

Selecting The Best Perennial Ryegrass Variety For Golf Course Fairways – The Trial At Sunnyvale Golf Course

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On most golf courses in the Northern half of the United States, the choice grass for fairway seeding is perennial ryegrass, primarily due to its seedling vigor and superior playing characteristics. Unfortunately, ryegrasses are susceptible to many turfgrass diseases, including Pythium Blight and Gray Leaf Spot. A rapid increase in use over the past several years of perennial ryegrass monostands (no other turf species included in a seed mix) has turned the latter, which had been a relatively minor disease problem of a few years ago, into the primary perennial ryegrass malady. Since 1995, Gray Leaf Spot, caused by the fungus *Puccinia grisea*, has devastated many golf courses in the Eastern and Central US. Fortunately, the disease has not yet been reported west of the Rocky Mountains; however, undoubtedly, it will not be long before we are dealing with it in California. Although some fungicides temporarily stop the disease, costs for a typical golf course using these chemicals have exceeded \$60,000 annually!

In cooperation with the GCSANC, the National Turfgrass Evaluation program, and the Sunnyvale Municipal Golf Course, we have begun a research trial at the Sunnyvale golf course to evaluate and determine the most suitable perennial ryegrass cultivars for golf course fairways, parks, sports fields, and home lawns. This research seems particularly timely given the rapid and devastating progress of ryegrass diseases including Gray Leaf Spot. We hope to collect information for Northern California golf course superintendents about varietal disease tolerance, as well as environmental suitability. Because we believe some perennial ryegrasses will possess greater natural resistance to this disease than others, we have included and established as many different varieties as we could find. Variance in disease tolerance should be quickly apparent. Our plots include all commercially available and experimental perennial ryegrass varieties. We will not purposely inoculate the disease, but wait for natural infestation. If we never get the disease (which would be fantastic!), the information we develop on performance characteristics of these varieties will still help to the California golf and landscape industries choose the most suitable cultivars for their use.

Preparation of the trial site at Sunnyvale began in early October of 1999. The plot area (110 ft. x 120 ft.) was sprayed with Roundup (donated by Mike Ravel of United Horticultural Supply) several times to kill existing weeds. The site was then tilled several times and leveled for seeding. Preplant fertilizer (donated by Chuck Dal Pozzo of the Scotts Company) was incorporated into the seedbed and the irrigation

system (including components previously donated by Mike Ginelli of West Star Distributing, and Craig Stenehiem of RV Cloud) was upgraded. On October 19, 1999, 144 commercial and experimental perennial ryegrass varieties were hand seeded at the rate of 6-lb./1000 sq. ft. in 5 ft. x 5 ft. plots, replicated 3 times, in a randomized complete block design. Seeds were lightly raked by hand and irrigated to start germination. Plot perimeters were seeded with tall fescue (donated by Dave Gilpin of Pacific Coast Seed.) Seeding took eight people three days to complete. Grass on all plots germinated successfully and established seedlings were mowed for the first time in late November.

This research will run for three to five years. During this period, plots will be irrigated as needed, using potable water. Depending on cultivar performance, we may eventually switch to irrigating with reclaimed water to evaluate their response to salinity. Plots will be mowed at 1.5 inches to 2 inches regularly. On a monthly basis, we will evaluate these varieties for various quality components and disease activity. We will summarize data annually and provide annual preliminary reports to the industry. A final report at the end of the study should provide the basis for perennial ryegrass variety recommendations for use on golf courses and other sports grounds in N. California.

We are very excited about this new project. In addition to the groups and individuals mentioned above, we wish to acknowledge on behalf of the UC Cooperative Extension the generous assistance of the following individuals:

Sunnyvale Municipal Golf Course: Curtis Black, Chris Gose, Tommy Bracamonte, Jose Medina, Fernando Velez, and Emilio Perez.

UC Cooperative Extension Volunteer: Roy Yokote

In Memoriam:

Tracy Barcelona of Becker-Underwood suddenly collapsed at his desk Thursday morning December 16th. The cause of death is believed to be either a brain aneurysm or congenital heart failure. He was 38 years old.

Tracy was very involved in both the State and Southern California chapters. A graduate of Cal Poly Pomona, Tracy spent many years with Germain's Seeds. He had recently taken the position with Becker-Underwood following work representing Allied Custom Gypsum. Tracy is survived by his wife Bonnie and two children Cameron age ten, and Haley age four.