

2004 Perennial Ryegrass Cultivar Trial

Rodney A. St. John, Nick E. Christians, and Christopher J. Blume

This was the first full year of the trial that began in the fall of 2004 with the establishment of 134 cultivars of perennial ryegrass at the Iowa State University Horticulture Research Station. The study was established on an irrigated area that was maintained at a 2-inch mowing height and fertilized with 3 to 4 lb N/1000 ft²/yr. The area received herbicide treatments as required.

The visual quality was evaluated monthly in 2005 for May and June (Table 1). The percentage cover data was collected in April 2005. The values listed under each month in Table 1 are the averages of visual quality ratings made on three replicated plots. Visual quality was based on a scale of 9 to 1: 9 = best quality, 6 = lowest acceptable quality, and 1 = worst quality. The yearly average of the two months of data for each cultivar was calculated and is listed in the last column (Mean). The first cultivar listed in Table 1 had the highest average visual quality rating for the entire 2005 season. The cultivars are listed in descending order by average quality. The last row states the LSD (least significant difference), which is a statistical measurement of how widely the datum in each column must vary before they are considered to be different from one another.

Table 1. 2005 visual quality and percent establishment for the 2004 National Perennial Ryegrass Study

Perennial Ryegrass Cultivar	PctEstab	-----Visual Quality-----						
		May	Jun	Jul	Aug	Sep	Oct	Mean ¹
GPR	80.0	7.7	8.7	8.7	8.0	8.0	8.0	8.2
APR 1648	73.3	8.0	8.3	8.3	8.0	8.0	7.7	8.1
LPFG	80.0	8.3	8.7	7.7	8.0	8.0	8.0	8.1
PARAGON GLR	76.7	8.0	8.7	8.0	8.0	8.0	7.7	8.1
PM 101	73.3	8.3	8.0	8.0	8.0	8.0	7.3	8.1
RAD-PR8	76.7	7.7	8.3	8.3	8.0	8.0	7.7	8.1
RNS	80.0	7.3	9.0	8.0	8.0	8.0	8.0	8.1
SP4	76.7	8.0	8.3	8.0	8.0	8.0	7.7	8.1
Harrier (SRX 4UP3)	80.0	8.0	8.0	8.7	8.0	7.7	8.0	8.1
\$ILVER DOLLAR	73.3	7.7	8.0	8.3	8.0	8.0	8.0	8.0
DCM	76.7	8.0	8.0	8.3	7.7	8.0	7.7	8.0
FUSION	80.0	7.3	8.3	8.3	8.0	8.0	8.0	8.0
IS-PR 268	80.0	7.7	8.0	8.3	8.0	8.0	8.0	8.0
IS-PR 312	80.0	8.0	8.0	8.3	8.0	7.7	8.0	8.0
IS-PR-274	80.0	7.3	8.3	8.3	8.0	8.0	8.0	8.0
QUICKSILVER	76.7	7.7	8.3	8.0	8.0	8.0	8.0	8.0
BUENA VISTA	80.0	7.3	8.0	8.3	8.0	7.7	8.0	7.9
D04-11T	76.7	8.0	7.7	8.3	7.7	7.7	7.7	7.9
D04-LP05	76.7	7.3	8.3	8.3	7.7	7.7	8.0	7.9
D04-UP	76.7	7.7	7.7	8.0	8.0	8.0	8.0	7.9
DP1	73.3	7.7	8.0	8.3	8.0	7.7	8.0	7.9
GRAY STAR (PST-2L)	80.0	7.0	8.3	8.0	8.0	8.0	8.0	7.9
IS-PR 233	76.7	7.7	8.0	8.0	8.0	8.0	8.0	7.9
IS-PR 235	76.7	8.0	8.3	8.0	7.7	7.7	8.0	7.9
IS-PR 236	76.7	7.7	8.0	8.3	7.7	7.7	7.7	7.9
IS-PR 269	76.7	7.3	8.0	8.0	8.0	8.0	8.0	7.9
JR-324	76.7	8.0	8.0	8.0	7.7	7.7	8.0	7.9
MMW	76.7	7.3	8.0	8.0	8.0	8.0	8.0	7.9
PINNACLE II	73.3	7.7	8.0	8.0	8.0	7.7	7.7	7.9
PST-2MNG	76.7	7.3	8.3	8.7	8.0	7.3	8.0	7.9
D04-1667	73.3	7.3	8.0	8.0	7.7	8.0	7.7	7.8
DP 17-9505	73.3	7.7	8.0	7.7	8.0	7.7	7.7	7.8
EXS54	73.3	7.7	8.0	7.7	7.7	8.0	8.0	7.8
GL-2	76.7	7.7	8.0	7.7	8.0	7.7	7.7	7.8
INSPIRE	76.7	7.3	8.0	7.7	8.0	8.0	8.0	7.8
PROTEGE GLR	76.7	7.0	8.0	8.0	8.0	8.0	7.7	7.8
PST-2AG4	80.0	7.0	8.0	8.0	8.0	8.0	8.0	7.8
PWDR	70.0	8.0	8.0	7.3	8.0	7.7	7.7	7.8
RG3P	76.7	7.3	8.3	7.7	8.0	7.7	8.0	7.8
AC2	80.0	7.0	7.7	7.7	8.0	8.0	8.0	7.7
AJM	76.7	8.0	7.7	7.7	7.3	7.7	7.7	7.7
APR 1797	76.7	7.3	8.0	8.0	7.7	7.7	7.7	7.7
BAR LP 4317	80.0	7.3	8.0	7.7	7.3	8.0	7.7	7.7
BAR LP 4920	80.0	7.7	7.7	7.3	8.0	8.0	8.0	7.7
BPR	73.3	8.3	7.0	7.7	8.0	7.7	7.7	7.7
DP 17-9499	70.0	7.3	8.0	7.7	8.0	7.3	7.3	7.7

E-99	80.0	7.7	7.7	7.7	8.0	7.7	8.0	7.7
ES45	80.0	7.7	8.3	7.7	7.7	7.3	8.0	7.7
EXACTA II (LTP-611-GLSR)	76.7	7.3	7.7	7.7	8.0	8.0	8.0	7.7
IS-PR 270	76.7	7.3	8.0	7.7	7.7	8.0	7.7	7.7
IS-PR 276	76.7	7.7	7.7	7.0	8.0	8.0	7.7	7.7
JR-114	80.0	7.7	8.0	7.7	7.7	7.7	7.7	7.7
JR-348	76.7	7.7	7.7	7.7	8.0	7.3	8.0	7.7
LCK	76.7	7.0	7.3	8.0	8.0	8.0	7.7	7.7
MACH I	80.0	7.7	7.7	7.0	8.0	8.0	8.0	7.7
PALMER IV	76.7	7.3	8.0	7.7	7.7	7.7	8.0	7.7
PICK RB-1	76.7	7.7	7.7	7.7	8.0	7.7	7.7	7.7
PRG HS-01-09	76.7	8.3	7.3	7.7	7.7	7.3	7.3	7.7
PST-2AM	80.0	7.3	7.3	8.3	7.7	7.7	8.0	7.7
RTS	76.7	7.3	8.0	7.3	8.0	7.7	8.0	7.7
SECRETARIAT II (LTP-101-GLSR)	70.0	7.3	8.7	7.3	7.3	7.7	7.3	7.7
VB99	76.7	8.0	8.0	7.3	7.7	7.7	7.3	7.7
AAZ-B104	76.7	7.3	7.7	7.3	8.0	7.7	8.0	7.6
AF	76.7	7.7	7.3	7.7	7.7	7.7	7.7	7.6
APR 1660	76.7	7.3	8.0	7.3	7.3	8.0	7.7	7.6
HEADSTART 2	73.3	7.7	8.0	7.3	7.7	7.3	8.0	7.6
IS-PR 271	73.3	7.3	7.3	7.7	8.0	7.7	8.0	7.6
IS-PR 273	73.3	7.7	7.3	7.3	8.0	7.7	7.7	7.6
JR-119	76.7	7.3	8.7	7.3	7.3	7.3	7.3	7.6
JR-255	73.3	7.3	7.7	7.7	7.7	7.7	7.7	7.6
PENTIUM	80.0	7.3	7.7	8.0	7.3	7.7	7.7	7.6
PIZZAZZ	80.0	7.7	7.3	7.0	8.0	8.0	8.0	7.6
PST-2GSM	76.7	7.3	7.7	8.0	7.7	7.3	8.0	7.6
PST-2LAN	76.7	7.0	7.7	7.7	7.7	8.0	7.7	7.6
REPELL GLS	80.0	7.7	7.3	7.3	8.0	7.7	8.0	7.6
SNR	73.3	8.3	7.0	6.7	8.0	8.0	7.7	7.6
TRS	73.3	7.7	7.7	7.7	7.7	7.3	7.3	7.6
VB77	73.3	8.0	7.0	7.7	7.7	7.7	7.7	7.6
APR 1663	80.0	7.3	8.0	7.3	7.7	7.3	7.7	7.5
ARR 1664	76.7	7.3	7.7	8.0	7.7	7.0	7.7	7.5
BRIGHTSTAR SLT	76.7	7.7	7.7	7.3	7.3	7.3	7.3	7.5
JR-408	73.3	7.7	7.3	7.3	7.7	7.7	7.7	7.5
L44	70.0	8.0	7.7	6.7	7.7	7.7	7.7	7.5
MS2	76.7	7.7	7.0	7.7	7.7	7.7	7.7	7.5
PANTHER	76.7	7.3	8.0	8.0	7.0	7.3	7.3	7.5
PANTHER GLS	70.0	7.0	7.7	7.3	7.7	8.0	7.3	7.5
PICK 01-2	76.7	8.0	7.3	7.3	7.7	7.0	7.7	7.5
PM 102	76.7	7.3	7.7	7.3	7.7	7.7	7.7	7.5
PM 103	70.0	7.7	7.3	7.3	7.7	7.7	7.0	7.5
PST-217	76.7	7.7	7.7	7.0	7.7	7.3	7.7	7.5
TR47	76.7	8.0	7.3	7.0	7.7	7.7	7.7	7.5
04-BRE	76.7	7.7	7.0	7.0	7.3	8.0	7.7	7.4
BAR LP 4420	76.7	7.0	7.7	7.0	7.7	7.7	7.7	7.4
CITATION FORE	80.0	7.0	7.7	7.7	7.3	7.3	8.0	7.4
HALO (KN42)	73.3	7.7	7.0	7.0	7.7	7.7	7.7	7.4
PICK F4	73.3	7.7	7.7	7.0	7.7	7.0	7.3	7.4

SRX 4692	80.0	7.0	7.3	7.7	7.3	7.7	7.7	7.4
BARLENNIUM	76.7	7.7	7.0	7.3	7.7	7.0	7.7	7.3
CHARISMATIC II (LTP-PG-GLSR)	70.0	7.3	7.7	7.0	7.3	7.3	7.3	7.3
CNV	70.0	7.7	7.0	6.7	7.7	7.3	7.3	7.3
DP 17-9788	76.7	7.0	7.3	7.3	7.7	7.3	8.0	7.3
JR-L63	76.7	7.0	7.7	7.0	7.7	7.0	8.0	7.3
OVERDRIVE	76.7	7.3	7.3	7.3	7.3	7.3	7.3	7.3
PREMIER II	80.0	7.3	7.3	7.3	7.0	7.7	7.7	7.3
SR 4600 (SRX 4SP)	76.7	7.0	7.0	7.0	8.0	7.7	8.0	7.3
SUNSHINE 2	73.3	7.7	7.0	7.0	7.3	7.3	7.3	7.3
04-BEN	73.3	7.3	7.0	7.0	7.3	7.3	7.3	7.2
APR 1670	76.7	7.3	7.0	7.0	7.3	7.3	7.3	7.2
PALMER III	76.7	7.0	7.0	7.0	7.7	7.3	8.0	7.2
PICK 02-R	73.3	8.0	6.7	6.7	7.3	7.3	7.3	7.2
PS-2	76.7	7.0	7.3	6.7	7.7	7.3	7.7	7.2
PST-2BLK	70.0	7.3	7.0	6.7	7.7	7.3	7.7	7.2
LPR 02203	80.0	7.0	7.0	6.7	7.0	7.0	8.0	6.9
SRX 4682	80.0	7.3	7.0	6.3	7.0	7.0	7.7	6.9
AFFINITY	73.3	6.0	7.0	7.0	7.0	6.7	7.0	6.7
PINNACLE	76.7	6.0	6.7	6.7	7.0	6.0	7.3	6.5
PREMIER	80.0	7.0	6.3	6.0	6.7	6.7	7.3	6.5
LINN	80.0	5.0	5.7	5.3	6.0	6.0	7.3	5.6
LSD	NS	1.2	1.8	1.9	0.8	0.9	1.6	0.7

¹ Means calculated from May to September only.