
	Buck Creek, IN		Buck Creek, IN		Buck Creek, IN	
	2008	2009	2008	2009	2008	2009
TF0402	114.3	112.5	13.5	19.8	25.0	20.8
Fawn	105.8	106.8	11.6	17.2	18.0	18.0
KY-31	99.7	109.4	11.8	18.6	27.0	26.5
LSD(.05)	5.1	5.2	1.4	2.3	1.2	2.2
CV(%)	4.0	4.0	9.7	10.5	4.2	8.3

Data collected from: Spaced single plants _____ Plants in rows/solid seeding X

Variants to be expected and frequency: None described

5. Primary Use	Forage Yields T/A Dry Matter				Stem rust: 1 = little or none	
	Buck Creek, IN		Mt. Joy, PA		Buck Creek, IN	Franklin, TN
	2008	2009	2009	2010	2008	2009
Forage						
TF0402	8.73	8.66	9.29	6.94	1.0	2.7
Fawn	7.61	6.52	7.56	6.10	7.7	9.0
KY-31	8.06	7.69	8.21	5.50	4.7	3.3
LSD(.05)	0.60	1.27	0.88	1.07	1.1	1.1
CV(%)	5.1	12.7	7.6	12.9	21.8	23.8

6. Seed increase of TF0402 is limited to breeder, foundation, and certified classes. Breeder seed was produced in 2006 (Syn-1) at Touchet, WA, and 2012 (Syn-2) at Otterbein, IN, sufficient for the life of the variety, and will be maintained by FFR Cooperative. Foundation fields may be established from breeder seed. Certified fields may be established from breeder or foundation seed. Stands of foundation and certified fields are limited to 3 and 5 years, respectively.
7. The first certified seed of TF0402 will be offered for sale in 2015. Plant variety protection will not be sought for this variety.



(TF0705SL)

1. **Variety name:** _____ Kind: Tall Fescue
Genus: Festuca **Species:** arundinacea
Experimental designation (s): TF0705SL
Date submitted: January 9, 2013

2. TF0705SL tall fescue was developed using phenotypic recurrent selection. Approximately 2500 plants from elite polycross progeny lines and varieties were established in a spaced-plant nursery at Buck Creek, IN. After 2 years of clonal evaluation for vigor, plant health, and soft leaf texture, selected plants were established in an isolated crossing block at Touchet, WA for further evaluation for vigor, heading date, and seed yield potential. Syn-1 breeder seed of TF0705SL was bulk harvested in 2008 from 56 elite plants in this nursery.

3. TF0705SL is adapted to and intended for forage use in the east central United States. It has been tested in Indiana, Kentucky, Tennessee, and Virginia.

4. Growth and Morphology Traits	Plant Height (cm)		Panicle length (cm)		Heading Date (May 1 = 1)	
	Buck Creek, IN		Buck Creek, IN		Buck Creek, IN	
	2010	2011	2010	2011	2010	2011
TF0705SL	121.5	113.8	29.8	24.3	23.3	29.5
Fawn	116.0	114.3	23.8	22.8	21.5	27.3
KY-31	125.8	106.3	29.5	24.0	26.0	31.5
LSD(.05)	7.2	5.0	1.9	1.9	1.5	1.1
CV(%)	4.9	3.7	5.7	6.6	5.2	3.1

Data collected from: Spaced single plants _____ Plants in rows/solid seeding X

Variants to be expected and frequency: None observed

5. Primary Use	Forage Yields T/A Dry Matter				Buck Creek, IN		Franklin, TN
	New Castle, KY		Franklin, TN		Crown rust	Crown rust	Stem rust
	2010	2011	2009	2010	2011 ^{1/}	2011 ^{2/}	2009
Forage							
TF0705SL	9.42	9.29	9.56	4.02	1.7	1.7	2.0
Fawn	8.12	8.85	8.47	4.46	9.0	9.0	9.0
KY-31	9.67	8.7	8.83	3.69	3.0	6.0	3.3
LSD(.05)	0.79	0.78	0.68	0.35	1.5	1.3	1.1
CV(%)	6.4	6.3	5.2	5.8	32.2	21.6	23.8

^{1/}Rating: 1 = little or no disease, 9 => 90% leaf area infected; 2009 seeding.

^{2/}Rating: 1 = little or no disease, 9 => 90% leaf area infected; 2010 seeding.

6. Seed increase of TF0705SL is limited to breeder, foundation, and certified classes. Breeder seed was produced in 2008 (Syn-1) at Touchet, WA, and 2012 (Syn-2) at Lebanon, OR, sufficient for the life of the variety, and will be maintained by FFR Cooperative. Foundation fields may be established from breeder seed. Certified fields may be established from breeder or foundation seed. Stands of foundation and certified fields are limited to 3 and 5 years, respectively.

7. The first certified seed of TF0705SL will be offered for sale in 2015. Plant variety protection will not be sought for this variety.



(JR-178)

1. **Variety name:** _____ Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne L.
Experimental designation (s): JR-178
Date submitted: 12-8-12

2. JR-178 (1501) perennial ryegrass (*Lolium perenne* L.) is a turf-type perennial ryegrass selected from the maternal progenies of 18 parental lines. JR-178 was selected for semi-prostrate growth habit, medium maturity, high seed yield, medium dark green color and tolerance to gray leaf spot (caused by *Pyricularia grisea*), and crown rust (caused by *Puccinia coronata*) diseases.
- In the spring of 2008, a spaced-plant nursery was established at the Plant Biology Research and Extension farm of Rutgers University, Freehold, NJ consisting of 3500 plants. The plants were selected from progeny planted in a 2007 test that had suffered from gray leaf spot. The plants were screened for tolerance to crown rust disease prior to harvest. In the fall of 2008, 276 turf plots were established from plants exhibiting uniform semi-prostrate growth habit and medium. Nineteen plots with the best turf quality and freedom from gray leaf spot disease were selected and transported to a Post Falls, ID greenhouse in April, 2009. In June 2009, the material was used to plant a 4918-plant isolation block near Connell, WA. About 75% of the block was removed in the spring due to winter damage. One progeny line was also removed before anthesis based on poor turf performance in New Jersey. Before anthesis in June 2010 the block was rogued to increase uniformity removing ~ 13% of the plants; 608 plants were harvested as Breeder seed in July 2010.
- Approximately 59% of the maternal germplasm used in the development of JR-178 perennial ryegrass traces to germplasm collected from Eastern Europe starting in 1996. Twenty-three percent traces to several patches of perennial ryegrass plants that survived severe flood and Pythium (*Pythium* spp.) damage in 1989. Eighteen percent trace to a plant collected from Georgian Court College in Lakewood, NJ in 1992.
3. JR-178 will be primarily used for turf. It has been tested in the 2010 perennial ryegrass National Turfgrass Evaluation Program (NTEP) test at 12 locations. JR-178 is adapted to use in CA, IA, IL, MA, MD, MI, MN, MO, NE, NJ, OR, and VA. JR-178 was also included in overseeding trials in AL, AZ, and FL as part of the 2010 NTEP and also is adapted for overseeding use at those locations.

4. Growth & Morphology Traits	Plant Height (cm)		Flagleaf height (cm)		Panicle length (cm)	
	2012		2012		2012	
	Moses Lake, WA	Rathdrum, ID	Moses Lake, WA	Rathdrum, ID	Moses Lake, WA	Rathdrum, ID
JR-178	61.0	44.9	36.3	24.6	15.1	11.1
Mach 1	61.3	50.7	36.6	28.0	15.1	14.6
Pinnacle	65.3	45.7	37.0	27.2	16.5	11.5
Linn	69.9	59.9	40.9	32.4	16.5	15.2
LSD (.05)	4.2	3.9	3.4	2.5	1.2	1.4
CV%	16.5	18.7	21.6	20.8	21.2	26.0

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: The frequency of variants has been less than 5% and can be identified as having earlier or later maturity, lighter color, coarser leaf texture, and taller plant height. Conspicuous variants are rogued from seed stock fields to maintain continued uniformity and stability, although they will occur in each generation.

5. Turf Use	Turf Quality		Spring Greenup		Seedling Vigor		Genetic Color	
	2011		2011		2010		2011	
	NJ	MN	IL	MD	MN	OR	NJ	MA
JR-178	6.7	5.5	5.3	7.7	7.0	7.0	6.3	5.7
Mach 1	6.0	5.0	5.3	7.7	6.0	6.7	7.7	7.3
Pinnacle	2.8	3.0	4.0	5.3	7.7	6.7	1.0	4.0
Linn	0.9	1.3	7.3	5.3	7.7	6.7	1.0	3.0
LSD (.05)	0.8	0.8	1.6	0.9	1.1	1.0	1.3	0.8
CV%	8.9	10.5	18.8	8.0	9.5	9.2	12.2	1.6

●Scale used to report traits (if appropriate): Ratings are based on 1-9 scale where 9 = best and 1 = poorest or dead.

6. Jacklin Seed by Simplot®, Post Falls, ID., maintains Breeder seed of JR-178. Seed classes recognized are Foundation, Registered and Certified and the length of stand on each is 3, 3, and 6 years, respectively. Jacklin Seed by Simplot® maintains the Breeder seed. Original Breeder seed is maintained in cold storage and if/when new Breeder seed is needed this will be planted, rogued by the plant breeder and harvested as Breeder seed.
7. Certified seed is expected to be available in August 2014. PVP will be applied for but non-certified seed will be allowed.



(JR-192)

1. **Variety name:** _____ Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne L.
Experimental designation (s): JR-192
Date submitted: 12-8-12

2. JR-192 was developed from the half-sib progenies of 19 plants. Breeding techniques in the population improvement program included selection, paired crosses and polycrosses. Plants with superior characteristics were advanced to the next cycle of breeding and inferior material discarded.

The maternal parentage of JR-192 traces to : 26.3% Accent II, 10.5% La Quinta, 10.5% Mach 1, 10.5% paired cross of Brightstar X Prizm, 5.3% All*Star 2, 5.3% Monterey II, 5.3% Monterey 3 and the remaining 26.3% of the material was from experimental populations. Table A contains a chronological breeding history of the 19 sib-progenies used in the development of JR-192.

During the spring of 2009, 19 progeny plots were selected from a 2007 Ohio turf trial based on superior turf performance. Before anthesis in 2010, this block was rogued heavily removing plants with winter damaged crowns and for uniformity of growth habit, maturity, and color removing 67% of the plants. The remaining 1454 plants were harvested as Breeders seed in July 2010.

3. JR-192 will be primarily used for turf. It has been tested in the 2010 perennial ryegrass National Turfgrass Evaluation Program (NTEP) test at 12 locations. JR-178 is adapted to use in CA, IA, IL, MA, MD, MI, MN, MO, NE, NJ, OR, and VA. JR-192 was also included in overseeding trials in AL, AZ, and FL as part of the 2010 NTEP and also is adapted for overseeding use at those locations.

4. Growth & Morphology Traits	Plant Height (cm)		Flagleaf height (cm)		Flagleaf length (cm)	
	2012		2012		2012	
	Moses Lake, WA	Rathdrum, ID	Moses Lake, WA	Rathdrum, ID	Moses Lake, WA	Rathdrum, ID
JR-192	62.3	50.3	38.0	28.8	10.8	9.4
Accent II	66.5	50.8	41.8	27.7	12.1	10.8
Mach 1	61.3	50.7	36.6	28.0	10.2	10.3
Pinnacle	65.3	45.7	37.0	27.2	10.5	8.9
Linn	69.9	59.9	40.9	32.4	12.6	11.1
LSD (.05)	4.2	3.9	3.4	2.5	1.2	1.3
CV%	16.5	18.7	21.6	20.8	30.0	30.8

Data collected from: Spaced single plants Plants in rows/solid seeding _____

Variants to be expected and frequency:

The frequency of variants has been less than 5% and can be identified as having earlier or later maturity, lighter color, coarser leaf texture, and taller plant height. Conspicuous variants are rogued from seed stock fields to maintain continued uniformity and stability, although they will occur in each generation.

5. Turf Use	Turf Quality		Spring Greenup		Seedling Vigor		Genetic Color	
	2011		2011		2010		2011	
	NJ	MN	IL	MD	MN	OR	NJ	MA
JR-192	5.9	5.0	4.7	7.0	7.3	7.0	5.3	5.7
Mach 1	6.0	5.0	5.3	7.7	6.0	6.7	7.7	7.3
Pinnacle	2.8	3.0	4.0	5.3	7.7	6.7	1.0	4.0
Linn	0.9	1.3	7.3	5.3	7.7	6.7	1.0	3.0
LSD (.05)	0.8	0.8	1.6	0.9	1.1	1.0	1.3	0.8
CV%	8.9	10.5	18.8	8.0	9.5	9.2	12.2	1.6

• Scale used to report traits (if appropriate): Ratings are based on 1-9 scale where 9 = best and 1 = poorest or dead.

6. Jacklin Seed by Simplot®, Post Falls, ID., maintains Breeder seed of JR-192. Seed classes recognized are Foundation, Registered and Certified and the length of stand on each is 3, 3, and 6 years, respectively. Jacklin Seed by Simplot® maintains the Breeder seed. Original Breeder seed is maintained in cold storage and if/when new Breeder seed is needed this will be planted, rogued by the plant breeder and harvested as Breeder seed.

7. Certified seed is expected to be available in August 2014. PVP will not be applied for.



(JT-783)

1. **Variety name:** _____ Kind: Tall fescue
Genus: Festuca **Species:** arundinacea or (L. arundinaceum)
Experimental designation (s): JT-783
Date submitted: 12-8-12

2. In 2007, 26800 plants were screened for plantlet development from rhizomes in the 2006 Post Falls, ID nursery. Among the 411 rhizomatous plants identified 32 plants were moved to polycross, 07-8002, before anthesis based on strong rhizome development, earlier maturity with improved leaf texture and crown density. These 32 plants were from 15 germplasm sources which had from 1 to 4 cycles of phenotypic selection for improved characteristics of density, color and seed head initiation ;selected plants were usually moved to polycrosses before anthesis in each cycle. The maternal parentage of JT-783 is derived from 65% Jacklin experimental non-released populations, 16% Quest, 13% Pixie, and 6 % Coronado tall fescues.

In 2008, progeny from each of the 32 plants was planted in near equal amounts in a 5340 plant replicated isolation block near Connell, WA. Beginning in the fall of 2008, plants with rhizomes were identified. Before anthesis in 2008 this block was rogued removing all plants that did not produce rhizomes. In addition plants with coarse texture, lighter color, low crown density and low seed head initiation were also removed. Approximately 80% of the block was removed and the remaining 1064 plants were harvested as first breeder seed in August 2008.

3. JT-783 will be primarily used for turf. It has been tested in Rathdrum, ID, New Carlisle, OH, and Poolesville, MD and showed adaptation to use as a turfgrass at these locations and would be adapted in areas with similar climates and use.

4. Growth & Morphology Traits	Plant Height-cm 2011		Flagleaf Length-cm 2011		Flagleaf width-mm 2011	
	Rathdrum, ID	Eltopia, WA	Rathdrum, ID	Eltopia, WA	Rathdrum, ID	Eltopia, WA
JT-783	91.3	94.0	9.2	11.0	4.3	5.8
Quest	101.7	97.0	12.2	12.8	4.9	6.1
Pixie	115.0	101.0	15.6	14.0	5.9	5.9
Kentucky 31	125.2	105.5	15.4	15.0	5.6	6.5
LSD (.05)	4.8	4.9	1.7	1.7	0.5	0.5
CV%	17.1	13.1	41.1	33.4	27.9	22.1

Data collected from: Spaced single plants Plants in rows/solid seeding _____

Variants to be expected and frequency:

Less than 5% variants have been found and they can be identified as having reduced seedhead initiation, maturity earlier or later than the majority of the field, coarser leaf texture than the majority of the field, or larger plant size compared to the JT-783 plants. These variants are relatively infrequent in occurrence and are routinely rogued from seedstock fields during the first year of establishment.

5. Turf Use	Turf Quality		Brown Patch		Genetic Color		Greenup	
	2010-2012		2010-2012		Rathdrum, ID		Rathdrum, ID	
a)								
b)	Poolesville, MD	Rathdrum, ID	Poolesville, MD	New Carlisle, OH	2009 trial(rated in 2010 and 2011)	2010 trial(rated in 2011)	2009 trial(rated in 2011 and 2012)	2010 trial(rated in 2012)
JT-783	4.4	4.0	3.7	4.0	6.5	7.3	4.3	4.7
Quest	3.4	4.4	2.9	4.0	5.8	6.0	5.5	4.7
Pixie	3.2	3.7	2.7	3.0	5.8	5.3	5.8	4.3
Arid 3	3.6	4.0	3.0	4.0	5.5	5.7	5.0	3.7
LSD (.05)	1.1	1.0	1.7	2.3	0.9	1.0	1.8	2.7
CV	4.7	5.7	3.5	4.1	10.2	6.0	5.8	3.0

●Scale used to report traits (if appropriate): Rating scale was 1-9 where 9 = best

6. Jacklin Seed by Simplot ®, Post Falls, ID., maintains Breeder seed of JT-783. Seed classes recognized are Foundation, Registered and Certified and the length of stand on each is 3, 3, and 6 years, respectively. Original Breeder seed is maintained in cold storage and if new Breeder seed is needed this will be planted, rogued by the plant breeder and harvested as Breeder seed.

7. If JT-783 is accepted Certified seed will be offered for sale in fall 2013. At this time PVP entry has not been decided.



V8 (V8)

1. **Variety name:** V8 Kind: Creeping bentgrass
Genus: Agrostis **Species:** stolonifera
Experimental designation (s): V8
Date submitted: December 12, 2012

2. The parental germplasm of V8 creeping bentgrass traces to plants from old, segregating putting greens during the career of the late Arthur D. Wick, an avid cool-season turfgrass plant collector. Plants from his collections were planted in a test area at the Pinehurst Golf Club in Pinehurst, NC in 1992. Three selected clones (PH-N, PH-S, PH-TC) were turf tested at Rutgers NJAES in North Brunswick, NJ, along with twelve attractive progeny from them, labeled R1-R12. Plants were selected based on attractiveness in stressful conditions; bright green (not dull) plant; and improved density. Remnant seed saved from the PH-N and R2 plants were used to establish a spaced plant breeder block near Connell, WA of approximately 1000 plants which was bulk harvested and declared Breeder seed in June 2010. Less than 2% of the plants were rogued for characteristics inconsistent with the cultivar.

3. V8's primary application is turf, specifically golf courses. Breeder seed was tested in mowed turf trials simulating golf course conditions in St. Paul, Oregon, and Post Falls, Idaho in 2011/2012. V8 exhibited satisfactory turfgrass quality, leaf texture, and summer density.

4. Growth & Morphology	Panicle length (cm)		Flag leaf length (cm)		Flag leaf width (mm)	
	Location		Location		Location	
	Oregon	Washington	Oregon	Washington	Oregon	Washington
V8	7.5	13.8	2.6	5.5	3.7	3.2
A-4	10.0	11.3	5.5	6.7	4.4	4.4
Authority	10.0	12.4	3.9	4.7	4.6	3.5
L-93	11.9	10.0	6.2	5.0	4.8	3.1
Penncross	8.9	10.7	5.3	4.9	3.4	4.4
LSD (.05)	0.9	3.1	0.7	0.59	0.48	0.36
Se / ems	0.45	37.7	0.36	1.4	0.24	0.48

Data collected from: Spaced single plants Plants in rows/solid seeding

Variants to be expected and frequency: | 2% variants were observed in the Breeder field

5. Turf Use	Turf Quality		Color		Texture		Establishment	
	Location		Location		Location		Location	
	Oregon	Idaho	Oregon	Idaho	Oregon	Idaho	Oregon	Idaho
V8	6.7	5.3	6.5	6.3	7.2	6.7	7.7	5.0
A-4	5.8	4.0	6.0	4.0	6.0	5.7	7.7	4.0
Authority	6.0	4.3	6.0	4.3	6.7	6.7	8.3	3.0
L-93	6.2	5.3	6.3	4.7	5.8	5.0	8.3	4.7
Shark	5.8	5.0	6.0	4.7	6.7	6.7	8.3	3.0
LSD (.05)	0.72	1.1	0.44	2.0	0.76	2.3	1.18	2.9
Se / ems	0.35	0.4	0.22	1.3	0.37	1.8	0.54	2.8

•Scale used to report traits (if appropriate): 1 to 9 NTEP-style rating scale with nine equal to best

•Insert additional information for use by inspectors (if any): _____

**If necessary, identify locations in line b) by the following key - A: St. Paul, OR B: Post Falls, ID

6. Jacklin Seed by Simplot® maintains the Breeder seed in cold storage and periodically regenerates Breeder seed as necessary to maintain viability and supply sufficient seedstock. Seed classes recognized are Foundation, Registered, and Certified, and the length of stand on each is 3, 3, and 6, respectively. Production of Certified to Certified seed is permissible on occasion with the approval of the breeder at Jacklin Seed.

7. V8 will be offered for sale as certified seed in 2013. At the present time, PVP is not being considered.



Allante (SD-3)

1. **Variety name:** Allante **Kind:** Perennial Ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): SD-3
Date submitted: November 28, 2012
-
2. Allante was developed by Ledebouer Seed LLC beginning early summer of 2002 with vegetative selections of similar phenotypes discovered in the breeder's home lawn located at Ledebouer Seed's Aurora, OR research station. These plants exhibited a very fine and very dense turf canopy with obvious spreading characteristics. Three cycles of selections for turf quality, color, texture and density were utilized to produce a final crossing block which was subsequently harvested for pre-breeder seed. The pre-breeder seed was used to produce a one acre breeder seed stand that was harvested in 2008. Breeder seed was used to establish comparison trials for morphological comparison data in 2009. Allante has an established Varietal Fluorescence of 0.81%. Allante is protected under U.S. Patent No. 7,696,418 for Spreading Ryegrass.
-
3. Allante is well adapted for use in Western Oregon and likely other areas with similar climate for normal turf use and sod.

4. Growth & Morphology	Heading Date – Julian Days			Plant Height (cm)			Flag Leaf Height (cm)		
	Aurora, OR			Aurora, OR			Aurora, OR		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Allante	153.0	154.0	147.0	97.4	96.9	91.6	60.8	59.8	54.3
Covet	149.0	149.0	144.0	67.7	67.8	64.3	31.7	31.3	29.6
Buccaneer	144.0	145.0	141.0	67.6	67.1	69.9	34.3	36.2	34.2
Casper	153.0	155.0	148.0	69.3	70.1	65.4	31.2	31.0	33.9
LSD (.05)	3.4	3.5	2.1	14.1	14.4	12.6	14.4	14.2	13.1
Variance	2.0	2.2	2.0	3.3	3.1	2.9	3.1	3.2	3.4

Data collected from: Spaced single plants x Plants in rows/solid seeding

Variants to be expected and frequency: Lighter color >.05%

5. Turf	Turf Quality (1-9)			Genetic Color (1-9)			Winter Leaf Spot (1-9)			Live Tillers (100-sq.cm)		
	Aurora, OR			Aurora, OR			Aurora, OR			Aurora, OR		
	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
Allante	8.2	8.3	8.4	8.0	8.0	8.0	8.5	8.5	8.5	1114	1183	1266
Covet	7.1	7.2	7.1	7.5	7.5	7.5	7.5	7.5	7.5	491	541	508
Buccaneer	6.8	6.7	6.6	7.0	7.0	7.0	6.5	6.0	6.0	543	527	495
Casper	6.9	7.1	6.9	7.5	7.5	7.5	6.5	6.5	7.0	538	519	546
LSD (.05)	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	188.2	197.7	201.9
Variance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	77.1	78.5	86.3

•Scale used to report traits (if appropriate): 1-9 with 9 being ideal quality/no disease/darkest color

6. Breeder seed is maintained by Ledebouer Seed LLC, Aurora, OR. Current inventory of breeder seed is enough to maintain the anticipated life of the variety. Foundation, Registered and Certified classes of seed are permitted. Foundation class seed stands may only be planted from breeder seed. Registered and Certified class seed stands may be planted from breeder and/or Foundation class seed. Certified class seed stands may be planted from breeder, Foundation and Registered class seed. Maximum number of harvests from Foundation and Registered stands is three years. Maximum number of harvests from Certified stands is five years. Additional years of seed production must be approved by the breeder or an individual designated by the breeder.
-
7. Certified seed will be available in fall of 2013. PVP will not be sought with the certification option.



Mensa (SD-2)

1. **Variety name:** Mensa Kind: Perennial Ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): SD-2
Date submitted: November 28, 2012
2. Mensa (SD-2) was developed by Ledebor Seed LLC beginning late summer of 2002 with vegetative selections of similar phenotypes discovered in the breeder's home lawn located at Ledebor Seed's Aurora, OR research station. These plants exhibited a very fine and very dense turf canopy with obvious spreading characteristics. Three cycles of selections for turf quality, color, texture and density were utilized to produce a final crossing block which was subsequently harvested for pre-breeder seed. The pre-breeder seed was used to produce a 5 acre breeder seed stand that was harvested in 2006. Breeder seed was used to establish comparison trials for morphological comparison data in September 2006. Mensa has an established Varietal Fluorescence level of 0.25%. Mensa is protected under U.S. Patent No. 7,696,418 for Spreading Ryegrass.
3. Mensa is well adapted for use in Western Oregon and likely other areas with similar climate for normal turf use and sod production.

4. Growth & Morphology	Heading Date – Julian Days		Plant Height (cm)		Flag Leaf Height (cm)	
	2007		2007		2007	
	Aurora	Suver	Aurora	Suver	Aurora	Suver
Mensa	149.0	148.0	94.3	95.4	59.4	61.7
Covet	148.0	146.0	69.1	67.3	32.4	33.6
Pinnacle	143.0	145.0	72.6	75.2	37.9	39.5
Refine	151.0	151.0	66.5	67.3	29.8	29.1
LSD (.05)	2.1	2.0	15.2	15.3	14.4	15.2
Variance	1.7	1.6	3.9	3.9	3.8	3.9

Data collected from: Spaced single plants x Plants in rows/solid seeding
 Variants to be expected and frequency: Lighter color, more upright >0.05%

5. Turf Use	Turf Quality (1-9)		Genetic Color (1-9)		Winter Leaf Spot (1-9)		Live Tillers (100-sq.cm)	
	2007		2007		2007		2007	
	Aurora	Suver	Aurora	Suver	Aurora	Suver	Aurora	Suver
Mensa	8.3	8.1	7.9	7.9	8.2	8.0	1104	1123
Covet	7.0	7.1	7.5	7.5	7.5	7.5	509	492
Pinnacle	6.1	6.3	6.5	6.5	6.0	6.0	457	416
Refine	7.1	6.7	7.5	7.5	7.0	7.0	549	504
LSD (.05)	0.3	.03	0.3	0.3	0.4	0.4	111.5	101.5
Variance	0.7	0.7	0.6	0.6	0.8	0.8	89.3	81.6

- Scale used to report traits (if appropriate): 1-9 with 9 being ideal quality/no disease/darkest color
6. Breeder seed is maintained by Ledebor Seed LLC, Aurora, OR. Current inventory of breeder seed is enough to maintain the anticipated life of the variety. Foundation, Registered and Certified classes of seed are permitted. Foundation class seed stands may only be planted from breeder seed. Registered and Certified class seed stands may be planted from breeder and/or Foundation class seed. Certified class seed stands may be planted from breeder, Foundation and Registered class seed. Maximum number of harvests from Foundation and Registered stands is three years. Maximum number of harvests from Certified stands is five years. Additional years of seed production must be approved by the breeder or an individual designated by the breeder.
 7. Certified seed will be available in fall of 2013. PVP will not be sought with the certification option as the variety has been commercially available since September, 2007. The variety was licensed to another entity in September, 2007, but was retained by Ledebor Seed LLC due to bankruptcy proceedings. Original breeder seed has been retained by Ledebor Seed LLC to continue commercialization of the variety.



Savant (SD-1)

1. **Variety name:** Savant Kind: Perennial Ryegrass
Genus: Lolium Species: perenne
Experimental designation (s): SD-1
Date submitted: November 28, 2012

2. Savant (SD-1) was developed by Ledebor Seed LLC beginning late summer of 2002 with vegetative selections of similar phenotypes discovered in the breeder's home lawn located at Ledebor Seed's Aurora, OR research station. These plants exhibited a very fine and very dense turf canopy with obvious spreading characteristics. Three cycles of selections for turf quality, color, texture and density were utilized to produce a final crossing block which was subsequently harvested for pre-breeder seed. The pre-breeder seed was used to produce a 5 acre breeder seed stand that was harvested in 2006. Breeder seed was used to establish comparison trials for morphological comparison data in September, 2006. Savant has an established Varietal Fluorescence level of 0.15%. Savant is protected under U.S. Patent No. 7,696,418.

3. Savant is well adapted for use in Western Oregon and likely other areas with similar climate for normal turf use and sod production.

4. Growth & Morphology	Heading Date – Julian Days 2007		Plant Height (cm) 2007		Flag Leaf Height (cm) 2007	
	Aurora	Suver	Aurora	Suver	Aurora	Suver
Savant	147.0	146.0	98.9	99.6	64.3	66.2
Covet	148.0	146.0	69.1	67.3	32.4	33.6
Pinnacle	143.0	145.0	72.6	75.2	37.9	39.5
Refine	151.0	151.0	66.5	67.3	29.8	29.1
LSD (.05)	2.1	2.0	15.2	15.3	14.4	15.2
Variance	1.7	1.6	3.9	3.9	3.8	3.9

Data collected from: Spaced single plants x Plants in rows/solid seeding

Variants to be expected and frequency: Lighter color, more upright >0.05%

5. Turf Use	Turf Quality (1-9)		Genetic Color (1-9)		Winter Leaf Spot (1-9)		Live Tillers (100-sq.cm)	
	2007		2007		2007		2007	
a)	Aurora	Suver	Aurora	Suver	Aurora	Suver	Aurora	Suver
Savant	8.1	7.9	7.5	7.5	8.1	8.3	1498	1379
Covet	7.0	7.1	7.5	7.5	7.5	7.5	509	492
Pinnacle	6.1	6.3	6.5	6.5	6.0	6.0	457	416
Refine	7.1	6.7	7.5	7.5	7.0	7.0	549	504
LSD (.05)	0.3	0.3	0.3	0.3	0.4	0.4	111.5	101.5
Variance	0.7	0.7	0.6	0.6	0.8	0.8	89.3	81.6

•Scale used to report traits (if appropriate): 1-9 with 9 being ideal quality/no disease/darkest color

6. Breeder seed is maintained by Ledebor Seed LLC, Aurora, OR. Current inventory of breeder seed is enough to maintain the anticipated life of the variety. Foundation, Registered and Certified classes of seed are permitted. Foundation class seed stands may only be planted from breeder seed. Registered and Certified class seed stands may be planted from breeder and/or Foundation class seed. Certified class seed stands may be planted from breeder, Foundation and Registered class seed. Maximum number of harvests from Foundation and Registered stands is three years. Maximum number of harvests from Certified stands is five years. Additional years of seed production must be approved by the breeder or an individual designated by the breeder.

7. Certified seed will be available in fall of 2013. PVP will not be sought with the certification option as the variety has been commercially available since September, 2007. The variety was licensed to another entity in September, 2007, but was retained by Ledebor Seed LLC due to bankruptcy proceedings. Original breeder seed has been retained by Ledebor Seed LLC to continue commercialization of the variety.



(APR2036)

1. **Variety name:** _____ Kind: Perennial Ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): APR2036
Date submitted: January 4, 2013

2. **Breeding Chronology**

The perennial ryegrass APR2036 was developed from various cycles of recurrent phenotypic and genotypic selection. Each cycle was used to improve the genetic color, yield potential, and disease resistance. APR2036 traces its parentage to germplasm obtained from Rutgers University.
2002: Germplasm source was obtained from Rutgers University.
2003: The germplasm source was established in the fall of 2003, in a single spaced plant nursery. The nursery contained 100 plants per block, replicated five times, for a total of 500 plants.
2004: In the spring of 2004, twenty-nine clones were selected from the plant selection field. Selection was based on genetic color, crown density, freedom from disease (*Puccinia coronata* and *Puccinia graminis*), and number of inflorescence. The selection was moved to an isolated crossing block, and designated APR1803.
2005: The block was harvested by progeny in the summer of 2005. A turf trial was established near Salem, NJ, in early September 2005. The trial contained the 29 progeny lines. The trial was maintained to increase the incidence of gray leaf spot (*Pyricularia grisea*). Gray leaf spot infected the trial in October. The trial was severely damaged and the best progeny lines (15) were removed in November, 2005. The survivors were returned to Albany, Oregon and planted in isolation and designated APR2036.
2006: APR2036 was harvested in bulk the summer of 2006.
2009: In the fall of 2009, a 1,500 plant increase block of APR2036 was established. The seed was harvested in bulk in 2010 and designated APR2036 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.

3. APR2036 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that APR2036 is suitable for turf used in this area.

Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors.

4. Growth & Morphology Traits	Heading Date (days after January 1)		Mature Plant Height (cm)		Flag Leaf Height (cm)	
	Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012
APR2036	148.67	141.67	53.80	51.73	26.77	28.43
Chivalry	144.67	140.33	58.80	59.20	30.67	31.67
Hawkeye	142.00	136.00	59.87	58.87	33.63	32.70
Manhattan II	134.00	129.33	65.53	67.77	31.67	35.57
LSD (.05)	1.75	1.28	3.15	3.45	2.53	2.76
Variance	0.87	0.67	3.79	4.26	5.70	6.21

Data collected from: Spaced single plants Plants in rows/solid seeding

Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.

5. Turf Use	Genetic Color		Density		Cover		Turf Quality	
	Albany, OR		Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
APR2036	7.46	7.55	7.30	7.33	7.85	8.10	7.25	7.48
Pizzazz	6.92	6.94	6.85	6.85	7.70	7.88	6.80	6.83
Manhattan V	7.00	6.77	6.90	6.93	7.65	7.83	6.85	6.80
Patriot 4	5.67	5.44	6.60	6.58	7.35	7.58	6.15	5.98
LSD (.05)	0.39	0.44	0.25	0.22	0.35	0.23	0.33	0.29
Variance	3.25	3.65	2.18	1.88	2.72	1.77	2.87	2.51

•Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

•**Insert additional information for use by inspectors (if any):**

**If necessary, identify locations in line b) by the following key - A: _____ B: _____

6. APR2036 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.

7. If APR2036 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(APR2106)

1. **Variety name:** _____ Kind: Perennial Ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): APR2106
Date submitted: January 4,2013

2. **1989 – 2006:** The perennial ryegrass APR2106 was developed from various cycles of recurrent phenotypic and genotypic selection. Each cycle was used to improve genetic color, yield potential, and disease resistance. APR2106 traces its parentage to selections from Birdie II, Charger, Citation II, Elka, Fiesta II, Idole, Cherokee, Manhattan II, Omega II, Ovation II, SR 4100, SR 4000, Trimmer, and a Hungarian ecotype.

2007

In the summer of 2007, APR2106 was harvested in bulk. In the fall APR2106 was established in a turf trial Albany, OR. The trial was managed specifically to measure turf quality and drought resistance.

2009

In the fall of 2009, a 2,000 plant increase block of APR2106 was established. The seed was harvested in bulk in 2010 and designated APR2106 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.

3. APR2106 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that APR2106 is suitable for turf used in this area.

Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors.

4. Growth & Morphology Traits	Heading Date (days after January 1) Albany, OR		Mature Plant Height (cm) Albany, OR		Flag Leaf Height (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
	<i>APR2106</i>	147.33	139.33	66.40	70.17	38.63
Chivalry	144.67	140.33	58.80	59.20	30.67	31.67
Hawkeye	142.00	136.00	59.87	58.87	33.63	32.70
Manhattan II	134.00	129.33	65.53	67.77	31.67	35.57
LSD (.05)	1.75	1.28	3.15	3.45	2.53	2.76
Variance	0.87	0.67	3.79	4.26	5.70	6.21

Data collected from: Spaced single plants X Plants in rows/solid seeding
 Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.

5. Turf Use	Genetic Color		Density		Cover		Turf Quality	
	Albany, OR		Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
<i>APR2106</i>	6.58	6.50	7.05	6.93	7.70	7.80	6.80	6.68
Pizzazz	6.92	6.94	6.85	6.85	7.70	7.88	6.80	6.83
Manhattan V	7.00	6.77	6.90	6.93	7.65	7.83	6.85	6.80
Patriot 4	5.67	5.44	6.60	6.58	7.35	7.58	6.15	5.98
LSD (.05)	0.39	0.44	0.25	0.22	0.35	0.23	0.33	0.29
Variance	3.25	3.65	2.18	1.88	2.72	1.77	2.87	2.51

•Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

•Insert additional information for use by inspectors (if any): _____

**If necessary, identify locations in line b) by the following key - A: _____ B: _____

6. APR2106 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.

7. If APR2106 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(APR2201)

1. **Variety name:** _____ Kind: Perennial Ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): APR2201
Date submitted: January 4, 2013

2. **Breeding Chronology**
1990 – 2001: The perennial ryegrass APR2201 was developed from various cycles of recurrent phenotypic and genotypic selection. Each cycle was used to improve genetic color, yield potential, and disease resistance. APR2201 traces its parentage to selections from experimental lines, ecotype collections and commercially available cultivars.
2002: A single spaced plant nursery was established in the fall.
2003: In the fall two populations were formed. Selection was based on genetic color, crown density, uniformity, maturity, seed yield potential and disease resistance.
2004: In the fall, the two populations were harvested in bulk and included in a turf trial established near Salem, New Jersey.
2005: Survivors from the turf trial were removed from New Jersey and returned to Oregon.
2006: In the summer the block was harvested in bulk. In the fall the seed was used to establish in a turf trial Salem, NJ.
2007: Survivors from the 2006 turf trial were removed. Fifty plants were established in isolation.
 In the summer of 2007, APR2201 was harvested in bulk. In the fall APR2201 was established in a turf trial Albany, OR. The trial was managed specifically to measure turf quality and drought resistance.
2009: In the fall of 2009, a 1,000 plant increase block of APR2201 was established. The seed was harvested in bulk in 2010 and designated APR2201 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.

3. APR2201 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that APR2201 is suitable for turf used in this area.
 Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors.

4. Growth & Morphology Traits	Heading Date (days after January 1) Albany, OR		Mature Plant Height (cm) Albany, OR		Flag Leaf Height (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
	APR2201	134.67	129.33	58.80	60.07	27.53
Chivalry	144.67	140.33	58.80	59.20	30.67	31.67
Hawkeye	142.00	136.00	59.87	58.87	33.63	32.70
Manhattan II	134.00	129.33	65.53	67.77	31.67	35.57
LSD (.05)	1.75	1.28	3.15	3.45	2.53	2.76
Variance	0.87	0.67	3.79	4.26	5.70	6.21

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.

5. Turf Use	Genetic Color		Density		Cover		Turf Quality	
	Albany, OR		Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
APR2201	6.75	6.71	7.00	6.85	7.60	7.70	6.80	6.75
Pizzazz	6.92	6.94	6.85	6.85	7.70	7.88	6.80	6.83
Manhattan V	7.00	6.77	6.90	6.93	7.65	7.83	6.85	6.80
Patriot 4	5.67	5.44	6.60	6.58	7.35	7.58	6.15	5.98
LSD (.05)	0.39	0.44	0.25	0.22	0.35	0.23	0.33	0.29
Variance	3.25	3.65	2.18	1.88	2.72	1.77	2.87	2.51

● Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

● **Insert additional information for use by inspectors (if any):**

**If necessary, identify locations in line b) by the following key - A: _____ B: _____

6. APR2201 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.

7. If APR2201 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(APR2208)

1. **Variety name:** _____ Kind: Perennial Ryegrass
 Genus: Lolium Species: perenne
 Experimental designation (s): APR2208
 Date submitted: January 4, 2013

2. **Breeding Chronology**

The perennial ryegrass APR2208 was developed from various cycles of recurrent phenotypic and genotypic selection. Each cycle was used to improve the genetic color, yield potential, and disease resistance. APR2208 traces its parentage to the released cultivars, ecotype collections and a germplasm source obtained from Rutgers University (BBC).

1997 – 1998: Multiple cycles of recurrent phenotypic and genotypic selections.

1999: A plant selection field was established in the fall. The plant selection field was evaluated for genetic color, fine leaf texture, freedom from disease, crown density, lack of panicle formation in re-growth and fall recovery.

2000: In the fall, three populations were formed. Each population was moved to an isolated crossing block and allowed to interpollinate. Each of the populations was harvested in bulk the summer of 2001.

2001: A turf trial was established near Salem, New Jersey in the fall. The trial was maintained to increase the incidence of gray leaf spot (*Pyricularia grisea*).

2002: The survivors were harvested in bulk. A plant selection field was established in the fall. Plant evaluation was based on genetic color, fine leaf texture, freedom from disease, crown density, lack of panicle formation in re-growth and fall recovery.

2003: In the fall, a new population was formed and moved to an isolated crossing block.

2004: In the summer it was harvested in bulk. A turf trial was established near Salem, New Jersey. The trial was maintained to increase the incidence of gray leaf spot (*Pyricularia grisea*).

2006: Plants were returned to Albany, Oregon and planted in isolation and designated APR2208.

2007: In the summer, APR2208 was harvested in bulk. In the fall APR2208 was established in a turf trial in Albany, OR and Salem, NJ.

2009: In the fall, a 1,200 plant increase block of APR2208 was established. The seed was harvested in bulk in 2010 and designated APR2208 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.

3. APR2208 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that APR2208 is suitable for turf used in this area.

Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors.

4. Growth & Morphology Traits	Heading Date (days after January 1) Albany, OR		Mature Plant Height (cm) Albany, OR		Flag Leaf Height (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
	APR2208	144.67	137.67	61.97	57.53	35.50
Chivalry	144.67	140.33	58.80	59.20	30.67	31.67
Hawkeye	142.00	136.00	59.87	58.87	33.63	32.70
Manhattan II	134.00	129.33	65.53	67.77	31.67	35.57
LSD (.05)	1.75	1.28	3.15	3.45	2.53	2.76
Variance	0.87	0.67	3.79	4.26	5.70	6.21

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.

5. Turf Use	Genetic Color Albany, OR		Density Albany, OR		Cover Albany, OR		Turf Quality Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
	APR2208	6.54	6.46	6.95	6.70	7.45	7.68	6.50
Pizzazz	6.92	6.94	6.85	6.85	7.70	7.88	6.80	6.83
Manhattan V	7.00	6.77	6.90	6.93	7.65	7.83	6.85	6.80
Patriot 4	5.67	5.44	6.60	6.58	7.35	7.58	6.15	5.98
LSD (.05)	0.39	0.44	0.25	0.22	0.35	0.23	0.33	0.29
Variance	3.25	3.65	2.18	1.88	2.72	1.77	2.87	2.51

•Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

•Insert additional information for use by inspectors (if any): _____

**If necessary, identify locations in line b) by the following key - A: _____ B: _____

6. APR2208 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.

7. If APR2208 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(APR2212)

- Variety name:** _____ Kind: Perennial Ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): APR2212
Date submitted: January 4, 2013
- 1990 – 2006:** The perennial ryegrass APR2212 was developed from various cycles of recurrent phenotypic and genotypic selection. Each cycle was used to improve genetic color, yield potential, and disease resistance. APR2212 traces its parentage to selections from Charger, SR 4000 and Dimension.
2007
In the summer of 2007, APR2212 was harvested in bulk. In the fall APR2212 was established in a turf trial Albany, OR. The trial was managed to measure turf quality and drought resistance.
2009
In the fall of 2009, a 2,000 plant increase block of APR2212 was established. The seed was harvested in bulk in 2010 and designated APR2212 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.
- APR2212 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that APR2212 is suitable for turf used in this area.

Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors.

4. Growth & Morphology Traits	Heading Date (days after January 1) Albany, OR		Mature Plant Height (cm) Albany, OR		Flag Leaf Height (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
	<i>APR2212</i>	146.67	138.33	58.57	54.03	31.20
<i>Chivalry</i>	144.67	140.33	58.80	59.20	30.67	31.67
<i>Hawkeye</i>	142.00	136.00	59.87	58.87	33.63	32.70
<i>Manhattan II</i>	134.00	129.33	65.53	67.77	31.67	35.57
LSD (.05)	1.75	1.28	3.15	3.45	2.53	2.76
<i>Variance</i>	0.87	0.67	3.79	4.26	5.70	6.21

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.

5. Turf Use	Genetic Color Albany, OR		Density Albany, OR		Cover Albany, OR		Turf Quality Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
	<i>APR2212</i>	6.55	6.46	6.95	6.78	7.40	7.65	6.65
<i>Pizzazz</i>	6.92	6.94	6.85	6.85	7.70	7.88	6.80	6.83
<i>Manhattan V</i>	7.00	6.77	6.90	6.93	7.65	7.83	6.85	6.80
<i>Patriot 4</i>	5.67	5.44	6.60	6.58	7.35	7.58	6.15	5.98
LSD (.05)	0.39	0.44	0.25	0.22	0.35	0.23	0.33	0.29
<i>Variance</i>	3.25	3.65	2.18	1.88	2.72	1.77	2.87	2.51

•Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

•Insert additional information for use by inspectors (if any): _____

**If necessary, identify locations in line b) by the following key - A: _____ B: _____

- APR2212 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.
- If APR2212 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(APR2225)

1. **Variety name:** _____ **Kind:** Perennial Ryegrass
Genus: Lolium _____ **Species:** perenne
Experimental designation (s): APR2225
Date submitted: January 4, 2013
2. The paternal germplasm used to develop APR2225 was developed from the released cultivars Amazing, Applaud, Integra, Jet, Peregrine, Pizzazz, Promise, APR1461 (Radiant II), and APR1426 [Renaissance (1/3) x SR 4350 (1/3) x Saint (1/3)]. Intercrosses of the best were subjected to several cycles of phenotypic and genotypic recurrent selection.
2001: A turf trial was planted near Salem, New Jersey in early September 2001. There were 51 entries in the trial, which included Amazing, Applaud, Integra, Jet, Peregrine, Pizzazz, Promise, APR1461, and APR1426. The trial was maintained to increase the incidence of gray leaf spot (*Pyricularia grisea*). The trial was severely damaged and survivors were removed. The survivors were returned to Albany, OR and planted in isolation.
2002: The survivors were harvested in bulk and planted again in a turf trial for gray leaf spot. The turf trial was evaluated for resistance to gray leaf spot (*Pyricularia grisea*).
2003: Eleven lines exhibited the best resistance to the pathogen *Pyricularia grisea*. Seed from the 2002 harvest was used to plant a randomized crossing block of the eleven most resistant lines. The crossing block consisted of six replications with 10 plants from each line per replication. The planting order was based on a randomized complete block design.
2004: The crossing block was harvested by progeny line and designated APR1724. A progeny turf trial was planted near Salem, NJ. **2005:** In the fall, plants from the 15 best performing plots were removed from the 2004 turf trial.
2006: The block was harvested in bulk and designated APR1959. In the fall, APR1959 was established in a single spaced plant nursery. The nursery consisted of five replications with 100 plants in each replication.
2007: In the fall, plants were selected for genetic color, crown density, uniformity, maturity, seed yield potential and disease resistance and designated APR2225.
2008: In the summer, APR2225 was harvested in bulk. In the fall APR2225 was established in a turf trial Albany, OR and Salem, NJ.
2009: In the fall, a 2,000 plant increase block of APR2225 was established. The seed was harvested in bulk in 2010 and designated APR2225 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.
3. APR2225 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that APR2225 is suitable for turf used in this area.

Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors (See Instructions Part II).

4. Growth & Morphology	Heading Date (days after January 1) Albany, OR		Mature Plant Height (cm) Albany, OR		Flag Leaf Height (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
	<i>APR2225</i>	148.67	141.00	60.00	56.37	32.03
Chivalry	144.67	140.33	58.80	59.20	30.67	31.67
Hawkeye	142.00	136.00	59.87	58.87	33.63	32.70
Manhattan II	134.00	129.33	65.53	67.77	31.67	35.57
LSD (.05)	1.75	1.28	3.15	3.45	2.53	2.76
Variance	0.87	0.67	3.79	4.26	5.70	6.21

Data collected from: Spaced single plants

X Plants in rows/solid seeding

Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.

5. Turf Use	Genetic Color		Density		Cover		Turf Quality	
	Albany, OR		Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
<i>APR2225</i>	7.50	7.82	6.75	6.73	7.85	8.08	7.10	7.33
Pizzazz	6.92	6.94	6.85	6.85	7.70	7.88	6.80	6.83
Manhattan V	7.00	6.77	6.90	6.93	7.65	7.83	6.85	6.80
Patriot 4	5.67	5.44	6.60	6.58	7.35	7.58	6.15	5.98
LSD (.05)	0.39	0.44	0.25	0.22	0.35	0.23	0.33	0.29
Variance	3.25	3.65	2.18	1.88	2.72	1.77	2.87	2.51

●Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

●Insert additional information for use by inspectors (if any):

**If necessary, identify locations in line b) by the following key -

A: _____

B: _____

6. APR2225 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.
7. If APR2225 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(APR2291)

1. **Variety name:** _____ Kind: Perennial Ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): APR2291
Date submitted: January 4, 2013

2. The perennial ryegrass APR2291 was developed from various cycles of recurrent phenotypic and genotypic selection. Each cycle was used to improve the genetic color, yield potential, and disease resistance. APR2291 traces its parentage to released cultivars; **2001:** A turf trial was planted near Salem, New Jersey in early September 2001. The trial was maintained to increase the incidence of gray leaf spot (*Pyricularia grisea*). The trial was severely damaged and 800 survivors were removed on December 1. The survivors were returned and planted in isolation. **2002:** The survivors were harvested in bulk. A plant selection field was established in the fall. The plant selection field was evaluated for genetic color, fine leaf texture, freedom from disease, crown density, lack of panicle formation in re-growth and fall recovery. Thirty-seven new experimental lines were formed that showed crown and stem rust resistance (*Puccinia coronata* and *Puccinia graminis*) were selected after recovery. The 37 new experimental lines were moved to isolated crossing blocks. **2003:** In the summer, the crossing blocks were harvested. A turf trial was planted near Salem, New Jersey. The trial was maintained to increase the incidence of gray leaf spot (*Pyricularia grisea*). **2004:** In the fall, 25 plants were removed from the 2004 turf trial. The plants were returned to Oregon and planted in isolated blocks. **2005:** The blocks were harvested in bulk. In the fall, a plant selection field was established in the fall. The plant selection field was evaluated for genetic color, fine leaf texture, freedom from disease, crown density, lack of panicle formation in re-growth and fall recovery. Eight new experimental populations were formed. **2006:** In the fall, 80 plants of the eight lines were planted into isolated blocks. **2007:** The eight blocks were evaluated for genetic color, fine leaf texture, freedom from disease, crown density. The inferior plants were removed from the populations. The remaining plants were allowed to interpollinate. The remaining plants were harvested by progeny. The 50 progeny from each of the eight lines with the highest seed weights were then bulked. The eight lines were then planted in an isolated crossing block. **2008:** In the summer, the crossing block was harvested in bulk and designated APR2291. In the fall APR2291 was established in a turf trial Albany, OR and Salem, NJ. **2009:** In the fall, a 1,000 plant increase block of APR2291 was established. The seed was harvested in bulk in **2010** and designated APR2291 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.

3. APR2291 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that APR2291 is suitable for turf used in this area.

Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors.

4. Growth & Morphology	Heading Date (days after January 1) Albany, OR		Mature Plant Height (cm) Albany, OR		Flag Leaf Height (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
Traits						
APR2291	146.67	140.67	60.53	55.73	34.13	34.70
Chivalry	144.67	140.33	58.80	59.20	30.67	31.67
Hawkeye	142.00	136.00	59.87	58.87	33.63	32.70
Manhattan II	134.00	129.33	65.53	67.77	31.67	35.57
LSD (.05)	1.75	1.28	3.15	3.45	2.53	2.76
Variance	0.87	0.67	3.79	4.26	5.70	6.21

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.



(APR2291) continued

5. Turf Use	Genetic Color		Density		Cover		Turf Quality	
	Albany, OR		Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
APR2291	7.46	7.62	7.10	7.00	7.75	8.00	7.20	7.28
Pizzazz	6.92	6.94	6.85	6.85	7.70	7.88	6.80	6.83
Manhattan V	7.00	6.77	6.90	6.93	7.65	7.83	6.85	6.80
Patriot 4	5.67	5.44	6.60	6.58	7.35	7.58	6.15	5.98
LSD (.05)	0.39	0.44	0.25	0.22	0.35	0.23	0.33	0.29
Variance	3.25	3.65	2.18	1.88	2.72	1.77	2.87	2.51

●Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

●Insert additional information for use by inspectors (if any): _____

**If necessary, identify locations in line b) by the following key - A: _____ B: _____

6. APR2291 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.
7. If APR2291 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(APR2320)

1. **Variety name:** Kind: Perennial Ryegrass
Genus: Lolium Species: perenne
Experimental designation (s): APR2320
Date submitted: January 4, 2013
2. **Breeding Chronology**
 The perennial ryegrass APR2320 was developed from various cycles of recurrent phenotypic and genotypic selection. Each cycle was used to improve the genetic color, yield potential, and disease resistance. APR2320 traces its parentage to the release cultivars Amazing (6/16) x Integra (5/16) x Pizzazz (5/16).
1999: A plant selection field (PSF) was established in the fall of 1999. The plant selection field contained Amazing, Integra and Pizzazz in 100 plant blocks, replicated five times. The lines were evaluated for genetic color, fine leaf texture, freedom from disease, crown density, lack of panicle formation in re-growth and fall recovery.
2000: In the fall of 2000, sixteen plants were moved together, placed in isolation, and allowed to interpollinate. The population was harvested in bulk the summer of 2001
2001: In the fall, a 2,500 PSF was established. The PSF was screened based on color, crown density, freedom from disease, seed yield potential, heads in re-growth and uniformity. Twenty plants were selected after recovery.
2002: The survivors were harvested by progeny, with 2.5% of the plants removed. A progeny turf trial was established near Salem, New Jersey in the fall.
2004: In the fall, eleven progeny lines were removed from the 2002 trial. The eleven lines exhibited the best overall performance based on turf quality. The progeny lines were planted in an isolated block.
2005: The progeny block was harvested in bulk in the summer of 2005 and designated APR1924. A PSF was established in the fall. The PSF was evaluated for genetic color, fine leaf texture, freedom from disease, crown density, lack of panicle formation in re-growth and fall recovery. The nursery was allowed to reach full maturity. Twenty-eight vigorous plants that showed crown and stem rust resistance (*Puccinia coronata* and *Puccinia graminis*) were selected after recovery and moved to an isolated crossing block in 2006 and designated APR2096.
2007: APR2096 was harvested in bulk the summer of 2007. A PSF was established in the fall. The PSF was evaluated for genetic color, fine leaf texture, freedom from disease, crown density. Twenty-four vigorous plants were selected in the spring and moved to an isolated crossing block and designated APR2320. In the summer of 2007, the crossing block of APR2320 was harvested in bulk. In the fall APR2320 was established in a turf trial in Albany, OR and Salem, NJ.
2009: In the fall, a 2,000 plant increase block of APR2320 was established. The seed was harvested in bulk in 2010 and designated APR2320 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.
3. APR2320 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that APR2320 is suitable for turf used in this area.

Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors.

4. Growth & Morphology	Heading Date (days after January 1) Albany, OR		Mature Plant Height (cm) Albany, OR		Flag Leaf Height (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
APR2320	150.67	142.67	61.63	62.07	31.17	32.83
Chivalry	144.67	140.33	58.80	59.20	30.67	31.67
Hawkeye	142.00	136.00	59.87	58.87	33.63	32.70
Manhattan II	134.00	129.33	65.53	67.77	31.67	35.57
LSD (.05)	1.75	1.28	3.15	3.45	2.53	2.76
Variance	0.87	0.67	3.79	4.26	5.70	6.21

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.

5. Turf Use	Genetic Color		Density		Cover		Turf Quality	
	Albany, OR		Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
APR2320	7.59	7.71	7.45	7.23	8.05	8.18	7.35	7.48
Pizzazz	6.92	6.94	6.85	6.85	7.70	7.88	6.80	6.83
Manhattan V	7.00	6.77	6.90	6.93	7.65	7.83	6.85	6.80
Patriot 4	5.67	5.44	6.60	6.58	7.35	7.58	6.15	5.98
LSD (.05)	0.39	0.44	0.25	0.22	0.35	0.23	0.33	0.29
Variance	3.25	3.65	2.18	1.88	2.72	1.77	2.87	2.51

•Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

•Insert additional information for use by inspectors (if any):

**If necessary, identify locations in line b) by the following key - A:

B:

6. APR2320 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.

7. If APR2320 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(APR2445)

1. **Variety name:** _____ **Kind:** Perennial Ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): APR2445
Date submitted: January 4, 2013

2. **Breeding Chronology**
The perennial ryegrass APR2445 was developed from various cycles of recurrent phenotypic and genotypic selection. Each cycle was used to improve the genetic color, yield potential, and disease resistance. APR2445 traces its parentage to a germplasm source and released cultivars;

2003: A plant selection field was established in the fall. The plant selection field contained germplasm source and released cultivars.
2004: The 500 plants of each line were evaluated for genetic color, fine leaf texture, freedom from disease, crown density, lack of panicle formation in re-growth and fall recovery. Sixty-four plants were selected from across lines and moved to an isolated crossing block in the fall of 2004.
2005: In the summer, the crossing block was harvested in bulk and designated APR1925. In the fall APR1925 was established in a turf trial near Salem, NJ.
2006: Survivors from APR1925 were removed from the 2006 turf trial and designated APR2297. One hundred plants were established in isolation.
2007: In the summer, APR2097 was harvested in bulk. In the fall APR2097 was established in a plant selection field.
2008: The 500 plants of APR2097 were evaluated for genetic color, fine leaf texture, freedom from disease, crown density, lack of panicle formation in re-growth and fall recovery. Sixteen plants were selected from APR2279 and moved to an isolated crossing block in the fall of 2008.
2009: In the summer, the crossing block was harvested in bulk and designated APR2445. In the fall, a 1,000 plant increase block of APR2445 was established. The seed was harvested in bulk in **2010** and designated APR2445 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.

3. APR2445 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that APR2445 is suitable for turf used in this area.

Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors.

4. Growth & Morphology Traits	Heading Date (days after January 1) Albany, OR		Mature Plant Height (cm) Albany, OR		Flag Leaf Height (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
	APR2445	149.33	140.67	62.33	60.87	36.13
Chivalry	144.67	140.33	58.80	59.20	30.67	31.67
Hawkeye	142.00	136.00	59.87	58.87	33.63	32.70
Manhattan II	134.00	129.33	65.53	67.77	31.67	35.57
LSD (.05)	1.75	1.28	3.15	3.45	2.53	2.76
Variance	0.87	0.67	3.79	4.26	5.70	6.21

Data collected from: Spaced single plants X Plants in rows/solid seeding
Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.

5. Turf Use	Genetic Color Albany, OR		Density Albany, OR		Cover Albany, OR		Turf Quality Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
	APR2445	7.59	7.57	6.75	6.78	7.75	7.93	7.00
Pizzazz	6.92	6.94	6.85	6.85	7.70	7.88	6.80	6.83
Manhattan V	7.00	6.77	6.90	6.93	7.65	7.83	6.85	6.80
Patriot 4	5.67	5.44	6.60	6.58	7.35	7.58	6.15	5.98
LSD (.05)	0.39	0.44	0.25	0.22	0.35	0.23	0.33	0.29
Variance	3.25	3.65	2.18	1.88	2.72	1.77	2.87	2.51

● Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

● Insert additional information for use by inspectors (if any): _____

**If necessary, identify locations in line b) by the following key - A: _____ B: _____

6. APR2445 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.
7. If APR2445 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(ATF1251)

1. **Variety name:** _____ **Kind:** Tall Fescue
Genus: Festuca **Species:** arundinacea
Experimental designation (s): ATF1251
Date submitted: January 4, 2013

2. The paternal germplasm used to develop ATF1251 was developed from the released cultivars Amigo, Olympic, Winchester, Rebel II, Tribute, Monarch, Arid and Rebel Exeda. Intercrosses of the best were subjected to many cycles of phenotypic and genotypic recurrent selection. Intercrosses of the best were subjected to many cycles of phenotypic and genotypic recurrent selection during the nine years prior to the 2002 trial established at NexGen Turf Research, LLC.

The trial was then allowed to dry down during the course of the summer of 2003, 2004 and 2005. After drought screening was complete survivors were removed. Fifty plants from Rebel Exeda and an experimental line were removed and planted in an isolated crossing block. The block was planted in a top cross design. 43 plants from the experimental line were harvested by progeny. The seed was then bulked and designated ATF1251. In the fall of 2008, a 2,000 plant increase block of ATF1251 was established. The seed was harvested in bulk in 2009 and designated ATF1251 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.

3. ATF1251 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that ATF1251 is suitable for turf used in this area.

Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors.

4. Growth & Morphology	Heading Date (days after March 1) Albany, OR		Mature Plant Height (cm) Albany, OR		Flag Leaf Height (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
	Traits					
<i>ATF1251</i>	76.33	52.00	103.50	114.73	51.50	60.50
Rebel Exeda	81.00	57.33	99.10	110.83	47.23	56.93
Rebel II	78.00	59.67	114.63	130.57	59.07	71.80
KY-31	72.33	53.00	127.97	147.07	71.87	86.23
LSD (.05)	2.83	3.70	6.96	6.35	3.72	5.67
Variance	2.49	4.51	4.41	3.61	4.68	5.99

Data collected from: Spaced single plants Plants in rows/solid seeding _____

Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.

5. Turf Use	Genetic Color		Density		Cover		Turf Quality	
	Albany, OR		Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
<i>ATF1251</i>	5.97	6.00	7.17	5.92	8.30	8.50	6.60	6.37
Falcon IV	6.30	6.08	6.27	6.67	8.20	8.42	6.20	6.40
Rebel Exeda	6.27	6.58	7.00	6.58	8.53	8.42	6.60	6.63
KY-31	3.43	4.67	6.63	4.50	7.70	7.75	4.77	4.57
LSD (.05)	0.66	0.49	0.72	0.27	0.31	0.30	0.51	0.37
Variance	7.49	5.70	8.15	5.24	2.76	2.96	5.79	4.24

•Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

•Insert additional information for use by inspectors (if any): _____

**If necessary, identify locations in line b) by the following key -

A:

B:

6. ATF1251 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.
7. If ATF1251 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



(ATF1532)

1. **Variety name:** _____ Kind: Tall Fescue
Genus: Festuca **Species:** arundinacea
Experimental designation (s): ATF1532
Date submitted: January 4, 2013

2. **1990 – 2005:** The tall fescue ATF1532 was developed from various cycles of recurrent phenotypic and genotypic selection. Each cycle was used to improve genetic color, yield potential, and disease resistance. ATF1532 traces its parentage to selections from experimental lines, ecotype collections and commercially available cultivars.
2006: In the fall of 2006, a plant selection field was established. One thousand five hundred plants were established for each of the following experimental lines; ATF1423, ATF1427, ATF1428, ATF1432, ATF1449, ATF1457, and ATF1480.
2007: Through the spring and early summer of 2007, the seven lines were rouged until 500 plants per lines remained. The 500 plants were selected based on genetic color, crown density, yield potential, and disease resistance. The 500 plants from each line was harvested by progeny, cleaned and weighed. The top 50 from each line based on seed yield was then blended. The seven lines were then planted in the fall into an isolated crossing block. The nursery consisted of 3 replications with 40 plants per replication from each of the seven lines in a randomized complete block design.
2008: The crossing block was harvested in bulk and designated ATF1532.
2009: In the fall of 2009, a 2,000 plant increase block of ATF1532 was established. The seed was harvested in bulk in 2010 and designated ATF1532, breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon.

3. ATF1532 has been tested for turf quality under lawn conditions near Albany, OR. The data indicates that ATF1532 is suitable for turf used in this area.

Use the following table to compare the applicant variety with at least two check varieties during two location-years for any three of the required plant growth or morphological descriptors.

4. Growth & Morphology Traits	Heading Date (days after March 1)		Mature Plant Height (cm)		Flag Leaf Height (cm)	
	Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012
<i>ATF1532</i>	79.33	59.67	109.83	116.47	53.07	62.03
Rebel Exeda	81.00	57.33	99.10	110.83	47.23	56.93
Rebel II	78.00	59.67	114.63	130.57	59.07	71.80
KY-31	72.33	53.00	127.97	147.07	71.87	86.23
LSD (.05)	2.83	3.70	6.96	6.35	3.72	5.67
Variance	2.49	4.51	4.41	3.61	4.68	5.99

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: Less than 1% of the plants exhibit a taller mature plant height with a lighter green color.

5. Turf Use	Genetic Color		Density		Cover		Turf Quality	
	Albany, OR		Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012	2011	2012
<i>ATF1532</i>	7.00	7.00	6.67	6.78	7.29	7.48	6.75	6.73
Falcon IV	6.59	6.73	7.17	7.21	7.46	7.69	6.75	6.92
Rebel Exeda	6.75	6.86	6.83	6.94	7.46	7.65	6.75	6.84
KY-31	4.83	4.40	5.42	5.81	6.92	7.23	4.71	4.57
LSD (.05)	0.33	0.23	0.35	0.21	0.28	0.20	0.40	0.25
Variance	2.94	1.99	3.12	1.85	2.29	1.61	3.57	2.25

•Scale used to report traits (if appropriate): 1-9 scale; 9=darker, most dense, highest coverage, highest quality.

•Insert additional information for use by inspectors (if any): _____

**If necessary, identify locations in line b) by the following key -

A: _____

B: _____

6. ATF1532 breeder seed is maintained by NexGen Turf Research, Albany, Oregon. Foundation fields may only be planted from breeder seed. Registered class may be established from either Foundation or Breeder seed. Seed production of Foundation and Registered class will be limited to three years. Seed production of Certified class will be limited to five years. Additional years of seed production may be approved by the breeder or an individual designated by the Director of Research, NexGen Turf Research, LLC.

7. If ATF1532 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2013. At this time Plant Variety Protection (PVP) will not be sought.



Playoff 2 (PO2)

1. **Variety name:** Playoff 2 Kind: Perennial Ryegrass
Genus: Lolium Species: perenne
Experimental designation (s): PO2
Date submitted: January 9, 2012

2. Playoff 2 perennial ryegrass was selected by Novel AG, Inc. in Saint Paul, Oregon from the half sib progenies of 9 plants selected for medium early maturity, an intermediate growth habit, strong presence of plant tillering and improved crown density, very dark green color, improved seedhead production and improved stem rust resistance and cycled in several generations of population improvement. Approximately 50% of the germplasm used in the development of Playoff 2 perennial ryegrass traces to plants selected from the progeny of Playoff perennial ryegrass. Another 35% of the germplasm used to develop Playoff 2 traces to selected sources from the experimental populations of an experimental selection "318". The balance (15%) traces its lineage to a plant selected from "Primary" perennial ryegrass. The first breeder seed was produced in 2010.
3. Playoff 2 has been tested in turf use in the National Turfgrass Evaluation Program 2010 Perennial Ryegrass Test. Playoff 2 has shown good adaptation at the locations reported in this application and include Western Oregon, Minnesota, Maryland, Missouri and New Jersey.

4. Growth & Morphology	Heading Date		Plant Height		Flag Leaf Length	
	St. Paul, OR		St. Paul, OR		St. Paul, OR	
	2011	2012	2011	2012	2011	2012
Playoff 2	June 7	May 23	54.2	66.3	12.2	11.2
Playoff	June 4	May 19	64.1	71.3	13.4	12.3
Allsport 3	June 2	May 19	68.7	71.4	15.9	13.5
Pinnacle	May 18	May 17	83.2	62.3	18.1	14.3
Linn	May 16	May 13	106.1	86.4	23.5	21.8
LSD (.05)	2.1	2.1	3.5	4.0	1.6	2.1
s.e.	1.3	1.1	1.8	2.0	.79	1.1

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: The frequency of variants is <2% and may be taller or lighter colored plants. Should these plants occur during Foundation seed production they should be removed.

5. Turf Use	Turf Quality		Genetic Color		Brown Patch Disease		Seedling Vigor	
	2011		2011		2011		2011	
	MN	MD1	MN	OR1	MO1	NJ2	MN	OR1
Playoff 2	4.5	5.2	4.7	7.0	3.7	3.7	6.7	6.0
Brightstar SLT	4.2	5.1	4.0	6.7	4.0	4.0	7.3	6.7
Palmer V	5.2	5.7	5.3	7.0	5.0	3.7	7.7	7.0
Pinnacle	3.4	4.3	2.0	5.7	4.7	3.3	7.7	6.7
Linn	1.3	2.8	1	5.7	3.0	1.3	7.7	6.7
LSD (.05)	.8	.8	1.2	.3	1.7	1.7	1.1	1.0
C.V.	10.5	9.5	12.4	9.5	23.3	23.9	9.5	9.2

•Scale used to report traits (if appropriate): 1-9, 9= best quality, least disease, darkest green, most vigor

6. Breeder seed of Playoff 2 is being maintained by Novel AG, Inc. in St. Paul, Oregon. Generations of seed increase shall follow breeder seed as foundation and certified. Foundation class production fields established from breeder seed can be harvested for foundation seed for a maximum of 4 years. Certified class production fields established from foundation seed will be limited to 4 years of seed production. Additional years of seed production may be approved by Novel AG, Inc.
7. Certified seed is anticipated to be available in July of 2013. PVP certification option has not been determined at this time.



Restore (AT-51)

1. **Variety name:** Restore **Kind:** Tall fescue
Genus: Festuca **Species:** Arundinacea
Experimental designation (s): AT-51
Date submitted: January 9, 2012

2. Restore tall fescue (*Festuca arundinacea* Schreb.) is an elite, medium-early maturing tall fescue variety that has been selected from experimental, elite germplasm in the Novel AG, Inc. breeding program from plants collected in wild populations and selected from turf plots with high turf scores with further spaced plant selection and seed increase. The sources of germplasm used to produce Restore traces to four populations. Approximately forty percent trace to 4 plants selected from Stetson Tall fescue. Fifty percent trace to 6 plants selected from Bravo tall fescue. Another Ten percent trace to the progeny of 2 plants selected from Lancer-e tall fescue. All of these plants were used in a cross in 1997 which was inter-pollinated with 7 plants collected from old turf areas in Oregon which had spread aggressively in low maintenance turf areas including a 3 plants from the Newberg Airpark, 1 plant from the Cabin Creek rest area off I-5 in Southern Oregon, a plant from the Mollala River State Park, and a plant collected from the Celilo State Park area near Celilo, Oregon. All of the old turf collected plants appeared to be very old plants and had generally very wide leaf expression and a local plant spreading adaptation either by rhizomes or strong tillering. All of the progeny seedlings from this initial cross were selected for an apparent mutation present in the paternal feral populations. An additional 4 cycles of selection were conducted to create the first breeder seed in 2006.
3. Restore has been developed for use as a turfgrass and was tested in St. Paul, Oregon during the years of 2007 and 2008 and exhibited good adaptation.

4. Growth & Morphology	Heading Date		Plant Height		Flag Leaf Length	
	St. Paul, OR		St. Paul, OR		St. Paul, OR	
	2007	2008	2007	2008	2007	2008
Restore	May 14	May 18	104.1	97	15.2	16.9
Bonsai	May 20	May 24	78.1	88.7	12.2	13.7
Silverado	May 17	May 23	84.0	86.1	14.2	10.8
Bravo	May 12	May 18	117.1	119.3	14.9	16.2
K-31	May 4	May 14	126.3	129.7	19.2	19.1
LSD (.05)	1.4 days	1.7 days	3.7	3.4	2.3	2.1
s.e.	.98	1.10	1.9	1.7	1.2	1.1

Data collected from: Spaced single plants Plants in rows/solid seeding

Variants to be expected and frequency: The frequency of variants is <2% and may be taller or lighter colored plants. Should these plants occur during Foundation seed production they should be removed.

5. Turf Use	Turf Quality		Genetic Color		Turf Density		Leaf Texture	
	St. Paul, OR		St. Paul, OR		St. Paul, OR		St. Paul, OR	
	2007	2008	2007	2008	2007	2008	2007	2008
Restore	6.8	7	6.9	6.7	6	6.7	6.1	6.3
Padre	6	6.1	6.7	7	6.3	6.7	6.7	7
Bravo	4.3	4	4.7	5.0	4.7	4	4.7	5
Rebel 2	3	2.8	3.4	3.8	2	2.3	2.3	3.7
KY-31	2.4	2.2	1.6	2	1.7	2	2	2.3
LSD (.05)	1.3	1.4	.8	.9	.9	1.2	2.6	2.4
s..	.6	1	.4	.7	.5	1	1.8	1.4

●Scale used to report traits (if appropriate): 1-9, 9= best quality, least disease, darkest green, most dense, finest

6. Breeder seed of Resotre is being maintained by Novel AG, Inc. in St. Paul, Oregon. Generations of seed increase shall follow breeder seed as foundation and certified. Foundation class production fields established from breeder seed can be harvested for foundation seed for a maximum of 4 years. Certified class production fields established from foundation seed will be limited to 4 years of seed production. Additional years of seed production may be approved by Novel AG, Inc.
7. Certified seed is anticipated to be available in July of 2013. PVP certification option has not been determined at this time.



Deep Blue (A98-1028)

1. **Variety name:** Deep Blue Kind: Kentucky Bluegrass
 Genus: Poa Species: pratensis
 Experimental designation (s): A98-1028
 Date submitted: December 18, 2012

2. Deep Blue is derived from a hybrid between the cultivars Lakeshore and Alpine. Initially hybridized by Rutgers in 1996, seed from the maternal parent Lakeshore was selected from a progeny nursery in Adelphia, NJ in 1997. Selection criteria included color, texture, growth habit, and freedom from disease. Breeder seed was first produced in 1999.

3. Deep Blue is intended for turf use in areas where Kentucky bluegrass is adapted. Deep Blue was entered into the 2000 Kentucky Bluegrass "High Maintenance" trial of the National Turfgrass Evaluation Program. States where data was utilized in the application include Illinois, North Carolina, New Jersey, Virginia, Oklahoma, Maine, and Michigan and Deep Blue appears to be adapted to those states under the management regimes tested.

4. Growth & Morphology	Flag leaf length, cm		Flag leaf width, mm		Panicle length, cm	
	Lebanon, OR		Lebanon, OR		Lebanon, OR	
	2010	2011	2010	2011	2010	2011
Deep Blue	2.8	3.0	4.0	4.2	8.3	8.7
Lakeshore	3.9	3.7	4.4	4.6	8.8	9.1
Baron	3.1	2.9	3.8	3.9	6.9	7.6
Alpine	3.3	3.4	3.3	3.3	6.7	6.4
Midnight	3.7	3.3	3.4	3.3	6.1	5.9
LSD (.05)	0.6	0.8	0.4	0.5	0.7	0.8
CV%	12.1	11.4	12.8	12.9	9.9	10.6

Data collected from: Spaced single plants Plants in rows/solid seeding

Variants to be expected and frequency: Later maturity, lighter color- up to 6% (94% apomictic)

5. Turf Use	Turf Quality, 0-9		Winter color, 0-9		Fall living cover, %		Red thread, 0-9	
	2005		2001		2001		2004	
	Carbondale		Adelphia, NJ Blacksburg, VA		Carbondale, IL Stillwater, OK		Orono, ME East Lansing, MI	
Deep Blue	6.1	2.4	5.3	6.7	73.3	85.0	9.0	8.7
Midnight	6.0	4.0	4.3	7.0	40.0	81.7	8.7	9.0
Baron	5.0	3.3	3.3	6.3	56.7	83.3	7.3	9.0
Alpine	3.9	2.3	3.3	7.0	66.7	86.7	8.3	8.7
Lakeshore	5.1	3.6	4.0	7.0	50.0	51.7	8.0	9.0
LSD (.05)	0.9	1.0	1.3	1.1	19.6	21.2	1.6	0.5
CV%	10.9	20.6	14.8	10.0	21.7	16.6	12.3	3.8

• Scale used to report traits: 0-9, 9=highest, darkest, least disease

6. Breeder seed is maintained by Cascade International Seed Company of Aumsville, OR and supplies are kept in long term storage. Stock seed is produced by Cascade with assistance from Oregro Seeds, Inc. of Albany, OR. Generational scheme includes Breeder – 2 year stand; Foundation – 2 year stand; Registered – 2 year stand; and Certified – 6 year stand.

7. If accepted, certified seed may be available in 2013. PVP will not be applied for.



PPG-TF 117 (PPG-TF 117)

1. **Variety name:** PPG-TF 117 Kind: Tall fescue
 Genus: Festuca Species: Arundinacea
 Experimental designation (s): PPG-TF 117
 Date submitted: January 2013
2. The germplasm used to develop PPG-TF 117 tall fescue traces 20% to selections from the variety Firebird, 40% to selections from Sidewinder, and 40% selections from the variety Taccoa. Plants were selected for high number of reproductive tillers, uniform, early maturity and dark green color. Breeder seed of the variety was first produced in 2010.
3. PPG-TF 117 has been tested for turf use under turf management in western Oregon. The data indicate that PPG-TF 117 is suitable for turf use in this area.

4. Growth & Morphology Traits	Heading Date (Day of Jefferson, OR)		Plant Height (cm) Jefferson, OR		Flag Leaf Height (cm) Jefferson, OR	
	2011	2012	2011	2012	2011	2012
	PPG-TF 117	155.2	158.1	72.6	70.7	31.1
Rebel II	155.2	161.2	93.5	95.3	42.8	43.7
Crewcut	157.3	161.6	84.6	83.6	37.4	35.0
KY 31	158.1	162.3	105.0	112.4	57.5	58.7
Bonanza	168.2	168.9	94.3	99.3	47.2	48.8
LSD (.05)	1.9	2.2	5.5	4.1	5.2	5.2
CV (%)	0.8	0.8	4.0	2.8	8.2	7.8

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: | A small percentage (<0.5%) of the plants are taller, coarser bladed and lighter green than the rest of the population.

5. Turf Use	Turf Quality (1-9)		Color (1-9)		Net Blotch (1-9)		Brown Patch (1-9)	
	Jefferson, OR		Jefferson, OR		Jefferson, OR		2011	
	2011	2012	2011	2012	2011	2012	New Jersey	Kentucky
PPG-TF 117	7.3	6.8	7.3	7.3	6.7	7.0	6.3	5.2
Firecracker LS	6.7	6.0	7.7	5.0	4.7	6.0	5.4	5.8
Falcon V	6.3	5.9	7.3	5.7	5.3	4.7	6.3	5.9
Bullseye	5.6	5.8	6.0	6.0	5.3	4.7	7.6	5.7
Kentucky 31	4.7	2.7	4.3	2.0	4.7	4.0	5.8	5.6
LSD (.05)	1.4	0.5	1.6	1.1	1.7	1.7	1.9	0.6
CV (%)	14.3	5.5	16.2	11.2	20.7	19.7	23.9	8.4

●Scale used to report traits (if appropriate): 1-9; 9= high quality, dark green, no disease

6. Breeder seed of PPG-TF 117 is maintained under controlled conditions by Peak Plant Genetics, Jefferson, Oregon. Foundation stands may only be planted from Breeder seed. Registered class fields may be established from either Foundation or Breeders seed. Certified fields may be established from Breeder, Foundation or Registered seed. Foundation and Registered Class fields will be limited to three harvests of Foundation/Registered production. Certified fields will be limited to six years of seed production.
7. PPG-TF 117 certified seed will first be available in the spring of 2013. Plant Variety Protection has not been applied for at this time.



Breakout

1. **Variety name:** Breakout Kind: Annual ryegrass
 Genus: Lolium Species: Multiflorum
 Experimental designation (s): _____
 Date submitted: January 8, 2013

2. The germplasm used to develop Breakout annual ryegrass traces maternally 40% to selections from the variety Panterra and 60% to selections from the variety Axcella 2. The variety Harbour was used as a pollen source in the development of the variety. Plants were selected for a high number of reproductive tillers, medium maturity, narrow leaves and relatively dark green foliage. The first breeder seed of the variety was produced in 2010.

3. Breakout was tested for turf in western Oregon and data indicate that it is suitable for turf in this area.

4. Growth & Morphology	Heading Date (Day of Year)		Plant Height (cm)		Flag Leaf Height (cm)	
	2012		2012		2012	
Traits	Jefferson	Salem	Jefferson	Salem	Jefferson	Salem
Breakout	151.2	152.5	88.2	89.6	46.1	36.1
Axcella 2	151.6	151.1	79.1	84.9	36.2	42.0
Panterra	150.9	151.4	97.1	95.5	50.3	45.6
Gulf	145.8	147.0	114.9	109.8	59.5	54.4
LSD (.05)	1.0	2.1	5.0	4.1	9.5	5.2
CV (%)	0.3	0.7	2.6	2.1	9.9	5.8

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: | A small percentage (<0.5%) of the plants are taller, coarser bladed and lighter green than the rest of the population.

5. Turf Use	Turf Quality (1-9)		Color (1-9)		Leaf Spot (1-9)		Winter Growth Rate	
	Jefferson, OR		Jefferson, OR		Jefferson, OR		Jefferson, OR	
	a)							
	2011	2012	2011	2012	2011	2012	2011	2012
Breakout	5.2	5.0	5.0	5.0	5.5	4.5	5.3	7.5
Axcella 2	5.0	4.9	4.8	4.5	5.0	4.5	4.7	6.0
Panterra	4.8	4.5	4.5	4.0	4.0	4.0	4.0	5.0
Gulf	1.2	1.4	1.5	1.0	4.0	5.8	1.3	1.0
LSD (.05)	0.8	0.8	1.0	0.8	2.2	1.7	1.3	1.0
CV (%)	8.0	9.4	9.7	9.4	23.8	25.2	12.6	8.2

•Scale used to report traits (if appropriate): 1-9; 9= high quality, dark green, no disease, low growth rate

6. Breeder seed of Breakout is maintained under controlled conditions by Peak Plant Genetics, Jefferson, Oregon. Foundation stands may only be planted from Breeder seed. Registered class fields may be established from either Foundation or Breeders seed. Certified fields may be established from Breeder, Foundation or Registered seed. Foundation and Registered Class fields will be limited to one harvest of Foundation/Registered production. Certified fields will be limited to one year of seed production.

7. Breakout certified seed will first be available in the spring of 2013. Plant Variety Protection has not been applied for at this time.



Tetrasweet (PPG-FPRT 103)

1. **Variety name:** Tetrasweet Kind: Perennial ryegrass
 Genus: Lolium Species: perenne
 Experimental designation (s): PPG-FPRT 103
 Date submitted: January 8, 2013

2. The germplasm used to develop Tetrasweet perennial ryegrass traces 50% to selections from the variety Power and 50% from selections from the variety Calibra. Plants were selected for high number of reproductive tillers, uniform, medium maturity, broad crowns, large amounts of foliage and good resistance to rust. The first breeder seed of the variety was produced in 2009.

3. Tetrasweet has been tested for forage uses in Kentucky, and New York. The data indicate that Tetrasweet is suitable for forage use in these areas.

4. Growth & Morphology	Heading Date (Day of Year)		Plant Height (cm)		Flag Leaf Length (cm)	
	2012		2012		2012	
	Jefferson	Salem	Jefferson	Salem	Jefferson	Salem
Pokopo	158.5	154.5	81.0	94.0	20.8	25.8
Calibra	157.2	154.5	81.6	103.5	20.5	26.9
Tetrasweet	158.0	152.3	84.9	101.5	22.2	28.5
Power	154.1	149.0	88.9	103.0	23.2	24.8
LSD (.05)	3.2	2.2	3.2	5.6	2.8	2.0
CV (%)	1.0	0.7	1.9	2.3	6.4	5.2

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency: | A small percentage (<0.5%) of the plants are shorter than the rest of the population.

5. Forage Use	Dry Matter Yields (T/A)				Stand Persistence (%)	
	Kentucky		New York		Kentucky	New York
	2011	2012	2011	2012	2011	2011
Tetrasweet	2.49	0.94	0.50	4.63	100.00	90.00
Boost	4.27	1.67	0.42	5.31	99.00	89.00
Linn	2.85	0.96	0.39	4.51	100.00	93.00
LSD (.05)	0.92	0.99	0.15	0.33	1.00	3.00
CV (%)	28.14	27.06	14.45	3.77	1.00	1.93

6. Breeder seed of Tetrasweet is maintained under controlled conditions by Peak Plant Genetics, Jefferson, Oregon. Foundation stands may only be planted from Breeder seed. Registered class fields may be established from either Foundation or Breeders seed. Certified fields may be established from Breeder, Foundation or Registered seed. Foundation and Registered Class fields will be limited to three harvests of Foundation/Registered production. Certified fields will be limited to five years of seed production.

7. Tetrasweet certified seed will first be available in the spring of 2013. Plant Variety Protection has not been applied for at this time.



(46-09 IR SAT)

1. **Variety name:** _____ Kind: Intermediate ryegrass
Genus: Lolium **Species:** hybridum
Experimental designation (s): 46-09 IR SAT
Date submitted: December 20, 2012

2. *46-09 IR SAT* was developed from a field cross (open pollination) of progeny from four ryegrass populations at the Pickseed USA, Inc. (PS) research facility, Albany, OR. The parental material for the populations were sourced primarily from the cultivars *Transcend*, *Transist 2200*, *Transist 2400* and *Fuse*. During May 2009, individuals of each population were evaluated and retained for open pollination if they exhibited a strict intermediate ryegrass phenotype, e.g. tall, erect growth habit, medium dark green foliage color, and awned reproductive spikes showing good seed production potential. Seed production from 150 retained plants was sampled, new progeny established, and the first breeder seed of *46-09 IR SAT* was harvested in July 2010 at PS.

3. *46-09 IR SAT* has been tested for overseeding turf use in Rolesville, NC and in Tucson, AZ. The variety has shown adaptation to those two locations, and will be marked in areas of similar climates.

4. Growth & Morphology	Heading Date		Plant Height (cm)		Flag Leaf Length (cm)	
	Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012
<i>46-09 IR SAT</i>	May 23	May 18	103.2	85.7	21.9	19.1
<i>Gulf</i>	May 17	May 12	139.0	104.2	25.6	23.3
<i>Linn</i>	May 8	May 4	116.0	82.4	20.7	16.2
<i>Intercross</i>	May 21	May 17	118.9	84.2	22.7	18.2
<i>Transeze</i>	May 25	May 21	99.6	75.9	19.5	14.9
LSD (.05)	4 days	3 days	18.9	15.5	5.7	6.1
S.E.	1.0	1.0	5.2	4.2	1.6	1.7

Data collected from: Spaced single plants Plants in rows/solid seeding _____

Variants to be expected and frequency: Taller, lighter green, coarse textured at <3%

5. Turf Use	% Establishment		Turf Quality (1-9)		Foliage Color (1-9)		Transition (1-9)	
	Rolesville, NC		Rolesville, NC		Rolesville, NC		Rolesville, NC	
	2010	2011	2011	2012	2011	2012	2011	2012
<i>46-09 IR SAT</i>	90.5	97.7	4.1	4.8	5.7	4.0	8.0	7.7
<i>Gulf</i>	89.9	94.7	2.1	2.1	2.0	1.0	7.7	9.0
<i>Seville 3</i>	88.3	98.1	6.2	6.0	6.7	7.0	8.0	8.3
<i>Transist 2200</i>	92.8	96.1	3.9	4.1	4.7	3.3	8.3	8.3
<i>Transist 2400</i>	93.5	96.9	3.7	3.4	4.7	2.0	8.0	8.3
LSD (.05)	7.8	2.5	1.0	0.9	1.3	1.2	1.5	1.5
CV %	5.6	1.6	13.4	11.2	5.6	13.7	12.4	12.6

•Scale used to report traits (if appropriate): 1-9 with 9= ideal quality, darkest green color, and rather complete transition

6. Breeder seed of *46-09-IR SAT* was first produced in 2010 by Pickseed USA, Inc. (PS), Albany, OR. A record sample of this seed is maintained at PS in cold, dry storage. During the life of the variety, additional breeder seed will be produced as needed to reconstitute the cultivar under the supervision of PS. Foundation, Registered, and Certified classes of seed production are permitted. Foundation fields may only be established using breeder seed. Registered fields may be established from either breeder or foundation seed. Certified fields may be established from breeder, foundation, or registered seed. Foundation, Registered, and Certified class fields will be limited to two harvests.

7. Certified seed is anticipated to be available in summer 2013. A decision for filing a PVP application has not been made at this time.



(PSG 4DFHM)

1. **Variety name:** _____ Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): PSG 4DFHM
Date submitted: _____
2. *PSG 4DFHM* was selected from five half-sib families. The parental family lines were selected for salt tolerance, dark green, fine textured foliage, and good seed production potential. The origin of the five families trace to *Hawkeye 2*, *Fiesta 4*, *Harrier*, *Dasher 3*, and an experimental release *PSG 4MSH*. Development of the variety was conducted at the research facility of Pickseed USA, Inc., Albany, OR, during 2006-2010, via spaced planted family evaluation, selection, and multiplication. The first breeder seed of *PSG 4DFHM* was produced in 2010 at Albany, OR.
3. *PSG 4DFHM* has performed well as a turfgrass variety in trials located in Riverside, CA; Ames, IA; College Park, MD; Mead, NE; Amherst, MA; and Columbia, MO. The variety could be available for sale in climates represented by those locations.

4. Growth & Morphology	Heading Date		Plant Height (cm)		Flag Leaf Length (cm)	
	Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012
PSG 4DFHM	May 26	May 20	62.0	49.4	12.5	8.0
Pinnacle	May 24	May 20	72.3	53.2	17.1	9.0
Linn	May 10	May 9	83.3	62.0	18.2	11.5
Manhattan	June 5	June 3	73.3	50.5	15.6	9.7
Elka	June 12	June 9	57.2	36.2	16.8	7.9
LSD (.05)	2 days	3 days	5.2	4.0	1.9	1.4
S.E.	1.0	2.0	2.6	1.9	0.9	0.7

Data collected from: Spaced single plants Plants in rows/solid seeding _____

Variants to be expected and frequency: Taller, lighter green, earlier heading at <3%.

5. Turf Use	Turf Quality (1-9)		Spring Green-up (1-9)		Foliage Color (1-9)		% Fall Ground Cover	
	2011		2011		2011		2011	
	A	B	C	D	C	D	B	E
PSG 4DFHM	6.1	4.9	4.7	5.0	6.3	7.0	50.0	86.7
Pinnacle	5.5	5.6	4.0	4.0	4.3	5.7	70.0	75.0
Linn	5.1	3.7	7.3	3.3	3.0	5.0	63.3	68.3
Fiesta 4	6.7	5.4	5.0	5.3	7.0	7.0	53.3	73.3
Mach 1	6.4	5.3	5.3	4.7	7.0	7.0	56.7	78.3
LSD (.05)	0.6	1.3	1.6	1.7	0.7	0.4	24.8	23.9
CV%	5.8	14.2	18.8	21.0	7.1	3.6	24.8	20.5

•Scale used to report traits (if appropriate): 1-9 with 9= ideal quality, completely green, darkest green color.

**If necessary, identify locations in line b) by the following key - A: Riverside, CA B: Ames, IA
C: Urbana, IL D: Mead, NE
E: Columbia, MO :

6. Breeder seed of *PSG 4DFHM* was first produced in 2010 by Pickseed USA, Inc. (PS), Albany, OR. A record sample of this seed is maintained at PS in cold, dry storage. During the life of the variety, additional breeder seed will be produced as needed to reconstitute the cultivar under the supervision of PS. Foundation, Registered, and Certified classes of seed production are permitted. Foundation fields may only be established using Breeder seed. Registered fields may be established from either Breeder or Foundation seed. Certified fields may be established from Breeder, Foundation, or Registered seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production, followed by three additional harvests of Certified production. Certified class fields will be limited to seven years of production.
7. Certified seed is anticipated to be available, summer 2013. A decision for filing a PVP application has not been made at this time



(PSG 60-08)

1. **Variety name:** _____ Kind: Tall fescue
Genus: Festuca **Species:** arundinacea
Experimental designation (s): PSG 60-08
Date submitted: January 3, 2013

2. *PSG 60-08* is an advanced generation synthetic variety derived from ten half-sib family lines. The variety was developed at Pickseed USA, Inc. (PS), Albany, OR. The parental material was selected for having basal tillering ability, seed production potential, fine textured foliage of dark green color, and tolerance to stem rust disease. A spaced planted nursery was established in late January 2006 at PS with individual progeny plants from the ten families. Individuals were maintained in the nursery from 2006-2008 roguing out, as needed, those individuals not showing the above mentioned characteristics. After open pollination among individuals of all ten families, seed of only six families was bulked as the first breeder seed of the variety, July 2008. Additional breeder seed was produced from the same nursery, in the same manner, July 2010.

3. *PSG 60-08* has been tested for turf quality and several turf characteristics in Fayetteville, AR; Berry, KY; St. Paul, MN; and Albany, OR. The variety could be available for sale in climates represented by those locations for use as a permanent, cool season turf surface.

4. Growth & Morphology	Heading Date		Plant Height (cm)		Flag Leaf Length (cm)	
	Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012
PSG 60-08	May 22	May 6	70.6	89.1	9.1	9.6
Bonanza	May 22	May 6	85.3	106.2	13.8	14.6
Bonsai	May 24	May 9	69.5	91.3	7.1	11.1
Silverado	May 21	May 5	70.3	92.4	11.3	13.3
LSD (.05)	2 days	2 days	14.6	16.6	3.2	4.2
S.E.	1	1	3.9	4.4	1.0	1.1

Data collected from: Spaced single plants Plants in rows/solid seeding _____

Variants to be expected and frequency: Taller, lighter green, coarser textured at < 3%.

5. Turf Use	Turf Quality (1-9)		Foliage Color (1-9)		Turf Density (1-9)		Foliage Texture (1-9)	
	2011		2011		C		C	
	A	B	A	B	2011	2012	2011	2012
PSG 60-08	4.2	5.1	5.5	7.0	7.0	7.5	7.5	6.5
Mustang 4	5.6	5.1	4.6	6.3	7.0	8.5	7.5	7.0
Falcon V	5.9	6.7	4.5	5.0	—	—	—	—
Crossfire 3	—	—	—	—	7.0	8.0	7.5	7.0
Corona	6.0	4.9	5.1	7.7	7.0	8.0	7.5	7.0
LSD (.05)	1.3	1.0	1.6	1.0	1.1	3.2	1.3	3.4
CV%/S.E.	17.5	14.0	27.0	13.2	0.5	0.7	0.6	0.8

● Scale used to report traits (if appropriate): 1-9, with 9= ideal quality, darkest green color, most dense, finest leaf texture CV% reported for turf quality and foliage color, S.E. reported for turf density and foliage texture.

● **If necessary, identify locations in line b) by the following key - A: Berry, KY B: St. Paul, MN
C: Albany, OR

6. Breeder seed of *PSG 60-08* was first produced in 2008 by Pickseed USA, Inc. (PS), Albany, OR. A record sample of this seed is maintained at PS in cold, dry storage. During the life of the variety, additional Breeder seed will be produced as needed to reconstitute the cultivar under the supervision of PS. Foundation, Registered, and Certified classes of seed production are permitted. Foundation fields may only be established using Breeder seed. Registered fields may be established from either Breeder or Foundation seed. Certified fields may be established from Breeder, Foundation, or Registered seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production, followed by three additional harvests of Certified production. Certified class fields will be limited to seven years of production.

7. Certified seed is anticipated to be available in spring 2013. a decision for filing a P.V.P. application has not been made at this time.



(BMXC-S02)

1. **Variety name:** Not yet named Kind: Strong Creeping Red Fescue
 Genus: Festuca Species: rubra
 Experimental designation (s): BMXC-S02
 Date submitted: January 7, 2013

2. BMXC-S02 was developed by scientists at the New Jersey Agricultural Experiment Station in conjunction with Blue Mountain Seeds, Inc. BMXC-S02 originates from a plant collected in the Rose City Cemetery in Portland, Oregon. This plant and progeny from this plant underwent several cycles of selection and were pollinated by plants collected from old turfs of the United States. BMXC-S02 was selected for resistance to various diseases, a lower-growing plant characteristic, abundant tillers, a rich, bright, dark green color, persistence in turf, uniformity, vigor and improved seed yield. Two cycles of seed selections were conducted in Imbler, Oregon to create an isolated crossing block that produced the first breeder seed in 2003.

3. BMXC-S02 has exhibited good turf performance and adaptation in western Oregon. It will be made available for sale in climates represented by this locale.

4. Growth & Morphology Traits	Total Plant Height Corvallis, Oregon		Flag Leaf Height Corvallis, Oregon		Heading Date Corvallis, Oregon	
	2004	2005	2005	2006	2005	2006
	BMXC-S02	77.0	83.6	20.5	27.4	May 1
Flyer	89.8	101.4	31.4	39.8	April 25	May 3
Boreal	79.5	96.2	32.2	36.1	May 9	May 13
Shademaster	79.0	90.6	30.0	38.3	May 1	May 10
Ensylva	79.9	82.6	30.9	33.0	May 2	May 12
LSD (.05)	3.5	3.1	2.1	3.5	5.4 days	4.3 days
CV%	11.2	10.1	13.8	13.3	17.5	16.9

Data collected from: Spaced single plants X Plants in rows/solid seeding

Variants to be expected and frequency:

Approximately 1.7% of the population may exhibit lighter green color and a total plant height 5% to 9% taller than population average.

5. Turf Use	Turf Quality							
	Corvallis, Oregon		Corvallis, Oregon		Corvallis, Oregon		Corvallis, Oregon	
	a) 2004	b) 2005	2004	2005	2004	2005	2004	2005
BMXC-S02	6.0	6.2	6.2	6.1	5.9	6.2	5.3	6.0
Cindy Lou	6.1	6.0	6.0	5.8	6.4	6.6	5.9	6.3
Rose	5.6	5.8	5.6	5.6	6.0	6.4	5.6	5.8
Fenway	5.8	5.5	5.5	5.2	5.9	6.2	5.7	5.5
LSD (.05)	0.6	0.5	0.6	0.6	0.4	0.5	0.5	0.5
CV%	11.8	11.2	12.4	12.7	11.6	12.2	11.4	11.9

- Rating scale is from 1 through 9 with 9 denoting best quality, darkest color, finest texture and highest density.

6. Breeder Seed of BMXC-S02 was first produced in 2003. Breeder Seed is maintained by Blue Mountain Seeds, Inc, Imbler, Oregon. A sample of the original Breeder Seed has been retained in cold storage for future use. Foundation stands may only be planted from Breeder Seed. Registered stands may be established from either Breeder or Foundation Seed. Certified fields may be established from Breeder, Foundation, or Registered Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by six additional harvests of Certified production. Certified class fields will be limited to ten years of seed production. Exceptions may be granted by Blue Mountain Seeds, Inc.

7. Certified seed is anticipated to be available in 2013. Application for PVP is undecided at this time.



Washington II (RAD-343 / LS 4000)

1. **Variety name:** Washington II Kind: Kentucky Bluegrass
Genus: Poa Species: pratensis
Experimental designation (s): RAD-343, LS 4000
Date submitted: January 1, 2013

2. Washington II Kentucky bluegrass was developed at the Radix Research, Inc. facility near Corvallis, Oregon. Washington II appears to have originated as a single, apomictic plant selection between the maternal plant CAZ 31M a collection made at Chinle, Arizona in early 2002, and paternal pollen contribution from the variety Washington. Washington II most closely resembles the variety Washington. Breeder seed of Washington II was first produced in 2004.
3. Washington II was tested for turf use under low maintenance in Kentucky and Massachusetts. It will be made available for sale in climates represented by these locales.

4. Growth & Morphology	Total Plant Height (cm) Corvallis, Oregon		Panicle Length (cm) Corvallis, Oregon		Julian Heading Date Corvallis, Oregon	
	2006	2007	2006	2007	2006	2007
Washington II	68.8	79.2	12.0	12.5	113	125
Kenblue	57.1	84.4	9.3	10.7	080	085
Baron	48.2	53.6	8.5	9.1	111	120
Washington	68.2	77.1	11.6	12.7	113	123
Midnight	43.4	46.2	8.3	8.7	130	133
LSD (.05)	3.9	3.3	0.4	0.4	5.9	6.4
CV%	6.8	5.9	4.6	3.9	7.5	6.7

Data collected from: Spaced single plants Plants in rows/solid seeding

Variants to be expected and frequency:

All aberrant plants observed in Washington II Kentucky bluegrass fields have been similar in appearance but shorter plants exhibiting reduced number of seed heads with an occurrence of 9% or less.

5. Turf Use	Turf Quality		Ground Cover		Spring Green-up		Leaf Texture	
	2009		2008	2010	2006		2006	
	Blacksburg, VA	Amherst, MA	Corvallis, OR	Corvallis, OR	Lexington, KY	St. Paul, MN	Amherst, MA	St. Paul, MN
Washington II	6.4	5.6	7.3	8.0	6.7	6.0	6.0	5.3
Midnight	5.6	5.8			5.0	4.3	6.0	6.3
Washington	7.1	5.7	8.0	7.7	7.3	7.0	6.7	7.3
Baron	6.2	5.3	6.7	8.3	5.3	4.7	7.0	5.0
Ginney			6.3	7.0				
CAZ 31M			4.0	5.7				
LSD (.05)	1.7	0.6	1.6	0.9	1.5	1.6	1.4	0.6
CV%	18.0	6.4	14.9	12.6	13.8	18.8	16.2	10.7

• Scale of 1-9, 9=Best, Earliest and Finest

6. Breeder seed of Washington II was first produced in 2004. All breeding work was carried out by Radix Research, Inc. The rights to produce and sell Washington II have been licensed by Lewis Seed of Shedd, OR. A portion of breeder seed has been retained in cold storage; breeder seed will be periodically regenerated by Radix Research Inc., as needed. Foundation stands may only be planted from breeder seed. Registered stands may be established from either Foundation or Breeder Seed. Certified fields may be established from Breeder, Foundation, or Registered Seed. Foundation and Registered class fields will be limited to six years, and seven years for Certified. Additional years of seed production may be approved by Radix Research, Inc.
7. Certified seed is anticipated to be available in the spring of 2013. PVP will not be applied for.



Quartermaster (RAD-LI101)

1. **Variety name:** Quartermaster Kind: Tetraploid Perennial Ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): RAD-LI101, LI101
Date submitted: January 1, 2013

2. Quartermaster was developed beginning with individual plant selections from a commercial variety evaluation nursery located at Radix Research, Inc.'s breeding facility near Corvallis, Oregon. Quartermaster originates from selections of the varieties Amazon (43%), Bison (29%), Lane (14%), and Baristra (14%). Plants were selected on the basis of noticeable freedom of disease, relatively similar maturity and phenotypic expression, the appearance of improved forage and seed yield, and similar ploidy level. Subsequently, two cycles of seed selections conforming to the original selection criteria were used to form an isolated crossing block that produced the first breeder seed in 2004.
3. Quartermaster has exhibited good forage yield performance and adaptation in New York and Kentucky. It will be made available for sale in climates represented by these locales.

4. Growth & Morphology Traits	Total Plant Height (cm) Corvallis, Oregon		Spike Length (cm) Corvallis, Oregon		Julian Heading Date Corvallis, Oregon	
	2005	2006	2005	2006	2005	2006
	Quartermaster	120.3	124.3	37.5	36.6	130
Tonga	100.3	102.2	31.1	32.4	126	133
Amazon	104.6	106.8	31.9	33.3	129	135
Sierra	88.5	91.9	27.8	25.8	114	122
Calibra	96.8	94.7	31.2	30.1	139	144
LSD (.05)	4.3	4.0	3.4	2.9	4.2	3.6
CV%	12.3	9.1	5.6	6.8	11.9	11.6

Data collected from: Spaced single plants Plants in rows/solid seeding

Variants to be expected and frequency: Approximately 4% of the population may appear as slightly shorter and darker green variants.

5. Forage Use	Forage Yield (T/A)						% Stand					
	Ithaca, New York			Lexington, Kentucky			Ithaca, New York		Lexington, Kentucky			
	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	
Quartermaster	6.51	5.27	5.21	5.20	0.80	1.05	53	48	94	61	41	
Sierra	4.92	4.91	4.73	3.27	0.85	1.03	63	58	96	66	65	
Tonga	4.87	4.52	4.59	3.70	0.80	1.01	53	51	96	65	56	
Calibra	5.65	4.97	4.49				56	51				
LSD (.05)	0.54	0.34	NS	0.77	0.28	0.34	7	NS	6.4	20.7	16.8	
CV%	7.5	4.7	NS	12.3	26.8	27.2	8.5	NS	4.6	24.3	24.5	

*NS = data not stated

6. Breeder seed of Quartermaster was first produced in 2004. All breeding work was carried out by Radix Research, Inc. The rights to produce and sell Quartermaster have been licensed by Lewis Seed of Shedd, OR. A portion of breeder seed has been retained in cold storage; any further breeder seed production will be overseen by Radix Research. Foundation stands may only be planted from breeder seed. Registered stands may be established from either Foundation or Breeder Seed. Certified fields may be established from Breeder, Foundation, or Registered Seed. Foundation and Registered class fields will be limited to two harvests of Foundation/Registered production followed by two additional harvests of Certified production. Certified class fields will be limited to four years of seed production. Additional years of seed production may be approved by Radix Research, Inc.
7. Certified seed is anticipated to be available in the spring of 2013. PVP will not be applied for.



(PSG 4MSH)

- Variety name:** _____ Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): PSG 4MSH
Date submitted: _____
- PSG 4MSH was selected from five clones. The parental clones, and their progeny, were selected for medium maturity, high crown density, and upright growth habit. Approximately 57% of the parental germplasm for the variety trace back to *Pinnacle*. Thirty-six percent trace to several turf patches of perennial ryegrass that had survived flooding and *Pythium* spp. damage in 1989. The remaining 7% of the parental germplasm traces back to *Jazz*. The first breeder seed of PSG 4MSH was produced in 2010 at Albany, OR.
- PSG 4MSH has performed well as a turfgrass variety in trials located in Riverside, CA; Ames, IA; College Park, MD; Mead, NE; Amherst, MA; and Columbia, MO. The variety could be available for sale in climates represented by those locations.

4. Growth & Morphology Traits	Heading Date Albany, OR		Plant Height (cm) Albany, OR		Flag Leaf Length (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
	PSG 4MSH	May 22	May 20	59.5	43.3	11.6
Pinnacle	May 24	May 20	72.3	53.2	17.1	9.0
Linn	May 10	May 9	83.3	62.0	18.2	11.5
Manhattan	June 5	June 3	73.3	50.5	15.6	9.7
Elka	June 12	June 9	57.2	36.2	16.8	7.9
LSD (.05)	2 days	3 days	5.2	4.0	1.9	1.4
S.E.	1.0	2.0	2.6	1.9	0.9	0.7

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: Taller, lighter green, earlier heading at <3%.

5. Turf Use	Turf Quality (1-9)		Spring Green-up (1-9)		Foliage Color (1-9)		% Fall Ground Cover	
	2011		2011		2011		2011	
	A	B	C	D	C	D	B	E
PSG 4MSH	6.7	5.7	5.7	6.0	6.3	7.0	66.7	86.7
Pinnacle	5.5	5.6	4.0	4.0	4.3	5.7	70.0	75.0
Linn	5.1	3.7	7.3	3.3	3.0	5.0	63.3	68.3
Fiesta 4	6.7	5.4	5.0	5.3	7.0	7.0	53.3	73.3
Mach 1	6.4	5.3	5.3	4.7	7.0	7.0	56.7	78.3
LSD (.05)	0.6	1.3	1.6	1.7	0.7	0.4	24.8	23.9
CV%	5.8	14.2	18.8	21.0	7.1	3.6	24.8	20.5

●Scale used to report traits (if appropriate): 1-9 with 9= ideal quality, completely green, darkest green color.

**If necessary, identify locations in line b) by the following key -

A:	Riverside, CA	B:	Ames, IA
C:	Urbana, IL	D:	Mead, NE
E	Columbia, MO		

- Breeder seed of PSG 4MSH was first produced in 2010 by Pickseed USA, Inc. (PS), Albany, OR, research department, (for Seed Research of Oregon). A record sample of this seed is maintained at PS in cold, dry storage. During the life of the variety, additional breeder seed will be produced as needed to reconstitute the cultivar under the supervision of PS. Foundation, Registered, and Certified classes of seed production are permitted. Foundation fields may only be established using breeder seed. Registered fields may be established from either breeder or foundation seed. Certified fields may be established from Breeder, Foundation, or Registered seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production, followed by three additional harvests of Certified production. Certified class fields will be limited to seven years of production.
- Certified seed is anticipated to be available, summer 2013. A decision for filing a PVP application has not been made at this time



(PSG 5RM)

1. **Variety name:** _____ Kind: Strong creeping red fescue
Genus: Festuca **Species:** rubra subsp. rubra
Experimental designation (s): PSG 5RM
Date submitted: December 18, 2012

2. *PSG 5RM* was selected from the progeny of 50 open pollinated parental clones. Progeny contributing to the variety was selected for medium maturity, dense crowns, high seed yield potential, and improved resistance to leaf spot disease. Tracing the ancestry of variety reveals 81% of the maternal parental material came from germplasm collected on 1984 from a cemetery in Portland, OR. The remaining 19% maternal parentage came from germplasm collected from Atlantic City, NJ. The paternal parentage for the variety was incorporated using a modified backcrossing program. The germplasm used for backcrossing traces its origin to plants selected from old turf areas of the U.S. from 1962-1990 by Rutgers University, NJ. The first breeder seed of *PSG 5RM* was produced in 2008, at Albany, OR.

3. *PSG 5RM* has performed well as a turfgrass variety in trials located in St. Paul, MN; University Park, PA; Logan, UT; Kingston, RI; and Puyallup, WA. The variety could be available for sale in climates represented by those locations.

4. Growth & Morphology	Heading Date		Plant Height (cm)		Flag Leaf Length (cm)	
	Albany, OR		Albany, OR		Albany	
	2009	2010	2009	2010	2009	2010
<i>PSG 5RM</i>	May 2	Apr. 20	45.8	65.3	5.6	6.0
<i>Flyer</i>	Apr. 30	Apr. 16	59.4	81.2	9.3	9.0
<i>Ensylva</i>	Apr. 26	Apr. 23	64.6	78.5	8.4	7.7
<i>Boreal</i>	May 2	Apr. 24	65.2	78.7	13.1	10.2
LSD (.05)	5 days	10 days	7.9	9.8	2.3	2.3
S.E.	2.5	4.6	3.8	4.7	1.1	1.1

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: Taller, lighter green, earlier maturity at <3%.

5. Turf Use	Turf Quality (1-9)		Foliage Color (1-9)		Spring Greenup (1-9)		% Living Cover, Summer	
	2010		2010		2010		2010	
	A	B	A	B	A	B	A	C
<i>PSG 5RM</i>	6.9	6.8	5.0	5.7	4.0	5.0	96.3	91.7
<i>Navigator II</i>	7.0	6.5	5.0	4.3	5.0	6.7	95.0	61.3
<i>Epic</i>	6.0	5.8	4.3	4.7	4.3	4.7	95.0	69.7
<i>Boreal</i>	3.8	4.0	3.0	6.0	4.3	6.0	90.0	25.0
LSD (.05)	1.1	1.1	1.4	1.0	1.4	1.7	2.7	39.6
CV%	11.1	11.4	18.9	12.9	20.0	18.2	1.8	37.5

●Scale used to report traits (if appropriate):1-9, with 9= ideal turf, darkest green color, completely green

●Insert additional information for use by inspectors (if any): _____

**If necessary, identify locations in line b) by the following key - A: St. Paul, MN B: Univ. Park, PA
 C: Kingston, RI

6. Breeder seed of *PSG 5RM* was first produced in 2008 by Pickseed USA, Inc., Albany, OR. A record sample of this seed is maintained PS in cold, dry storage. During the life of the variety, additional breeder seed will be produced as needed to reconstitute the cultivar under the supervision of PS. Foundation, Registered, and Certified classes of seed production are permitted. Foundation fields may only be established using breeder seed. Registered fields may be established from either breeder or foundation seed. Certified fields may be established from breeder, foundation, or registered seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production, followed by three additional harvests of certified production. Certified class fields will be limited to seven years of production.

7. Certified seed is anticipated to be available, summer 2013. A decision for filing a PVP application has not been made at this time.



(PSG 83-08)

1. **Variety name:** _____ Kind: Tall fescue
Genus: Festuca **Species:** arundinacea
Experimental designation (s): PSG 83-08
Date submitted: January 3, 2013

2. *PSG 83-08* is advanced generation synthetic variety derived from six half sib family lines. The variety was developed at Pickseed USA, Inc. (PS), Albany, OR. The parental material was selected for erect growth habit of medium height, early to medium heading date, and fine textured, dark green foliage. A spaced planted nursery was established in October 2007 at PS with individual progeny plants from the six family lines. In May 2008 individuals in the nursery were evaluated. Progeny were discarded that did not have the above mentioned characteristics. Seed of the remaining individuals in the nursery was bulk harvested and designated of breeder seed for the variety, July 2008.
3. *PSG 83-08* has been tested for turf quality and several turf characteristics in Fayetteville, AR; Berry, KY; St. Paul, MN; and Albany, OR. The variety could be available for sale in climates represented by those locations for use as a permanent, cool season turf surface.

4. Growth & Morphology Traits	Heading Date Albany, OR		Plant Height (cm) Albany, OR		Flag Leaf Length (cm) Albany, OR	
	2011	2012	2011	2012	2011	2012
	PSG 83-08	May 22	May 8	79.5	92.4	9.4
Bonanza	May 22	May 6	85.3	106.2	13.8	14.6
Bonsai	May 24	May 9	69.5	91.3	7.1	11.1
Silverado	May 21	May 5	70.3	92.4	11.3	13.3
LSD (.05)	2 days	2 days	14.6	16.6	3.2	4.2
S.E.	1	1	3.9	4.4	1.0	1.1

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: Taller, lighter green, coarser textured at < 3%.

5. Turf Use	Turf Quality (1-9)		Foliage Color (1-9)		Turf Density (1-9)		Foliage Texture (1-9)	
	2011		2011		C		C	
	A	B	A	B	2011	2012	2011	2012
PSG 83-08	5.4	6.0	4.8	4.7	7.0	8.0	7.0	5.0
Mustang 4	5.6	5.1	4.6	6.3	7.0	8.5	7.5	7.0
Falcon V	5.9	6.7	4.5	5.0	—	—	—	—
Crossfire 3	—	—	—	—	7.0	8.0	7.5	7.0
Corona	6.0	4.9	5.1	7.7	7.0	8.0	7.5	7.0
LSD (.05)	1.3	1.0	1.6	1.0	1.1	3.2	1.3	3.4
CV%/S.E.	17.5	14.0	27.0	13.2	0.5	0.7	0.6	0.8

• Scale used to report traits (if appropriate): 1-9, with 9= ideal quality, darkest green color, most dense, finest leaf texture CV% reported for turf quality and foliage color, S.E. reported for turf density and foliage texture.

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 **If necessary, identify locations in line b) by the following key - A: Berry, KY B: St. Paul, MN
 C: Albany, OR

6. Breeder seed of *PSG 83-08* was first produced in 2008 by Pickseed USA, Inc. (PS), Albany, OR, research department, (for Seed Research of Oregon). A record sample of this seed is maintained at PS in cold, dry storage. During the life of the variety, additional Breeder seed will be produced as needed to reconstitute the cultivar under the supervision of PS. Foundation, Registered, and Certified classes of seed production are permitted. Foundation fields may only be established using Breeder seed. Registered fields may be established from either Breeder or Foundation seed. Certified fields may be established from Breeder, Foundation, or Registered seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production, followed by three additional harvests of Certified production. Certified class fields will be limited to seven years of production.
7. Certified seed is anticipated to be available in spring 2013. a decision for filing a P.V.P. application has not been made at this time.



(SRX 4ISA)

1. **Variety name:** _____ Kind: Intermediate ryegrass
Genus: Lolium **Species:** hybridum
Experimental designation (s): SRX 4ISA
Date submitted: December 20, 2012

2. *SRX 4ISA* was developed from a field cross (open pollination) of progeny originating from selections of ryegrass varieties: *Transist 2000*, *Transcend*, *Fuse*, *Transist 2400*, *04-1Lh*, *Edge II*, *Hawkeye 2*, *Dasher 3*, *Seville 3*, *Fiesta 4*, *Sunshine 2*, and *Firebolt*. During May 2009, individuals within an established space planted nursery were evaluated and retained for open pollination if they exhibited short to medium height in erect growth habit, had dark green foliage that was free of disease symptoms, and showed spikes with awned spikelets. Progeny of pre-breeder seed were established in a new nursery, evaluated, rogued, and seed was harvested in 2010. The 2010 harvest was tagged as the first breeder seed of the variety.
3. *SRX 4ISA* has been tested for overseeding turf use in Rolesville, NC and in Tuscan, AZ. The variety has shown adaptation to those two locations, and will be marked in areas of similar climates.

4. Growth & Morphology	Heading Date		Plant Height (cm)		Flag Leaf Length (cm)	
	Albany, OR		Albany, OR		Albany, OR	
	2011	2012	2011	2012	2011	2012
<i>SRX 4ISA</i>	May 23	May 19	99.4	80.5	21.7	16.5
<i>Gulf</i>	May 17	May 12	139.0	104.2	25.6	23.3
<i>Linn</i>	May 8	May 4	116.0	82.4	20.7	16.2
<i>Intercross</i>	May 21	May 17	118.9	84.2	22.7	18.2
<i>Transeze</i>	May 25	May 21	99.6	75.9	19.5	14.9
LSD (.05)	4 days	3 days	18.9	15.5	5.7	6.1
S.E.	1.0	1.0	5.2	4.2	1.6	1.7

Data collected from: Spaced single plants Plants in rows/solid seeding _____

Variants to be expected and frequency: Taller, lighter green, coarse textured at <3%

5. Turf Use	% Establishment		Turf Quality (1-9)		Foliage Color (1-9)		Transition (1-9)	
	Rolesville, NC		Rolesville, NC		Rolesville, NC		Rolesville, NC	
	2010	2011	2011	2012	2011	2012	2011	2012
<i>SRX 4ISA</i>	89.0	97.0	4.4	4.8	5.0	3.7	7.7	7.7
<i>Gulf</i>	89.9	94.7	2.1	2.1	2.0	1.0	7.7	9.0
<i>Seville 3</i>	88.3	98.1	6.2	6.0	6.7	7.0	8.0	8.3
<i>Transist 2200</i>	92.8	96.1	3.9	4.1	4.7	3.3	8.3	8.3
<i>Transist 2400</i>	93.5	96.9	3.7	3.4	4.7	2.0	8.0	8.3
LSD (.05)	7.8	2.5	1.0	0.9	1.3	1.2	1.5	1.5
CV %	5.6	1.6	13.4	11.2	5.6	13.7	12.4	12.6

• Scale used to report traits (if appropriate): 1-9 with 9= ideal quality, darkest green color, and rather complete transition

6. Breeder seed of *SRX 4ISA* was first produced in 2010 by Pickseed USA, Inc. (PS), Albany, OR. A record sample of this seed is maintained at PS in cold, dry storage. During the life of the variety, additional breeder seed will be produced as needed to reconstitute the cultivar under the supervision of PS. Foundation, Registered, and Certified classes of seed production are permitted. Foundation fields may only be established using breeder seed. Registered fields may be established from either breeder or foundation seed. Certified fields may be established from breeder, foundation, or registered seed. Foundation, Registered, and Certified class fields will be limited to two harvests.
7. Certified seed is anticipated to be available in summer 2013. A decision for filing a PVP application has not been made at this time.



Royal Bengal (PSG 9BAN)

1. **Variety name:** Royal Bengal Kind: Bermudagrass
 Genus: Cynodon Species: dactylon
 Experimental designation (s): PSG 9BAN
 Date submitted: January 8, 2013

2. *Royal Bengal* originated from maternal germplasm collected at Tangail, Bangladesh, and open pollinated with germplasm selected from *LaPaloma*. The maternal side of the variety was specifically screened for dark green color and good turf quality. The first breeder seed of *Royal Bengal* was produced in 2006 by Pickseed USA, Inc., Albany, OR, for Seed Research of Oregon, Corvallis, OR.

3. *Royal Bengal* has been tested for turf quality, and several turf characteristics in Tucson, AZ; Mississippi State, MS; and Raleigh, NC. The variety could be available for sale in climates represented by those locations for use as a permanent, warm season turf surface.

4. Growth & Morphology Traits	Plant Height (cm)		Raceme Length (cm)		Flag Leaf Width (mm)	
	Rolesville, NC		Rolesville, NC		Rolesville, NC	
	2008	2009	2008	2009	2008	2009
Royal Bengal	14.2	14.2	1.9	1.9	0.9	1.0
Yukon	5.0	5.9	1.7	1.8	0.9	0.9
LaPaloma	17.4	18.0	2.6	2.5	0.9	1.0
LSD (.05)	1.6	1.7	0.2	0.3	0.1	0.1
CV%	31.0	31.4	27.1	57.0	24.0	25.1

Data collected from: Spaced single plants Plants in rows/solid seeding

Variants to be expected and frequency: Taller, lighter green, coarser textured <3%

5. Turf Use	Turf Quality (1-9)		Foliage Color (1-9)		Spring Greenup (1-9)		Foliage Texture (1-9)	
	2011		2011		2011		2011	
	A	B	A	B	A	B	A	B
Royal Bengal	5.6	5.9	6.0	6.3	7.7	4.3	6.7	6.0
Yukon	6.4	6.0	6.7	7.0	7.7	4.7	7.0	6.0
Riviera	6.0	5.7	5.3	6.7	6.3	4.3	6.3	5.0
Princess 77	6.0	6.0	5.7	7.0	7.3	4.0	7.0	6.0
LSD (.05)	0.1	0.7	1.0	0.6	1.0	0.7	0.7	0.7
CV%	7.9	7.9	10.4	5.3	8.4	10.1	7.3	7.2

•Scale used to report traits (if appropriate): 1-9, with 9= ideal turf, dark green, completely green, and very fine.

**If necessary, identify locations in line b) by the following key - A: Tucson, AZ B: Mississippi State, MS

6. Breeder seed of *Royal Bengal* was first produced in 2006 by Pickseed USA, Inc. (PS), Albany, OR, research department, (for Seed Research of Oregon). A record sample of this seed is maintained at PS in cold, dry storage. During the life of the variety, additional Breeder seed will be produced as needed to reconstitute the cultivar under the supervision of PS. Foundation, Registered, and Certified classes of seed production are permitted. Foundation, Registered and Certified fields will each be limited to ten harvests.

7. Certified seed is anticipated to be available in summer 2013. A decision for filing a P.V.P. application has not been made at this time.



Aquarius 4

1. **Variety name:** Aquarius 4 Kind: Perennial ryegrass
Genus: Lolium Species: perenne
Experimental designation (s): _____
Date submitted: 2 Jan 2012

2. In 1990's, perennial ryegrasses were screened for seed yield near Brooks, Oregon, and small advanced polycrosses from multiple sources were developed. In 2001, 140 plants originating from Aquarius maternal lines, 20 plants originating from Evening Shade maternal lines, and 40 plants originating from Allaire maternal lines were planted in space plant nurseries near Brooks, Oregon. Plants late in maturity or with stem rust were removed, leaving 65 plants total with approximately 60% of the plants from Aquarius maternal lines and the remainder equally from Evening Shade and Allaire maternal lines that were bulk harvested in 2003. In Fall 2003, a small field was planted in rows near Stanfield, OR. In 2004, the field was rogued for any light green, tall plants, with breeders seed harvested in 2004.

3. Aquarius 4 was tested for turf in Japan and has shown adaptation to that area for winter overseeding and would be adapted in areas with similar climate and use. Aquarius 4 was tested in Puyallup WA and would be adapted in areas with similar climate and use.

4. Growth & Morphology Traits	Lebanon, OR		Lebanon, OR		Lebanon, OR	
	Julian Date Heading		Plant Height (cm)		Spike Length (cm)	
	2010	2011	2010	2011	2010	2011
Aquarius 4	140	148.7	62	53.9	19.2	15.5
Linn	130.7	135.1	77.8	66.0	19.8	18.5
Pavilion	148	150.9	63.6	55.9	17.0	15.1
Patriot 4	135	145.2	64.6	57.6	16.8	15.4
LSD (.05)	3.2	4.0	12.9	4.9	3.5	1.6
CV	1.4	1.9	12.8	4.9	4.3	5.9

Data collected from: Spaced single plants X Plants in rows/solid seeding _____

Variants to be expected and frequency: Any variants, up to 5%, would be slightly taller and lighter green in color

5. Turf Use	Quality (1-9)***		Establishment (1-9)***		Density (1-9)***		Color (1-9)***	
	Chiba, Jpn	Puyallup WA	Chiba, Jpn	Puyallup WA	Chiba, Jpn	Puyallup WA	Chiba, Jpn	Puyallup WA
	a)	b)	2010	2012	2010	2012	2009	2012
Aquarius 4	7.0	7.0	6.7	6.7	7.0	5.7	7.0	6.0
Pizazz	7.0	7.0	7.0	7.0	6.3	7.3	6.3	7.3
Patriot 4	7.0	7.7	7.0	7.3	7.0	7.0	5.7	6.0
Paragon	7.0	8.7	6.7	8.0	7.0	7.0	6.3	7.3
LSD (.05)	0.4	1.1	0.8	1.1	0.4	1.6	0.9	0.7
Range	1.3	1.7	1.7	1.6	2.7	2.0	4.0	3.0

**If necessary, identify locations in line b) by the following key

A: Japan, 2009-10 B: WA. State U., 2012

***Rated on a scale of 1-9 with 9=best

6. Breeder seed of Aquarius 4 is maintained by Turf Merchants Inc, Tangent, OR. Adequate breeder seed was produced to reproduce the variety for the life of the variety. Foundation, Registered, and Certified classes are permitted. Foundation stands may be planted only from breeder seed. Foundation class fields may be harvested for Foundation seed for a maximum of three years, followed by two years of Registered, and five years as Certified. Certified class fields produced from Registered or Foundation seed will be limited to seven years of certified production. Additional years of seed production may be approved by the breeder or the breeders designee.

7. Certified seed is anticipated to be available in spring of 2013. PVP will not be sought.



Patriot 4

1. **Variety name:** Patriot 4 Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): _____
Date submitted: 2 Jan 2012
2. In 1990's, Dr. Mike Richardson screened perennial ryegrasses for seed yield near Brooks, Oregon, and developed small advanced polycrosses from multiple sources. In 2002, 160 plants originating from Patriot II maternal lines, 20 plants originating from Evening Shade maternal lines, and 20 plants originating from Laredo maternal lines were planted in space plant nurseries near Brooks, Oregon. Plants late in maturity or with stem rust were removed, leaving approximately 60% of the plants from Patriot II maternal lines and the remainder equally from Evening Shade and Laredo for bulk harvest in 2003. In Fall 2003, a small field was planted in rows near Stanfield, OR. In 2004, the field was rogued for any light green, tall plants, with breeders seed harvested in 2004.
3. Patriot 4 was tested in Japan and has shown adaptation to that area for a winter overseeding annual and would be adapted in areas with similar climate and use. Patriot 4 was tested in Washington State and would be adapted there and to a similar area.

4. Growth &	Julian Date	Julian Date	Plant	Plant	Spike	Spike
Morphology	Heading	Heading	Height (cm)	Height (cm)	Length (cm)	Length (cm)
Traits	2010	2011	2010	2011	2010	2011
Patriot 4	135	145.2	64.6	57.6	16.8	15.4
Linn	130.7	135.1	77.8	66.0	19.8	18.5
Pavilion	148	150.9	63.6	55.9	17.0	15.1
Aquarius 4	140	148.7	62	53.9	19.2	15.5
LSD (.05)	3.2	4.0	12.9	4.9	3.5	1.6
CV	1.4	1.9	12.8	4.9	4.3	5.9

Data collected from: Spaced single plants _____ Plants in rows/solid seeding _____

Variants to be expected and frequency: Any variants, up to 5%, would be slightly taller and lighter green in color

5. Turf Use	Quality (1-9)***		Establishment (1-9)***		Density (1-9)***		Color (1-9)***	
	Chiba Jpn	Puyallup WA	Chiba Jpn	Puyallup WA	Chiba Jpn	Puyallup WA	Chiba Jpn	Puyallup WA
a)	2010	2012	2010	2012	2010	2012	2009	2012
Patriot 4	7.0	7.7	7.0	7.3	7.0	7.0	5.7	6.0
Pizazz	7.0	7.0	7.0	7.0	6.3	7.3	6.3	7.3
Aquarius 4	7.0	7.0	6.7	6.7	7.0	5.7	7.0	6.0
Paragon	7.0	8.7	6.7	8.0	7.0	7.0	6.3	7.3
LSD (.05)	0.4	1.1	0.8	1.1	0.4	1.6	0.9	0.7
Range	1.3	1.7	1.7	1.6	2.7	2.0	4.0	3.0

**If necessary, identify locations in line b) by the following key A: Japan, 2009-10 B: PuyallupWA 2012

***Rated on a scale of 1-9 with 9=best.

6. Breeder seed of Patriot 4 is maintained by Turf Merchants Inc, Tangent, OR. Adequate breeder seed was produced to reproduce the variety for the life of the variety. Foundation, Registered, and Certified classes are permitted. Foundation stands may be planted only from breeder seed. Foundation class fields may be harvested for Foundation seed for a maximum of three years, followed by two years of Registered, and five years as Certified. Certified class fields produced from Registered or Foundation seed will be limited to seven years of certified production. Additional years of seed production may be approved by the breeder or the breeders designee.
7. Certified seed is anticipated to be available in spring of 2013. PVP will not be sought.

