

# 2003 RUTGERS Turfgrass Proceedings



## THE NEW JERSEY TURFGRASS ASSOCIATION

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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  
Dr. Bruce B. Clarke, Coordinator

## 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><br>Aug.<br>2003 |
|-----------------------|--------------------------------------|--------------|--------------|--------------|--------------|--|
|                       | 2000-<br>2003<br>Avg.                | 2000<br>Avg. | 2001<br>Avg. | 2002<br>Avg. | 2003<br>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><br>Aug.<br>2003 |
|----|-----------------------|--------------------------------------|--------------|--------------|--------------|--------------|--|
|    |                       | 2000-<br>2003<br>Avg.                | 2000<br>Avg. | 2001<br>Avg. | 2002<br>Avg. | 2003<br>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><br>Aug.<br>2003 |
|-----|-----------------------|--------------------------------------|--------------|--------------|--------------|--------------|--|
|     |                       | 2000-<br>2003<br>Avg.                | 2000<br>Avg. | 2001<br>Avg. | 2002<br>Avg. | 2003<br>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><br>Aug.<br>2003 |
|----|-----------------------|--------------------------------------|--------------|--------------|--------------|--|
|    |                       | 2001-<br>2003<br>Avg.                | 2001<br>Avg. | 2002<br>Avg. | 2003<br>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><br>Aug.<br>2003 |
|----|-----------------------|--------------------------------------|--------------|--------------|--------------|--|
|    |                       | 2001-<br>2003<br>Avg.                | 2001<br>Avg. | 2002<br>Avg. | 2003<br>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><br>Aug.<br>2003 |
|-----|-----------------------|--------------------------------------|--------------|--------------|--------------|--|
|     |                       | 2001-<br>2003<br>Avg.                | 2001<br>Avg. | 2002<br>Avg. | 2003<br>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><br>Aug.<br>2003 |
|-----|-----------------------|--------------------------------------|--------------|--------------|--------------|--|
|     |                       | 2001-<br>2003<br>Avg.                | 2001<br>Avg. | 2002<br>Avg. | 2003<br>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><br>Aug.<br>2003 |
|-----|-----------------------|--------------------------------------|--------------|--------------|--------------|--|
|     |                       | 2001-<br>2003<br>Avg.                | 2001<br>Avg. | 2002<br>Avg. | 2003<br>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><br>2003<br>Avg. | Brown Patch<br>Aug. 8<br>2003 | Brown Patch<br>Aug. 16<br>2003 |
|-----------------------|--------------------------------------|--------------|--------------|--|-------------------------------|--------------------------------|
|                       | 2002-<br>2003<br>Avg.                | 2002<br>Avg. | 2003<br>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><br>2003<br>Avg. | Brown Patch<br>Aug. 8<br>2003 | Brown Patch<br>Aug. 16<br>2003 |
|----|-----------------------|--------------------------------------|--------------|--------------|--|-------------------------------|--------------------------------|
|    |                       | 2002-<br>2003<br>Avg.                | 2002<br>Avg. | 2003<br>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><br>2003<br>Avg. | Brown Patch<br>Aug. 8<br>2003 | Brown Patch<br>Aug. 16<br>2003 |
|-----|-----------------------|--------------------------------------|--------------|--------------|--|-------------------------------|--------------------------------|
|     |                       | 2002-<br>2003<br>Avg.                | 2002<br>Avg. | 2003<br>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><br>2003<br>Avg. | Brown Patch<br>Aug. 8<br>2003 | Brown Patch<br>Aug. 16<br>2003 |
|-----|-----------------------|--------------------------------------|--------------|--------------|--|-------------------------------|--------------------------------|
|     |                       | 2002-<br>2003<br>Avg.                | 2002<br>Avg. | 2003<br>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><br>2003<br>Avg. | Brown Patch<br>Aug. 8<br>2003 | Brown Patch<br>Aug. 16<br>2003 |
|-----|-----------------------|--------------------------------------|--------------|--------------|--|-------------------------------|--------------------------------|
|     |                       | 2002-<br>2003<br>Avg.                | 2002<br>Avg. | 2003<br>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><br>2003<br>Avg. | Brown Patch<br>Aug. 8<br>2003 | Brown Patch<br>Aug. 16<br>2003 |
|-----|-----------------------|--------------------------------------|--------------|--------------|--|-------------------------------|--------------------------------|
|     |                       | 2002-<br>2003<br>Avg.                | 2002<br>Avg. | 2003<br>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><br>2003<br>Avg. | Brown Patch<br>Aug. 8<br>2003 | Brown Patch<br>Aug. 16<br>2003 |
|-----|-----------------------|--------------------------------------|--------------|--------------|--|-------------------------------|--------------------------------|
|     |                       | 2002-<br>2003<br>Avg.                | 2002<br>Avg. | 2003<br>Avg. |  |                               |                                |
| 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 Avg.                            | 2003 Avg. |  |   |                                    |                              |                     |                                |                                     |
| 1 Rebel IV            | 6.5                                  | 6.2       | 3.7                                      | 5.0                                     | 6.3                                | 6.3                          | 88.3                | 7.7                            | 6.7                                 |
| 2 K01-8015            | 6.4                                  | 5.8       | 4.8                                      | 4.0                                     | 4.0                                | 6.7                          | 76.7                | 8.0                            | 7.7                                 |
| 3 LIF Comp            | 6.3                                  | 5.8       | 4.8                                      | 4.3                                     | 5.7                                | 6.3                          | 86.7                | 7.0                            | 7.3                                 |
| 4 Inferno             | 6.3                                  | 5.5       | 3.8                                      | 3.0                                     | 6.0                                | 5.7                          | 86.7                | 7.0                            | 7.3                                 |
| 5 Avenger             | 6.1                                  | 5.5       | 3.0                                      | 4.3                                     | 4.3                                | 4.7                          | 91.7                | 6.7                            | 6.3                                 |
| 6 Falcon IV           | 6.0                                  | 5.1       | 4.3                                      | 3.7                                     | 4.3                                | 5.7                          | 91.7                | 6.7                            | 6.7                                 |
| 7 LIL Comp            | 5.9                                  | 5.5       | 4.7                                      | 3.3                                     | 5.7                                | 6.3                          | 83.3                | 7.0                            | 7.0                                 |
| 8 LID Comp            | 5.9                                  | 5.4       | 4.2                                      | 3.0                                     | 5.3                                | 6.3                          | 78.3                | 7.0                            | 6.3                                 |
| 9 Tar Heel II         | 5.8                                  | 6.3       | 4.9                                      | 6.7                                     | 7.0                                | 5.0                          | 83.3                | 6.3                            | 5.3                                 |
| 10 Finelawn Elite     | 5.7                                  | 5.5       | 4.6                                      | 5.3                                     | 6.3                                | 5.7                          | 86.7                | 7.3                            | 6.7                                 |
| 11 LIL Comp           | 5.7                                  | 5.1       | 3.5                                      | 4.0                                     | 5.7                                | 6.3                          | 81.7                | 7.0                            | 6.0                                 |
| 12 Bingo              | 5.7                                  | 5.6       | 4.9                                      | 3.7                                     | 5.0                                | 8.0                          | 88.3                | 7.0                            | 7.0                                 |
| 13 Blackwatch         | 5.7                                  | 5.4       | 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                                  | 5.4       | 3.7                                      | 3.7                                     | 5.3                                | 5.3                          | 90.0                | 7.0                            | 6.3                                 |
| 17 Cayenne            | 5.6                                  | 5.6       | 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                                  | 5.3       | 4.6                                      | 3.7                                     | 5.7                                | 6.0                          | 70.0                | 7.0                            | 6.0                                 |
| 20 01-ORU1            | 5.6                                  | 5.5       | 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><br>2003<br>Avg. | Spring Green-up <sup>2</sup><br>April<br>2003 | Brown Patch <sup>3</sup><br>Aug.<br>2003 | Color <sup>4</sup><br>Oct.<br>2003 | Cover (%)<br>Oct.<br>2003 | Density <sup>5</sup><br>Oct.<br>2003 | Leaf Texture <sup>6</sup><br>Oct.<br>2003 |
|-----------------------|--------------------------------------|--------------|--|---|--|------------------------------------|---------------------------|--------------------------------------|---|
|                       | 2002-<br>2003<br>Avg.                | 2003<br>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 Avg. | 2002 Avg.                       | 2003 Avg. |  |   |                                    |                              |                     |                                |                                     |
| 71 Pick-OD-AFA        | 4.9            | 4.4       | 5.3                             | 4.4       | 3.9                                      | 3.0                                     | 4.3                                | 6.0                          | 76.7                | 6.0                            | 5.3                                 |
| 72 PST-5S12           | 4.9            | 4.9       | 4.7                             | 4.9       | 4.5                                      | 6.7                                     | 6.0                                | 3.7                          | 83.3                | 5.7                            | 4.7                                 |
| 73 Signia             | 4.9            | 4.6       | 5.2                             | 4.6       | 4.0                                      | 3.3                                     | 4.7                                | 6.7                          | 78.3                | 6.3                            | 6.3                                 |
| 74 Dynasty            | 4.9            | 4.5       | 5.2                             | 4.5       | 4.0                                      | 3.7                                     | 5.0                                | 6.0                          | 83.3                | 7.0                            | 7.0                                 |
| 75 PST-5LO            | 4.9            | 4.6       | 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                             | 4.9       | 4.5                                      | 3.7                                     | 6.3                                | 7.3                          | 73.3                | 6.0                            | 5.3                                 |
| 77 JT-12              | 4.8            | 4.7       | 4.9                             | 4.7       | 4.4                                      | 3.0                                     | 6.0                                | 6.7                          | 75.0                | 6.3                            | 7.0                                 |
| 78 Scorpion           | 4.8            | 4.6       | 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                             | 4.8       | 4.7                                      | 5.0                                     | 6.0                                | 6.3                          | 78.3                | 5.7                            | 6.0                                 |
| 80 UT-155             | 4.8            | 4.6       | 5.0                             | 4.6       | 3.7                                      | 3.3                                     | 6.7                                | 6.3                          | 81.7                | 6.7                            | 6.3                                 |
| 81 Tar Heel           | 4.7            | 5.0       | 4.5                             | 5.0       | 5.1                                      | 6.0                                     | 6.7                                | 3.3                          | 83.3                | 5.0                            | 4.0                                 |
| 82 Watchdog           | 4.7            | 4.6       | 4.9                             | 4.6       | 4.4                                      | 4.7                                     | 4.3                                | 4.0                          | 81.7                | 6.7                            | 7.0                                 |
| 83 Barrington         | 4.7            | 4.5       | 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                             | 4.7       | 4.0                                      | 4.3                                     | 6.3                                | 6.3                          | 80.0                | 6.7                            | 6.3                                 |
| 85 CIS-TF-64          | 4.7            | 4.6       | 4.8                             | 4.6       | 2.9                                      | 3.0                                     | 5.7                                | 6.3                          | 80.0                | 6.3                            | 7.3                                 |
| 86 JT-13              | 4.7            | 4.4       | 5.0                             | 4.4       | 4.8                                      | 1.3                                     | 5.0                                | 7.0                          | 71.7                | 6.3                            | 6.3                                 |
| 87 Finesse II         | 4.7            | 4.4       | 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                             | 4.7       | 5.1                                      | 5.7                                     | 5.3                                | 6.3                          | 85.0                | 6.3                            | 5.3                                 |
| 89 Prospect           | 4.7            | 4.5       | 4.8                             | 4.5       | 4.5                                      | 4.3                                     | 5.7                                | 5.0                          | 83.3                | 5.3                            | 5.7                                 |
| 90 PST-5KU            | 4.6            | 4.5       | 4.7                             | 4.5       | 3.9                                      | 2.7                                     | 6.3                                | 6.0                          | 85.0                | 6.3                            | 5.7                                 |
| 91 Constitution       | 4.6            | 4.2       | 5.0                             | 4.2       | 3.5                                      | 3.7                                     | 4.7                                | 5.3                          | 70.0                | 6.0                            | 5.3                                 |
| 92 SR 8600            | 4.6            | 4.2       | 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                             | 4.5       | 4.2                                      | 4.7                                     | 7.0                                | 5.7                          | 66.7                | 6.3                            | 5.7                                 |
| 94 PST-5TUD           | 4.6            | 4.3       | 4.8                             | 4.3       | 4.1                                      | 2.7                                     | 5.3                                | 6.3                          | 80.0                | 6.0                            | 6.0                                 |
| 95 NA-TDD             | 4.6            | 4.3       | 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 | 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. |  |   |                                    |                              |                     |                                |                                     |
| 121 Covenant          | 4.3            | 4.7       | 3.9                             | 3.6       | 3.6                                      | 1.3                                     | 5.7                                | 6.0                          | 81.7                | 6.3                            | 6.0                                 |
| 122 Barlexas          | 4.3            | 4.5       | 4.0                             | 4.7       | 4.7                                      | 3.7                                     | 4.7                                | 4.3                          | 88.3                | 5.3                            | 5.0                                 |
| 123 Rebel Sentry      | 4.2            | 5.0       | 3.7                             | 4.5       | 4.5                                      | 2.3                                     | 4.3                                | 6.3                          | 88.3                | 6.3                            | 5.7                                 |
| 124 Millennium        | 4.2            | 4.7       | 3.7                             | 4.7       | 4.7                                      | 3.3                                     | 5.0                                | 4.7                          | 81.7                | 6.0                            | 5.3                                 |
| 125 MRF-29            | 4.2            | 4.5       | 3.9                             | 4.7       | 4.7                                      | 2.3                                     | 3.7                                | 7.0                          | 68.3                | 5.7                            | 5.3                                 |
| 126 JT-9              | 4.2            | 4.6       | 3.7                             | 3.6       | 3.6                                      | 2.3                                     | 3.7                                | 8.3                          | 61.7                | 6.0                            | 6.0                                 |
| 127 Plantation        | 4.2            | 4.8       | 3.6                             | 3.1       | 3.1                                      | 3.3                                     | 5.3                                | 6.0                          | 85.0                | 5.3                            | 5.7                                 |
| 128 Tomahawk RT       | 4.2            | 4.4       | 4.0                             | 4.9       | 4.9                                      | 3.0                                     | 4.3                                | 6.7                          | 70.0                | 5.3                            | 4.7                                 |
| 129 MRF-28            | 4.2            | 4.4       | 3.8                             | 4.2       | 4.2                                      | 1.3                                     | 5.7                                | 8.0                          | 73.3                | 6.0                            | 5.3                                 |
| 130 ATF-803           | 4.1            | 4.4       | 3.8                             | 5.2       | 5.2                                      | 2.3                                     | 5.3                                | 7.0                          | 76.7                | 5.3                            | 5.3                                 |
| 131 Titan Ltd         | 4.1            | 4.6       | 3.6                             | 5.0       | 5.0                                      | 3.0                                     | 4.0                                | 4.0                          | 85.0                | 6.0                            | 5.3                                 |
| 132 Kitty Hawk 2000   | 4.1            | 4.6       | 3.7                             | 3.1       | 3.1                                      | 3.0                                     | 4.0                                | 6.7                          | 80.0                | 6.0                            | 6.3                                 |
| 133 MRF-22            | 4.1            | 4.2       | 4.0                             | 5.1       | 5.1                                      | 3.0                                     | 5.0                                | 6.7                          | 70.0                | 4.7                            | 4.7                                 |
| 134 ATF-800           | 4.1            | 4.3       | 3.8                             | 4.9       | 4.9                                      | 2.0                                     | 5.7                                | 5.7                          | 83.3                | 5.7                            | 5.3                                 |
| 135 DP 50-9226        | 4.1            | 4.3       | 3.9                             | 4.7       | 4.7                                      | 5.0                                     | 5.7                                | 6.0                          | 75.0                | 5.7                            | 5.3                                 |
| 136 ATF 806           | 4.1            | 4.4       | 3.8                             | 3.4       | 3.4                                      | 2.3                                     | 4.0                                | 5.7                          | 70.0                | 5.7                            | 6.3                                 |
| 137 Legitimate        | 4.1            | 4.1       | 4.0                             | 4.3       | 4.3                                      | 4.7                                     | 5.3                                | 5.0                          | 78.3                | 5.3                            | 4.3                                 |
| 138 BAR Fa 1003       | 4.1            | 4.3       | 3.9                             | 4.0       | 4.0                                      | 3.0                                     | 4.7                                | 6.3                          | 66.7                | 4.7                            | 5.3                                 |
| 139 JT-18             | 4.0            | 4.1       | 4.0                             | 3.9       | 3.9                                      | 2.3                                     | 5.0                                | 7.0                          | 70.0                | 6.0                            | 6.3                                 |
| 140 Pure Gold         | 4.0            | 4.3       | 3.7                             | 3.0       | 3.0                                      | 2.3                                     | 5.0                                | 6.3                          | 80.0                | 6.7                            | 5.7                                 |
| 141 Tulsa II          | 4.0            | 4.0       | 4.0                             | 5.6       | 5.6                                      | 5.0                                     | 4.3                                | 4.0                          | 83.3                | 5.3                            | 5.7                                 |
| 142 MRF-26            | 4.0            | 4.4       | 3.5                             | 4.3       | 4.3                                      | 2.0                                     | 4.7                                | 7.3                          | 56.7                | 5.3                            | 5.0                                 |
| 143 TF 66             | 4.0            | 4.5       | 3.5                             | 4.1       | 4.1                                      | 4.0                                     | 2.7                                | 5.0                          | 75.0                | 5.7                            | 5.7                                 |
| 144 Laramie           | 3.9            | 4.2       | 3.6                             | 3.8       | 3.8                                      | 1.7                                     | 5.3                                | 6.7                          | 70.0                | 5.0                            | 4.7                                 |
| 145 T991              | 3.9            | 4.3       | 3.5                             | 3.1       | 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                                  | 3.5       | 4.7                                      | 3.7                                     | 4.7                                | 6.3                          | 63.3                | 5.3                            | 4.7                                 |
| 147 SRX 805           | 3.8                                  | 3.5       | 3.3                                      | 1.3                                     | 5.7                                | 7.3                          | 63.3                | 6.0                            | 6.0                                 |
| 148 ATF 707           | 3.8                                  | 3.4       | 3.8                                      | 1.3                                     | 5.7                                | 6.7                          | 68.3                | 4.7                            | 4.3                                 |
| 149 01-TFOR3          | 3.7                                  | 3.4       | 3.9                                      | 3.3                                     | 5.3                                | 4.7                          | 70.0                | 6.0                            | 6.0                                 |
| 150 Lancer E          | 3.7                                  | 3.3       | 3.8                                      | 4.0                                     | 4.3                                | 5.3                          | 85.0                | 6.3                            | 5.3                                 |
| 151 Southern Choice   | 3.6                                  | 3.3       | 4.0                                      | 1.7                                     | 5.7                                | 6.7                          | 66.7                | 5.0                            | 4.3                                 |
| 152 Daytona           | 3.6                                  | 3.2       | 3.7                                      | 1.7                                     | 4.0                                | 7.3                          | 61.7                | 4.3                            | 4.0                                 |
| 153 BAR FA 1CR 7      | 3.6                                  | 3.2       | 2.6                                      | 2.0                                     | 4.0                                | 7.0                          | 66.7                | 5.0                            | 4.7                                 |
| 154 Stetson           | 3.5                                  | 3.4       | 4.5                                      | 5.0                                     | 4.3                                | 3.7                          | 86.7                | 6.3                            | 5.3                                 |
| 155 GO-FL3            | 3.4                                  | 3.1       | 5.7                                      | 6.3                                     | 5.0                                | 2.3                          | 85.0                | 4.7                            | 4.0                                 |
| 156 Falcon II         | 3.4                                  | 3.2       | 4.5                                      | 5.3                                     | 5.0                                | 4.3                          | 83.3                | 5.7                            | 5.0                                 |
| 157 DLF-J210          | 3.4                                  | 3.0       | 4.4                                      | 3.0                                     | 4.3                                | 6.3                          | 80.0                | 5.7                            | 5.0                                 |
| 158 South Paw         | 3.4                                  | 3.1       | 3.8                                      | 2.7                                     | 4.3                                | 6.7                          | 66.7                | 4.7                            | 4.0                                 |
| 159 Bonsai            | 3.4                                  | 3.2       | 3.6                                      | 2.0                                     | 4.3                                | 4.0                          | 65.0                | 4.3                            | 4.3                                 |
| 160 ATF 704           | 3.4                                  | 3.3       | 3.2                                      | 2.3                                     | 5.7                                | 6.7                          | 66.7                | 5.3                            | 5.3                                 |
| 161 JTTF-2000         | 3.3                                  | 2.8       | 3.1                                      | 1.3                                     | 4.0                                | 6.7                          | 63.3                | 5.0                            | 5.0                                 |
| 162 GO-RD4            | 3.2                                  | 3.0       | 4.7                                      | 2.7                                     | 6.0                                | 4.7                          | 73.3                | 4.3                            | 4.3                                 |
| 163 DP 50-9082        | 3.2                                  | 3.1       | 4.4                                      | 4.0                                     | 4.3                                | 3.3                          | 70.0                | 6.3                            | 5.7                                 |
| 164 GO-SIU2           | 3.1                                  | 2.8       | 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><br>2003<br>Avg. | Spring Green-up <sup>2</sup><br>April<br>2003 | Brown Patch <sup>3</sup><br>Aug.<br>2003 | Color <sup>4</sup><br>Oct.<br>2003 | Cover (%)<br>Oct.<br>2003 | Density <sup>5</sup><br>Oct.<br>2003 | Leaf Texture <sup>6</sup><br>Oct.<br>2003 |
|-----------------------|--------------------------------------|--------------|--|---|--|------------------------------------|---------------------------|--------------------------------------|---|
|                       | 2002<br>Avg.                         | 2003<br>Avg. |  |   |  |                                    |                           |                                      |   |
|                       | 0.8                                  | 0.7          | 1.0  | 2.1   | 2.2                                      | 1.4                                | 14.3                      | 1.4                                  | 1.4                                       |
| LSD at 5% =           |                                      |              |  |   |  |                                    |                           |                                      |   |

- <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><br>2003<br>Avg. | Establishment <sup>2</sup><br>Sept.<br>2002 | Brown Patch <sup>3</sup><br>2003<br>Avg. | Brown Patch<br>Aug. 9<br>2003 | Brown Patch<br>Aug. 14<br>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><br>2003<br>Avg. | Establishment <sup>2</sup><br>Sept.<br>2002 | Brown Patch <sup>3</sup><br>2003<br>Avg. | Brown Patch<br>Aug. 9<br>2003 | Brown Patch<br>Aug. 14<br>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><br>2003<br>Avg. | Establishment <sup>2</sup><br>Sept.<br>2002 | Brown Patch <sup>3</sup><br>2003<br>Avg. | Brown Patch<br>Aug. 9<br>2003 | Brown Patch<br>Aug. 14<br>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><br>2003<br>Avg. | Establishment <sup>2</sup><br>Sept.<br>2002 | Brown Patch <sup>3</sup><br>2003<br>Avg. | Brown Patch<br>Aug. 9<br>2003 | Brown Patch<br>Aug. 14<br>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