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
(Co-funded with NTEP and GCSAA)

Performance of overseeding grasses is being done on actual golf course fairways where they are subject to the wear and tear of golf play.

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 exceptional playability, are aesthetically pleasing and require less inputs. This on-site testing program is providing scientific information of a more applied nature about cultivars for overseeding.

The evaluation trials are jointly sponsored by the Golf Course Superintendents Association of America (GCSAA), the United States Golf Association (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 shots and/or drive golf carts. Plot size is large, 5' x 20', replicated three times.

Variety performance varied from location to location, as it did in 1999-2000, however, general trends emerged. Again this year, the perennial ryegrass entries, in general, provided the highest quality turf averaged over the entire season. Turfgrass quality ratings of the perennial ryegrasses averaged over the entire season yielded small levels of significance at five locations. At two locations, there was no statistical difference among any entries for overall quality. Therefore, at most sites, one-half or more of the entries performed statistically similar to the top entry.

The *Poa trivialis* entries and perennial ryegrass/*Poa trivialis* mixtures were again slower to establish, reducing their quality ratings at most locations. However, at three locations, due to other factors, the *Poa trivialis* entries finished on top, complicating our ability to predict where *Poa trivialis* may be used effectively.

Similar to last year, the annual ryegrass and intermediate ryegrass entries transitioned faster than the most all perennial ryegrass entries. At some sites, the entries that contain *Poa trivialis* transitioned back to bermudagrass faster than perennial ryegrass. At other sites, the opposite was true, the perennial ryegrasses disappeared quicker in spring than *Poa trivialis*. At a couple of other locations, the *Poa trivialis* and perennial ryegrass entries transitioned in a similar manner. This is the second year we have seen these discrepancies leading us to believe that the transition phenomenon is highly weather and management related.

Summary Points

- Variety performance varied from location to location, as it did in 1999-2000.
- Perennial ryegrass entries, in general, provided the highest quality turf averaged over the entire season.
- Turfgrass quality ratings of the perennial ryegrasses averaged over the entire season, yielded small levels of significance at five locations. At two locations, there was no statistical difference among any entries for overall quality.
- The annual ryegrass and intermediate ryegrass entries transitioned faster than the most all perennial ryegrass entries.
- At some sites, the entries that contain *Poa trivialis* transitioned back to bermudagrass faster than perennial ryegrass. At other sites, the opposite was true, the perennial ryegrasses disappeared quicker in spring than *Poa trivialis*.
- This is the second year we have seen these discrepancies in transition leading us to believe that the transition phenomenon is highly weather and management related.