IMPROVEMENT OF POA ANNUA AND POA SUPINA FOR GOLF TURF

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(fourth year of support)

The Poa annua breeding project is about to enter a two-year critical phase. Dr. White and his superb research team have laid a solid foundation for understanding the variability, reproductive biology, improvement potential, increase and identification of this unique grass. This project has always been classified as 'high risk' and now the critical field evaluation (on golf courses and at other experiment stations) of the best Poa annuas produced to date is about to begin in 1988. There is every hope of success.

The severe winter of 1986-1987 resulted in a powerful hardiness evaluation of space planted materials and identifying superior selections. Advanced generations of some selections showed highly improved hardiness characteristics.

Collections of superior material were received from California, Ohio, Wisconsin, Texas (via Oregon) and Sweden (via Canada). Materials collected in Turkey were forwarded through the USDA but have yet to be received in Minnesota.

Poa supina was generally more cold hardy than Poa annua. Perennial Poa annua materials were consistently hardier than the annual types. Stolons of some selections survived more than seven months in dark cold storage. Sibbing resulted in more seed than selfing or crossing in some genotypes. This has potentially strong implications on seed production strategies. Experiments with electrophoresis indicate there is a good possibility of identifying (fingerprinting) differences in genotype. This will be extremely important to the introduction and protection of any new variety in the future.

Potted material is already available and stolon material should be available in early 1988 for planting on golf courses and at other experiment stations. Papers dealing with stolon storage and self incompatibility were presented at the ASHS and ASA meetings in 1987.