Creeping Bluegrass Research Program

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We continue, with our limited resources, to make slow progress on the creeping bluegrass improvement project. We continue to try to track some of the effects of the light intensity by cold interaction in the vernalization process of new materials. This can be a critical step in preparing materials for seed increase. Two plantings of 580 individual plants each of 10 advanced selections were established in OR for a seed trial and increase. Seed was harvested from 35 plots in Minnesota for increase & production data. A seed harvester utilizing a rotary brush for research plots was designed and built to facilitate seed harvest from small plots.

Two plantings of 576 plants of 10 advanced selections for seed increase trials were planted in Oregon. 44 seed production plots were established for seed increase here in Minnesota at the Horticulture Research Center. A 350 entry space planting trial that included, 3500 plants, was established and seed harvested from 256 entries for 2004 planting, 25 crosses were executed in the greenhouse along with 30 open pollinated collections among parents.

Overseeding experiments on the University soccer field were initiated. Three experiments with overseeding fairways and tees were initiated (30 treatments 3 reps). Experiments on the effects of competition on performance were conducted. Investigation into control of bentgrass in Poa annua revealed that Poast resulted in complete control with no phytotoxicity in the creeping bluegrass. Fusilade, and Assure resulted in complete control but unacceptable levels of phytotoxicity were observed. Both exhibited plant growth regulator effects on Poa annua. Research was completed on the use of ISSR (Inter Simple Sequence Repeats) PCR for generating polymorphic loci for genetic research in P.annua. This will allow us to differentiate between different lines in the breeding project. We continued to cooperate with several other projects on and off campus.