

1995 NTEP Kentucky Bluegrass Test

Clark Throssell and Dan Weisenberger

Objective

Our objective was to evaluate the performance of varieties of Kentucky bluegrass under low mowing height, high maintenance conditions.

Rationale

Sports turf managers need to know which Kentucky bluegrass varieties can best tolerate low mowing heights required on elite quality athletic fields. In addition some golf course superintendents would like to maintain their fairways and tees at a mowing height less than 1 inch but are unable to grow creeping bentgrass or perennial ryegrass for one of many reasons. In these situations Kentucky bluegrass fairways may be a viable option. This experiment was conducted to determine which Kentucky bluegrass cultivars are best adapted to regular mowing at 0.75 inch under Indiana conditions.

How It Was Done

One hundred and three varieties of Kentucky bluegrass were seeded on 1 Sep 1995 at the rate of 2.0 lbs seed per 1,000 sq. ft. on a silt loam soil at the Purdue Agronomy Research Center. A starter fertilizer was applied immediately prior to seeding at the rate 0.2 lbs N, 1.0 lbs P₂O₅ and 0.2 lbs K₂O per 1,000 sq. ft. After establishment the experiment was fertilized with 4.0 lbs N per 1,000 sq. ft. per year using a 4:1:2 nutrient ratio fertilizer. Rates in lbs N per 1,000 sq. ft., and dates of application were 1.0 lb N in late May, 0.5 lbs N in late July, 1.0 lb in mid-Sep, and 1.5 lbs N in early Nov. Turf was mowed three times per week with clippings returned and irrigated to prevent any sign of drought stress. A preemergence herbicide was applied each spring to control crabgrass and a postemergence herbicide was applied each fall to control broadleaf weeds. No insecticides or fungicides were applied during the experiment.

Data collected in 1995 were seedling vigor to assess rate of establishment. In 1995, 1996, and 1997 data collected included spring green-up, genetic color, leaf texture, disease incidence, and monthly 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

- There are several Kentucky bluegrass varieties that performed well under the high maintenance, low mowing height conditions of this experiment (Table 1).
- Some of the top performing varieties from 1996-1998 were PST-B2-42, America, Unique, Apollo, Limousine and Bartitia.

Table 1. Average yearly visual quality ratings of Kentucky bluegrass varieties for 1996, 1997, 1998 and three year average visual quality ratings.

Variety	Visual quality ^a			Three year average
	1996	1997	1998	
PST-B2-42	6.5	7.1	7.1	6.9
America	6.5	7.0	7.0	6.8
Unique	6.1	6.7	6.9	6.6
Apollo (PST-B3-180)	6.0	6.9	6.7	6.5
Limousine	6.3	6.8	6.3	6.5
Bartitia	6.6	6.4	6.4	6.5
Ba 81-270	6.4	6.6	6.2	6.4
PST-BO-141	6.0	6.5	6.6	6.4
Shamrock	6.0	6.4	6.7	6.4
Absolute (MED-1497)	6.1	6.4	6.5	6.4
Coventry	6.2	6.5	6.3	6.3
Midnight	6.3	6.2	6.3	6.3
ASP200 (HV 130)	6.1	6.3	6.4	6.2
Conni	5.8	6.8	6.1	6.2
Blacksburg	6.2	6.3	6.2	6.2
NuStar	6.4	5.8	6.3	6.2
Livingston	6.0	6.2	6.4	6.2
Rambo (J-2579)	5.6	6.6	6.3	6.2
Classic	6.3	6.3	5.9	6.2
Baronie	6.3	6.2	6.0	6.2
Award	5.5	6.3	6.6	6.1
BAR VB 233	6.3	6.2	5.9	6.1
NJ-GD	5.8	6.0	6.5	6.1
Eclipse	5.7	6.2	6.3	6.1
North Star (PST-A7-60)	5.9	6.2	6.2	6.1
Princeton 105	5.8	6.3	6.1	6.1
SR 2109	5.9	5.9	6.4	6.1
Nimbus	6.4	6.1	5.7	6.1
HV 242	6.1	6.1	5.9	6.0
Jefferson	6.2	6.0	6.0	6.0
Chateau	6.0	6.3	5.8	6.0
Ba 81-220	6.3	6.1	5.7	6.0
PST-P46	6.0	6.0	6.1	6.0
Ba 73-373	6.1	5.9	6.0	6.0
Seabring (Ba 79-260)	6.1	6.2	5.7	6.0
Challenger	5.9	6.1	6.0	6.0
BAR VB 3115B	6.3	5.8	5.9	6.0
Fortuna	6.1	6.0	5.8	6.0
Total Eclipse (TCR-1738)	5.5	6.3	6.1	6.0
Serene (PST-A7-245A)	5.5	6.3	6.0	5.9
Marquis	6.1	5.8	5.9	5.9

Table 1. Average yearly visual quality ratings of Kentucky bluegrass varieties for 1996, 1997, 1998 and three year average visual quality ratings.
(continued)

Variety	Visual quality ^a			
	1996	1997	1998	Three year average
BA 70-060	6.0	6.0	5.8	5.9
Wildwood	5.8	6.2	5.8	5.9
Rugby II (MED-18)	5.6	6.2	5.9	5.9
Odyssey (J-1561)	5.6	6.0	6.0	5.9
Ba 81-058	5.8	6.0	6.0	5.9
Platini	6.0	5.8	5.8	5.9
Allure	6.3	6.1	5.2	5.9
BAR VB 5649	5.5	6.1	5.9	5.9
Abbey	6.0	5.8	5.8	5.9
BAR VB 6820	5.6	6.4	5.5	5.8
NuGlade	5.3	6.2	6.0	5.8
Ba 75-173	5.8	5.8	5.8	5.8
Glade	6.2	5.8	5.5	5.8
Liberator (ZPS-2572)	5.4	6.1	5.9	5.8
SRX 2205	5.8	6.0	5.5	5.8
Blackstone (PST-638)	5.6	6.0	5.7	5.8
Ba 81-227	5.6	5.8	5.9	5.8
Caliber	5.8	5.9	5.5	5.8
NJ-54	5.5	6.0	5.8	5.8
Champagne (LPT-621)	5.5	5.8	6.0	5.7
Chicago (J-2582)	5.6	5.9	5.6	5.7
Goldrush (Ba 87-102)	6.0	5.5	5.7	5.7
Cardiff	6.0	5.8	5.4	5.7
NJ 1190	5.2	5.6	6.3	5.7
Pick 8	5.3	5.9	5.8	5.7
Pick-855	6.0	5.7	5.3	5.7
PST-BO-165	5.1	6.1	5.8	5.7
Ba 77-702	5.4	5.7	5.9	5.6
Impact (J-1576)	5.2	5.8	6.0	5.6
Ba 75-490	5.7	5.5	5.8	5.6
Quantum Leap (J-1567)	5.3	5.9	5.6	5.6
Misty (Ba 76-372)	5.2	5.6	5.9	5.6
Haga	6.3	6.1	4.2	5.5
Bluechip (MED-1991)	5.3	5.9	5.4	5.5
Raven	5.7	5.3	5.5	5.5
Ba 76-197	5.2	5.5	5.8	5.5
Baron	5.4	5.5	5.6	5.5
MED-1580	5.8	5.6	5.1	5.5
Arcadia (J-1936)	5.4	5.7	5.3	5.5
Pepaya (DP 37-192)	5.8	5.6	4.9	5.4
Moonlight (PST-A418)	5.1	5.7	5.5	5.4

Table 1. Average yearly visual quality ratings of Kentucky bluegrass varieties for 1996, 1997, 1998 and three year average visual quality ratings.
(continued)

Variety	Visual quality ^a			Three year average
	1996	1997	1998	
LKB-95	5.4	5.4	5.4	5.4
Explorer (Pick-3561)	5.6	5.5	5.2	5.4
Ba 81-113	5.8	5.3	5.0	5.4
Ascot	5.3	5.3	5.6	5.4
ZPS-309	5.4	5.7	5.1	5.4
ZPS-2183	5.1	5.6	5.4	5.4
SR 2000	6.0	5.4	4.7	5.3
SR 2100	5.9	5.2	4.9	5.3
Ba 75-163	5.4	5.6	4.8	5.3
Dragon (ZPS-429)	5.5	5.7	4.6	5.3
A88-744	5.2	5.1	4.9	5.1
Sodnet	4.6	5.3	4.9	4.9
VB 16015	5.4	4.9	4.5	4.9
H86-690	5.1	4.6	4.9	4.9
Sidekick	5.3	4.6	4.5	4.8
Lipoa	5.7	4.7	3.4	4.6
LPT-620	3.8	4.3	5.1	4.4
J-1555	6.0	4.3	2.8	4.3
Compact	5.1	4.3	3.2	4.2
Baruzo	4.9	3.3	3.5	3.9
Kenblue	4.2	2.8	3.1	3.4

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