

# 2003 RUTGERS Turfgrass Proceedings



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# **2003 RUTGERS TURFGRASS PROCEEDINGS**

of the

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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 2003 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.

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Dr. Ann Brooks Gould, Editor  
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# PERFORMANCE OF TALL FESCUE CULTIVARS AND SELECTIONS IN NEW JERSEY TURF TRIALS

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Tall fescue (*Festuca arundinacea* Schreb.) is a cool-season grass native to Europe and parts of Africa that is used widely as both forage and turfgrass in much of the United States. Tall fescue has become a popular turfgrass during the last 25 years due to significant improvements in turf quality and disease resistance. The ability to perform well under low soil moisture conditions as well as a wide range of soil types has made tall fescue a good option for turf managers in many situations. Other cool-season turfgrasses do not perform as well as tall fescue under conditions of high temperature and drought.

Tall fescue germplasm was first introduced to the United States in the 19th century. The species was first utilized as a forage grass, and the first tall fescue cultivars to be used as turfgrass, Kentucky-31 and Alta, were introduced in the early 1940s. These older cultivars have a coarse leaf texture, light-green color, rapid vertical growth rate, and low shoot density, which results in poor turf quality when used for turf. Rebel tall fescue, released in 1980, is considered a landmark as the first turf-type cultivar with a finer leaf texture, higher shoot density, darker green color, and lower growth habit. Since its release, continuous improvements in these characteristics have resulted in a number of superior cultivars. Regardless of these improvements, however, Kentucky-31 is still sold in large quantities due to its low seed price.

Recent tall fescue releases can now be used effectively for a number of medium-high maintenance situations including athletic fields, parks, and home lawns. Many of the improved tall fescue cultivars are comparable to other cool-season turfgrass species in terms of turf quality at mowing heights of 1.5 inch and higher. This improvement is due to the efforts of plant breeders who have focused on developing tall

fescue cultivars that exhibit a darker green color, lower growth habit, higher shoot density, finer leaf texture, and increased resistance to disease. Tall fescue can also be used in low maintenance situations such as roadsides and industrial sites.

Currently, a great amount of research is being done on the beneficial role of endophytes in tall fescue. Endophytic fungi can live in leaf, sheath, and stem tissue of tall fescue plants and have been shown to enhance drought tolerance and insect resistance. Endophytes have been conclusively effective for insects such as white grubs which feed primarily on the root. The development of cultivars that contain beneficial endophytes may lead to many more uses for tall fescue as a turfgrass. Plant breeders are also continually attempting to find new sources of endophytes. The incorporation of new germplasm collections containing endophyte permits turf breeders to expand the genetic base of tall fescue used in cultivar development.

## PROCEDURES

Five tall fescue tests were established in New Jersey between 1999 and 2002. A single test was established each year at the Rutgers Plant Science Research and Extension Farm in Adelphia (Tables 1, 2, 3, and 5) and in 2001 at the Rutgers Horticultural Research Farm II in North Brunswick (Table 4). All tests at Adelphia were established in August or September by hand sowing 0.88 oz of seed per 3 X 5 ft plot (3.7 lb/1000 ft<sup>2</sup>). The test at North Brunswick was seeded in September and the plots were 4 X 6 ft (1.4 oz of seed per plot [3.6 lb/1000 ft<sup>2</sup>]). All tests were arranged in a randomized complete block design with three replications, and plots had a six-inch unseeded border to limit contamination.

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Broadleaf weeds were controlled with spring or fall applications of 2,4-D and Banvel. Dimension was used to control annual grassy weeds. Prograss was applied to reduce contamination by *Poa annua*. The North Brunswick test was also treated with Merit for grub control in July and Subdue for the control of *Pythium* in August.

Single applications of fertilizer did not exceed 1.0 lb nitrogen/1000 ft<sup>2</sup>. The amount and timing of nitrogen applied to turf varied to encourage disease and other stresses. Tests were mowed regularly (approximately 2 to 3 times per week) with reel mowers to maintain a 1.5-inch height of cut. The annual rate of nitrogen and mowing height for each test is presented in Table 6. 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 damage from insects and diseases). Other individual ratings such as establishment, spring green-up, color, density, leaf texture, and disease damage were evaluated when significant differences were evident. All ratings were based on a 1 to 9 scale, with 9 representing the best turf characteristic. Plots were evaluated by a number of turfgrass 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 the least significant difference (LSD) multiple comparisons test.

## RESULTS AND DISCUSSION

Results of the tall fescue tests can be found in Tables 1 through 5. All tests are ranked by the overall (multiple-year) turf quality average. A high quality average is generally indicative of better disease resistance, a darker green color, greater density, uniformity, finer leaf texture, lower growth habit, improved mowing quality, and less damage due to insects. Tables 3 and 4 include entries of the 2001 National Tall Fescue test sponsored by the National Turfgrass Evaluation Program (NTEP).

### Turf Quality

Great improvements have been made in overall turf quality of tall fescue. The early cultivars such as Kentucky-31 consistently rank near the bottom of the tests when ranked by turf quality. A cultivar devel-

oped in 2000 may rank very high in that test but rank quite low, relative to more recently-developed entries, in a test seeded just two or three years later. Because of this, turfgrass managers should continually study all available data.

### Disease Resistance

The major disease of tall fescue is brown patch caused by the fungus *Rhizoctonia solani*. Currently, there are no turf-type tall fescue cultivars with complete resistance to brown patch. If appropriate environmental conditions exist, all available cultivars will sustain some damage from the disease. Dense turf produces a microenvironment more favorable to brown patch, thus tall fescues with a more open canopy are being selected in further breeding efforts. Although these more open-type selections may not have the optimum density for some turf situations, the reduction in brown patch severity may greatly enhance summer turf quality.

The brown patch results in Tables 1 to 5 indicate that while significant differences existed between cultivars and selections, each plot was affected to some degree by the disease. Many of the new experimental selections being developed at Rutgers, such as ATM comp, ATL comp, and ATN comp, showed excellent disease resistance and recovery as did some of the newly released varieties such as Justice and Falcon IV.

In New Jersey, most improved tall fescue cultivars are able to recover fully from brown patch soon after the disease subsides. Treating for the disease, therefore, may not be necessary in most situations.

### Color

Breeding efforts over the past few decades have focused on the development of tall fescue cultivars that exhibit a darker green color. The dark green color of newer cultivars is reflected in the overall quality ratings in each of the tables. Much of the recent improvement made in newer cultivars such as Bingo, Guardian 21, Justice, SR 8250, and Raptor can be attributed to a change in color from medium green (i.e., Rebel Jr. and Falcon II) to dark green.

## SUMMARY

As plant breeders continue to develop cultivars with improved turf quality and disease resistance, tall fescue is certain to be used more widely in the turf

industry. Improvements in shade tolerance, density, leaf texture, and color have made tall fescue a more popular selection in many turfgrass situations. These improvements have also made it possible for tall fescue to be used effectively in mixtures with other turfgrass species, especially Kentucky bluegrass. Tall fescue performs better than most other cool-season turfgrasses under high temperature and low moisture conditions due in part to its extensive deep root system. Endophyte-infected tall fescue cultivars are useful in certain stress situations and will continue to be studied. The major weakness of tall fescue is its susceptibility to brown patch, thus the Rutgers breeding

program is focusing on developing cultivars that can better handle brown patch disease pressure.

#### **ACKNOWLEDGMENTS**

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Table 1. Performance of tall fescue cultivars and selections in a turf trial established in September 1999 at Adelphia, NJ.

Cultivar or Selection	-----Turf Quality <sup>1</sup> -----					Brown Patch <sup>2</sup> Aug. 2003
	2000- 2003 Avg.	2000 Avg.	2001 Avg.	2002 Avg.	2003 Avg.	
1 EBP comp	6.1	5.9	5.9	6.2	6.4	6.0
2 BE-3 comp	6.1	5.9	5.8	6.0	6.5	6.7
3 Signia	6.0	6.3	5.9	5.9	5.9	3.0
4 BE-1 comp	6.0	5.7	5.8	5.9	6.4	4.7
5 Rebel Exeda	5.9	5.7	5.9	5.8	6.2	4.3
6 Pick TF 5-99	5.8	5.5	6.1	5.8	5.9	5.3
7 ATF 629	5.8	5.7	5.7	5.8	6.0	5.7
8 Forte	5.8	5.7	5.6	6.0	5.9	4.3
9 SR 8550	5.8	5.9	5.5	5.9	5.9	4.7
10 TF 41	5.8	5.7	5.9	6.0	5.5	3.7
11 Bingo	5.7	5.9	5.6	5.7	5.7	5.3
12 ATF 594	5.7	6.1	5.7	5.8	5.2	3.7
13 DWP	5.7	5.5	6.0	6.1	5.1	1.7
14 E67 comp	5.7	5.5	5.1	5.8	6.3	4.3
15 WAF	5.6	5.6	5.6	5.8	5.6	6.0
16 Gremlin	5.6	5.4	5.8	5.6	5.7	4.3
17 94 RUT TF-2	5.5	5.3	5.6	5.7	5.5	6.3
18 Pick RT-95	5.5	5.3	5.8	5.5	5.3	4.3
19 Biltmore	5.4	4.7	5.5	5.6	5.9	4.0
20 ATF 708	5.4	5.7	5.5	5.3	5.2	4.0
21 8001 comp	5.4	5.6	5.2	5.3	5.5	5.0
22 Adam's Valley	5.4	5.5	5.8	5.2	5.0	4.0
23 Constitution	5.4	5.4	5.3	5.4	5.5	4.3
24 Arabia	5.3	5.4	5.0	5.2	5.7	4.3
25 Focus	5.3	5.5	5.7	5.1	5.0	4.3
26 Turbo	5.3	5.0	5.2	5.3	5.6	5.0
27 Picasso	5.3	5.3	5.4	5.2	5.3	4.0
28 Pick TF 4-99	5.2	4.6	5.3	5.6	5.4	4.7
29 Arid 3	5.2	5.3	5.2	5.4	4.9	4.3
30 Greystone	5.2	4.8	5.0	5.2	5.7	5.0
31 Plantation	5.1	5.0	5.1	5.3	4.9	4.0
32 PST-DDL	5.0	5.0	5.2	5.1	4.9	4.0
33 GS Bulk M-99	5.0	5.2	5.0	4.7	5.2	5.3
34 ATF 703	5.0	5.1	5.1	4.9	4.9	3.0
35 Rembrandt	5.0	4.7	5.4	5.1	4.9	5.3

(Continued)

Table 1 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----					Brown Patch <sup>2</sup> Aug. 2003
		2000- 2003 Avg.	2000 Avg.	2001 Avg.	2002 Avg.	2003 Avg.	
36	Sunpro	5.0	4.9	5.0	5.0	4.9	4.3
37	MA 127	5.0	4.4	5.0	5.3	5.3	3.0
38	FA 24-91-99	5.0	4.5	5.3	5.0	5.1	4.3
39	Pick H-97	5.0	4.9	5.0	5.0	4.9	5.3
40	SYN R5LT-99	5.0	4.6	4.7	5.1	5.3	5.0
41	Pick FAXF-95	4.9	4.9	5.0	4.9	4.9	5.7
42	Masterpiece	4.9	5.0	5.3	4.8	4.6	4.0
43	Barrington	4.9	5.2	4.9	4.9	4.7	4.0
44	LA 107R	4.9	4.5	5.1	5.1	4.9	2.3
45	Barerra	4.9	5.3	4.4	4.9	5.0	4.7
46	OPP2	4.8	4.8	4.9	5.2	4.5	2.7
47	TF6	4.8	4.6	4.6	5.0	5.1	5.0
48	Barlexas	4.8	5.2	4.6	4.5	5.1	4.0
49	Tracer	4.8	5.0	4.8	4.7	4.7	3.7
50	Leopard	4.7	4.7	4.8	4.8	4.7	3.7
51	ATF 704	4.7	4.8	4.7	4.6	4.7	5.3
52	TF 40	4.7	4.8	4.9	4.6	4.5	4.7
53	6LV	4.7	4.7	4.9	4.4	4.9	3.3
54	Arizona	4.7	5.1	4.3	4.8	4.5	5.0
55	94 RUT TF-1	4.6	4.6	4.8	4.6	4.5	3.0
56	WATF	4.6	4.2	4.7	4.6	4.8	4.3
57	RTP	4.6	4.9	4.6	4.5	4.4	3.0
58	T991	4.6	4.6	5.1	4.2	4.5	3.7
59	SMS	4.6	4.6	4.8	4.5	4.3	3.0
60	Prospect	4.6	4.5	4.6	4.3	4.8	3.7
61	Arid II	4.5	4.3	4.3	4.5	5.0	5.3
62	LA 128	4.5	4.3	4.5	4.6	4.7	4.7
63	Santa Fe	4.5	4.0	4.8	4.7	4.6	3.3
64	Starfire	4.5	4.7	4.1	4.4	4.7	4.3
65	Tulsa II	4.5	4.6	4.7	4.1	4.5	4.3
66	Laramie	4.5	5.0	4.8	4.1	3.9	4.0
67	FA 487	4.5	4.4	4.5	4.7	4.3	3.7
68	LWE	4.5	4.7	5.1	4.2	3.9	3.3
69	TF 5-97	4.4	4.8	4.5	4.4	4.0	3.0
70	SYN R5EH-99	4.4	4.5	4.4	4.1	4.7	5.3

(Continued)

Table 1 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----					Brown Patch <sup>2</sup> Aug. 2003
		2000- 2003 Avg.	2000 Avg.	2001 Avg.	2002 Avg.	2003 Avg.	
71	Brandy	4.4	4.7	4.2	4.5	4.2	4.3
72	Millennium	4.4	4.3	4.8	4.3	4.2	3.3
73	6D	4.4	4.5	4.8	4.2	4.0	4.0
74	Insignia	4.4	4.2	4.2	4.6	4.4	4.0
75	MA 131	4.4	4.2	4.7	4.3	4.2	2.0
76	MA 135	4.3	4.0	4.5	4.4	4.5	4.7
77	Lancer	4.3	4.7	4.5	3.9	4.1	4.3
78	Onyx	4.3	4.1	4.1	4.4	4.5	5.0
79	Frontera	4.3	3.7	4.1	4.7	4.5	5.3
80	MA 123	4.2	4.3	4.3	4.1	4.3	4.0
81	TF E-97	4.2	4.3	4.0	4.3	4.2	5.0
82	Hounddog 5	4.2	4.5	4.3	4.1	3.9	6.0
83	ATF 707	4.2	4.5	4.2	4.0	4.1	4.7
84	Bravo	4.2	4.8	4.4	3.8	3.7	2.7
85	Watchdog	4.1	4.2	4.1	4.2	4.1	4.7
86	Lion	4.1	4.3	3.9	4.5	3.8	5.0
87	Wolfpack	4.1	3.9	4.1	4.1	4.4	5.0
88	MA 132	4.1	3.8	4.0	4.2	4.4	4.3
89	Coronado	4.0	4.7	4.0	3.8	3.5	3.3
90	Shortstop II	4.0	3.9	3.9	4.0	4.1	4.3
91	Pixie	4.0	4.7	4.0	3.8	3.4	2.7
92	Stetson	3.9	4.3	4.0	3.5	3.9	4.7
93	GS Bulk E-99	3.8	4.0	3.8	3.5	3.9	4.7
94	LA 126	3.8	3.6	3.8	4.1	3.7	4.0
95	Crossfire II	3.7	4.2	3.3	3.5	3.5	3.7
96	Vegas	3.3	3.8	3.2	3.2	2.9	4.3
97	Talisman	3.2	2.1	3.5	3.6	3.6	3.3
98	Phoenix	2.5	2.6	2.3	2.6	2.7	4.7
99	Austin	2.1	1.5	1.4	2.6	3.0	4.7
100	Kentucky-31	1.2	1.2	1.1	1.2	1.2	3.0
	LSD at 5% =	0.5	0.9	0.8	0.7	0.9	1.9

<sup>1</sup>9 = best turf quality<sup>2</sup>9 = least disease

Table 2. Performance of tall fescue cultivars and selections in a turf trial established in August 2000 at Adelphia, NJ.

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----				Brown Patch <sup>2</sup> Aug. 2003
		2001- 2003 Avg.	2001 Avg.	2002 Avg.	2003 Avg.	
1	Guardian 21	6.8	6.8	6.6	7.0	6.7
2	Justice	6.4	6.0	6.7	6.5	5.3
3	Titanium	6.3	6.5	6.0	6.3	5.7
4	RB3 comp	6.2	6.4	6.2	6.1	6.7
5	10,001 comp	6.2	6.2	6.0	6.5	5.7
6	2nd Millennium	6.0	6.1	5.7	6.1	6.0
7	Kalahari	5.9	6.1	5.8	5.9	5.0
8	EA 171	5.9	6.0	5.9	5.7	5.0
9	OD1 comp	5.9	6.0	5.6	6.0	7.3
10	Bingo	5.8	5.9	5.8	5.9	4.7
11	TF-34	5.8	6.1	5.6	5.7	5.0
12	Forte	5.8	6.1	5.8	5.6	5.7
13	Silverado II	5.8	6.1	5.7	5.5	7.0
14	Gremlin	5.8	6.1	5.6	5.6	6.3
15	Blackwatch	5.8	6.2	5.5	5.5	6.3
16	Magellan	5.7	6.1	5.5	5.6	6.7
17	Raptor	5.7	6.1	5.6	5.5	4.7
18	GO-OD2	5.7	5.9	5.4	5.8	7.0
19	Biltmore	5.6	5.8	5.7	5.3	6.0
20	TF-34	5.5	5.3	5.5	5.7	5.3
21	Syn 5MP	5.5	5.4	5.4	5.7	4.7
22	SR 8550	5.5	5.6	5.3	5.5	5.3
23	00-H FA	5.5	5.6	5.6	5.2	5.3
24	Rendition	5.5	5.6	5.5	5.3	6.0
25	00 GFA	5.5	5.9	5.4	5.1	4.7
26	Syn 5K1	5.5	5.9	5.5	5.0	6.0
27	Syn 5NAS	5.4	5.5	5.1	5.6	4.7
28	Syn 5BAB	5.4	5.7	5.4	5.0	5.7
29	Syn 5DWF	5.3	5.6	5.3	5.1	5.3
30	SRX 8DDMPP	5.3	5.4	5.3	5.2	5.0
31	Syn 5BEH	5.3	5.4	5.3	5.2	6.7
32	Syn 5H2	5.3	5.3	5.1	5.5	5.3
33	00-BFA	5.3	5.7	5.2	5.1	6.0
34	Santa Fe	5.3	5.2	5.6	5.1	4.0
35	SR 8600	5.3	5.9	5.2	4.8	4.3

(Continued)

Table 2 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----				Brown Patch <sup>2</sup> Aug. 2003
		2001- 2003 Avg.	2001 Avg.	2002 Avg.	2003 Avg.	
36	Syn 5KU	5.3	5.6	5.0	5.2	5.0
37	00-A FA	5.3	5.3	5.1	5.4	6.0
38	BE-1	5.3	5.1	5.2	5.4	6.3
39	Dynamic	5.2	5.4	5.1	5.2	5.7
40	Syn 5BZ	5.2	5.4	4.9	5.4	4.0
41	5BE	5.2	5.3	5.0	5.3	5.3
42	TF H-97	5.2	5.4	4.9	5.2	5.7
43	Mustang III	5.2	5.6	5.2	4.8	4.7
44	Syn-R54M-00	5.1	5.5	5.1	4.8	4.0
45	Syn 5A3	5.1	5.2	5.0	5.2	5.0
46	EA 172	5.1	5.1	5.5	4.8	5.0
47	Picasso	5.1	5.4	5.1	4.7	6.3
48	E-97	5.1	5.6	5.0	4.7	3.7
49	FA6-91	5.1	5.5	5.0	4.6	4.3
50	Southern Comfort	5.0	5.4	4.8	4.9	3.7
51	Rembrandt	5.0	5.2	5.1	4.8	4.7
52	MA 176	5.0	5.4	5.0	4.7	4.7
53	Syn 5T2	5.0	5.8	5.0	4.2	4.0
54	EA 180	5.0	5.3	5.0	4.7	4.3
55	CAE comp	5.0	5.1	4.8	5.0	6.3
56	Matador RT	5.0	5.1	5.1	4.7	5.0
57	SRX 8601 E	5.0	5.2	5.1	4.5	4.3
58	Tahoe	5.0	5.1	5.1	4.6	5.7
59	Syn-R5JM-00	4.9	5.1	5.0	4.8	5.0
60	EA 155	4.9	5.1	4.9	4.8	4.7
61	MA 160	4.9	5.1	4.9	4.8	4.3
62	Matador	4.9	5.6	4.8	4.3	4.7
63	TF-41	4.9	5.0	5.0	4.7	5.0
64	Finelawn Elite	4.9	5.4	4.9	4.4	4.3
65	00-J FA	4.9	5.4	4.5	4.7	5.0
66	MA 177	4.8	4.8	4.6	5.1	3.7
67	Syn BRO	4.8	4.9	4.7	4.9	5.7
68	SRX 8DDEOO	4.8	4.9	4.8	4.7	5.0
69	MA 127	4.8	4.9	4.9	4.7	4.3
70	00-CFA	4.8	5.3	4.6	4.5	4.3

(Continued)

Table 2 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----				Brown Patch <sup>2</sup> Aug. 2003
		2001- 2003 Avg.	2001 Avg.	2002 Avg.	2003 Avg.	
71	Turbo	4.8	5.0	4.9	4.5	4.0
72	Plantation	4.8	5.1	4.7	4.4	4.3
73	SRX 8 FFT	4.7	5.3	4.5	4.5	5.0
74	SRX 8BPDDE	4.7	5.2	4.6	4.3	4.0
75	Sun Pro	4.7	5.1	4.8	4.3	4.0
76	Syn 5S2	4.7	5.0	4.7	4.4	5.0
77	RT-95	4.7	4.6	4.6	4.9	4.7
78	Pure Gold	4.7	4.8	4.6	4.5	3.7
79	SRX 8CDEW	4.7	4.7	4.6	4.7	4.0
80	8RF2	4.6	4.5	5.0	4.5	4.7
81	Pick FA B93	4.6	4.9	4.8	4.2	3.0
82	Crewcut II	4.6	5.2	4.5	4.1	5.3
83	EA 163	4.6	4.8	4.7	4.3	5.0
84	Laramie	4.6	5.1	4.7	3.9	4.3
85	MA 178	4.6	4.6	4.7	4.5	4.3
86	TF J-97	4.6	5.1	4.5	4.1	4.0
87	Syn 5G9	4.5	4.8	4.5	4.3	5.0
88	SRX 8EDFF	4.5	4.7	4.5	4.4	4.7
89	MA 165	4.5	4.6	4.8	4.1	6.3
90	TF-40	4.5	4.7	4.6	4.2	4.7
91	Millennium	4.5	4.8	4.5	4.2	4.3
92	Olympic Gold	4.5	4.5	4.5	4.5	4.7
93	Prospect	4.5	4.6	4.7	4.1	5.3
94	8OP22	4.5	4.5	4.7	4.2	5.3
95	P89 * SpL	4.5	4.9	4.2	4.3	5.3
96	Syn 5CH	4.5	4.9	4.3	4.1	4.3
97	Starfire	4.4	4.5	4.4	4.4	4.0
98	MA 158	4.4	4.4	4.6	4.2	3.7
99	00-D FA	4.4	4.8	4.2	4.3	3.7
100	00-E FA	4.4	4.5	4.4	4.4	5.7
101	SRX 8 BPDDNE	4.4	4.9	4.3	4.0	3.3
102	00-I FA	4.4	4.8	4.2	4.3	5.0
103	ORE-00TF	4.4	4.9	4.2	4.1	2.7
104	SR 8500	4.4	4.6	4.2	4.3	3.7
105	8 S M2	4.4	4.9	4.3	3.9	5.0

(Continued)

Table 2 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----				Brown Patch <sup>2</sup> Aug. 2003
		2001- 2003 Avg.	2001 Avg.	2002 Avg.	2003 Avg.	
106	MA 98	4.4	4.3	4.5	4.3	4.0
107	Shortstop II	4.4	4.7	4.1	4.2	3.7
108	GS bulk M2	4.4	4.6	4.4	4.1	4.0
109	Tarheel	4.3	4.4	4.5	4.0	4.7
110	SRX 8MO961	4.3	4.7	4.0	4.2	4.0
111	Bravo	4.2	5.1	4.0	3.4	2.7
112	GS bulk E1	4.2	4.5	4.2	3.8	4.7
113	P89 * SpE	4.1	4.2	4.1	4.1	4.3
114	TF-43	4.1	4.2	4.3	3.9	4.3
115	Coronado	4.1	4.5	4.2	3.7	4.0
116	Hounddog 5	4.1	4.5	4.0	3.8	5.7
117	Syn 5HUO	4.1	4.1	4.0	4.1	5.0
118	Coronado Gold	4.1	4.6	4.2	3.4	5.0
119	TF-42	4.1	4.2	4.0	4.0	3.3
120	5UP	4.0	4.4	4.2	3.6	3.7
121	Tomahawk E+	4.0	4.3	4.0	3.7	3.0
122	Apache II	4.0	4.6	3.8	3.7	4.3
123	D5 ATF 00-6	3.9	3.9	4.0	3.8	3.7
124	SRX 8 MO94	3.9	4.0	3.9	3.7	4.0
125	Tomahawk	3.9	4.1	4.1	3.5	3.7
126	T991-00	3.9	4.0	4.1	3.5	4.7
127	Crewcut	3.9	3.9	3.9	3.8	4.3
128	Lancer	3.8	4.3	3.9	3.3	3.3
129	Talisman	3.8	4.2	3.7	3.7	4.7
130	SR 8210	3.8	3.8	4.0	3.6	3.3
131	Rebel Jr.	3.8	4.4	3.6	3.4	2.7
132	Regiment	3.6	4.0	3.4	3.5	3.3
133	Wolfpack	3.6	3.7	3.6	3.5	4.0
134	SRX LJHH	3.6	3.8	3.6	3.3	4.0
135	Crossfire II	3.6	4.1	3.4	3.2	3.7
136	Bonanza II	3.6	3.8	3.5	3.4	5.3
137	Grande	3.5	3.9	3.5	3.1	4.0
138	Mustang II	3.5	3.7	3.3	3.5	4.3
139	Hilltop TF	3.4	3.6	3.4	3.2	3.0

(Continued)

Table 2 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----				Brown Patch <sup>2</sup> Aug. 2003
		2001- 2003 Avg.	2001 Avg.	2002 Avg.	2003 Avg.	
140	Confederate	3.4	3.6	3.3	3.2	3.3
141	Eldorado	3.3	3.6	3.4	3.0	4.0
142	GT 2K	3.3	3.0	3.9	3.0	5.0
143	Torpedo	1.7	1.0	1.8	2.4	3.3
144	Kentucky 31	1.1	1.3	1.1	1.0	5.0
	LSD at 5% =	0.5	0.7	0.6	0.6	1.8

<sup>1</sup>9 = best turf quality

<sup>2</sup>9 = least disease

Table 3. Performance of tall fescue cultivars and selections in a turf trial established in September 2001 at Adelphia, NJ. (Includes all entries in the National Tall Fescue Test.)

Cultivar or Selection	-----Turf Quality <sup>1</sup> -----			Brown Patch <sup>2</sup> 2003 Avg.	Brown Patch Aug. 8 2003	Brown Patch Aug. 16 2003
	2002- 2003 Avg.	2002 Avg.	2003 Avg.			
1 Justice	6.8	7.0	6.6	6.5	7.3	5.7
2 Inferno	6.7	7.0	6.4	4.7	5.0	4.3
3 Avenger	6.6	7.1	6.2	5.7	6.0	5.3
4 DaVinci	6.4	6.5	6.3	5.0	5.7	4.3
5 Rebel IV	6.4	6.5	6.3	6.8	7.0	6.7
6 Falcon IV	6.4	6.6	6.2	6.0	6.0	6.0
7 Cochise III	6.3	6.4	6.2	6.0	6.0	6.0
8 L1D comp	6.3	6.4	6.2	5.2	5.0	5.3
9 Blackwatch	6.1	6.5	5.7	6.0	6.3	5.7
10 L1F comp	6.1	6.4	5.8	6.2	6.7	5.7
11 Biltmore	6.0	6.2	5.8	4.3	4.7	4.0
12 L11 comp	6.0	6.0	5.9	5.7	6.3	5.0
13 Guardian-21	6.0	6.0	5.9	5.8	6.3	5.3
14 Finelawn Elite	5.9	6.2	5.7	7.0	7.3	6.7
15 Rebel Exeda	5.9	6.3	5.5	6.7	7.7	5.7
16 L1L comp	5.9	5.7	6.1	4.0	4.0	4.0
17 Raptor	5.9	6.0	5.7	4.8	5.7	4.0
18 Kalahari	5.8	5.8	5.7	5.5	6.7	4.3
19 01-6TF	5.7	5.7	5.6	5.3	6.0	4.7
20 SRX 8FFT	5.7	5.9	5.5	6.2	6.0	6.3
21 Rendition	5.7	6.1	5.2	5.2	5.0	5.3
22 Dynamic	5.6	6.0	5.2	4.5	4.0	5.0
23 2nd Millennium	5.6	5.4	5.8	5.8	6.3	5.3
24 K01-8015	5.6	5.2	6.0	5.0	5.0	5.0
25 Titanium	5.6	5.3	5.9	6.0	6.0	6.0
26 Cayenne	5.6	5.4	5.8	5.0	5.0	5.0
27 Forte	5.6	5.7	5.5	6.0	7.0	5.0
28 Bingo	5.6	5.4	5.8	4.5	5.3	3.7
29 K01-WAF	5.6	5.8	5.3	6.5	7.0	6.0
30 CIS-TF-67	5.5	5.2	5.8	5.3	5.3	5.3
31 SR 8550	5.5	5.9	5.1	4.7	4.7	4.7
32 Turbo	5.5	5.4	5.6	6.0	6.0	6.0
33 ATF 801	5.5	5.5	5.5	3.8	4.3	3.3
34 CIS TF 34	5.5	5.6	5.3	4.8	6.0	3.7
35 Rebel Sentry	5.5	5.8	5.2	4.3	4.3	4.3

(Continued)

Table 3 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----			Brown Patch <sup>2</sup> 2003 Avg.	Brown Patch Aug. 8 2003	Brown Patch Aug. 16 2003
		2002- 2003 Avg.	2002 Avg.	2003 Avg.			
36	Five Point	5.5	5.6	5.3	5.0	5.0	5.0
37	PST-DDL	5.5	5.8	5.1	3.3	4.3	2.3
38	SRX 8DD MPP	5.5	6.0	4.9	4.5	4.7	4.3
39	01 5TF	5.4	5.4	5.5	4.7	5.0	4.3
40	Bar FA 1005	5.4	5.4	5.5	6.8	6.3	7.3
41	CIS TF 41	5.4	5.2	5.6	5.2	5.3	5.0
42	BAR Fa 1005	5.4	5.3	5.4	6.7	7.3	6.0
43	Padre	5.3	5.3	5.4	6.3	6.7	6.0
44	01-ORU1	5.3	5.2	5.5	6.3	7.3	5.3
45	Matador	5.3	5.6	5.0	4.2	3.7	4.7
46	Pure Gold	5.3	5.5	5.0	4.7	5.0	4.3
47	5BU	5.3	5.2	5.3	5.8	7.0	4.7
48	Mustang 3	5.2	5.2	5.3	5.8	6.0	5.7
49	MA 158	5.2	5.1	5.3	3.5	3.7	3.3
50	Riverside	5.2	5.3	5.1	4.8	4.3	5.3
51	5BUD	5.2	5.2	5.2	5.8	6.3	5.3
52	Plantation	5.2	5.7	4.7	5.5	6.0	5.0
53	CIS-TF-77	5.2	5.1	5.3	5.3	5.3	5.3
54	BE-1	5.2	5.2	5.2	5.5	5.3	5.7
55	5PAL	5.2	5.5	4.9	4.7	4.7	4.7
56	SRX 8601	5.2	5.3	5.1	5.5	5.7	5.3
57	Apache III	5.2	5.1	5.2	5.2	5.7	4.7
58	Gremlin	5.2	5.1	5.2	4.8	4.7	5.0
59	PST-5FZD	5.2	5.0	5.3	5.0	4.7	5.3
60	01-3TF	5.2	5.3	5.0	6.3	6.7	6.0
61	Fidelity	5.1	5.0	5.3	5.7	5.7	5.7
62	Pick 00 BFA	5.1	5.3	4.9	4.7	4.3	5.0
63	Dynasty	5.1	5.2	5.0	4.8	5.7	4.0
64	Adam's Valley	5.1	5.3	4.9	4.5	5.0	4.0
65	SR 8250	5.1	5.3	4.9	5.0	5.0	5.0
66	SR 8600	5.1	5.3	4.9	4.7	5.0	4.3
67	CIS-TF-64	5.1	4.8	5.4	3.8	4.3	3.3
68	GO-OD2	5.1	5.0	5.2	5.5	5.7	5.3
69	Quest	5.1	5.5	4.6	5.3	6.0	4.7
70	UT-155	5.1	5.1	5.0	4.7	5.0	4.3

(Continued)

Table 3 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----			Brown Patch <sup>2</sup> 2003 Avg.	Brown Patch Aug. 8 2003	Brown Patch Aug. 16 2003
		2002- 2003 Avg.	2002 Avg.	2003 Avg.			
71	Magellan	5.1	4.8	5.3	5.5	5.7	5.3
72	PST-5KI	5.1	5.0	5.1	5.5	6.3	4.7
73	CIS-TF-65	5.0	4.8	5.3	4.0	5.0	3.0
74	Roberts SM4	5.0	5.1	5.0	5.0	4.7	5.3
75	K01-E03	5.0	4.6	5.5	4.2	4.3	4.0
76	Tahoe	5.0	5.1	5.0	4.3	4.0	4.7
77	Picasso	5.0	5.2	4.8	5.2	5.0	5.3
78	Crewcut II	5.0	5.5	4.6	4.2	4.0	4.3
79	ATF 859	5.0	4.9	5.1	5.3	5.3	5.3
80	Pick TF FD-97	5.0	4.8	5.2	4.7	5.0	4.3
81	5BUL	5.0	5.0	5.0	4.7	5.0	4.3
82	ATF 799	5.0	4.8	5.2	4.8	6.0	3.7
83	PST-5BZ	5.0	5.1	4.9	4.5	4.3	4.7
84	UT-RB3	5.0	4.9	5.1	4.2	4.3	4.0
85	PST-5S12	5.0	5.0	4.9	6.0	6.3	5.7
86	CIS TF 78	5.0	4.6	5.3	4.3	5.3	3.3
87	Tuxedo	5.0	4.6	5.3	2.7	2.7	2.7
88	Constitution	4.9	4.9	5.0	4.5	5.0	4.0
89	01-RUTOR 2	4.9	4.7	5.2	5.2	5.3	5.0
90	FA 20-92	4.9	5.2	4.7	4.5	5.0	4.0
91	Sunpro	4.9	5.3	4.5	4.0	3.3	4.7
92	Barrera	4.9	5.3	4.5	4.7	5.0	4.3
93	PST-5KU	4.9	4.7	5.1	4.2	4.0	4.3
94	PST-5JM	4.9	4.8	5.0	2.8	2.3	3.3
95	JT-15	4.9	4.6	5.2	4.8	5.0	4.7
96	01-7TF	4.9	4.9	4.9	5.2	6.0	4.3
97	Finesse II	4.9	4.7	5.1	3.5	2.7	4.3
98	Rembrandt	4.9	4.9	4.8	5.2	5.7	4.7
99	Arabia	4.9	5.5	4.2	4.2	3.7	4.7
100	Olympic Gold	4.9	5.1	4.7	5.2	6.0	4.3
101	01-4TF	4.9	5.0	4.7	4.7	5.3	4.0
102	01-ORTF2W	4.9	4.7	5.0	5.2	5.0	5.3
103	5BRO	4.9	4.8	4.9	6.2	6.3	6.0
104	ATF 866	4.9	4.6	5.1	4.5	4.7	4.3
105	CIS-TF-60	4.8	4.1	5.6	5.5	6.3	4.7

(Continued)

Table 3 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----			Brown Patch <sup>2</sup> 2003 Avg.	Brown Patch Aug. 8 2003	Brown Patch Aug. 16 2003
		2002- 2003 Avg.	2002 Avg.	2003 Avg.			
106	PST-5NAS	4.8	4.7	5.0	4.2	4.7	3.7
107	PST-53T	4.8	4.9	4.8	4.5	4.7	4.3
108	JT-12	4.8	4.5	5.1	4.3	4.0	4.7
109	PST-5TUO	4.8	4.6	5.1	5.5	5.3	5.7
110	SRX 805	4.8	4.8	4.8	4.5	4.7	4.3
111	01-8TF	4.8	5.0	4.7	4.3	4.7	4.0
112	ATF 805	4.8	4.8	4.9	5.3	5.7	5.0
113	Pick 00-AFA	4.8	4.9	4.7	4.7	4.7	4.7
114	Pick-OD-AFA	4.8	4.8	4.8	3.7	3.7	3.7
115	Wolfpack	4.8	5.0	4.6	7.0	7.3	6.7
116	EA-163	4.8	4.7	4.9	5.7	5.3	6.0
117	MA-127	4.8	4.7	4.9	4.8	5.3	4.3
118	Arid 3	4.8	5.1	4.5	4.7	4.3	5.0
119	Crossfire II	4.8	4.9	4.7	5.8	6.0	5.7
120	JT-6	4.8	4.5	5.0	4.5	5.0	4.0
121	CIS TF 66	4.8	4.8	4.8	5.5	6.3	4.7
122	JT-13	4.8	4.4	5.1	2.8	3.0	2.7
123	Masterpiece	4.8	4.5	5.0	5.2	5.3	5.0
124	SRX 8ED FF	4.8	5.0	4.5	3.3	3.0	3.7
125	Grande II	4.7	4.7	4.8	3.2	2.7	3.7
126	Pick TF H-97	4.7	4.9	4.5	6.0	6.3	5.7
127	Pick 00 CFA	4.7	4.8	4.6	4.0	4.0	4.0
128	PST-5LO	4.7	4.7	4.7	5.0	5.0	5.0
129	01-ORTFZS	4.7	4.5	4.9	5.0	5.3	4.7
130	Pick SM4	4.7	4.8	4.6	4.3	4.3	4.3
131	Silverado II	4.7	4.6	4.7	5.7	6.3	5.0
132	Silverstar	4.7	4.7	4.7	6.0	6.0	6.0
133	Signia	4.7	4.6	4.7	4.7	5.7	3.7
134	Prospect	4.7	4.9	4.4	5.5	6.3	4.7
135	Tar Heel II	4.7	4.6	4.7	6.3	7.0	5.7
136	PST-5BAB	4.7	4.6	4.7	4.7	4.3	5.0
137	CAS-ED	4.7	4.7	4.6	5.2	6.0	4.3
138	5V1	4.7	4.7	4.6	5.5	6.0	5.0
139	ATF 864	4.7	5.1	4.2	3.3	3.3	3.3
140	K01-E09	4.6	4.2	5.0	4.0	4.3	3.7

(Continued)

Table 3 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----			Brown Patch <sup>2</sup> 2003 Avg.	Brown Patch Aug. 8 2003	Brown Patch Aug. 16 2003
		2002- 2003 Avg.	2002 Avg.	2003 Avg.			
141	MRF-29	4.6	4.5	4.7	3.7	3.7	3.7
142	K01-8007	4.6	4.3	5.0	4.2	3.7	4.7
143	01-ORTF2T	4.6	4.6	4.6	4.7	5.0	4.3
144	Tracer	4.6	5.0	4.2	3.2	3.0	3.3
145	Barrington	4.6	4.9	4.4	4.3	4.3	4.3
146	Barlexas II	4.6	5.2	4.0	3.2	3.3	3.0
147	Focus	4.6	4.8	4.4	4.5	4.7	4.3
148	MRF-27	4.6	4.7	4.5	3.3	3.3	3.3
149	5TDH	4.6	4.6	4.6	4.7	5.3	4.0
150	ATF 894	4.6	4.4	4.7	5.0	6.0	4.0
151	GA 011	4.6	4.8	4.3	4.7	5.0	4.3
152	JT-9	4.6	4.3	4.8	4.7	4.3	5.0
153	ATF 847	4.6	4.4	4.7	4.7	5.3	4.0
154	Watchdog	4.5	4.8	4.2	5.2	5.7	4.7
155	Arizona	4.5	4.6	4.5	4.3	4.7	4.0
156	Covenant	4.5	4.2	4.8	3.2	3.7	2.7
157	5RZS	4.5	4.3	4.7	4.8	5.7	4.0
158	SRX 8CD EW	4.5	4.6	4.3	3.8	3.7	4.0
159	Pick TF BA-97	4.5	4.4	4.6	4.5	5.0	4.0
160	MA 138	4.5	4.6	4.3	4.5	4.7	4.3
161	Millennium	4.4	4.6	4.3	3.0	3.0	3.0
162	DLFJ 211	4.4	4.6	4.3	4.2	4.7	3.7
163	SRX 82RH2	4.4	4.6	4.3	4.0	4.0	4.0
164	Scorpion	4.4	4.2	4.6	4.0	4.3	3.7
165	Pick ZMG	4.4	4.3	4.4	4.5	4.7	4.3
166	Laramie	4.4	4.9	3.8	3.2	3.7	2.7
167	Tar Heel	4.4	4.5	4.2	5.8	6.0	5.7
168	MRF-28	4.3	4.4	4.3	4.7	5.3	4.0
169	Greystone	4.3	4.2	4.5	4.2	4.3	4.0
170	NA-TDD	4.3	4.1	4.5	2.2	2.7	1.7
171	BAR Fa 1003	4.3	4.1	4.5	6.0	6.3	5.7
172	ATF 857	4.3	4.3	4.3	3.8	4.0	3.7
173	Coyote	4.3	4.8	3.7	3.2	3.3	3.0
174	ATF 861	4.3	4.2	4.4	4.5	4.7	4.3
175	SR 8500	4.3	4.6	3.9	4.3	4.3	4.3

(Continued)

Table 3 (continued).

	Cultivar or Selection	-----Turf Quality <sup>1</sup> -----			Brown Patch <sup>2</sup> 2003 Avg.	Brown Patch Aug. 8 2003	Brown Patch Aug. 16 2003
		2002- 2003 Avg.	2002 Avg.	2003 Avg.			
176	Wyatt	4.3	4.6	3.9	3.8	4.0	3.7
177	ATF 806	4.3	4.2	4.3	3.3	3.0	3.7
178	Alamo	4.2	4.8	3.7	3.5	3.3	3.7
179	ATF 863	4.2	4.7	3.8	3.7	3.3	4.0
180	Pick TF DC-97-98	4.2	4.3	4.1	4.3	4.7	4.0
181	Tomahawk RT	4.2	4.5	3.9	4.0	4.0	4.0
182	MRF-210	4.2	4.2	4.2	3.3	2.7	4.0
183	ATF 895	4.2	4.2	4.3	3.7	4.7	2.7
184	JT-18	4.2	3.8	4.6	4.5	4.7	4.3
185	MRF-25	4.2	4.2	4.1	3.8	4.3	3.3
186	MRF-211	4.2	4.1	4.3	3.0	2.7	3.3
187	Titan Ltd	4.2	4.7	3.7	3.5	3.7	3.3
188	ATF 860	4.2	4.2	4.1	3.8	3.7	4.0
189	ATF 807	4.2	4.0	4.3	2.7	2.3	3.0
190	GS Bulk E-99	4.2	4.4	3.9	5.0	4.3	5.7
191	ATF 586	4.1	4.2	4.1	2.8	3.7	2.0
192	ATF-800	4.1	4.0	4.3	3.8	4.3	3.3
193	Tulsa	4.1	4.3	4.0	4.3	4.7	4.0
194	ATF-803	4.1	4.2	4.0	3.2	3.3	3.0
195	T991	4.1	4.4	3.8	2.0	1.3	2.7
196	Southern Choice	4.1	4.1	4.1	3.5	3.0	4.0
197	Bravo	4.1	4.4	3.7	3.5	3.0	4.0
198	MRF-26	4.1	4.0	4.1	3.0	2.3	3.7
199	TF 66	4.1	4.3	3.8	2.3	2.0	2.7
200	Jaguar 3	4.1	4.2	3.9	5.5	5.3	5.7
201	DLFJ 209	4.1	4.0	4.1	5.0	5.3	4.7
202	Kitty Hawk 2000	4.0	4.0	4.1	2.8	3.0	2.7
203	Endeavor	4.0	4.3	3.8	6.0	6.3	5.7
204	BAR FA 1CR 7	4.0	4.3	3.7	3.8	4.0	3.7
205	Barlexas	4.0	4.1	3.8	5.8	5.7	6.0
206	CIS TF 40	4.0	4.1	3.8	4.5	5.3	3.7
207	Starlet	4.0	4.3	3.6	4.3	4.3	4.3
208	Lancer E	3.9	4.0	3.8	2.7	2.3	3.0
209	DP 50-9226	3.9	3.7	4.0	4.2	4.7	3.7
210	Regiment	3.9	4.2	3.6	3.8	3.0	4.7

(Continued)

Table 3 (continued).

Cultivar or Selection	-----Turf Quality <sup>1</sup> -----			Brown Patch <sup>2</sup>	Brown Patch	Brown Patch	
	2002-2003 Avg.	2002 Avg.	2003 Avg.	2003 Avg.	Aug. 8 2003	Aug. 16 2003	
211	Talisman	3.9	4.1	3.7	4.7	4.3	5.0
212	01-TFOR3	3.9	3.9	3.8	5.2	5.3	5.0
213	Daytona	3.9	4.1	3.6	3.2	3.3	3.0
214	Tulsa II	3.8	4.1	3.6	2.8	3.0	2.7
215	Dominion	3.8	3.8	3.8	5.2	5.7	4.7
216	DLF-J210	3.8	3.9	3.7	2.8	2.0	3.7
217	ATF 704	3.7	3.8	3.7	4.3	4.0	4.7
218	SR 8210	3.7	4.0	3.5	3.3	3.7	3.0
219	01-ORTF3	3.7	3.6	3.8	4.2	4.3	4.0
220	MRF-22	3.7	3.9	3.5	4.0	4.3	3.7
221	Legitimate	3.7	3.5	3.8	3.8	4.3	3.3
222	Stetson	3.7	3.8	3.5	5.2	5.0	5.3
223	JTTF-2000	3.6	3.9	3.3	2.8	3.3	2.3
224	Grande	3.6	3.9	3.3	5.3	5.7	5.0
225	01-ORTF2	3.6	3.4	3.8	4.7	4.0	5.3
226	Bonanza II	3.6	4.0	3.1	4.2	3.3	5.0
227	South Paw	3.5	3.7	3.4	2.3	2.0	2.7
228	SRX 82RH1	3.5	3.5	3.6	2.7	2.3	3.0
229	Mustang II	3.5	3.7	3.2	4.0	3.3	4.7
230	BAR FA 1002	3.5	3.5	3.4	4.3	4.3	4.3
231	ATF 865	3.4	3.4	3.5	2.2	2.7	1.7
232	Elisa	3.4	3.6	3.2	4.3	3.7	5.0
233	DLFJ 9178	3.4	3.8	3.0	3.5	3.3	3.7
234	Crewcut	3.4	3.7	3.1	4.8	4.3	5.3
235	Falcon II	3.3	3.4	3.2	3.3	2.3	4.3
236	GO-SIU2	3.1	3.2	3.1	4.7	5.7	3.7
237	GO-FL3	3.1	3.4	2.8	5.2	5.7	4.7
238	GO-RD4	3.0	3.2	2.8	4.0	3.7	4.3
239	ATF 707	3.0	3.2	2.8	2.7	3.7	1.7
240	Bonsai	3.0	3.3	2.6	3.8	3.3	4.3
241	DP 50-9082	2.9	2.6	3.1	2.5	2.3	2.7
242	Total	2.3	2.5	2.2	4.7	5.0	4.3
243	Tipton	2.0	2.0	1.9	4.8	5.0	4.7
244	Kentucky-31 E+	1.2	1.3	1.0	6.0	7.0	5.0
LSD at 5% =		0.5	0.6	0.5	1.5	2.2	1.6

<sup>1</sup>9 = best turf quality<sup>2</sup>9 = least disease

Table 4. Performance of tall fescue cultivars and selections in a turf trial established in September 2001 at North Brunswick, NJ. (Includes all entries in the 2001 National Tall Fescue Test.)

Cultivar or Selection	-----Turf Quality <sup>1</sup> -----		Worn Turf Quality <sup>1</sup> 2003 Avg.	Spring Green-up <sup>2</sup> April 2003	Brown Patch <sup>3</sup> Aug. 2003	Color <sup>4</sup> Oct. 2003	Cover (%) Oct. 2003	Density <sup>5</sup> Oct. 2003	Leaf Texture <sup>6</sup> Oct. 2003
	2002- 2003 Avg.	2003 Avg.							
1 Rebel IV	6.5	6.7	3.7	5.0	6.3	6.3	88.3	7.7	6.7
2 K01-8015	6.4	6.9	4.8	4.0	4.0	6.7	76.7	8.0	7.7
3 LIF Comp	6.3	6.8	4.8	4.3	5.7	6.3	86.7	7.0	7.3
4 Inferno	6.3	7.0	3.8	3.0	6.0	5.7	86.7	7.0	7.3
5 Avenger	6.1	6.7	3.0	4.3	4.3	4.7	91.7	6.7	6.3
6 Falcon IV	6.0	6.8	4.3	3.7	4.3	5.7	91.7	6.7	6.7
7 LIL Comp	5.9	6.4	4.7	3.3	5.7	6.3	83.3	7.0	7.0
8 LID Comp	5.9	6.4	4.2	3.0	5.3	6.3	78.3	7.0	6.3
9 Tar Heel II	5.8	5.3	4.9	6.7	7.0	5.0	83.3	6.3	5.3
10 Finelawn Elite	5.7	5.9	4.6	5.3	6.3	5.7	86.7	7.3	6.7
11 LIL Comp	5.7	6.4	3.5	4.0	5.7	6.3	81.7	7.0	6.0
12 Bingo	5.7	5.8	4.9	3.7	5.0	8.0	88.3	7.0	7.0
13 Blackwatch	5.7	5.9	4.8	5.0	5.3	6.0	76.7	6.7	6.7
14 Padre	5.7	5.7	4.6	3.0	7.3	5.7	90.0	7.0	6.7
15 Guardian 21	5.7	5.7	4.0	4.3	5.7	6.7	85.0	7.3	7.3
16 DaVinci	5.7	6.0	3.7	3.7	5.3	5.3	90.0	7.0	6.3
17 Cayenne	5.6	5.7	4.1	4.0	5.0	6.3	78.3	7.3	7.0
18 2nd Millennium	5.6	5.6	4.0	4.0	6.0	6.0	90.0	6.7	6.7
19 LIM Comp	5.6	5.8	4.6	3.7	5.7	6.0	70.0	7.0	6.0
20 01-ORU1	5.6	5.6	4.2	4.3	6.3	6.0	86.7	8.3	7.7

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality <sup>1</sup> -----		Worn Turf Quality <sup>1</sup> 2003 Avg.	Spring Green-up <sup>2</sup> April 2003	Brown Patch <sup>3</sup> Aug. 2003	Color <sup>4</sup> Oct. 2003	Cover (%) Oct. 2003	Density <sup>5</sup> Oct. 2003	Leaf Texture <sup>6</sup> Oct. 2003
	2002-2003 Avg.	2003 Avg.							
21 PST-5FZD	5.6	5.7	3.7	4.0	7.0	6.0	76.7	6.7	6.3
22 Cochise III	5.5	5.1	4.0	4.7	6.7	5.3	83.3	6.7	5.7
23 Justice	5.5	5.0	3.4	3.0	5.7	7.3	91.7	7.0	6.7
24 01-RUTOR 2	5.5	5.5	4.5	3.3	6.0	6.3	83.3	7.3	7.3
25 K01-WAF	5.4	5.3	4.9	5.3	4.7	5.0	83.3	7.3	6.7
26 Biltmore	5.4	4.8	4.6	2.3	3.3	6.7	88.3	6.7	5.7
27 Titanium	5.4	5.3	4.5	4.0	6.3	5.3	85.0	6.3	6.3
28 BAR Fa 1005	5.4	5.5	4.4	4.7	5.7	6.0	83.3	6.7	7.3
29 Dynamic	5.4	5.2	4.0	4.3	5.7	4.3	81.7	6.3	5.7
30 Mustang 3	5.4	5.2	4.5	5.0	5.7	5.3	88.3	7.7	6.7
31 Fidelity	5.4	5.4	4.5	4.7	5.7	5.7	86.7	6.3	6.0
32 PST-5JM	5.4	5.4	4.3	5.0	3.7	6.7	78.3	6.0	6.0
33 Silverado II	5.4	5.4	4.1	3.7	5.3	5.3	90.0	6.3	5.7
34 PST-DDL	5.4	4.8	3.6	3.3	4.7	6.7	76.7	6.0	6.7
35 Quest	5.3	5.1	4.7	4.7	5.3	6.7	68.3	5.7	6.0
36 Five Point	5.3	5.1	4.6	4.0	6.3	6.7	85.0	5.7	6.0
37 Rembrandt	5.3	5.1	4.3	4.7	5.7	5.7	91.7	6.3	5.7
38 K01-8007	5.3	5.1	3.9	2.7	2.7	7.0	83.3	7.3	7.7
39 Turbo	5.3	5.1	4.8	3.7	6.0	6.3	85.0	6.0	6.3
40 UT-RB3	5.3	5.4	4.3	3.3	5.7	6.0	85.0	6.7	6.0
41 Masterpiece	5.2	5.3	5.4	5.3	5.3	5.0	80.0	6.3	5.3
42 PST-53T	5.2	5.2	5.1	4.0	4.3	7.3	78.3	6.3	5.7
43 Magellan	5.2	5.1	3.8	3.3	5.7	5.3	85.0	7.0	6.7
44 CIS-TF-60	5.2	4.8	3.5	1.7	5.0	8.3	76.7	6.7	6.7
45 CIS-TF-65	5.2	5.1	3.4	2.3	5.3	8.7	83.3	6.3	6.7

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality <sup>1</sup> -----		Worn Turf Quality <sup>1</sup> 2003 Avg.	Spring Green-up <sup>2</sup> April 2003	Brown Patch <sup>3</sup> Aug. 2003	Color <sup>4</sup> Oct. 2003	Cover (%) Oct. 2003	Density <sup>5</sup> Oct. 2003	Leaf Texture <sup>6</sup> Oct. 2003
	2002-2003 Avg.	2003 Avg.							
46 Raptor	5.2	4.9	4.0	2.7	4.3	6.7	83.3	6.3	6.7
47 SR 8550	5.1	5.0	5.5	2.3	4.7	6.3	86.7	7.0	6.3
48 PST-5KI	5.1	5.2	4.4	3.3	6.3	4.7	78.3	7.0	6.0
49 CIS-TF-67	5.1	4.8	3.4	2.3	4.3	5.7	85.0	6.7	6.7
50 Kalahari	5.1	4.8	4.3	3.7	3.7	5.0	85.0	6.3	6.7
51 Forte	5.0	4.7	4.8	3.0	4.3	7.0	86.7	7.3	6.7
52 PST-5BZ	5.0	4.9	4.4	4.3	5.3	5.3	81.7	6.0	5.7
53 Rebel Exeda	5.0	5.0	4.3	4.0	6.7	5.3	85.0	6.0	6.3
54 Matador	5.0	4.6	4.0	4.0	4.3	7.0	85.0	6.0	6.7
55 CIS-TF-77	5.0	4.9	3.9	3.3	4.7	5.7	81.7	6.3	6.7
56 Olympic Gold	5.0	5.2	6.1	6.7	6.7	4.3	81.7	5.7	5.3
57 Rendition	5.0	4.1	4.9	3.0	5.7	6.7	86.7	6.3	6.3
58 PST-5NAS	5.0	4.7	4.5	4.3	4.7	7.0	83.3	6.3	5.3
59 Riverside	5.0	5.0	4.3	3.7	6.7	6.3	76.7	6.7	6.0
60 K01-E09	5.0	4.9	3.8	4.0	5.0	5.7	80.0	7.0	6.0
61 BE-1	5.0	4.6	3.8	5.7	5.0	5.7	86.7	7.0	7.0
62 Apache III	5.0	4.7	5.8	4.7	5.7	5.7	83.3	5.7	5.3
63 Wolfpack	5.0	5.1	4.7	6.7	5.3	4.3	86.7	6.0	5.0
64 K01-E03	5.0	4.3	4.3	5.0	2.7	5.7	80.0	7.3	8.0
65 Pick TF H-97	5.0	5.1	3.3	3.0	6.0	6.0	75.0	6.0	6.3
66 JT-15	4.9	4.7	4.7	3.0	4.7	7.3	73.3	6.7	6.7
67 MA-127	4.9	4.7	4.4	3.0	6.0	5.7	80.0	6.0	5.7
68 Grande II	4.9	4.7	4.3	3.3	5.7	6.3	85.0	6.3	6.0
69 Silverstar	4.9	4.8	5.2	5.7	5.7	4.7	86.7	7.0	6.0
70 Picasso	4.9	4.8	4.4	4.3	5.0	5.0	83.3	6.3	6.0

(Continued)

Table 4 (continued).

Cultivar or Selection	2002-2003 Avg.		Turf Quality <sup>1</sup>		Worn Turf Quality <sup>1</sup> 2003 Avg.	Spring Green-up <sup>2</sup> April 2003	Brown Patch <sup>3</sup> Aug. 2003	Color <sup>4</sup> Oct. 2003	Cover (%) Oct. 2003	Density <sup>5</sup> Oct. 2003	Leaf Texture <sup>6</sup> Oct. 2003
	2003 Avg.	2003	2002 Avg.	2003 Avg.							
71 Pick-OD-AFA	4.9		5.3	4.4	3.9	3.0	4.3	6.0	76.7	6.0	5.3
72 PST-5S12	4.9		4.7	4.9	4.5	6.7	6.0	3.7	83.3	5.7	4.7
73 Signia	4.9		5.2	4.6	4.0	3.3	4.7	6.7	78.3	6.3	6.3
74 Dynasty	4.9		5.2	4.5	4.0	3.7	5.0	6.0	83.3	7.0	7.0
75 PST-5LO	4.9		5.1	4.6	3.7	4.3	6.0	4.3	86.7	6.0	5.0
76 EA-163	4.8		4.9	4.9	4.5	3.7	6.3	7.3	73.3	6.0	5.3
77 JT-12	4.8		4.9	4.7	4.4	3.0	6.0	6.7	75.0	6.3	7.0
78 Scorpion	4.8		5.0	4.6	4.4	5.0	5.3	5.3	85.0	6.7	6.3
79 Roberts SM4	4.8		4.8	4.8	4.7	5.0	6.0	6.3	78.3	5.7	6.0
80 UT-155	4.8		5.0	4.6	3.7	3.3	6.7	6.3	81.7	6.7	6.3
81 Tar Heel	4.7		4.5	5.0	5.1	6.0	6.7	3.3	83.3	5.0	4.0
82 Watchdog	4.7		4.9	4.6	4.4	4.7	4.3	4.0	81.7	6.7	7.0
83 Barrington	4.7		4.8	4.5	4.0	4.3	4.3	6.3	81.7	6.0	5.3
84 Pick ZMG	4.7		4.7	4.7	4.0	4.3	6.3	6.3	80.0	6.7	6.3
85 CIS-TF-64	4.7		4.8	4.6	2.9	3.0	5.7	6.3	80.0	6.3	7.3
86 JT-13	4.7		5.0	4.4	4.8	1.3	5.0	7.0	71.7	6.3	6.3
87 Finesse II	4.7		5.0	4.4	4.0	4.0	5.0	7.0	81.7	7.3	7.3
88 PST-5BAB	4.7		4.7	4.7	5.1	5.7	5.3	6.3	85.0	6.3	5.3
89 Prospect	4.7		4.8	4.5	4.5	4.3	5.7	5.0	83.3	5.3	5.7
90 PST-5KU	4.6		4.7	4.5	3.9	2.7	6.3	6.0	85.0	6.3	5.7
91 Constitution	4.6		5.0	4.2	3.5	3.7	4.7	5.3	70.0	6.0	5.3
92 SR 8600	4.6		4.9	4.2	4.8	3.3	4.3	6.7	81.7	6.0	6.3
93 GO-OD2	4.6		4.5	4.5	4.2	4.7	7.0	5.7	66.7	6.3	5.7
94 PST-5Tuo	4.6		4.8	4.3	4.1	2.7	5.3	6.3	80.0	6.0	6.0
95 NA-TDD	4.6		4.8	4.3	3.4	1.3	4.0	7.0	70.0	5.3	6.0

(Continued)

Table 4 (continued).

Cultivar or Selection	2002-2003 Avg.		Turf Quality <sup>1</sup> -----		Worn Turf Quality <sup>1</sup> 2003 Avg.	Spring Green-up <sup>2</sup> April 2003	Brown Patch <sup>3</sup> Aug. 2003	Color <sup>4</sup> Oct. 2003	Cover (%) Oct. 2003	Density <sup>5</sup> Oct. 2003	Leaf Texture <sup>6</sup> Oct. 2003
	2003 Avg.	2002 Avg.	2003 Avg.	2002 Avg.							
96 MRF-25	4.5	4.9	4.1	4.1	4.6	4.3	4.7	7.3	80.0	5.3	4.7
97 MRF-27	4.5	4.9	4.1	4.1	4.0	2.7	4.7	6.3	66.7	5.7	5.0
98 Bravo	4.5	4.9	4.0	4.0	4.7	5.0	6.3	5.3	83.3	5.3	5.0
99 CAS-ED	4.5	4.6	4.5	4.5	4.4	2.0	5.0	6.0	78.3	6.3	6.7
100 MRF-211	4.5	5.0	4.3	4.3	4.3	2.3	4.7	7.7	78.3	5.3	5.3
101 Elisa	4.5	4.5	4.4	4.4	5.8	8.3	3.7	3.0	90.0	5.7	5.7
102 Barrera	4.5	4.8	4.1	4.1	4.5	1.7	5.7	6.0	78.3	5.7	5.3
103 Gremlin	4.5	4.8	4.2	4.2	4.2	3.7	4.7	6.7	68.3	7.0	6.3
104 Endeavor	4.4	4.6	4.2	4.2	5.1	5.3	6.3	4.0	80.0	5.3	4.3
105 Tuxedo	4.4	4.1	4.6	4.6	3.6	1.3	5.7	7.0	85.0	6.7	6.3
106 Tahoe	4.4	5.0	3.8	3.8	3.6	2.3	3.7	7.0	71.7	6.7	6.3
107 ATF 799	4.4	4.7	4.4	4.4	3.5	2.3	6.7	6.7	81.7	6.0	6.0
108 Focus	4.4	4.8	4.0	4.0	5.1	3.0	4.0	6.0	83.3	6.3	5.3
109 Tracer	4.4	4.8	4.0	4.0	4.2	3.3	5.3	6.0	75.0	6.3	7.3
110 JT-6	4.4	4.7	4.2	4.2	4.1	1.7	5.0	8.3	76.7	6.7	6.7
111 SR 8250	4.4	4.6	4.3	4.3	3.6	2.3	5.0	5.0	76.7	6.0	5.7
112 MA 138	4.4	4.6	4.1	4.1	3.3	2.0	5.3	6.7	65.0	5.7	4.7
113 MRF-210	4.4	4.6	4.1	4.1	4.4	3.3	4.3	7.3	76.7	5.7	4.7
114 Dominion	4.3	4.2	4.5	4.5	6.1	4.3	7.0	5.3	81.7	5.7	5.3
115 Jaguar 3	4.3	4.4	4.2	4.2	5.2	6.3	6.0	3.3	81.7	5.7	4.7
116 Wyatt	4.3	4.6	4.1	4.1	4.9	7.0	4.3	4.0	81.7	5.3	5.3
117 MA 158	4.3	4.6	4.1	4.1	4.4	2.0	5.3	7.7	78.3	5.3	4.0
118 Barlexas II	4.3	4.8	3.9	3.9	4.1	3.3	5.0	6.0	80.0	6.0	5.7
119 ATF 586	4.3	4.4	4.2	4.2	4.3	4.0	6.0	4.0	75.0	5.3	5.7
120 Adam's Valley	4.3	4.6	3.9	3.9	4.3	2.0	5.3	6.3	90.0	7.0	6.3

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality <sup>1</sup> -----		Worn Turf Quality <sup>1</sup> 2003 Avg.	Spring Green-up <sup>2</sup> April 2003	Brown Patch <sup>3</sup> Aug. 2003	Color <sup>4</sup> Oct. 2003	Cover (%) Oct. 2003	Density <sup>5</sup> Oct. 2003	Leaf Texture <sup>6</sup> Oct. 2003
	2002 Avg.	2003 Avg.							
121 Covenant	4.3	3.9	3.6	1.3	5.7	6.0	81.7	6.3	6.0
122 Barlexas	4.3	4.0	4.7	3.7	4.7	4.3	88.3	5.3	5.0
123 Rebel Sentry	4.2	3.7	4.5	2.3	4.3	6.3	88.3	6.3	5.7
124 Millennium	4.2	3.7	4.7	3.3	5.0	4.7	81.7	6.0	5.3
125 MRF-29	4.2	3.9	4.7	2.3	3.7	7.0	68.3	5.7	5.3
126 JT-9	4.2	3.7	3.6	2.3	3.7	8.3	61.7	6.0	6.0
127 Plantation	4.2	3.6	3.1	3.3	5.3	6.0	85.0	5.3	5.7
128 Tomahawk RT	4.2	4.0	4.9	3.0	4.3	6.7	70.0	5.3	4.7
129 MRF-28	4.2	3.8	4.2	1.3	5.7	8.0	73.3	6.0	5.3
130 ATF-803	4.1	3.8	5.2	2.3	5.3	7.0	76.7	5.3	5.3
131 Titan Ltd	4.1	3.6	5.0	3.0	4.0	4.0	85.0	6.0	5.3
132 Kitty Hawk 2000	4.1	3.7	3.1	3.0	4.0	6.7	80.0	6.0	6.3
133 MRF-22	4.1	4.0	5.1	3.0	5.0	6.7	70.0	4.7	4.7
134 ATF-800	4.1	3.8	4.9	2.0	5.7	5.7	83.3	5.7	5.3
135 DP 50-9226	4.1	3.9	4.7	5.0	5.7	6.0	75.0	5.7	5.3
136 ATF 806	4.1	3.8	3.4	2.3	4.0	5.7	70.0	5.7	6.3
137 Legitimate	4.1	4.0	4.3	4.7	5.3	5.0	78.3	5.3	4.3
138 BAR Fa 1003	4.1	3.9	4.0	3.0	4.7	6.3	66.7	4.7	5.3
139 JT-18	4.0	4.0	3.9	2.3	5.0	7.0	70.0	6.0	6.3
140 Pure Gold	4.0	3.7	3.0	2.3	5.0	6.3	80.0	6.7	5.7
141 Tulsa II	4.0	4.0	5.6	5.0	4.3	4.0	83.3	5.3	5.7
142 MRF-26	4.0	3.5	4.3	2.0	4.7	7.3	56.7	5.3	5.0
143 TF 66	4.0	3.5	4.1	4.0	2.7	5.0	75.0	5.7	5.7
144 Laramie	3.9	3.6	3.8	1.7	5.3	6.7	70.0	5.0	4.7
145 T991	3.9	3.5	3.1	1.7	4.7	7.7	76.7	4.7	5.3

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality <sup>1</sup> -----		Worn Turf Quality <sup>1</sup> 2003 Avg.	Spring Green-up <sup>2</sup> April 2003	Brown Patch <sup>3</sup> Aug. 2003	Color <sup>4</sup> Oct. 2003	Cover (%) Oct. 2003	Density <sup>5</sup> Oct. 2003	Leaf Texture <sup>6</sup> Oct. 2003
	2002-2003 Avg.	2003 Avg.							
146 Coyote	3.8	4.2	4.7	3.7	4.7	6.3	63.3	5.3	4.7
147 SRX 805	3.8	4.2	3.3	1.3	5.7	7.3	63.3	6.0	6.0
148 ATF 707	3.8	4.2	3.8	1.3	5.7	6.7	68.3	4.7	4.3
149 01-TFOR3	3.7	4.1	3.9	3.3	5.3	4.7	70.0	6.0	6.0
150 Lancer E	3.7	4.0	3.8	4.0	4.3	5.3	85.0	6.3	5.3
151 Southern Choice	3.6	3.9	4.0	1.7	5.7	6.7	66.7	5.0	4.3
152 Daytona	3.6	4.0	3.7	1.7	4.0	7.3	61.7	4.3	4.0
153 BAR FA 1CR 7	3.6	4.5	2.6	2.0	4.0	7.0	66.7	5.0	4.7
154 Stetson	3.5	3.5	4.5	5.0	4.3	3.7	86.7	6.3	5.3
155 GO-FL3	3.4	3.7	5.7	6.3	5.0	2.3	85.0	4.7	4.0
156 Falcon II	3.4	3.6	4.5	5.3	5.0	4.3	83.3	5.7	5.0
157 DLF-J210	3.4	3.8	4.4	3.0	4.3	6.3	80.0	5.7	5.0
158 South Paw	3.4	3.7	3.8	2.7	4.3	6.7	66.7	4.7	4.0
159 Bonsai	3.4	3.6	3.6	2.0	4.3	4.0	65.0	4.3	4.3
160 ATF 704	3.4	3.7	3.2	2.3	5.7	6.7	66.7	5.3	5.3
161 JTTF-2000	3.3	3.8	3.1	1.3	4.0	6.7	63.3	5.0	5.0
162 GO-RD4	3.2	3.5	4.7	2.7	6.0	4.7	73.3	4.3	4.3
163 DP 50-9082	3.2	3.4	4.4	4.0	4.3	3.3	70.0	6.3	5.7
164 GO-SIU2	3.1	3.4	3.5	4.0	4.3	4.3	86.7	6.0	5.0
165 Kentucky-31 E+	1.2	1.2	3.6	6.7	6.3	1.0	53.3	2.0	1.0

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality <sup>1</sup> -----		Worn Turf Quality <sup>1</sup> 2003 Avg.	Spring Green-up <sup>2</sup> April 2003	Brown Patch <sup>3</sup> Aug. 2003	Color <sup>4</sup> Oct. 2003	Cover (%) Oct. 2003	Density <sup>5</sup> Oct. 2003	Leaf Texture <sup>6</sup> Oct. 2003
	2002- 2003 Avg.	2003 Avg.							
LSD at 5% =	0.8	0.7	1.0	2.1	2.2	1.4	14.3	1.4	1.4

<sup>1</sup>9 = best turf quality  
<sup>2</sup>9 = earliest spring green-up  
<sup>3</sup>9 = least disease  
<sup>4</sup>9 = darkest green color  
<sup>5</sup>9 = best turf density  
<sup>6</sup>9 = finest leaf texture

Table 5. Performance of tall fescue cultivars and selections in a turf trial established in September 2002 at Adelphia, NJ.

	Cultivar or Selection	Turf Quality <sup>1</sup> 2003 Avg.	Establishment <sup>2</sup> Sept. 2002	Brown Patch <sup>3</sup> 2003 Avg.	Brown Patch Aug. 9 2003	Brown Patch Aug. 14 2003
1	ATL comp	6.9	5.7	7.7	7.3	8.0
2	ATM comp	6.7	5.7	8.5	8.3	8.7
3	CIS-TF-71	6.7	5.0	6.2	6.7	5.7
4	Justice	6.6	6.7	6.2	6.0	6.3
5	Falcon IV	6.5	6.3	6.8	7.7	6.0
6	ATN comp	6.5	4.7	8.0	8.0	8.0
7	CIS-TF-65	6.5	5.0	6.0	6.7	5.3
8	WAE comp	6.3	5.7	6.8	7.0	6.7
9	CIS-TF-72	6.3	4.3	6.5	6.7	6.3
10	CIS-TF-67	6.2	4.7	6.2	7.0	5.3
11	CIS-TF-60	6.2	5.3	3.8	5.0	2.7
12	Avenger	6.2	6.0	6.8	7.3	6.3
13	Cochise III	6.1	6.7	5.8	6.0	5.7
14	ATE comp	6.1	5.7	7.7	7.7	7.7
15	ATC comp	6.1	4.7	6.7	7.0	6.3
16	02-I FA	6.1	4.0	6.2	7.0	5.3
17	Cayenne	6.0	4.7	6.5	6.7	6.3
18	DaVinci	6.0	5.7	5.7	5.7	5.7
19	Raptor	6.0	3.7	6.2	6.7	5.7
20	02-D FA	5.9	4.7	5.8	6.7	5.0
21	02-E FA	5.9	3.0	5.7	6.0	5.3
22	SRX 8DDMPP	5.9	5.3	5.0	5.7	4.3
23	CIS-TF-80	5.8	3.0	6.5	7.0	6.0
24	02-B FA	5.8	3.3	5.2	5.7	4.7
25	02-CFA	5.8	3.7	5.2	5.7	4.7
26	FA14-AB-02	5.8	5.3	6.0	6.0	6.0
27	CIS-TF-61	5.7	4.3	4.8	5.3	4.3
28	CIS-TF-77	5.7	4.3	7.3	7.7	7.0
29	Forte	5.6	6.0	5.2	5.7	4.7
30	WAE comp	5.6	4.7	6.8	7.0	6.7
31	Guardian 21	5.6	5.0	5.8	6.0	5.7
32	Rebel Exceda	5.6	4.7	6.2	6.3	6.0
33	Biltmore	5.6	5.0	6.8	6.7	7.0
34	02-F FA	5.6	3.0	6.2	7.0	5.3
35	SR 8250	5.6	5.0	5.3	6.0	4.7

(Continued)

Table 5 (continued).

	Cultivar or Selection	Turf Quality <sup>1</sup> 2003 Avg.	Establishment <sup>2</sup> Sept. 2002	Brown Patch <sup>3</sup> 2003 Avg.	Brown Patch Aug. 9 2003	Brown Patch Aug. 14 2003
36	SR 8550	5.6	4.7	4.8	5.3	4.3
37	Titanium	5.5	5.7	6.7	6.7	6.7
38	Finesse II	5.5	4.3	4.0	4.0	4.0
39	Constitution	5.5	5.7	5.2	5.3	5.0
40	Gazelle	5.5	5.7	4.0	4.3	3.7
41	WAE comp	5.5	5.0	4.5	4.7	4.3
42	SRX 8FFT	5.5	5.7	5.2	6.0	4.3
43	Plantation	5.4	6.0	4.7	5.3	4.0
44	Tuxedo	5.4	5.7	4.5	5.3	3.7
45	Five Point	5.4	5.3	4.2	4.7	3.7
46	FA 34-4-02	5.4	4.7	5.8	6.7	5.0
47	JT-3	5.4	5.0	5.3	5.3	5.3
48	Signia	5.4	5.3	5.0	6.0	4.0
49	TF H-97	5.4	6.3	5.2	6.0	4.3
50	02-G FA	5.3	3.7	5.5	6.0	5.0
51	2nd Millennium	5.3	5.3	5.5	5.7	5.3
52	ATF-909	5.3	5.0	4.5	4.7	4.3
53	CIS-TF-64	5.3	4.0	4.0	4.3	3.7
54	CIS-TF-93	5.3	4.3	5.8	6.3	5.3
55	ATF-805	5.3	5.7	4.8	5.7	4.0
56	Grande II	5.3	5.3	4.5	4.7	4.3
57	FA 34-B-02	5.2	4.7	6.3	6.7	6.0
58	ATF-901	5.2	3.3	4.2	4.3	4.0
59	ATF-903	5.2	3.7	6.8	7.0	6.7
60	Prospect	5.2	5.0	6.2	6.3	6.0
61	Finelawn Elite	5.2	6.0	6.7	7.3	6.0
62	Pick 00-AFA	5.2	5.0	5.5	6.3	4.7
63	Focus	5.1	4.7	5.2	5.7	4.7
64	JT-2	5.1	5.7	4.2	4.7	3.7
65	Rendition	5.1	4.3	5.0	5.0	5.0
66	ATF-899	5.1	4.3	5.3	6.0	4.7
67	JT-4	5.1	4.7	5.7	5.7	5.7
68	Pick TF B-97	5.1	4.7	5.5	6.0	5.0
69	Masterpiece	5.0	7.0	6.5	6.7	6.3
70	CIS-TF-63	5.0	5.0	6.7	7.0	6.3

(Continued)

Table 5 (continued).

	Cultivar or Selection	Turf Quality <sup>1</sup> 2003 Avg.	Establishment <sup>2</sup> Sept. 2002	Brown Patch <sup>3</sup> 2003 Avg.	Brown Patch Aug. 9 2003	Brown Patch Aug. 14 2003
71	Roberts SM4	5.0	5.0	5.8	6.3	5.3
72	Matador	5.0	2.3	3.5	3.3	3.7
73	ATF-897	5.0	5.7	5.3	6.0	4.7
74	CIS-TF-79	5.0	5.3	6.8	7.0	6.7
75	Rebel Sentry	5.0	5.3	5.8	6.3	5.3
76	02-H FA	5.0	3.0	5.3	5.7	5.0
77	ATF-905	4.9	6.0	5.7	6.3	5.0
78	Scorpion	4.9	5.0	5.3	6.0	4.7
79	SRX 8RH2	4.9	4.7	5.2	6.0	4.3
80	ATF-906	4.8	4.3	4.0	4.0	4.0
81	ATF-896	4.8	3.7	4.8	5.0	4.7
82	ATF-902	4.8	4.0	5.2	5.7	4.7
83	ATF-907	4.8	4.3	3.5	3.7	3.3
84	ATF-898	4.8	4.7	5.8	6.3	5.3
85	TF E-97	4.8	4.3	4.7	5.0	4.3
86	Cortez II	4.7	5.3	4.7	5.3	4.0
87	00-C FA	4.7	4.7	5.0	5.7	4.3
88	Pick TF DC-97-98	4.7	5.0	5.3	5.7	5.0
89	Durana	4.7	5.3	5.3	5.7	5.0
90	Shenandoah II	4.7	5.7	4.7	5.0	4.3
91	Crossfire II	4.7	4.7	5.7	5.7	5.7
92	ATF-908	4.7	5.0	4.2	4.3	4.0
93	Pick MT3	4.7	5.0	4.7	5.3	4.0
94	Millennium	4.6	5.7	6.0	6.0	6.0
95	Greystone	4.6	4.7	3.8	4.3	3.3
96	Picasso	4.6	4.7	5.8	5.7	6.0
97	ATF-904	4.6	4.0	5.0	5.3	4.7
98	CIS-TF-92	4.5	4.7	6.3	6.7	6.0
99	Expedition	4.4	4.7	4.3	4.7	4.0
100	Arizona	4.4	3.0	3.3	3.7	3.0
101	DLF-210	4.4	4.7	4.5	4.7	4.3
102	DLF-209	4.4	5.0	5.3	5.7	5.0
103	Bandana	4.3	5.0	5.7	6.0	5.3
104	Crewcut II	4.2	2.7	6.0	6.0	6.0
105	Finelawn Petite	4.2	7.0	5.0	5.7	4.3

(Continued)

Table 5 (continued).

	Cultivar or Selection	Turf Quality <sup>1</sup> 2003 Avg.	Establishment <sup>2</sup> Sept. 2002	Brown Patch <sup>3</sup> 2003 Avg.	Brown Patch Aug. 9 2003	Brown Patch Aug. 14 2003
106	ATF-900	4.2	4.7	4.5	4.7	4.3
107	Jaguar 3	4.0	6.7	6.0	6.3	5.7
108	Virtue	4.0	6.7	4.3	4.7	4.0
109	Duster	4.0	6.0	3.8	4.3	3.3
110	Titan LTD	4.0	6.0	3.0	3.7	2.3
111	Bonsai 2000	3.9	6.7	3.8	4.3	3.3
112	TTF-O2AA	3.9	3.3	4.5	5.0	4.0
113	Regiment	3.9	5.0	4.8	5.7	4.0
114	Tulsa	3.8	4.7	3.8	4.3	3.3
115	Oncue	3.8	5.7	5.5	6.3	4.7
116	SRX 8RH1	3.8	5.7	4.3	5.0	3.7
117	Tulsa II	3.8	5.0	4.3	5.0	3.7
118	Watchdog	3.6	5.3	3.7	4.0	3.3
119	Grande	3.6	7.0	4.5	4.7	4.3
120	Bonanza II	3.6	5.0	4.7	5.0	4.3
121	Mini-Mustang	3.4	5.7	5.0	5.0	5.0
122	Mustang II	3.1	6.3	5.3	6.0	4.7
123	Landmark	1.2	8.3	4.3	4.7	4.0
124	Jesup Plus	1.1	6.7	5.5	6.3	4.7
125	Kentucky-31	1.1	6.7	3.7	3.7	3.7
	LSD at 5% =	0.7	1.3	1.4	1.5	1.6

<sup>1</sup>9 = best turf quality<sup>2</sup>9 = best seedling establishment<sup>3</sup>9 = least disease

Table 6. Yearly nitrogen (N) applied and mowing height (Ht) on tall fescue tests established at Adelphia and North Brunswick, NJ.

	2000		2001		2002		2003	
	N <sup>1</sup>	Ht <sup>2</sup>	N	Ht	N	Ht	N	Ht
Table 1 (1999 Adelphia) .....	2.6	1.5	2.2	1.5	3.0	1.5	0.75	1.5
Table 2 (2000 Adelphia) .....			2.8	1.5	3.0	1.5	3.00	1.5
Table 3 (2001 Adelphia) .....					2.0	1.5	2.75	1.5
Table 4 (2001 North Brunswick) .....					4.1	1.5	4.25	1.5
Table 5 (2002 Adelphia) .....							3.00	1.5

<sup>1</sup> Annual N applied (lb/1000 ft<sup>2</sup>)

<sup>2</sup> Mowing height in inches