Registration of ‘Silver Dollar’ Perennial Ryegrass

‘Silver Dollar’ perennial ryegrass (Lolium perenne L.) (Reg. no. CV-245, PI 639896) was released by Pure-Seed Testing, Inc., Hubbard, OR, in October 2003. Pure-Seed Testing, Inc. developed Silver Dollar with the assistance of the New Jersey Agricultural Experiment Station at Rutgers University, New Brunswick. Silver Dollar was tested as PST-2J$. The first Certified seed was produced in 2004.

The original parents of Silver Dollar were selected for their excellent dollar spot (caused by Sclerotinia homoeocarpa F.T. Bennett) resistance. A perennial ryegrass turf evaluation trial was seeded at Adelphia, NJ during the late summer of 1998. During the late summer of 2000, plots of six Pure-Seed Testing, Inc. experimental progenies showed little or no damage from dollar spot under high disease pressure. Plugs were dug from these plots and sent to Pure-Seed Testing, Inc. in Oregon during August 2000. The plugs were divided into individual plants, which were subsequently transplanted into an isolated 1500-plant nursery near Hubbard.

During the spring of 2001, 41 dark green, low-growing plants with no visible symptoms of stem rust (caused by P. graminis Pers.:Pers.) were selected from this nursery and transplanted, before anthesis, into an isolated polycross designated 2J$. The plants were allowed to interpollinate and seed was subsequently harvested from each plant during the summer of 2001.

Seed harvested from 27 plants with high floret fertility and stem rust resistance, in the 2J$ polycross, was used to establish an isolated 2850-plant nursery near Hubbard during the fall of 2001. During the spring of 2002, plants were removed from this nursery to increase uniformity of plant type and maturity and to remove plants with visible symptoms of stem rust. Remaining plants interpollinated and seed was subsequently harvested from 376 plants to produce Breeder seed of Silver Dollar during the summer of 2002.

The plants that produced the Breeder seed of Silver Dollar traced their maternal parents to the following sources: 88% to PST-2BR, which was developed into ‘Citation Fore’ (Fraser et al., 2004); 5% to PST-2JH, which was a population selected for heat tolerance and summer disease resistance (brown patch [caused by Rhizoctonia solani Kühn] and gray leaf spot [caused by Pyricularia grisea (Cooke) Sacc.] near Rolesville, NC; 5% to PST-2M4, which was a population that traced to ‘Manhattan 3’ (Rose-Fricker et al., 2002), and 2% to an unidentified source.

Silver Dollar has shown excellent turf quality in trials in Oregon, California, New Jersey, and North Carolina (Rose-Fricker et al., 2005; Rose-Fricker et al., 2004). Silver Dollar has shown resistance to crown rust (caused by Puccinia coronata West.) and is recommended for sports turf, home seeding of dormant bermudagrass (Cynodon dactylon). Seed propagation of Silver Dollar is limited to research, testing, demonstration, and limited quantities of increase from Breeder seed: one ear. Registered, and Certified. Breeder seed is maintained by Pure-Seed Testing, Inc. in Oregon.

Limited quantities of seed are available for research purposes from the corresponding author (crystal@pureseedtesting.com). Agreement must be signed that evaluator will not make use of germplasm for selecting, crossing, increasing, or commercial purposes. Seeds have been deposited in the National Plant Germplasm System. Seed will be available for the NPGS 20 yr after U.S. Plant Variety Protection (PVP) is granted. Application has been made for protection: application no. 200600068 is pending).

References


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