

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



ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES

NATIONAL GRASS VARIETY REVIEW BOARD REPORT ©2012

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APRIL 2012



NATIONAL GRASS
VARIETY REVIEW BOARD

ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES
(APRIL 2012)

The Association of Official Seed Certifying Agencies (AOSCA), National Grass Variety Review Board reviewed the following varieties on February 29, 2012 in New Orleans, LA. 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:

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Respectfully submitted,

Sandy Smith, Chair
National Grass Variety Review Board

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KoSpeed (Naehan 15)

1. **Variety name:** KoSpeed Kind: Annual ryegrass
Genus: Lolium **Species:** Multiflorum
Experimental designation (s): Naehan 15
Date submitted: 2012 February 8th

2. KoSpeed was developed by the South Korean National Institute of Animal Science from a 49 plant cross of plants selected from the varieties Florida 80, Grazer and an ecotype populations collected near Hwaseong, South Korea. Selection criteria included tolerance to low temperature and early maturity. Breeder seed was first produced in 2002.

3. **KoSpeed** 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 Traits | Heading date-day/month 2003 | | Plant Height-cm 2003 | | Flag leaf blade length-cm 2003 | |
|----------------------------------|--------------------------------|----------|-------------------------|---------|-----------------------------------|---------|
| | Suwon | Yonchun | Suwon | Yonchun | Suwon | Yonchun |
| | <i>KoSpeed</i> | 28/April | 1/May | 80.9 | 83.9 | 19.5 |
| <i>Florida 80</i> | 29/April | 6/May | 80.7 | 90.1 | 18.5 | 19.0 |
| <i>Hwasan 101</i> | 20/May | 23/May | 100.2 | 101.9 | 29.4 | 34.3 |
| <i>Kowinmaster</i> | 6/May | 14/May | 88.3 | 101.3 | 22.5 | 20.8 |
| LSD (.05) | 0.067 | 0.013 | 3.50 | 4.26 | 2.30 | 1.97 |
| Variance | 0.060 | 0.016 | 5.63 | 6.33 | 14.40 | 12.13 |

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

Variants to be expected and frequency: None observed

| 5. Primary Use Forage | Forage Yields(DM) – kg/ha | | | | | | Winter survival degree-1~9 | | | | | |
|--------------------------|---------------------------|--------|-------|---------|--------|-------|----------------------------|------|------|---------|------|-------|
| | Suwon | | | Yonchun | | | Suwon | | | Yonchun | | |
| | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 |
| <i>KoSpeed</i> | 7,032 | 10,432 | 4,380 | 13,598 | 12,049 | 3,199 | 3 | 1 | 3 | 3 | 3 | 5 |
| <i>Florida 80</i> | 6,652 | 10,131 | 4,392 | 11,950 | 11,676 | 2,263 | 3 | 1 | 3 | 5 | 3 | 7 |
| <i>Hwasan 101</i> | 8,775 | 8,527 | 4,761 | 12,718 | 9,313 | 8,169 | 3 | 1 | 3 | 3 | 5 | 3 |
| <i>Kowinmaster</i> | 7,477 | 9,806 | 5,250 | 13,175 | 10,735 | 6,920 | 3 | 1 | 3 | 3 | 3 | 3 |
| LSD (.05) | 1,018 | 1,245 | 641 | 2,854 | 1,474 | 1,291 | 0.74 | 0.57 | 0.76 | 1 | 0.67 | 1.33 |
| Variance | 12.5 | 7.5 | 7.7 | 12.0 | 2.1 | 13.2 | 1.06 | 1.03 | 1.66 | 12 | 22 | 24.15 |

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

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 and/or registered 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 2012. Application will not be made for USA Plant Variety protection.



KoWinearly (Naehan 18)

1. **Variety name:** KoWinearly Kind: Annual ryegrass
Genus: Lolium **Species:** Multiflorum
Experimental designation (s): Naehan 18
Date submitted: January 3, 2012

2. KoWinearly was developed by the South Korean National Institute of Animal Science from a 49 plant cross of plants selected from the varieties Florida 80, Rustmaster and Rio and ecotype populations collected near Hwaseong and Seonghwan, South Korea. Selection criteria included tolerance to low temperature. Breeder seed was first produced in 2002.

3. **KoWinearly** 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 Traits | Heading date-day/month 2003 | | Plant height-cm 2003 | | Flag leaf blade length-cm 2003 | |
|----------------------------------|--------------------------------|---------|-------------------------|---------|-----------------------------------|---------|
| | Suwon | Yonchun | Suwon | Yonchun | Suwon | Yonchun |
| | <i>Kowinearly</i> | 1/May | 6/May | 82.7 | 91.7 | 20.9 |
| <i>Florida 80</i> | 29/April | 6/May | 80.7 | 90.1 | 18.5 | 19.0 |
| <i>Hwasan 101</i> | 20/May | 23/May | 100.2 | 101.9 | 29.4 | 34.3 |
| <i>Kowinmaster</i> | 6/May | 14/May | 88.3 | 101.3 | 22.5 | 20.8 |
| LSD (.05) | 0.058 | 0.072 | 3.50 | 4.26 | 2.30 | 1.97 |
| Variance | 0.090 | 0.010 | 5.63 | 6.33 | 14.40 | 12.13 |

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

Variants to be expected and frequency: None observed

| 5. Primary Use Forage | Forage Yields(DM) – kg/ha | | | | | | Winter survival degree-1~9 | | | | | |
|--------------------------|---------------------------|--------|-------|---------|--------|-------|----------------------------|------|------|---------|------|-------|
| | Suwon | | | Yonchun | | | Suwon | | | Yonchun | | |
| | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 |
| <i>Kowinearly</i> | 6,476 | 9,498 | 4,720 | 13,125 | 13,701 | 5,513 | 3 | 1 | 3 | 3 | 3 | 3 |
| <i>Florida 80</i> | 6,652 | 10,131 | 4,392 | 11,950 | 11,676 | 2,263 | 3 | 1 | 3 | 5 | 3 | 7 |
| <i>Hwasan 101</i> | 8,775 | 8,527 | 4,761 | 12,718 | 9,313 | 8,169 | 3 | 1 | 3 | 3 | 5 | 3 |
| <i>Kowinmaster</i> | 7,477 | 9,806 | 5,250 | 13,175 | 10,735 | 6,920 | 3 | 1 | 3 | 3 | 3 | 3 |
| LSD (.05) | 1,018 | 1,245 | 641 | 2,854 | 1,474 | 1,291 | 0.74 | 0.57 | 0.76 | 1 | 0.67 | 1.33 |
| Variance | 12.5 | 7.5 | 7.7 | 12.0 | 2.1 | 13.2 | 1.06 | 1.03 | 1.66 | 12 | 22 | 24.15 |

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

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 and/or registered 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 2012. Application will not be made for USA Plant Variety protection.



(B-7.0516)

1. Variety name: _____ Kind: Perennial ryegrass
Genus: Lolium _____ Species: perenne
Experimental designation (s): B-7.0516
Date submitted: 2 Jan 2012

2. In 2005, a planting of 405 maternal lines were planted in Richardson, TX. Based on turf data, residual seed of eight lines were bulked in equal amounts and planted in a polycross with approximately 1500 plants near Lebanon, OR in Fall 2006. One of the maternal line sources traces to Americus, one line to Casper, and two lines to Indy. The varieties Americus, Casper, and Indy had been screened and selected through three cycles of salinity and moisture stress with survivors planted in various recurrent selection programs with other germplasm sources from 2000 to 2005 and maternal lines developed from each. Sources 3.0047D, 5.1205, 5.1206 were from 14 different maternal polycrosses from 1996, 1997, and 1998 from ABT undeveloped germplasm. Source 4.1410 originated from ABT undeveloped germplasm and was subjected to two cycles of selection for seed yield. Prior to pollination in 2007, approximately 50% of the plants were removed for rust susceptibility or poor leaf color. In 2007, seed was bulked from the remainder of the plants and declared breeders seed of 7.0516.

3. B-7.0516 was tested for turf in North Carolina and Arizona and has shown adaptation to those areas for winter overseeding and would be adapted in areas with similar climate and use.

Table with 7 columns: 4. Growth & Morphology, Julian Date (Heading 2010, 2011), Plant Height (cm) (2010, 2011), Spike Length (cm) (2010, 2011). Rows include B-7.0516, Linn, Pavilion, LSD (.05), and CV.

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

Table with 5 columns: 5. Turf Use, Quality (1-9*) (Wilmington, NC, Tucson, AZ), Density (1-9*) (Wilmington, NC, Tucson, AZ), Color (1-9*) (Wilmington, NC, Tucson, AZ), Establishment % (Wilmington, NC, Tucson, AZ). Rows include B-7.0516, New Arrival GLR, Crescendo GLR, LSD (.05), and Range.

*Rated on a scale 1-9, with 9=best. Establishment rated at Wilmington in October and at Tucson in November.

6. Breeder seed of B-7.0516 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-7.0860)

1. **Variety name:** _____ Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): B-7.0860
Date submitted: 2 Jan 2012

2. Fifty-seven maternal lines of ryegrass from existing varieties and various undeveloped experimental germplasm sources were subjected to moisture and salinity stress tolerance in greenhouse trials in 2005. A nursery of approximately 1044 plants that survived the stresses from the 57 lines was planted in 2005 with harvest in 2006. In 2006, a replicated turf evaluation nursery was established at Richardson TX that included the 57 contributing lines. Based on turf data and seed yield characters, 117 plants were retained for pollination and seed harvest in 2007. The directly traceable maternal plant sources and numbers are: Metropolitan- 19; Americus – 7; Indy – 7; Cruiser – 7; and Palmer III – 4. Seventeen plants were from undeveloped ABT germplasm tracing to 1999, and the remaining plants were from 26 lines of experimental germplasm that had been in multiple cycles of recurrent selection for seed production characters in Oregon over a six year period with a maximum of two plants from any experimental line or polycross source. In 2007, seed was bulked and declared breeders seed of 7.0860.

3. B-7.0860 was tested for turf in Arizona and North Carolina and has shown adaptation to those areas as a winter overseeding and would be adapted in areas with similar climate and use.

| 4. Growth & Morphology Traits | Julian Date | Julian Date | Plant | Plant | Spike | Spike |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Heading | Heading | Height (cm) | Height (cm) | Length (cm) | Length (cm) |
| | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 |
| B-7.0860 | 139 | 143 | 47 | 58.0 | 16.7 | 16.9 |
| Linn | 139 | 130.7 | 51 | 77.8 | 18.4 | 19.8 |
| Pavilion | 143 | 148.0 | 48 | 63.6 | 16.7 | 17.0 |
| LSD (.05) | 4.3 | 3.2 | 7.5 | 12.9 | 1.6 | 3.5 |
| CV | 1.8 | 1.4 | 9.9 | 12.8 | 5.8 | 4.3 |

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*) | | Density (1-9*) | | Color (1-9*) | | Establishment % | |
|-----------------|----------------|------------|----------------|------------|----------------|------------|-----------------|------------|
| | Wilmington, NC | Tucson, AZ | Wilmington, NC | Tucson, AZ | Wilmington, NC | Tucson, AZ | Wilmington, NC | Tucson, AZ |
| | 2007-08 | 2007-08 | 2007-08 | 2007-08 | 2007-08 | 2007-08 | 2007-08 | 2007-08 |
| B-7.0860 | 5.8 | 5.7 | 6.0 | 7.3 | 6.8 | 7.0 | 37.5 | 93 |
| New Arrival GLR | 5.4 | 6.8 | 5.5 | 7.7 | 6.1 | 6.6 | 25 | 86 |
| Crescendo GLR | 5.7 | 6.3 | 5.8 | 7.0 | 6.5 | 7.2 | 40 | 94 |
| LSD (.05) | 0.6 | 1.1 | 0.62 | 1.2 | 0.65 | 0.9 | 12.6 | 18 |
| Range | 2.2 | 1.9 | 1.9 | 2.5 | 2.7 | 2.7 | 20 | 48 |

*Rated on a scale of 1-9, 9=best. Establishment rated at Wilmington in October and at Tucson in November.

6. Breeder seed of B-7.0860 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-8.0707, 80707, NIC2)

1. **Variety name:** _____ Kind: Orchardgrass
Genus: Dactylis **Species:** glomerata
Experimental designation (s): B-8.0707, 80707, NIC2
Date submitted: 11 January 2012
2. Remnant seed from each selection cycle of the MO2 and Cycle 2 of WO11 populations selected for seed yield in Oregon. The MO2 population was a six-clone synthetic population derived through a recurrent selection program for resistance to stem rust and the original parental materials collected from old pastures in Missouri. This population was one of four entered in a convergent-divergent selection program directed toward improving forage yield in the Midwest USA while maintaining high seed yield in Oregon. The Oregon two direct selection cycles for seed yield were used in developing B-8.0707 orchardgrass. In the spring of 2006, a nursery was established near Lebanon, OR. The plants came from the seed-yield improved MO2 populations as described above. There were 491 total plants in the nursery, 363 from the three cycles of MO2 populations and 128 from WO11 C2. In 2008, eighty-seven plants that were earlier maturing than the other plants in the nursery that had high panicle numbers, and that were free of leaf defoliation diseases were selected. About 80% of the plants were from the MO2 populations with the balance tracing to the WO11 C2 population. All the remaining plants were mowed prior to anthesis of the selected plants. The selected plants were bulk harvested and this seed was declared breeder seed in the fall of 2008.
3. B-8.0707 was tested for forage production for two years at Princeton, KY and for two years near Lebanon, OR. The variety is adapted to environments similar to those tested in Kentucky and Oregon.

| 4. Growth & Morphology Traits | Heading Date — Day of Year Lebanon, OR | | Plant Height—cm Lebanon, OR | | Panicle Length—cm Lebanon, OR | |
|-------------------------------|---|------|--------------------------------|------|----------------------------------|------|
| | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 |
| B-8.0707 | 137 | 127 | 103 | 146 | 14 | 20 |
| Prodigy | 133 | 126 | 99 | 144 | 13 | 21 |
| Pennlate | 141 | 141 | 106 | 141 | 16 | 25 |
| Potomac | 134 | 130 | 97 | 128 | 13 | 20 |
| Hallmark | 131 | 128 | 95 | 130 | 14 | 22 |
| LSD (.05) | 6.2 | 3.9 | 6.3 | 13.3 | 2.2 | 4.3 |
| CV (%) | 2.7 | 1.6 | 4.1 | 5.5 | 11.1 | 11.4 |

Data collected from: Spaced single plants X Plants in rows/solid seeding _____
 Variants to be expected and frequency: Less than 5% of plants may be shorter than most.

| 5. Forage Use | Forage Yield—tons/acre | | | | Maturity Rating ¹ | |
|----------------|------------------------|-------|-------------|------|------------------------------|------|
| | Princeton, KY | | Lebanon, OR | | Princeton, KY | |
| | 2009 | 2010 | 2010 | 2011 | 2009 | 2010 |
| B-8.0707 | 4.06 | 2.22 | 4.07 | 0.56 | 57.0 | 63.0 |
| Prodigy | 4.25 | 2.19 | 3.20 | 0.82 | 57.5 | 62.5 |
| Potomac | 4.16 | 2.12 | 3.20 | 0.51 | 57.0 | 63.0 |
| Benchmark Plus | 4.01 | 2.12 | -- | -- | 56.5 | 63.3 |
| Pennlate | -- | -- | 3.62 | 0.63 | -- | -- |
| LSD (.05) | 0.53 | 0.45 | 1.94 | 0.25 | 8.4 | 1.0 |
| CV (%) | 9.06 | 15.58 | 35 | 21 | 11.5 | 1.2 |

¹Maturity has a relationship to forage quality. The rating scale was: 37=flag leaf emergence, 45=boot swollen, 50=beginning of inflorescence emergence, 58=complete emergence of inflorescence, 62=beginning of pollen shed.

6. Breeder seed of B-8.0707 orchardgrass was first produced in 2008. A supply of B-8.0707 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-8.0707. Only the Foundation, Registered and Certified classes are permitted. Foundation stands may only be planted from breeder seed, or from Foundation seed if approved specifically by the breeder. Foundation class production fields established from breeder seed can be harvested for Foundation seed for a maximum of three years followed by Certified class seed for four years. Certified class production fields established from Registered or Foundation seed 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.
7. First certified seed will be available in 2012, but it is unknown at this time if PVP will be sought.



(B-9.1326)

1. **Variety name:** _____ Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): B-9.1326
Date submitted: 2 Jan 2012

2. Fifty B-9.1326 has eight maternal lines as parental sources. Two maternal lines trace to two individual plants selected from an approximate 1500 plant nursery that included approximately 10 maternal sources selected for quality in Texas in 2005-06. Other maternal line sources are : Acappella; 99.0592 and 99.0667 from ABT undeveloped germplasm; Phantom ; 7.0779 , a bulk of 42 female lines from a 2007 polycross ; and Drifter. In Fall 2007, seed was bulked by maternal line, and an approximate 1500 plant nursery from the bulk was planted near Lebanon, OR. In 2008 prior to pollination, plants were rogued for maturity and rust susceptibility. Seed from the remaining approximate 1000 plants was bulked and declared breeders seed of B-9.1326 in 2008.

3. B-9.1326 was tested for turf in Arizona and Texas and has shown adaptation to those areas for winter overseeding and would be adapted in areas with similar climate and use.

| 4. Growth & Morphology Traits | Julian Date | Julian Date | Plant | Plant | Spike | Spike |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Heading | Heading | Height (cm) | Height (cm) | Length (cm) | Length (cm) |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| B-9.1326 | 141 | 144 | 57.5 | 55.7 | 16.0 | 15.1 |
| 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 |
| 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*) | | Density (1-9*) | | Color (1-9*) | | Texture (1-9*) | |
|-------------|----------------|------------|----------------|------------|---------------|------------|----------------|------------|
| | Richardson TX | Lebanon OR | Richardson TX | Lebanon OR | Richardson TX | Lebanon OR | Richardson TX | Lebanon OR |
| | 2009-10 | 2009-10 | 2009-10 | 2009-10 | 2009-10 | 2009-10 | 2009-10 | 2009-10 |
| B-9.1326 | 6.2 | 6.8 | 5.7 | 7.0 | 6.2 | 7.3 | 6.2 | 5 |
| Palmer III | 3.9 | 4.5 | 3.4 | 5.3 | 4.1 | 4.5 | 4.2 | 5 |
| Palmer II | 4.2 | 3 | 3.7 | 3 | 4.2 | 3 | 4.2 | 3 |
| Linn | 2.1 | 1.5 | 5.8 | 3.3 | 1.3 | 1.5 | 2 | 1.5 |
| LSD (.05) | 0.4 | 2.1 | 0.7 | 1.0 | 0.93 | 1.9 | 0.85 | 1.1 |
| CV | 9.1 | 18.7 | 7.1 | 8.6 | 12.2 | 16.4 | 8.5 | 9.8 |

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

6. Breeder seed of B-9.1326 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.



Valeria (B-6.0733)

1. **Variety name:** Valeria Kind: red fescue
Genus: Festuca Species: rubra
Experimental designation (s): B-6.0733
Date submitted: 2 Jan 2012

2. B-6.0733 (Valeria) strong creeping red fescue is the result of recurrent selection with plants from six sources. Source 1 consisted of 24 progeny that survived a greenhouse salinity amended soil screening that traced to an undeveloped germplasm pool from a polycross developed for seed yield from plants collected in the Eastern United States prior to 1999; Source 2 consisted of 24 progeny from a plant collected in RI that survived a greenhouse salinity screening. Source 3 consisted of 12 progeny from maternal lines crossed and cycled two years from Kent that survived a greenhouse low soil moisture trial. Source 4 consisted of 12 progeny from maternal lines crossed and cycled two years from Kent that survived a salinity amended soil greenhouse screening. Source 5 consisted of 12 progeny from FDM that survived a salinity amended greenhouse screening. Source 6 consisted of 12 progeny from Shademaster II that survived a greenhouse low moisture trial. In Fall 2005, the plants were placed in a nursery near Lebanon, OR. In spring 2006, approximately 30% of each source was rogued for color or poor seed head production prior to pollination. At harvest, the seed was bulked by source with equal amounts of seed combined for breeders seed. Breeder seed was declared in 2006.

3. Valeria was tested for turf in Rhode Island. It has shown adaptation to that area and would be adapted in areas with similar climate.

| 4. Growth & Morphology | Julian Date | Julian Date | Plant Height (cm) | Plant Height (cm) | Panicle Length (cm) | Panicle Length (cm) |
|------------------------|-------------|-------------|-------------------|-------------------|---------------------|---------------------|
| Traits | Heading | Heading | 2009 | 2010 | 2009 | 2010 |
| Valeria | 109.3 | 110.0 | 80.9 | 83.6 | 15.2 | 13.9 |
| Shademaster | 107.7 | 110.3 | 89.1 | 89.5 | 15.2 | 14.9 |
| Kent | 110.0 | 111.0 | 73.3 | 78.1 | 12.3 | 12.3 |
| LSD (.05) | 4.2 | 4.6 | 5.4 | 7.5 | 2.1 | 0.7 |
| CV | 2.1 | 2.2 | 3.8 | 4.8 | 8.1 | 12.6 |

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 | Turf Quality (1-9*) | | Cover (%) | | Density (1-9*) | | Summer Recovery (1-9*) | |
|-------------|---------------------|------|--------------|------|----------------|------|------------------------|------|
| a) | Kingston, RI | | Kingston, RI | | Kingston, RI | | Kingston, RI | |
| b) | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 |
| Valeria | 6.4 | 6.9 | 98.4 | 92.7 | 3.3 | 7.3 | 6 | 7.3 |
| Kent | 5.7 | 6.0 | 98.5 | 93.4 | 6.3 | 2.7 | 5.3 | 7 |
| Columbra II | 5.7 | 6.4 | 98.8 | 92.2 | 4.7 | 5.3 | 7.3 | 5.7 |
| LSD (.05) | 1.1 | 1.8 | 6.2 | 20.9 | 1.6 | 1.4 | 2 | 2.5 |
| Range | 2.1 | 3.3 | 8.7 | 33.8 | 4.7 | 6.6 | 2.4 | 3.3 |

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

6. Breeder seed of Valeria 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 2012. It is undecided if PVP will be sought.



Vision (B-5.1447)

1. **Variety name:** Vision Kind: Colonial bentgrass
Genus: Agrostis Species: tenius
Experimental designation (s): B-5.1447
Date submitted: 1Jan 2012

2. B-5.1447 (Vision) colonial bentgrass is the result of recurrent selection. In 1991, approximately 24 plants of Sefton were planted next to one colonial bentgrass that was collected in North Carolina (NC) in 1991. In summer 1992, seed from 16 plants from the Sefton source and the NC clone were bulked separately. In fall 1992, approximately 300 plants of the Sefton source and 500 plants from the NC source were planted. In summer 1993, approximately 50% of all the plants were eliminated for lack of seed heads. In fall 1993, progeny plots from individual darker green plants were planted in Boundbrook, New Jersey. In 1994, based on progeny records, three plants from the Sefton source, and five plants from the NC source were allowed to interpollinate, the seed bulked and labeled as D1S. In summer 2004, plants from D1S and Tiger were exposed to salinity screening with 45 and 100 surviving plants from D1S and Tiger, respectively, planted in a crossing block with 30 plants from D1S and 25 plants from Tiger maternal source retained. In 2005, seed was harvested by maternal source and bulked. The seed from the D1S maternal source was labeled 5.1447 and declared breeders seed.

3. Vision was tested for turf in Bingley, England and has shown adaptation to that area 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) |
| | 2006 | 2007 | 2006 | 2007 | 2006 | 2007 |
| Vision | 151.3 | 155.0 | 30.0 | 33.0 | 15.5 | 13.5 |
| Highland | 140.3 | 142.3 | 49.4 | 47.4 | 17.1 | 18.1 |
| SR 7100 | 154.0 | 155.0 | 36.7 | 34.2 | 14.1 | 14.1 |
| LSD (.05) | 1.8 | 3.7 | 2.4 | 7.2 | 2.0 | 2.2 |
| CV | 0.6 | 1.3 | 0.7 | 10.7 | 7.1 | 8.3 |

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 | Turf Quality (1-9*) | | Turf sward height (cm) | | Color (1-9*) | | Turf Texture (1-9*) | |
|-------------|---------------------|------|------------------------|-------|--------------|------|---------------------|------|
| a) | Bingley | | Bingley | | Bingley | | Bingley | |
| b) | 2010 | 2010 | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| Vision | 5.3 | 5.1 | 102.9 | 123.7 | 5.7 | 7.7 | 5.0 | 5.0 |
| Sefton | 6.4 | 6.7 | 102.4 | 119.8 | 3.8 | 3.7 | 4.5 | 6.7 |
| Egmont | 6.2 | 6.5 | 94.4 | 115.4 | 6.3 | 5.7 | 5.8 | 7 |
| LSD (.05) | 0.8 | 0.7 | 7.95 | 9.4 | 1.1 | 1.8 | 1.68 | 0.94 |
| Range | 4.8 | 3.3 | 22 | 20.1 | 7.3 | 5.3 | 6.3 | 5.8 |

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

6. Breeder seed of Vision 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 2012. It is undecided if PVP will be sought.



(TM0401)

1. Variety name: _____ Kind: Timothy
Genus: Phleum _____ Species: Pratense
Experimental designation (s): TM0401
Date submitted: Revised 1/27/2012

2. TM0401 timothy was developed using phenotypic recurrent selection. Plants from the varieties Derby, Richmond, Summit, Treasure and two elite 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 2 years of clonal evaluation for vigor, regrowth, seed yield, dark-green color, and early maturity, 60 plants were allowed to intercross in isolation. The syn-1 breeder seed was bulk harvested in 2005.

3. TM0401 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, Illinois, Kentucky, Ohio, Pennsylvania, Tennessee, Virginia, Washington, and Wisconsin.

Table with 4 columns: Growth and Morphology Traits, Plant Height (cm) Buck Creek, IN, Flag Leaf Width (mm) Buck Creek, IN, and Heading Date (May 1 = 1) Buck Creek, IN. Rows include TM0401, Clair, Climax, LSD(.05), and CV(%).

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

Variants to be expected and frequency: None described

Table with 5 columns: Primary Use, Forage Yield T/A dry matter (Buck Creek, IN, Franklin, TN), and Regrowth (Buck Creek, IN, New Castle, KY, Touchet, WA). Rows include TM0401, Clair, Climax, LSD(.05), and CV(%).

6. Seed increase of TM0401 is limited to one generation of breeder (Syn-1), two generations of foundation (Syn-2 or Syn-3), and three generations of certified (Syn-2, Syn-3 or Syn-4) classes. Breeder seed was produced in 2005 at Touchet, WA, sufficient for the life of the variety, and will be maintained by DLF International Seeds. 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 TM0401 will be offered for sale in 2013. Plant variety protection will not be sought for this variety.



Eclipse (TM0002)

1. **Variety name:** Eclipse Kind: Timothy
Genus: Phleum Species: pratense
Experimental designation (s): TM0002
Date submitted: January 11, 2012

2. Eclipse timothy was developed using phenotypic recurrent selection. Approximately 400 plants from the varieties Colt, KY-Early, and Summit, and several FFR breeding lines were established in a spaced-plant nursery at Battle Ground, IN. After 3 years of clonal evaluation for vigor and plant health, and 2 years for summer regrowth, open-pollinated seed from 19 plants selected for excellent summer regrowth was harvested in August 2000 and bulked to form syn-1 breeder seed.

3. Eclipse is adapted to and intended for forage use in the north central, east central, and northwest United States. It has been tested in Indiana, Illinois, Kentucky, Ohio, Pennsylvania, Tennessee, Washington, and Wisconsin.

| 4. Growth and Morphology Traits | Flag leaf length (cm) | | Panicle Length (cm) | | | Heading Date (May 1 = 1) | |
|---------------------------------|-----------------------|-------------|---------------------|-------------|-------------|--------------------------|--|
| | Buck Creek, IN | | Buck Creek, IN | | | Buck Creek, IN | |
| | <u>2008</u> | <u>2009</u> | <u>2008</u> | <u>2009</u> | <u>2008</u> | <u>2009</u> | |
| Eclipse | 12.1 | 13.6 | 12.9 | 13.7 | 34.8 | 30.3 | |
| Clair | 11.0 | 12.1 | 12.0 | 11.4 | 34.3 | 28.3 | |
| Climax | 12.0 | 13.3 | 12.6 | 13.5 | 47.5 | 45.3 | |
| LSD(.05) | 2.0 | 1.8 | 1.4 | 1.9 | 0.7 | 1.4 | |
| CV(%) | 13.1 | 11.4 | 8.3 | 11.8 | 1.4 | 3.3 | |

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 | | | | Regrowth: 9 = most | | |
|----------------|------------------------------|-------------|-------------|-------------|--------------------|-------------|-------------|
| | Buck Creek, IN | | Mt Joy, PA | | Buck Creek, IN | | |
| | <u>2007</u> | <u>2008</u> | <u>2009</u> | <u>2010</u> | <u>2002</u> | <u>2003</u> | <u>2007</u> |
| <u>Forage</u> | | | | | | | |
| Eclipse | 3.68 | 7.27 | 8.27 | 6.30 | 6.7 | 7.3 | 9.0 |
| Clair | 2.98 | 6.62 | 7.38 | 5.57 | 6.0 | 9.0 | 7.0 |
| Climax | 3.53 | 4.68 | 7.73 | 5.31 | 3.0 | 3.7 | 6.7 |
| LSD(.05) | 0.75 | 0.67 | 0.90 | 0.55 | 1.7 | 1.2 | 0.9 |
| CV(%) | 14.5 | 7.4 | 8.1 | 6.7 | 21.3 | 14.6 | 8.8 |

6. Seed increase of Eclipse is limited to two generations each of breeder (Syn-1 or Syn-2), foundation (Syn-2 or Syn-3), and certified (Syn-3 or Syn-4) classes. Breeder seed was produced in 2000 (Syn-1) at Battle Ground, IN, and 2008 (Syn-2) at Touchet, WA, 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 Eclipse will be offered for sale in 2013. Plant variety protection will not be sought for this variety.



Shogun (TM0402)

1. **Variety name:** Shogun Kind: Timothy
Genus: Phleum Species: pratense
Experimental designation (s): TM0402
Date submitted: January 11, 2012

2. Shogun timothy was developed using phenotypic recurrent selection. Plants from the varieties Derby, Richmond, Summit, and Treasure, and two 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 2 years of clonal evaluation for vigor, regrowth, seed yield rating, dark-green color, and medium maturity, 10 plants were removed and allowed to intercross in isolation. The syn-1 breeder seed was bulk harvested in 2006.

3. Shogun 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 | Flag leaf width (mm) | | Panicle Length (cm) | | | Heading Date (May 1 = 1) | |
|---------------------------------|----------------------|-------------|---------------------|-------------|-------------|--------------------------|--|
| | Buck Creek, IN | | Buck Creek, IN | | | Buck Creek, IN | |
| | <u>2008</u> | <u>2009</u> | <u>2008</u> | <u>2009</u> | <u>2008</u> | <u>2009</u> | |
| Shogun | 8.5 | 12.1 | 13.3 | 12.9 | 40.3 | 38.3 | |
| Clair | 7.9 | 9.0 | 12.0 | 11.4 | 34.3 | 28.3 | |
| Climax | 7.8 | 11.2 | 12.6 | 13.5 | 47.5 | 45.3 | |
| LSD(.05) | 1.0 | 1.3 | 1.4 | 1.9 | 0.7 | 1.4 | |
| CV(%) | 9.5 | 10.1 | 8.3 | 11.8 | 1.4 | 3.3 | |

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 | | | | Regrowth: 9 = most | | | |
|----------------|------------------------------|-------------|-------------|-------------|--------------------|-------------|----------------|--|
| | Buck Creek, IN | | Mt Joy, PA | | Buck Creek, IN | | New Castle, KY | |
| | <u>2007</u> | <u>2008</u> | <u>2009</u> | <u>2010</u> | <u>2007</u> | <u>2007</u> | <u>2007</u> | |
| <u>Forage</u> | | | | | | | | |
| Shogun | 4.41 | 7.03 | 8.99 | 6.78 | 8.7 | | 7.7 | |
| Clair | 2.98 | 6.62 | 7.38 | 5.57 | 7.0 | | 6.7 | |
| Climax | 3.53 | 4.68 | 7.73 | 5.31 | 6.7 | | 6.7 | |
| LSD(.05) | 0.75 | 0.67 | 0.90 | 0.55 | 0.9 | | 1.4 | |
| CV(%) | 14.5 | 7.4 | 8.1 | 6.7 | 8.8 | | 14.2 | |

6. Seed increase of Shogun is limited to two generations each of breeder (Syn-1 or Syn-2), foundation (Syn-2 or Syn-3), and certified (Syn-3 or Syn-4) classes. Breeder seed was produced in 2006 (Syn-1) at Touchet, WA, and 2009 (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 Shogun will be offered for sale in 2013. Plant variety protection will not be sought for this variety.



(JF-116)

1. **Variety name:** _____ Kind: Hard fescue
Genus: Festuca **Species:** trachyphylla
Experimental designation (s): JF-116
Date submitted: 1/5/2012

2. 'JF-116' hard fescue (*Festuca trachyphylla*) is a turf-type cultivar developed by Jacklin Seed by Simplot®, Post Falls, ID. JF-116 is an advanced generation synthetic developed in a breeding program that used several cycles of population improvement. JF-116 was developed from the half-sib progenies of 27 plants. In 2008, about 75 remnant seed from each of the 31 plants in polycross 07-8002 were planted in a replicated isolation block near Connell, Washington of 2200 plants. Before anthesis in 2009, this block was rogued heavily for uniformity of growth habit, maturity, seed head initiation, and color. The remaining 602 plants from 27 of the sib-progenies were harvested as Breeders seed in June 2009; 4 of the half-sib progenies were completely removed. Maternal parentage of the plants harvested can be traced to: 53% plant collected in Swan Mountains in Montana, 11% from PI 206561 (collected in Greece in 1953), 9% SR 3100, 8% Osprey, 8% ABT seedlot 2, 7% Rescue 911, 3% Discovery, 1% unknown. This variety has plants that are both bluish and green during different times of the year. One color often predominates; leaf color appears to be influenced by fertility level, time of year and prevailing temperatures. Our observations show plants appear bluish after fertilization. This is not considered a variant and individual plants have been observed that have both green and blue leaves on the same plant.

3. JF-116 has been tested in company trials in Post Falls, ID, Vernon, UT and New Carlisle, OH since 2009.

| 4. Growth & Morphology | Plant height (cm) | | Flagleaf height (cm) | | Flagleaf length (cm) | |
|------------------------|-------------------|------|----------------------|------|----------------------|------|
| | 2011 | | 2011 | | 2011 | |
| | ID | WA | ID | WA | ID | WA |
| Traits | | | | | | |
| JF-116 | 63.7 | 57.6 | 24.0 | 22.2 | 5.2 | 6.7 |
| Ecostar | 71.6 | 65.8 | 27.3 | 29.4 | 5.7 | 7.7 |
| Rescue 911 | 65.9 | 59.1 | 26.2 | 25.0 | 5.7 | 7.6 |
| LSD (.05) | 3.2 | 3.0 | 2.0 | 2.4 | 0.5 | 0.9 |
| CV% | 13.3 | 12.7 | 22.4 | 23.6 | 26.0 | 30.3 |

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, or larger plant size compared to the JF-116 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 | | Seedling Vigor | | Color | | Salt tolerance | |
|-------------|--------------|------|----------------|----------------------|-------|------|----------------|------|
| | 2009-2011 | | 2009 | | 2010 | | Utah | |
| | Ohio | ID | ID | ID (low maintenance) | Ohio | ID | 2010 | 2011 |
| a) | | | | | | | | |
| b) | | | | | | | | |
| JF-116 | 5.8 | 5.3 | 5.2 | 4.8 | 7.0 | 5.5 | 3.5 | 2.5 |
| Ecostar | 4.2 | 4.9 | 6.2 | 6.3 | 5.5 | 4.5 | 2.5 | 3.5 |
| Rescue 911 | 4.0 | 4.9 | 5.3 | 5.3 | 7.5 | 5.5 | 4.5 | 1.5 |
| LSD (.05) | 1.2 | 2.4 | 1.4 | 3.1 | 1.4 | 2.3 | 1.7 | 3.5 |
| Variance | 18.1 | 30.3 | 23.2 | 29.5 | 9.8 | 26.4 | 25.7 | 55.5 |

•Scale used to report traits (if appropriate): 1-9 where 9=best

6. 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 should be available in July 2013. PVP will not be sought.



(JF-234)

1. **Variety name:** _____ Kind: Hard fescue
Genus: Festuca **Species:** trachyphylla
Experimental designation (s): JF-234
Date submitted: 1/5/2012

2. 'JF-234' hard fescue (*Festuca trachyphylla*) is a turf-type cultivar developed by Jacklin Seed by Simplot®, Post Falls, ID. In 2008, a 2000-plant isolation block of approximately 400 selections was established near Connell, WA. This block was rogued heavily removing plants from other species, and those that had winter damage, poor crown density, leaf spot, stem rust, low seed head initiation, or prostrate growth habit. The uniformity of the remaining 208 plants was high and they were harvested in bulk as a test variety and declared breeder seed in fall 2009. The plants harvested maternally trace to: 55% ABT seedlot 1, 22% ABT seed lot 2, and 10% Rescue 911. The remaining 13% of the plants were developed from plants collected in Seattle, WA and Wisconsin Rapids, WI; selections from Ecostar, SR 3100, Longfellow II, and Osprey; hard fescue contaminants identified in Jacklin and ABT seedlots.

This variety has plants that are both bluish and green during different times of the year. One color often predominates; leaf color appears to be influenced by fertility level, time of year and prevailing temperatures. Our observations show plants appear bluish after fertilization. This is not considered a variant and individual plants have been observed that have both green and blue leaves on the same plant.

3. JF-234 has been tested in company trials in Post Falls, ID, Vernon, UT and New Carlisle, OH since 2009.

| 4. Growth & Morphology | Plant height (cm) | | Flagleaf height (cm) | | Flagleaf length (cm) | |
|---------------------------|-------------------|------|----------------------|------|----------------------|------|
| | 2011 | | 2011 | | 2011 | |
| | ID | WA | ID | WA | ID | WA |
| Traits | | | | | | |
| JF-234 | 63.5 | 56.0 | 22.9 | 21.8 | 4.7 | 6.3 |
| Ecostar | 71.6 | 65.8 | 27.3 | 29.4 | 5.7 | 7.7 |
| Rescue 911 | 65.9 | 59.1 | 26.2 | 25.0 | 5.7 | 7.6 |
| LSD (.05) | 3.2 | 3.0 | 2.0 | 2.4 | 0.5 | 0.9 |
| CV% | 13.3 | 12.7 | 22.4 | 23.6 | 26.0 | 30.3 |

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, or larger plant size compared to the JF-234 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 | | Seedling Vigor | | Color | | Salt tolerance | |
|-------------|--------------|------|----------------|----------------------|-------|------|----------------|------|
| | 2009-2011 | | 2009 | | 2010 | | Utah | |
| | Ohio | ID | ID | ID (low maintenance) | Ohio | ID | 2010 | 2011 |
| a) | | | | | | | | |
| b) | | | | | | | | |
| JF-234 | 5.0 | 5.9 | 4.5 | 4.0 | 7.5 | 6.5 | 3.5 | 2.5 |
| Ecostar | 4.2 | 4.9 | 6.2 | 6.3 | 5.5 | 4.5 | 2.5 | 3.5 |
| Rescue 911 | 4.0 | 4.9 | 5.3 | 5.3 | 7.5 | 5.5 | 4.5 | 1.5 |
| LSD (.05) | 1.2 | 2.4 | 1.4 | 3.1 | 1.4 | 2.3 | 1.7 | 3.5 |
| Variance | 18.1 | 30.3 | 23.2 | 29.5 | 9.8 | 26.4 | 25.7 | 55.5 |

•Scale used to report traits (if appropriate):1-9 where 9=best

6. 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 should be available in July 2013. PVP will not be sought.



(JR-521)

1. **Variety name:** _____ Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): JR-521
Date submitted: _____

2. JR-521 was developed from the half-sib progenies of 39 plants in a breeding program initiated in 1990 to improve cultivars of perennial ryegrass for turf use. Breeding techniques in the population improvement program have 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-521 traces to: 28% Pizzazz, 12% MB-48, 6% Brightstar, 5% each from Kokomo, Admire, Radiant, and SR 4420 and less than 3% from Atlantis, Affinity, Gettysburg, APM, MB-49, Monterey II, Phantom, Premier II, Wind Dance and Yorktown III.

During the spring of 2006, seed from the 39 plants in polycross 05-8005 were started in flats in the greenhouse and in June a randomized replicated isolation block was planted using ~160 plants per line. The 5200-plant block was rogued removing plants with winter damage, lighter color, coarser leaf texture, poor crown density to increase the uniformity; 444 plants were harvested as the first Breeder seed of this variety. In 2008 a Breeder seed increase was planted near Nine Mile, Washington. This block was also rogued to increase uniformity but less than 10% of the plants were removed from the block before anthesis. First Breeders seed of JR-521 was produced in July 2007.

3. JR-521 was developed for use as permanent turf in areas where perennial ryegrass is well adapted and has shown adaptation to MD, OH, ID, and CA.

| 4. Growth & Morphology | Plant height (cm) | | Flagleaf height (cm) | | Panicle length (cm) | |
|------------------------|-------------------|------------|----------------------|------------|---------------------|------------|
| | 2011 | | 2011 | | 2011 | |
| | Idaho | Washington | Idaho | Washington | Idaho | Washington |
| <i>JR-521</i> | 56.1 | 55.9 | 31.1 | 32.9 | 14.0 | 15.4 |
| <i>Pizzazz</i> | 53.2 | 52.9 | 31.3 | 32.0 | 14.5 | 14.6 |
| <i>Linn</i> | 62.8 | 59.7 | 34.6 | 35.1 | 17.4 | 17.8 |
| LSD (.05) | 2.8 | 2.8 | 2.2 | 2.1 | 1.0 | 1.1 |
| Variance | 14.1 | 12.9 | 19.9 | 16.1 | 19.5 | 18.2 |

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 | | Color (1-9 scale, 9=best) | | Density (1-9 scale, 9=best) | | Greenup (1-9 scale, 9=best) | | | |
|--------------------|--------------|----|---------------------------|------------|-----------------------------|------------|-----------------------------|------------|------------|------------|
| | | | | | | | | | | |
| | a) | b) | 2008-10 MD | 2008-10 ID | 2008-10 MD | 2008-10 ID | 2008-09 ID | 2007-09 ID | 2008-09 ID | 2007-09 OH |
| <i>JR-521</i> | | | 4.5 | 4.9 | 7.0 | 7.3 | 5.7 | 5.2 | 5.5 | 7.0 |
| <i>Pizzazz</i> | | | 3.6 | 4.8 | 5.5 | 6.0 | 5.3 | 5.5 | 4.8 | 6.5 |
| <i>Accent</i> | | | 3.0 | 4.2 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 6.0 |
| <i>Linn</i> | | | 1.5 | 2.2 | 4.5 | 4.0 | 3.3 | 3.3 | 4.0 | 8.0 |
| <i>Revenge GLX</i> | | | 4.7 | 5.0 | 7.0 | 6.5 | 6.3 | 6.7 | 4.3 | 5.5 |
| LSD (.05) | | | 1.2 | 0.8 | 1.9 | 1.9 | 1.2 | 1.3 | 2.6 | 2.9 |
| Variance | | | 22.3 | 13.1 | 18.1 | 16.0 | 11.4 | 12.2 | 22.4 | 21.6 |

6. 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 July 2012. PVP will not be applied for.



(JR-522)

1. **Variety name:** _____ Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): JR-522
Date submitted: _____

2. JR-522 was developed from the half-sib progenies of 32 plants in a breeding program initiated in 1990 to improve cultivars of perennial ryegrass for turf use. Breeding techniques in the population improvement program have included selection, paired crosses and polycrosses. JR-522 was selected for improved turf performance, dark color, and fine leaf texture.

The maternal parentage of JR-522 traces to: 19% Kokomo, 16% Pizzazz, 9% Paragon, 9% Brightstar, 6% All*Star 2, 6% MB-48, and 6% Prelude III. Less than 5% each of the maternal parentage traces to Admire, Atlantis, Extreme, Gator 3, MB-44, Saturn, WX-393, and Yorktown III and 2 experimental populations.

During the spring of 2006, seed from the 32 plants in polycross 05-8006 were started in flats in the greenhouse and in June a randomized replicated isolation block was planted using ~160 plants per line. The 5120-plant block was rogued removing plants with winter damage, lighter color, coarser leaf texture, poor crown density to increase the uniformity; 683 plants were harvested as the first Breeder seed of this variety in July 2007. In 2008 a Breeder seed increase was planted near Nine Mile, Washington. This block was also rogued to increase uniformity but less than 10% of the plants were removed from the block before anthesis.

3. JR-522 was developed for use as permanent turf in areas where perennial ryegrass is well adapted and has shown adaptation to MD, OH, ID, and CA.

| 4. Growth & Morphology | Plant height (cm) | | Flagleaf height (cm) | | Panicle length (cm) | |
|------------------------|-------------------|------------|----------------------|------------|---------------------|------------|
| | 2011 | | 2011 | | 2011 | |
| | Idaho | Washington | Idaho | Washington | Idaho | Washington |
| Traits | | | | | | |
| JR-522 | 55.6 | 51.6 | 32.4 | 32.2 | 14.0 | 14.0 |
| Pizzazz | 53.2 | 52.9 | 31.3 | 32.0 | 14.5 | 14.6 |
| Linn | 62.8 | 59.7 | 34.6 | 35.1 | 17.4 | 17.8 |
| LSD (.05) | 2.8 | 2.8 | 2.2 | 2.1 | 1.0 | 1.1 |
| Variance | 14.1 | 12.9 | 19.9 | 16.1 | 19.5 | 18.2 |

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 | | Color (1-9 scale, 9=best) | | Density (1-9 scale, 9=best) | | Greenup (1-9 scale, 9=best) | |
|-------------|--------------|------------|---------------------------|------------|-----------------------------|------|-----------------------------|------|
| | 2008-10 | | 2008-10 | | 2008-09 ID 2007-09 ID | | 2008-09 ID 2007-09 OH | |
| | MD | 2008-10 ID | MD | 2008-10 ID | | | | |
| JR-522 | 4.8 | 4.9 | 7.5 | 6.0 | 5.8 | 5.3 | 4.3 | 6.7 |
| Pizzazz | 3.6 | 4.8 | 5.5 | 6.0 | 5.3 | 5.5 | 4.8 | 6.5 |
| Accent | 3.0 | 4.2 | 5.0 | 5.0 | 5.0 | 5.5 | 5.5 | 6.0 |
| Linn | 1.5 | 2.2 | 4.5 | 4.0 | 3.3 | 3.3 | 4.0 | 8.0 |
| Revenge GLX | 4.7 | 5.0 | 7.0 | 6.5 | 6.3 | 6.7 | 4.3 | 5.5 |
| LSD (.05) | 1.2 | 0.8 | 1.9 | 1.9 | 1.2 | 1.3 | 2.6 | 2.9 |
| Variance | 22.3 | 13.1 | 18.1 | 16.0 | 11.4 | 12.2 | 22.4 | 21.6 |

6. 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 July 2012. PVP will not be applied for.



(JT-158)

1. **Variety name:** _____ Kind: Tall fescue
Genus: Festuca **Species:** arundinacea Schreb.
Experimental designation (s): JT-158
Date submitted: 1/5/12

2. The maternal parentage of JT-158 derives from: 15% JT-24, 15% JT-25, 12% Quest, 10% 05-8005, 9% JT-4, 7% 03-8011, 6% Pixie, and less than 5% from each of the following: 02-8001, 02-8002, 02-8004, JT-17, Coronado, 03-8010, 05-8015, 05-8017, JT-10, and 99-8001. The Jacklin experimental lines included material from polycrosses, single plant selections and advanced test varieties that have not been publicly released. Breeding techniques in the population improvement program included selection, paired crosses and polycrosses. In 2007, the 2006 ID nursery was screened for fine leaf texture and 266 were identified out of ~40000 plants. Many of the selections were moved before anthesis to one of three polycross blocks for fine leaf texture based on plant maturity; 07-8006 (35 plants), 07-8007 (38 plants) or 07-8008 (31 plants). The remaining fine leaved selections were open pollinated. Half-sib progeny plots from the 266 selections were planted in company trials in 2007 in MD, OH, and ID. In spring 2008, 100 superior lines were selected from the 266 based on texture and quality in the turf trials. These were planted in an isolation block near Connell, WA. Fifty-eight of the lines were planted using remnant seed from their 2007 harvest and the remaining 42 lines were plugged from turf trials planted in 2007 in ID, MD, and OH. Approximated 60 plants per line were planted in a 5100-plant isolation block near Connell, WA in 2008. JT-158 was selected for improved fine leaf texture, density and color. This block was rogued to improve uniformity and 4074 plants were removed before anthesis based on lighter color, coarser leaf texture, low tiller density, and reduced seedhead initiation; three lines were completely removed. The remaining 1026 plants were harvested in July 2009 as Breeder seed.

3. JT-158 was developed for use as permanent turf in areas tall fescue is well adapted and has shown adaptation to MD, OH, ID, and UT.

| 4. Growth & Morphology | Plant height (cm) | | Flagleaf height (cm) | | Panicle length (cm) | |
|------------------------|-------------------|------------|----------------------|------------|---------------------|------------|
| | 2011 | | 2011 | | 2011 | |
| | Idaho | Washington | Idaho | Washington | Idaho | Washington |
| Traits | | | | | | |
| JT-158 | 87.8 | 90.7 | 43.5 | 54.3 | 16.1 | 16.8 |
| Jaguar 4G | 94.7 | 95.4 | 48.6 | 57.6 | 16.8 | 18.3 |
| Quest | 101.7 | 97.0 | 53.5 | 58.4 | 18.3 | 19.0 |
| LSD (.05) | 4.8 | 4.9 | 4.5 | 4.4 | 1.7 | 1.7 |
| Variance | 17.1 | 13.1 | 26.6 | 19.1 | 29.3 | 22.9 |

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 | | Texture (1-9 scale, 9=best) | | Brown patch (1-9 scale) | | Color (1-9 scale, 9=best) | |
|-------------|--------------|------------|-----------------------------|------------|-------------------------|------|---------------------------|------|
| | | | 2010-11 | | 2009-11 | | 2009-11 | |
| | 2010-11 MD | 2010-11 OH | ID#2 | 2010-11 OH | OH | MD | ID | ID |
| a) | | | | | | | | |
| b) | | | | | | | | |
| JT-158 | 5.2 | 5.0 | 7.0 | 7.0 | 6.5 | 5.0 | 6.2 | 7.3 |
| Jaguar 4G | 3.7 | 3.9 | 5.0 | 5.5 | 7.0 | 3.7 | 6.8 | 6.7 |
| Quest | 3.4 | 3.3 | 5.0 | 4.5 | 8.0 | 3.3 | 5.8 | 6.0 |
| LSD (.05) | 1.3 | 1.8 | 2.3 | 1.3 | 3.1 | 3.0 | 0.9 | 1.0 |
| Variance | 21.5 | 23.6 | 19.5 | 21.2 | 16.9 | 37.6 | 9.8 | 15.5 |

6. 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 July 2012. PVP will not be applied for.



Insight (SD-1RES.2S2)

1. **Variety name:** Insight Kind: Perennial Ryegrass
Genus: Lolium Species: perenne
Experimental designation (s): SD-1RES.2S2
Date submitted: January 5, 2012

2. Insight was developed by Ledebouer Seed LLC beginning early summer of 2004 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 .25 acre breeder seed stand that was harvested in 2009.

3. Insight is well adapted for use in Western Oregon and likely other areas with similar climate for normal turf use. Insight is protected under U.S. Patent No. 7,696,418 for Spreading Ryegrass.

| 4. Growth & Morphology Traits | Heading Date – Julian Days Aurora, OR | | Plant Height (cm) Aurora, OR | | Flag Leaf Height (cm) Aurora, OR | |
|-------------------------------|--|----------|---------------------------------|----------|-------------------------------------|----------|
| | 2010 avg | 2011 avg | 2010 avg | 2011 avg | 2010 avg | 2011 avg |
| | Insight | 152 | 153 | 91.8 | 89.4 | 57.8 |
| Covet | 149.0 | 149.0 | 67.7 | 67.8 | 31.7 | 31.3 |
| Buccaneer | 144.0 | 145.0 | 67.6 | 67.1 | 34.3 | 36.2 |
| Casper | 153.0 | 155.0 | 69.3 | 70.1 | 31.2 | 31.0 |
| LSD (.05) | 3.4 | 3.5 | 19.4 | 19.2 | 14.5 | 14.5 |
| Variance | 2.0 | 2.2 | 3.3 | 3.1 | 3.1 | 3.2 |

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

Variants to be expected and frequency: None

| 5. Turf Use | 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 avg | 2011 avg | 2010 avg | 2011 avg | 2010 avg | 2011 avg | 2010 avg | 2011 avg |
| Insight | 8.4 | 8.6 | 8.5 | 8.5 | 8.5 | 8.5 | 1232 | 1251 |
| Covet | 7.1 | 7.2 | 7.5 | 7.5 | 7.5 | 7.5 | 491 | 541 |
| Buccaneer | 6.8 | 6.7 | 7.0 | 7.0 | 6.5 | 6.0 | 543 | 527 |
| Casper | 6.9 | 7.1 | 7.5 | 7.5 | 6.5 | 6.5 | 538 | 519 |
| LSD (.05) | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 188.2 | 197.7 |
| Variance | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 77.1 | 78.5 |

•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 two years. Maximum number of harvests from Certified stands is four 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 2012. PVP will not be sought with the certification option.



Reatta (SD-0)

1. **Variety name:** Reatta Kind: Perennial Ryegrass
Genus: Lolium Species: perenne
Experimental designation (s): SD-0
Date submitted: January 5, 2012

2. Reatta was developed by Ledebor Seed LLC beginning early summer of 2002 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 one acre breeder seed stand that was harvested in 2008. Breeder seed was used to establish comparison trials for morphological comparison data

3. Reatta is well adapted for use in Western Oregon and likely other areas with similar climate for normal turf use. Reatta is protected under U.S. Patent No. 7,696,418 for Spreading Ryegrass.

| 4. Growth & Morphology Traits | Heading Date – Julian Days Aurora, OR | | Plant Height (cm) Aurora, OR | | Flag Leaf Height (cm) Aurora, OR | |
|-------------------------------|--|-------|---------------------------------|------|-------------------------------------|------|
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| | Reatta | 149.0 | 150.0 | 94.3 | 92.5 | 59.1 |
| Covet | 149.0 | 149.0 | 67.7 | 67.8 | 31.7 | 31.3 |
| Buccaneer | 144.0 | 145.0 | 67.6 | 67.1 | 34.3 | 36.2 |
| Casper | 153.0 | 155.0 | 69.3 | 70.1 | 31.2 | 31.0 |
| LSD (.05) | 3.4 | 3.5 | 19.4 | 19.2 | 14.5 | 14.5 |
| Variance | 2.0 | 2.2 | 3.3 | 3.0 | 3.1 | 3.2 |

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

Variants to be expected and frequency: Lighter color >.01%

| 5. Turf Use | 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 | |
| | a) | b) | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| Reatta | 7.9 | 8.1 | 7.5 | 7.5 | 8.0 | 8.0 | 1348 | 1369 |
| Covet | 7.1 | 7.2 | 7.5 | 7.5 | 7.5 | 7.5 | 491 | 541 |
| Buccaneer | 6.8 | 6.7 | 7.0 | 7.0 | 6.5 | 6.0 | 543 | 527 |
| Casper | 6.9 | 7.1 | 7.5 | 7.5 | 6.5 | 6.5 | 538 | 519 |
| LSD (.05) | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 188.2 | 197.7 |
| Variance | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 77.1 | 78.5 |

•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 two years. Maximum number of harvests from Certified stands is three 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.



Sienna (SD-20cl.)

1. **Variety name:** Sienna Kind: Perennial Ryegrass
Genus: Lolium Species: perenne
Experimental designation (s): SD-20cl.
Date submitted: January 5, 2012

2. Sienna was developed by Ledebor Seed LLC beginning early summer of 2006 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 .25 acre breeder seed stand that was harvested in 2009.

3. Sienna is well adapted for use in Western Oregon and likely other areas with similar climate for normal turf use. Sienna is protected under U.S. Patent No. 7,696,418 for Spreading Ryegrass.

| 4. Growth & Morphology | Heading Date – Julian Days | | Plant Height (cm) | | Flag Leaf Height (cm) | |
|------------------------|----------------------------|----------|-------------------|----------|-----------------------|----------|
| | Aurora, OR | | Aurora, OR | | Aurora, OR | |
| | 2010 avg | 2011 avg | 2010 avg | 2011 avg | 2010 avg | 2011 avg |
| Sienna | 150 | 152 | 95.6 | 96.4 | 61.5 | 62.3 |
| Covet | 149.0 | 149.0 | 67.7 | 67.8 | 31.7 | 31.3 |
| Buccaneer | 144.0 | 145.0 | 67.6 | 67.1 | 34.3 | 36.2 |
| Casper | 153.0 | 155.0 | 69.3 | 70.1 | 31.2 | 31.0 |
| LSD (.05) | 3.4 | 3.5 | 19.4 | 19.2 | 14.5 | 14.5 |
| Variance | 2.0 | 2.2 | 3.3 | 3.1 | 3.1 | 3.2 |

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

Variants to be expected and frequency: Lighter color >.01%

| 5. Turf Use | 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 avg | 2011 avg | 2010 avg | 2011 avg | 2010 avg | 2011 avg | 2010 avg | 2011 avg |
| Sienna | 8.1 | 8.3 | 8.0 | 8.0 | 8.5 | 8.5 | 1289 | 1307 |
| Covet | 7.1 | 7.2 | 7.5 | 7.5 | 7.5 | 7.5 | 491 | 541 |
| Buccaneer | 6.8 | 6.7 | 7.0 | 7.0 | 6.5 | 6.0 | 543 | 527 |
| Casper | 6.9 | 7.1 | 7.5 | 7.5 | 6.5 | 6.5 | 538 | 519 |
| LSD (.05) | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 188.2 | 197.7 |
| Variance | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 77.1 | 78.5 |

•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 two years. Maximum number of harvests from Certified stands is four 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 2012. PVP will not be sought with the certification option.



(A-35)

1. Variety name: Not Yet Named Kind: Perennial ryegrass
Genus: Lolium Species: perenne L.
Experimental designation (s): A-35
Date submitted: December 31, 2011

2. A-35 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties: ASP6004, Frontier, Majesty II and Wind Dance II. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, four cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.

3. A-35 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

Table with 4 columns: Growth and Morphology Traits, Heading Date - Julian Days (Verboort, Oregon 2010/2011), Plant Height (cm) (Verboort, Oregon 2010/2011), and Flag Leaf Length (cm) (Verboort, Oregon 2010/2011). Rows include A-35, Elka, Fiesta 4, Pinnacle, and Linn.

SE 1.5 1.4 1.9 3.0 0.8 0.9
LSD @ 0.05 3.0 2.9 3.9 6.2 1.7 1.7

Data collected from: Single spaced plants X Plants in rows / solid seeding
Variants to be expected and frequency: None have been observed or documented

Table with 5 columns: Turf Use, Turf Quality (1-9) (2010 OR/PA), Color (1-9) (2010 OR/PA), Density (1-9) (2010 OR/PA), and Texture (1-9) (2010 OR/PA). Rows include A-35, Applaud, Fiesta 4, Pinnacle, Linn, SE, and LSD @ 0.05.

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture

Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of A-35 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.

7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



(CS-20)

1. **Variety name:** Not Yet Named Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne L.
Experimental designation(s): CS-20
Date submitted: December 31, 2011
2. CS-20 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties: Frontier, Pennant III, Presidio, Majesty II and ASP6001. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, four cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.
3. CS-20 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

| 4. Growth and Morphology | Heading Date - Julian Days | | Plant Height (cm) | | Flag Leaf Length (cm) | |
|--------------------------|----------------------------|-------|-------------------|------|-----------------------|------|
| | Verboort, Oregon | | Verboort, Oregon | | Verboort, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| CS-20 | 135.5 | 136.8 | 64.8 | 65.9 | 14.3 | 14.9 |
| Elka | 150.1 | 154.1 | 38.6 | 39.9 | 15.9 | 17.0 |
| Fiesta 4 | 132.0 | 134.0 | 40.3 | 42.7 | 12.9 | 12.0 |
| Pinnacle | 127.7 | 129.7 | 45.0 | 43.6 | 12.5 | 13.5 |
| Linn | 112.6 | 125.0 | 83.5 | 67.5 | 21.1 | 17.2 |

| | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|
| SE | 1.5 | 1.4 | 1.9 | 3.0 | 0.8 | 0.9 |
| LSD @ 0.05 | 3.0 | 2.9 | 3.9 | 6.2 | 1.7 | 1.7 |

Data collected from: Single spaced plants Plants in rows / solid seeding
Variants to be expected and frequency: None have been observed or documented

| 5. Turf Use | Turf Quality (1-9) | | Color (1-9) | | Density (1-9) | | Texture (1-9) | |
|-------------|--------------------|-----|-------------|-----|---------------|-----|---------------|-----|
| | 2010 | | 2010 | | 2010 | | 2010 | |
| | OR | PA | OR | PA | OR | PA | OR | PA |
| CS-20 | 7.3 | 6.7 | 7.9 | 7.4 | 7.1 | 7.0 | 7.2 | 6.1 |
| Applaud | 6.4 | 5.1 | 6.1 | 5.3 | 5.9 | 5.3 | 5.8 | 4.8 |
| Fiesta 4 | 6.1 | 4.8 | 6.0 | 5.3 | 6.1 | 5.4 | 6.4 | 5.7 |
| Pinnacle | 4.2 | 3.3 | 3.4 | 3.0 | 3.5 | 3.1 | 4.4 | 3.6 |
| Linn | 2.4 | 1.9 | 1.9 | 1.6 | 1.5 | 1.3 | 1.6 | 1.4 |
| SE | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| LSD @ 0.05 | 0.6 | 0.5 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 |

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture
Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of CS-20 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.
7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



(D-10)

1. **Variety name:** Not Yet Named Kind: Perennial ryegrass
 Genus: Lolium Species: perenne L.
 Experimental designation(s): D-10
 Date submitted: December 31, 2011
2. D-10 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties: Fiji, Line Drive, Divine, Pennant III and ASP6003. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, four cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.
3. D-10 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

| 4. Growth and Morphology Traits | Heading Date - Julian Days | | Plant Height (cm) | | Flag Leaf Length (cm) | |
|---------------------------------|----------------------------|-------|-------------------|------|-----------------------|------|
| | Verboort, Oregon | | Verboort, Oregon | | Verboort, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| D-10 | 137.1 | 139.7 | 64.2 | 65.7 | 14.7 | 14.9 |
| Elka | 150.1 | 154.1 | 38.6 | 39.9 | 15.9 | 17.0 |
| Fiesta 4 | 132.0 | 134.0 | 40.3 | 42.7 | 12.9 | 12.0 |
| Pinnacle | 127.7 | 129.7 | 45.0 | 43.6 | 12.5 | 13.5 |
| Linn | 112.6 | 125.0 | 83.5 | 67.5 | 21.1 | 17.2 |

| | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|
| SE | 1.5 | 1.4 | 1.9 | 3.0 | 0.8 | 0.9 |
| LSD @ 0.05 | 3.0 | 2.9 | 3.9 | 6.2 | 1.7 | 1.7 |

Data collected from: Single spaced plants X Plants in rows / solid seeding
 Variants to be expected and frequency: None have been observed or documented

| 5. Turf Use | Turf Quality (1-9) | | Color (1-9) | | Density (1-9) | | Texture (1-9) | |
|-------------|--------------------|-----|-------------|-----|---------------|-----|---------------|-----|
| | 2010 | | 2010 | | 2010 | | 2010 | |
| | OR | PA | OR | PA | OR | PA | OR | PA |
| D-10 | 7.3 | 6.9 | 8.1 | 7.8 | 7.1 | 7.2 | 6.9 | 6.3 |
| Applaud | 6.4 | 5.1 | 6.1 | 5.3 | 5.9 | 5.3 | 5.8 | 4.8 |
| Fiesta 4 | 6.1 | 4.8 | 6.0 | 5.3 | 6.1 | 5.4 | 6.4 | 5.7 |
| Pinnacle | 4.2 | 3.3 | 3.4 | 3.0 | 3.5 | 3.1 | 4.4 | 3.6 |
| Linn | 2.4 | 1.9 | 1.9 | 1.6 | 1.5 | 1.3 | 1.6 | 1.4 |
| SE | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| LSD @ 0.05 | 0.6 | 0.5 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 |

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture
 Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of D-10 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.
7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



(DC-1)

1. **Variety name:** Not Yet Named Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne L.
Experimental designation(s): DC-1
Date submitted: December 31, 2011

2. DC-1 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties: Pennant III, Nexus XD, Line Drive, Fiji, Singular and Frontier. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, four cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.

3. DC-1 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

| 4. Growth and Morphology Traits | Heading Date - Julian Days | | Plant Height (cm) | | Flag Leaf Length (cm) | |
|---------------------------------|----------------------------|-------|-------------------|------|-----------------------|------|
| | Verboort, Oregon | | Verboort, Oregon | | Verboort, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| DC-1 | 130.2 | 133.1 | 57.6 | 53.2 | 15.2 | 15.6 |
| Elka | 150.1 | 154.1 | 38.6 | 39.9 | 15.9 | 17.0 |
| Fiesta 4 | 132.0 | 134.0 | 40.3 | 42.7 | 12.9 | 12.0 |
| Pinnacle | 127.7 | 129.7 | 45.0 | 43.6 | 12.5 | 13.5 |
| Linn | 112.6 | 125.0 | 83.5 | 67.5 | 21.1 | 17.2 |

| | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|
| SE | 1.5 | 1.4 | 1.9 | 3.0 | 0.8 | 0.9 |
| LSD @ 0.05 | 3.0 | 2.9 | 3.9 | 6.2 | 1.7 | 1.7 |

Data collected from: Single spaced plants Plants in rows / solid seeding
 Variants to be expected and frequency: None have been observed or documented

| 5. Turf Use | Turf Quality (1-9) | | Color (1-9) | | Density (1-9) | | Texture (1-9) | |
|-------------|--------------------|-----|-------------|-----|---------------|-----|---------------|-----|
| | 2010 | | 2010 | | 2010 | | 2010 | |
| | OR | PA | OR | PA | OR | PA | OR | PA |
| DC-1 | 7.1 | 6.7 | 7.9 | 7.7 | 7.0 | 6.9 | 7.0 | 6.1 |
| Applaud | 6.4 | 5.1 | 6.1 | 5.3 | 5.9 | 5.3 | 5.8 | 4.8 |
| Fiesta 4 | 6.1 | 4.8 | 6.0 | 5.3 | 6.1 | 5.4 | 6.4 | 5.7 |
| Pinnacle | 4.2 | 3.3 | 3.4 | 3.0 | 3.5 | 3.1 | 4.4 | 3.6 |
| Linn | 2.4 | 1.9 | 1.9 | 1.6 | 1.5 | 1.3 | 1.6 | 1.4 |
| SE | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| LSD @ 0.05 | 0.6 | 0.5 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 |

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture
 Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of DC-1 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.
7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



(GO-G-37)

1. **Variety name:** Not Yet Named Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne L.
Experimental designation(s): GO-G-37
Date submitted: December 31, 2011
2. GO-G-37 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties: Wilmington, ASP6004, Fiji, Wind Dance II and Pennant III. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, four cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.
3. GO-G-37 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

| 4. Growth and Morphology Traits | Heading Date - Julian Days | | Plant Height (cm) | | Flag Leaf Length (cm) | |
|---------------------------------|----------------------------|-------|-------------------|------|-----------------------|------|
| | Verboort, Oregon | | Verboort, Oregon | | Verboort, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| G-GO-37 | 139.6 | 140.7 | 59.1 | 61.5 | 14.4 | 14.6 |
| Elka | 150.1 | 154.1 | 38.6 | 39.9 | 15.9 | 17.0 |
| Fiesta 4 | 132.0 | 134.0 | 40.3 | 42.7 | 12.9 | 12.0 |
| Pinnacle | 127.7 | 129.7 | 45.0 | 43.6 | 12.5 | 13.5 |
| Linn | 112.6 | 125.0 | 83.5 | 67.5 | 21.1 | 17.2 |

| | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|
| SE | 1.5 | 1.4 | 1.9 | 3.0 | 0.8 | 0.9 |
| LSD @ 0.05 | 3.0 | 2.9 | 3.9 | 6.2 | 1.7 | 1.7 |

Data collected from: Single spaced plants Plants in rows / solid seeding
 Variants to be expected and frequency: None have been observed or documented

| 5. Turf Use | Turf Quality (1-9) | | Color (1-9) | | Density (1-9) | | Texture (1-9) | |
|-------------|--------------------|-----|-------------|-----|---------------|-----|---------------|-----|
| | 2010 | | 2010 | | 2010 | | 2010 | |
| | OR | PA | OR | PA | OR | PA | OR | PA |
| GO-G-37 | 7.2 | 6.6 | 8.2 | 7.7 | 7.1 | 7.1 | 7.2 | 6.0 |
| Applaud | 6.4 | 5.1 | 6.1 | 5.3 | 5.9 | 5.3 | 5.8 | 4.8 |
| Fiesta 4 | 6.1 | 4.8 | 6.0 | 5.3 | 6.1 | 5.4 | 6.4 | 5.7 |
| Pinnacle | 4.2 | 3.3 | 3.4 | 3.0 | 3.5 | 3.1 | 4.4 | 3.6 |
| Linn | 2.4 | 1.9 | 1.9 | 1.6 | 1.5 | 1.3 | 1.6 | 1.4 |
| SE | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| LSD @ 0.05 | 0.6 | 0.5 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 |

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture
 Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of GO-G-37 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.
7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



(ISG-1)

1. **Variety name:** Not Yet Named Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne L.
Experimental designation(s): ISG-1
Date submitted: December 31, 2011
2. ISG-1 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties: Divine, Presidio, Majesty II, Pennant III, Radiant and ASP6003. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, four cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.
3. ISG-1 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

| 4. Growth and Morphology Traits | Heading Date - Julian Days | | Plant Height (cm) | | Flag Leaf Length (cm) | |
|---------------------------------|----------------------------|-------|-------------------|------|-----------------------|------|
| | Verboort, Oregon | | Verboort, Oregon | | Verboort, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| ISG-1 | 131.2 | 133.2 | 58.0 | 59.9 | 13.9 | 14.2 |
| Elka | 150.1 | 154.1 | 38.6 | 39.9 | 15.9 | 17.0 |
| Fiesta 4 | 132.0 | 134.0 | 40.3 | 42.7 | 12.9 | 12.0 |
| Pinnacle | 127.7 | 129.7 | 45.0 | 43.6 | 12.5 | 13.5 |
| Linn | 112.6 | 125.0 | 83.5 | 67.5 | 21.1 | 17.2 |
| SE | 1.5 | 1.4 | 1.9 | 3.0 | 0.8 | 0.9 |
| LSD @ 0.05 | 3.0 | 2.9 | 3.9 | 6.2 | 1.7 | 1.7 |

Data collected from: Single spaced plants Plants in rows / solid seeding
 Variants to be expected and frequency: None have been observed or documented

| 5. Turf Use | Turf Quality (1-9) | | Color (1-9) | | Density (1-9) | | Texture (1-9) | |
|-------------|--------------------|-----|-------------|-----|---------------|-----|---------------|-----|
| | 2010 | | 2010 | | 2010 | | 2010 | |
| | OR | PA | OR | PA | OR | PA | OR | PA |
| ISG-1 | 7.1 | 6.5 | 7.7 | 7.3 | 6.8 | 6.5 | 6.9 | 6.0 |
| Applaud | 6.4 | 5.1 | 6.1 | 5.3 | 5.9 | 5.3 | 5.8 | 4.8 |
| Fiesta 4 | 6.1 | 4.8 | 6.0 | 5.3 | 6.1 | 5.4 | 6.4 | 5.7 |
| Pinnacle | 4.2 | 3.3 | 3.4 | 3.0 | 3.5 | 3.1 | 4.4 | 3.6 |
| Linn | 2.4 | 1.9 | 1.9 | 1.6 | 1.5 | 1.3 | 1.6 | 1.4 |
| SE | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| LSD @ 0.05 | 0.6 | 0.5 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 |

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture
 Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of ISG-1 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.
7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



(ISG-30)

1. **Variety name:** Not Yet Named Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne L.
Experimental designation(s): (ISG-30)
Date submitted: December 31, 2011
2. ISG-30 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties Frontier, Provocative, Nexus XR, ASP6002 and Majesty II. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, four cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.
3. ISG-30 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

| 4. Growth and Morphology Traits | Heading Date - Julian Days | | Plant Height (cm) | | Flag Leaf Length (cm) | |
|------------------------------------|----------------------------|-------|-------------------|------|-----------------------|------|
| | Verboort, Oregon | | Verboort, Oregon | | Verboort, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| ISG-30 | 134.4 | 135.3 | 65.7 | 66.6 | 14.4 | 13.6 |
| Elka | 150.1 | 154.1 | 38.6 | 39.9 | 15.9 | 17.0 |
| Fiesta 4 | 132.0 | 134.0 | 40.3 | 42.7 | 12.9 | 12.0 |
| Pinnacle | 127.7 | 129.7 | 45.0 | 43.6 | 12.5 | 13.5 |
| Linn | 112.6 | 125.0 | 83.5 | 67.5 | 21.1 | 17.2 |

| | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|
| SE | 1.5 | 1.4 | 1.9 | 3.0 | 0.8 | 0.9 |
| LSD @ 0.05 | 3.0 | 2.9 | 3.9 | 6.2 | 1.7 | 1.7 |

Data collected from: Single spaced plants Plants in rows / solid seeding
 Variants to be expected and frequency: None have been observed or documented

| 5. Turf Use | Turf Quality (1-9) | | Color (1-9) | | Density (1-9) | | Texture (1-9) | |
|-------------|--------------------|-----|-------------|-----|---------------|-----|---------------|-----|
| | 2010 | | 2010 | | 2010 | | 2010 | |
| | OR | PA | OR | PA | OR | PA | OR | PA |
| ISG-30 | 7.2 | 6.3 | 7.8 | 7.2 | 7.0 | 6.6 | 7.0 | 5.9 |
| Applaud | 6.4 | 5.1 | 6.1 | 5.3 | 5.9 | 5.3 | 5.8 | 4.8 |
| Fiesta 4 | 6.1 | 4.8 | 6.0 | 5.3 | 6.1 | 5.4 | 6.4 | 5.7 |
| Pinnacle | 4.2 | 3.3 | 3.4 | 3.0 | 3.5 | 3.1 | 4.4 | 3.6 |
| Linn | 2.4 | 1.9 | 1.9 | 1.6 | 1.5 | 1.3 | 1.6 | 1.4 |
| SE | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| LSD @ 0.05 | 0.6 | 0.5 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 |

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture
 Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of ISG-30 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.
7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



(ISG-31)

1. **Variety name:** Not Yet Named Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne L.
Experimental designation(s): ISG-31
Date submitted: December 31, 2011
2. ISG-31 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties: Pennant II, Frontier, Singular, Fiji and ASP6004. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, four cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.
3. ISG-31 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

| 4. Growth and Morphology Traits | Heading Date - Julian Days | | Plant Height (cm) | | Flag Leaf Length (cm) | |
|---------------------------------|----------------------------|-------|-------------------|------|-----------------------|------|
| | Verboort, Oregon | | Verboort, Oregon | | Verboort, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| ISG-31 | 139.3 | 139.3 | 62.9 | 61.1 | 14.0 | 13.2 |
| Elka | 150.1 | 154.1 | 38.6 | 39.9 | 15.9 | 17.0 |
| Fiesta 4 | 132.0 | 134.0 | 40.3 | 42.7 | 12.9 | 12.0 |
| Pinnacle | 127.7 | 129.7 | 45.0 | 43.6 | 12.5 | 13.5 |
| Linn | 112.6 | 125.0 | 83.5 | 67.5 | 21.1 | 17.2 |

| | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|
| SE | 1.5 | 1.4 | 1.9 | 3.0 | 0.8 | 0.9 |
| LSD @ 0.05 | 3.0 | 2.9 | 3.9 | 6.2 | 1.7 | 1.7 |

Data collected from: Single spaced plants Plants in rows / solid seeding
 Variants to be expected and frequency: None have been observed or documented

| 5. Turf Use | Turf Quality (1-9) | | Color (1-9) | | Density (1-9) | | Texture (1-9) | |
|-------------|--------------------|-----|-------------|-----|---------------|-----|---------------|-----|
| | 2010 | | 2010 | | 2010 | | 2010 | |
| | OR | PA | OR | PA | OR | PA | OR | PA |
| ISG-31 | 7.1 | 6.5 | 7.7 | 7.4 | 7.0 | 6.7 | 6.9 | 6.2 |
| Applaud | 6.4 | 5.1 | 6.1 | 5.3 | 5.9 | 5.3 | 5.8 | 4.8 |
| Fiesta 4 | 6.1 | 4.8 | 6.0 | 5.3 | 6.1 | 5.4 | 6.4 | 5.7 |
| Pinnacle | 4.2 | 3.3 | 3.4 | 3.0 | 3.5 | 3.1 | 4.4 | 3.6 |
| Linn | 2.4 | 1.9 | 1.9 | 1.6 | 1.5 | 1.3 | 1.6 | 1.4 |
| SE | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| LSD @ 0.05 | 0.6 | 0.5 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 |

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture
 Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of ISG-31 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.
7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



(ISG-36)

1. **Variety name:** Not Yet Named Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne L.
Experimental designation(s): ISG-36
Date submitted: December 31, 2011
2. ISG-36 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties: Majesty II, ASP6004, Radiant, Pennant II, Divine and Wind Dance II. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, four cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.
3. ISG-36 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

| 4. Growth and Morphology Traits | Heading Date - Julian Days | | Plant Height (cm) | | Flag Leaf Length (cm) | |
|---------------------------------|----------------------------|-------|-------------------|------|-----------------------|------|
| | Verboort, Oregon | | Verboort, Oregon | | Verboort, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| ISG-36 | 137.5 | 136.4 | 64.5 | 65.2 | 15.8 | 16.4 |
| Elka | 150.1 | 154.1 | 38.6 | 39.9 | 15.9 | 17.0 |
| Fiesta 4 | 132.0 | 134.0 | 40.3 | 42.7 | 12.9 | 12.0 |
| Pinnacle | 127.7 | 129.7 | 45.0 | 43.6 | 12.5 | 13.5 |
| Linn | 112.6 | 125.0 | 83.5 | 67.5 | 21.1 | 17.2 |

| | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|
| SE | 1.5 | 1.4 | 1.9 | 3.0 | 0.8 | 0.9 |
| LSD @ 0.05 | 3.0 | 2.9 | 3.9 | 6.2 | 1.7 | 1.7 |

Data collected from: Single spaced plants Plants in rows / solid seeding
 Variants to be expected and frequency: None have been observed or documented

| 5. Turf Use | Turf Quality (1-9) | | Color (1-9) | | Density (1-9) | | Texture (1-9) | |
|-------------|--------------------|-----|-------------|-----|---------------|-----|---------------|-----|
| | 2010 | | 2010 | | 2010 | | 2010 | |
| | OR | PA | OR | PA | OR | PA | OR | PA |
| ISG-36 | 7.3 | 6.7 | 7.8 | 7.4 | 6.9 | 6.8 | 7.0 | 6.0 |
| Applaud | 6.4 | 5.1 | 6.1 | 5.3 | 5.9 | 5.3 | 5.8 | 4.8 |
| Fiesta 4 | 6.1 | 4.8 | 6.0 | 5.3 | 6.1 | 5.4 | 6.4 | 5.7 |
| Pinnacle | 4.2 | 3.3 | 3.4 | 3.0 | 3.5 | 3.1 | 4.4 | 3.6 |
| Linn | 2.4 | 1.9 | 1.9 | 1.6 | 1.5 | 1.3 | 1.6 | 1.4 |
| SE | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| LSD @ 0.05 | 0.6 | 0.5 | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 |

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture
 Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of ISG-36 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.
7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



(OR-21)

1. **Variety name:** Not Yet Named Kind: Tall Fescue
Genus: Festuca Species: arundinacea
Experimental designation (s): OR-21
Date submitted: December 31, 2011
2. OR-21 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties: Dakota, Integrity, Renovate, AST9002 and Falcon II. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, four cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.
3. OR-21 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

| 4. Growth and Morphology Traits | Heading Date - Julian Days | | Plant Height (cm) | | Flag Leaf Length (cm) | |
|---------------------------------|----------------------------|-------|-------------------|------|-----------------------|------|
| | Verboort, Oregon | | Verboort, Oregon | | Verboort, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| OR-21 | 134.4 | 127.4 | 82.3 | 89.4 | 11.7 | 14.1 |
| Bonsai | 139.9 | 135.2 | 65.5 | 70.8 | 6.8 | 10.7 |
| Silverado | 134.1 | 127.3 | 71.6 | 76.1 | 11.1 | 13.2 |
| Rebel II | 130.8 | 126.3 | 94.2 | 98.6 | 17.2 | 17.8 |
| SE | 2.0 | 2.9 | 3.2 | 2.2 | 0.7 | 1.0 |
| LSD @ 0.05 | 4.1 | 5.8 | 6.4 | 4.5 | 1.5 | 2.1 |

Data collected from: Single spaced plants Plants in rows / solid seeding
Variants to be expected and frequency: None have been observed or documented

| 5. Turf Use | Turf Quality (1-9) | | Color (1-9) | | Density (1-9) | | Texture (1-9) | |
|-------------|--------------------|-----|-------------|-----|---------------|-----|---------------|-----|
| | 2010 | | 2010 | | 2010 | | 2010 | |
| | OR | PA | OR | PA | OR | PA | OR | PA |
| OR-21 | 8.2 | 7.5 | 8.0 | 7.8 | 8.0 | 6.9 | 7.3 | 6.4 |
| Falcon 4 | 6.2 | 6.4 | 5.8 | 6.0 | 6.4 | 5.5 | 6.3 | 5.3 |
| Bonsai | 5.9 | 5.1 | 5.9 | 4.6 | 7.3 | 3.5 | 7.2 | 5.0 |
| Silverado | 4.9 | 4.1 | 4.8 | 3.1 | 4.9 | 3.1 | 4.1 | 3.3 |
| Rebel II | 4.1 | 3.9 | 3.5 | 3.3 | 3.5 | 3.2 | 3.2 | 3.8 |
| SE | 0.4 | 0.3 | 0.6 | 0.5 | 0.6 | 0.7 | 0.6 | 0.6 |
| LSD @ 0.05 | 0.8 | 0.6 | 1.1 | 1.0 | 1.1 | 1.3 | 1.2 | 1.1 |

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture

Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of OR-21 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.
7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



(TY-10)

1. **Variety name:** Not Yet Named Kind: Tall Fescue
 Genus: Festuca Species: arundinacea
 Experimental designation (s): TY-10
 Date submitted: December 31, 2011
2. TY-10 was developed by McCarthy Research Farm LLC beginning with the selection of plants from nurseries at Verboort, Oregon. Selected plants were derived from the following varieties: Hudson, AST9003, Darlington and Falcon III. Plants were grown as spaced plants in an isolated nursery and screened for dark green color, fine leaves, abundant tillering and high seed yield potential. Turf performance was evaluated using plots at Verboort, Oregon and Lewisburg Pennsylvania. Subsequently, three cycles of selections for high seed yield, abundant tillering, turf quality and dark green color were conducted to produce the first breeder seed in 2009.
3. TY-10 was tested for turf use in western Oregon and in central Pennsylvania. It has shown adaptation to those climatic conditions and will be made available for sale in climates represented by those localities.

| 4. Growth and Morphology Traits | Heading Date - Julian Days | | Plant Height (cm) | | Flag Leaf Length (cm) | |
|---------------------------------|----------------------------|-------|-------------------|------|-----------------------|------|
| | Verboort, Oregon | | Verboort, Oregon | | Verboort, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| TY-10 | 130.3 | 123.7 | 73.1 | 80.6 | 12.2 | 13.9 |
| Bonsai | 139.9 | 135.2 | 65.5 | 70.8 | 6.8 | 10.7 |
| Silverado | 134.1 | 127.3 | 71.6 | 76.1 | 11.1 | 13.2 |
| Rebel II | 130.8 | 126.3 | 94.2 | 98.6 | 17.2 | 17.8 |
| SE | 2.0 | 2.9 | 3.2 | 2.2 | 0.7 | 1.0 |
| LSD @ 0.05 | 4.1 | 5.8 | 6.4 | 4.5 | 1.5 | 2.1 |

Data collected from: Single spaced plants Plants in rows / solid seeding
 Variants to be expected and frequency: None have been observed or documented

| 5. Turf Use | Turf Quality (1-9) | | Color (1-9) | | Density (1-9) | | Texture (1-9) | |
|-------------|--------------------|-----|-------------|-----|---------------|-----|---------------|-----|
| | 2010 | | 2010 | | 2010 | | 2010 | |
| | OR | PA | OR | PA | OR | PA | OR | PA |
| TY-10 | 7.9 | 7.8 | 8.1 | 7.4 | 7.8 | 7.0 | 7.2 | 6.5 |
| Falcon 4 | 6.2 | 6.4 | 5.8 | 6.0 | 6.4 | 5.5 | 6.3 | 5.3 |
| Bonsai | 5.9 | 5.1 | 5.9 | 4.6 | 7.3 | 3.5 | 7.2 | 5.0 |
| Silverado | 4.9 | 4.1 | 4.8 | 3.1 | 4.9 | 3.1 | 4.1 | 3.3 |
| Rebel II | 4.1 | 3.9 | 3.5 | 3.3 | 3.5 | 3.2 | 3.2 | 3.8 |
| SE | 0.4 | 0.3 | 0.6 | 0.5 | 0.6 | 0.7 | 0.6 | 0.6 |
| LSD @ 0.05 | 0.8 | 0.6 | 1.1 | 1.0 | 1.1 | 1.3 | 1.2 | 1.1 |

Scale: 1 – 9 with 9 ideal quality or darkest green or most dense or finest texture
 Trial Locations: Verboort, Oregon & Lewisburg Pennsylvania

6. A supply of TY-10 breeder seed will be kept in cold storage by McCarthy Research Farm LLC located in Verboort, Oregon. 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, Registered or Foundation Seed. Foundation and Registered class fields will be limited to four harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to six years of seed production. Additional years of seed production may be approved by the breeder.
7. Certified seed is anticipated to be available in the fall of 2012. PVP will be sought with the certification option.



PPG-PR 117 (PPG-PR 117)

1. **Variety name:** PPG-PR 117 Kind: Perennial ryegrass
Genus: Lolium Species: perenne
Experimental designation (s): PPG-PR 117
Date submitted: January 2012

2. The germplasm used to develop PPG-PR 117 perennial ryegrass traces 25% to selections from the variety Flash II, 25% to selections from Linedrive, 25% selections from Top Hat 2 and 25% selections from the variety Notable. Plants were selected for high number of reproductive tillers, uniform, medium maturity, medium dark green color and semi-prostrate growth. Breeder seed was produced in 2009.
3. PPG-PR 117 has been tested for turf use under turf management in western Oregon. The data indicate that PPG-PR 117 is suitable for turf use in this area.

| 4. Growth & Morphology | Heading Date | | Plant Height (cm) | | Flag Leaf Height (cm) | |
|------------------------|---------------|--------------|-------------------|-------------|-----------------------|-------------|
| | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | |
| Traits | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| PPG-PR 117 | 157.6 | 145.4 | 77.7 | 68.2 | 36.9 | 23.5 |
| Linn | 141.6 | 135.7 | 95.4 | 79.3 | 46.5 | 19.8 |
| Manhattan II | 154.2 | 145.2 | 88.2 | 68.4 | 37.7 | 22.7 |
| Elka | 179.6 | 166.3 | 66.0 | 55.8 | 32.3 | 21.8 |
| LSD (.05) | 2.2 | 2.2 | 5.7 | 5.5 | 5.1 | 3.9 |
| CV (%) | 1.1 | 0.9 | 3.8 | 5.2 | 7.1 | 9.2 |

Data collected from: Spaced single plants 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) | | Density (1-9) | | Leaf Spot (1-9) | |
|-------------------|--------------------|------------|---------------|------------|---------------|------------|-----------------|------------|
| | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | |
| a) | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| Churchill | 4.8 | 3.9 | 5.0 | 5.2 | 4.0 | 3.3 | 2.3 | 3.0 |
| Paragon | 5.6 | 5.1 | 4.7 | 5.2 | 5.0 | 4.3 | 3.3 | 4.7 |
| PPG-PR 117 | 5.1 | 5.0 | 5.3 | 5.7 | 5.0 | 5.0 | 4.0 | 5.0 |
| Palmer III | 5.1 | 3.9 | 4.7 | 4.3 | 5.0 | 3.7 | 2.7 | 3.3 |
| LSD (.05) | 0.6 | 0.6 | 1.2 | 0.7 | 1.3 | 1.2 | 1.3 | 1.4 |
| CV (%) | 6.1 | 6.7 | 12.4 | 7.4 | 13.3 | 12.8 | 16.4 | 15.1 |

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

6. Breeder seed of PPG-PR 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 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. Certified fields will be limited to six years of seed production.
7. PPG-PR 117 certified seed will first be available in the spring of 2012. Plant Variety Protection has not been applied for at this time.



PPG-PR 119 (PPG-PR 119)

1. **Variety name:** PPG-PR 119 Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): PPG-PR 119
Date submitted: January 2012

2. The germplasm used to develop PPG-PR 119 perennial ryegrass traces 25% to selections from the variety Attribute, 25% to selections from Platinum, 25% selections from Primary and 25% selections from the variety Wizard. Plants were selected for high number of reproductive tillers, uniform, medium maturity and broad crown diameters. Breeder seed was produced in 2009.
3. PPG-PR 119 has been tested for turf use under turf management in western Oregon. The data indicate that PPG-PR 119 is suitable for turf use in this area.

| 4. Growth & Morphology | Heading Date | | Plant Height (cm) | | Flag Leaf Height (cm) | |
|------------------------|---------------|--------------|-------------------|-------------|-----------------------|-------------|
| | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | |
| Traits | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| PPG-PR 119 | 159.7 | 147.7 | 82.1 | 73.5 | 41.0 | 23.9 |
| Linn | 141.6 | 135.7 | 95.4 | 79.3 | 46.5 | 19.8 |
| Manhattan II | 154.2 | 145.2 | 88.2 | 68.4 | 37.7 | 22.7 |
| Elka | 179.6 | 166.3 | 66.0 | 55.8 | 32.3 | 21.8 |
| LSD (.05) | 2.2 | 2.2 | 5.7 | 5.5 | 5.1 | 3.9 |
| CV (%) | 1.1 | 0.9 | 3.8 | 5.2 | 7.1 | 9.2 |

Data collected from: Spaced single plants 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) | | Density (1-9) | | Leaf Spot (1-9) | |
|-------------------|--------------------|------------|---------------|------------|---------------|------------|-----------------|------------|
| | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | |
| a) | | | | | | | | |
| b) | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| Churchill | 4.8 | 3.9 | 5.0 | 5.2 | 4.0 | 3.3 | 2.3 | 3.0 |
| PPG-PR 119 | 5.8 | 5.2 | 6.0 | 6.0 | 5.3 | 5.7 | 4.0 | 5.7 |
| Paragon | 5.6 | 5.1 | 4.7 | 5.2 | 5.0 | 4.3 | 3.3 | 4.7 |
| Palmer III | 5.1 | 3.9 | 4.7 | 4.3 | 5.0 | 3.7 | 2.7 | 3.3 |
| LSD (.05) | 0.6 | 0.6 | 1.2 | 0.7 | 1.3 | 1.2 | 1.3 | 1.4 |
| CV (%) | 6.1 | 6.7 | 12.4 | 7.4 | 13.3 | 12.8 | 16.4 | 15.1 |

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

6. Breeder seed of PPG-PR 119 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-PR 119 certified seed will first be available in the spring of 2012. Plant Variety Protection has not been applied for at this time.



Solstice II (PPG-TIR 101)

1. **Variety name:** Solstice II Kind: Intermediate ryegrass
Genus: Lolium Species: hybridum
Experimental designation (s): PPG-TIR 101
Date submitted: January 2012

2. The germplasm used to develop Solstice II intermediate ryegrass traces 33.3% to selections from the variety Solstice intermediate ryegrass, 33.3% to selections from the variety Harbour intermediate ryegrass and 33.3% to the variety Axcella 2 annual ryegrass. Plants were selected for relatively short plant height, darker green and finer textured leaves and a high number of reproductive tillers. They were also selected for maturity and tolerance to leaf spot. Breeder seed was produced in 2009.

3. Solstice II has been tested for turf quality under turf management in western Oregon. The data indicate that Solstice II is suitable for turf use in this area.

| 4. Growth & Morphology | Heading Date | | Plant Height (cm) | | Flag Leaf Height (cm) | |
|------------------------|---------------|--------------|-------------------|-------------|-----------------------|-------------|
| | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | |
| Traits | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| Solstice II | 160.3 | 144.6 | 109.1 | 94.7 | 60.8 | 50.4 |
| Solstice | 159.8 | 144.8 | 132.2 | 104.3 | 77.5 | 53.7 |
| Harbor | 162.2 | 142.9 | 120.6 | 117.1 | 74.0 | 59.9 |
| Midway | 162.5 | 144.7 | 146.9 | 124.7 | 92.6 | 71.7 |
| LSD (.05) | 2.0 | NS | 10.2 | 8.1 | 10.2 | 8.6 |
| CV (%) | 0.6 | 1.2 | 4.1 | 3.7 | 6.9 | 7.3 |

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

Variants to be expected and frequency: | A small percentage (<1%) 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) | | Growth Rate (1-9) | | Density (1-9) | |
|--------------------|--------------------|-------------|---------------|-------------|-------------------|-------------|---------------|-------------|
| | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | |
| | a) | b) | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| Solstice II | 5.8 | 5.50 | 5.8 | 5.25 | 4.0 | 4.25 | 6.0 | 4.50 |
| Harbour | 5.7 | 2.35 | 5.0 | 3.00 | 4.5 | 2.25 | 3.3 | 1.00 |
| Solstice | 2.6 | 3.00 | 2.0 | 2.75 | 2.5 | 2.25 | 4.3 | 2.00 |
| Midway | 1.8 | 2.70 | 2.0 | 3.25 | 1.5 | 2.75 | 3.0 | 1.00 |
| LSD (.05) | 1.0 | 0.6 | 1.1 | 1.0 | 1.7 | 1.5 | 1.5 | 1.4 |
| CV (%) | 10.1 | 7.4 | 10.8 | 9.2 | 16.5 | 13.5 | 21.7 | 15.1 |

•Scale used to report traits (if appropriate): scale 1-9, 9 = high quality, dark green, high growth rate, and fine texture

6. Breeder seed of Solstice II 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 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. Certified fields will be limited to six years of seed production.

7. Solstice II certified seed will first be available in the spring of 2012. Plant Variety Protection has not been applied for at this time.



Starlite II (PPG-PT 101)

1. **Variety name:** Starlite II Kind: Roughstalk bluegrass
Genus: Poa **Species:** trivialis
Experimental designation (s): PPG-PT 101
Date submitted: January 2012

2. The germplasm used to develop Starlite II *Poa trivialis* traces 30% to selections from the variety Starlite, 30% to selections from the variety Sabre 3, 30% selections from the variety Sunup and 10% selections from the variety Cypress. Plants were selected for high number of reproductive tillers, semi-erect growth habits, dark green color, and fine leaf texture. Breeder seed was produced in 2009.
3. Starlite II has been tested for turf quality under turf management in western Oregon. The data indicate that Starlite II is suitable for turf use in this area.

| 4. Growth & Morphology | Heading Date | | Plant Height (cm) | | Flag Leaf Height (cm) | |
|------------------------|---------------|--------------|-------------------|-------------|-----------------------|-------------|
| | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| Laser | 138.3 | 135.1 | 85.7 | 71.7 | 36.1 | 34.7 |
| Starlite | 144.9 | 138.9 | 84.9 | 73.9 | 41.2 | 37.4 |
| Starlite II | 142.1 | 136.5 | 82.5 | 74.6 | 35.3 | 38.4 |
| Sabre 3 | 140.1 | 136.2 | 80.0 | 77.2 | 35.0 | 37.1 |
| LSD (.05) | 2.1 | 2.3 | 3.4 | 3.0 | 2.8 | 3.2 |
| CV (%) | 0.7 | 1.1 | 2.1 | 2.0 | 3.7 | 4.4 |

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

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

| 5. Turf Use | Turf Quality | | Color | | Density | | Texture | |
|--------------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|
| | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | | Jefferson, OR | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| Starlite II | 7.3 | 6.9 | 7.0 | 8.0 | 7.7 | 6.7 | 7.3 | 7.7 |
| Starlite | 6.4 | 6.0 | 6.3 | 6.7 | 6.3 | 5.7 | 7.0 | 5.7 |
| Laser | 6.3 | 6.6 | 6.7 | 6.0 | 6.7 | 6.7 | 6.3 | 7.0 |
| Sabre 3 | 5.7 | 6.5 | 5.3 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| LSD (.05) | 0.8 | 0.3 | 1.1 | 0.6 | 1.1 | 1.2 | 0.7 | 0.9 |
| CV(%) | 7.2 | 0.6 | 9.2 | 1.0 | 8.7 | 2.2 | 5.5 | 1.6 |

●Scale used to report traits (if appropriate): scale 1-9, 9 = high quality, dark green, dense, and fine texture

6. Breeder seed of Starlite II 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. Starlite II certified seed will first be available in the spring of 2012. Plant Variety Protection has not been applied for at this time.



(APR2190)

1. **Variety name:** _____ Kind: Perennial ryegrass
Genus: Lolium **Species:** perenne
Experimental designation (s): APR2190
Date submitted: January 5, 2012

2. The parental germplasm of APR2190 Perennial Ryegrass traces its origin to plants selected from the released cultivar ASP410 and Brightstar.

A greenhouse screening technique was developed using flexible root tubes to evaluate root extension and root length densities (Bonos et al., 2004). The selection area consisted of three replications; each replication contained 168 plants, for a total of 1008 plants. Seventeen plants were selected and moved to an isolated crossing block and harvested in bulk in 1997.

The bulk selection was then rescreened in the flexible root tubes. Eight plants were selected and moved to an isolated crossing block and harvested in bulk in 2000.

A turf trial was established at the NexGen research facility, Albany, OR in the fall of 2002. The trial consisted of four entries replicated three times. The experimental area was covered with a rain-out structure consisting of a 6 mil ply clear plastic top with open sides to maximize air-flow, while preventing precipitation from reaching the turf plots. The trial was then allowed to dry down during the course of the summer of 2003. Green turf coverage was evaluated twice per week as the trial was subjected to drought stress. The trial was maintained to promote turf health and the dry-down was repeated the summer of 2004 and 2005. After drought screening was complete survivors were removed. Fifty surviving plants were top crossed by 50 surviving plants of Brightstar. The plants were planted in serpentine order, where the Brightstar survivors were the odd numbered plants. The block was planted in isolation. The plants interpollinated and 39 plants were harvested by progeny. The twelve highest yielding progeny were bulked and designated APR2190.

In the fall of 2007, a 2,000 plant increase block of APR2190 was established. The seed was harvested in bulk in 2008 and designated APR2190 breeder seed. This seed was used to establish a morphological nursery in the fall of 2009 at the NexGen research facility near Albany, Oregon.

3. APR2190 has been tested for turf quality under lawn conditions near Salem, NJ. The data indicates that APR2190 is suitable for turf used in this area.

| 4. Growth & Morphology Traits | Heading Date (days after January 1) Albany, OR | | Mature Plant Height (cm) Albany, OR | | Spike Length (mm) Albany, OR | |
|-------------------------------|--|---------------|---|--------------|------------------------------------|---------------|
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| | APR2190 | 138.73 | 144.90 | 69.20 | 62.10 | 439.43 |
| Brightstar | 140.52 | 144.65 | 66.03 | 62.07 | 429.10 | 369.53 |
| Hawkeye | 141.37 | 143.55 | 64.50 | 59.47 | 387.03 | 357.77 |
| Manhattan II | 133.13 | 139.55 | 70.57 | 66.60 | 461.77 | 421.03 |
| CV | 4.45 | 3.43 | 3.09 | 4.09 | 3.48 | 2.80 |
| LSD (0.05) | 1.87 | 1.48 | 3.19 | 3.87 | 22.33 | 16.09 |

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 | |
|--------------|-----------------------------|-------------|-----------------------|-------------|---------------------|-------------|----------------------------|-------------|
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| | APR2190 | 4.90 | 4.75 | 5.25 | 6.35 | 6.00 | 7.60 | 5.70 |
| Integra II | 6.15 | 6.25 | 5.00 | 5.95 | 6.25 | 7.65 | 6.40 | 7.00 |
| Phenom | 6.00 | 5.75 | 4.50 | 6.00 | 5.95 | 7.80 | 5.90 | 7.00 |
| Manhattan II | 4.25 | 3.85 | 5.50 | 6.15 | 5.75 | 7.75 | 5.40 | 6.15 |
| CV | 5.65 | 6.70 | 10.14 | 7.30 | 4.81 | 4.61 | 8.34 | 3.90 |
| LSD (0.05) | 0.54 | 0.62 | 0.83 | 0.73 | 0.48 | 0.58 | 0.83 | 0.43 |

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

* Genetic color, turf density, cover and turf quality data collected using digital image analysis (Karcher, D.E. et. al. 2005, Objective Evaluation of Turf Quality. 2005 Annual Meeting Abstracts [ASA/CSSA/SSA]).

6. APR2190 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 APR2190 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2012. At this time Plant Variety Protection (PVP) will not be sought.



(ATF1254)

1. **Variety name:** _____ Kind: Tall Fescue
Genus: Festuca **Species:** arundinacea
Experimental designation (s): ATF1254
Date submitted: January 5, 2012

2. The parental germplasm of ATF1254 tall fescue traces its origin to plants selected from the released cultivars Wyatt and Rebel Exeda. A greenhouse screening technique was developed using flexible root tubes to evaluate root extension and root length densities (Bonos et al., 2004). The selection area consisted of three replications; each replication contained 168 plants of Wyatt, for a total of 504 plants. Seventeen plants were selected and moved to an isolated crossing block and harvested in bulk in 1997. The bulk selection was then rescreened in the flexible root tubes. Nine plants were selected moved to an isolated crossing block and harvested in bulk in 1999. This seed was planted in a turf trial at the NexGen research facility, Albany, OR in the fall of 2002. The experimental area was covered with a rain-out structure consisting of a 6 mil ply clear plastic top with open sides to maximize air-flow, while preventing precipitation from reaching the turf plots. Green turf coverage was evaluated twice per week as the trial was subjected to drought stress. The trial was maintained to promote turf health and the dry-down was repeated the summer of 2004 and 2005. After drought screening was complete survivors were removed. Fifty plants of the Wyatt selection were top crossed by 50 surviving plants of Rebel Exeda. The plants were planted in serpentine order, where the Rebel Exeda survivors were the odd numbered plants. The block was planted in isolation. The plants interpollinated and 39 Wyatt plants were harvested by progeny. The twelve highest yielding progeny were bulked and designated ATF1254. In the fall of 2007, a 2,000 plant increase block of ATF1254 was established. The seed was harvested in bulk in 2008 and designated ATF1254 breeder seed. This seed was used to establish a morphological nursery in the fall of 2009 at the NexGen research facility near Albany, Oregon.

3. ATF1254 has been tested for turf quality under lawn conditions near Salem, NJ. The data indicates that ATF1254 is suitable for turf used in this area.

| 4. Growth & Morphology Traits | Heading Date (days after March 1) Albany, OR | | Mature Plant Height (cm) Albany, OR | | Flag Leaf Height (cm) Albany, OR | |
|-------------------------------|--|--------------|---|---------------|--|--------------|
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| | ATF1254 | 71.00 | 55.00 | 114.80 | 115.33 | 53.47 |
| Signia | 71.67 | 61.00 | 107.10 | 111.03 | 49.03 | 58.97 |
| Tulsa II | 71.00 | 60.67 | 115.90 | 122.70 | 56.17 | 70.07 |
| Rebel II | 66.33 | 59.67 | 127.93 | 131.70 | 66.03 | 79.53 |
| KY-31 | 63.33 | 58.00 | 142.07 | 146.97 | 82.57 | 95.63 |
| CV | 2.09 | 3.69 | 3.02 | 3.66 | 5.35 | 5.20 |
| LSD (0.05) | 2.08 | 3.16 | 5.10 | 6.38 | 4.48 | 5.24 |

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 | |
|----------------------------|-----------------------------|-------------|-----------------------|-------------|---------------------|-------------|----------------------------|-------------|
| | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 |
| | ATF1254 | 5.60 | 5.65 | 5.65 | 7.00 | 6.60 | 7.70 | 6.15 |
| 2 nd Millennium | 6.35 | 5.70 | 5.40 | 6.60 | 6.90 | 7.65 | 6.55 | 6.50 |
| Penn 1901 | 5.95 | 5.70 | 5.30 | 6.15 | 6.55 | 6.15 | 6.20 | 6.25 |
| Rebel Exeda | 6.70 | 6.00 | 5.80 | 6.10 | 6.65 | 7.90 | 6.85 | 6.50 |
| KY-31 | 3.75 | 3.65 | 5.00 | 5.25 | 5.20 | 6.10 | 4.40 | 4.40 |
| CV | 4.53 | 3.69 | 7.02 | 5.37 | 4.30 | 2.76 | 3.74 | 3.57 |
| LSD (0.05) | 0.49 | 0.38 | 0.60 | 0.54 | 0.47 | 0.34 | 0.40 | 0.38 |

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

* Genetic color, turf density, cover and turf quality data collected using digital image analysis (Karcher, D.E. et al. 2005, Objective Evaluation of Turf Quality. 2005 Annual Meeting Abstracts [ASA/CSSA/SSA]).

6. ATF1254 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 ATF1254 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2012. At this time Plant Variety Protection (PVP) will not be sought.



(ATF1255)

1. **Variety name:** _____ Kind: Tall Fescue
Genus: Festuca **Species:** arundinacea
Experimental designation (s): ATF1255
Date submitted: January 5, 2012

2. The parental germplasm used to develop ATF1255 is part of the germplasm pool present at the NJAES and has undergone numerous cycles of recurrent selection with plants selected from old turfs of the mid-Atlantic region of the United States starting in 1962. Plants selected from old turfs plus a few plants selected from a population related to ‘Penn 1901’ and ‘Rebel’ tall fescue were evaluated in spaced-plant nurseries and frequently mowed clonal evaluation tests. Intercrosses of the best were subjected to many cycles of phenotypic and genotypic recurrent selection during the three decades prior to release to NexGen Turf Research, LLC.

The parental population was subjected to 3 cycles of selection through plant selection fields. The plants were rated for recovery, genetic color and crown density. The selected population was established in a turf trial in the fall of 2002. 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 were removed and planted in an isolated crossing block. The block interpollinated and 43 plants were harvested by progeny. The 25 highest yielding progeny were bulked and designated ATF1255. In the fall of 2008, a 2,000 plant increase block of ATF1255 was established. The seed was harvested in bulk in 2009 and designated ATF1255 breeder seed. This seed was used to establish a morphological nursery in the fall of 2009 at the NexGen research facility near Albany, Oregon.

3. ATF1255 has been tested for turf quality under lawn conditions near Salem, NJ. The data indicates that ATF1255 is suitable for turf used in this area.

| 4. Growth & Morphology Traits | Heading Date (days after March 1) Albany, OR | | Mature Plant Height (cm) Albany, OR | | Flag Leaf Height (cm) Albany, OR | |
|-------------------------------|--|--------------|---|---------------|--|--------------|
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| | ATF1255 | 72.67 | 59.67 | 105.93 | 115.13 | 47.83 |
| Signia | 71.67 | 61.00 | 107.10 | 111.03 | 49.03 | 58.97 |
| Tulsa II | 71.00 | 60.67 | 115.90 | 122.70 | 56.17 | 70.07 |
| Rebel II | 66.33 | 59.67 | 127.93 | 131.70 | 66.03 | 79.53 |
| KY-31 | 63.33 | 58.00 | 142.07 | 146.97 | 82.57 | 95.63 |
| CV | 2.09 | 3.69 | 3.02 | 3.66 | 5.35 | 5.20 |
| LSD (0.05) | 2.08 | 3.16 | 5.10 | 6.38 | 4.48 | 5.24 |

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 | |
|-------------|-----------------------------|------|-----------------------|------|---------------------|------|----------------------------|------|
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| | ATF1255 | 6.97 | 7.07 | 6.43 | 7.00 | 7.90 | 7.63 | 6.63 |
| Falcon IV | 6.63 | 6.93 | 6.77 | 6.90 | 7.60 | 7.93 | 6.47 | 6.83 |
| Penn 1901 | 6.30 | 6.47 | 6.37 | 6.97 | 7.63 | 7.70 | 6.10 | 6.57 |
| Rebel II | 4.57 | 5.37 | 7.07 | 7.03 | 7.53 | 8.00 | 5.67 | 6.17 |
| Signia | 7.50 | 7.20 | 6.30 | 7.07 | 7.13 | 7.57 | 6.37 | 6.73 |
| LSD (0.05) | 0.23 | 0.30 | 0.27 | 0.28 | 0.35 | 0.36 | 0.29 | 0.35 |
| CV | 2.54 | 3.21 | 3.11 | 2.97 | 3.50 | 3.40 | 3.45 | 3.83 |

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

* Genetic color, turf density, cover and turf quality data collected using digital image analysis (Karcher, D.E. et. al. 2005, Objective Evaluation of Turf Quality. 2005 Annual Meeting Abstracts [ASA/CSSA/SSA]).

6. ATF1255 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 ATF1255 is accepted by official seed certifying agencies, Certified seed will be first offered for sale fall of 2012. At this time Plant Variety Protection (PVP) will not be sought.



(PPERC2)

1. **Variety name:** _____ Kind: Annual ryegrass
Genus: Lolium **Species:** multiflorum
Experimental designation (s): PPERC2
Date submitted: January 5, 2012

2. The parental germplasm of PPERC2 annual ryegrass traces its origin to plants selected from the released cultivar Passerel Plus. PPERC2 has demonstrated significantly root mass compared to the parental material Passerel Plus.

The selection area consisted of 6 replications; each replication contained 168 plants of Passerel Plus, for a total of 1008 plants. One hundred and thirty two plants were selected and moved to an isolated crossing block and harvested in bulk in 2007.

The bulk selection was then rescreened in the flexible root tubes. Ninety nine plants were selected moved to an isolated crossing block and harvested in bulk in 2008. The seed was harvested in bulk in 2008 and designated PPERC2 breeder seed. This seed was used to establish a morphological nursery in the fall of 2010 at the NexGen research facility near Albany, Oregon and Dever Conner, OR.

3. PPERC2 has been trialed in Alabama, Florida, Georgia, Louisiana, Mississippi and Oklahoma. The data indicates that PPERC2 is suitable for these regions. PPERC2 will be used as a forage in these areas.

| 4. Growth & Morphology Traits | Heading Date (days after January 1) | | Mature Plant Height (cm) | | Spike Length (cm) | |
|-------------------------------|--|------------------|-----------------------------|------------------|----------------------|------------------|
| | Albany, OR | Dever Conner, OR | Albany, OR | Dever Conner, OR | Albany, OR | Dever Conner, OR |
| | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 |
| PPERC2 | 144.67 | 145.00 | 108.90 | 103.00 | 639.70 | 602.53 |
| Passerel Plus | 142.67 | 141.67 | 119.30 | 113.77 | 689.83 | 662.10 |
| Marshall | 143.67 | 143.33 | 115.40 | 105.83 | 698.70 | 633.60 |
| Gulf | 135.00 | 134.67 | 119.00 | 109.60 | 700.63 | 646.97 |
| CV | 0.74 | 1.26 | 2.91 | 3.05 | 2.71 | 3.67 |
| LSD (0.05) | 1.59 | 2.81 | 5.34 | 5.23 | 29.31 | 37.08 |

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

Variants to be expected and frequency: Less than 1% of the population will exhibit broader leaves with a lighter green color.

5. Forage Use Dry Matter Yield

| Experimental Code | Louisiana LSU Ag Center Franklinton 2011 Data | Louisiana LSU Ag Center Franklinton 2010 Data | Oklahoma Nobel Found. Ardmore 2011 Data | Oklahoma Nobel Found. Ardmore 2010 Data |
|-------------------|---|---|--|--|
| PPERC2 | 9766 | 10935 | 4284 | 5947 |
| Passerel Plus | 9898 | 11057 | 3795 | 6383 |
| Marshall | 10637 | 11656 | 3408 | 5803 |
| Gulf | 11129 | 11129 | 2395 | 4553 |
| CV | 10 | 10 | 10.18 | 7.86 |
| LSD (0.10) | NS | NS | 573.85 | 717.95 |
| Mean | 10604 | 11563 | 3430 | 5555 |
| Low | 9898 | 11057 | 2359 | 3804 |
| High | 11991 | 12264 | 4284 | 6605 |
| # entries | 22 | 22 | 24 | 24 |

6. PPERC2 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, Registered and Certified class will be limited to one year

7. If PPERC2 is accepted by official seed certifying agencies, Certified seed will be first offered for sale spring of 2012. At this time Plant Variety Protection (PVP) will not be sought.



Ko-Green (RDA-KG01)

1. **Variety name:** Ko-Green Kind: Annual ryegrass
Genus: Lolium Species: multiflorum
Experimental designation (s): RDA-KG01
Date submitted: December 12, 2011

2. Ko-Green was bred from selected plants from two populations of Florida 80, two populations of Surrey, and an ecotype collected near Yonchun, Korea. Subjected to seven days of freezing treatments down to -15°C, the survivors were further selected for early maturity, left to pollinate, and the seed from this final crossing used to multiply breeder generation, which was first produced in 2002.

3. Ko-Green is intended for forage production in central and southern South Korea. It has been tested in Suwon and Yonchun and appears to be adapted for forage production in those regions.

| 4. Growth & Morphology | 50% heading, Julian 2003 | | Plant height, cm 2003 | | Flag leaf length, cm 2003 | |
|------------------------|--------------------------|---------|-----------------------|---------|---------------------------|---------|
| | Suwon | Yonchun | Suwon | Yonchun | Suwon | Yonchun |
| Traits | | | | | | |
| Ko-Green | 120 | 128 | 80.5 | 87.9 | 20.2 | 20.7 |
| Florida 80 | 119 | 128 | 80.7 | 90.1 | 18.5 | 19.0 |
| Hwasan 101 | 140 | 142.5 | 100.2 | 101.9 | 29.4 | 34.3 |
| Ko-Winmaster | 128 | 134 | 88.3 | 101.3 | 22.5 | 20.8 |
| LSD (.05) | 7.9 | 4.5 | 3.50 | 4.26 | 2.30 | 1.97 |
| CV% | 2.2 | 1.2 | 5.63 | 6.33 | 14.40 | 12.13 |

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

Variants to be expected and frequency: Less than 1/2 % taller, with heavier stems and longer seed heads.

| 5. Primary Use? | Forage yields, Dry Matter, kg/hectare | | | | | | CT/Winter survival, 1= 100% survival | | | | | |
|-----------------|---------------------------------------|-------|-------|---------|-------|-------|--------------------------------------|------|------|---------|------|------|
| | Suwon | | | Yonchun | | | Suwon | | | Yonchun | | |
| Forage | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 |
| Ko-Green | 6,890 | 9,618 | 9,590 | 13122 | 12622 | 3,319 | 3 | 1 | 3 | 3 | 3 | 5 |
| Florida 80 | 6,652 | 10131 | 4,392 | 11950 | 11676 | 2,263 | 3 | 1 | 3 | 5 | 3 | 7 |
| Hwasan 101 | 8,775 | 8,527 | 4,761 | 12718 | 9,313 | 8,169 | 3 | 1 | 3 | 3 | 5 | 3 |
| Ko-Winmaster | 7,477 | 9,806 | 5,250 | 13175 | 10735 | 6,920 | 3 | 1 | 3 | 3 | 3 | 3 |
| LSD (.05) | 1,018 | 1,245 | 641 | 2,854 | 1,474 | 1,291 | .1 | .1 | .1 | .2 | .2 | .4 |
| CV% | 12.5 | 7.5 | 7.7 | 12.0 | 2.1 | 13.2 | .3 | .1 | .3 | .3 | .3 | .2 |

Winter Survival: 1=100%, 3=90-99%, 5=60-89%, 7=20-59%, 9= 0-19%.

6. Oregro Seeds, Inc. of Albany, OR and the NIAS of Korea will maintain adequate supplies of breeder generation seed in long term controlled storage. Generational scheme includes Breeder, Foundation, Registered, and Certified. Stand life will be one year. Exceptions to this will be with permission of the maintainers.

7. First availability of certified seed will be in 2012. PVP was applied for and granted by the Korea Seed & Variety Service in 2008.



(08-16 Lp)

1. **Variety name:** Kind: Perennial ryegrass
Genus: Lolium Species: perenne
Experimental designation (s): 08-16 Lp
Date submitted: December 22, 2011

2. '08-16 Lp' was selected from the maternal progenies of 17 clones. The parents of '08-16 Lp' were selected and allowed to interpollinate in May 2008, at the research facility of Pickseed USA, Inc. (PS), Albany, OR. The parents were selected for their fine textured, disease free, and dark green foliage. The parents also exhibited erect growth habit with medium late reproductive heading. After seed maturation in July 2008, seed was harvested via separate maternal parent. A spaced planted nursery of 100 half-sib progeny from each parent was established at PS in October 2008. In April/May 2009, individuals in the above nursery were evaluated. A total of 15% of the progeny were rogued from the original 1700 established in the nursery. Approximately equal rouging occurred within and between half-sib families. Seed of all the remaining progeny was bulk harvested in July 2009. The seed was designated as breeder seed for the variety.

3. '08-16 Lp' has been tested for turf quality in overseeding applications in Raleigh and Rolesville, NC; Overton, TX; and Tucson, AZ. It 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 | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| 08-16 Lp | May 30 | May 29 | 56.6 | 56.1 | 10.0 | 11.3 |
| Manhattan | June 7 | June 5 | 74.5 | 73.3 | 17.7 | 15.6 |
| Fiesta 4 | May 27 | May 29 | 54.4 | 56.4 | 10.4 | 11.2 |
| Pinnacle | May 21 | May 24 | 74.1 | 72.3 | 12.8 | 17.1 |
| Linn | May 7 | May 10 | 86.3 | 83.3 | 17.3 | 18.2 |
| LSD (.05) | 2 days | 2 days | 8.8 | 5.2 | 2.6 | 1.9 |
| S.E. | 1 | 1 | 4.3 | 2.6 | 1.3 | 0.9 |

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) | | %Cover, fall/winter | | %Transition to Warm Season | | Foliage Color (1-9) | |
|-------------|--------------------|-----|---------------------|----|----------------------------|----|---------------------|-----|
| | 2011 | | 2010-11 | | 2011 | | 2011 | |
| | A | B | A | B | A | B | C | D |
| 08-16 Lp | 8.2 | 6.7 | 97 | 50 | 88 | 42 | 7.3 | 6.5 |
| Double Time | 5.5 | 6.0 | 80 | 73 | 91 | 35 | — | — |
| Gulf | 3.5 | 3.0 | 53 | 87 | 91 | 90 | 2.0 | — |
| Panterra | 4.0 | 5.0 | 78 | 88 | 93 | 83 | 2.7 | — |
| TXR | 4.7 | 6.3 | 91 | 95 | 89 | 87 | — | — |
| Seville 3 | — | — | — | — | — | — | 6.7 | 5.5 |
| Fiesta 4 | — | — | — | — | — | — | 6.0 | 6.0 |
| Accent | — | — | — | — | — | — | 6.7 | 5.0 |
| LSD (.05) | 1.1 | 1.2 | 10 | 11 | 6 | 20 | 1.3 | 1.1 |
| CV% | 12 | 12 | 8 | 8 | 5 | 16 | 13 | 10 |

● Scale used to report traits (if appropriate): 1-9 with 9=ideal quality, darkest green color. Percent cover = the mean cover of an overseeded grass. % transition to WS = percent transition to warm season grass in spring.

A: Raleigh, NC B: Overton, TX
 C: Rolesville, NC D: Albany, OR

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

6. Breeder seed of '08-16 Lp' was first produced in 2009 by Pickseed USA, Inc. (PS) in 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 the summer of 2012. A decision for filing a P.V.P. application has not been made at this time.



Lucky Star (PST-101-92)

1. **Variety name:** Lucky Star Kind: Kentucky Bluegrass
Genus: Poa Species: pratensis
Experimental designation (s): PST-101-92
Date submitted: 1/11/2011

2. Lucky Star originated as a single highly apomictic selection from PST-107-40, a derivative of Unique, open pollinated in the green house in the spring of 2000 with pollen from Brilliant cv., Blacksburg cv. or PST-107-85 Kentucky bluegrasses. Seedlings from this cross were planted in the field and in the summer of 2001 a morphologically distinct hybrid with good seed yield potential, floret fertility, and resistance to stripe rust, was selected from this plant and labeled PST-101-92. In the summer of 2002 seedlings from 101-92 were evaluated in a space plant nursery and determined apomictic. After evaluation for seed yield potential and turf quality an increase of breeder seed was harvested in 2004 and 2005. PST-101-92 is a facultative apomict with approximately 95% of its progeny appearing genetically identical to the maternal plant.

3. Lucky Star has been tested for turf performance in AR, AZ, CA, NJ, NM and TN.

| 4. Growth & Morphology | Plant Height Canby, OR. | | Flag Leaf Length Canby, OR. | | Panicle Length Canby, OR. | |
|------------------------|----------------------------|------|--------------------------------|------|------------------------------|------|
| | 2007 | 2008 | 2007 | 2008 | 2007 | 2008 |
| Lucky Star | 44.9 | 48.3 | 4.8 | 2.6 | 8.4 | 6.9 |
| Unique | 45.5 | 36.7 | 4.8 | 5 | 8.1 | 7.6 |
| Midnight | 38.4 | 38.6 | 6.1 | 3.6 | 7.4 | 7.1 |
| Moonlight | 41.9 | 41.9 | 3.3 | 3.4 | 7.5 | 6.6 |
| LSD (.05) | 4.0 | 2.3 | 0.5 | 0.4 | 0.5 | 0.4 |
| CV (%) | 28.2 | 17.0 | 34.7 | 34.7 | 18.2 | 18.3 |

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

Variants to be expected and frequency: Any aberrant plants observed in a Lucky Star Kentucky bluegrass field have been similar in appearance but shorter plants with reduced seed head with an occurrence of 5% or less.

| 5. Turf Use | Turf Quality 1-9 9=best | | Stem Rust 1-9 9=No Disease | | Dollar Spots | | Genetic Color 1-9 9=Darkest | |
|-------------|-------------------------|------------------|----------------------------|------------------|--|--------------------------------------|-----------------------------|------------------|
| | 2007 | | 2007 | | 2007 | | 2007 | |
| | Camarillo, CA | Fayetteville, AR | Camarillo, CA | Las Cruces, N.M. | Knoxville, TN % infection 0=No disease | Fayetteville, AR 1-9 9=No Disease | Knoxville, TN | Fayetteville, AR |
| Lucky Star | 6.00 | 5.57 | 7.33 | 9.00 | 26.67 | 1.33 | 6.80 | 6.27 |
| America | 5.67 | 4.80 | 8.00 | 8.70 | 6.67 | 2.00 | 6.50 | 6.60 |
| Midnight | 5.80 | 4.90 | 6.00 | 7.00 | 11.67 | 1.33 | 7.33 | 7.53 |
| Julia | 4.9 | 6.33 | 6.33 | 6.70 | 21.67 | 1.33 | 6.60 | 6.77 |
| LSD (.05) | 0.62 | 0.96 | 1.25 | 1.40 | 11.65 | 2.00 | 0.23 | 0.75 |
| CV (%) | 8.39 | 13.75 | 14.11 | 15.60 | 55.42 | 77.89 | 2.50 | 8.09 |

6. Pure-Seed Testing, Inc. maintains Breeder seed of Lucky Star in Oregon and will regenerate as necessary. Seed production of Lucky Star is limited to three generations of increase from Breeder seed: one each of Foundation, Registered, and Certified. Age of stand is limited to six years for Foundation and Registered and seven years for Certified. Additional years of seed production may be approved by the breeder.

7. Experimental certified seed has already been produced. No PVP will be sought. Variety will be entered into the Certification program.



North Shore SLT (PST-R62530)

1. **Variety name:** North Shore SLT Kind: Bermudagrass
Genus: Cynodon Species: dactylon
Experimental designation: PST-R62530
Date submitted: 11 January 2012

2. The parent material of North Shore SLT originated as U.S. collections. A population selected for good turf performance and seed yield potential in North Carolina was subjected to three cycles of phenotypic recurrent selection for salt tolerance. Breeder seed was first produced in North Carolina in 2006.

3. North Shore SLT's primary use is turf. North Shore SLT has been trialed in North Carolina, Tennessee, and Georgia, and is adapted to regions with similar climates.

| 4. Growth & Morphology Traits | Plant Height (cm) Rolesville, NC | | Raceme Length (cm) Rolesville, NC | | Heading Date-Julian Days Rolesville, NC | |
|-------------------------------|-------------------------------------|------|--------------------------------------|------|--|-------|
| | 2008 | 2007 | 2008 | 2007 | 2007 | 2006 |
| North Shore SLT | 21.1 | 19.9 | 3.1 | 3.6 | 177.9 | 147.0 |
| Transcontinental | 24.1 | 24.1 | 3.3 | 4.0 | 178.6 | 148.0 |
| Guymon | 24.4 | 24.1 | 4.1 | 4.4 | 181.8 | 158.9 |
| LSD (.05) | 1.7 | 2.7 | 0.3 | 0.3 | 2.5 | 3.0 |
| CV (%) | 20.8 | 34.2 | 20.5 | 23.3 | 4.0 | 6.0 |

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

Variants to be expected and frequency: No variants have been observed.

| 5. Turf Use | Turf Quality (1-9) | | Spring Green-up (1-9) | | Salt Damage (1-9) | | Fall Color Retention (% Green Cover-Nov) | |
|------------------|--------------------|-----|-----------------------|------|-------------------|------|--|------|
| | 2010 | | 2009 | | Rolesville, NC | | Knoxville, TN | |
| | Rolesville, NC | A | Rolesville, NC | B | 2009 | 2008 | 2011 | 2010 |
| North Shore SLT | 6.9 | 7.0 | 8.0 | 5.3 | 7.0 | 6.3 | 51.8 | 45.7 |
| Transcontinental | 6.0 | 6.2 | 6.0 | 2.7 | 4.5 | 4.8 | 44.3 | 35.6 |
| Savannah II | 7.2 | 6.2 | 7.3 | 5.0 | 4.8 | 6.0 | 39.4 | 35.3 |
| Riviera | 7.7 | 6.7 | 8.0 | 6.3 | 8.0 | 4.8 | 40.2 | 32.4 |
| LSD (.05) | 0.6 | 0.5 | 1.5 | 1.4 | 1.7 | 1.7 | 6.5 | 7.6 |
| CV (%) | 6.0 | 4.2 | 16.0 | 20.6 | 24.4 | 24.2 | 8.7 | 11.9 |

•Scale used to report traits: 1-9: 9 = ideal; 100% green; no damage. % green cover evaluated by digital image analysis

•Insert additional information for use by inspectors (if any): **None**

**If necessary, identify locations in line b) by the following key A: Knoxville, TN B: Griffin, GA

6. Breeder seed of North Shore SLT was first produced in 2006. Pure-Seed Testing, Inc. maintains Breeder seed in North Carolina and will regenerate as necessary. Seed production of North Shore SLT is limited to three generations of increase from Breeder seed: one each of Foundation, Registered, and Certified. Age of stand is limited to six years for Foundation and Registered and to seven years for Certified. Additional years of seed production may be approved by the breeder.

7. Certified seed is anticipated to be available in 2012. PVP will not be sought.



(PST-5BGR)

1. **Variety name:** _____ Kind: Tall fescue
Genus: Festuca **Species:** arundinacea
Experimental designation: PST-5BGR
Date submitted: 11 January 2012

2. PST-5BGR was developed for turf use. The parents of PST-5BGR were selected from single plant progeny turf plots planted near Rolesville, NC during 2002 and 2003. Plants were selected from plots with excellent summer turf performance under high disease pressure from brown patch and gray leaf spot. Forty-eight plants interpollinated in 2005. Seed harvested from 35 plants was used to establish a 1650-plant nursery. Breeder seed was harvested from 227 plants with medium maturity, medium height, upright growth habit, bright green color, stem rust resistance and high floret fertility during 2006.

3. PST-5BGR is adapted for turf use. Trial data from North Carolina, Arkansas, California, and New Jersey are presented. PST-5BGR is adapted to regions with similar climates.

| 4. Growth & Morphology Traits | Heading Date-Julian | | Plant Height (cm) | | Panicle Length (cm) | |
|-------------------------------|---------------------|-------|-------------------|-------|---------------------|------|
| | Hubbard, OR | | Hubbard, OR | | Hubbard, OR | |
| | 2009 | 2007 | 2009 | 2007 | 2009 | 2007 |
| PST-5BGR | 124.7 | 119.7 | 118.1 | 108.4 | 20.7 | 18.0 |
| Kentucky 31 | 119.3 | 113.7 | 148.5 | 144.5 | 26.7 | 28.1 |
| Matador GT | 127.7 | 124.3 | 121.7 | 110.9 | 21.2 | 19.9 |
| Endeavor | 125.0 | 117.0 | 135.1 | 119.4 | 25.3 | 22.9 |
| LSD (0.05) | 2.0 | 2.2 | 3.7 | 7.0 | 1.1 | 1.1 |
| CV (%) | 0.9 | 1.1 | 10.2 | 20.4 | 17.6 | 17.4 |

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

Variants to be expected and frequency: None observed.

| 5. Turf Use | Turf Quality (1-9) | | Brown Patch (1-9) | | Genetic Color (1-9) | | Density (1-9) | |
|-------------|--------------------|--------------|-------------------|--------------|---------------------|------|---------------|------|
| | Rolesville, NC | Adelphia, NJ | Rolesville, NC | Adelphia, NJ | A | B | A | B |
| | 2009 | 2010 | 2009 | 2010 | 2008 | 2007 | 2008 | 2007 |
| PST-5BGR | 6.0 | 5.1 | 6.0 | 5.7 | 6.3 | 7.3 | 6.8 | 6.6 |
| Endeavor II | 4.5 | 5.1 | 5.5 | 3.7 | 5.1 | 7.2 | 5.3 | 6.7 |
| Tar Heel II | 4.9 | 4.3 | 6.3 | 5.3 | 5.3 | 6.8 | 7.2 | 6.1 |
| Wolfpack II | 6.1 | 5.9 | 5.3 | 6.3 | 6.3 | 7.6 | 6.8 | 6.8 |
| Faith | 4.1 | 6.4 | 2.8 | 6.0 | 7.3 | 7.5 | 8.8 | 6.9 |
| LSD (0.05) | 0.9 | 0.7 | 2.0 | 1.6 | 0.9 | 2.5 | 1.8 | 0.5 |
| CV (%) | 11.9 | 10.7 | 25.7 | 19.1 | 9.0 | 17.8 | 15.5 | 24.1 |

•Scale used to report traits: 1-9: 9 = ideal; no disease; darkest green; most dense.

•Insert additional information for use by inspectors (if any): **None**

**If necessary, identify locations in line b) by the following key A: Fayetteville, AR B: Riverside, CA

6. Pure-Seed Testing, Inc. maintains Breeder seed of PST-5BGR in Oregon and will regenerate as necessary. Seed production of PST-5BGR is limited to three generations of increase from Breeder seed: one each of Foundation, Registered, and Certified. Age of stand is limited to six years for Foundation and Registered and seven years for Certified. Additional years of seed production may be approved by the breeder.

7. Certified seed is anticipated to be available for sale in 2012. PVP will not be sought.



(PR66, CS-PR66, RAD-PR66)

1. **Variety name:** Not yet named Kind: Perennial Ryegrass
Genus: Lolium **Species:** perenne
Experimental designations: PR66, CS-PR66, RAD-PR66
Date submitted: January 10, 2012

2. PR66 was developed by Radix Research, Inc. beginning with individual plant selections from various nurseries located at the Radix Research Station near Corvallis, Oregon. PR66 originates from the varieties Pershing (25%), Vail II (16.7%), Baccarat (16.7%), Kokomo (16.7%), Prelude GLS (8.3%), Palmer 4 (8.3%) and All Star 2 (8.3%). Plants were selected on the basis of compact crowns, dark color, general freedom from disease and the general appearance of high seed yield capacity. Subsequently, two cycles of seed selections conforming to the original selection criteria were used to create an isolated crossing block that produced the first breeder seed in 2009.

3. PR66 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 | Total Plant Height (cm) | | Flag Leaf Length (cm) | | Heading Date | |
|------------------------|-------------------------|------|-----------------------|------|-------------------|----------|
| | Corvallis, Oregon | | Corvallis, Oregon | | Corvallis, Oregon | |
| | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| PR66 | 65.9 | 72.2 | 15.9 | 14.6 | June 3 | June 7 |
| Manhattan II | 67.2 | 75.8 | 16.0 | 15.7 | June 2 | June 5 |
| Pinnacle | 65.6 | 74.4 | 16.5 | 15.8 | May 31 | June 3 |
| Manhattan | 65.0 | 70.5 | 17.6 | 17.4 | June 9 | June 15 |
| Elka | 52.1 | 55.4 | 13.9 | 13.4 | June 17 | June 22 |
| LSD (.05) | 3.4 | 3.1 | 1.8 | 1.5 | 5.0 Days | 4.8 Days |
| CV% | 10.0 | 9.6 | 13.2 | 12.1 | 14.9 | 14.4 |

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

Variants to be expected and frequency: Approximately 1% of the population may exhibit lighter green color and a total plant height 6% to 9% taller than population average.

| 5. Turf Use | Turf Quality | | Genetic Color | | Leaf Texture | | Turf Density | |
|-------------|-------------------|---------|-------------------|------|-------------------|------|-------------------|------|
| | Corvallis, Oregon | | Corvallis, Oregon | | Corvallis, Oregon | | Corvallis, Oregon | |
| | a) 2010 | b) 2011 | 2010 | 2011 | 2010 | 2011 | 2010 | 2011 |
| PR66 | 6.5 | 6.4 | 6.9 | 6.6 | 6.2 | 6.3 | 6.5 | 6.4 |
| Palmer IV | 6.0 | 5.7 | 6.6 | 6.2 | 5.9 | 6.1 | 5.9 | 5.7 |
| Presidio | 5.6 | 5.4 | 6.6 | 6.4 | 5.9 | 6.0 | 5.8 | 5.4 |
| Palmer 3 | 4.5 | 3.8 | 5.0 | 4.8 | 5.4 | 5.4 | 5.2 | 4.7 |
| LSD (.05) | 0.6 | 0.4 | 0.9 | 0.7 | 0.7 | 0.7 | 0.8 | 0.6 |
| CV% | 11.9 | 10.7 | 12.8 | 11.7 | 12.8 | 12.3 | 12.4 | 11.6 |

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

6. Breeder Seed of PR66 was first produced in 2009. Breeder Seed is maintained by Radix Research, Inc, Junction City, 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 three harvests of Foundation/Registered production followed by two additional harvests of Certified production. Certified class fields will be limited to five years of seed production. Exceptions may be granted by Radix Research, Inc. Columbia Seeds, LLC has been licensed to produce and sell PR66.

7. Certified seed is anticipated to be available in the fall of 2011. Application for PVP is undecided at this time.



Black Sheep (CAS-SIFI, SIFI)

1. **Variety name:** Black Sheep Kind: Hard Fescue
Genus: Festuca Species: trachyphylla
Experimental designation (s): CAS-SIFI, SIFI
Date submitted: January 9, 2012

2. Black Sheep was developed beginning with individual plant selections from a clonal evaluation nursery located at the Cascade International Seed breeding facility near Aumsville, Oregon. Black Sheep originates from naturalized selections collected from Northeastern Arizona in 1991 (37.5%) as well as the varieties MX-86 (37.5%) and Bighorn (25%). Plants were selected on the basis of noticeably improved vigor, increased growth activity and the appearance of improved seed yield. 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 1997.

3. Black Sheep 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 | Total Plant Height (cm) | | Panicle Length | | Heading Date | |
|------------------------|-------------------------|------|-------------------|------|-------------------|----------|
| | Corvallis, Oregon | | Corvallis, Oregon | | Corvallis, Oregon | |
| Traits | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| Black Sheep | 56.4 | 60.9 | 8.7 | 9.2 | April 13 | April 11 |
| Scaldis | 73.3 | 84.5 | 10.1 | 11.3 | April 16 | April 12 |
| SR 3000 | 71.6 | 82.8 | 8.8 | 9.6 | April 18 | April 13 |
| Aurora | 65.3 | 71.0 | 7.9 | 9.0 | April 23 | April 16 |
| Bighorn | 57.4 | 64.3 | 8.4 | 8.8 | April 13 | April 10 |
| LSD (.05) | 4.9 | 4.4 | 1.8 | 1.6 | 2.7 Days | 1.9 Days |
| CV% | 10.7 | 10.2 | 12.1 | 11.6 | 12.8 | 12.5 |

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

Variants to be expected and frequency: Approximately 2% of the population may appear as slightly taller and lighter green variants.

| 5. Turf Use | Turf Quality | | Genetic Color | | Leaf Texture | | Turf Density | |
|-------------|-------------------|------|-------------------|------|-------------------|------|-------------------|------|
| | Corvallis, Oregon | | Corvallis, Oregon | | Corvallis, Oregon | | Corvallis, Oregon | |
| a) | 2005 | 2006 | 2005 | 2006 | 2005 | 2006 | 2005 | 2006 |
| Black Sheep | 5.5 | 5.7 | 4.7 | 4.9 | 6.5 | 6.3 | 6.0 | 6.4 |
| SR 3000 | 6.0 | 6.1 | 5.6 | 5.3 | 6.4 | 6.4 | 6.2 | 6.4 |
| Heron | 5.9 | 5.9 | 5.5 | 5.4 | 6.3 | 6.2 | 6.0 | 6.5 |
| Quattro | 5.4 | 5.6 | 4.8 | 4.6 | 7.0 | 6.7 | 5.6 | 6.8 |
| Bighorn | 5.1 | 5.4 | 4.9 | 5.0 | 6.5 | 6.4 | 5.7 | 6.3 |
| LSD (.05) | 0.6 | 0.5 | 0.8 | 0.7 | 0.7 | 0.8 | 0.9 | 0.6 |
| CV% | 11.2 | 10.6 | 9.9 | 9.6 | 12.1 | 11.7 | 10.4 | 9.8 |

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

6. Breeder seed of Black Sheep was first produced in 1997. All breeding work was carried out by Steven J. Witten and Chad F. Miebach. The rights to Black Sheep have been purchased by Landmark Native Seed of Spokane, WA. A portion of breeder seed has been retained in cold storage; any further breeder seed production will be overseen by Landmark Native Seed. 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 three harvests of Foundation/Registered production followed by four additional harvests of Certified production. Certified class fields will be limited to seven years of seed production. Additional years of seed production may be approved by the breeder or an individual designated by the breeder.

7. Certified seed is anticipated to be available in the spring of 2012. PVP will not be applied for.



(PSG 85QR)

| | | | | |
|----|-------------------------------|-------------------|----------|-------------|
| 1. | Variety name: | | Kind: | Tall fescue |
| | Genus: | Festuca | Species: | arundinacea |
| | Experimental designation (s): | PSG 85QR | | |
| | Date submitted: | December 22, 2011 | | |

2. 'PSG 85QR' is an advanced generation synthetic cultivar based on the maternal progenies of five sources. The cultivar was developed at Seed Research of Oregon (SRO), Corvallis, OR. The parental material was selected for fine textured, dark green foliage, and basal spreading ability. A spaced planted nursery was established in the fall of 2005 at SRO with individual progeny plants from the five family lines. In April/May 2006, individuals in the nursery were evaluated. Progeny were discarded that were low in basal tillering and/or lighter green than the mean of the population. Individuals were also discarded if they were taller in mature plant height, or earlier/later in potential anthesis date relative to the mean of the population. Seed of the remaining progeny was bulk harvested and designated as breeder seed of the variety, July 2006.
3. 'PSG 85QR' has been tested for turf quality in southern U.S. locations, e.g. Griffin, GA, Mississippi State, MS, and Dallas, TX. 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 | <i>Heading Date</i> | | <i>Plant Height (cm)</i> | | <i>Flag Leaf Length (cm)</i> | |
|-----------------------------------|---------------------|-------------|--------------------------|-------------|------------------------------|-------------|
| | <i>Albany, OR</i> | | <i>Albany, OR</i> | | <i>Albany, OR</i> | |
| | <i>2007</i> | <i>2008</i> | <i>2007</i> | <i>2008</i> | <i>2007</i> | <i>2008</i> |
| <i>PSG 85QR</i> | May 16 | May 9 | 62.7 | 92.9 | 10.2 | 12.4 |
| <i>Bonsai</i> | May 23 | May 12 | 61.4 | 88.5 | 5.7 | 11.5 |
| <i>Bonanza</i> | May 17 | May 11 | 64.6 | 107.2 | 12.7 | 19.1 |
| <i>Silverado</i> | May 17 | May 9 | 58.9 | 80.4 | 9.8 | 17.0 |
| <i>Mustang 4</i> | May 10 | May 4 | 62.8 | 92.7 | 9.5 | 13.8 |
| LSD (.05) | 3 days | 2 days | 11.9 | 8.8 | 1.8 | 2.5 |
| <i>S.E.</i> | 1 | 1 | 5.9 | 4.3 | 0.9 | 1.3 |

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 | <i>Turf Quality (1-9)</i> | | <i>Foliage Color</i> | | <i>Foliage Texture</i> | | <i>Spring Density</i> | |
|--------------------|---------------------------|----------|----------------------|----------|------------------------|----------|-----------------------|----------|
| | <i>2007</i> | | <i>2007</i> | | <i>2007</i> | | <i>2007</i> | |
| | <i>A</i> | <i>B</i> | <i>A</i> | <i>B</i> | <i>B</i> | <i>C</i> | <i>C</i> | <i>D</i> |
| <i>PSG 85QR</i> | 6.2 | 6.4 | 7.0 | 6.0 | 6.0 | 6.0 | 8.0 | 7.0 |
| <i>Rembrandt</i> | 6.3 | 6.4 | 7.0 | 6.0 | 6.3 | 6.0 | 7.3 | 8.0 |
| <i>Silverado</i> | 6.4 | 6.2 | 7.3 | 5.3 | 6.0 | 5.0 | 7.7 | 7.0 |
| <i>Rebel IV</i> | 6.6 | 6.4 | 7.3 | 6.0 | 6.0 | 6.0 | 6.7 | 7.3 |
| <i>KY-31</i> | 5.1 | 5.1 | 5.0 | 4.0 | 4.0 | 5.0 | 6.0 | 6.3 |
| LSD (.05) | 0.9 | 0.6 | 1.4 | 0.6 | 0.6 | 0.9 | 1.6 | 1.5 |
| <i>CV%</i> | 8.7 | 7.7 | 12.7 | 6.0 | 5.7 | 9.6 | 13.9 | 13.1 |

●Scale used to report traits (if appropriate): 1-9 with 9=ideal quality, darkest green color, finest leaf texture, and most dense.

| | | | | |
|--|----|-------------|----|---------------------|
| | A: | Griffin, GA | B: | Mississippi St., MS |
| **If necessary, identify locations in line b) by the following key | C: | Dallas, TX | D: | Fayetteville, AR |

6. Breeder seed of **PSG 85QR** was first produced in 2006 by Seed Research of Oregon, Corvallis, OR. A record sample of this seed is maintained at Pickseed USA, Inc. (PS) in Albany, OR 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 the summer of 2012. A decision for filing a P.V.P. application has not been made at this time.



Verdure (WVPB-AR-SS-93-K-T-1)

1. **Variety name:** Verdure Kind: Annual Ryegrass
Genus: Lolium Species: multiflorum
Experimental designation (s): WVPB-AR-SS-93-K-T-1
Date submitted: 2 January, 2012

2. Verdure is the result of 4 cycles of repetitive phenotypic mass selection. Parental clones were open-pollinated derivatives sourced from local collections of four Shedd, Oregon annual ryegrass growers. Elite plants were selected and intercrossed from 1988 to 1998 to maximize heterogeneity within the populations. Selection criteria were plant vigor, crown rust resistance and early plant maturity. The first year breeder seed was produced was 2002.

3. Verdure is adapted for forage production as a winter annual in Texas. Annual ryegrass is primarily grazed but hay can be made under suitable hay drying weather conditions. Forage yield testing was done in East and South-East Texas.

| 4. Growth & Morphology | Heading Date | | Plant Height (cm) | | Flag Leaf Height (cm) | |
|------------------------|---------------------|----------|---------------------|------|-----------------------|------|
| | Brownsville, Oregon | | Brownsville, Oregon | | Brownsville, Oregon | |
| | 2003 | 2004 | 2003 | 2004 | 2003 | 2004 |
| Verdure | 9 May | 11 May | 118 | 124 | 56 | 58 |
| Gulf | 1 May | 3 May | 98 | 107 | 40 | 42 |
| Surrey | 6 May | 8 May | 94 | 98 | 42 | 44 |
| Marshall | 16 May | 19 May | 105 | 108 | 46 | 48 |
| Florida 80 | 27 April | 28 April | 84 | 86 | 36 | 38 |
| LSD (.05) | 6.0 | 7.0 | 13.6 | 14.0 | 12.7 | 12.2 |
| Variance | 5.8 | 6.7 | 13.1 | 13.4 | 12.1 | 11.7 |

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

Variants to be expected and frequency: | None described or expected

| 5. Forage Use | Forage Yields (Pounds/Acre) | | | | Crown Rust | | | |
|---------------|-----------------------------|--------|-----------------|-------|-----------------|------|----------------------|------|
| | Overton, Texas | | Beaumont, Texas | | Beaumont, Texas | | Gainesville, Florida | |
| | 2008 | 2009 | 2008 | 2009 | 2007 | 2008 | 2007 | 2008 |
| Verdure | 10,629 | 10,079 | 3,985 | 3,337 | 0.7 | 1.7 | 0.8 | 4.5 |
| Gulf | 9,654 | 7,496 | 3,705 | 3,106 | - | - | - | - |
| Marshall | 11,030 | 8,510 | 3,214 | 2,877 | 1.3 | 3.7 | 2.3 | 7.3 |
| TAM 90 | 10,111 | 9,148 | 4,296 | 4,284 | 0.3 | 0.3 | 1.3 | 2.3 |
| LSD (.05) | 1,605 | 1,139 | 564 | 1,232 | NS | 2.1 | 1.4 | 1.2 |

●Scale used to report traits (if appropriate): Beaumont 0-9; 0=none and 9=most severe. Gainesville 0-10; 0=none and 10=100% coverage

6. The breeder, Willamette Valley Plant Breeders, Inc. will maintain the breeder seed in cold storage. Foundation, Registered and Certified seed will be grown in Oregon under the Oregon Certification scheme. Breeder seed cans sow Foundation, Registered, and Certified seed. Foundation and/or Registered seed can sow Certified seed. The stand limitation (length of time) for each generation is:
 Foundation: 1 year
 Registered: 1 year
 Certified: 1 year
 There are no other requirements of limitations necessary to maintain varietal characteristics.

7. It is anticipated that certified seed will be offered for sale in 2013. The variety is not PVP eligible

