

2004 RUTGERS Turfgrass Proceedings



THE NEW JERSEY TURFGRASS ASSOCIATION

In Cooperation With

RUTGERS COOPERATIVE RESEARCH & EXTENSION
NEW JERSEY AGRICULTURAL EXPERIMENT STATION
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY
NEW BRUNSWICK

Distributed in cooperation with U.S. Department of Agriculture in furtherance of the Acts of Congress on May 8 and June 30, 1914. Rutgers Cooperative Research & Extension works in agriculture, family and community health sciences, and 4-H youth development. Dr. Karyn Malinowski, Director of Extension. Rutgers Cooperative Research & Extension provides education and educational services to all people without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs). Rutgers Cooperative Research & Extension is an Equal Opportunity Program Provider and Employer.

2004 RUTGERS TURFGRASS PROCEEDINGS

of the

New Jersey Turfgrass Expo December 7-9, 2004 Trump Taj Mahal Atlantic City, New Jersey

The Rutgers Turfgrass Proceedings is published yearly by the Rutgers Center for Turfgrass Science, Rutgers Cooperative Extension, and the New Jersey Agricultural Experiment Station, Cook College, Rutgers, The State University of New Jersey in cooperation with the New Jersey Turfgrass Association. The purpose of this document is to provide a forum for the dissemination of information and the exchange of ideas and knowledge. The proceedings provide turfgrass managers, research scientists, extension specialists, and industry personnel with opportunities to communicate with co-workers. Through this forum, these professionals also reach a more general audience, which includes the public.

This publication includes lecture notes of papers presented at the 2004 New Jersey Turfgrass Expo. Publication of these lectures provides a readily available source of information covering a wide range of topics and includes technical and popular presentations of importance to the turfgrass industry.

This proceedings also includes research papers that contain original research findings and reviews of selected subjects in turfgrass science. These papers are presented primarily to facilitate the timely dissemination of original turfgrass research for use by the turfgrass industry.

Special thanks are given to those who have submitted papers for this proceedings, to the New Jersey Turfgrass Association for financial assistance, and to those individuals who have provided support to the Rutgers Turfgrass Research Program at Cook College, Rutgers, The State University of New Jersey.

Dr. Ann Brooks Gould, Editor
Dr. Bruce B. Clarke, Coordinator

PERFORMANCE OF PERENNIAL RYEGRASS CULTIVARS AND SELECTIONS IN NEW JERSEY TURF TRIALS

Melissa M. Wilson, William A. Meyer, C. Reed Funk, William K. Dickson,
Stacy A. Bonos, Ronald F. Bara, and Dirk A. Smith¹

Perennial ryegrass (*Lolium perenne* L.) is a vigorous cool-season grass best known for its ability to rapidly establish an attractive turf stand within a short time of seeding. Perennial ryegrass performs well in a wide variety of soil conditions and is increasingly more popular among homeowners, sports turf managers, and golf course superintendents. The development of improved perennial ryegrass cultivars continues at the New Jersey Agricultural Experiment Station as well as at other research facilities. The incorporation of new germplasm collections from Western and Eastern Europe permits turf breeders to expand the genetic base of perennial ryegrass used in cultivar development.

Turfgrass breeders and researchers are continuing to research the beneficial role of endophytes in turfgrasses. Endophytes are naturally occurring fungi that live within the leaf, sheath, and stem tissues of certain grasses. The endophytes are transmitted to succeeding generations of plants by seed. The presence of a *Neotyphodium lolii* endophyte has enhanced insect resistance and stress tolerance in many perennial ryegrasses. International collection trips are being made in an effort to acquire new sources of germplasm containing the endophyte.

PROCEDURES

Seven perennial ryegrass trials were established between 2000 and 2004. Six of the tests were seeded at the Rutgers Plant Science Research and Extension Farm in Adelphia, NJ (Tables 1 to 6) and one test was seeded at the Rutgers Horticultural Research Farm II in North Brunswick, NJ (Table 7). The six Adelphia tests were hand sown with 0.88 oz of seed into 3 X 5 ft plots (3.7 lb seed/1000 ft²). The North Brunswick test was hand sown with 2.1 oz of seed into 3.5 X 5.5 ft plots (6.8 lb seed/1000 ft²). All tests

were arranged in a randomized complete block design with three replications, and plots had a 6-inch unseeded border to limit contamination.

A spring application of Dimension was used for preemergence control of summer annuals on tests in Tables 1 to 5. The 2003 Adelphia test in Table 5 received a fall application of the postemergence herbicides 2, 4-D and Banvel for broadleaf weed control. The 2004 Adelphia test (Table 6) received a fall application of Dimension. Adelphia tests in Tables 1 to 5 were also treated with a July application of Merit for grub control and an August application of Dimension for crabgrass control. Manage was applied to tests in Tables 2, 4, and 5 in August to control yellow nutsedge. The North Brunswick test received an application of Subdue in September to control Pythium blight and an application of Dimension in October for broadleaf weed control. The annual rate of nitrogen (N) and mowing height for each test is presented in Table 8. Single applications of fertilizer did not exceed 1.0 lb N/1000 ft². The amount and timing of N applied to turf varied to encourage disease and other stresses. Tests were mowed regularly with reel mowers to maintain a 1.5-inch height of cut. Rotary mowers were occasionally used to cut off tillers. Based on soil test results, tests were limed as needed to maintain a pH of 6.0 to 6.5. All tests were irrigated when necessary to avoid drought stress.

All tests were rated throughout the growing season for visual turf quality (i.e., overall appearance, turf color, uniformity, density, mowing quality, reduced rate of vertical growth, leaf texture, and lack of damage from insects and diseases). Other ratings such as establishment, spring green-up, color, density, leaf texture, and disease were rated when significant differences were evident. All ratings were based on a 1 to 9 scale, with 9 representing the best turf charac-

¹Head Greenhouse and Field Technician, Research Professor, Research Professor, Turfgrass Research Farm Supervisor, Assistant Professor, Principal Laboratory Technician, and Principal Laboratory Technician, respectively, New Jersey Agricultural Experiment Station, Cook College, Rutgers, The State University of New Jersey, New Brunswick, NJ 08901-8520.

teristic. Plots were evaluated by a number of turf-grass specialists to reduce the impact of personal bias for particular characteristics. All data were summarized and subjected to an analysis of variance. Means were separated using Fisher's protected least significant difference (LSD) mean separation test.

RESULTS and DISCUSSION

Results for all tests are presented in Tables 1 through 7. Entries are ranked by overall (multi-year) (Tables 1 to 4) or 2004 quality averages (Table 5). A high quality average is generally indicative of better disease resistance, a darker bright green color, greater density, uniformity, finer leaf texture, lower growth habit, improved mowing quality, and less damage due to insects. Tables 6 and 7 include entries of the 2004 National Perennial Ryegrass test sponsored by the National Turfgrass Evaluation Program (NTEP). The entries in Tables 6 and 7 are ranked by gray leaf spot (caused by *Pyricularia grisea*) average due to the fact that these tests were maintained to encourage the disease and evaluate plots for resistance.

Turf Quality

Considerable improvements have been made in the overall quality of turf type perennial ryegrass over the last 40 years. Newer varieties such as Citation Fore, Paragon GLR, and Palmer IV as well as many promising experimentals possess darker green color, more uniform appearance, increased density, lower growth habit, cleaner mowing, and better tolerance to disease and insects. Perennial ryegrass can adapt well to a wide variety of soil types, and newer varieties have improved heat tolerance when not stimulated with too much fertilizer.

Establishment

Perennial ryegrass is the most widely used grass on home lawns, golf courses, and athletic fields because of its ability to rapidly establish an attractive turf stand within 7 to 10 days. It is often found in mixtures with slower germinating grasses such as Kentucky bluegrass and the fine fescues to help prevent soil erosion during lawn establishment. In Tables 6 and 7, percent cover ratings indicate that most cultivars were well established within a month after seeding. Seedling vigor can be affected by factors such as genetics, seed quality and storage, environmental conditions, after ripening dormancy, and management procedures.

Disease

Many of the newly developed perennial ryegrasses exhibit significant differences in disease resistance and recovery. New Jersey provides excellent environmental conditions for the development of diseases such as gray leaf spot, red thread (caused by *Laetisaria fuciformis*), dollar spot (caused by *Sclerotinia homeocarpa*), brown patch (caused by *Rhizoctonia solani*), and certain strains of rusts that attack perennial ryegrass as well as many other turf species. The red thread and dollar spot data in Table 4 reveal a wide range of resistance and susceptibility among cultivars and selections.

The development of improved resistance to gray leaf spot steadily continues at the New Jersey Agricultural Experiment Station. Gray leaf spot can be devastating on newly established turf stands of perennial ryegrass. The disease is favored when several hours of leaf wetness and/or high humidity as well as temperatures above 68°F are maintained. Gray leaf spot begins as small, gray to brown leaf lesions which become oblong and light brown to dark gray-brown. Diseased leaves often appear off-color and wilted, followed by the development of pocketed areas and irregularly shaped patches. The results in Tables 5, 6, and 7 are very significant because of the detrimental impact gray leaf spot is known to have on turf-type perennial ryegrass.

In August 2003, a perennial ryegrass test at Adelphia, NJ (Table 5) was established and maintained to encourage a gray leaf spot epidemic. In this trial, newer experimentals such as UP2, DP2, and DP1 as well as the varieties Paragon GLR and Palmer IV had excellent resistance to the disease. In August 2004, two additional perennial ryegrass tests were established and maintained to encourage gray leaf spot (Tables 6 and 7); both tests include all the entries of the 2004 National Ryegrass Test sponsored by NTEP. The data in Table 6 represent two ratings taken about 2 weeks apart. A drop in performance by some cultivars was evident by the second rating; the performance of other varieties and experimentals stayed consistent or improved during that period. The data in Table 7 represents gray leaf spot data taken two days apart and indicates that most of the same varieties and experimentals that did well in the trial reported in Table 6 remained consistent or recovered quickly in the trial reported in Table 7.

SUMMARY

Perennial ryegrass is widely used in northern regions for long-term turf and forage pastures as well as for overseeding of dormant grasses in the southern United States. The new turf type perennial ryegrasses are one of the most versatile grasses available. Although significant improvements have been made to perennial ryegrasses, increased genetically stable resistance to gray leaf spot, crown rust, dollar spot, pink patch, red thread, and brown patch is still needed. In addition, increased heat tolerance, cold hardiness, and the ability to survive under ice sheets for extended periods are also necessary.

ACKNOWLEDGMENTS

New Jersey Agricultural Experiment Station Publication No. E-12180-20-05. This work was conducted as a part of NJAES Project No. 12264, supported by New Agricultural Experiment Station, State and Hatch Act funds, the Rutgers Center for Turfgrass Science, other grants and gifts. Additional support was received by the New Jersey Turfgrass Association, the New Jersey Turfgrass Foundation and the National Turfgrass Evaluation Program.

Table 1. Performance of perennial ryegrass cultivars and selections in a turf trial established in August 2000 at Adelphia, NJ.

	Cultivar or Selection	-----Turf Quality ¹ -----				
		2001-2004 Avg.	2001 Avg.	2002 Avg.	2003 Avg.	2004 Avg.
1	RNS comp	6.5	6.3	6.9	6.4	6.2
2	Mach 1	6.3	5.8	6.3	6.6	6.6
3	DMS comp	6.1	5.6	6.4	6.5	6.1
4	SR 4420	5.9	5.9	5.6	5.8	6.1
5	DCM comp	5.8	5.7	5.9	6.0	5.7
6	Top Hat 2	5.8	6.3	5.8	5.6	5.4
7	SRX 4510	5.7	5.8	5.9	5.7	5.4
8	OO-C Lp	5.5	5.1	5.5	5.8	5.5
9	Jet	5.4	5.3	5.8	5.6	5.0
10	EMR comp	5.4	5.7	5.9	5.4	4.6
11	SR 4220	5.0	5.1	5.1	5.1	4.8
12	SRX 4500	5.0	4.6	5.2	5.3	4.9
13	PR-122	4.9	5.1	5.0	4.9	4.6
14	Lp P-93	4.7	5.1	4.4	4.8	4.5
15	Fiesta III	4.7	4.5	4.9	5.0	4.3
16	Ecologic	4.7	5.0	4.8	4.4	4.3
17	High Life LF	4.6	4.7	4.7	4.7	4.3
18	Barefoot	4.5	4.6	4.5	4.6	4.2
19	Lowgrow II	4.4	4.4	4.5	4.6	4.2
20	Exacta	4.4	3.5	4.4	4.9	4.7
21	PR-84	4.3	3.9	4.4	4.5	4.6
22	PR-125	4.3	4.6	4.2	4.2	4.2
23	Calypso II	4.3	4.3	4.4	4.5	3.9
24	PR-121	4.3	4.3	4.4	4.2	4.2
25	Covet	4.3	4.1	4.5	4.6	4.0
26	Hawkeye	4.1	3.4	4.5	4.3	4.0
27	SRX 4SPBPEW	4.0	4.3	4.0	4.1	3.8
28	SRX 4CCG	4.0	4.3	3.9	3.7	4.0
29	Pick PR 1-94	3.9	3.6	4.0	4.1	4.0
30	SRX 4AT PREW	3.9	4.2	3.8	3.8	3.8
31	Churchill	3.9	3.6	4.0	3.9	4.0
32	Dancer	3.9	4.1	3.8	3.7	3.8
33	PRC-97	3.8	3.9	3.6	4.0	3.7
34	Racer	3.8	3.8	3.8	4.1	3.5
35	SRX 4120	3.8	3.7	3.7	3.9	3.9

(Continued)

Table 1 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----				
		2001-2004 Avg.	2001 Avg.	2002 Avg.	2003 Avg.	2004 Avg.
36	SRX 4DFDWEW	3.8	3.7	3.9	3.9	3.7
37	OO-A Lp	3.8	4.3	3.5	3.8	3.6
38	SRX 4330	3.8	4.0	3.7	3.8	3.7
39	SRX 4DMSO	3.8	3.9	3.8	3.8	3.6
40	Jiffie	3.7	3.5	3.7	3.9	3.8
41	Greenland	3.7	3.9	3.7	3.7	3.7
42	SRX 4BPEW	3.7	3.5	3.7	3.9	3.8
43	Platinum	3.7	3.5	3.7	3.9	3.8
44	SR 4200	3.7	3.4	3.7	4.0	3.7
45	SR 4400	3.7	3.9	3.7	3.5	3.5
46	SRX 4010	3.7	3.9	3.7	3.6	3.4
47	SRX 4MO971	3.6	3.8	3.4	3.7	3.6
48	SR 4100	3.6	3.7	3.5	3.5	3.6
49	Affirmed	3.6	3.8	3.5	3.7	3.3
50	Edge	3.6	3.5	3.5	3.7	3.6
51	PRJ-97-00	3.6	3.6	3.4	3.7	3.6
52	Headstart	3.5	3.5	3.5	3.7	3.3
53	SRX 4MO972	3.5	3.4	3.4	3.6	3.4
54	Penguin	3.4	2.9	3.6	3.8	3.5
55	BPF1 Bulk-00	3.4	4.0	3.2	3.2	3.3
56	Fiesta II	3.4	3.5	3.2	3.7	3.3
57	Bayou	3.4	3.8	3.3	3.5	3.0
58	Omni	3.4	3.1	3.4	3.6	3.4
59	Vibrant	3.4	3.8	3.4	3.2	3.1
60	SRX CALM	3.3	2.9	3.2	3.5	3.8
61	SRX 4DGBPEW	3.3	2.7	3.4	3.8	3.2
62	PR1 99 C2-00	3.2	2.8	3.2	3.3	3.3
63	Easy Livin	3.2	3.5	3.1	3.1	2.9
64	P-2	3.1	3.0	2.8	3.2	3.2
65	Nui	1.1	1.3	1.0	1.0	1.0
	LSD at 5% =	0.5	0.6	0.6	0.7	0.6

¹9 = best turf quality

Table 2. Performance of perennial ryegrass cultivars and selections in a turf trial established in August 2001 at Adelphia, NJ.

	Cultivar or Selection	-----Turf Quality ¹ -----			
		2002-2004 Avg.	2002 Avg.	2003 Avg.	2004 Avg.
1	1GH comp	6.3	6.9	6.2	5.9
2	1G2 comp	6.3	6.9	6.6	5.5
3	Palmer IV	5.8	6.7	5.3	5.5
4	APR 1425	5.8	6.4	5.7	5.4
5	All*Star2	5.7	6.0	5.7	5.4
6	Gator 3	5.6	5.5	6.0	5.3
7	Delaware XL	5.6	5.9	5.6	5.3
8	PR-187	5.5	6.1	5.3	5.1
9	Top Hat 2	5.5	6.3	5.2	4.9
10	Applaud	5.3	5.7	5.5	4.7
11	Blazer IV	5.2	4.9	5.8	5.0
12	Jet	5.2	5.3	5.4	4.8
13	O1.O615	5.1	5.4	5.5	4.5
14	O1-3	5.1	5.0	5.1	5.2
15	Pizzazz	5.1	5.0	5.6	4.6
16	O1-11	5.0	5.1	5.3	4.5
17	Integra	5.0	5.4	4.8	4.8
18	GGH comp	5.0	4.7	5.1	5.1
19	PR-155	5.0	5.2	5.2	4.5
20	8451 comp	4.9	4.9	4.8	5.1
21	Amazing	4.9	5.0	4.8	4.7
22	Radiant II	4.8	5.6	4.6	4.4
23	O1-1	4.6	4.8	4.6	4.4
24	Pinnacle II	4.6	4.9	4.7	4.1
25	Prelude IV	4.5	4.1	4.7	4.7
26	APR 1421	4.4	4.7	4.6	4.0
27	O1-8	4.4	4.0	4.7	4.4
28	PR-186	4.3	5.0	4.0	4.0
29	O1-9PR	4.3	4.6	4.2	4.0
30	Pick PR B-97	4.3	4.4	4.2	4.2
31	Brightstar II	4.2	4.0	4.2	4.4
32	Pace	4.2	4.2	4.3	4.1
33	Paragon	4.2	3.9	4.5	4.1
34	APR 1472	4.1	4.3	4.5	3.5
35	Palmer III	4.1	4.1	4.1	4.1

(Continued)

Table 2 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----			
		2002-2004 Avg.	2002 Avg.	2003 Avg.	2004 Avg.
36	PR-156	4.0	4.5	4.1	3.6
37	Fiesta 3	4.0	3.6	4.4	4.1
38	Monterey II	4.0	3.7	4.3	3.9
39	Pirouette	4.0	3.6	4.1	4.2
40	APR 1424	4.0	3.9	4.0	4.0
41	O1-7	3.9	4.2	4.0	3.5
42	Barlennium	3.9	4.0	3.9	3.8
43	ASAP	3.9	3.8	3.9	3.9
44	Extreme	3.8	3.8	3.9	3.7
45	Premier II	3.8	3.7	3.9	3.8
46	Admire	3.8	3.4	3.9	4.0
47	Galaxy	3.7	3.8	3.9	3.5
48	Pleasure XL	3.7	3.4	3.9	3.8
49	Goal Keeper	3.6	3.4	3.6	3.9
50	Sonata	3.6	3.6	3.7	3.6
51	Promise	3.6	3.3	4.1	3.5
52	APR 1423	3.6	3.5	3.5	3.9
53	Caddieshack	3.6	3.4	3.7	3.8
54	Lowgrow II	3.6	3.6	3.1	4.2
55	PR A-97	3.6	3.4	3.6	3.8
56	APR 1426	3.6	3.6	3.8	3.3
57	Accent	3.5	3.1	3.5	3.9
58	Calypso II	3.5	3.1	3.7	3.8
59	00-A Lp	3.4	3.5	3.3	3.5
60	Racer	3.4	3.4	3.7	3.1
61	Sunshine	3.4	3.3	3.4	3.5
62	Top Gun	3.4	3.3	3.4	3.5
63	Churchill	3.3	3.1	3.8	3.1
64	Windstar	3.3	3.0	3.5	3.5
65	PRC-97	3.3	3.5	3.1	3.4
66	APM	3.1	3.2	3.0	3.3
67	Monterey	3.1	2.8	3.3	3.3
68	APR 1420	3.1	3.1	3.0	3.1
69	Shining Star	3.0	2.8	3.3	3.0
70	Advert	3.0	2.9	3.1	2.9

(Continued)

Table 2 (continued).

		-----Turf Quality ¹ -----			
Cultivar or Selection	2002-2004 Avg.	2002 Avg.	2003 Avg.	2004 Avg.	
71	Morning Star	3.0	2.6	3.1	3.3
72	Edge	2.9	2.9	3.0	2.9
73	Headstart	2.9	2.8	3.0	2.9
74	Cutter	2.8	2.9	2.9	2.7
75	Manhattan	2.1	2.2	2.1	2.0
LSD at 5% =		0.6	0.6	0.8	0.8

¹9 = best turf quality

Table 3. Performance of perennial ryegrass cultivars and selections in a turf trial established in August 2001 at Adelphia, NJ.

	Cultivar or Selection	-----Turf Quality ¹ -----			
		2002-2004 Avg.	2002 Avg.	2003 Avg.	2004 Avg.
1	DLF-17 9499	6.8	6.4	6.7	7.2
2	Citation Fore	6.7	6.7	6.9	6.5
3	DLF-17 9506	6.6	6.0	6.7	7.1
4	SRX 4801	6.5	6.3	6.7	6.6
5	DLF-17 9502	6.5	6.4	6.3	6.6
6	DLF-17 9505	6.5	6.3	6.1	7.0
7	SRX 4820	6.3	6.6	6.1	6.2
8	2S1	6.3	6.2	6.4	6.3
9	Manhattan 4	6.2	6.1	6.4	6.1
10	DLFJ-121	6.1	6.4	6.2	5.9
11	EP159	6.1	6.5	5.9	6.0
12	Precious	6.1	6.4	5.8	6.1
13	2INO-2001	6.1	6.3	5.7	6.3
14	DLF-17 9498	6.1	6.0	5.9	6.4
15	PST-2JS	6.1	6.0	6.2	5.9
16	Brightstar SLT	6.0	6.0	6.1	6.0
17	Charismatic	6.0	6.1	5.9	6.1
18	PST-2MG	6.0	5.9	6.2	6.0
19	DLF-17 9503	6.0	5.9	5.9	6.2
20	PST-2INR	6.0	5.9	5.6	6.4
21	DLF-17 9501	6.0	5.7	6.0	6.2
22	PST-2PCR	5.9	5.9	5.7	6.0
23	PST-2FM	5.9	5.7	6.0	5.8
24	PST-2GI	5.8	5.7	6.0	5.8
25	DLF-17 9507	5.8	6.0	5.4	6.0
26	EP158	5.8	5.9	5.7	5.8
27	Hawkeye	5.8	5.8	5.7	5.8
28	2PC-2001	5.8	5.9	5.5	5.8
29	Grand Slam	5.7	5.7	5.8	5.7
30	DLFJ-122	5.7	5.7	5.8	5.7
31	EP145	5.7	5.6	5.4	6.0
32	Salinas	5.7	5.5	5.5	6.0
33	SR 4510	5.6	5.9	5.4	5.5
34	EP151	5.6	5.3	5.5	6.0
35	MP148	5.6	5.6	5.5	5.8

(Continued)

Table 3 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----			
		2002-2004 Avg.	2002 Avg.	2003 Avg.	2004 Avg.
36	Brightstar II	5.6	5.4	5.6	5.7
37	MP153	5.6	5.7	5.6	5.5
38	GLSR	5.5	5.5	5.7	5.4
39	PST-2R91	5.5	5.5	5.6	5.4
40	DLF-17 9508	5.5	5.4	5.2	5.8
41	DLF-17 9500	5.4	5.6	5.0	5.7
42	PST-2TRS	5.4	5.4	5.2	5.5
43	Manhattan 3	5.4	5.3	5.5	5.4
44	PST-2QH	5.3	5.2	5.5	5.3
45	PST-2FNE	5.3	5.2	5.5	5.2
46	DLF-17 9504	5.3	5.8	4.7	5.4
47	SR 4500	5.3	5.1	5.2	5.5
48	Player	5.3	5.0	5.4	5.4
49	MP149	5.3	5.3	5.0	5.5
50	PST-2AGL	5.2	5.3	5.1	5.2
51	PST-2SH	5.2	5.1	5.1	5.4
52	DLFJ-105	5.2	4.8	5.2	5.5
53	MP150	5.2	4.8	4.8	5.8
54	DLFJ-102	5.2	5.0	5.1	5.3
55	DLFJ-104	5.1	5.0	5.1	5.2
56	SRX 45ABM	5.0	4.6	5.3	5.2
57	Refine	5.0	5.1	4.8	5.1
58	DLFJ-127	5.0	5.0	4.8	5.2
59	DLFJ-125	4.9	5.1	4.8	4.9
60	DLFJ-103	4.9	4.8	5.1	4.8
61	PST-2R99	4.9	5.1	4.8	4.8
62	EP152	4.9	5.0	4.7	4.9
63	PST-2GL1	4.8	4.8	4.6	5.1
64	SRX 4RTABM	4.8	4.5	5.1	4.8
65	PST-25GL	4.8	4.6	5.0	4.9
66	SRX 4ABRTM	4.6	4.3	4.5	5.0
67	SRX 4PFL71	4.5	4.5	4.4	4.8
68	SRX 4120	4.5	4.5	4.6	4.6
69	DLFJ-126	4.5	4.5	4.5	4.5
70	SRX 4PFE69	4.5	4.5	4.3	4.8

(Continued)

Table 3 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----			
		2002-2004 Avg.	2002 Avg.	2003 Avg.	2004 Avg.
71	PST-2GLL	4.5	4.5	4.4	4.6
72	SRX 4PFL78	4.4	4.7	4.2	4.4
73	PST-2911	4.4	4.5	4.4	4.5
74	Quick Trans	4.4	4.6	4.5	4.2
75	Penguin	4.4	4.5	4.4	4.3
76	Omni	4.4	4.2	4.3	4.6
77	SRX 4PFL82	4.4	4.3	4.1	4.7
78	SR 4200	4.3	4.1	4.4	4.5
79	SRX 4PRM0971	4.3	4.4	4.2	4.4
80	DLFJ-124	4.3	4.1	4.2	4.7
81	SRX 4M0972	4.3	4.5	4.2	4.2
82	SR 4330	4.3	4.1	4.3	4.5
83	SRX 4SPRI	4.3	4.3	4.1	4.4
84	SRX 4ATPREW	4.3	4.3	4.1	4.4
85	SRX 4PFL72	4.2	4.5	4.0	4.2
86	PST-2RGL	4.2	4.1	4.2	4.4
87	SRX 4CCG	4.2	4.2	4.1	4.3
88	SRX 4PFL74	4.2	4.2	3.8	4.4
89	EP154	4.1	4.3	4.0	4.1
90	SRX 4PFL63	4.1	4.1	4.0	4.3
91	SRX 4PFE75	4.0	4.0	4.0	4.2
92	SR 4010	4.0	4.0	3.9	4.0
93	SR 4400	3.8	3.8	3.7	4.0
94	SRX 4PFL62	3.8	3.5	3.8	4.1
95	PST-2GP-bulk	3.8	3.7	3.9	3.8
96	Envy	3.8	3.7	3.9	3.8
97	SR 4100	3.7	3.8	3.5	3.8
98	DLFJ-119	3.5	3.2	3.8	3.5
99	DLFJ-123	3.3	3.1	3.2	3.5
100	Linn	1.3	1.3	1.3	1.2
	LSD at 5% =	0.6	0.6	0.8	0.8

¹9 = best turf quality

Table 4. Performance of perennial ryegrass cultivars and selections in a turf trial established in August 2002 at Adelphia, NJ.

	Cultivar or Selection	-----Turf Quality ¹ -----			Red Thread ² March 2004	Dollar Spot ² Aug. 2004
		2003-2004 Avg.	2003 Avg.	2004 Avg.		
1	PG4 comp	5.8	7.0	4.6	6.0	5.0
2	MS2 comp	5.6	6.2	4.9	7.3	6.3
3	Paragon GLR	5.5	6.3	4.8	6.0	5.7
4	MS3 comp	5.5	6.2	4.8	7.0	5.3
5	PG5 comp	5.5	6.6	4.3	5.0	5.7
6	RG1 comp	5.5	6.0	4.9	5.3	5.7
7	PG2 comp	5.4	6.3	4.5	6.0	5.3
8	MS1 comp	5.4	6.1	4.7	6.0	7.0
9	RG2 comp	5.4	6.6	4.2	4.3	5.0
10	MM1 comp	5.3	6.1	4.4	5.7	5.3
11	PG1 comp	5.2	5.4	4.9	5.0	7.0
12	Palmer IV	5.1	5.7	4.6	6.3	5.3
13	PG3 comp	5.1	5.8	4.5	4.7	5.7
14	Buena Vista	5.1	5.8	4.4	5.7	6.0
15	PR-209	5.1	5.5	4.6	5.0	6.3
16	Pizzazz C1	5.0	5.5	4.5	5.7	7.0
17	IG2	5.0	5.6	4.4	6.0	5.7
18	RG3 comp	5.0	5.2	4.7	5.3	5.7
19	PR-143	4.9	5.2	4.6	7.0	7.3
20	Applaud	4.9	5.3	4.5	7.0	6.3
21	APR 1563	4.9	5.3	4.4	6.7	6.3
22	Amazing C1	4.8	5.0	4.6	6.3	6.7
23	Applaud C1	4.8	5.4	4.2	6.3	7.0
24	APR 1532	4.8	4.9	4.7	7.0	7.3
25	APR 1557	4.8	4.7	4.9	5.7	7.3
26	APR 1561	4.7	4.9	4.4	5.7	6.0
27	PR-141	4.7	5.2	4.2	7.3	6.3
28	All*Star2	4.6	4.9	4.3	8.0	6.3
29	APR 1566	4.6	5.0	4.2	4.7	5.7
30	Gator 3	4.6	4.8	4.3	6.3	5.7
31	APR 1559	4.5	4.8	4.3	6.3	6.0
32	Jet C1	4.5	4.8	4.1	7.3	5.7
33	Amazing	4.5	4.4	4.6	6.3	8.0
34	APR 1533	4.5	4.8	4.1	4.7	5.7
35	APR 1535	4.4	4.7	4.1	5.7	6.0

(Continued)

Table 4 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----			Red Thread ² March 2004	Dollar Spot ² Aug. 2004
		2003-2004 Avg.	2003 Avg.	2004 Avg.		
36	APR 1562	4.4	4.6	4.3	7.0	7.0
37	Pizzazz	4.4	4.6	4.1	6.0	5.0
38	Integra C1	4.3	4.9	3.8	6.3	5.3
39	PR-142	4.3	4.9	3.7	5.0	3.0
40	Jet	4.3	4.8	3.8	5.3	5.0
41	APR 1531	4.2	4.2	4.2	5.0	6.3
42	SR 4220	4.2	4.7	3.7	4.7	4.7
43	Integra	4.2	4.8	3.6	6.0	4.7
44	APR 1536	4.2	4.2	4.1	6.7	6.7
45	SR 4420	4.1	4.5	3.7	4.7	4.3
46	Radiat II	4.1	3.8	4.4	5.0	7.7
47	APR 1534	4.1	3.8	4.3	5.0	6.3
48	MRF 41	4.1	4.1	4.0	5.0	5.0
49	A00 C1	4.0	4.3	3.7	6.3	5.3
50	APR 1522	4.0	4.1	4.0	4.3	4.3
51	APR 1560	4.0	4.2	3.9	6.3	7.7
52	Pleasure XL	4.0	3.9	4.1	4.7	7.0
53	SRX 4510	4.0	4.6	3.4	6.0	4.0
54	APR 1551	4.0	4.2	3.8	6.7	5.7
55	Promise C1	4.0	3.7	4.2	4.7	7.3
56	Top Hat 2	4.0	4.1	3.8	6.3	6.3
57	Palmer III	3.9	4.1	3.8	6.3	7.0
58	APR 1425	3.9	3.4	4.4	4.3	6.7
59	SRX 4R56	3.9	4.3	3.4	5.3	5.0
60	SRX 4125	3.9	3.5	4.2	5.0	6.3
61	APR 1520	3.8	3.4	4.2	5.7	7.3
62	SRX 4500	3.8	3.8	3.8	7.3	6.3
63	APR 1528	3.8	3.4	4.1	5.7	7.3
64	PR-189	3.7	3.7	3.7	4.0	6.3
65	Windance	3.7	3.7	3.7	4.7	5.3
66	MRF 42	3.7	3.6	3.8	5.0	5.3
67	MRF 45	3.6	3.4	3.9	4.3	3.7
68	APR 1521	3.6	3.1	4.1	6.0	6.3
69	SRX 4R54	3.6	3.5	3.7	5.7	5.3
70	APR 1519	3.6	3.0	4.2	4.7	7.0

(Continued)

Table 4 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----			Red Thread ² March 2004	Dollar Spot ² Aug. 2004
		2003-2004 Avg.	2003 Avg.	2004 Avg.		
71	Promise	3.6	3.4	3.7	5.3	6.3
72	SRX 4R52	3.6	3.7	3.5	5.7	4.7
73	Prelude IV	3.6	3.3	3.8	6.3	5.7
74	SRX 4R57	3.6	3.6	3.5	6.0	4.7
75	01-ORE-PRG	3.5	3.6	3.4	4.3	4.7
76	APR 1523	3.5	3.3	3.8	5.7	7.7
77	Hawkeye	3.5	3.1	3.9	5.0	6.0
78	MRF 44	3.5	3.6	3.4	4.0	4.7
79	Charismatic	3.5	3.0	4.0	5.7	6.0
80	SRX 4R63	3.5	3.5	3.4	6.0	4.3
81	SRX 4R55	3.4	3.4	3.4	5.0	5.0
82	Manhattan 3	3.4	3.3	3.5	5.0	6.0
83	Prowler	3.4	3.2	3.5	7.3	7.3
84	SRX 4R62	3.3	3.4	3.2	5.3	4.3
85	PR-84	3.3	3.0	3.6	5.3	4.7
86	Exacta	3.3	3.1	3.4	5.0	4.7
87	Omega 3	3.3	3.6	2.9	5.7	4.7
88	Sonata	3.3	3.2	3.3	4.7	6.0
89	SRX 4R64	3.3	3.0	3.5	5.7	5.0
90	LF 122	3.2	2.8	3.6	5.3	3.7
91	Laredo	3.2	3.1	3.3	6.3	6.0
92	Paragon	3.2	3.0	3.3	6.0	5.0
93	SRX 4CCG	3.1	3.4	2.9	5.3	3.7
94	Shining Star	3.1	3.0	3.2	7.0	6.7
95	Affinity	3.1	3.3	2.8	6.3	3.3
96	Windstar	3.0	3.1	2.9	4.7	3.7
97	Blackhawk	3.0	3.2	2.8	6.0	4.3
98	MRF 43	3.0	3.1	2.9	2.3	2.7
99	Morningstar	2.9	2.8	2.9	6.7	5.3
100	MSP 3393	2.8	3.0	2.6	3.3	4.3
101	SR 4200	2.8	2.7	2.9	4.7	5.0
102	Continental	2.7	2.6	2.8	5.7	4.7
103	Navajo	2.5	2.4	2.6	5.3	3.0
104	MSP 3478	2.0	1.9	2.1	4.7	3.3
105	Manhattan	1.8	1.9	1.7	4.7	3.3

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----			Red Thread ² March 2004	Dollar Spot ² Aug. 2004
	2003- 2004 Avg.	2003 Avg.	2004 Avg.		
106 Nui	1.1	1.1	1.0	.	6.7
LSD at 5% =	0.5	0.7	0.6	2.2	2.3

¹9 = best turf quality

²9 = least disease

Table 5. Performance of perennial ryegrass cultivars and selections in a turf trial established in August 2003 at Adelphia, NJ.

	Cultivar or Selection	Turf Quality ¹ 2004 Avg.	Gray Leaf Spot ² 2003 Avg.	Gray Leaf Spot Sept. 26 2003	Gray Leaf Spot Oct. 1 2003	Establishment ³ Sept. 2003	Seed Head ⁴ May 2004
1	UP2 comp	7.0	8.2	8.3	8.0	5.7	6.3
2	DP2 comp	6.9	8.3	8.3	8.3	5.3	6.7
3	DP1 comp	6.8	8.0	8.0	8.0	5.7	5.3
4	AF comp	6.7	7.8	8.0	7.7	6.3	6.0
5	Amazing C2	6.7	7.5	7.3	7.7	6.3	6.7
6	Palmer IV	6.7	7.5	8.3	6.7	8.7	7.3
7	Paragon GLR	6.7	7.8	8.0	7.7	5.3	7.0
8	IS-PR 236	6.6	7.2	7.3	7.0	4.0	6.3
9	APR 1675	6.5	7.8	8.0	7.7	5.7	6.7
10	Applaud C2	6.5	7.0	7.3	6.7	6.3	6.3
11	APR 1664	6.4	7.3	7.7	7.0	4.7	7.7
12	Panther GLS	6.4	7.8	8.3	7.3	6.3	7.0
13	Prelude GLS	6.4	7.5	8.0	7.0	5.0	6.3
14	SP comp	6.4	7.7	8.0	7.3	5.0	5.3
15	UP5 comp	6.4	7.3	7.7	7.0	6.0	6.3
16	APR 1619	6.4	6.5	7.0	6.0	4.0	6.3
17	APR 1683	6.4	6.8	7.0	6.7	6.0	7.7
18	APR 1692	6.4	7.2	8.0	6.3	5.0	5.0
19	Pizzazz C2	6.3	6.7	7.0	6.3	6.3	6.7
20	B-3.0662	6.3	6.7	6.7	6.7	4.0	6.3
21	MM2 comp	6.3	7.5	7.3	7.7	5.0	6.3
22	APR 1658	6.2	8.0	8.3	7.7	5.0	6.7
23	UP3 comp	6.2	6.8	7.3	6.3	5.3	6.0
24	A00 C2	6.2	6.8	7.0	6.7	6.3	6.0
25	APR 1666	6.1	7.0	7.3	6.7	5.7	6.0
26	APR 1695	6.1	6.7	7.7	5.7	5.0	6.3
27	Integra C1	6.1	6.0	6.7	5.3	5.7	5.3
28	IS-PR 235	6.1	6.7	7.3	6.0	4.0	3.3
29	IG2	6.1	7.2	7.7	6.7	7.0	6.3
30	APR 1712	6.0	5.8	6.7	5.0	4.7	6.7
31	IS-PR 237	6.0	6.8	7.0	6.7	4.7	7.3
32	IS-PR 230	5.9	5.8	6.3	5.3	4.3	6.0
33	Amazing C1	5.8	5.5	6.0	5.0	6.3	6.7
34	IS-PR 266	5.8	6.3	7.3	5.3	4.7	5.7
35	APR 1670	5.8	6.5	7.0	6.0	6.0	5.3

(Continued)

Table 5 (continued).

	Cultivar or Selection	Turf Quality ¹ 2004 Avg.	Gray Leaf Spot ² 2003 Avg.	Gray Leaf Spot Sept. 26 2003	Gray Leaf Spot Oct. 1 2003	Establishment ³ Sept. 2003	Seed Head ⁴ May 2004
36	Integra C2	5.8	7.5	7.7	7.3	5.0	5.0
37	Pizzazz C1	5.8	5.3	5.7	5.0	7.3	6.3
38	APR 1663	5.7	6.7	7.0	6.3	6.0	5.7
39	APR 1673	5.7	6.5	7.0	6.0	5.0	7.7
40	IS-PR 226	5.7	5.7	6.7	4.7	3.7	6.3
41	APR 1647	5.7	7.2	7.7	6.7	4.3	6.0
42	IS-PR 234	5.7	6.8	6.7	7.0	2.7	6.3
43	Fusion	5.7	6.0	6.7	5.3	4.3	4.7
44	UP4 comp	5.7	6.2	6.0	6.3	5.3	4.7
45	APR 1551	5.6	5.3	6.7	4.0	5.7	6.0
46	APR 1699	5.6	7.7	7.7	7.7	5.3	7.3
47	Buena Vista	5.6	5.5	6.0	5.0	4.7	6.3
48	IS-PR 229	5.6	5.5	5.7	5.3	5.0	6.0
49	APR 1563	5.6	5.5	6.0	5.0	5.3	5.0
50	PST-Syn-2AGP	5.6	6.7	6.7	6.7	3.7	5.3
51	Applaud C1	5.5	5.2	5.7	4.7	6.3	5.7
52	IS-PR 267	5.5	6.0	6.3	5.7	5.0	6.0
53	APR 1702	5.5	5.5	6.0	5.0	6.3	5.7
54	Jet C2	5.5	6.7	6.7	6.7	5.3	6.3
55	Promise C2	5.5	6.0	6.0	6.0	5.3	6.3
56	PST-2PC	5.4	5.8	6.3	5.3	8.0	6.7
57	PSW #45	5.4	4.5	5.3	3.7	8.0	8.0
58	SRX 4557	5.4	6.0	6.7	5.3	5.0	5.7
59	APR 1557	5.3	5.8	6.7	5.0	5.3	6.0
60	APR 1705	5.3	5.8	6.7	5.0	5.0	5.3
61	PST-2GSM bulk	5.3	5.7	6.3	5.0	5.0	6.3
62	Applaud	5.2	4.2	4.7	3.7	8.7	6.0
63	PST-2MNG bulk	5.2	5.3	5.7	5.0	3.7	6.7
64	PSW #19	5.2	4.7	5.0	4.3	4.7	6.3
65	IS-PR 209	5.2	5.7	6.0	5.3	3.7	6.0
66	Amazing	5.2	3.2	3.7	2.7	9.0	5.0
67	Pizzazz	5.2	3.8	4.3	3.3	9.0	6.3
68	APR 1561	5.1	5.0	5.7	4.3	5.0	5.0
69	Citation Fore	5.1	4.0	4.3	3.7	8.3	5.7
70	Gray Star	5.1	5.5	6.0	5.0	4.7	7.3

(Continued)

Table 5 (continued).

	Cultivar or Selection	Turf Quality ¹ 2004 Avg.	Gray Leaf Spot ² 2003 Avg.	Gray Leaf Spot Sept. 26 2003	Gray Leaf Spot Oct. 1 2003	Establishment ³ Sept. 2003	Seed Head ⁴ May 2004
71	IS-PR 239	5.1	5.5	6.3	4.7	4.3	5.7
72	SRX 4510	5.1	4.0	4.3	3.7	8.7	5.7
73	APR 1559	5.0	4.3	5.0	3.7	7.0	6.3
74	APR 1560	5.0	5.2	6.7	3.7	6.0	4.3
75	APR 1694	5.0	6.2	7.0	5.3	4.7	6.7
76	DSU comp	5.0	4.3	4.7	4.0	4.0	5.3
77	Integra	5.0	4.0	4.3	3.7	7.7	5.3
78	PST-2UF	5.0	4.3	4.7	4.0	7.3	7.7
79	APR 1566	5.0	5.3	6.3	4.3	4.7	5.7
80	APR 1674	5.0	6.7	7.3	6.0	5.0	4.0
81	APR 1682	5.0	7.0	6.7	7.3	5.3	6.7
82	APR 1684	4.9	5.7	6.3	5.0	5.3	5.0
83	Peregreen	4.9	3.8	4.3	3.3	8.7	6.0
84	Top Hat 2	4.9	4.0	4.3	3.7	8.7	5.3
85	A00 C1	4.9	3.8	4.0	3.7	6.7	5.0
86	APR 1671	4.9	5.7	6.0	5.3	6.7	6.3
87	IS-PR 241	4.9	5.5	6.3	4.7	4.3	6.3
88	PST-Syn-2MAN	4.8	6.0	6.7	5.3	3.7	5.7
89	Delaware XL	4.8	4.0	4.3	3.7	4.7	5.7
90	Jet C1	4.8	4.3	5.3	3.3	7.0	5.3
91	APR 1661	4.7	6.8	7.3	6.3	6.7	5.7
92	SR 4420	4.7	3.3	3.7	3.0	8.3	5.7
93	IS-PR 233	4.7	6.2	6.7	5.7	3.0	6.0
94	PSW #13	4.7	3.7	4.3	3.0	5.0	7.3
95	PST-Syn-2MGG	4.6	5.2	5.7	4.7	3.3	5.7
96	BOB-03	4.6	4.5	5.0	4.0	4.0	5.7
97	SRX OH 422	4.6	3.8	4.3	3.3	6.7	6.0
98	2MAN	4.5	5.0	5.7	4.3	5.0	6.0
99	B-03.0530	4.5	4.7	5.7	3.7	4.3	5.0
100	Racer 2	4.4	3.8	4.0	3.7	9.0	6.3
101	SR 4220	4.4	3.8	4.0	3.7	8.7	5.7
102	B-3.0616	4.4	4.7	5.3	4.0	4.0	4.3
103	Pennant II	4.4	3.7	4.3	3.0	8.7	6.3
104	PST-2AOI bulk	4.4	4.7	5.7	3.7	4.0	5.0
105	PST-2LGS bulk	4.4	5.2	5.7	4.7	5.3	3.7

(Continued)

Table 5 (continued).

	Cultivar or Selection	Turf Quality ¹ 2004 Avg.	Gray Leaf Spot ² 2003 Avg.	Gray Leaf Spot Sept. 26 2003	Gray Leaf Spot Oct. 1 2003	Establishment ³ Sept. 2003	Seed Head ⁴ May 2004
106	Calypso II	4.3	2.8	3.3	2.3	8.7	5.0
107	Jet	4.3	3.2	3.7	2.7	8.7	4.3
108	PST-Syn-2BL	4.3	4.7	5.0	4.3	3.0	8.0
109	PSW #20	4.3	4.2	4.7	3.7	4.7	5.3
110	Blazer 4	4.2	3.0	3.3	2.7	9.0	5.7
111	Manhattan 4	4.2	4.0	4.7	3.3	9.0	5.3
112	PST-Syn-2EMN	4.2	5.2	5.7	4.7	3.7	3.7
113	PST-Syn-2MD	4.2	4.2	5.0	3.3	4.0	3.7
114	PSW #31	4.2	3.7	4.3	3.0	5.0	3.7
115	PSW #39	4.2	4.3	5.3	3.3	4.0	6.0
116	PSW #52	4.2	5.2	6.0	4.3	4.0	7.3
117	B-3.0526	4.2	5.3	6.0	4.7	3.0	4.3
118	IS-PR 232	4.2	5.2	5.3	5.0	3.0	6.3
119	NMSP-03	4.2	3.2	3.3	3.0	4.3	6.3
120	Promise C1	4.2	3.5	4.3	2.7	6.0	4.7
121	SRX CA 422	4.2	3.5	3.7	3.3	4.7	5.3
122	Sun-Kissed	4.2	2.7	3.0	2.3	8.3	5.0
123	Brightstar SLT	4.2	3.3	3.7	3.0	8.7	4.7
124	Gator 3	4.2	3.5	3.7	3.3	7.7	5.3
125	IS-PR 261	4.2	3.2	3.7	2.7	5.7	5.3
126	IS-PR 225	4.1	3.5	4.3	2.7	4.0	5.7
127	Line Drive	4.1	3.7	4.0	3.3	8.7	6.0
128	Radiant	4.1	3.5	4.0	3.0	8.7	6.0
129	SRX CA 421	4.1	4.7	5.7	3.7	3.0	5.3
130	PST-2LITA bulk	4.1	3.8	5.0	2.7	3.7	6.0
131	PSW #18	4.1	3.8	4.3	3.3	5.0	5.3
132	APR 1672	4.1	5.3	5.7	5.0	5.0	5.0
133	IS-PR 238	4.1	4.7	5.0	4.3	2.7	5.3
134	IS-PR 246	4.1	4.3	5.3	3.3	3.0	6.0
135	Lowgrow II	4.1	4.2	4.7	3.7	4.3	5.0
136	Prelude IV	4.1	2.8	3.0	2.7	9.0	5.0
137	APR 1425	4.0	4.5	5.0	4.0	4.7	5.3
138	APR 1648	4.0	2.7	3.7	1.7	5.7	5.7
139	Fiesta 3	4.0	3.2	3.7	2.7	8.3	4.7
140	PSW #24	4.0	4.3	5.3	3.3	5.0	5.0

(Continued)

Table 5 (continued).

	Cultivar or Selection	Turf Quality ¹ 2004 Avg.	Gray Leaf Spot ² 2003 Avg.	Gray Leaf Spot Sept. 26 2003	Gray Leaf Spot Oct. 1 2003	Establishment ³ Sept. 2003	Seed Head ⁴ May 2004
141	B-3.0527	4.0	4.0	4.7	3.3	4.3	5.0
142	Palmer III	4.0	3.2	3.7	2.7	8.7	5.3
143	B-3.0611	3.9	3.8	4.7	3.0	2.7	4.7
144	PSW #10	3.9	4.5	5.3	3.7	5.3	6.7
145	PSW #12	3.9	4.2	4.7	3.7	6.0	7.0
146	Extreme	3.9	3.2	3.3	3.0	9.0	6.7
147	PST-2LU bulk	3.9	4.8	5.0	4.5	2.3	6.7
148	ALS2-03	3.9	4.2	5.3	3.0	4.3	5.3
149	IS-PR 240	3.9	4.0	4.7	3.3	3.3	5.0
150	IS-PR 248	3.9	4.7	5.3	4.0	3.3	6.0
151	PSW #5	3.9	4.7	5.3	4.0	2.3	5.3
152	Arrival	3.8	3.0	4.0	2.0	5.3	4.7
153	B-3.0617	3.8	3.8	4.3	3.3	3.7	4.7
154	PST-Syn-2R9R	3.8	4.7	5.3	4.0	4.7	4.7
155	SRX CA 424	3.8	3.0	4.0	2.0	6.0	4.0
156	Monterey II	3.7	2.0	2.3	1.7	9.0	6.0
157	PSW #29	3.7	3.5	4.3	2.7	4.3	5.7
158	PSW #3	3.7	2.8	3.7	2.0	5.7	5.0
159	PSW #54	3.7	4.5	5.7	3.3	4.3	6.3
160	SR 4500	3.7	4.2	4.7	3.7	8.7	4.3
161	SRX CA 423	3.7	3.7	4.3	3.0	5.7	5.3
162	SRX CA 452	3.7	3.5	4.0	3.0	5.0	5.7
163	SRX CA HT1	3.7	3.2	4.0	2.3	5.7	3.7
164	PSW #16	3.7	1.8	2.3	1.3	6.0	5.7
165	PSW #34	3.7	2.7	3.3	2.0	4.7	6.0
166	PSW #43	3.7	1.8	2.0	1.7	8.7	5.0
167	PSW #9	3.7	3.5	4.0	3.0	4.0	4.0
168	SRX CA 451	3.7	3.0	3.7	2.3	3.7	5.7
169	SRX OH 421	3.7	3.8	4.3	3.3	5.7	5.7
170	PSW #25	3.6	3.8	4.3	3.3	3.3	5.7
171	Wizard	3.6	4.2	4.7	3.7	9.0	5.0
172	B-3.0614	3.6	3.5	4.0	3.0	4.0	5.0
173	PSW #6	3.6	3.2	4.0	2.3	3.7	5.0
174	Greenville	3.6	4.0	4.0	4.0	4.0	4.0
175	PSW #22	3.6	3.7	4.3	3.0	3.7	4.7

(Continued)

Table 5 (continued).

	Cultivar or Selection	Turf Quality ¹ 2004 Avg.	Gray Leaf Spot ² 2003 Avg.	Gray Leaf Spot Sept. 26 2003	Gray Leaf Spot Oct. 1 2003	Establishment ³ Sept. 2003	Seed Head ⁴ May 2004
176	PSW #27	3.6	3.8	4.0	3.7	8.0	2.7
177	Sunshine	3.6	2.7	3.3	2.0	8.3	4.7
178	Allsport	3.5	3.7	4.0	3.3	4.7	5.0
179	Dazzle	3.5	3.0	3.7	2.3	5.0	4.3
180	IS-PR 245	3.5	3.3	4.0	2.7	4.0	5.0
181	Phantom	3.5	3.8	4.3	3.3	8.7	5.3
182	PST-2MX bulk	3.5	3.0	3.7	2.3	3.7	3.7
183	PSW #2	3.5	4.0	4.7	3.3	4.7	5.3
184	Seville II	3.5	2.8	3.3	2.3	9.0	3.7
185	SRX CA 441	3.5	3.7	4.7	2.7	4.3	5.0
186	PSW #32	3.5	1.7	2.3	1.0	6.3	5.3
187	PSW #51	3.5	3.5	4.0	3.0	4.0	7.0
188	Passport	3.4	2.7	3.3	2.0	8.3	5.7
189	B-3.0528	3.4	2.7	3.3	2.0	4.0	4.7
190	B-3.0533	3.4	3.0	4.0	2.0	3.0	4.3
191	PST-2ERS bulk	3.4	4.5	5.3	3.7	4.7	2.3
192	SR 4350	3.4	2.5	3.0	2.0	9.0	6.0
193	PSW #15	3.4	3.0	3.7	2.3	5.0	6.7
194	PSW #33	3.4	3.5	4.3	2.7	4.0	5.3
195	PSW #37	3.4	2.8	3.7	2.0	4.7	5.3
196	SRX CAE W1	3.4	4.0	4.7	3.3	6.3	3.7
197	SRX OH 433	3.4	3.7	4.3	3.0	6.3	5.7
198	SRX OH COR	3.3	3.2	4.3	2.0	4.7	5.0
199	Lowgrow	3.3	3.3	4.0	2.7	7.7	6.3
200	B-03.0666	3.3	3.5	4.0	3.0	3.3	4.7
201	Promise	3.3	2.0	2.7	1.3	8.7	3.3
202	PST-2LING bulk	3.3	3.7	4.7	2.7	3.3	4.7
203	PSW #23	3.3	3.5	4.3	2.7	3.0	5.0
204	B-3.0606	3.2	3.0	3.7	2.3	4.3	4.7
205	Goal Keeper	3.2	2.8	3.3	2.3	9.0	6.0
206	PSW #14	3.2	2.5	3.3	1.7	7.0	5.3
207	PSW #26	3.2	2.2	2.7	1.7	5.0	4.7
208	PSW #8	3.2	4.2	4.7	3.7	3.0	4.7
209	Repell II	3.2	2.3	2.3	2.3	8.3	3.7
210	Paragon	3.2	2.5	3.0	2.0	8.7	4.0

(Continued)

Table 5 (continued).

	Cultivar or Selection	Turf Quality ¹ 2004 Avg.	Gray Leaf Spot ² 2003 Avg.	Gray Leaf Spot Sept. 26 2003	Gray Leaf Spot Oct. 1 2003	Establishment ³ Sept. 2003	Seed Head ⁴ May 2004
211	PST-Syn-2MUI	3.2	3.8	4.7	3.0	4.3	2.7
212	PSW #21	3.2	3.2	4.0	2.3	3.0	5.3
213	PSW #30	3.2	2.7	3.7	1.7	3.0	4.7
214	SRX 45AB1	3.2	4.2	5.0	3.3	1.7	6.0
215	SRX AB 452	3.2	4.5	5.3	3.7	1.0	6.7
216	B-3.0615	3.2	3.0	3.3	2.7	3.7	4.0
217	SRX AB 451	3.2	3.7	4.0	3.3	1.7	5.7
218	SRX CA MO	3.2	2.8	3.7	2.0	3.0	4.3
219	ASAP	3.1	2.0	2.3	1.7	9.0	4.7
220	PSW #40	3.1	2.8	3.7	2.0	3.3	6.3
221	SRX ABHT	3.1	4.3	4.3	4.3	1.3	6.7
222	Hawkeye	3.1	1.7	2.0	1.3	9.0	3.3
223	IS-PR 247	3.1	3.3	3.7	3.0	3.3	5.3
224	PSW #11	3.1	2.3	3.0	1.7	5.3	6.7
225	PSW #38	3.1	2.5	3.3	1.7	4.7	5.3
226	Racer	3.1	2.3	3.0	1.7	8.0	3.0
227	Wilmington	3.1	2.7	3.7	2.5	4.0	4.0
228	B-3.0607	3.1	2.8	4.0	1.7	3.0	5.0
229	Prospert	3.1	3.7	4.0	3.3	3.3	3.0
230	PSW #41	3.1	1.8	2.3	1.3	4.0	5.7
231	Cutter	3.0	3.0	3.3	2.7	9.0	2.7
232	Pacesetter	3.0	3.2	4.0	2.3	3.7	4.3
233	Prizm	3.0	2.5	2.7	2.3	8.3	4.7
234	PSW #35	3.0	1.5	2.0	1.0	5.7	4.0
235	Edge	3.0	2.5	3.3	1.7	8.3	3.3
236	Icon	3.0	3.5	4.0	3.0	4.0	5.0
237	PSW #53	3.0	2.0	2.3	1.7	4.0	4.7
238	PSW #42	3.0	3.2	4.3	2.0	3.3	5.3
239	PSW #7	3.0	3.0	3.3	2.7	3.7	5.7
240	PSW #46	2.9	1.7	2.0	1.3	7.7	5.7
241	B-3.0531	2.9	2.7	3.3	2.0	3.3	4.3
242	Prelude III	2.8	1.7	1.7	1.7	8.7	3.3
243	SRX OH 411	2.8	2.8	3.7	2.0	6.0	3.7
244	SRX OH 412	2.8	2.3	3.0	1.7	4.7	3.3
245	PSW #17	2.8	2.2	3.0	1.3	3.0	6.0

(Continued)

Table 5 (continued).

	Cultivar or Selection	Turf Quality ¹ 2004 Avg.	Gray Leaf Spot ² 2003 Avg.	Gray Leaf Spot Sept. 26 2003	Gray Leaf Spot Oct. 1 2003	Establishment ³ Sept. 2003	Seed Head ⁴ May 2004
246	B-3.0608	2.8	2.8	3.3	2.3	2.7	4.7
247	B-3.0609	2.8	3.0	3.7	2.3	3.7	4.0
248	PSW #50	2.8	3.0	3.7	2.3	4.3	5.3
249	Panther	2.7	1.3	1.7	1.0	9.0	4.3
250	PSW #48	2.7	3.3	4.0	2.7	3.0	6.0
251	MPRH 93	2.7	2.0	4.0	2.0	2.3	3.0
252	SRX AB 453	2.7	3.3	4.0	2.7	1.7	6.3
253	PSW #1	2.6	2.2	3.0	1.3	3.3	4.7
254	B-3.0535	2.6	2.2	3.0	1.3	5.0	3.3
255	PST-Syn-2GE	2.6	3.2	3.3	3.0	3.0	3.0
256	SRX CA HT2	2.6	1.5	1.7	1.3	5.0	3.7
257	PST-2SS bulk	2.5	3.5	4.0	3.0	2.3	3.7
258	PSW #36	2.5	2.0	2.7	1.3	5.3	3.7
259	Penguin	2.5	1.3	1.7	1.0	8.7	3.0
260	Imagine	2.4	1.2	1.3	1.0	9.0	3.3
261	Omni	2.4	1.7	2.0	1.3	7.7	2.7
262	PST-Syn-2CRH	2.3	2.5	3.0	2.0	2.0	3.7
263	Manhattan	2.2	2.8	3.7	2.0	5.0	6.3
264	Pennfine	1.4	1.2	1.3	1.0	6.7	1.3
265	Nui	1.0	3.2	3.3	3.0	9.0	1.0
	LSD at 5% =	0.8	1.3	1.5	1.3	1.4	1.4

¹9 = best turf quality²9 = least disease³9 = best seedling establishment⁴9 = fewest seed heads

Table 6. Performance of perennial ryegrass cultivars and selections in a turf trial established in August 2004 at Adelphia, NJ. (Includes all entries of the 2004 National Perennial Ryegrass Test sponsored by NTEP.)

	Cultivar or Selection	Gray Leaf Spot ¹ 2004 Avg.	Gray Leaf Spot Oct. 5 2004	Gray Leaf Spot Oct. 21 2004	Turf Quality ² 2004 Avg.	Cover (%) Sept. 2004
1	Pick RB-1	9.0	9.0	9.0	8.3	85.0
2	LTP-611-GLSR	8.8	8.7	9.0	8.7	90.0
3	GL1 Comp	8.8	9.0	8.7	8.0	81.7
4	D04-UP	8.8	9.0	8.7	7.6	68.3
5	DP1	8.7	8.7	8.7	8.1	91.7
6	Pick F4	8.7	8.7	8.7	7.9	66.7
7	AAZ-B104	8.7	8.7	8.7	7.4	71.7
8	IS-PR 274	8.5	8.3	8.7	8.4	76.7
9	GL4 Comp	8.5	8.3	8.7	8.3	75.0
10	SRX 4SP	8.5	8.3	8.7	8.0	68.3
11	Protege	8.5	8.7	8.3	7.8	91.0
12	Paragon GLR	8.3	8.7	8.0	7.2	88.3
13	AF	8.2	8.3	8.0	7.6	90.0
14	SRX 4UP3	8.2	8.3	8.0	7.2	76.7
15	GL-2	8.2	8.3	8.0	6.5	91.7
16	APR 1664	8.0	8.0	8.0	7.5	63.3
17	APR 1797	8.0	8.0	8.0	6.6	71.7
18	JR-348	7.8	8.0	7.7	7.2	80.0
19	MMW	7.7	7.7	7.7	7.7	70.0
20	IS-PR 273	7.7	7.7	7.7	6.6	68.3
21	IS-PR 270	7.5	7.7	7.3	7.4	68.3
22	D04-11T	7.5	7.3	7.7	6.8	90.0
23	IS-PR 271	7.5	7.3	7.7	6.6	70.0
24	IS-PR 268	7.5	7.3	7.7	6.4	73.3
25	IS-PR 235	7.5	7.7	7.3	6.4	60.0
26	APR 1663	7.5	8.0	7.0	5.9	75.0
27	APR 1660	7.3	7.0	7.7	6.8	73.3
28	Panther GLS	7.3	7.7	7.0	6.8	73.3
29	IS-PR 236	7.3	7.3	7.3	6.4	70.0
30	LTP-PG-GLSR	7.3	7.7	7.0	5.9	75.0
31	IS-PR 276	7.2	7.3	7.0	6.8	71.7
32	GL3 Comp	7.2	7.3	7.0	6.5	63.3
33	Repell GLS	7.2	7.0	7.3	6.3	81.7
34	LTP-101-GLSR	7.2	7.0	7.3	6.0	66.7
35	RNS	7.2	7.0	7.3	5.9	83.3

(Continued)

Table 6 (continued).

	Cultivar or Selection	Gray Leaf Spot ¹ 2004 Avg.	Gray Leaf Spot Oct. 5 2004	Gray Leaf Spot Oct. 21 2004	Turf Quality ² 2004 Avg.	Cover (%) Sept. 2004
36	IS-PR 269	7.0	7.0	7.0	6.1	65.0
37	RG3P	6.8	6.7	7.0	6.5	73.3
38	LCK	6.8	6.7	7.0	6.2	61.7
39	Palmer IV	6.8	7.0	6.7	5.8	81.7
40	Fusion	6.8	7.0	6.7	5.6	58.3
41	PST-2AM	6.7	7.0	6.3	5.9	81.7
42	SRX 4682	6.7	7.0	6.3	5.0	55.0
43	IS-PR 233	6.7	7.0	6.3	4.9	46.7
44	APR 1670	6.5	6.7	6.3	6.0	81.7
45	D04-1667	6.5	6.7	6.3	5.6	76.7
46	IS-PR 312	6.3	6.0	6.7	5.3	90.0
47	Buena Vista	5.8	5.3	6.3	4.8	75.0
48	Silver Dollar	5.7	5.0	6.3	5.3	76.7
49	PST-2GSM	5.7	5.7	5.7	4.9	83.3
50	PST-2AG4	5.5	5.7	5.3	5.7	68.3
51	PST-2MNG	5.3	5.3	5.3	4.8	76.7
52	04-BRE	5.3	5.7	5.0	3.4	43.3
53	04-BEN	5.2	5.7	4.7	4.4	50.0
54	SRX 4692	5.2	5.7	4.7	4.1	48.3
55	AC2	5.0	4.7	5.3	4.6	65.0
56	MS2	4.8	4.3	5.3	4.2	70.0
57	DCM	4.8	4.7	5.0	4.1	81.7
58	VB77	4.8	5.3	4.3	3.9	58.3
59	PM 103	4.7	4.7	4.7	4.0	75.0
60	PST-2LGL	4.5	4.7	4.3	4.0	56.7
61	BAR Lp 4420	4.5	4.7	4.3	3.7	50.0
62	DP 17-9502	4.5	4.7	4.3	2.8	58.3
63	ES45	4.3	4.7	4.0	4.2	56.7
64	Mach I	4.3	4.3	4.3	4.0	91.7
65	PST-2LAN	4.3	4.3	4.3	4.0	76.7
66	Citation Fore	4.3	4.3	4.3	3.8	93.3
67	RAD-PR8	4.2	4.0	4.3	4.2	48.3
68	LPFG	4.2	4.3	4.0	4.0	53.3
69	PST-217	4.2	4.3	4.0	3.4	70.0
70	EXS54	4.0	4.3	3.7	3.8	53.3

(Continued)

Table 6 (continued).

	Cultivar or Selection	Gray Leaf Spot ¹ 2004 Avg.	Gray Leaf Spot Oct. 5 2004	Gray Leaf Spot Oct. 21 2004	Turf Quality ² 2004 Avg.	Cover (%) Sept. 2004
71	Pinnacle II	4.0	4.3	3.7	3.8	48.3
72	PM 102	3.8	3.3	4.3	3.9	53.3
73	Pick 01-2	3.8	3.7	4.0	3.5	86.7
74	PST-2BLK	3.8	4.0	3.7	3.1	81.7
75	DP 17-9788	3.8	4.0	3.7	3.1	51.7
76	E-99	3.8	3.7	4.0	3.0	56.7
77	VB99	3.7	3.7	3.7	4.0	58.3
78	SNR	3.7	3.3	4.0	3.7	66.7
79	PRG HS-01-99	3.7	3.3	4.0	3.2	80.0
80	Pizzazz	3.7	3.3	4.0	3.1	88.3
81	PM 101	3.7	3.7	3.7	3.1	58.3
82	DP 17-9499	3.7	4.0	3.3	2.7	51.7
83	GPR	3.5	3.7	3.3	3.9	60.0
84	CNV	3.5	3.7	3.3	3.5	48.3
85	BPR	3.5	3.7	3.3	3.3	46.7
86	BAR Lp 4317	3.5	3.7	3.3	3.1	70.0
87	Affinity	3.5	3.7	3.3	2.2	95.0
88	Quicksilver	3.3	3.7	3.0	3.3	80.0
89	Pentium	3.3	3.0	3.7	3.2	93.3
90	TRS	3.3	3.3	3.3	3.0	45.0
91	PWDR	3.3	3.7	3.0	3.0	50.0
92	JR-225	3.3	3.3	3.3	2.9	63.3
93	SP4	3.2	3.3	3.0	3.2	70.0
94	JR-119	3.2	3.3	3.0	3.2	73.3
95	Overdrive	3.2	3.0	3.3	3.2	71.7
96	AJM	3.2	3.7	2.7	3.1	53.3
97	JR-408	3.2	3.0	3.3	3.0	70.0
98	TR47	3.2	3.3	3.0	3.0	55.0
99	Palmer III	3.2	3.0	3.3	2.8	83.3
100	Premier	3.2	3.3	3.0	2.4	94.3
101	L44	3.0	3.3	2.7	3.3	61.7
102	BAR Lp 4920	3.0	2.7	3.3	3.1	76.7
103	RTS	3.0	3.7	2.3	3.0	50.0
104	DP 17-9505	3.0	3.7	2.3	2.9	51.7
105	KN42	3.0	3.3	2.7	2.8	53.3

(Continued)

Table 6 (continued).

	Cultivar or Selection	Gray Leaf Spot ¹ 2004 Avg.	Gray Leaf Spot Oct. 5 2004	Gray Leaf Spot Oct. 21 2004	Turf Quality ² 2004 Avg.	Cover (%) Sept. 2004
106	D04-LP05	2.8	3.0	2.7	2.7	73.3
107	Brightstar SLT	2.8	2.7	3.0	2.4	90.0
108	Premier II	2.8	3.0	2.7	2.4	93.3
109	APR 1648	2.5	2.3	2.7	3.2	83.3
110	Sunshine 2	2.3	1.7	3.0	2.9	76.7
111	Barlennium	2.2	2.7	1.7	2.0	76.7
112	JR-324	2.0	2.0	2.0	2.9	71.7
113	Inspire	2.0	2.3	1.7	2.0	86.0
114	Headstart 2	1.8	1.3	2.3	2.8	68.3
115	Pinnacle	1.8	2.3	1.3	1.8	90.0
116	Pick 02-R	1.7	1.7	1.7	2.8	55.0
117	Panther	1.7	2.0	1.3	1.9	94.3
118	JR-114	1.7	1.3	2.0	1.9	63.3
119	JR-163	1.7	1.7	1.7	1.8	48.3
120	PS-2	1.3	1.0	1.7	1.9	53.3
121	LPR 02203	1.0	1.0	1.0	1.2	90.0
122	Linn	1.0	1.0	1.0	1.0	88.7
123	Manhattan II	.	.	.	1.0	5.0
	LSD at 5% =	1.0	1.2	1.1	0.9	17.4

¹9 = least disease²9 = best turf quality

Table 7. Performance of perennial ryegrass cultivars and selections in a turf trial established in August 2004 at New Brunswick, NJ. (Includes all entries of the 2004 National Perennial Ryegrass Test sponsored by NTEP.)

	Cultivar or Selection	Gray Leaf Spot ¹ 2004 Avg.	Gray Leaf Spot Oct. 4 2004	Gray Leaf Spot Oct. 6 2004	Turf Quality ² 2004 Avg.	Cover (%) Sept. 2004
1	LTP-611-GLSR	9.0	9.0	9.0	8.0	81.7
2	D04-UP	9.0	9.0	9.0	8.7	68.3
3	DP1	8.8	9.0	8.7	8.3	88.3
4	MMW	8.8	8.7	9.0	8.0	81.7
5	Pick RB-1	8.8	9.0	8.7	8.2	83.3
6	Pick F4	8.8	8.7	9.0	7.8	85.0
7	SRX 4SP	8.8	9.0	8.7	8.8	76.7
8	Protege	8.5	8.3	8.7	7.8	83.3
9	APR 1664	8.5	8.3	8.7	7.3	76.7
10	IS-PR 274	8.5	8.3	8.7	8.2	86.7
11	APR 1663	8.5	8.7	8.3	7.2	86.7
12	AAZ-B104	8.5	8.7	8.3	8.3	78.3
13	AF	8.5	8.7	8.3	7.5	86.7
14	APR 1660	8.3	8.7	8.0	7.0	83.3
15	SRX 4UP3	8.3	8.7	8.0	7.8	73.3
16	Panther GLS	8.2	8.7	7.7	7.0	75.0
17	SRX 4682	8.0	8.7	7.3	5.8	65.0
18	D04-11T	8.0	8.0	8.0	7.3	83.3
19	IS-PR 270	7.8	7.7	8.0	6.5	86.7
20	PST-2AM	7.8	8.0	7.7	6.8	78.3
21	D04-1667	7.8	8.0	7.7	6.8	80.0
22	Paragon GLR	7.7	7.7	7.7	7.3	86.7
23	IS-PR 268	7.5	7.3	7.7	6.8	86.7
24	IS-PR 236	7.5	7.3	7.7	6.7	83.3
25	Repell GLS	7.5	7.7	7.3	7.0	76.7
26	GL-2	7.5	7.7	7.3	5.8	86.7
27	RNS	7.3	8.0	6.7	6.3	85.0
28	APR 1797	7.3	7.3	7.3	6.5	81.7
29	IS-PR 235	7.2	7.3	7.0	6.8	81.7
30	LTP-PG-GLSR	7.2	8.0	6.3	7.3	61.7
31	LTP-101-GLSR	7.2	7.3	7.0	6.8	73.3
32	Palmer IV	7.2	7.3	7.0	7.0	76.7
33	JR-348	6.8	7.3	6.3	7.0	73.3
34	IS-PR 273	6.8	7.3	6.3	6.2	78.3
35	APR 1670	6.8	7.0	6.7	5.8	88.3

(Continued)

Table 7 (continued).

	Cultivar or Selection	Gray Leaf Spot ¹ 2004 Avg.	Gray Leaf Spot Oct. 4 2004	Gray Leaf Spot Oct. 6 2004	Turf Quality ² 2004 Avg.	Cover (%) Sept. 2004
36	IS-PR 271	6.7	6.7	6.7	6.3	78.3
37	04-BRE	6.7	7.0	6.3	5.5	75.0
38	IS-PR 269	6.3	6.7	6.0	6.3	86.7
39	Fusion	6.3	6.3	6.3	5.8	75.0
40	RG3P	6.3	6.3	6.3	5.5	85.0
41	SRX 4692	6.3	6.7	6.0	4.8	68.3
42	IS-PR 233	6.2	6.3	6.0	6.0	76.7
43	IS-PR 276	6.0	6.0	6.0	5.7	83.3
44	04-BEN	6.0	6.7	5.3	5.2	70.0
45	Buena Vista	5.7	6.0	5.3	5.3	76.7
46	PST-2AG4	5.7	5.3	6.0	5.7	70.0
47	LCK	5.5	5.7	5.3	5.7	78.3
48	PST-2MNG	5.3	5.7	5.0	4.8	80.0
49	ES45	5.0	5.0	5.0	4.2	68.3
50	Gray Star	5.0	5.7	4.3	3.5	75.0
51	LPFG	4.8	5.0	4.7	3.7	75.0
52	IS-PR 312	4.8	5.0	4.7	5.2	90.0
53	AC2	4.8	5.0	4.7	4.3	73.3
54	PST-2GSM	4.7	4.7	4.7	4.5	68.3
55	MS2	4.5	5.0	4.0	4.0	75.0
56	VB99	4.3	4.7	4.0	3.5	68.3
57	VB77	4.2	4.3	4.0	3.7	76.7
58	L44	4.2	4.3	4.0	3.3	76.7
59	BPR	4.2	4.3	4.0	3.7	80.0
60	AJM	4.2	4.3	4.0	3.5	76.7
61	DCM	4.2	4.3	4.0	4.2	78.3
62	RAD-PR8	4.2	4.3	4.0	4.0	80.0
63	EXS54	4.0	4.3	3.7	3.5	76.7
64	Overdrive	4.0	4.0	4.0	3.5	78.3
65	Silver Dollar	4.0	4.0	4.0	4.2	81.7
66	CNV	3.8	4.0	3.7	3.5	71.7
67	PWDR	3.8	4.0	3.7	3.7	78.3
68	SNR	3.8	4.3	3.3	3.8	78.3
69	BAR Lp 4420	3.8	4.0	3.7	3.5	76.7
70	TR47	3.7	4.0	3.3	3.3	76.7

(Continued)

Table 7 (continued).

	Cultivar or Selection	Gray Leaf Spot ¹ 2004 Avg.	Gray Leaf Spot Oct. 4 2004	Gray Leaf Spot Oct. 6 2004	Turf Quality ² 2004 Avg.	Cover (%) Sept. 2004
71	PST-217	3.7	3.7	3.7	3.3	73.3
72	PST-2LAN	3.7	4.0	3.3	3.3	73.3
73	SP4	3.5	3.7	3.3	3.3	83.3
74	Citation Fore	3.5	3.7	3.3	3.5	86.7
75	Pinnacle II	3.5	4.3	2.7	3.3	73.3
76	PM 103	3.5	3.7	3.3	3.5	76.7
77	E-99	3.5	4.0	3.0	3.8	73.3
78	PRG HS-01-99	3.3	3.7	3.0	3.3	85.0
79	GPR	3.2	3.0	3.3	3.3	73.3
80	TRS	3.2	3.7	2.7	2.5	78.3
81	Pick 01-2	3.2	3.3	3.0	3.3	80.0
82	PST-2BLK	3.2	3.3	3.0	3.3	66.7
83	Pizzazz	3.0	3.3	2.7	2.8	85.0
84	KN42	3.0	3.0	3.0	3.2	75.0
85	RTS	3.0	3.3	2.7	2.7	75.0
86	JR-119	3.0	3.3	2.7	2.7	81.7
87	Quicksilver	3.0	3.3	2.7	2.7	75.0
88	BAR Lp 4317	3.0	3.0	3.0	2.5	73.3
89	Pentium	3.0	3.0	3.0	2.8	81.7
90	JR-225	2.8	3.3	2.3	3.2	68.3
91	PM 101	2.8	3.3	2.3	2.5	78.3
92	BAR Lp 4920	2.8	3.3	2.3	2.5	78.3
93	PM 102	2.8	3.0	2.7	2.8	81.7
94	DP 17-9499	2.8	3.3	2.3	2.7	76.7
95	DP 17-9788	2.8	3.0	2.7	2.8	76.7
96	Palmer III	2.7	3.7	1.7	2.2	70.0
97	Barlennium	2.7	3.3	2.0	2.0	83.3
98	D04-LP05	2.7	3.3	2.0	2.8	76.7
99	DP 17-9505	2.7	3.3	2.0	2.3	75.0
100	JR-408	2.5	3.0	2.0	2.3	86.7
101	Mach I	2.5	3.0	2.0	2.5	90.0
102	Sunshine 2	2.5	3.0	2.0	2.2	81.7
103	Premier	2.5	2.7	2.3	2.2	90.0
104	DP 17-9502	2.5	3.0	2.0	2.7	81.7
105	Affinity	2.3	2.7	2.0	2.0	86.7

(Continued)

Table 7 (continued).

	Cultivar or Selection	Gray Leaf Spot ¹ 2004 Avg.	Gray Leaf Spot Oct. 4 2004	Gray Leaf Spot Oct. 6 2004	Turf Quality ² 2004 Avg.	Cover (%) Sept. 2004
106	JR-163	2.3	2.7	2.0	2.0	73.3
107	JR-114	2.3	3.0	1.7	2.3	75.0
108	PS-2	2.3	3.0	1.7	2.0	76.7
109	Inspire	2.3	2.7	2.0	2.2	85.0
110	JR-324	2.2	2.7	1.7	2.2	75.0
111	Brightstar SLT	2.2	2.7	1.7	2.2	90.0
112	Pick 02-R	2.0	2.7	1.3	1.8	70.0
113	Headstart 2	2.0	2.7	1.3	2.7	80.0
114	APR 1648	2.0	2.7	1.3	1.8	80.0
115	Premier II	1.8	2.3	1.3	1.3	86.7
116	Pinnacle	1.7	2.3	1.0	1.5	86.7
117	Linn	1.5	2.0	1.0	1.2	88.3
118	LPR 02203	1.3	1.7	1.0	1.5	76.7
119	Panther	1.3	1.7	1.0	1.2	90.0
120	Manhattan II	1.0
	LSD at 5% =	1.2	1.3	1.4	1.1	10.5

¹9 = least disease²9 = best turf quality

Table 8. Yearly nitrogen (N) applied and mowing height (Ht) on perennial ryegrass tests established at Adelphia and North Brunswick, NJ.

	2001		2002		2003		2004	
	N ¹	Ht ²	N	Ht	N	Ht	N	Ht
Table 1 (2000 Adelphia)	4.5	1.5	2.8	1.5	2.25	1.5	1.25	1.5
Table 2 (2001 Adelphia)			3.5	1.5	3.25	1.5	2.25	1.5
Table 3 (2001 Adelphia)			1.0	1.5	2.5	1.5	2.5	1.5
Table 4 (2002 Adelphia)					4.25	1.5	1.75	1.5
Table 5 (2003 Adelphia)					1.5	1.5	4.0	1.5
Table 6 (2004 Adelphia)							1.25	1.5
Table 7 (2004 North Brunswick)							0.5	1.5

¹ Annual N applied (lb/1000 ft²)

² Mowing height in inches