

BENTGRASS BREEDING

PENNSYLVANIA STATE UNIVERSITY
University Park, Pennsylvania

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(ongoing support since 1958)

Creeping Bentgrass

Second cycle reselections were made on 24 Penncross lines (northern selections), 24 Penncross (southern selections), 22 very close cut putting green selections, and 22 fairway bents. Seed increase and yield trials were Oregon established for 25 experimental lines.

Two seasons of triplex mowing at 3/8 inch with and without baskets were completed on Penncross, Penneagle, Pennlinks, and Seaside originally seeded into Poa annua infested area. First year treatments with growth regulator treatments applied fall, spring, or combination completed. Fairway turf quality and Poa annua competition in descending order of Penneagle, Pennlinks, Penncross, and Seaside. Paclobutrazol Poa inhibition excellent in combination with management treatments.

Modification of 17,000 sq. ft. area in progress as both soil-less and high sand media for creeping bent varietal and management studies.

Electrophoresis varietal identification utilizing both standard gel and phast systems in progress on 55 Agrostis cultivars, commercial and experimental.

Colonial Bentgrass

Rhizome screening program continued on progeny of over 1,000 advanced generation selfed and open pollinated lines and sibs, and new selections.

Complete somatic tissue culture system from seed explants of A. tenuis and A. castellana was developed. Previous attempts with A. tenuis by other researchers were reported failures. There were no previous reports with A. castellana. Attempts to produce haploid plants of A. castellana through anther culture resulted in no callus growth.

Studies to enhance earliest possible floral induction and initiation of A. tenuis and A. castellana well under way. A threshold temperature of below 24 degrees centigrade in combination with short day treatment necessary. Acceptable flowering possible in 11 weeks from germination of seed.