Registration of ‘Hubbard 87’ Tall Fescue

‘Hubbard 87’ tall fescue (Festuca arundinacea Schreb.) (Reg. no. CV-55, PI 544064) was released October 1989 by Hubbard Seed and Supply Co., Hubbard, OR. Germplasm obtained from the New Jersey Agricultural Experiment Station was used in the development of Hubbard 87. The first certified seed was produced in 1989.

Hubbard 87 is an advanced-generation synthetic cultivar selected from the progenies of 18 clones. The parental germplasm of Hubbard 87 traces to plants related to ‘Rebel’ tall fescue (1), and plants collected from old lawn-type turfs located in Alabama, Georgia, Idaho, Kansas, Kentucky, Maryland, Mississippi, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, and Virginia during the period from 1962 through 1980. Elite selections were initially evaluated in spaced-plant or mowed clonal nurseries for attractiveness, disease resistance, tolerance of heat and drought, and seed yield potential. Selected plants were subsequently interpollinated or crossed with plants related to Rebel. Half-sib, single-plant progenies were then evaluated in closely mowed turf trials. These trials were established in locations subject to severe stresses of heat, drought, high humidity, and interplant competition. Tillers from the best-performing turf plots were selected to initiate new cycles of recurrent selection. The parental clones of Hubbard 87 were selected from the above germplasm sources after three to nine cycles of selection. Selection within spaced-plant nurseries was directed toward finer leaf texture, lower-growth habit, moderately upright plant growth, dark-green color, high seed yield potential, absence of disease, and medium maturity. Selection within mowed clonal trials and solid-seeded turf trials was based on long-term performance scores, attractive appearance, fine leaf texture, turf density, reduced rate of vertical growth, dark-green color, appearance during heat and drought stress, cold weather color retention, and improved resistance to the large brown patch caused by Rhizoctonia solani Kühn, and net blotch incited by Drechslera dictyoides (Drechs.) Shoemaker.

Breeder seed of Hubbard 87 was produced in a spaced-plant nursery located at the Rutgers University Plant Science Research Station at Adelphia, NJ. A total of 3168 plants were established in this nursery. Selection within this nursery was directed toward improving uniformity, seed yield potential, and disease resistance. A total of 1811 plants were removed prior to anthesis. Seed was subsequently harvested from the 666 plants with the best floret fertility.

Hubbard 87 is a leafy, turf-type tall fescue of medium maturity. It is capable of producing a persistent, moderately dense, attractive, medium-to-low-growing turf with medium texture and a medium-dark green color. It has moderate resistance to net blotch and large brown patch. Hubbard 87 has good heat and cold tolerance and moderate cold temperature color retention. It has good wear tolerance when well established. Hubbard 87 has good seedling vigor on warm soils and is adapted to a wide range of soils. It produces less thatch than vigorous cultivars of Kentucky bluegrass (Poa pratensis L.) and Chewings fescue (Festuca rubra L. subsp. commutata Gaup.). Its deep roots enhance drought avoidance and have the ability to penetrate dense soils. Hubbard 87 should perform well as a medium-to-low maintenance turf in regions where tall fescue is adapted.

Seed increase of Hubbard 87 is limited to two generations of increase from breeder seed, one each of foundation and certified. Breeder seed will be produced and maintained by Hubbard Seed and Supply Co. in cooperation with Pickseed West, Inc., Tangent, OR, and the New Jersey Agricultural Experiment Station. Application (no. 9100001) has been made for U.S. plant variety protection.

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References and Notes

2. M.L. Fraser, Pure-Seed Testing-East, P.O. Box 176, Rolesville, NC 27571; S.K. Jones and G.W. Jones, Hubbard Seed and Supply Co., P.O. Box 310, Hubbard, OR 97032; and C.R. Funk, Plant Science Dep., New Jersey Agric. Exp. Stn., Cook College, Rutgers Univ., New Brunswick, NJ 08903. Publication no. D15166-7.91, New Jersey Agric. Exp. Stn. Some of this work was conducted as part of New Jersey Agric. Exp. Stn. project no. 15166, supported by New Jersey Agric. Exp. Stn. funds, other grants, and gifts. Additional support was received from the U.S. Golf Assoc.-Golf Course Superintendents Asso., Amer. Res. Fund. Registration by CSSA. Accepted 30 June 1993.

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Registration of ‘Bison’ Buffalograss

‘Bison’ buffalograss (Buchloë dactyloides (Nutt.) Engelm.) (Reg. no. CV-158, PI 555657) was jointly released by the Oklahoma Agricultural Experiment Station and the USDA-ARS in September 1990. It is a cold-hardy cultivar suitable for forage, conservation, and general purpose turf in the southern Great Plains of the USA. Bison was evaluated using the Syn 1 generation under the experimental designation A-Plus.

Bison is a four-clone synthetic cultivar derived from two male and two female clones. The male and female parents of ‘Mesa’ buffalograss (a two-clone synthetic) plus a superior plant of each sex selected from ‘Texoka’ (1) constitute the parents of Bison. The two Texoka plants were selected in 1982 from the original foundation increase block of Texoka established in the early 1970s at the Grazing Lands Research Laboratory (GLRL), El Reno, OK. Clonal propagules of the four parental plants were used to establish a 0.4-ha crossing block at the GLRL in 1983.

Bison and Texoka plantings were compared for forage and seed yields and forage quality in small-plot field trials conducted at the GLRL; South Central Research Station, Chickasha, OK; and Panhandle Research Station, Goodwell, OK, for 2 yr (1987-1988). The mean pure live seed yield of Bison was 24% greater than Texoka (P < 0.05). Bison and Texoka did not differ significantly (P > 0.05) in forage yield, in vitro digestible dry matter, crude protein, and acid-or neutral-de tergent fibers. Bison is similar to Texoka in morphology, growth habit, and seedling production characteristics. It is adapted to the same geographic region as Texoka. Higher seed yield potential is the outstanding feature of Bison relative to Texoka.

The four parental clones constituting the breeder stock of Bison will be maintained by the Oklahoma Agricultural Experiment Station. Classes of seed increase shall be limited to one generation each of foundation and certified. The foundation class consists of Syn 1 generation seed produced by intercrossing the two female with the two male parental clones. Foundation seed production is under the direction of Oklahoma Foundation Seed Stocks, Inc., Agronomy Dep., Oklahoma State University.