Registration of ‘Inferno’ Tall Fescue

‘Inferno’ tall fescue (Festuca arundinacea Schreb.) (Reg. no. CV-97, PI 634805) was released by Jacklin Seed by Simplot, Post Falls, ID, in August 2004 as part of a cooperative breeding effort between Jacklin Seed and the New Jersey Agricultural Experiment Station (NJAES). First Certified seed was produced in 2004. Inferno was tested under the experimental designations JT-99 and L1J.

Inferno is a medium-low-growing, dark green, medium-fine-leaved, turf-type tall fescue selected from the maternal progeny of 370 parents. Inferno was selected for high shoot density, dark-green color, low growth habit, and medium reproductive maturity. Approximately 80% of the parental germplasm in Inferno contained Neotyphodium coenophialum (Morgan-Jones and Gams) Glenn, Bacon endophyte.

All of the germplasm used to develop Inferno tall fescue were from the NJAES tall fescue improvement program, which was initiated in 1960. The 370 parents of Inferno were selected from 83 different maternal sources evaluated in progeny turf plots at the Rutgers Plant Biology and Pathology Research and Extension Farm at Adelphia, NJ, in 1997, 1998, and 1999. Twenty-five percent of the germplasm traced to a plant selected from the Georgia State Hospital, Milledgeville, in 1977. Eighteen percent of the germplasm trace to plants related to ‘Gazelle’. Another 18% traced to plants related to ‘Apache’ (Meyer et al., 1991). Six percent traced to a plant that was found on the Princeton University campus, Princeton, NJ, in 1977 and was used in the development of ‘Rebel’ (Funk et al., 1981). Five percent traced to a plant collected from eastern North Carolina in 1975. Five percent traced to a plant collected from Lexington, KY, in 1979. The remainder traced to plants related to ‘Duke’, ‘Mini-Mustang’ (Alderson and Sharp, 1995), and ‘Finelawn Elite’; plants that traced to plants utilized in an interspecific crossing program with perennial ryegrass (Lolium perenne L.) at Rutgers University (Funk et al., 1981); plants selected for improved crown rust (caused by Puccinia coronata Corda) resistance from a mowed spaced-plant trial at Adelphia, NJ, in 1988; plants that traced to a plant identified as RR-11F and evaluated in turf plots at Adelphia, NJ, in 1988; plants selected from Westview Cemetery, Atlanta, GA, in 1975; and plants collected from Georgia and Kansas in 1977 and Poland in 1997.

Approximately 7800 tillers were removed from the best performing single-plant progeny turf plots at Adelphia, NJ, during 2000. Selection was based on performance records as well as appearance at the time the plants were selected from these progeny plots. Eighty-three single-plot progenies were selected from 1055 plots from ten different populations in the 1997 test, 635 plots from nine different populations in the 1998 test, and 890 plots from eight different populations in the 1999 test. These plants were established in greenhouse flats and screened by 50% before their transfer to a 3900-plant nursery at Adelphia, NJ, in the spring of 2000. The 3900 plants were selected for dark green color, high tiller density, low growth habit, and medium reproductive maturity. Inferno Breeder seed. Replicated turf plots were established at Adelphia in the fall of 2001 and entered in the 2001 National Turfgrass Evaluation Program (NTEP) tall fescue test (Morris, 2003, 2004). Inferno was transferred from NJAES to Jacklin for Foundation.

In production, Inferno appears most similar to ‘Apache’, however, Inferno has a lower plant height ranging from 71.8 cm, narrower flag leaf width of 3.4 to 4.0 cm, leaf length ranging from 7.6 to 7.8 cm, shorter panicle length ranging from 13.9 to 15.4 cm, and a shorter secondary panicle length ranging from 11.0 to 11.8 cm.

Inferno has shown excellent turf quality under high and medium maintenance. Its regional adaptation in the Northeast, Mid-Atlantic, Semi-Arid, and southern parts of the USA (Morris, 2004). In these trials, it has exhibited good resistance to a brown patch (caused by Rhizoctonia solani) and Fusarium brown spot (caused by Puccinia graminis Pers.:Pers.) and leaf spot (caused by Typhula incarnata Fr.). Inferno maintains good turf quality under traffic stress. Inferno has a finer and denser sward than many cultivars.

Inferno is recommended for sports fields,1890, 1995) and golf course roughs where tall fescue is adapted.

Breeder seed is maintained by Jacklin Seed by Simplot. Seed propagation is limited to three generations of increase; if Inferno contributes to the development of a cultivar or is used for other research purposes. Seed requests are to be documented in the National Plant Germplasm System (NPGS), but no seed will be distributed by the NPGS without written permission from the corresponding author for all seed requests. Inferno has been granted Variety Protection for ‘Rebel’ (Funk, 1991). Contact the corresponding author for all seed requests. Recipients are asked to recognize the source if Inferno is used in the development of a cultivar or is used for other research purposes. Seed requests are to be documented in the National Plant Germplasm System (NPGS), but no seed will be distributed by the NPGS without written permission from the corresponding author for all seed requests.

References


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