‘GolfStar’, a Turf, Ornamental, and Reclamation Cultivar of North American Native Idaho Bentgrass

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Plants uncharacteristic of the cultivar were rogued before anthesis in 1994, removing 20% of the population.

The best way to simplify the breeding history of ‘GolfStar’ is to examine each of its six parent lines:

- **92-1549** originated in 1989 as accession 89-0848, collected by boat from the shores of Killarney Lake, near Harrison, Idaho. A plant selected from a spaced planting of 89-0848 progeny was used as one of nine clones in polycross 90-8010, which was grouped for fine texture, low density, dark color, and medium maturity. Seed from the 89-0848 plant was designated 90-0606, and was evaluated in a 1991 turf trial. A selection from 90-0606 was later entered as one of nine plants in 1992 polycross 92-8004, grouped based on the Poa-like characteristics of the spaced plants, and its seed characteristically lacks a palaec. Plants of ‘GolfStar’ flower in mid-July (in Idaho) at a height of 0.5 m, with a brilliant purplish-red color.

- **92-1163** originated from accession 89-0945, which was found in 1989 growing near the same location as accession 89-0945. A plant selected from 89-0945 was designated 90-0638 and was used as one of 28 clones in polycross 90-8013, which was grouped for very fine texture, prostrate seedheads, and early maturity. Seed from 90-0638 was evaluated in a 1991 turf trial. A selection from 90-0638 was entered into polycross 92-8002 (described above) in 1992. Seed from this clone was designated 92-1097.

- **92-1165** originated from accession 89-0963, which was found in 1989 growing near the same location as accession 89-0945. A plant selected from 89-0963 was designated 90-0641 and was entered into polycross 92-8004 (described above). The resulting seed was designated 92-1231.

- **92-1543** also originated as a progeny of 89-0848 and was entered in polycross 90-8010 (described above). In 1992, a clone selected from the progeny of 89-0848 was entered into polycross 92-8002, which consisted of 10 plants grouped together for fine leaf texture, early maturity, and prostrate seedheads. The resulting seed was designated 92-1543.

- **92-1231** also traces to 89-0848. A selected clone from 89-0848 was designated 90-0651 and was entered as one of 28 clones in polycross 90-8012, based on fine texture, good shoot density, and late maturity. In 1992, a selection from 90-0651 was entered into polycross 92-8004 (described above). The resulting seed from 90-0651 was designated 92-1231.

- **92-1163** also traces to 89-0848, a selected clone of which was entered into 1992 polycross 92-8005. This polycross of six plants was grouped on early reproductive maturity and a moderately upright growth habit. The seed from this clone was designated 92-1163.

- **92-1097** originated in 1989 as accession 89-0945, collected near the Schlepp farm near Rose Lake, Idaho (Fig. 1). A plant selected from 89-0945 was designated 90-0638 and was used as one of 23 clones in polycross 90-8013, which was grouped for very fine texture, prostrate seedheads, and early maturity. Seed from 90-0638 was evaluated in a 1991 turf trial. A selection from 90-0638 was entered into polycross 92-8002 (described above) in 1992. Seed from this clone was designated 92-1097.

In northern Idaho, flowering of ‘GolfStar’ occurs in mid- to late July, and swathing time is usually around 1 Aug. (Table 1). At anthesis,
the cultivar has a brilliant purplish-red panicle color. By swathing time, heads turn a rusty tan color, while the underlying foliage remains mostly vibrant green. Idaho bentgrass is noted for its drought tolerance and persistence under low precipitation (Cronquist et al., 1977; Hitchcock, 1951).

During its breeding, ‘GolfStar’ was optimized for a 3-cm mowing height (Fig. 2). Therefore, ‘GolfStar’ is best suited for lawns, parks, golf courses, roadsides, and sports turf where the mowing height is above 2 cm. It lacks lateral stems and does not exhibit the false crowns at higher mowing heights associated with the exotic bentgrass species (Fig. 3). Idaho bentgrass is noteworthy for its tolerance to damp shade. The cultivar may possess tolerance to heavy metal contamination (owing to its origins), but this assertion has not been empirically verified. ‘GolfStar’ was entered into the 1998 National Turfgrass Evaluation Program (NTEP) fairway/tee trial (Morris, 2002), where its performance was similar to that of colonial bentgrass, but with a generally darker leaf color. ‘GolfStar’ was the top-scoring entry in overall quality in the NTEP trial site in South Dakota. Bonos et al. (1998) found ‘GolfStar’ to be less susceptible to dollar spot (Sclerotinia homoeocarpa F.T. Bennett) than other Agrostis, and Brede (1999) found it to be equal in brown patch (Rhizoctonia solani Kuhn) resistance to leading perennial ryegrass (Lolium perenne L.) and tall fescue (Festuca arundinacea Schreb.) cultivars. ‘GolfStar’ is compatible in mixtures with fine fescue (Festuca sp.), providing an attractive “links” appearance, even at higher mowing heights. It has also been successfully tested for winter overseeding of bermudagrass putting greens, where it exhibited rapid germination and early spring transition, similar to Poa trivialis L. (Anderson and Dudeck, 1995; Kopec and Gilbert, 1995).

### Availability

Seed is produced and breeder seed is maintained by Simplot. Seed propagation is limited to four cycles of increase: Breeder, Foundation, Registered, and Certified. ‘GolfStar’ Idaho bentgrass and all germplasm derived from it are protected under U.S. utility patent 5,981,853. The experimental designation for ‘GolfStar’ was J-100.

### Literature Cited


