

2003 NTEP Bentgrass (Fairway/Tee) Test

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Objective

To evaluate commercial and experimental varieties of creeping and colonial bentgrasses under fairway/tee maintenance conditions in central Indiana.

Rationale

Creeping bentgrass is widely used on golf course fairways and tees that are maintained under 0.5 inches. With new cultivars in the experimental stage and becoming commercially available, the need for regional testing becomes apparent. By determining the performance of the 28 varieties, we will be able to offer sound information on which varieties of bentgrass have potential for Indiana.

How It Was Done

Twenty-one varieties of creeping bentgrass and 7 varieties of colonial bentgrass were seeded on 12 Sep 2003 at the William H. Daniel Turfgrass Research and Diagnostic Center on a silt loam soil. Seeding rate was 1.0 lbs per 1000 ft² and seed was spread using a hand shaker jar. After seeding the experiment was lightly raked and a starter fertilizer (8-22-16) was applied at the rate of 1.5 lbs P₂O₅ per 1000 ft². The area was covered with a germination blanket following seeding to prevent washing of seed and mixing of varieties.

Plots were maintained under a typical fairway maintenance regime. The mowing height was 0.5 inches, mowed 3x per week. The annual fertilization was 3.0 lbs. N per 1000 ft² with 1 lb applied in mid-May, 1 lb in mid-September, and 1.0 lb. in early November. Irrigation was applied to prevent any sign of stress.

Data collected in 2008 included genetic color, spring greenup, dollar spot resistance, *Poa annua* invasion, mowing quality and visual quality ratings from April to October. All data taken were visual observations of turf characteristics and performance. Color and greenup were rated on a scale of 1 to 9 where 1 = light green and 9 = ideal dark green. Dollar spot resistance was rated visually on a scale of 1 to 9 where 1 = susceptible and 9 = resistant. *Poa annua* invasion was rated visually on a scale of 1 to 9 where 1 = maximum and 9 = none. Mowing quality was rated on a scale of 1 to 9 where 1 = severe scalping and 9 = no scalping. Visual quality ratings were taken using a scale of 1 to 9 with 1 = no living turf, 5 = acceptable turf, and 9 = ideal turf.

Results to Date

- Cultivars are listed according to their mean visual quality for 2004 through 2008. There are no statistical differences in the mean visual quality among the top 8 cultivars (Table 1). Cultivars are listed by decreasing mean quality for 2004 through 2008.
- When making cultivar selections, it is best to consult the NTEP web page at www.ntep.org for complete performance data from around the country on cultivars, placing special emphasis on how cultivars perform in IN, IL, KY, MI and/or OH (depending if you are located in northern, central, or southern IN) under the specific maintenance regime you intend for that grass.

Results to Date

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Table 1. Visual quality, color, greenup, dollar spot and *Poa annua* infestation of 28 bentgrass cultivars growing under fairway/tee maintenance in 2008 and overall study mean quality from 2004 through 2008.

Cultivar	Visual quality ^a								Genetic color ^b	Spring greenup ^c	Dollar Spot resistance ^d	<i>Poa annua</i> ^e	Mowing Quality ^f	Overall Study Mean Quality
	April	May	June	July	Aug	Sep	Oct	Mean						
T-1	7.3	7.3	7.0	7.0	6.7	7.3	7.3	7.1	8.3	5.0	6.0	7.3	7.3	7.1
13-M	7.7	7.7	7.0	7.3	7.3	7.7	7.7	7.5	7.0	4.7	7.7	7.3	8.3	7.0
LS-44	6.3	6.3	7.0	7.3	7.7	7.3	7.3	7.0	8.3	4.3	6.7	6.7	9.0	6.9
Penneagle II	6.7	6.7	7.0	7.0	6.7	7.3	7.7	7.0	6.7	4.0	7.0	7.3	7.3	6.9
Crystal BlueLinks	7.0	6.7	6.7	7.3	7.3	7.3	7.0	7.0	6.7	4.3	7.3	7.0	8.7	6.8
Alpha	6.3	7.0	7.0	7.3	8.0	7.7	7.7	7.3	7.0	5.0	6.7	7.3	8.7	6.8
Declaration	7.7	7.0	6.7	7.3	6.0	6.7	7.3	7.0	6.7	4.3	8.7	7.7	7.0	6.7
Shark	7.0	7.3	7.3	6.3	6.0	6.0	6.3	6.6	6.7	4.0	6.0	8.0	6.3	6.7
L-93	7.0	6.0	6.3	6.3	6.3	7.0	7.0	6.6	6.7	5.0	7.7	7.7	8.3	6.6
Independence	7.7	7.0	7.7	6.7	5.3	6.3	6.7	6.8	6.3	5.0	5.7	7.3	6.7	6.6
Authority	7.0	6.3	6.7	6.3	5.7	6.0	6.3	6.3	6.7	4.3	7.3	7.3	7.3	6.5
Kingpin	6.3	6.7	6.0	6.7	6.7	6.3	7.0	6.5	7.7	4.0	7.0	7.3	7.7	6.5
Bengal	6.7	5.3	6.7	7.3	8.0	7.7	7.7	7.0	7.0	4.7	6.3	7.3	9.0	6.5
Runner	7.0	6.7	6.0	6.7	6.0	6.0	7.0	6.5	5.7	4.0	6.7	7.7	7.3	6.3
SR1150	6.0	6.3	7.0	6.3	6.3	6.3	7.0	6.5	6.3	4.0	7.3	7.7	7.7	6.3
SR 1119	6.7	6.7	7.0	7.3	7.7	7.0	6.7	7.0	7.3	5.7	6.3	6.7	8.7	6.3
MacKenzie	6.0	5.7	6.3	6.0	4.7	5.7	6.3	5.8	7.7	4.3	7.7	7.3	6.3	6.2
Penncross	6.3	6.0	6.7	7.0	7.7	7.0	7.0	6.8	7.3	4.7	7.0	6.7	8.7	6.1
Pennlinks II	5.0	5.0	5.7	6.7	7.3	6.7	6.7	6.1	7.0	5.3	7.7	6.7	8.3	5.9
Princeville	5.0	5.7	6.0	6.7	7.7	6.7	6.3	6.3	7.3	4.7	6.0	7.3	8.7	5.7
IS-AT 7	4.0	4.0	3.3	3.7	4.0	4.0	4.7	4.0	7.3	5.3	8.0	5.3	9.0	4.5
Bardot	4.0	4.0	4.3	4.3	4.3	4.0	4.7	4.2	6.3	5.3	7.7	5.0	8.0	4.4
PST-9VN	4.0	3.3	3.3	4.3	5.0	4.7	5.3	4.3	7.3	4.7	7.7	4.7	8.3	4.3
Tiger II	3.7	3.7	4.0	4.0	3.7	3.7	4.7	3.9	6.3	5.3	7.7	5.7	8.3	4.2
EWTR	3.3	2.7	2.7	3.3	3.0	3.3	3.3	3.1	6.7	5.7	8.3	5.3	9.0	4.2
SR 7150	4.3	4.0	4.0	3.3	3.7	4.0	4.3	4.0	7.3	6.0	7.7	5.3	9.0	4.2
PST-9NBC	4.0	3.3	3.3	4.0	3.3	3.3	4.7	3.7	7.0	5.7	7.3	4.0	8.7	4.1
Seaside	3.3	2.7	3.0	4.0	4.0	3.3	3.7	3.4	7.3	5.3	7.0	5.3	8.7	3.4
LSD (0.05)	0.9	0.9	1.0	1.1	1.6	1.3	1.2	0.8	0.9	1.0	1.0	1.5	1.8	0.4

^a Visual quality ratings were taken using a scale of 1 to 9 with 1 = no living turf, 5 = acceptable turf, and 9 = ideal turf.

^b Color was rated on a scale of 1 to 9 where 1 = light green and 9 = ideal dark green.

^c Spring greenup was rated on a scale of 1 to 9 where 1 = light green and 9 = ideal dark green.

^d Dollar spot resistance was rated visually on a scale of 1 to 9 where 1 = susceptible and 9 = resistant

^e *Poa annua* infestation was rated visually on a scale of 1 to 9 where 1 = maximum and 9 = none

^f Mowing quality was rated on a scale of 1 to 9 where 1 = severe scalping and 9 = no scalping

