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explant types (B.D. Singh et al.). The second examines genetic fidelity issues in micropropagation systems and how molecular markers can be used to avoid variants (V. Rani and S.N. Raina). The prospects of pollen biotechnology for crop improvement are examined in Chapter 25 (K.R. Shivanna), including long-term storage of pollen, the potential for using pollen for screening, techniques for overcoming pre- and post-fertilization barriers, and generating instant inbreds. The final chapter (R. Varghese et al.) is a bit of an oddity for a crop improvement book, in that it discusses molecular characterization of the Actinomycete *Frankia* aimed at identifying and isolating more suitable strains.

The book is unique in that it examines improvement in crops that, with the exception of wheat, are not common to North American agriculture. The book contains a mix of very useful, informative chapters thrown in with chapters that at best gloss over the subject matter. As with any book in a rapidly evolving field, this book's shelf life is extremely short. However, it does provide an interesting "snap-shot" of where the field was in early 1997.

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# REGISTRATIONS OF CULTIVARS

## Registration of 'AC Bacon' Barley

'AC Bacon' (*Hordeum vulgare* subsp. *vulgare*), (Reg. no. CV-277, PI 608020), is a hulless six-row feed spring barley developed at the Agriculture and Agri-Food Canada (AAFC) Research Centre, Brandon, MB, Canada, which was registered on 21 Apr. 1998, by the Canadian Food Inspection Agency, Ottawa, Canada. AC Bacon was tested at Brandon (and eastern prairie locations - from 1991) and in the Western Hulless Barley Cooperative Test (1995–1997) under the experimental numbers H85-9 and HB 105, respectively. AC Bacon was selected from the cross 'Tupper'/'Johnston'//'Conquest'/3/'Abee'/4/'Ellice'/'Bedford'. Tupper is the source of the hulless character. Only hulless progeny were retained.

The hybrid population (Brandon no. H85) was developed by hand crossing in controlled-environment facilities at the Brandon Research Centre, AAFC, and the final cross was completed in 1988. Seventy $F_1$ seed were planted in the greenhouse and $F_2$ seed were harvested in bulk. $F_2$ seed were planted in the field in a single 3 m long row and $F_3$ seed were bulk harvested. The procedure was repeated for the $F_3$ generation using two rows 3 m long. From the $F_3$ bulk, 1500 seeds were chosen at random and were grown as $F_4$ spaced plants with 1 m spacing between plants and rows. AC Bacon originated from a single plant selected from the $F_4$ population based on visual assessment for spike size and conformity, number of fertile tillers, vigour, and relative absence of disease. The selected plant (the origin of AC Bacon) was grown, along with other $F_4$ selections, as 3 m long and 1 m wide plots in a nearest-neighbour design with the check cultivar 'CDC Buck' repeated every 20 plots. A single plot (H85-9) was selected from this $F_5$ population on the basis of superior agronomic performance relative to CDC Buck, including yield, straw strength, test weight, maturity, and percent hull retention. H85-9 was first tested in a replicated field trial in Brandon in 1991. H85-9 was also screened for reaction to 15 foliar and spike pathogens in the laboratory. H85-9 was then tested at two locations in 1992 (Brandon, MB and Oak River, MB) and advanced to the Eastern Prairie Barley Test (EPBT) in 1994 on the basis of merit in yield, straw strength, and overall agronomic performance. The EPBT was grown at seven locations in Manitoba and Saskatchewan. H85-9 was then advanced as HB 105 to the Western Cooperative Hulless Barley Registration Test (HBCOOP) in 1995 based on merit for yield and agronomic performance.

Over three years of evaluation in the HBCOOP, AC Bacon was higher yielding ($P < 0.05$) than 'Falcon' (the high-yielding six-row hulless check) in eastern Black Soils (18%), Brown Soils (18.7%), western Black Soils (10.6%) and Grey Wooded Soils (17.3%) zones of western Canada.

AC Bacon heads two days earlier than Falcon and is one day earlier in maturity. Straw strength (3.9) is less than Falcon (1.7) and equal to the two-row hulless check 'Condor' (3.4), on a scale of 1 to 9, where 1 = no lodging and 9 = completely lodged. AC Bacon is short (non-semidwarf), averaging 7 cm taller than Falcon (semi-dwarf), and averages 83 cm across western Canada. The six-row spike is semi-compact (avg. 12 cm), semi-erect, decumbent, with deciduous hulls upon threshing. Kernels are large and wide with yellow (white) aleurone. Lemma awns are smooth. AC Bacon is similar in thousand kernel weight to Falcon (34.6 vs. 33.9 g), as well as in test weight (62.2 vs. 61.8 kg $hl^{-1}$).

Based on both laboratory and field evaluations, AC Bacon is resistant to scald [caused by *Rhynchosporium secalis* (Oudem) J.J. Davis]; moderately resistant to common root rot [caused by *Cochliobolus sativus* (Ito and Kuribayashi) Dreschs. and Dastur]; susceptible to net blotch (caused by *Pyrenophora teres* Dreschs.); all forms of smuts (caused by *Ustilago* spp); and septoria leaf blotch (caused by *Septoria passerinii* Sacc.).

Seed from 300 uniform $F_{11}$ head rows were bulked to constitute the Breeder seed of AC Bacon. Breeder seed is being maintained by AAFC at the Indian Head Research Farm, Indian Head, SK., Canada. The Canadian distributor for AC Bacon is SeCan Association, 200-57 Auriga Drive, Nepean, ON, Canada, K2E 8B2.

M.C. Therrien* (1)

### References and Notes

1. AAFC, Brandon Research Centre, Box 1000A, R.R. #3, Brandon, MB, Canada, R7A 5Y3. Registration by CSSA. Accepted 31 Oct. 1999. *Corresponding author (MTherrien@em.agr.ca).

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## Registration of 'Orca' Barley

'Orca' is a spring barley (*Hordeum vulgare* L.), (Reg. no. CV-278, PI 607936), developed by the Oregon Agricultural Experiment Station and released in 1998. The University of Idaho Agricultural Experiment Station and the Washington State Agricultural Research Center participated in the release.

Orca, tested as BSR45 and Icaro (unofficial pre-release name), was derived from the cross of 'Calicuchima'-sib × 'Bowman'-derivative made in 1990. Calicuchima-sib is a six-row spring barley germplasm line developed by the International Center for Agricultural Research in the Dry Areas (ICARDA) barley breeding program based in Mexico. The pedigree of Calicuchima-sib is 'LBIran'/UNA8271//'Gloria'/'Comanche'. In 11 years of multi-location tests in Mexico and the Andean region of South America (1988–1998), Calicuchima-sib was resistant to stripe rust (caused by *Puccinia striiformis* f.sp. *hordei*), leaf rust (caused by *Puccinia hordei* G. Otth) and scald [caused by *Rhynchosporium secalis* (Oudem.) J.J. Davis] (H. Vivar, personal communication). Bowman (Reg. no. CV-197, PI 483237) (1) is a two-row spring barley released by the North Dakota State University Experiment Station in 1984. The pedigree of Bowman is ND2685/ND1156//'Hector'. The Bowman-derivative (ND586/CI*ho* 2376//ND4880)/4*Bowman) carries the *Ryd2* gene for resistance to Barley Yellow Dwarf Virus (BYDV) from CI*ho* 2376 and was generously provided by Dr. Jerry Franckowiak of North Dakota State Univ. Orca is one of 110 doubled haploid lines (BSR45) derived from the $F_1$ of Calicuchima-sib/Bowman-derivative. The doubled haploids were developed in 1992 using a modified *Hordeum bulbosum* technique (2). The doubled haploid population was used to map genes conferring resistance to barley stripe rust and other diseases (3, 4). Five hundred heads of Orca were selected from a phenotypically uniform block in New Zealand in 1997 and were grown in head rows by the Washington State Crop Improvement Association in 1997. This seed was harvested in bulk for Breeder seed.

Orca is a two-row, long and rough-awned, white-aleurone spring barley with short rachilla hair. Additional genotype identifiers are 35 Restriction Fragment Length Polymorphisms (RFLPs) and 15 Simple Sequence Repeats (SSRs) (4, 5).

Orca is resistant to barley stripe rust under field conditions in Mexico, South America, and the Pacific Northwest, U.S.A. Averaged over tests conducted in Bolivia, Chile, Ecuador, Peru, Mexico, and the U.S.A. (California, Idaho, Montana, Oregon, and Washington), from 1993–1998, the average adult plant stripe rust severity on Orca was 10%. Initially, only race 24 of *P. striiformis* f.sp. *hordei* was thought to be present in the Americas (6). Recently, more extensive analysis has revealed considerable variation in pathogen isolates collected in the U.S.A. (7, 8). Barley germplasm developed by the ICARDA/CIMMYT program in Mexico, including Calicuchima-sib, allows limited symptom development when exposed to the spectrum of stripe rust virulence encountered in field tests in South America, Mexico, and the U.S.A. The fact that this germplasm has remained resistant over an 11-year period may be grounds for describing it as having "durable resistance" (9). The primary determinants of stripe rust resistance in Orca were mapped as Quantitative Trait Loci (QTLs) to chromosomes 4 (4H) and 7 (5H) and the resistance alleles at these QTLs originated from Calicuchima-sib (3, 4). This may indicate that Orca has the adult plant, quantitative resistance of the Calicuchima-sib parent. Orca is also resistant to a Canadian PAV strain of Barley Yellow Dwarf Virus (BYDV). On a 1–9 scale (1 = resistant, 9 = susceptible) Orca received a mean symptom score of 1.7 in a test involving a PAV strain isolate of BYDV (4). In the same test, the resistant parent (Bowman-derivative) received a score of 1.3 and the susceptible parent (Calicuchima-sib) a score of 8.2. BYDV resistance mapped to chromosome 3 (3H) (4). The *Ryd2* locus maps to this same chromosome location (10).

Orca was tested under both irrigated and dryland conditions in Oregon, Washington, and Idaho (1994–1998). It was also tested in the Western Regional Spring Barley Nursery (WRSBN) in 1997 and 1998. The yield of Orca was 5814 kg $ha^{-1}$, 107% of 'Harrington' (the North American two-row malting barley standard) and 96% of 'Baronesse' (the most popular feed variety in the Pacific Northwest of the U.S.A.) in 21 station-years of irrigated tests. Averaged over 30 station-years of dryland tests, the yield of Orca was 4369 kg $ha^{-1}$, which was similar to Harrington and 17% lower than Baronesse. Averaged over 23 station-years in the WRSBN, the yield of Orca was 5168 kg $ha^{-1}$, 99% of the yield of 'Steptoe' (the feed barley check in the WRSBN) and 104% of the yield of Harrington.

Orca has large, plump seeds and high test weight. In 10 station-years of dryland and 12 station-years of irrigated tests, the average percentages of plump seed (seeds remaining on a 2.4 mm slotted sieve) were 97 and 96, respectively. These represent advantages over Harrington of 22% (dryland) and 10% (irrigated). The advantages over Baronesse were 20% (dryland) and 9% (irrigated). The percentage of plump seed of Orca was 93%, a 13% advantage over Steptoe and a 20% advantage over Harrington, averaged over 17 station-years in the WRSBN. In 30 station-years of dryland and 19 station-years of irrigated tests, respectively, the average test weight of Orca was 67 kg $hL^{-1}$. This represents a 3% advantage over Harrington and a value comparable to Baronesse. Averaged over 21 station-years in the WRSBN, the test weight of Orca was 66 kg $hL^{-1}$, a 10% advantage over Steptoe and a 2% advantage over Harrington.

Orca is earlier and about the same height, but more lodging-resistant, than Harrington and Baronesse under irrigated and dryland conditions. In 16 station-years of dryland and irrigated tests, the average Julian heading dates of Orca, Harrington, and Baronesse were 173, 179, and 179 d respectively. In 19 station-years of testing in the WRSBN, the average Julian heading date of Orca was 175 d, as compared to 176 d for Steptoe and 180 d for Harrington. Averaged over 29 station-years of dryland and irrigated tests, the average plant heights of Orca, Harrington, and Baronesse were 86, 85, and 83 cm, respectively. In 20 station-years of testing in the WRSBN, the plant height of Orca was 87 cm, as compared to 85 cm for Steptoe and 87 cm for Harrington. Averaged over 13 station-years of dryland and irrigated tests, the average lodging percentages (on a plot basis) for Orca, Harrington, and Baronesse were 25, 48, and 41%, respectively.

Averaged over 14 station-years (1993–1998), the grain protein of Orca was 13.1%, the malt extract was 79.5%, the diastatic power was 144° (ASBC) and the alpha amylase activity was 51.7 20° units. Orca was tested for two years (1997–1998) in the American Malting Barley Association (AMBA) Pilot Scale program. Due to high grain protein and enzyme activity, Orca did not receive approval for release as a malting variety.

Breeder and Foundation seed will be maintained by the Washington State Crop Improvement Association. U.S. plant variety protection will not be applied for. Seed for experimental purposes may be obtained from the corresponding author.

P.M. Hayes,* A.E. Corey, R. Dovel, R. Karow, C. Mundt, K. Rhinart, and H. Vivar (11)

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## Registration of 'Garnet' Barley

'Garnet', a two-rowed spring feed barley (*Hordeum vulgare* L.) (Reg. no. CV-279, PI 605472), was developed cooperatively by the USDA-ARS and the Idaho Agricultural Experiment Station. It was formally released by these agencies in May 1999. Garnet was released as a feed barley, but it is a potential malting barley.

Garnet was selected from a cross of 'Harrington'/78Ab6871 made in 1983. The parent Harrington, a two-rowed malting barley, was developed by the University of Saskatchewan at Saskatoon, Saskatchewan from the cross 'Klages'/3/'Gazelle'/'Betzes'// 'Centennial'. The parent 78Ab6871 was released in 1989 as 'Crystal'. Crystal is a two-rowed malting barley developed by ARS at Aberdeen, Idaho from the cross 'Columba'/Klages. Garnet originated at Aberdeen as a $F_4$ spike selection, subsequently harvested as a $F_5$ row in 1986, and designated as 86Ab2317. Breeder seed of Garnet originated as a $F_9$ bulk seed increase, derived without further selection from the original $F_5$ head row, grown at the Aberdeen Research and Extension Center. Garnet is midseason in maturity with medium-lax spikes and rough awns. Kernels are covered and have white aleurone, rachilla hairs are long, barbs on lateral veins are absent, lemmas are typically wrinkled, glumes are covered with long hairs or in a band, and rachis edges have numerous hairs.

Garnet was first tested in replicated trials in Idaho in 1988. It was tested in the regional Western Spring Barley Nursery from 1991 to 1994 and in the Western Dryland Spring Barley Nursery from 1991 to 1995. It has been widely tested in both irrigated and dryland trials in Idaho and other western states since 1991. In eight station-yr of testing in irrigated trials at Aberdeen, from 1990 to 1994 and 1996 to 1998, Garnet's grain yield was 7643 kg $ha^{-1}$ or 94% of Crystal, 100% of Harrington, and 104% of Klages. No data were obtained in this series of trials at Aberdeen in 1995. In these same trials, Garnet exhibited good kernel plumpness, averaging 95% over a 2.4 by 19.1 mm screen vs. 92% for Crystal, 89% for Harrington, and 85% for Klages. Garnet averaged 685 kg $m^{-3}$ in test weight in Aberdeen trials which was slightly lower than the check varieties, averaging 21 kg $m^{-3}$ less than Crystal, 8 kg $m^{-3}$ less than Harrington, and 6 kg $m^{-3}$ less than Klages. Garnet is similar to these varieties in heading date and height at Aberdeen. It is similar to Crystal in straw strength, and superior to Harrington and Klages in trials at Aberdeen.

In nine station-yr of testing in irrigated trials at Tetonia, Idaho, from 1990 to 1998, Garnet averaged 5187 kg $ha^{-1}$ or 97% of Crystal, 103% of Harrington and 105% of Klages. Garnet has an excellent kernel plumpness record under irrigation at Tetonia, averaging 94% over a 2.4 by 19.1 mm screen and exceeding all check varieties for this trait. In six station-yr of testing in dryland trials at Tetonia, from 1990 to 1995, Garnet averaged 3720 kg $ha^{-1}$ or 96% of Crystal, 98% of Gallatin, 95% of Harrington and 85% of Hector. In these dryland trials Garnet was superior to all of these check varieties in kernel plumpness, averaging 87% over a 2.4 by 19.1 mm screen vs. 71% for Crystal, 82% for Gallatin, 79% for Harrington, and 78% for Hector. In 16 station-yr of testing in dryland trials at Bonners Ferry, Craigmont, Potlatch, and Tammany in northern Idaho, from 1995 to 1998, Garnet averaged 4531 kg $ha^{-1}$ or 88% of 'Baronesse', 94% of 'Chinook', 106% of 'Crest', 98% of Crystal, and 102% of Harrington. Garnet was superior to all of these check varieties in kernel plumpness in these trials, averaging 91% over a 2.4 by 19.1 mm screen vs. 84% for Baronesse, 86% for Chinook, 81% for Crest, 84% for Crystal, and 76% for Harrington.

Garnet has been relatively free of disease when grown in Idaho, but it is susceptible to barley stripe rust [caused by *Puccinia striiformis* West. f. sp. *hordei*]. Garnet is susceptible to Russian wheat aphid [*Diuraphis noxia* (Mordvilko)]. Garnet has good malting quality characteristics and is currently being evaluated in plant-scale tests for malting and brewing quality. Garnet is expected to compete favorably with existing two-rowed spring barley cultivars in irrigated and many non-irrigated or dryland environments in Idaho and other western states. Breeder and Foundation seed of Garnet will be maintained by the Idaho Agricultural Experiment Station, Foundation Seed Program. Requests for seed should be directed to the Coordinator, Foundation Seed Program, College of Agriculture, Kimberly Research and Extension Center, 3793 N 3600 E, Kimberly, Idaho 83341. Seed is available in small quantities for research purposes from the corresponding author. U.S. plant variety protection will not be applied for.

D.M. Wesenberg,* D.E. Burrup, J.C. Whitmore, and C.T. Liu (1)

### References and Notes

1. D.M. Wesenberg and D.E. Burrup, USDA-ARS, Univ. of Idaho Aberdeen Res. & Ext. Ctr., USDA-ARS, Natl. Small Grains Germplasm Res. Facility, P.O. Box 307, Aberdeen, ID 83210; J.C. Whitmore, Univ. of Idaho Tetonia Res. & Ext. Ctr., 888 West Highway 33, Newdale, ID 83436; and C.T. Liu, Dep. of Plant, Soil, and Entomological Sciences, University of Idaho, Moscow, Idaho 83843. Cooperative investigations of the USDA-ARS and the Idaho Agric. Exp. Stn. Idaho Agric. Exp. Stn. Manuscript no. 00709. Registration by CSSA. Accepted 31 Oct. 1999. *Corresponding author (dwesenb@uidaho.edu).

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## Registration of 'Jaeger' Barley

'Jaeger' is a six-row hulless feed spring barley (*Hordeum vulgare* L.), (Reg. no. CV-280, PI 608012), released in 1999

by the Field Crop Development Centre, Alberta Agriculture, Food and Rural Development, Lacombe, Alberta, Canada (Canadian Reg. no. 4873 ). Jaeger was selected from the cross 'Nopal'/'Ager'/5/F10.14/3/'Mona'/'Emir'//Bco.Mr/'Godiva'/4/'Api'/'CM67'//'Ore'. An $F_2$ bulk from this cross was introduced to the Alberta breeding program from the International Maize and Wheat Improvement Center (CIMMYT), Mexico and grown out for observation at Lacombe, AB, in 1983. Using a modified bulk breeding method, the $F_3$ bulk was planted in California in the fall of 1983 and harvested in the spring of 1984. Subsequent bulk populations of the cross were grown alternately at Lacombe and El Centro, CA. Head selections were made in the $F_9$ generation to produce $F_{10}$ head-rows and planted in 1990 at Lacombe. A single $F_{10}$ head-row was selected at Lacombe and was entered in yield trials from 1991 to 1997. In 1995, $F_{14}$ heads were selected and grown out as single head-rows. Selection was based on test results for yield, test weight, protein content, straw strength, threshability and leaf disease resistance. Breeder seed of Jaeger was derived from a bulk of 171 $F_{17}$ head-rows.

Jaeger is a midseason, short-statured cultivar, with a green coleoptile and a semi-erect juvenile growth habit. Leaves are dark green, wide and long with glabrous green sheaths and blades. The flag leaves are dark green, wide, medium long and erect. The auricle is white with a waxy sheath. Stems are green and waxy, with an average thickness of 2–3 mm. Culms generally have 4 nodes, a closed collar shape, an undulated neck, and an exsertion above the base of the flag leaf blade of 3–10 cm. Jaeger's 6-row spikes are dense, semi-erect and short in length. Lemma awns are rough and long with slight purplish tips. The basal marking of the lemma is a slight crease. The lemmas have many barbs on the lateral veins. Glume awns are rough and half the length of the lemma. Rachillas are medium long with short hairs. Kernels are hulless, short and medium wide, with an amber aleurone.

Jaeger was tested as M82037021N in Alberta yield trials from 1991 to 1994 and as HB608 in the Western Cooperative Hulless Barley Test (WCHBT) of the Canadian Prairie Registration Recommending Committee from 1995 to 1997. In 39 station-years of the WCHBT grown in Manitoba, Saskatchewan, and Alberta production areas, Jaeger had an average yield of 5346 kg $ha^{-1}$, which was 106% of the six-row hulless check 'Falcon', and 110% of the predominant two-row hulless check 'Condor'. In the same test, Jaeger had a mean test weight of 73.7 kg $hL^{-1}$ compared with 74.2 kg $hL^{-1}$ for Falcon and 77.2 kg $hL^{-1}$ for Condor. The mean 1000 kernel weight of Jaeger was 32.0 g, compared with 33.7 g for Falcon and 37.1 mg for Condor. In this same test, in 29 trials, Jaeger was 2 d later than Falcon and 1 d later than Condor. Its plant height was 74.7 cm, compared with 70.3 cm for Falcon and 80.4 cm for Condor. Jaeger has shown excellent resistance to lodging. In 22 station-years of the WCHBT, Jaeger had a lodging resistance score of 1.8 on a scale of 0–9 (where 0 = erect, 9 = fully lodged), compared with 2.0 for Falcon and 3.2 for Condor. Jaeger is well adapted to the brown soils of Saskatchewan and to the brown soils and irrigated areas of Alberta.

Jaeger has good field resistance to barley leaf scald [caused by *Rhynchosporium secalis* (Oudem.) J.J. Davis]. In six trials of the WCHBT where scald ratings were taken, Jaeger averaged 2.7 (on a scale of 0 to 9, where 0 = least affected), compared with 3.4 for Falcon and 5.4 for Condor. Jaeger is susceptible to covered smut [caused by *Ustilago hordei* (Pers.) Lagerh], to false loose smut [caused by *Ustilago avenae* (Pers.) Rostr], to loose smut [caused by *Ustilago tritici* (Pers.) Rostr.], and to net blotch (caused by *Pyrenophora teres* Drechs.). Jaeger is resistant to septoria leaf blotch (caused by *Septoria passerinii* Sacc.).

Breeder seed of Jaeger is being maintained by the Field Crop Development Ctr., Alberta Agriculture, Food and Rural Development, Lacombe, AB. Distribution rights were granted to Progressive Seeds Ltd., #155 4752 Ross Street, Red Deer, AB. T4N 1X2, Canada. Application has been made in Canada for plant breeder's rights.

James H. Helm, Manuel J. Cortez,* Patricia E. Juskiw, Donald F. Salmon, and William M. Stewart (1)

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## Registration of 'Accent' Perennial Ryegrass

'Accent' perennial ryegrass (*Lolium perenne* L.) (Reg. no. CV-199, PI 607445), a turf-type diploid ($2n=2x=14$), was developed and released 11 August 1995 by J.R. Simplot Co. dba Jacklin Seed and Medalist America, Post Falls, Idaho. Accent was evaluated under the experimental designations MED-393 and 92-0393. The first Certified seed was produced in 1995.

Accent was developed from the maternal progenies of 18 clones. These consisted of 12 clones selected from 'APM' (10), three clones from 'Advent' (11), two clones from 'Saturn' (9), and one clone from 'Pinnacle' (2). The 18 selected clones were evaluated in spaced-plant nurseries and selected on the basis of dark green color, high tiller density, high seed yield, and relative freedom from foliar disease. The half sib-progenies from these clones were planted in turf trials in 1990 at Rutgers University, Adelphia, NJ and at the Jacklin Research farm in Post Falls.

In August 1992, plugs were removed from the Adelphia turf plots and transferred to greenhouse flats at Post Falls. A subset of 10 plugs from each line was screened for the presence of the fungal endophyte, *Neotyphodium lolii* (Latch, Christensen and Samuels) Glenn, Bacon, Price and Hanlin, which averaged 95% across the 18 lines.

In October 1992, 7200 plugs (400 from each of the 18 half-sib progenies) were transplanted into a spaced-plant nursery near Albany, OR. In the spring of 1993, the block was selected for uniformity, with 50% of the plants being removed before anthesis. Plants with extremely upright or prostrate growth habit, maturity earlier or later than the majority of the field, broad leaves, reduced seed head initiation, and susceptibility to leaf spot {caused by *Drechslera siccans* [(*H. siccans* Drechs.) (teleomorph *Pyrenophora lolii* Dovaston)]}, and stem rust (caused by *Puccinia graminis* Pers.:Pers.) were removed from the field. Breeder seed was first harvested in July 1993 and was used to establish a Foundation field in Oregon in the fall of 1993.

Accent provides an attractive turf with high density and medium-fine leaf texture. In the 1994 National Turfgrass Evaluation Program perennial ryegrass test (5,6,7), Accent exhibited improved turf quality and spring density. In these trials, Accent demonstrated moderate resistance to dollarspot (caused by *Lanzia* and *Moellerodiscus* spp.), large brown patch (caused by *Rhizoctonia solani* Kühn), red thread [caused by *Laetisaria fuciformis* (McAlpine) Burdsall], and gray leaf spot [caused by *Pyricularia grisea* (Cooke) Sacc.]. Accent, in these