birdsfoot trefoil cultivar with a diverse genetic background that should provide the resiliency to adapt to different environments within the North Central region. Norcen yielded about 6.0% more dry matter than the check cultivar ‘Leo’ when evaluated over 35 test years in 11 states. In Minnesota, Norcen was the highest in seed yield, but was somewhat less winter-hardy than Leo and ‘Carroll’. It flowers somewhat earlier than Carroll, but later than ‘Viking’. Preliminary data indicate that Norcen is adapted also to the northeastern region of the USA.

Prebreeder (Syn 1) seed of Norcen was synthesized by mixing equal (1.5 g) quantities of polycross seed from each of the nine parental clones. Syn 2 seed was produced in 1975 at Rosemount from bulked seed produced on several hundred plants grown in isolation. Breeder seed (Syn 3) was produced under isolation near Roseau, Minn. in 1977 and 1978. Three generations of seed increase will be allowed beyond breeder seed: foundation, registered, and certified. Allowable number of harvest years shall be: a) breeder seed—2 years, b) foundation seed—3 years, c) registered seed—4 years, and d) certified seed—5 years. No field can produce more than five seed crops regardless of class of seed planted.

Prebreeder and breeder seed will be maintained by the Dep. of Agronomy and Plant Genetics, Minnesota Agric. Exp. Stn. The Minnesota Crop Improvement Assoc., St. Paul, MN 55108, will produce and distribute foundation seed of Norcen. Orders for foundation seed will be accepted through 15 December of each year. Foundation seed orders shall be placed with the Foundation Seed organization of the state in which the purchaser lives. (i.e., Iowa growers should place orders with Iowa CAD who will order from Minnesota Crop Improvement Assoc.) When orders exceed available foundation seed, amounts provided will be prorated.

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References and Notes


ELIAS ANNUAL CANARYGRASS

ELIAS annual canarygrass (Phalaris canariensis L.) (Reg. No. 87) was released by the Minnesota Agricultural Experimental Station on 15 Feb. 1983. It is named in honor of Elias B. Herseh, pioneer canarygrass grower and Honorary Director of Minn-Dak Growers’ Association. Elias was selected at Rosemount, MN as a single plant in a spaced-plant nursery of selections from PI 170622. Annual canarygrass is a grain crop used for bird feed.

Elias (Minn. 4) was compared with ‘Alden’ and ‘Keet’ in cultivar trials from 1979 through 1982 at Rosemount, Crookston, and Stephen, Minn. Elias exceeded Alden and Keet in seed yield and test weight at all three locations, and its average yield of 1707 kg/ha exceeded that of Keet by 11% and that of Alden by 27%. Its test weight of 664 kg m⁻³ was the highest of the three cultivars. Seed weight of 0.008 g was slightly heavier than that of Alden or Keet. Elias was equal in lodging resistance to Keet and was the same as Alden in height and maturity.

Elias is uniform in appearance and has compact, oval-shaped, spikelike panicles. The panicles retain seed firmly so that shattering losses are usually small. Plants head about 64 days after planting and mature about 104 days after planting. Height at maturity is about 91 cm. The seeds (florets) are cream-colored, and the caryopses are brown. Seed classes of Elias will include Breeder, Foundation, Registered, and Certified. Breeder seed will be maintained by the Minnesota Agric. Exp. Stn., St. Paul, MN 55108.

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References and Notes


RELIANT HARD FESCUE

‘RELIANT’ hard fescue (Festuca longifolia Thuii) (Reg. No. 25) is a 43-clone synthetic cultivar developed and released by Lofts Seed, Inc., using germplasm obtained from the New Jersey Agriculture Experiment Station. Lofts FL-1 was the experimental designation of Reliant. The first certified seed was produced in western Oregon in 1981.

The parental germplasm of Reliant hard fescue was developed by screening over 30 000 seedlings for resistance to the powdery mildew disease incited by Erysiphe graminis D. C. Cultivars of European origin and germplasm accessions collected from old turfs were used. Over 3700 powdery-mildew-resistant seedlings were selected and established in a spaced-plant field nursery. Immediately before anthesis, 138 plants were selected and transferred to isolated nurseries for cross-pollination. Selection was based on freedom from disease, an attractive, bright, medium dark green color, a lower turf-type growth habit, uniform maturity, and high seed yield potential. Seed from each plant was subsequently planted in individual turf evaluation plots subjected to frequent mowing at 2 cm. Seedings were subsequently selected from turf plots having the best overall performance ratings and subjected to a second cycle of greenhouse screening for powdery mildew resistance.

Nearly 2000 attractive powdery-mildew resistant seedlings were selected during greenhouse evaluation and transferred to a spaced-plant field nursery. Prior to anthesis, the most attractive plants with the best performance records were removed from this nursery and transplanted to an isolation block for the production of breeder’s seed.

Reliant is a leafy, persistent, turf-type hard fescue capable of producing an attractive, dense, low-growing, fine-textured turf with limited or no supplemental irrigation and fertilization. Reliant has shown good winter hardiness and improved summer performance in New Jersey trials. It has shown improved resistance to prevalent races of powdery mildew, anthracnose incited by Colletotrichum graminicola (As.) Wils, netblotch caused by Helminthosporium dictyoides Drechsler and red thread caused by Laetisaria fuciformis (McAlpine) Burdsall.

Reliant has performed well in full sun and in light to moderate shade in most areas where fine fescues are well adapted. It appears to be especially useful on poor infertile soils or on areas where supplemental irrigation and fertilization are not practical.