 Registration of ‘Crenshaw’ Creeping Bentgrass

‘Crenshaw’ creeping bentgrass [Agrostis stolonifera L. var. palustris (Huds.) Farw.; syn. Agrostis palustris Huds.] (Reg. no. CV-6, PI 576152) has dark green color and good summer performance and quality in the southern USA. Crenshaw, identified as Syn3-88 during development and evaluation, was released by the Texas Agricultural Experiment Station, Texas A&M University System, in April 1993.

Crenshaw is a six-clone synthetic cultivar. The parental clones were selected from plants that survived environmental stresses under golf course conditions. Five parental clones originated from germplasm obtained from the University of Arizona; the sixth originated from collection in Texas. Crenshaw shares three parents in common with the cultivar SR1020. Ninety-two vegetatively propagated clones of bentgrass were planted in a replicated trial on a putting green surface in Dallas, TX, in 1985. Vegetative propogules of the 50 clones with the highest turf quality and persistence through the summer of 1985 were planted in a replicated seed production nursery in the fall of 1985 at Tangent, OR. The six parental clones were physically isolated at Tangent, OR, in January 1988, with first seed harvested in August 1988. Selection of parental clones was based on medium to high turf quality performance, including density, texture, color, and persistence in Dallas, and floral nicking, seed head number, plant spread, plant morphology, and seed yield in Oregon.

First planted in turf trials at Dallas, TX, and Augusta, GA, in 1988, Crenshaw had significantly more tillers than ‘Penncross’, and similar leaf texture. Crenshaw exhibited a more erect leaf orientation than Penncross. Crenshaw had significantly higher turf quality ratings than Penncross and ‘Pennlinks’ at Dallas, TX, in the summer of 1988, and higher turf quality ratings than Penncross and Pennlinks in the summer of 1989 at Augusta, GA. In the National Turf Evaluation Program (NTEP) trials in Florida, Crenshaw had significantly better disease resistance in 1990 to a combined disease complex of pythium blight (caused by Pythium spp.) and dollar spot (caused by Sclerotinia homeocarpa F.T. Bennett) than the other 22 entries. Crenshaw has been tested in replicated trials in Costa Mesa, CA; Atlanta, GA; Augusta, GA; West Palm Beach, FL; Chattanooga, TN; and Dallas, TX. More than 245 observations comparing numerous cultivars of creeping bentgrass for various agronomic and turf quality traits have been recorded since 1988. Crenshaw was not significantly different from the top entry (equates to Turf Performance Index) 92.7% of the time as compared with Penncross (65.7%), Pennlinks (69.4%), and SR1020 (84.1%). Crenshaw is reported to be tolerant to rhizoctonia blight (caused by Rhizoctonia solani Kühn) and pythium blight (3,4). Crenshaw is susceptible to dollar spot (2). Crenshaw exhibits better summer density and persistence than Penncross (1).

Crenshaw is a fine-textured, upright creeping bentgrass with dark green color. Up to 20% of the inflorescences may not close completely after pollination. Crenshaw is recommended for use in areas where creeping bentgrass is well adapted for golf-course putting greens, fairways, and tees, and for other areas where a high-quality, closely mown turf is desirable. Crenshaw is also recommended for use in the southern and transition regions of the United States where bentgrass is adapted.

Crenshaw yields 500 kg seed ha⁻¹ in the year of establishment, and 1000 kg seed ha⁻¹ in the second and third harvest years. Breeder seed of Crenshaw will be maintained by Foundation Seed Services, Texas A&M University, College Station, TX 77843-2474. Three generations of seed increase from breeder seed will be permitted, to include one each of foundation, registered, and certified. United States Plant Variety Protection (Application no. 9400015) has been applied for.

References and Notes

1. Cato is identified as Syn4-88 during development and evaluation. Cato exhibits good summer performance and quality. Cato was developed to extend the range of adaptation of creeping bentgrass into the southern USA. Cato was identified as Syn4-88 during development and evaluation.

2. The parental clones were selected from plants that survived environmental stresses under golf course conditions. Two parental clones originated from germplasm collected in Michigan, and four clones originated from collections in Texas. Ninety-two vegetatively propagated clones of bentgrass were planted in a replicated trial on a putting green surface in Dallas, TX, in 1985. Vegetative propogules of the 50 clones with the highest quality and persistence throughout the summer of 1985 were planted in a replicated seed production nursery in the fall of 1985 at Tangent, OR. The six parental clones were physically isolated at Tangent, OR, in January 1988, with first seed harvested in August 1988.