

On-Site Fairway Overseeding Trials

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Objectives:

1. Evaluate new cultivars of overseeding grasses (i.e., perennial ryegrass, intermediate ryegrass, *Poa trivialis*), as well as blends and mixtures, on bermudagrass fairways in the southern and western United State to provide performance data for end users.

Start Date: 1999

Project Duration: 3 years

Total Funding: \$45,000

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With the initiation of on-site testing of bentgrass and bermudagrass on putting greens, interest is now increasing for the evaluation of other grasses used on golf courses. Grasses are needed that provide exceptional playing surfaces with less pesticides, fertilizer and water. Therefore, grasses that have superior drought, cold, heat, disease and insect resistance need to be identified.

Overseeding bermudagrass fairways is a common practice throughout the southern half of the United States. Millions of pounds of seed are bought and sown each autumn on golf courses in this region. Golf course owners, managers and superintendents seek grasses that establish quickly, exhibit excellent playability, are aesthetically pleasing, and require less inputs.

This on-site testing program will provide scientific information about cultivars for overseeding. The evaluation trials are jointly sponsored by the Golf Course Superintendents Association of America (GCSAA), the USGA Green Section and the National Turfgrass Evaluation Program (NTEP).

Ten evaluation trial sites were chosen. Trials are positioned strategically in the following areas: southern California; Arizona; Houston, TX; Dallas, TX; Mississippi; central Florida; Myrtle Beach, SC; Virginia; Atlanta, GA; and St. Louis, MO.

Trials are conducted with named cultivars and commercially available blends or mixtures. The trials are located on active play sites where golfers hit fairway golf



Dr. Kimberly Erusha and Jim Latham observe an on-site overseeding test at Grand Cypress Golf Resort in Orlando, Florida.

shots and/or drive golf carts. Plot size is large (5'x 20') and replicated three times. Data from 1999-2000 was compiled and published on the NTEP web site. Variety performance varied from location to location, however, general trends emerged.

The perennial ryegrass entries, in general, provided the highest quality turf averaged over the entire season. The *Poa trivialis* entries and perennial ryegrass/*Poa trivialis* mixtures were slower to establish and lighter green in color. This reduced their quality ratings at most locations, but at two locations, other factors such as reduced *Poa annua* invasion, put the *P. trivialis* entries on top.

Turfgrass quality ratings averaged over the entire season yielded small levels of significance at most locations. In other words, at most sites, one-half to two-thirds of the entries performed statistically similar to the top entry. The data do reveal, however, differences in spring transition from the overseeding grass to bermudagrass.

The annual ryegrass and intermediate ryegrass entries transitioned faster than the most perennial ryegrass entries. At some sites, the entries that contain *P. trivialis* transitioned back to bermudagrass faster

than perennial ryegrass. At other sites, the opposite was true, the perennial ryegrasses disappeared quicker in spring than *P. trivialis*. At a couple of locations, the *P. trivialis* and perennial ryegrass entries transitioned in a similar manner. This leads us to believe that this transition phenomenon is highly weather-related.

Summary Points

- Interest is increasing for the evaluation of grasses on golf courses.
- Data from ten evaluation sites comparing named cultivars and commercially available blends and mixtures was compiled and published in hard copy and on the NTEP web site.
- In general, perennial ryegrass entries provided the highest quality turf averaged over the entire season.
- Poa trivialis* entries and perennial ryegrass/*P. trivialis* mixtures were slower to establish and lighter green in color.
- At most sites, one-half to two-thirds of the entries performed statistically similar to the top entry.
- Annual ryegrass and intermediate ryegrass entries transitioned faster than perennial ryegrass entries at some locations.
- Speed of transition was dependent on local weather.