CROP REGISTRATIONS

Registration of ‘TennTurf’ Centipedegrass

‘TennTurf’ centipedegrass [Eremochloa ophiuroides (Munro) Hack.] (Reg. no. CV-194, PI 604793), a uniquely cold-hardy cultivar, was officially approved for release by the University of Tennessee (UT) Agricultural Experiment Station (AES) 5 May 1997. TennTurf was evaluated for 33 yr at several UT-AES sites throughout Tennessee under the experimental accession number A-84. TennTurf was not released by the UT-AES prior to 1997, but sprigs had gotten into the hands of a few sod growers who were marketing A-84 germplasm uncertified as Tennessee Hardy, a name that was tentatively assigned to A-84 in 1971. The UT-AES decided that a different name, TennTurf, was needed for the exclusive release of A-84 in 1997 to a local marketing association.

TennTurf is the most cold-hardy centipedegrass cultivar presently available. Centipedegrasses are warm-season (C4) grasses and are not generally known for cold hardiness (3,5,6). TennTurf was originally found growing in a lawn in Chattanooga, TN. TennTurf traces to a single sprig that survived winter kill and spread over an extensive area after this lawn was seeded in 1955. TennTurf was under formal evaluation as a cold-hardy strain from 1 July 1964 to May 1997 at the UT Knoxville Experiment Station (elevation 290 m), at the UT Plateau Experiment Station (elevation > 600 m), at the UT Middle Tennessee Experiment Station (elevation 230 m), and at the UT West Tennessee Experiment Station (elevation 120 m). Winter temperatures at the UT Plateau Experiment Station ranged from -17 to -31°C over 31 yr without significant loss of sod due to winter kill in TennTurf. ‘Oklawn’ centipedegrass (2), thought to be winter hardy (1,2,3), suffered total winterkill following two spring plantings at this 600-m site. TennTurf was evaluated for 8 yr at the 290-m site (UT Knoxville Experiment Station) against Oklawn, ‘AU-Centennial’, ‘Tennessee Tuff’, TC-238 experimental, TC-230 experimental, and Tifton common centipedegrass. TennTurf maintained 100% stand density over the 8 yr, while the highest density among the comparative strains was 55% for Tifton common.

DNA fingerprints clearly show TennTurf to be distinctively different from AU-Centennial, Oklawn, Tennessee Tuff, and Tifton common (8). Phylogenetic analysis using parsimony (PAUP) was conducted with these five strains, confirming the distinctively different DNA profile of TennTurf. The PAUP analysis linked Tennessee Tuff and Oklawn together and nearer in relationship to AU-Centennial and then to Tifton common, with TennTurf at the most distant branching from these. Results of DNA analysis suggest that TennTurf behaves as if it were a different species.

TennTurf is a diploid (2n = 2x = 18) (4,7) lawn-type turfgrass that is light green in color, of average growing height, well suited to poor soils, a low pH (4.5 to 5.5), and low fertility (only 49 kg N ha^-1 yr^-1). Nitrogen should be kept low and applied in the spring, P and K at a medium to high soil test, and treatments with Fe may be needed. Mow weekly at a 2.5- to 5-cm (1- to 2-inch) cutting height, and irrigate weekly in the absence of rain. TennTurf is adapted throughout the southern USA, but is particularly adapted to Tennessee. The recommended planting dates for TennTurf are from mid-April to mid-July. TennTurf is protected by DNA fingerprinting (8).

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References and Notes
9. Dep. of Ornamental Horticulture and Landscape Design, Kate Sessions Hall, 259, Univ. of Tennessee, 2431 Center Dr., Knoxville, TN 37996. Registration by CSSA. Accepted 30 Nov. 1998. *Croppipe (1)callahan@utk.edu
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Registration of ‘Santiam’ Hop

‘Santiam’ hop (Humulus lupulus L.) (Reg. no. CV-194; PI 604793) was developed and jointly released by USDA-Agricultural Research Service, Oregon State Agricultural Research Centers of Oregon, and the University of Idaho on 9 Mar. 1998 for its excellent aroma characteristics, high yield, and the seedless condition due to its triploid condition.

Santiam originated from a 1988 cross between ‘Tettnanger’ (USDA 61021; 2n = 2x = 20) and the female ‘English Early Green’ (6,7). Santiam was selected from a cross between tetraploid ‘Hallertauer-Mittelfruh’ (USDA 121397) and the male hop, USDA 64035M (2n = 4x = 40). USDA 64035M was selected from a cross between triploid ‘Hallertauer-Mittelfruh’ (USDA 121397) and the male hop, USDA 21381M is a selection from the cross of ‘Cascade’ (USDA 64035M) (1,2,3). The genetic composition, as calculated from its breeding pedigree, is 1/2 ‘Tettnanger’, 1/2 ‘English Early Green’, and 5/64 unknown German aroma hop (possibly ‘Saazer’ and/or ‘Tettnanger’). The above-named × tetraploid cross produced the triploid (2n = 3x = 30) selection 8802-68, which was conspicuous because of its high yield potential and European-type aroma characteristics.

‘Santiam’ hop is a cultivar with improved aroma characteristics and yield potential. It is protected by DNA fingerprinting (8).

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