

Annual Report - 1986

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R. I. Agricultural Experiment Station

University of Rhode Island, Kingston

During 1986, considerable effort was expended in trial evaluation of turfgrasses originating from collected materials. Among these grasses are:

1. Creeping and Velvet bentgrasses for putting green use. 81 selections. 49 plots seeded in 1982, and 32 in 1985.
2. Colonial bentgrasses. 95 selections. 50 plots seeded in 1984, and 45 seeded in 1986.
3. Lawn and general purpose grasses. These include Kentucky bluegrass, Canada bluegrass, fine fescues, tall fescues, Perennial ryegrass, sweet vernal and Timothy. 245 selections. 67 seeded in 1983, 100 in 1984, and 78 seeded in 1985.

All grass trials are maintained with less nutrients, water and pesticides than is normal.

I have collected most of these grasses from old, dry, low fertility stands of grass throughout New England and the Canadian Maritime Provinces during the past four years. Several of the bentgrasses are older collections and are in second or third stage evaluation.

A collection of sweet vernal grass has also been assembled and is being evaluated for use in extremely infertile and dry conditions. This is a naturalized grass that is widely dispersed in America. We have determined that the phenotypic diversity

within the species is great. We note great differences in texture, color, growth habit, leafiness, and disease reaction. We are currently evaluating its performance under different cutting heights and fertility levels.

During the year we have constructed an automatic rain shelter which will enable us to better evaluate grasses for drought tolerances. We will be able to grow grasses in a natural, outdoor environment with only the water that we supply.

We have an additional trial in progress to evaluate mixtures of grasses, including creeping bent, Kentucky bluegrass, fine fescue, Colonial bent and Perennial ryegrass, for fairway usage. Performance of these mixtures is being evaluated both with and without fungicides.

Seed of several dozen of the R. I. bentgrass selections were sent to Dr. Milton Engelke and Dr. Ron Ensign for additional stress evaluations.

*Turfgrass Research Trials*

*Executive Summary*

*Rhode Island*

*C. R. Skogley*

*Performance evaluation of several hundred turfgrasses, collected throughout the Northeast and increased sexually, are in progress. These are being evaluated under reduced levels of maintenance. A number of these materials appear promising and seed of several have been sent to Oregon for seed increase and production potential. It is possible that one or two creeping bentgrass selections may be nearly ready for release as improved varieties within one or two years.*

*Photographs:*

*Numbered in red.*

- 1. Creeping & velvet bentgrass putting green trials, seeded in fall, 1985. Photo in May 1986.*
- 2. Dollar spot incidence and variation in the trial seeded in fall, 1985. Photo on 10 month old stand.*
- 3. Sweet vernal trial established for evaluation of cutting height tolerance.*