

On-Site Putting Green Variety Trial

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National Turfgrass Evaluation Program

Objectives:

1. To evaluate cultivars of bermudagrass and creeping bentgrass on participating golf courses for use as putting green turf and provide comparative performance data for end users.

Start Date:

Project Duration:

Total Funding:

(Co-funded with NTEP and GCSAA)

Many new bentgrass and bermudagrass cultivars have been commercialized in the last few years, however, there is a lack of research data on their performance under intensively managed putting green conditions. Therefore, this research evaluates these grasses on golf course putting or chipping greens built to USGA specifications. This research differs from evaluations conducted at university research stations because the greens are used by golfers for practice putting and/or chipping.

The evaluation trials are jointly sponsored by the Golf Course Superintendents Association of America, the USGA Green Section, and the National Turfgrass Evaluation Program. Trial sites are located on golf courses near a land grant university with a turfgrass research program or in a major metropolitan area which is readily accessible to a university turfgrass scientist. Sixteen evaluation trial sites have been established. Bentgrass trials were all seeded in fall, 1997, with one exception. Bermudagrass trials were planted using vegetatively propagated material in June, 1998.

Bentgrass Again, this year, data was reported from each location separately and not summarized over all thirteen locations, as in standard NTEP reports. The entry 'Penn A-4' was again the most consistent top-performer having the highest or second (or tied for) highest mean turfgrass quality rating at twelve of the thirteen sites in 1999. 'Penn A-1' was also a consistently good performer finishing number one or two (or tied) for mean turfgrass quality at eight locations. 'Century' continued its good performance



Dr. Ali Harivandi discusses the on-site putting green trial with a large group of superintendents in northern California.

with quality ratings in the top statistical group at seven sites but this was less than the twelve sites in 1998. Differences in color and density seemed to contribute considerably to quality performance. Again, this is consistent to what we observe in our official NTEP trials conducted at universities. Stimpmeter readings again showed little or no statistical differences among the cultivars.

Bermudagrass At all seven remaining locations (one location - St. Charles, MO, suffered severe winter kill), 'Mini-Verde' performed in the top statistical group for mean turfgrass quality. 'Champion' was in the top statistical group at five locations, 'TifEagle' - four locations, 'MS-Supreme' and 'Floradwarf' - two locations each. 'Mini-Verde' has been the most consistent top-performer to date with 'Champion' and 'TifEagle' following closely.

Genetic color, density, leaf texture, spring greenup and Stimpmeter ratings were collected at several locations. In addition, one location collected data on overseeding quality and another collected thatch measurements. This information will be important as these varieties age and are more affected by management and cultural practices.

In June, 2000, turfgrass performance of the bermudagrasses declined significantly at the Mobile, AL. The decline was attributed to high nematode populations. 'Tifgreen' had an average root knot population of over 120 per 100 cm³ of soil.

All other cultivars, except 'Floradwarf', had average root-knot numbers of 55-90 per 100 cm³ of soil. 'Floradwarf' was the only cultivar to have high numbers of lance nematodes (over 100 per 100 cm³ of soil). Although the data has not yet been statistically analyzed, there appears to be considerable cultivar differences for nematode infestation and susceptibility.

Summary Points

- The entry 'Penn A-4' was again the most consistent top-performer having the highest or second (or tied for) highest mean turfgrass quality rating at twelve of the thirteen sites in 1999. 'Penn A-1' was also a consistently good performer finishing number one or two (or tied) for mean turfgrass quality at eight locations.
- 'Champion' was in the top statistical group at five locations, 'TifEagle' - four locations, 'MS-Supreme' and 'Floradwarf' - two locations each. 'Mini-Verde' has been the most consistent top-performer to date with 'Champion' and 'TifEagle' following closely.