

## **2004 NTEP Perennial Ryegrass Test – 2005 Results**

Glenn Hardebeck and Cale Bigelow

### **Objective**

To evaluate 120 commercial and experimental varieties of perennial ryegrass under low mowing height, high maintenance conditions in central Indiana.

### **Rationale**

Perennial ryegrass is used for golf course tees and fairways and some highly maintained athletic fields because it can tolerate relatively short mowing heights and traffic. Use of perennial ryegrass has been problematic due to such problems as disease susceptibility. This experiment was conducted to evaluate the performance of perennial ryegrass varieties to aid in cultivar selection.

### **How It Was Done**

One hundred twenty varieties of perennial ryegrass were seeded on 10 Sep 2004 at the William H. Daniel Research and Diagnostic Center on a silt loam soil. Seeding rate was 6.0 lbs per 1000 ft<sup>2</sup> and seed was spread using a hand shaker jar. After seeding the experiment was lightly raked and a starter fertilizer (6-24-24) was applied at the rate of 1.0 lbs P<sub>2</sub>O<sub>5</sub> per 1000 ft<sup>2</sup>. The area was covered with a germination blanket following seeding to prevent washing of seed and mixing of varieties.

Plots are maintained under a typical fairway maintenance regime. The mowing height is 0.5 inch, mowed 3x per week. The annual fertilization is 3.0 lbs. N per 1000 ft<sup>2</sup> with 1 lb applied in mid-May, 1 lb in mid-September, and 1.0 lb. in early November. Irrigation is applied to prevent any sign of stress.

Data collected in 2005 included genetic color, spring green-up, gray leaf spot and visual quality ratings from April to November. All data taken were visual observations of turf characteristics and performance. Visual color and green-up ratings were taken using a scale of 1 to 9 with 1 = light green or dormant and 9 = dark green turf. Gray leaf spot ratings were measured as a percent affected turf in increments of 0, 25, 50, 75 and 100 percent affected turf. 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 53 cultivars (Table 1).
- When making cultivar selections, it is best to consult the NTEP web page at [www.ntep.org](http://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.

### **Acknowledgments**

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**Table 1.** Visual quality, genetic color, green-up and gray leaf spot severity of 120 perennial ryegrass cultivars growing under high maintenance in 2005.

Cultivar	Visual quality <sup>a</sup>									Genetic Color <sup>b</sup>	Spring green-up <sup>c</sup>	Gray Leaf Spot <sup>d</sup>
	April	May	June	July	Aug	Sep	Oct	Nov	Avg			
DP1	7.3	6.7	6.0	6.7	9.0	8.7	8.3	8.3	7.6	7.7	7.3	0.0
GL-2	6.7	7.7	6.3	7.0	8.7	8.0	8.3	7.7	7.5	7.7	7.0	8.3
RNS	7.3	7.7	7.0	7.0	8.3	7.3	7.7	7.7	7.5	7.3	5.3	8.3
IS-PR-235	6.7	7.0	6.3	6.7	9.0	8.7	7.7	7.7	7.5	8.0	7.0	0.0
Pick RB-1	7.3	6.3	6.0	6.0	9.0	8.3	8.3	8.0	7.4	8.3	6.3	0.0
IS-PR 270	6.3	7.3	6.3	7.3	8.3	8.0	7.7	8.0	7.4	7.7	7.0	0.0
JR-348	6.3	6.3	6.0	6.3	9.0	8.7	8.3	8.0	7.4	8.7	7.3	0.0
TR47	7.7	7.3	5.7	6.3	8.7	8.0	7.7	7.3	7.3	8.3	6.0	0.0
IS-PR 273	6.3	7.3	6.3	6.7	8.3	8.0	7.7	7.7	7.3	7.3	7.0	0.0
IS-PR-236	7.0	7.3	6.0	6.7	8.7	8.0	7.3	7.3	7.3	8.0	6.3	0.0
Exacta II (LTP-611-GLSR)	7.0	7.0	6.0	6.3	8.3	7.7	8.0	7.7	7.3	8.0	7.3	0.0
TRS	7.0	7.3	6.3	6.3	8.3	8.0	7.7	7.0	7.3	7.3	6.3	0.0
EXS54	7.7	7.0	6.3	6.3	8.3	8.0	7.3	7.0	7.3	7.3	6.7	8.3
IS-PR-312	6.0	7.0	6.0	6.3	8.7	8.3	8.0	7.7	7.3	7.7	6.7	0.0
Pick F4	7.0	7.0	6.3	6.7	8.7	7.7	7.7	7.0	7.3	7.0	7.0	0.0
LCK	6.7	7.0	5.7	6.3	8.7	8.3	7.7	7.0	7.2	7.0	6.7	0.0
PM 101	7.3	7.7	7.0	7.0	7.0	6.7	7.3	7.3	7.2	7.7	7.0	8.3
D04-UP	7.3	6.7	6.0	6.0	8.3	8.0	7.7	7.3	7.2	7.0	6.3	0.0
VB77	7.0	6.7	6.0	6.0	8.3	8.0	7.3	7.3	7.1	8.0	6.7	0.0
IS-PR 271	6.3	6.7	6.3	6.3	8.3	8.0	7.7	7.0	7.1	8.3	6.3	0.0
RG3P	7.3	6.7	6.3	6.3	8.3	7.7	7.3	6.7	7.1	7.0	6.3	8.3
DCM	7.0	6.3	6.3	6.3	8.3	7.7	7.3	7.3	7.1	7.3	6.0	0.0
Silver Dollar	5.3	6.3	6.0	7.0	8.3	8.0	7.7	8.0	7.1	7.3	7.7	0.0
SRX 4UP3	6.7	6.0	6.3	6.7	8.3	7.7	7.7	7.3	7.1	7.3	7.7	0.0
IS-PR-274	6.3	7.3	6.0	6.0	8.3	8.0	7.3	7.0	7.0	7.7	6.7	0.0
IS-PR-233	7.0	7.3	5.0	5.7	8.7	8.0	7.3	7.3	7.0	8.3	6.0	0.0
Charismatic II	6.3	6.0	5.7	6.7	8.7	8.0	7.7	7.3	7.0	7.0	6.7	0.0
PRG HS-01-09	7.7	7.3	5.7	6.3	8.0	7.7	6.7	7.0	7.0	8.0	6.3	8.3
MS2	7.0	7.0	6.3	6.7	7.3	7.0	7.3	7.7	7.0	8.0	6.0	0.0
Buena Vista	7.0	7.0	5.7	6.0	8.0	8.0	7.3	7.0	7.0	7.3	6.7	0.0
AC2	7.0	7.3	6.3	6.7	7.7	7.7	6.7	6.7	7.0	7.7	6.3	0.0
IS-PR-268	7.0	6.3	6.0	6.0	8.3	7.7	7.3	7.0	7.0	7.3	6.3	0.0
D04-LP05	6.7	6.3	5.7	6.7	7.7	7.7	7.7	7.3	7.0	7.7	6.3	0.0

LPFG	6.7	5.7	5.7	6.0	8.3	7.7	8.0	7.3	6.9	7.7	6.0	0.0
SP4	7.3	6.7	5.7	5.3	7.7	7.7	7.3	7.7	6.9	8.0	6.0	0.0
Protégé GLR	6.0	6.3	5.7	6.0	8.3	8.0	7.3	7.3	6.9	7.7	7.3	0.0
D04-1667	5.7	6.3	6.0	6.0	8.3	8.0	7.3	7.0	6.8	7.0	6.7	0.0
CNV	7.3	6.3	6.0	5.7	8.0	7.3	7.0	6.7	6.8	7.7	6.0	0.0
JR-408	7.0	6.7	6.7	6.0	7.3	7.3	7.0	6.3	6.8	7.0	5.3	0.0
IS-PR-269	7.3	6.3	5.3	5.7	8.0	7.7	7.3	6.7	6.8	7.3	6.3	8.3
AAZ-B104	6.3	6.3	5.7	6.3	8.0	8.0	7.0	6.7	6.8	7.0	6.7	0.0
AJM	7.3	7.0	5.7	5.7	7.7	7.7	6.7	6.3	6.8	7.3	6.3	0.0
MMW	6.3	6.3	4.3	6.0	8.0	8.0	7.3	7.7	6.8	7.3	7.0	0.0
Fusion	6.7	6.3	6.0	5.7	8.0	8.0	7.0	6.3	6.8	7.0	6.3	8.3
PST-2MNG	6.0	6.3	6.3	6.0	8.0	7.3	7.0	7.0	6.8	7.3	6.3	0.0
RAD-PR8	6.7	7.0	6.0	6.3	6.7	6.7	7.3	7.3	6.8	8.0	6.0	0.0
ES45	7.0	6.7	5.7	5.3	8.0	7.7	7.0	6.3	6.7	7.7	6.3	0.0
PWDR	7.0	7.0	5.7	5.7	7.7	7.3	7.0	6.3	6.7	7.0	6.3	0.0
Gray Star (PST-2LGL)	7.3	6.3	5.7	6.7	7.3	7.0	6.7	6.7	6.7	7.0	5.0	0.0
Pinnacle II	6.3	6.7	6.0	6.7	7.0	6.7	7.3	7.0	6.7	7.0	6.3	0.0
SRX 4SP	6.3	6.0	6.0	6.0	7.7	7.3	7.0	7.3	6.7	7.3	7.0	0.0
Inspire	7.0	6.3	6.0	6.3	7.3	7.3	7.0	6.3	6.7	7.3	6.0	0.0
IS-PR-276	5.3	6.0	5.0	6.0	8.7	7.7	7.7	7.0	6.7	7.7	6.7	0.0
Mach I	7.3	6.0	5.7	5.7	8.0	7.3	6.7	6.3	6.6	7.0	6.0	8.3
JR-L63	7.0	6.7	5.7	5.7	7.3	7.0	7.0	6.7	6.6	6.7	6.0	0.0
PST-2AG4	7.3	6.7	5.3	5.3	7.3	7.0	7.0	7.0	6.6	7.3	7.0	8.3
D04-11T	7.0	6.7	5.7	5.7	8.0	7.3	6.3	6.3	6.6	6.7	6.3	8.3
Pizzazz	6.3	6.0	5.7	6.0	7.3	7.3	7.0	7.0	6.6	8.3	6.0	8.3
Halo (KN42)	7.0	7.0	5.0	5.7	7.3	7.3	6.7	6.3	6.5	7.3	5.7	8.3
SNR	6.7	6.3	5.3	5.0	8.0	7.3	7.0	6.7	6.5	7.3	5.7	8.3
PST-2AM	6.7	5.7	5.7	6.3	7.3	7.0	7.0	6.7	6.5	7.0	6.0	0.0
PST-2LAN	7.0	6.3	5.0	5.3	8.0	7.3	7.0	6.3	6.5	6.7	6.0	0.0
Pick 02-R	7.0	7.7	7.0	6.7	5.3	6.0	6.3	6.3	6.5	7.3	6.3	16.7
APR 1797	6.7	6.3	5.3	5.7	7.7	7.0	7.0	6.7	6.5	7.3	6.0	0.0
APR-1663	5.7	6.7	6.0	5.7	7.7	7.7	6.7	6.0	6.5	7.0	7.0	0.0
Panther GLS	5.7	6.3	5.3	5.7	8.0	7.7	6.7	6.7	6.5	7.0	6.3	0.0
DP 17-9505	6.3	6.3	6.3	6.0	7.0	6.7	6.7	6.7	6.5	7.7	6.7	8.3
PST-2GSM	7.0	5.3	4.3	4.7	8.0	8.0	7.3	7.0	6.5	6.7	5.7	0.0
Palmer IV	6.7	6.0	5.0	5.3	7.7	7.3	7.0	6.7	6.5	7.0	6.7	0.0
PM 103	7.0	7.0	6.0	5.7	6.7	6.7	6.3	6.3	6.5	7.7	6.3	8.3

DP 17-9502	6.3	7.3	6.3	6.3	6.7	6.7	6.0	6.0	6.5	7.0	6.7	25.0
GPR	7.0	6.3	4.7	5.3	7.7	7.3	6.7	6.3	6.4	7.3	6.0	0.0
VB99	7.3	6.7	5.3	4.7	7.3	7.0	6.7	6.3	6.4	7.3	6.0	0.0
Pick 01-2	6.7	6.0	5.7	5.7	7.7	7.0	6.7	6.0	6.4	7.0	6.3	0.0
Quicksilver	7.0	6.0	5.3	5.3	7.7	7.3	6.7	6.0	6.4	7.0	4.7	0.0
APR 1670	6.3	4.7	5.7	5.7	7.7	7.3	7.3	6.7	6.4	7.0	6.7	8.3
RTS	7.3	6.7	5.3	4.7	7.7	7.0	6.3	6.0	6.4	7.3	5.7	0.0
Secretariat II	5.7	5.3	5.0	5.3	8.0	7.7	7.3	6.7	6.4	7.3	6.3	0.0
Overdrive	6.7	6.0	5.0	5.7	7.3	7.0	6.7	6.7	6.4	7.0	6.0	0.0
BAR Lp 4420	7.0	6.7	5.7	5.7	6.3	6.3	6.7	6.7	6.4	7.3	5.7	8.3
E-99	6.3	5.7	5.0	6.0	7.3	7.3	7.0	6.3	6.4	6.7	6.7	0.0
Paragon GLR	7.0	6.7	5.3	5.0	7.3	7.0	6.0	6.3	6.3	7.0	6.3	0.0
JR-324	7.3	6.3	5.7	6.0	7.0	6.3	6.0	6.0	6.3	6.7	6.0	0.0
JR-255	7.3	5.7	5.3	5.0	7.3	7.0	6.7	6.3	6.3	7.0	6.3	0.0
Repell GLS	6.7	5.7	5.7	5.0	7.3	7.0	6.7	6.7	6.3	7.0	6.3	0.0
JR-119	6.7	5.3	5.7	5.7	7.0	7.0	6.7	6.3	6.3	6.3	6.0	0.0
DP 17-9499	5.3	5.7	5.7	6.3	7.7	6.7	6.7	6.3	6.3	7.7	6.7	16.7
PST-2BLK	6.3	5.7	5.3	4.7	7.7	7.3	6.7	6.0	6.2	6.3	5.0	0.0
AF	6.3	5.7	4.7	5.0	8.0	7.7	6.0	6.3	6.2	7.7	6.7	16.7
Citation Fore	5.7	6.0	5.7	6.0	6.7	6.7	6.3	6.7	6.2	7.0	7.0	8.3
Headstart 2	6.7	6.0	6.0	6.3	6.3	6.3	6.0	6.0	6.2	6.7	6.3	8.3
L44	6.7	6.3	5.0	5.0	7.0	6.7	6.3	6.3	6.2	7.7	6.0	0.0
BPR	6.7	5.7	5.0	5.0	7.7	6.7	6.7	6.0	6.2	7.0	5.7	8.3
PST-217	7.3	5.7	5.3	5.7	7.3	6.3	6.3	5.3	6.2	6.0	5.0	0.0
04-BRE	6.3	6.0	4.3	4.3	7.7	7.3	6.7	6.7	6.2	7.3	6.3	8.3
PS-2	6.3	6.0	6.0	6.0	6.3	6.3	6.3	6.0	6.2	7.0	5.7	8.3
Sunshine 2	7.0	7.0	6.0	5.0	6.0	6.0	6.0	6.0	6.1	6.3	6.0	25.0
ARR 1664	6.0	6.0	4.7	5.0	7.3	6.7	6.7	6.3	6.1	5.0	6.3	8.3
BAR Lp 4317	6.3	5.0	4.7	5.3	6.7	7.0	6.7	7.0	6.1	7.0	5.7	0.0
APR1660	6.3	5.3	5.3	4.7	7.3	6.7	6.3	6.0	6.0	7.0	6.0	0.0
PM 102	6.0	6.3	5.0	5.7	6.7	6.0	6.0	6.0	6.0	7.3	6.7	8.3
04-BEN	6.0	5.3	4.3	5.0	7.7	6.7	6.3	6.0	5.9	7.3	6.3	0.0
SRX 4692	5.3	5.0	4.7	4.7	7.3	7.0	6.7	6.3	5.9	7.0	6.3	0.0
JR-114	6.7	6.3	4.7	5.3	5.7	6.3	6.3	5.3	5.8	6.0	5.7	8.3
APR 1648	7.0	7.0	5.0	5.3	5.7	6.0	5.3	5.3	5.8	7.3	7.0	16.7
Brightstar SLT	6.0	5.7	5.0	5.7	6.0	6.0	6.0	5.7	5.8	7.0	6.0	16.7
Premier II	5.0	5.3	5.0	5.3	6.3	6.3	6.0	6.0	5.7	7.0	6.0	0.0

Palmer III	5.7	5.0	5.0	5.3	6.3	6.3	6.0	5.3	5.6	6.3	6.0	0.0
Panther	5.3	5.0	5.3	5.0	6.0	6.0	6.0	5.7	5.5	5.7	6.0	0.0
SRX 4682	5.3	4.7	4.7	4.3	6.7	6.7	6.0	6.0	5.5	7.3	5.0	8.3
Pentium	5.7	6.0	4.7	5.3	5.7	5.7	5.7	5.7	5.5	6.7	5.7	8.3
DP 17-9788	5.3	5.3	4.7	5.0	5.7	5.7	5.7	5.7	5.4	6.7	6.0	8.3
Barlennium	5.3	5.3	4.7	5.0	5.0	5.7	5.0	5.0	5.1	6.0	6.0	8.3
LPR 02203	6.0	4.3	4.3	4.3	4.3	4.3	5.7	5.0	4.8	5.3	5.7	16.7
BAR Lp 4920	6.0	6.0	5.3	5.0	3.3	4.3	4.0	4.3	4.8	6.3	6.7	50.0
Affinity	5.0	4.3	4.0	4.0	5.0	5.0	4.7	4.3	4.5	5.7	5.3	8.3
Premier	4.3	4.0	4.7	4.3	3.7	4.3	4.3	4.3	4.3	4.3	6.3	58.3
Da Vinci (TTTF) <sup>e</sup>	3.3	3.3	4.0	3.7	5.3	5.0	4.0	3.3	4.0	3.7	5.0	0.0
Pinnacle	3.0	3.7	3.3	3.0	3.3	3.7	2.7	3.3	3.3	4.3	5.3	41.7
Linn	2.7	2.3	3.0	2.0	2.3	2.7	2.3	1.7	2.4	3.0	4.7	58.3
LSD (0.05)	1.4	1.3	1.7	1.8	1.4	1.4	1.4	1.6	0.9	1.5	1.3	22.0

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

<sup>b</sup> Color was rated on a scale of 1 to 9 where 1 = light green and 9 = dark green.

<sup>c</sup> Green-up was rated on a scale of 1 to 9 where 1 = dormant and 9 = green.

<sup>d</sup> Gray Leaf Spot was rated visually 15 Sep. as percent affected turf in increments of 0, 25, 50, 75 and 100.

<sup>e</sup> Da Vinci Turf Type Tall Fescue