

1997 USGA/GCSAA/NTEP Creeping Bentgrass Test – 2001 Results

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Objective

The objective of this experiment is to determine the performance of 18 varieties of creeping bentgrass maintained as putting green turf under regular use as a practice putting green.

Rational

Varieties of creeping bentgrass play a major role in determining quality of putting greens. Therefore it is important to know which varieties of creeping bentgrass perform the best under Indiana growing conditions. This test is also used as a practice putting green and is maintained by Jim Scott, Golf Course Superintendent at the Birck Boilermaker Golf Complex, so that all performance data collected reflects actual use conditions.

How It Was Done

Eighteen cultivars of creeping bentgrass were seeded on 3 Oct 1997 at the rate of 1.1 lbs seed/1000 ft² on a practice putting green at the Birck Boilermaker Golf Complex. The practice putting green was built to USGA specification and the rootzone consisted of 83% sand and 17% sphagnum peat moss by volume. Starter fertilizers were applied immediately prior to seeding at the rate of 2.0 lbs N, 2.3 lbs P₂O₅, and 1 lb K₂O/1000 ft². The green was covered with a lightweight fabric until early Nov 1997 to prevent seed movement. In 2001 the green was fertilized with 5.25 lbs N, 0.5 lbs P₂O₅, and 4.25 lbs K₂O/1000 ft². Mowing height was 1/8 inch seven days per week. Topdressing and spiking were done on a regular basis during 2001. The green was irrigated to prevent any sign of drought stress. Fungicides and insecticides were applied as needed to keep pest damage to a minimum.

Data collected in 2001 included spring green-up, genetic color, leaf texture, and monthly visual quality ratings from Apr to Nov. All data taken were visual observations of turf characteristics and performance. 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

- There are no statistical differences in average visual quality among the top 3 cultivars (Table 1).
- There are no statistical differences in the top 3 cultivars in the three year average visual quality (Table 2).
- Penn A-4, and Penn A-1 are the only two cultivars that were in the top 3 in 2001 and the top 3 in the 3 year average.
- There are no statistical differences among Penn A-4, Penn A-1, Century, Grand Prix (LCB-103), and Backspin in texture rating in 2001.
- These results show the improvements made by breeding programs since the release of Penncross.

Table 1. Visual quality of bentgrass cultivars maintained as putting green turf under regular use as a practice putting green in 2001.

Cultivar	Apr	May	June	July	Aug	Sep	Oct	Nov	Avg
Penn A-4	6.3	7.7	8.0	7.0	7.0	6.7	8.0	7.3	7.3
Grand Prix (LCB-103)	5.7	6.7	7.3	7.3	7.3	6.7	7.0	7.0	6.9
Penn A-1	5.7	7.3	7.7	7.3	7.0	6.3	7.3	6.7	6.9
Century	5.3	7.0	7.7	7.7	7.3	6.0	7.0	6.3	6.8
Penn G-1	5.7	7.0	7.3	7.3	7.0	6.7	6.7	7.0	6.8
Backspin	5.7	7.0	7.0	6.7	7.7	6.0	6.7	6.0	6.6
L-93	6.7	6.7	7.0	6.3	6.3	6.0	6.0	6.7	6.5
Penn G-6	5.7	6.3	6.7	6.7	6.7	6.7	7.0	6.0	6.5
Crenshaw	5.0	7.3	7.0	7.0	6.3	6.0	6.3	6.0	6.4
Imperial	5.7	7.0	7.0	7.0	6.7	5.3	6.7	6.0	6.4
Providence	5.7	6.3	7.0	6.7	6.7	6.0	6.3	5.7	6.3
SR 1119	5.3	6.3	6.7	6.3	6.3	6.0	6.7	6.0	6.2
SR 1020	5.7	6.0	7.0	6.0	6.3	5.7	6.3	6.0	6.1
Cato	5.7	6.3	6.7	6.7	5.7	5.0	5.7	6.3	6.0
Trueline	5.0	5.7	6.3	6.3	6.0	5.7	6.0	5.7	5.8
Viper	4.7	5.7	5.7	6.3	6.0	5.3	6.0	5.7	5.7
Putter	5.7	5.7	6.0	6.0	5.7	5.3	5.7	5.0	5.6
Penncross	5.0	5.7	5.3	5.7	5.0	4.7	4.3	4.7	5.0
LSD (0.05)	NS	1.1	0.8	0.9	0.9	0.9	1.0	1.0	0.5

^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.

Table 2. Color, greenup, and texture 2001, and visual quality for 1998, 1999, 2000, 2001, and four year average of bentgrass cultivars maintained as putting green turf under regular use as a practice putting green.

Cultivar	Color ^b	Greenup ^c	Texture ^d	Visual quality ^a				
				1998	1999	2000	2001	Avg
Penn A-4	7.0	5.0	7.7	6.1	6.9	7.2	7.3	6.9
Penn A-1	6.7	4.7	7.3	6.2	6.9	7.0	6.9	6.8
Penn G-1	6.3	4.3	6.7	6.0	6.9	7.3	6.8	6.8
Century	6.0	4.0	7.0	5.8	6.5	6.7	6.8	6.5
Grand Prix (LCB-103)	6.0	4.3	7.3	6.0	6.3	6.7	6.9	6.5
Imperial	6.7	5.3	6.7	5.9	6.7	6.9	6.4	6.5
Penn G-6	7.0	4.3	6.7	5.9	6.7	6.8	6.5	6.5
L-93	7.7	5.3	5.7	5.8	6.6	6.7	6.5	6.4
Backspin	6.0	4.3	7.0	5.5	6.2	6.3	6.6	6.2
SR 1119	7.7	4.3	6.7	5.5	6.4	6.5	6.2	6.2
Cato	7.3	4.3	5.7	5.4	6.4	6.5	6.0	6.1
Crenshaw	7.3	5.0	6.3	5.8	6.2	6.2	6.4	6.1
Providence	7.3	5.0	6.0	5.4	6.3	6.4	6.3	6.1
SR 1020	7.0	4.3	6.0	5.2	6.1	6.5	6.1	6.0
Trueline	7.0	3.3	5.7	5.8	5.9	5.8	5.8	5.9
Viper	7.0	4.0	5.3	5.5	5.9	6.1	5.7	5.8
Putter	7.0	4.0	5.3	5.3	5.8	5.6	5.6	5.6
Penncross	6.7	4.3	4.3	5.5	5.5	5.3	5.0	5.3
LSD (0,05)	0.7	NS	0.9	0.6	0.4	0.6	0.5	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. Monthly ratings were averaged to obtain yearly average.

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

^c Green up was rated on a scale of 1 to 9 where 1 = dormant and 9 = green.

^d Texture was rated on a scale of 1 to 9 where 1 = coarse and 9 = fine.