

USGA GREEN SECTION RESEARCH PROGRAM

ANNUAL REPORT

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PROJECT TITLE:

Evaluation of Warm-Season Grasses for Putting Greens
USGA ID#: 2013-17-478

PROJECT LEADER

Kevin Morris, Executive Director
National Turfgrass Evaluation Program (NTEP)
BARC-West, Bldg. 005, Rm. 307
Beltsville, MD 20705

START DATE

2013

PROJECT DURATION

Five years

TOTAL FUNDING

\$90,000

SUMMARY TEXT

With the increased interest in the use of bermudagrass on greens, a project was developed to evaluate three warm-season grass species on USGA specification putting greens at eleven locations across the southern and mid-western U.S. Trial sites include university locations (7) and golf courses (4). The trial parameters dictate a higher mowing height and a less intensive management regime as compared to typical ultradwarf bermudagrass management, while targeting green speeds of 9-10 feet.

The trial consists of twenty-eight total entries, with fourteen bermudagrass, eleven zoysiagrass and two seashore paspalum entries. Trials were planted anywhere from mid-June to mid-August 2013. As explained last year, winter injury from 2013-14 was significant at some

locations. This winter injury caused NTEP to replant some or all entries at four locations in summer 2014. The winter of 2014-15 was also colder than normal in some locations, which delayed some entry development and hence, collection of some of the more advanced data parameters. Also, various issues led to the unfortunate abandonment of the trial at Tequesta, FL.

In 2015, several experimental bermudagrass entries performed equal to, or better than our standard entries 'Tifdwarf', 'Tifeagle' and 'Mini-Verde' at some locations. 'MSB-264' and 'MSB-285' have performed very well thus far at several of the more southern locations. Other experimentals such as '08-T-18', '11-T-861', 'FAES 1302' and 'OKC 16-13-8' have shown good turf quality at several locations. And the new commercial cultivar 'Sunday' has finished in the top turf quality statistical group at eight of the ten locations. Significant differences in genetic color, density, leaf texture and fall color retention were noted among entries, which largely led to the quality ratings separation.

For zoysia in 2015, several experimental entries produced turf quality that rivaled many of the bermudagrasses. 'DALZ 1308' was one of the best zoysia entries in 2015, finishing in the top statistical group at every location, including the most northern location (Bloomington, IN). Other entries, such as 'DALZ 1306', 'DALZ 1307' and 'DALZ 1309', were consistent performers. Commercially available 'L1F' was a top performer at a few southern locations. It is possible that several of these entries may end up as suitable alternatives for bermuda on lower input greens in the southern to mid-central U.S.

The two seashore paspalum entries demonstrated excellent establishment and reasonable quality thus far. 'UGA 1743' and the standard entry 'SeaDwarf' performed very similarly at almost locations in 2015. Also, as expected, both seashore paspalum entries died at the northern locations of Lexington, KY and Bloomington, IN.

Ball roll measurements were collected at most locations in 2015. However, only two locations (Jay, FL and Mississippi State, MS) recorded 100 inches of roll using the stimpmeter on at least one rating date. Only the bermuda entries 'Tifeagle', 'FAES 1302' and 'CTF-B10' achieved ball roll distances of at least 100 inches at both locations. None of the zoysia or seashore paspalum entries rolled at least 100 inches, however, that could be due to differences in management needs.

SUMMARY POINTS

- At some locations in 2015, several new or experimental bermudagrasses provided turf quality equal to or better than established standards 'Tifdwarf', 'Tifeagle' and 'Mini-Verde'.
- Several zoysia entries produced turf quality rivaling the best bermuda entries. The two seashore paspalum entries performed similarly in 2015, and as expected, both entries did

not survive winter in the most northern sites.

- Ball roll data showed only a few bermuda entries with distances of least 100 inches under this medium maintenance regime.
- No seashore paspalum or zoysia entries produced a ball roll measurement of 100 inches on at least one rating date at any location. The maintenance practices for these two species may require adjustment for the 100-inch threshold to be achieved.

