

1999 RUTGERS Turfgrass Proceedings



THE NEW JERSEY TURFGRASS ASSOCIATION

In Cooperation With

RUTGERS COOPERATIVE EXTENSION
NEW JERSEY AGRICULTURAL EXPERIMENT STATION
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY
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1999 RUTGERS TURFGRASS PROCEEDINGS

of the

**New Jersey Turfgrass Expo
December 7-9, 1999
Trump Taj Mahal
Atlantic City, New Jersey**

**Volume 31
Published July, 2000**

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 University 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. Articles appearing in these proceedings are divided into two sections.

The first section includes lecture notes of papers presented at the 1999 New Jersey Turfgrass Expo. Publication of the New Jersey Turfgrass Expo Notes provides a readily available

source of information covering a wide range of topics. The Expo Notes include technical and popular presentations of importance to the turfgrass industry.

The second section includes research papers containing original research findings and reviews covering selected subjects in turfgrass science. The primary objective of this section is to facilitate the timely dissemination of original turfgrass research for use by the turfgrass industry.

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

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

PERFORMANCE OF KENTUCKY BLUEGRASS CULTIVARS AND SELECTIONS IN NEW JERSEY TURF TRIALS

Stacy A. Bonos, Ronald F. Bara, William K. Dickson, Dirk A. Smith, Melissa M. Mohr,
Eric Watkins, James A. Murphy, William A. Meyer, and C. Reed Funk¹

Kentucky bluegrass (*Poa pratensis* L.) is a hardy, persistent, and attractive grass used extensively for turf throughout the northern half of the United States. It is adapted to a wide range of soils and climates, and has extensive rhizomes that provide excellent sod strength and survival under adverse conditions. These attributes make Kentucky bluegrass a popular choice for soil stabilization and conservation, forage, and turf. Kentucky bluegrass is utilized on more than 35 million acres of pastures in the northeastern and northcentral United States, as well as large areas of Canada and Europe. Kentucky bluegrass is considered a premier lawn grass, contributing to the turf of over 40 million lawns throughout the subarctic, temperate, and subtropical (high altitude) climates of the United States.

There are three main uses of Kentucky bluegrass: forage, soil preservation and improvement, and specialized turf. Prior to the release of Merion in 1947, the common Kentucky bluegrasses were the predominant type used for turf. The common type bluegrasses perform well under high-cut, lower maintenance regimes, especially in climates with bright sun and lower humidity where soil conservation is the main objective. The common type bluegrasses possess beneficial characteristics such as early maturity, good stress tolerance, and the ability to survive dry summers in a dormant state. However, these bluegrasses can suffer extensive turf loss from leaf spot and melting out disease (caused by species of *Drechslera* and *Bipolaris*) under conditions of close mowing in

humid environments. Joseph Valentine, the former superintendent of Merion Country Club in Pennsylvania, discovered Merion Kentucky bluegrass in the early 1930s. Merion had excellent resistance to leaf spot and greatly increased the usefulness of Kentucky bluegrass as an acceptable turfgrass in regions with a humid, temperate climate. The turf-type Kentucky bluegrasses have a lower, more prostrate growth habit, respond better to higher maintenance regimes, tolerate closer mowing, and have greater resistance to leaf spot disease than common-type bluegrasses.

The facultative apomictic breeding behavior of Kentucky bluegrass contributes to the survival and performance of many unique genotypes adapted to many different environments. Although apomixis presents a challenge to breeders attempting to improve Kentucky bluegrass, it also provides the opportunity to produce true-to-type seed from superior genotypes generation after generation. Kentucky bluegrass cultivars have been developed through a number of approaches including: i) selection of naturalized ecotypes; ii) selection of successful, highly apomictic plants found in old pastures or turfs; iii) blending of highly apomictic single plants; and iv) selection of single, highly apomictic plants from breeding programs using intraspecific and interspecific hybridization.

The Kentucky bluegrass improvement program at Rutgers University involves extensive field evaluations of collections from the United States, Europe, and Asia, and new material de-

¹ Graduate Assistant, Principal Laboratory Technician, Turfgrass Research Farm Supervisor, Principal Laboratory Technician, Soils and Plants Technician, Graduate Assistant, Associate Extension Specialist in Turfgrass Management, Research Professor, and Research Professor, respectively, New Jersey Agricultural Experiment Station, Cook College, Rutgers, The State University of New Jersey, New Brunswick, NJ 08901-8520.

veloped in the breeding program as well as the evaluation of cultivars and selections developed by other breeders. Recent collection trips to Poland, Finland, France, Spain, Norway, the Slovak republic, Uzbekistan, and Inner Mongolia have enhanced the diversity of germplasm incorporated into the Kentucky bluegrass hybridization program. In addition, the turfgrass research program at Rutgers participates in the National Turfgrass Evaluation Program (NTEP), which is sponsored by the Beltsville Agricultural Research Center and the National Turfgrass Federation, Inc.

The recent gray leaf spot epidemic has resulted in significant loss of perennial ryegrass on golf course fairways and other recreational fields and has led to the consideration of the use of other grass species for fairways. Therefore, future Kentucky bluegrass breeding efforts will likely include improvement in tolerance to lower mowing height, the ability to compete with annual bluegrass (*Poa annua* L.), wear tolerance, and resistance to summer patch.

PROCEDURES

Ten trials were seeded in September of 1994 to 1998 at North Brunswick, Adelphia, or Pittstown, New Jersey (Tables 1 to 11). One low maintenance test was located at North Brunswick (Table 5) and the other at Pittstown (Table 11). The other tests were conducted under medium-high maintenance regimes. Two of the tests contained all entries from the NTEP 1995 National Kentucky Bluegrass Medium-High Maintenance Trial (Tables 3 and 4), and one of the tests contained all the entries from the NTEP 1995 National Kentucky Bluegrass Low Maintenance Trial (Table 5). The soils at the three research farms are moderately fertile and fairly well drained.

Entries in each test were sown by hand using a maximum of 0.53 oz of seed per 3 X 5 ft plot (2.2 lb/1000ft²), except for two tests seeded in 1995 at North Brunswick (Table 3 and 5), which utilized 4 X 6 ft plots. An unplanted six-inch border was left around each plot. Each test was

arranged in a randomized complete block design with three replications. Annual nitrogen applied and mowing height for each trial are presented in Table 12. The amount of nitrogen applied varied between tests to permit the evaluation of characteristics known to respond to nitrogen level. No single nitrogen application exceeded 1.0 lb/1000 ft². Mowing was frequent enough to avoid excessive defoliation and the accumulation of clippings (two or three times per week during active growth). Reel mowers were used to maintain a 1.5 inch height of cut, whereas rotary mowers were employed at a higher cut.

After establishment, summer annual weeds were controlled by a spring application of DCPA, bensulide, or dithiopyr (Dimension), and broad-leaf weeds were controlled by an autumn application of 2,4-D and dicamba. Bensulide was applied in August 1998 for *Poa annua* control on the 1995 (medium-high maintenance test, Table 3) and 1996 (Table 5) tests at North Brunswick. No other pesticides were applied. Generally, soil pH was maintained between 6.0 and 6.5 with agricultural limestone. Low maintenance tests (Tables 5 and 11) were irrigated only during establishment. All other tests were irrigated during establishment and also when needed to avoid severe drought stress.

All tests were rated frequently throughout the growing season for turf quality (color, brightness, leaf texture, density, uniformity, and damage due to diseases and insects). Other characteristics were evaluated separately on some tests when differences between entries were apparent. These characteristics included: spring green-up (Tables 5 and 8), winter color (Tables 3, 5, 6, and 11), winter or spring appearance (Tables 1, 2, 4, 7, and 8), stripe smut (caused by *Ustilago striiformis*) (Tables 1, 2, and 4), leaf spot (Tables 4, 7, 8, and 10), genetic color (Tables 10 and 11), green cover (Tables 3, 5, and 11), billbug (*Sphenophorus* spp.) damage (Table 3), emergence (Table 11), establishment (Tables 10 and 11), seedling vigor (Table 9), amount of seed heads (Tables 1, 2, 4, and 5), summer patch (caused by *Magnaporthea poae*) (Table 3), drought recovery (Table 9), and wear tolerance

(Tables 1 and 2). Wear was simulated by passing a novel traffic simulator (Meyer et al., 1997) twice per day between 21 June and 18 July 1999, for a total of 20 passes. All ratings were based on a 1 to 9 scale, where 9 represented the most favorable turf quality or desirable turf characteristic. Ratings were scored by more than one person on many occasions to reduce individual preferences toward a particular trait.

RESULTS

Results are presented in Tables 1 through 11. Entries are ranked according to the overall (multi-year) quality average.

Many distinct types of Kentucky bluegrass have been released that can be classified into groups based on growth and performance characteristics. The Kentucky bluegrass types described below are based on observations of several Rutgers turfgrass evaluation trials. It should be noted that this classification system continues to be refined as more cultivars are developed and their distinct characteristics are expressed in research trials. This method of classification is used to present data in Tables 3 and 4.

Compact Type

Cultivars within this group are characterized by a low, compact growth habit and possess good to excellent resistance to leaf spot. In general, compact types have a long winter dormancy, and many cultivars can form a highly attractive turf after green-up in late spring. Although many cultivars have a purple coloration during cold weather (which is reflected in winter color or winter appearance ratings), cultivars such as Blackstone and ZPS-2183 do exhibit better winter performance. Performance during summer heat and drought stress is variable; poor to excellent recovery from summer stress was observed among entries in this group, and many entries exhibited good resistance to strip smut.

Midnight Type

Within the compact type, a number of cultivars exhibit growth and performance characteristics similar to the cultivar Midnight. These cultivars have a long winter dormancy with late spring green-up, are susceptible to powdery mildew, and characteristically have a very dark green color with good turf quality and good heat tolerance. Midnight type cultivars are variable in tolerance to summer patch and the ability to maintain green cover.

America Type

Within the compact type, a number of cultivars exhibit growth and performance characteristics similar to the cultivar America. These cultivars have finer leaf texture and higher density than most other compact type cultivars. The America type has moderate winter dormancy that is exhibited in some cultivars by a yellowing or bleaching of the leaf tips. Moderate recovery from summer stress is observed within this group. This type has good resistance to leaf spot and most races of powdery mildew.

Julia Type

A number of cultivars exhibit similar growth and performance characteristics to the cultivar Julia. These cultivars form a high quality turf but have moderate winter performance. Julia type cultivars have good resistance to leaf spot and stripe smut, but can be damaged by brown patch and are susceptible to dollar spot.

Bellevue Type

These cultivars form a turf with medium growth, medium wide leaves, and medium shoot density. Excellent cool-season vigor exists in this group which is evident by excellent color retention and turf quality during the winter, and early spring green-up. Cultivars within this type can become stemmy in turf plots from seed head

formation in late spring. Bellevue type cultivars have moderate recuperative ability from summer stress. These cultivars have moderate resistance to leaf spot and stripe smut and are susceptible to billbug damage.

CELA Type (Challenger, Eclipse, Liberty, Adelphi Type)

These cultivars exhibit better spring green-up than compact type cultivars, and tend to have less steminess under mowed turf conditions than cultivars within the Bellevue type. In 1999, the cultivars Jefferson and Eclipse had the least seed head formation of the entries in this group. CELA type cultivars have moderate to good stripe smut and leaf spot resistance and variable winter color and dormancy.

Aggressive Type

This group of cultivars is recognized for its aggressive lateral growth habit and the development of a turf with high shoot density. An aggressive dense growth may be advantageous for turfs subject to high traffic and can hasten the development of a mature sod. Aggressive cultivars can dominate other species or cultivars when used in blends or mixtures. If aggressive cultivars dominate a stand, this could lead to the rapid expression of the cultivar's strengths and weaknesses. The cultivars within this group seem to share only two common characteristics: vigorous lateral spread and high shoot density. Other turf characteristics such as spring green-up, winter dormancy, winter color, disease susceptibility, and recovery from summer stress vary considerably among these cultivars.

Mid-Atlantic Ecotype

This group of cultivars forms a vigorous turf of medium-high density with a deep, extensive root and rhizome system. In general, this group has moderate susceptibility to leaf spot; exceptions are Preakness, ZPS-204, and SR 2000, which have good resistance. The ability to recover from leaf spot damage and other stresses is excellent as a result of the type's deep, exten-

sive rhizome system. Most of the cultivars have good tolerance of summer stress and exhibit good recovery after summer stress. This group has moderate to good winter performance, and most cultivars have early spring green-up.

BVMG Type (Baron, Victa, Merit, Gnome Type)

This widely used group of cultivars has very high seed yield potential and can generally produce medium-good quality turf in the absence of stripe smut. These cultivars have medium-low growth, medium-wide leaves, and produce a medium-density turf. The BVMG type can become very stemmy in turf plots due to seed head formation in late spring. These cultivars have moderate resistance to leaf spot; however, all BVMG type entries evaluated in long term trials at Rutgers are susceptible to a new race of stripe smut. The entries Dragon and 93 KB1 exhibited moderate resistance to stripe smut in 1999. This group of cultivars generally has poor winter color and longer winter dormancy and can also suffer significant billbug damage. Recovery from summer stress in turf trails ranged from poor to moderate.

Shamrock Type

Cultivars within this type exhibit characteristics similar to the cultivar Shamrock. They have moderate winter color, resistance to leaf spot, and susceptibility to billbug feeding. This type has the potential for high seed yield production. Compared to the BVMG type, shamrock type cultivars have less seed head formation in turf plots and also show good tolerance to stripe smut, although cultivars SR 2100 and A88-744 are susceptible to this disease. Tolerance of summer stress is variable within the shamrock type.

Common Type (formerly Midwest Ecotypes)

These cultivars and selections are frequently referred to as "common" Kentucky bluegrasses and are characterized by an erect growth habit and narrow leaf blades. The common type should not be confused with the seed label term "variety-not-stated" or VNS; unfortunately the

term common is often used to inaccurately describe VNS seed. Common type Kentucky bluegrasses are typically used for soil conservation purposes, permanent pastures, and low maintenance utility turf. Many of these cultivars were selections of naturalized ecotypes found in old pastures of the midwestern United States. These cultivars produce seed early and economically, exhibit good stress tolerance, and often survive summer drought in a dormant condition.

Common type cultivars are highly susceptible to leaf spot and may be extensively damaged by this disease during the cool, cloudy, humid conditions of winter and spring. Poor turf quality and excessive purple coloration is typical of some of these cultivars during winter. These cultivars are best adapted to high cutting heights in regions with cool nights, bright sun, and low humidity. Common type cultivars are suited for low maintenance utility turf areas where soil stabilization and conservation are needed. The two best performing common types are A91-703 and A91-702, which also have improved leaf spot resistance.

Cheri Type

These cultivars possess growth and performance characteristics similar to the cultivar Cheri. They will produce a turf of medium-low growth and medium density with medium-wide leaves. These cultivars have moderate resistance to leaf spot, good resistance to stripe smut, and are moderately susceptible to dollar spot.

Seed yield potential of these cultivars is relatively high. This type shows less seed head formation in turf plots than the BVMG type. Moderate winter dormancy is exhibited.

Other Turf Types

This group of cultivars and selections possess characteristics intermediate between two or more of the previously discussed groups. Further study is needed to identify new types of cultivars or recognize the characteristics of a cultivar that are common to a known group.

ACKNOWLEDGMENTS

New Jersey Agricultural Experiment Station Publication No. E-12264-2-00. This work was conducted as part of NJAES Project No. 12264, supported by the New Jersey Agricultural Experiment Station, State, and Hatch Act funds, Rutgers' Center for Turfgrass Science, other grants, and gifts. Additional support was received from the United States Golf Association - Golf Course Superintendents Association of America Research Fund, the National Turfgrass Evaluation Program, and the New Jersey Turfgrass Association.

REFERENCE

Meyer, W. A., Murphy, J. A., and Smith, D. A. 1997. Response of cool-season turfgrasses to a novel traffic simulator. Page 125 *in* Agronomy Abstracts, American Society of Agronomy, Madison, Wisconsin.

Table 1. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1994 at Adelphia, NJ.

	Cultivar or Selection	-----Turf Quality ¹ -----					1999 Avg.	Winter Appearance ²	Stripe Smut ³	Seed Head ⁴	Wear Tolerance ⁵
		1995-1999 Avg.	1995 Avg.	1996 Avg.	1997 Avg.	1998 Avg.		April 1999	May 1999	May 1999	June 1999
1	Midnight	6.9	7.0	7.9	6.7	6.6	6.4	2.3	9.0	7.3	6.0
2	ZPS-2183	6.7	6.5	7.0	6.3	6.5	7.0	7.3	8.9	6.6	6.6
3	Princeton P-105	6.7	6.5	7.1	6.1	6.6	7.1	2.9	9.0	8.5	7.7
4	Wildwood	6.6	7.1	7.2	5.9	6.1	6.9	2.7	9.0	7.7	6.7
5	SR 2109	6.6	6.2	6.8	6.7	6.5	6.7	4.5	9.0	7.0	7.2
6	Blacksburg	6.4	6.7	7.0	5.1	6.6	6.4	4.0	9.0	8.0	7.0
7	A91-630	6.2	5.6	6.5	6.3	6.2	6.5	6.3	9.0	5.0	5.3
8	C-74	6.2	6.6	6.4	5.9	5.8	6.4	4.0	8.7	6.0	5.3
9	NuStar	6.2	5.1	6.6	6.2	6.0	7.2	3.0	9.0	7.7	5.7
10	Unique	6.2	6.8	6.3	6.0	5.7	6.1	3.8	9.0	5.2	5.7
11	America	6.2	7.0	6.0	5.8	5.9	6.2	4.0	8.3	5.0	5.7
12	Apex	6.1	6.1	6.7	5.4	5.9	6.5	2.0	9.0	5.7	7.3
13	A83-876	6.1	6.6	6.0	5.6	5.8	6.3	5.0	9.0	6.7	6.7
14	Aspen	6.0	5.6	6.3	6.2	5.4	6.3	5.7	9.0	5.0	5.0
15	Princeton 104	6.0	5.4	5.8	6.2	6.1	6.3	6.0	9.0	8.3	8.3
16	A82-2005	5.8	6.5	5.6	5.4	5.9	5.8	4.7	9.0	7.0	7.0
17	Eclipse	5.8	5.7	5.9	5.8	5.7	5.9	5.3	8.7	6.0	6.0
18	Champagne	5.8	5.6	6.1	6.0	5.5	5.7	4.2	8.9	6.0	4.5
19	H86-1019	5.8	6.1	6.0	5.3	5.6	6.0	2.5	8.5	7.5	5.5
20	Ram I	5.8	6.0	6.0	5.8	5.6	5.6	4.0	8.7	5.0	6.0

(Continued)

Table 1 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----						Winter Appearance ² April 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Wear Tolerance ⁵ June 1999
		1995-1999 Avg.	1995 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.				
21	NJ-1190	5.8	6.7	5.5	4.9	6.2	5.7	5.0	9.0	6.5	6.5
22	PST-697	5.7	6.2	5.9	6.0	5.5	5.1	4.0	8.7	5.0	4.7
23	Rita	5.7	6.1	5.2	5.6	5.5	5.8	4.8	9.0	5.0	5.5
24	Julia	5.7	5.5	6.5	5.3	5.4	5.6	4.3	8.3	2.7	6.0
25	Washington	5.6	5.0	5.7	5.7	5.8	6.0	4.3	9.0	9.0	6.0
26	Glade	5.6	5.4	6.1	5.7	5.4	5.3	3.7	9.0	8.3	5.0
27	Shamrock	5.6	5.5	5.1	5.9	6.0	5.5	4.7	9.0	5.0	6.0
28	Limousine	5.5	6.3	5.5	5.0	5.3	5.3	4.3	8.0	7.3	6.7
29	Preakness	5.4	5.7	5.5	5.6	4.6	5.6	4.0	8.2	5.3	6.1
30	LTP-620	5.4	5.4	5.7	5.7	5.2	5.0	4.5	8.5	6.3	4.2
31	NuBlue	5.4	5.2	5.5	5.7	5.4	5.3	4.7	8.7	4.7	5.0
32	Fylking	5.3	4.7	6.3	5.6	4.9	5.2	4.0	8.0	5.7	6.0
33	Cheri	5.2	5.4	4.8	5.6	4.9	5.3	3.7	8.7	4.3	7.0
34	Trenton	5.1	5.1	5.5	5.5	5.0	4.5	5.0	7.7	2.3	4.7
35	Adelphi	5.1	5.5	5.3	4.6	5.1	4.9	4.7	5.7	4.7	5.3
36	Amazon	5.0	4.8	4.8	5.0	5.1	5.3	4.7	9.0	4.0	6.7
37	Belmont	5.0	5.0	5.0	4.8	4.8	5.2	4.3	9.0	3.0	6.0
38	Sydsport	4.9	5.2	4.6	5.0	4.9	4.9	3.3	9.0	4.3	7.0
39	Penn Pro	4.9	4.6	4.6	5.4	5.2	4.8	4.0	9.0	7.0	4.3
40	Freedom	4.9	5.5	5.0	5.0	5.0	4.0	6.0	8.7	2.0	4.0

Table 1 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----						Winter Appearance ² April 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Wear Tolerance ⁵ June 1999
		1995- 1999 Avg.	1995 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.				
41	Rugby	4.8	5.3	5.2	4.7	4.8	4.2	6.0	8.3	2.0	3.3
42	1757	4.8	5.1	4.9	4.8	4.9	4.2	4.7	7.7	3.3	4.7
43	Classic	4.8	5.4	5.0	4.7	4.4	4.4	4.3	8.3	2.7	5.0
44	Liberty	4.8	5.1	4.8	5.0	4.8	4.3	4.0	8.0	4.0	6.0
45	Livingston	4.8	4.6	4.9	5.0	4.8	4.6	6.0	9.0	6.3	4.3
46	Suffolk	4.7	5.0	5.4	4.2	4.1	4.8	4.0	8.7	4.0	5.3
47	Georgetown	4.6	5.1	4.5	4.6	4.4	4.5	5.0	9.0	2.0	4.0
48	A34	4.6	4.5	4.4	4.7	4.8	4.7	4.3	8.7	6.7	6.7
49	Kelly	4.4	4.9	5.1	5.1	4.7	2.2	3.3	1.7	6.3	1.7
50	Nimbus	4.4	4.6	4.1	4.5	4.8	4.0	4.7	5.7	6.3	4.7
51	Plush	4.3	3.9	4.0	4.3	4.4	4.7	3.7	8.3	5.7	4.7
52	PST-BM3	4.2	4.4	5.0	4.5	4.1	3.0	6.0	8.0	8.0	3.0
53	Baron	4.1	4.6	5.0	4.6	4.1	2.3	2.3	1.7	4.7	2.0
54	Merit	4.0	4.7	4.5	4.4	4.2	2.0	2.3	1.7	6.0	1.3
55	Huntsville	3.9	3.5	4.0	3.8	4.2	3.8	4.0	6.7	4.3	5.3
56	Canterbury	3.9	5.0	3.9	3.6	3.7	3.2	2.0	7.7	3.0	3.7
57	Bel 21	3.7	3.7	4.0	4.3	3.6	3.2	3.7	6.0	6.3	3.3
58	RSP	3.7	3.8	3.7	3.3	4.1	3.7	3.3	8.7	6.7	4.3
59	S-21	3.0	2.5	3.2	3.1	3.3	2.7	3.7	7.3	6.0	4.0

Table 1 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----						Winter Appearance ²	Stripe Smut ³	Seed Head ⁴	Wear Tolerance ⁵
	1995-1999 Avg.	1995 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.	April 1999	May 1999	May 1999	June 1999
LSD at 5% =	0.6	0.7	0.8	0.9	0.7	1.0	1.3	1.9	1.5	1.5

¹9 = best turf quality

²9 = best winter appearance; winter appearance is based on winter color, activeness, and dark green color only

³9 = least stripe smut

⁴9 = least seed head production

⁵9 = best turf quality with wear applied; a total of 20 passes with a novel traffic simulator (Meyer et al., 1997) was applied between June 21 and July 18, 1999

Table 2. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1994 at Adelphia, NJ.

Cultivar or Selection	-----Turf Quality ¹ -----						Winter Appearance ²	Stripe Smut ³	Seed Head ⁴	Wear Tolerance ⁵
	1995-1999 Avg.	1995 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.	April 1999	May 1999	May 1999	June 1999
1 Moonlight	6.5	7.4	7.7	6.6	6.6	4.4	4.7	7.4	5.5	4.4
2 Midnight	6.1	6.1	7.7	6.2	6.7	3.4	5.0	7.7	5.0	3.3
3 Blacksburg	6.0	5.8	7.0	5.6	6.3	5.3	5.3	8.7	6.3	5.0
4 Unique	5.6	6.3	5.9	5.3	5.5	5.1	4.3	8.3	6.7	5.0
5 America	5.3	6.1	6.0	5.0	5.3	4.2	4.3	7.3	5.0	4.7
6 A118	5.2	6.0	5.7	5.1	5.0	4.5	4.9	7.5	5.2	4.3
7 Baron	4.5	4.2	4.8	4.1	3.8	5.5	5.0	7.7	6.0	6.3
LSD at 5% =	0.6	0.7	0.7	0.7	0.7	2.2	1.5	3.4	2.9	2.4

¹9 = best turf quality

²9 = best winter appearance; winter appearance is based on winter color, activeness, and dark green color only

³9 = least stripe smut

⁴9 = least seed head production

⁵9 = best turf quality with wear applied; a total of 20 passes with a novel traffic simulator (Meyer et al., 1997) was applied between June 21 and July 18, 1999

Table 3. Performance of Kentucky bluegrass cultivars and selections in a trial seeded in September 1995 at North Brunswick, NJ. (Includes the 1995 National Kentucky Bluegrass Medium-High Maintenance Test-1-NTEP.)

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Summer Patch ³ Aug. 1999	Billbug Damage ⁴ Aug. 1999	Green Turf (%) Sept. 1999	
	1996- 1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
COMPACT TYPE										
1	Princeton P-105	6.5	5.6	6.0	7.2	7.3	2.0	8.7	6.3	68.3
2	Moonlight	6.4	6.2	7.0	5.7	6.6	4.0	6.0	7.7	42.7
3	Blackstone	6.2	5.7	6.6	5.4	7.0	7.7	5.0	9.0	58.3
4	Blacksburg	5.8	4.9	6.3	5.2	6.6	5.0	4.7	7.3	40.0
5	Apex	5.7	5.2	5.7	4.9	7.2	2.3	8.7	8.0	83.3
6	Platini	5.4	5.1	5.2	5.5	5.8	2.7	8.3	6.0	58.3
7	Indigo	5.4	5.5	6.2	4.3	5.7	6.7	4.7	7.0	28.7
8	ZPS-2183	5.3	4.3	5.9	5.2	5.9	6.0	4.3	9.0	42.7
9	Glade	5.0	5.3	4.7	5.4	4.7	3.0	6.7	6.7	55.0
10	H94-461	4.9	4.8	5.3	5.0	4.6	5.0	5.7	5.7	31.0
11	Alpine	4.9	4.7	5.2	4.6	5.0	1.0	5.0	4.5	20.0
12	Wildwood	4.6	4.8	4.9	4.3	4.6	5.0	4.0	5.5	33.7
13	SR 2109	4.5	5.2	4.7	4.2	3.8	5.7	3.0	7.0	8.7
14	H94-451	4.4	4.9	4.6	4.3	3.7	2.7	5.3	5.0	21.3
15	A118	4.2	5.0	4.3	3.4	4.2	2.3	4.3	6.5	21.7
16	A93-372	4.1	4.8	4.3	3.8	3.7	3.3	3.7	6.0	11.0
17	MED-1580	3.7	4.2	3.9	3.6	3.2	2.7	3.3	7.7	7.7
18	Ram I	3.6	4.7	3.6	3.3	2.8	3.3	1.5	7.5	2.3
19	NJ-1190	3.5	3.8	3.5	3.6	3.1	4.7	2.3	9.0	11.7

(Continued)

Table 3 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Summer Patch ³ Aug. 1999	Billbug Damage ⁴ Aug. 1999	Green Turf (%) Sept. 1999	
	1996- 1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
MIDNIGHT TYPE										
1	Midnight	6.3	6.4	6.2	6.1	6.5	3.3	8.0	7.3	71.7
2	Liberator	6.1	5.1	6.6	6.1	6.6	3.3	7.3	6.3	39.7
3	Odyssey	6.1	4.7	6.5	6.2	6.8	3.7	8.0	7.7	58.3
4	NuGlade	5.6	4.4	6.0	5.6	6.4	3.3	8.0	7.3	72.7
5	Rugby II	5.6	4.9	6.4	5.2	5.7	4.3	7.3	7.0	40.0
6	Award	5.5	4.2	5.8	5.8	6.0	3.7	8.3	5.7	41.0
7	Impact	5.3	4.6	6.0	4.9	5.9	4.3	8.3	6.7	56.7
8	Total Eclipse	5.3	5.1	5.2	4.9	5.8	5.0	7.7	5.7	42.0
9	Quantum Leap	5.0	4.7	5.6	4.4	5.3	4.0	6.0	5.5	23.3
10	Arcadia	5.0	4.4	6.0	4.3	5.1	3.7	4.7	4.5	19.3
11	Absolute	4.3	5.1	4.9	3.8	3.3	5.0	5.0	8.5	19.0
AMERICA TYPE										
1	H94-294	5.5	6.5	6.0	4.2	5.3	3.7	5.3	5.7	42.3
2	Apollo	5.4	5.0	6.3	4.9	5.5	2.0	7.7	5.3	55.7
3	Brilliant	5.4	4.6	6.1	5.4	5.5	2.3	8.3	6.0	52.0
4	America	5.4	5.5	5.9	5.1	5.0	3.0	5.7	7.5	56.3
5	Unique	5.2	5.4	5.8	4.5	5.2	3.3	8.0	7.0	62.3

Table 3 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Summer Patch ³ Aug. 1999	Billbug Damage ⁴ Aug. 1999	Green Turf (%) Sept. 1999	
	1996- 1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
AMERICA TYPE (continued)										
6	Showcase	5.2	4.5	5.8	5.0	5.5	2.7	8.0	7.3	72.0
7	H94-224	4.3	5.0	4.8	3.7	3.6	2.0	4.5	4.0	12.3
8	H94-728	4.2	4.7	4.4	3.7	4.0	3.3	5.0	5.5	30.0
JULIA TYPE										
1	A93-418	5.8	5.9	5.6	5.3	6.3	4.0	8.3	6.7	68.3
2	A90-924	5.6	6.1	5.5	5.0	6.0	3.3	7.9	5.4	60.5
3	Julia	5.1	5.9	4.5	4.1	5.6	3.0	7.0	5.0	43.3
4	ZPS-309	4.7	4.9	4.5	4.3	4.9	4.7	7.3	6.3	61.7
5	Caliber	4.4	4.5	4.7	4.1	4.3	4.3	7.7	5.7	37.7
CELA TYPE										
1	Jefferson	5.9	5.2	6.1	5.6	6.6	3.0	7.0	7.3	48.3
2	Eclipse	5.6	5.2	6.1	5.0	6.0	5.3	7.7	6.0	29.0
3	Challenger	4.1	5.2	4.7	3.3	3.0	5.3	4.7	5.3	10.7

Table 3 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Summer Patch ³ Aug. 1999	Billbug Damage ⁴ Aug. 1999	Green Turf (%) Sept. 1999	
	1996- 1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
AGGRESSIVE TYPE										
1	North Star	5.8	5.6	5.6	5.3	6.9	1.7	8.0	8.3	70.0
2	Mystic	5.6	4.9	5.9	4.9	6.8	8.0	6.0	9.0	74.3
3	Limousine	5.5	5.4	5.2	4.8	6.3	2.0	5.0	9.0	36.0
4	Princeton 104	5.4	5.4	4.7	5.9	5.4	5.7	6.3	4.0	19.7
5	A-34	4.6	4.5	4.1	4.6	5.3	2.7	7.3	4.7	25.0
6	Touchdown	3.7	4.1	4.1	3.4	3.1	4.3	4.7	3.3	4.0
MID-ATLANTIC TYPE										
1	ZPS-204	5.5	6.0	5.5	4.9	5.4	4.0	5.7	7.3	74.3
2	Monopoly	5.4	4.3	5.4	5.7	6.2	3.7	8.7	7.7	76.7
3	SR 2000	5.0	6.3	5.7	4.4	3.7	5.0	6.7	7.0	21.3
4	A82-1107	5.0	5.5	5.3	4.7	4.7	5.3	5.3	4.3	39.0
5	Eagleton	4.8	4.8	5.4	3.8	5.4	4.7	4.3	6.3	24.0
6	Livingston	4.7	5.0	5.1	4.3	4.6	6.0	3.3	7.0	15.7
7	Bel-21	4.7	3.9	4.8	4.3	5.8	2.0	6.7	7.3	60.0
8	Plush	4.4	4.0	5.0	4.3	4.1	5.0	3.0	8.0	15.0
9	Preakness	4.3	4.0	4.5	3.3	5.5	5.0	7.0	4.0	31.3
10	Muddy Pk	4.1	4.0	4.1	3.7	4.7	3.7	5.0	8.3	58.3

(Continued)

Table 3 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Summer Patch ³ Aug. 1999	Billbug Damage ⁴ Aug. 1999	Green Turf (%) Sept. 1999	
	1996- 1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
SHAMROCK TYPE										
1	A93-405	5.0	5.3	5.3	4.7	4.8	5.7	5.3	7.3	43.0
2	SR 2100	4.9	5.1	5.1	4.9	4.7	3.0	8.0	5.0	21.7
3	Champagne	4.9	5.0	5.4	4.7	4.5	5.7	5.7	3.7	35.0
4	A88-744	4.8	5.0	5.3	3.7	5.0	3.7	6.0	6.0	33.0
5	A91-625	4.7	4.9	4.8	4.4	4.6	5.7	5.7	5.5	28.3
6	A93-427	4.7	4.8	5.0	4.1	4.6	6.0	5.0	5.0	30.7
7	NJ-GD	4.4	5.3	4.4	4.0	4.1	5.3	3.3	5.7	24.7
8	Shamrock	4.3	4.8	4.5	4.1	3.8	5.7	3.3	5.0	13.7
9	LTP-620	3.4	3.9	3.8	3.1	2.6	5.7	6.0	4.0	7.3
10	A91-624	2.6	4.6	2.6	1.7	1.2	2.7	1.0	1.0	1.5
11	Parkland	2.5	3.2	2.9	2.6	1.4	5.0	2.0	.	4.7
BELLEVUE TYPE										
1	Suffolk	4.8	5.0	4.9	4.4	5.1	7.3	5.0	6.3	40.0
2	Georgetown	4.8	5.3	4.9	4.5	4.3	6.0	4.3	5.0	23.3
3	Classic	4.7	4.9	4.8	4.5	4.6	6.3	6.3	5.0	42.7
4	Haga	4.5	4.8	4.5	3.9	4.9	5.3	6.3	7.3	34.0

Table 3 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Summer Patch ³ Aug. 1999	Billbug Damage ⁴ Aug. 1999	Green Turf (%) Sept. 1999
		1996- 1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.				
OTHER TYPE										
1	Pick 8-15-94W	6.0	5.1	6.5	5.9	6.7	3.3	7.0	9.0	71.0
2	NuStar	5.2	5.0	5.3	4.9	5.7	3.0	4.7	7.7	46.7
3	BAR VB 3115B	5.1	4.5	5.0	4.9	6.0	5.3	5.5	6.5	27.3
4	BAR VB 233	5.0	4.7	5.1	4.6	5.5	5.0	8.5	5.0	35.3
5	BAR VB 5649	5.0	4.5	4.9	4.6	6.0	5.0	8.3	5.7	45.0
6	Baronie	4.9	4.8	5.4	4.8	4.6	5.3	7.3	5.3	44.3
7	PST-P46	4.6	4.9	4.6	4.5	4.2	3.7	4.0	8.5	27.7
8	Ba 81-227	4.4	4.3	4.5	4.2	4.8	3.3	6.7	3.0	21.7
9	Bronco	4.4	4.2	4.6	4.2	4.4	3.0	6.0	6.7	37.7
10	Ba 81-270	4.4	4.6	3.9	4.0	4.9	4.7	6.0	5.0	19.3
11	Serene	4.3	3.8	4.3	4.3	4.9	3.3	5.0	5.0	23.0
12	HV-242	4.3	4.4	4.2	3.8	4.7	3.7	4.0	5.7	14.3
13	Conni	4.2	4.5	3.5	4.3	4.6	4.0	6.3	7.0	16.0
14	Chicago	4.2	4.6	4.9	3.7	3.6	4.3	4.0	8.5	8.0
15	BAR VB 6820	4.2	4.1	4.9	4.4	3.4	2.0	3.0	7.0	5.3
16	Allure	4.2	4.4	3.6	4.0	4.6	3.7	5.7	4.7	20.7
17	Rambo	4.1	4.0	4.6	3.8	4.2	4.3	6.0	4.0	14.7
18	PST-697	4.1	6.2	3.8	3.0	3.6	5.0	1.5	4.5	9.7
19	Explorer	4.1	4.1	4.5	4.0	3.9	3.3	4.3	7.0	10.7
20	Ascot	4.0	5.2	5.1	3.0	2.8	1.7	3.7	9.0	20.0

(Continued)

Table 3 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Summer Patch ³ Aug. 1999	Billbug Damage ⁴ Aug. 1999	Green Turf (%) Sept. 1999	
	1996- 1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
OTHER TYPE (continued)										
21	Coventry	3.9	4.1	3.5	3.9	4.1	3.7	6.5	4.0	14.3
22	Seabring	3.9	4.6	4.5	3.2	3.2	2.3	3.0	8.0	8.3
23	Chateau	3.8	4.3	3.7	3.7	3.7	3.3	5.0	2.7	7.3
24	NJ-54	3.7	2.8	4.7	3.6	3.7	5.3	2.5	9.0	20.3
25	ASP200	3.7	4.4	4.0	3.7	2.7	5.3	5.5	2.5	8.0
26	LKB-95	3.6	3.7	4.0	3.5	3.2	4.3	4.3	5.0	10.7
27	Pick-855	3.5	3.8	4.0	3.1	3.2	4.0	4.7	8.3	18.0
28	Bartitia	3.5	5.1	3.7	2.8	2.5	3.5	1.0	9.0	8.0
29	SR 2205	3.5	3.7	4.0	3.2	3.1	2.0	2.3	6.3	11.0
30	Nimbus	3.5	3.9	3.7	3.5	2.9	7.0	3.5	7.0	5.7
31	Sidekick	3.5	3.3	4.4	3.6	2.6	5.7	6.0	4.5	23.3
32	PST-BO-165	3.4	3.4	3.7	3.3	3.2	3.3	3.0	4.0	8.3
33	BAR VB 16015	3.3	3.5	4.1	3.0	2.5	4.3	3.7	6.0	6.3
34	D3 WN 763	3.2	2.3	4.0	3.1	3.3	6.0	2.3	9.0	11.0
35	J-1555	3.1	3.1	4.2	2.5	2.6	3.5	2.0	9.0	7.3
36	Misty	3.0	3.8	2.8	3.1	2.1	5.0	2.0	7.0	5.0
37	Compact	2.8	3.8	2.7	2.7	2.2	3.7	6.5	5.0	6.3
38	WXS-955-2	2.8	3.0	3.2	2.9	2.0	4.7	1.5	.	5.7
39	Pepaya	2.4	3.1	3.0	2.6	1.1	1.0	1.0	.	1.3
40	Lipoa	2.3	2.8	3.1	1.9	1.2	2.7	2.0	9.0	3.7

(Continued)

Table 3 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Summer Patch ³ Aug. 1999	Billbug Damage ⁴ Aug. 1999	Green Turf (%) Sept. 1999
		1996- 1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.				
OTHER TYPE (continued)										
41	Cardiff	2.2	2.9	2.8	2.0	1.3	4.5	.	.	2.0
42	Baruzo	2.2	2.9	3.0	1.8	1.2	1.5	1.0	.	3.3
43	Sodnet	2.2	1.8	2.9	2.3	1.6	3.7	2.5	7.0	3.7
BVMG TYPE										
1	Ba 81-058	5.1	5.2	5.8	4.2	5.1	8.0	7.3	4.0	42.7
2	Ba 70-060	4.3	4.7	4.9	3.8	3.7	3.3	5.0	8.0	28.3
3	Dragon	4.3	4.5	5.2	3.8	3.6	6.3	7.0	6.0	41.7
4	Raven	4.2	4.3	5.3	4.2	3.2	3.3	6.3	6.7	20.0
5	Crest	4.2	4.6	4.9	4.1	3.1	3.0	4.3	6.3	16.7
6	Ba 75-490	4.1	3.0	4.4	4.3	4.8	5.3	6.7	6.0	45.0
7	Ba 77-702	4.1	4.1	4.7	4.5	3.1	2.7	6.0	3.0	17.3
8	Ba 81-220	4.1	4.3	5.0	3.9	3.1	4.0	6.0	3.7	22.0
9	Abbey	4.1	4.5	4.9	4.0	2.9	4.0	5.3	5.7	18.3
10	Marquis	4.1	4.4	4.8	4.2	2.9	2.3	6.0	6.0	25.7
11	Goldrush	4.0	4.6	4.9	3.5	3.0	3.0	4.7	6.7	29.0
12	Fortuna	4.0	4.3	5.0	3.3	3.2	3.3	4.0	7.0	33.3
13	Ba 73-373	3.9	4.6	4.7	3.7	2.7	4.0	6.0	5.0	17.7
14	Baron	3.9	4.1	5.1	4.0	2.5	2.0	7.0	6.0	12.3
15	Ba 75-173	3.7	4.6	4.5	3.6	2.2	2.7	5.3	4.5	8.3

(Continued)

Table 3 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Summer Patch ³ Aug. 1999	Billbug Damage ⁴ Aug. 1999	Green Turf (%) Sept. 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
BVMG TYPE (continued)										
16	Nassau	3.6	5.3	3.7	2.8	2.6	6.7	2.3	5.0	8.7
17	BlueChip	3.5	3.6	4.5	3.6	2.4	3.7	3.7	9.0	9.3
18	Ba 75-163	2.9	3.7	3.3	2.5	2.0	2.5	3.0	8.0	17.7
19	Ba 76-197	2.7	3.8	2.7	2.5	1.9	2.5	3.0	8.5	4.7
20	Ba 81-113	2.7	3.6	3.3	2.2	1.5	3.3	3.0	9.0	6.0
COMMON TYPE										
1	A91-702	4.1	4.6	5.1	3.4	3.5	7.7	3.0	4.5	11.3
2	A91-703	4.0	4.5	4.8	3.2	3.4	7.3	2.0	9.0	15.0
3	EXP# 1589	2.4	2.3	2.1	2.6	2.7	6.7	2.3	8.0	6.7
4	Kenblue	2.4	2.1	2.5	2.5	2.5	5.3	4.5	5.0	9.0
LSD at 5% =		0.8	0.9	0.9	1.0	1.4	1.4	2.7	3.0	30.2

¹9 = best turf quality²9 = best winter color³9 = least summer patch⁴9 = least billbug damage

Table 4. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1995 at Adelphia, NJ. (Includes the 1995 National Kentucky Bluegrass Medium-High Maintenance Test-2-NTEP.)

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
COMPACT TYPE										
1	SR 2109	6.3	6.2	6.2	6.4	6.5	5.3	9.0	7.7	9.0
2	Moonlight	6.3	6.8	6.3	6.1	5.9	4.0	8.7	7.3	9.0
3	Blackstone	6.1	6.8	5.3	5.7	6.7	5.7	9.0	7.0	8.7
4	Blacksburg	6.1	6.0	5.9	5.9	6.5	4.0	6.7	7.0	7.7
5	Princeton P-105	5.9	6.0	5.7	5.8	6.1	1.3	8.3	8.0	8.7
6	ZPS-2183	5.8	5.4	6.2	5.7	5.9	6.0	8.7	7.3	9.0
7	H94-461	5.8	6.5	6.1	5.2	5.4	3.3	9.0	6.3	9.0
8	AG 508	5.7	6.2	5.4	5.6	5.5	2.3	9.0	7.0	8.0
9	H94-451	5.7	6.4	5.4	5.4	5.4	2.7	9.0	5.0	7.7
10	Alpine	5.6	5.9	5.6	5.6	5.4	1.7	5.7	7.0	9.0
11	Wildwood	5.6	6.2	5.4	5.3	5.6	4.0	9.0	7.7	8.7
12	NJ-1190	5.6	6.0	4.7	5.8	5.9	5.7	8.0	7.7	5.7
13	H92-109	5.6	6.1	4.7	6.1	5.6	4.0	9.0	8.3	3.7
14	Indigo	5.6	6.0	5.9	5.7	5.0	4.4	6.7	7.5	7.3
15	Platini	5.1	5.1	4.6	5.4	5.4	5.0	8.7	4.3	5.0

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996- 1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
COMPACT TYPE (continued)										
16	Glade	5.0	5.4	4.9	4.5	5.2	3.7	8.7	8.0	4.3
17	Ram I	4.8	3.9	4.7	5.3	5.3	5.0	6.7	6.3	7.0
18	Med-1580	4.6	4.9	4.6	3.9	4.9	2.7	4.7	5.3	6.7
19	Nugget	4.5	4.5	4.1	4.8	4.7	1.3	8.7	6.7	8.3
20	Amazon	4.2	4.1	3.8	4.1	4.7	4.0	9.0	5.0	4.7
MIDNIGHT TYPE										
1	Midnight	6.3	6.5	5.8	6.3	6.6	2.3	8.3	8.7	8.7
2	Total Eclipse	6.2	6.8	6.2	6.1	5.7	2.3	6.3	8.7	8.7
3	Liberator	6.1	6.5	5.7	6.2	6.2	2.7	7.0	8.7	9.0
4	NuGlade	6.0	6.0	6.1	6.0	6.0	2.0	7.0	8.7	8.0
5	Quantum Leap	6.0	6.7	6.5	5.5	5.3	2.7	7.0	8.0	7.3
6	Award	5.9	6.5	5.4	6.1	5.8	1.7	6.7	8.7	8.0
7	Impact	5.9	6.4	6.2	5.6	5.6	2.7	6.7	8.3	8.0
8	Odyssey	5.7	6.2	5.9	5.5	5.1	2.0	6.0	8.0	8.7
9	Arcadia	5.4	6.3	5.9	4.5	5.1	3.7	7.0	8.3	6.7
10	Rugby II	5.4	6.1	5.5	4.9	5.2	2.3	8.7	8.3	8.0
11	Absolute	5.1	6.3	5.6	4.6	3.8	3.0	2.3	7.0	5.7

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
AMERICA TYPE										
1	A95-284	6.3	6.7	6.0	6.2	6.2	5.3	9.0	4.3	8.0
2	Langara	6.1	6.6	6.3	5.7	6.0	5.3	9.0	5.3	7.7
3	C-74	5.6	6.0	5.7	5.4	5.1	4.2	8.7	6.5	6.5
4	H94-296	5.6	6.1	5.7	5.6	5.1	4.0	9.0	2.3	6.7
5	Unique	5.5	5.8	5.5	5.4	5.3	4.0	8.3	5.3	6.3
6	Brilliant	5.5	5.8	5.6	5.4	5.2	4.3	8.3	6.3	8.0
7	America	5.4	5.7	5.1	5.6	5.3	4.3	8.0	5.7	5.7
8	H94-285	5.4	6.0	5.3	5.2	5.1	3.0	9.0	7.0	7.3
9	H94-282	5.4	6.0	5.1	5.2	5.3	4.0	9.0	2.7	6.0
10	Showcase	5.3	5.6	5.1	5.2	5.3	3.7	6.7	6.0	5.7
11	Apollo	5.3	5.7	5.1	5.3	5.0	4.0	7.3	4.7	5.0
JULIA TYPE										
1	A90-287	6.0	6.4	5.6	6.2	5.9	2.5	9.0	6.4	7.9
2	A93-421	5.9	6.2	5.9	6.1	5.4	3.0	9.0	6.3	8.7
3	H92-558	5.9	6.6	5.3	5.9	5.6	2.7	9.0	5.0	7.7
4	A93-417	5.7	6.2	5.6	5.5	5.5	2.7	9.0	6.0	8.0
5	A90-924	5.7	6.1	5.3	5.7	5.5	3.3	9.0	6.0	8.2

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
JULIA TYPE (continued)										
6	A93-453	5.5	6.3	5.0	5.6	5.2	2.0	9.0	5.0	8.3
7	Julia	5.2	5.3	4.9	5.3	5.2	5.0	9.0	4.3	5.0
8	ZPS-309	5.1	5.0	5.1	5.0	5.1	6.3	9.0	1.3	2.3
9	Caliber	4.8	4.3	4.9	5.0	5.0	4.3	7.0	4.0	3.3
CELA TYPE										
1	Jefferson	5.6	5.1	5.2	6.3	5.8	5.7	9.0	8.0	7.7
2	Challenger	5.4	6.1	5.5	4.9	4.9	5.7	6.0	5.0	5.7
3	Eclipse	5.3	5.2	5.8	4.8	5.3	5.7	7.7	6.0	7.7
4	Liberty	5.0	4.9	4.6	5.5	4.8	5.3	7.0	3.0	6.7
BELLEVUE TYPE										
1	Freedom	5.5	5.5	5.1	6.1	5.5	7.0	8.0	3.0	4.0
2	Suffolk	4.9	4.5	4.5	5.4	5.2	6.7	8.3	3.0	5.3
3	Haga	4.9	4.9	4.4	5.2	4.8	4.3	8.3	4.3	5.3
4	Classic	4.8	4.7	4.1	5.4	5.0	7.0	8.3	2.0	4.3

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
AGGRESSIVE TYPE										
1	Princeton 104	5.6	4.8	5.7	6.0	6.0	5.3	9.0	8.3	8.3
2	North Star	5.4	6.1	5.3	4.7	5.3	2.3	9.0	6.7	9.0
3	Touchdown	5.3	4.4	5.2	5.4	5.8	5.5	8.2	7.2	6.7
4	Limousine	4.7	5.1	4.3	4.6	4.8	3.3	4.7	8.0	5.7
MID-ATLANTIC TYPE										
1	Preakness	5.6	5.6	5.2	5.7	5.8	4.5	8.7	8.5	7.2
2	ZPS-204	5.6	6.0	5.6	5.6	5.1	5.3	7.3	7.7	7.0
3	Livingston	5.4	5.0	5.5	5.6	5.6	5.3	8.3	6.0	6.3
4	Eagleton	5.1	4.3	5.2	5.4	5.5	3.5	8.2	6.2	5.5
5	Monopoly	5.0	4.2	4.7	5.7	5.2	4.7	9.0	6.3	4.3
6	Plush	4.9	4.3	5.1	5.1	4.9	3.7	9.0	6.3	6.0
7	A84-587	4.7	4.1	4.5	4.9	5.1	4.0	8.0	4.0	3.3
8	SR 2000	4.3	5.0	4.4	3.6	4.1	4.7	7.7	5.0	8.3
9	Bel 21	4.1	3.9	4.2	4.1	4.2	3.0	3.7	6.7	3.3
10	RSP	4.0	3.7	3.8	4.2	4.4	5.7	9.0	8.3	2.0
11	Muddy Pk	3.9	3.4	3.9	4.0	4.2	5.0	8.5	7.5	2.0

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
OTHER TYPE										
1	A93-372	5.6	6.4	5.4	5.3	5.3	2.7	9.0	5.3	7.7
2	Rita	5.6	6.3	5.6	5.4	5.1	5.7	8.7	6.0	8.2
3	Pick 8-15-94W	5.6	6.0	5.3	5.4	5.6	4.7	9.0	5.7	7.7
4	H90-710 A84-605	5.6	5.6	5.5	5.5	5.7	5.7	9.0	7.0	7.7
5	BAR VB 6820	5.6	4.7	5.5	6.0	5.9	2.3	9.0	6.0	6.3
6	93KB 5	5.5	6.1	5.3	5.3	5.5	3.0	6.7	6.3	8.0
7	PST-697	5.5	6.6	5.2	5.3	4.9	5.7	9.0	6.0	7.3
8	PST-P46	5.5	6.3	5.2	4.9	5.6	4.0	7.7	7.3	8.7
9	BA 81-058	5.4	5.6	5.6	5.6	4.9	5.3	8.0	5.0	7.3
10	Bartitia	5.3	5.3	5.7	4.8	5.4	5.0	9.0	6.7	8.3
11	Conni	5.3	5.3	4.6	5.7	5.5	5.0	8.0	7.0	7.7
12	Ascot	5.3	5.3	5.3	5.3	5.2	5.0	6.7	4.0	8.0
13	Chateau	5.2	5.1	4.8	5.6	5.4	4.7	9.0	4.3	5.7
14	Pick 247	5.2	5.2	5.3	5.3	5.1	3.7	9.0	5.0	6.7
15	BAR VB 5649	5.1	5.2	4.4	5.7	5.2	5.0	9.0	4.7	3.3
16	Seabring	5.1	5.5	4.9	5.1	5.0	2.7	7.0	4.0	7.7
17	Cardiff	5.1	5.1	5.2	5.5	4.6	5.3	8.0	4.3	5.7
18	BA 81-270	5.1	5.0	4.6	5.3	5.4	3.3	8.7	4.7	6.0
19	Rambo	5.0	5.0	4.7	5.1	5.3	4.3	7.3	7.0	5.0
20	Misty	5.0	4.9	4.9	4.8	5.6	6.0	9.0	5.0	4.7

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
OTHER TYPE (continued)										
21	Washington	5.0	4.2	5.4	5.0	5.3	4.5	8.9	7.7	6.7
22	Allure	5.0	5.2	5.1	4.9	4.7	4.3	8.0	5.3	4.3
23	NuStar	5.0	4.7	4.9	5.1	5.3	2.7	8.3	7.3	8.0
24	SR 2205	5.0	4.8	5.0	4.7	5.4	3.3	9.0	7.3	7.3
25	BAR VB 233	5.0	4.8	4.9	5.0	5.0	5.3	8.0	3.7	4.0
26	Pick 151	5.0	4.2	5.1	5.0	5.4	5.3	9.0	7.3	6.7
27	Explorer	4.9	5.1	5.0	5.1	4.6	3.7	5.3	8.3	5.3
28	Fylking	4.9	4.8	5.2	4.9	4.8	3.7	4.3	7.0	5.3
29	LKB-95	4.9	4.3	4.5	5.5	5.2	4.7	9.0	6.3	6.3
30	Chicago	4.9	4.8	4.7	5.1	4.9	4.3	6.7	6.3	4.7
31	BAR VB 3115B	4.9	5.1	4.9	4.8	4.7	4.3	6.3	9.0	6.7
32	Bronco	4.9	4.5	5.1	4.9	4.9	3.7	9.0	7.0	7.0
33	AG 496	4.8	4.5	5.4	5.0	4.2	3.3	5.7	6.0	3.3
34	Coventry	4.8	4.9	4.9	4.5	4.8	4.0	8.3	4.3	5.3
35	Baronie	4.7	4.4	4.7	5.0	4.8	7.0	8.3	2.3	5.3
36	Pick 855	4.7	4.4	4.3	4.9	5.2	5.0	7.3	6.3	4.3
37	D3WN 763	4.7	3.5	5.3	5.2	4.8	2.0	8.3	5.0	5.0
38	BAR VB 16015	4.7	5.1	4.5	4.6	4.4	4.0	3.7	2.7	5.3
39	Pick 3	4.6	4.3	4.6	4.6	5.0	3.0	7.7	5.7	5.3
40	PST-B9-196	4.6	4.5	4.5	4.5	5.0	3.7	9.0	5.0	7.7

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
OTHER TYPE (continued)										
41	Pick 4	4.6	4.2	4.9	4.5	4.8	4.0	8.3	6.0	5.3
42	Serene	4.6	4.6	4.1	4.7	4.9	4.7	7.0	5.0	6.7
43	PST-BO-165	4.5	4.5	4.0	4.6	5.1	4.0	8.0	3.3	5.7
44	HV 242	4.5	4.8	3.8	4.4	4.9	5.3	6.0	5.0	5.0
45	Nassau	4.5	4.2	4.2	5.1	4.3	5.3	6.7	3.3	4.3
46	Sodnet	4.4	4.5	4.2	4.3	4.6	1.3	9.0	3.0	7.0
47	Canterbury	4.4	4.3	4.2	4.8	4.4	6.0	5.7	2.5	4.0
48	BA 81-227	4.3	3.6	4.5	4.2	5.0	5.0	8.7	4.3	6.3
49	NJ-54	4.3	3.0	4.6	4.7	5.0	3.7	6.7	3.3	5.7
50	BA 75-103	4.3	4.7	3.9	4.2	4.4	3.7	6.0	3.7	5.7
51	PTE	4.3	4.6	3.6	4.6	4.3	5.3	7.3	2.0	5.0
52	Wx5 955-2	4.3	3.6	4.6	4.2	4.6	4.0	4.3	4.7	3.7
53	Pepaya	4.3	4.2	3.8	4.7	4.4	3.0	9.0	3.3	5.7
54	KB-02-04x35	4.2	3.9	4.1	4.0	4.9	3.0	8.7	4.3	5.3
55	KB-02-06Ax23	4.2	3.8	4.5	4.0	4.7	4.0	8.0	4.7	4.3
56	BA 75-490	4.2	3.7	3.8	4.5	4.9	5.0	6.3	5.0	3.3
57	BH 95-199	4.2	3.9	3.7	4.7	4.6	4.3	7.3	3.3	6.7
58	NTT 683	4.2	4.1	3.8	4.6	4.5	1.0	8.3	6.3	8.0
59	Nimbus	4.2	4.6	4.5	3.8	3.8	7.0	4.0	4.7	6.7
60	ASP200	4.2	6.2	4.3	3.8	2.5	5.0	2.0	2.7	5.3

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
OTHER TYPE (continued)										
61	JC91 L II	4.1	4.6	3.9	3.9	4.0	3.7	9.0	4.7	6.0
62	Pick 2	4.1	3.2	4.3	4.4	4.6	3.3	5.3	4.3	5.3
63	J-1555	4.1	4.2	4.2	3.6	4.2	4.0	5.7	6.7	4.7
64	BA 76-197	4.0	3.0	4.0	4.6	4.6	3.3	7.3	4.7	3.3
65	93KB 4	4.0	4.1	3.8	4.1	4.2	5.0	5.3	2.0	4.3
66	Merion	4.0	3.7	4.0	4.4	4.0	5.0	9.0	6.3	5.3
67	BA 73-373	4.0	4.4	4.4	3.9	3.2	4.0	1.7	2.3	3.3
68	93KB 8	4.0	3.8	3.7	4.0	4.4	4.0	7.0	3.3	6.0
69	KBGJB91-B	3.9	4.3	4.7	3.4	3.2	4.0	2.0	3.0	3.3
70	93KB 9	3.9	4.0	4.1	3.8	3.7	3.5	4.0	3.0	4.0
71	Sidekick	3.9	3.0	3.7	4.6	4.1	5.3	7.3	1.7	4.0
72	93KB 2	3.8	3.2	4.0	3.6	4.6	4.0	7.0	3.0	3.3
73	Baruzo	3.8	4.1	3.0	4.0	3.8	1.3	5.3	3.7	2.7
74	Pick Vat	3.7	3.2	3.6	3.9	4.0	3.7	8.3	5.0	2.0
75	Lipoa	3.6	4.6	3.0	3.6	3.2	4.7	2.7	3.3	4.3
76	Compact	3.3	3.1	3.6	3.2	3.5	5.3	7.0	5.0	2.3

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
SHAMROCK TYPE										
1	NJ-GD	5.6	5.4	5.3	5.6	6.1	4.3	9.0	5.3	6.3
2	A91-625	5.3	5.7	4.9	5.1	5.4	4.3	8.0	6.3	6.0
3	Champagne	5.3	5.2	5.5	4.8	5.5	4.7	8.0	5.7	6.7
4	Shamrock	5.0	5.0	4.8	5.2	5.0	5.0	7.3	4.7	5.7
5	A91-624	4.9	5.3	4.4	4.8	5.1	5.2	9.0	5.3	4.8
6	Parkland	4.2	4.1	4.9	3.9	3.9	4.0	8.7	3.3	2.7
7	SR 2100	3.9	4.5	4.4	3.5	3.4	4.0	2.7	3.0	4.7
8	LTP-620	3.9	3.3	3.7	4.0	4.6	4.0	8.3	4.3	3.3
9	A88-744	3.8	4.4	3.1	3.9	3.8	3.0	3.7	3.3	5.0
CHERI TYPE										
1	A93-238	5.1	5.4	4.7	5.2	4.9	3.7	8.0	5.7	6.0
2	Sydsport	5.0	4.9	4.6	5.0	5.4	3.7	8.0	5.0	7.0
3	A91-391	4.9	5.5	4.3	4.8	5.2	3.3	8.3	4.7	6.7
4	A82-1095	4.9	5.2	4.8	4.6	5.1	3.0	8.3	4.7	5.7
5	Cheri	4.9	5.4	5.0	4.5	4.6	4.3	4.3	3.3	5.0
6	Cobalt	4.5	5.3	3.7	4.3	4.7	2.7	9.0	4.3	6.0
7	A82-1091	4.4	4.8	3.8	4.3	4.9	3.3	8.3	3.7	7.0

(Continued)

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
BVMG TYPE										
1	Dragon	4.6	4.2	4.1	4.9	5.1	5.0	5.3	1.0	4.3
2	Abbey	4.1	4.1	4.4	4.3	3.6	5.0	1.7	1.3	4.0
3	Crest	4.0	5.1	4.7	3.3	2.9	4.3	1.0	2.0	3.7
4	Raven	4.0	4.5	4.7	3.6	3.2	4.0	1.0	2.3	4.3
5	93 KB1	4.0	3.1	3.9	4.5	4.5	4.7	5.7	3.7	5.0
6	BA 70-060	4.0	4.4	5.0	3.8	2.8	4.0	1.0	2.3	3.7
7	Marquis	3.9	4.2	4.7	3.6	3.2	2.3	1.0	2.3	4.3
8	BA 81-220	3.9	4.4	4.7	3.6	3.1	3.7	1.3	3.7	3.3
9	BA 75-173	3.9	4.5	4.4	3.6	3.1	4.7	1.3	2.7	3.3
10	BlueChip	3.9	4.6	4.5	3.3	3.2	4.7	1.7	2.3	4.0
11	Fortuna	3.9	4.5	5.0	3.5	2.5	3.3	1.0	2.0	3.7
12	BA 81-113	3.7	3.8	4.1	4.0	2.9	3.7	1.0	1.3	4.0
13	BA 77-702	3.7	4.0	4.8	3.4	2.7	3.7	1.0	2.7	4.0
14	Goldrush	3.7	4.4	4.3	2.8	3.3	4.3	1.7	3.7	4.3
15	BlueStar	3.7	3.8	3.6	3.8	3.5	3.0	1.3	2.3	3.7
16	Baron	3.5	3.8	4.4	3.3	2.7	3.3	1.0	2.0	3.7

Table 4 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Appearance ² March 1999	Stripe Smut ³ May 1999	Seed Head ⁴ May 1999	Leaf Spot ⁵ May 1999	
	1996-1999 Avg.	1996 Avg.	1997 Avg.	1998 Avg.	1999 Avg.					
COMMON TYPE										
1	A91-703	4.9	4.5	5.2	5.0	4.9	4.5	8.9	4.2	7.0
2	A91-702	4.7	4.1	4.7	5.0	4.9	5.3	9.0	4.7	6.3
3	H86-749	4.0	3.1	4.1	4.3	4.4	5.3	9.0	3.3	2.3
4	Huntsville	3.5	3.1	3.7	3.1	4.1	5.3	7.7	5.7	2.0
5	S-21	3.5	2.9	4.3	3.1	3.6	5.7	8.3	5.0	1.0
6	Exp# 1589	3.2	2.9	3.8	2.7	3.5	4.3	9.0	3.7	1.0
7	South Dakota Cert	3.2	2.5	3.3	3.3	3.8	4.0	8.0	5.3	2.0
8	Kenblue	3.1	2.3	3.6	3.3	3.3	4.0	9.0	8.0	1.0
LSD at 5% =		0.6	0.7	1.0	1.0	0.8	1.5	1.9	1.7	1.8

¹9 = best turf quality²9 = best winter appearance; winter appearance is based on winter color, activeness, and dark green color only³9 = least stripe smut⁴9 = least seed head production⁵9 = least leaf spot

Table 5. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1995 at North Brunswick, NJ. (Includes 1995 National Kentucky Bluegrass Low Maintenance Test-NTEP.)

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Spring Green-up ³ May 1999	Seed Head ⁴ June 1999	Green Cover -----(%)-----	
	1999 Avg.	1996 Avg.	1996- 1997 Avg.	1998 Avg.	1999 Avg.				July 1999	Oct. 1999
1 Bar VB 3115B	5.0	4.8	5.1	3.9	6.2	5.0	8.7	8.0	31.7	20.0
2 SR 2109	5.0	4.9	5.7	4.5	4.8	3.0	3.7	5.7	21.7	15.0
3 LTP-620	4.8	5.1	4.8	3.5	5.9	3.3	6.0	8.0	26.7	51.7
4 H94-451	4.7	5.2	5.5	3.7	4.3	2.7	5.0	6.0	13.3	15.0
5 A90-1129	4.7	4.9	4.9	3.4	5.6	3.3	5.3	8.3	25.0	51.7
6 Champagne	4.6	4.9	4.5	3.5	5.7	4.0	6.0	8.7	26.7	51.7
7 Indigo	4.6	5.5	4.6	3.5	4.6	4.7	5.0	5.0	18.3	7.5
8 A90-1331	4.6	4.7	4.7	3.4	5.5	3.3	6.0	8.0	21.7	46.7
9 A93-405	4.5	4.2	4.7	3.4	5.8	3.3	6.0	7.7	26.7	70.0
10 Preakness	4.5	4.5	5.3	3.8	4.4	3.7	4.0	7.0	20.0	20.7
11 SR 2000	4.5	4.3	4.2	4.3	5.1	3.7	5.0	5.7	18.3	31.7
12 Monopoly	4.4	3.7	4.5	3.9	5.6	3.0	7.0	8.7	25.0	25.0
13 Bartitia	4.4	5.4	4.9	3.9	3.4	3.3	3.3	3.3	20.0	2.0
14 Bel 21	4.4	3.4	4.3	3.9	6.0	1.0	8.0	9.0	20.0	35.0
15 Touchdown	4.4	4.8	4.1	3.2	5.4	3.0	6.7	9.0	30.0	25.0
16 A90-924	4.4	4.7	4.5	3.8	4.5	4.0	4.2	7.2	25.9	19.2
17 Eagleton	4.4	3.9	4.5	4.0	5.0	3.7	5.0	7.7	16.7	40.7
18 A91-624	4.3	4.9	5.0	3.5	4.0	3.5	4.7	9.0	11.0	50.0
19 A90-1099	4.3	4.2	4.9	3.6	4.7	2.7	5.0	8.3	16.7	40.0
20 North Star	4.3	6.1	5.0	3.2	3.0	3.0	2.7	2.0	25.0	8.5

(Continued)

Table 5 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Spring Green-up ³ May 1999	Seed Head ⁴ June 1999	Green Cover -----(%)-----	
		1999 Avg.	1996 Avg.	1996- 1997 Avg.	1998 Avg.	1999 Avg.				July 1999	Oct. 1999
21	H94-224	4.3	4.9	5.6	3.7	3.2	2.0	3.0	4.3	11.7	6.0
22	Blackstone	4.3	5.4	4.9	3.4	3.4	5.3	2.3	6.0	8.3	6.0
23	A93-427	4.3	4.2	4.5	3.3	5.0	3.0	5.3	7.3	26.7	42.5
24	Princeton P-105	4.2	4.2	4.2	3.5	5.1	2.3	8.0	8.7	21.7	50.0
25	Moonlight	4.2	5.3	5.4	3.4	2.8	2.7	1.3	4.7	4.3	20.0
26	Princeton 104	4.2	4.6	4.1	3.3	4.8	3.3	7.3	8.3	21.7	40.0
27	Bar VB 233	4.2	4.5	4.0	3.3	5.0	3.7	5.7	7.3	43.3	24.0
28	A91-625	4.2	4.4	4.6	3.1	4.8	2.0	5.7	8.0	21.7	51.7
29	A91-538	4.2	3.3	5.5	3.9	4.2	1.0	5.7	9.0	30.0	23.3
30	Baruzo	4.2	5.9	4.8	2.8	3.2	1.3	3.0	8.0	35.0	3.5
31	Ram I	4.1	5.0	4.7	3.3	3.6	3.0	3.7	6.3	13.3	5.0
32	D3 WN	4.1	3.5	4.9	3.5	4.6	1.0	6.3	8.0	33.3	60.0
33	A93-372	4.1	4.4	4.7	3.0	4.4	2.3	4.0	7.7	20.0	28.3
34	Plush	4.1	3.8	4.4	3.9	4.3	1.3	5.7	9.0	16.7	27.5
35	A90-1413	4.1	4.7	4.4	3.3	3.9	2.7	4.3	7.0	20.0	35.0
36	Baronie	4.1	4.2	4.4	3.6	4.2	5.7	6.0	7.3	25.0	18.3
37	H86-920	4.1	5.3	4.3	3.0	3.7	4.3	4.7	6.3	26.7	3.5
38	Midnight	4.0	5.6	4.5	3.2	2.8	2.3	2.0	4.3	5.0	30.0
39	Shamrock	4.0	4.5	3.6	3.1	4.8	2.5	4.3	8.0	25.0	50.0
40	BH 95-199	4.0	4.4	4.6	3.7	3.3	4.0	3.3	7.0	21.7	13.3

(Continued)

Table 5 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Spring Green-up ³ May 1999	Seed Head ⁴ June 1999	Green Cover -----(%)-----	
		1999 Avg.	1996 Avg.	1996- 1997 Avg.	1998 Avg.	1999 Avg.				July 1999	Oct. 1999
41	NJ-1190	4.0	4.7	3.9	3.5	3.8	4.3	4.3	8.0	17.7	40.0
42	Bar VB 5649	4.0	4.0	4.1	3.5	4.3	4.0	5.0	8.3	36.7	35.0
43	SR 2205	3.9	4.3	4.7	3.0	3.8	3.0	4.7	8.0	15.0	17.5
44	Washington	3.9	4.3	4.1	3.4	3.9	2.0	5.3	9.0	13.3	4.5
45	Crest	3.9	4.0	4.3	3.2	4.1	3.3	6.0	8.7	33.3	30.0
46	Dragon	3.9	3.9	5.1	3.3	3.3	3.0	3.3	8.0	18.3	33.3
47	Bronco	3.9	4.0	4.1	3.2	4.3	2.0	5.0	6.3	33.3	9.0
48	Baron	3.8	4.4	4.8	3.2	3.0	2.0	3.0	1.0	20.0	43.5
49	Caliber	3.8	3.6	3.6	3.1	4.8	3.0	8.0	9.0	36.7	43.3
50	SR 2100	3.7	4.4	4.4	3.1	3.1	2.3	3.0	2.3	20.0	11.0
51	Canterbury	3.7	3.6	3.9	2.9	4.5	3.3	6.0	7.3	30.0	38.3
52	Nassau	3.7	4.5	4.4	3.3	2.7	2.0	2.3	1.0	16.7	22.5
53	PST-B9-196	3.7	3.8	4.5	3.1	3.4	3.3	5.0	7.0	11.7	55.0
54	Alpine	3.6	4.9	4.3	3.0	2.4	3.0	2.0	6.0	13.7	11.7
55	Muddy Pk	3.6	3.9	3.3	3.4	3.9	3.0	7.7	9.0	26.7	7.3
56	Bar VB 6820	3.6	5.1	4.3	2.7	2.4	3.7	2.7	5.5	16.7	12.7
57	MTT 683	3.6	3.9	4.4	3.2	2.9	3.3	2.7	6.5	18.3	20.0
58	VB 16015	3.6	4.5	4.3	2.6	2.8	4.0	2.0	6.0	18.3	21.0
59	America	3.4	4.2	4.0	2.9	2.7	2.3	2.0	2.7	13.3	32.5
60	Blue Star	3.4	3.8	3.6	3.4	2.8	2.0	2.3	1.0	21.7	32.5

Table 5 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Winter Color ² March 1999	Spring Green-up ³ May 1999	Seed Head ⁴ June 1999	------(%)-----	
	1999 Avg.	1996 Avg.	1996- 1997 Avg.	1998 Avg.	1999 Avg.				July 1999	Oct. 1999
61 South Dakota	3.4	2.9	3.2	2.8	4.6	1.3	7.7	9.0	36.7	45.0
62 Lipoa	3.3	4.0	3.9	3.0	2.5	4.7	2.7	7.5	19.0	32.5
63 Exp # 1589	3.3	2.6	3.4	3.0	4.1	3.0	8.0	9.0	48.3	23.3
64 Kenblue	3.2	2.5	3.4	2.7	4.3	1.0	9.0	9.0	51.7	65.0
LSD at 5% =	0.7	0.8	0.9	0.9	1.4	1.9	1.8	1.0	12.7	30.5

¹9 = best turf quality²9 = best winter color³9 = earliest spring green-up⁴9 = least seed head production

Table 6. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1996 at North Brunswick, NJ.

	Cultivar or Selection	-----Turf Quality ¹ -----				Winter Color ² March 1999
		1997-1999 Avg.	1997 Avg.	1998 Avg.	1999 Avg.	
1	Impact	7.3	7.3	6.9	7.7	3.3
2	A95-439	7.2	7.0	7.3	7.3	4.0
3	Award	7.2	7.1	6.8	7.6	3.3
4	Rugby II	6.8	7.2	6.7	6.5	3.3
5	Blackstone	6.6	6.4	6.3	7.1	4.7
6	Midnight	6.6	6.7	6.4	6.6	3.0
7	Total Eclipse	6.6	7.2	6.1	6.5	3.3
8	Liberator	6.5	6.7	6.1	6.6	3.3
9	A94-706	6.4	6.6	5.8	6.8	3.7
10	Langara	6.3	6.4	5.9	6.6	4.3
11	NuGlade	6.3	6.7	6.0	6.1	3.3
12	A94-359	6.1	5.9	6.2	6.3	4.7
13	Cabernet	6.0	6.0	5.6	6.4	4.7
14	A93-453	6.0	6.1	5.8	6.2	4.0
15	H94-195	6.0	5.1	6.0	7.0	4.0
16	Rambo	6.0	5.9	6.0	6.2	5.0
17	Indigo	5.9	5.7	6.4	5.7	5.0
18	H92-558	5.8	6.1	5.7	5.7	4.0
19	H94-324	5.8	7.0	5.4	5.2	3.0
20	P154	5.8	6.0	5.5	6.0	4.3
21	A95-414	5.7	5.8	5.3	6.0	3.7
22	A95-1009	5.6	5.4	5.4	6.0	4.7
23	A94-1200	5.6	5.2	5.0	6.7	5.0
24	H94-232	5.5	5.8	5.7	5.0	5.0
25	America	5.5	5.3	5.8	5.5	4.3
26	A93-417	5.5	5.9	5.1	5.5	4.7
27	Princeton P-105	5.5	5.5	5.4	5.5	3.3
28	Alpine	5.5	5.5	5.8	5.2	2.0
29	Chicago	5.5	5.9	5.3	5.3	4.0
30	A94-362	5.4	5.5	5.1	5.7	3.3

(Continued)

Table 6 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----				Winter Color ² March 1999
		1997-1999 Avg.	1997 Avg.	1998 Avg.	1999 Avg.	
31	A93-421	5.4	5.4	5.6	5.3	4.0
32	Ba 82-228	5.4	5.5	5.4	5.3	5.0
33	Limousine	5.4	5.3	4.9	5.9	4.3
34	Wildwood	5.4	5.4	5.3	5.5	3.3
35	Preakness	5.4	5.3	5.2	5.8	5.3
36	H94-283	5.3	5.3	5.3	5.3	4.0
37	H94-227	5.3	5.6	5.0	5.3	5.0
38	Champagne	5.3	5.3	4.9	5.8	5.0
39	A93-200	5.2	4.9	5.5	5.2	5.3
40	Dellwood	5.2	4.5	5.5	5.6	3.0
41	H94-461	5.1	5.9	4.8	4.6	3.7
42	H94-451	5.1	6.0	4.7	4.7	4.3
43	Eclipse	5.1	4.7	5.6	5.0	5.0
44	A94-363	5.0	4.8	4.9	5.2	4.5
45	H90-1186	5.0	5.2	4.3	5.6	6.3
46	PST-697	5.0	5.4	4.4	5.3	5.7
47	A93-464	5.0	4.9	4.8	5.2	5.0
48	Ba 83-113	5.0	5.3	4.4	5.2	4.0
49	NuStar	5.0	4.7	5.1	5.1	3.0
50	Glade	5.0	5.5	4.4	5.3	5.0
51	A94-1122	4.9	5.4	4.4	4.8	4.2
52	H94-418	4.9	5.5	4.5	4.7	4.3
53	Julia	4.9	4.8	4.7	5.3	6.0
54	Bel 21	4.9	4.4	4.7	5.6	4.3
55	A95-410	4.9	5.1	4.9	4.7	4.0
56	A93-372	4.9	5.7	4.2	4.7	3.7
57	J-1555	4.8	5.1	4.5	4.8	4.3
58	H90-1190	4.8	5.0	4.3	5.2	6.3
59	A91-625	4.8	4.5	4.5	5.4	5.0
60	A88-744	4.8	5.4	4.0	5.0	3.7

(Continued)

Table 6 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----				Winter Color ² March 1999
		1997-1999 Avg.	1997 Avg.	1998 Avg.	1999 Avg.	
61	Eagleton	4.8	4.7	4.8	4.9	4.0
62	Ram I	4.8	5.1	4.6	4.7	4.7
63	Ba 84-166	4.7	5.2	4.8	4.1	3.0
64	Blue Moon	4.7	5.4	4.3	4.4	3.0
65	Shamrock	4.6	4.2	4.6	5.0	4.7
66	A91-624	4.5	5.6	4.4	3.5	3.3
67	Muddy Pk	4.5	4.0	4.3	5.3	3.3
68	Touchdown	4.4	4.2	4.2	4.8	4.0
69	Caliber	4.4	4.3	4.2	4.7	5.0
70	Nottingham	4.4	4.8	4.4	4.2	3.3
71	Dragon	4.3	4.0	4.4	4.6	5.0
72	Cheri	4.2	4.3	4.5	3.9	4.3
73	A93-201	4.2	4.1	4.3	4.3	4.7
74	Blue Chip	4.2	4.9	4.1	3.7	3.7
75	Baron	4.1	4.7	3.8	3.8	3.0
76	Ba 84-021	4.1	5.2	3.4	3.8	4.0
77	Classic	4.0	4.2	3.8	4.1	5.3
78	Nassau	3.7	4.0	3.3	3.9	4.3
79	Ba 82-230	3.6	4.0	3.2	3.5	4.3
80	Ba 84-176	3.0	3.0	3.0	3.0	3.3
81	Kenblue	2.9	2.8	2.9	3.0	3.3
	LSD at 5% =	0.8	0.7	1.0	1.4	1.2

¹9 = best turf quality

²9 = best winter color

Table 7. Performance of Kentucky bluegrass cultivars and selections in a test seeded in September 1996 at Adelphia, NJ.

	Cultivar or Selection	-----Turf Quality ¹ -----				Spring Appearance ² April 1999	Leaf Spot ³ May 1999
		1997-1999 Avg.	1997 Avg.	1998 Avg.	1999 Avg.		
1	Liberator	6.9	7.1	7.1	6.6	3.0	5.7
2	Total Eclipse	6.8	7.4	6.2	6.7	3.3	5.7
3	Midnight	6.7	7.0	6.5	6.6	3.0	6.7
4	Moonlight	6.5	7.0	6.1	6.4	3.7	8.0
5	Impact	6.5	7.0	5.8	6.6	3.3	6.0
6	A95-439	6.4	6.7	6.6	5.9	4.3	6.0
7	NuGlade	6.4	6.6	6.5	6.0	2.7	5.3
8	Award	6.3	6.8	6.1	6.0	2.7	6.0
9	Rugby II	6.2	6.5	5.8	6.4	3.0	6.3
10	A95-414	6.2	6.0	6.1	6.5	4.0	7.0
11	Langara	6.2	6.3	5.9	6.3	5.1	6.0
12	A93-417	6.1	6.6	5.8	6.0	5.7	5.3
13	Blackstone	6.0	6.5	6.0	5.5	6.3	5.3
14	Indigo	6.0	5.9	6.4	5.7	5.3	6.0
15	Wildwood	5.8	5.8	5.8	6.0	2.7	7.0
16	H92-558	5.8	6.0	5.4	6.1	5.3	5.7
17	Princeton P-105	5.8	5.5	5.9	6.0	4.0	7.3
18	H94-451	5.8	5.8	5.8	5.8	5.3	6.3
19	H94-461	5.8	5.9	5.8	5.7	4.7	6.7
20	SR 2109	5.8	5.6	6.0	5.8	5.0	5.7
21	A94-752	5.8	5.8	5.2	6.3	5.0	6.7
22	A85-301	5.8	5.6	5.6	6.1	5.0	7.0
23	ZPS-204	5.8	6.2	5.6	5.5	5.3	5.0
24	A95-1009	5.7	5.9	5.8	5.5	3.7	7.0
25	H94-324	5.6	5.9	5.3	5.7	5.0	5.7
26	PST-697	5.6	6.4	5.3	5.1	5.3	5.0
27	A93-421	5.6	5.9	5.1	5.7	4.7	6.0
28	A93-453	5.5	5.8	5.3	5.4	4.7	5.3
29	Cabernet	5.5	5.6	5.6	5.3	5.7	4.7
30	H94-690	5.4	5.4	5.3	5.6	5.0	6.7

(Continued)

Table 7 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----				Spring Appearance ² April 1999	Leaf Spot ³ May 1999
		1997-1999 Avg.	1997 Avg.	1998 Avg.	1999 Avg.		
31	A94-363	5.4	5.5	5.1	5.4	4.5	6.0
32	SR 2205	5.4	5.9	5.3	5.0	3.7	4.7
33	C-74	5.4	5.9	4.8	5.5	4.0	4.7
34	H94-195	5.4	5.7	5.1	5.3	3.7	6.7
35	H90-1186	5.3	5.8	4.7	5.5	6.7	3.0
36	A94-706	5.3	5.4	4.9	5.6	5.7	5.7
37	H94-418	5.3	5.7	5.1	5.0	4.3	5.0
38	Alpine	5.3	4.7	5.6	5.5	2.0	7.3
39	Preakness	5.3	5.8	4.7	5.3	5.3	5.3
40	America	5.2	5.4	5.4	4.9	5.0	4.0
41	H94-232	5.2	5.5	5.3	4.8	5.3	4.7
42	Jefferson	5.2	5.4	5.3	4.9	5.3	4.3
43	Caliber	5.2	5.8	4.6	5.1	5.3	3.7
44	A93-200	5.2	5.4	5.1	5.0	5.3	4.3
45	Eclipse	5.2	5.3	5.1	5.1	5.7	5.0
46	NJ -1190	5.2	5.7	4.6	5.3	6.3	3.3
47	Limousine	5.2	5.7	4.8	4.9	4.3	4.7
48	Julia	5.1	5.6	4.6	5.2	6.3	3.3
49	Champagne	5.1	5.4	5.2	4.8	5.3	4.0
50	A91-53	5.1	5.5	4.9	5.0	5.3	4.0
51	SR 2000	5.1	5.3	5.1	5.0	4.7	6.0
52	Washington	5.1	4.8	5.1	5.3	6.0	3.7
53	Shamrock	5.1	5.4	4.9	4.9	6.7	4.3
54	Blue Moon	5.1	5.8	4.6	4.8	3.7	4.0
55	Chicago	5.1	5.1	4.9	5.2	4.3	5.0
56	Shamrock	5.0	5.1	4.9	5.1	5.3	5.0
57	Rambo	5.0	5.6	4.6	4.7	4.3	5.3
58	Shade Blue	5.0	5.1	4.8	5.0	5.3	4.7
59	A91-702	4.9	4.7	5.1	5.0	6.3	5.0
60	Unique	4.9	4.7	5.1	5.0	3.7	5.0

(Continued)

Table 7 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----				Spring Appearance ² April 1999	Leaf Spot ³ May 1999
		1997-1999 Avg.	1997 Avg.	1998 Avg.	1999 Avg.		
61	A93-201	4.9	5.0	5.0	4.8	5.7	4.7
62	J-333	4.9	4.6	4.8	5.3	4.3	5.7
63	A93-354	4.9	5.2	4.8	4.8	4.5	5.5
64	H94-730	4.9	5.5	5.0	4.2	4.0	5.4
65	Parkland	4.9	4.7	5.5	4.5	3.7	3.3
66	Eagleton	4.9	4.9	4.9	4.9	4.0	4.7
67	Ba 82-228	4.9	5.2	4.5	4.8	5.3	6.0
68	A88-744	4.8	5.4	4.4	4.5	4.0	4.7
69	J-1555	4.8	4.8	4.5	5.0	4.3	4.3
70	Cheri	4.8	5.1	4.2	5.0	5.0	5.0
71	JV 91 L2	4.7	4.9	4.4	4.7	5.0	4.0
72	SRX 2207B	4.7	5.2	4.1	4.7	5.0	3.7
73	A91-703	4.7	4.7	4.6	4.7	6.0	5.3
74	Ba 83-113	4.6	5.1	4.1	4.7	6.0	5.3
75	Baron	4.6	5.1	5.3	3.4	4.7	3.0
76	JV 91 I	4.6	5.2	4.6	4.0	5.0	3.0
77	Touchdown	4.6	4.6	4.4	4.7	7.0	4.7
78	Dellwood	4.5	4.3	4.6	4.6	5.7	3.3
79	Nottingham	4.5	4.8	4.6	4.1	5.0	4.0
80	Ba 84-166	4.5	5.0	4.9	3.5	5.0	2.7
81	Ba 82-230	4.4	4.2	4.3	4.9	5.3	4.0
82	PTE	4.4	5.0	3.7	4.5	6.0	4.7
83	Ba 84-176	4.4	4.8	4.3	4.1	4.7	6.0
84	Ba 84-021	4.3	5.1	3.7	4.1	4.7	5.3
85	SR 2100	4.3	4.9	4.4	3.5	4.7	3.3
86	Nassau	4.3	4.5	4.1	4.3	5.7	4.0
87	Classic	4.3	4.0	4.1	4.7	5.3	3.7
88	Dragon	4.2	4.3	4.0	4.4	5.7	3.3
89	OFI-25	4.2	4.0	4.4	4.2	5.3	4.3
90	PST BM3	4.1	4.1	4.0	4.3	6.3	2.7

(Continued)

Table 7 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----				Spring Appearance ² April 1999	Leaf Spot ³ May 1999
	1997-1999 Avg.	1997 Avg.	1998 Avg.	1999 Avg.		
91 Blue Chip	4.0	4.6	4.9	2.5	4.3	2.3
92 Bel 21	4.0	4.3	3.7	4.0	4.3	3.7
93 Muddy Pk	3.8	4.0	3.9	3.5	5.3	1.3
94 Eagleton	3.8	3.6	3.7	4.0	5.7	1.7
95 Kenblue	3.3	3.4	3.5	3.0	4.7	1.3
96 CNC	2.6	3.0	2.3	2.5	6.7	1.0
LSD at 5% =	0.6	0.8	0.8	0.7	1.2	1.1

¹9 = best turf quality

²9 = best spring appearance; spring appearance is rating of spring green-up, activeness, and dark green color

³9 = least leaf spot

Table 8. Performance of Kentucky bluegrass cultivars and selections in a test seeded in September 1997 at Adelphia, NJ.

	Cultivar or Selection	-----Turf Quality ¹ -----			Winter Appearance ² March 1999	Spring Green-up ³ April 1999	Leaf Spot ⁴ May 1999
		1998-1999 Avg.	1998 Avg.	1999 Avg.			
1	Blacksburg	6.5	5.9	7.1	5.3	5.0	7.0
2	SR 2109	6.3	6.1	6.4	5.0	4.4	6.0
3	Langara	6.3	6.1	6.4	5.1	4.7	6.0
4	H94-550	6.3	5.7	6.9	5.7	4.0	7.0
5	Blackstone	6.3	6.2	6.3	5.7	4.3	5.7
6	H92-392	6.2	5.8	6.6	8.0	5.7	6.0
7	Midnight	6.2	6.0	6.3	2.7	2.3	4.3
8	Washington	6.1	6.1	6.1	5.0	6.0	4.7
9	North Star	6.1	5.8	6.4	3.3	3.7	6.0
10	A96-394	6.1	6.2	6.0	5.0	3.7	6.0
11	H92-166	6.0	6.4	5.7	6.0	6.0	3.3
12	H94-288	6.0	6.1	5.9	4.3	4.3	5.3
13	Moonlight	5.9	6.2	5.7	3.3	3.7	8.3
14	95 AN-10	5.9	6.0	5.9	5.7	6.7	4.7
15	H94-747	5.9	6.0	5.8	3.0	3.7	4.7
16	Impact	5.9	5.6	6.2	3.0	3.3	5.3
17	A93-453	5.9	6.2	5.5	3.7	3.7	5.7
18	York Harbor G+T-4	5.9	5.7	6.0	4.3	3.3	6.3
19	NuGlade	5.9	5.6	6.1	2.3	2.7	5.0
20	SR 2205	5.9	5.4	6.4	3.3	3.3	5.7
21	ZPS-20	5.8	5.7	5.9	5.3	5.3	4.7
22	A95-439	5.8	5.8	5.9	3.3	4.0	4.7
23	Liberator	5.8	5.8	5.8	2.7	3.3	6.0
24	Award	5.8	5.6	6.0	2.3	2.7	5.0
25	A93-238	5.8	5.8	5.7	4.0	4.7	4.7
26	ZPS-2183	5.8	5.6	6.0	8.0	4.7	5.0
27	H94-461	5.7	6.1	5.4	4.7	3.7	6.3
28	Caliber	5.7	5.9	5.5	4.3	5.7	4.3
29	Ram I	5.6	5.5	5.7	5.0	4.7	3.7
30	A96-742	5.6	5.8	5.4	4.7	4.0	5.0

(Continued)

Table 8 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----			Winter Appearance ² March 1999	Spring Green-up ³ April 1999	Leaf Spot ⁴ May 1999
		1998-1999 Avg.	1998 Avg.	1999 Avg.			
31	H94-707	5.6	5.6	5.6	3.7	2.7	5.7
32	Arcadia	5.6	5.8	5.4	3.3	2.7	6.0
33	A93-421	5.6	5.8	5.4	3.7	3.3	5.3
34	A93-201	5.6	5.6	5.5	5.0	6.0	4.7
35	IBC-170	5.6	5.7	5.4	4.3	5.0	5.0
36	Total Eclipse	5.6	5.3	5.8	2.3	3.0	5.0
37	Julia	5.6	5.8	5.3	5.3	5.0	4.0
38	A93-200	5.6	5.6	5.5	4.0	5.0	4.3
39	H92-543	5.6	5.5	5.6	4.3	5.0	4.7
40	Princeton P-105	5.5	5.2	5.9	4.3	3.7	5.7
41	A95-410	5.5	5.5	5.6	4.7	3.7	5.3
42	Challenger	5.5	5.6	5.4	5.3	4.3	4.7
43	H90-1193	5.5	6.0	5.0	6.3	5.7	3.0
44	H94-293	5.5	5.4	5.6	4.3	3.3	6.7
45	A90-287	5.5	5.6	5.3	3.3	3.7	5.3
46	H94-340	5.5	5.3	5.6	3.3	4.0	5.0
47	York Harbor G+T-11	5.5	5.5	5.4	4.0	5.3	4.3
48	Brilliant	5.4	5.5	5.4	4.0	4.0	5.7
49	Showcase	5.4	5.5	5.4	4.3	4.3	4.7
50	A90-1128	5.4	5.7	5.0	5.2	5.7	4.7
51	Champagne	5.4	5.3	5.6	5.0	5.0	4.3
52	Rugby	5.4	5.6	5.2	5.3	4.7	4.0
53	Wildwood	5.4	5.5	5.3	5.0	3.3	7.0
54	H94-201	5.4	5.5	5.3	4.0	4.3	5.0
55	H94-690	5.4	5.8	5.0	5.7	3.7	4.7
56	Opti-green	5.4	5.4	5.4	3.7	5.7	4.0
57	A95-1009	5.4	5.7	5.1	4.7	3.0	6.0
58	A95-1073	5.4	5.8	5.0	5.0	4.3	5.0
59	A91-635	5.4	5.7	5.0	5.7	6.0	4.3
60	H94-562	5.4	5.1	5.6	4.0	5.7	4.7

(Continued)

Table 8 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----			Winter Appearance ² March 1999	Spring Green-up ³ April 1999	Leaf Spot ⁴ May 1999
		1998-1999 Avg.	1998 Avg.	1999 Avg.			
61	A93-417	5.4	5.4	5.3	3.7	3.3	5.3
62	H94-195	5.4	5.7	5.0	4.3	5.0	5.0
63	Freedom	5.4	5.4	5.3	5.0	5.0	4.3
64	A96-494	5.3	5.8	4.8	5.0	3.0	5.7
65	Bordeaux	5.3	5.5	5.1	4.7	3.7	5.7
66	SRX 2207B	5.3	5.3	5.3	3.7	4.7	4.0
67	Liberty	5.3	5.3	5.3	5.0	5.0	4.0
68	Fairfax	5.3	5.3	5.3	3.7	4.7	3.7
69	A96-481	5.3	5.3	5.3	2.7	4.3	5.3
70	A94-314	5.3	5.3	5.3	7.0	4.0	6.3
71	Dragon	5.3	5.3	5.2	5.3	4.7	3.3
72	H92-203	5.3	5.4	5.1	4.0	3.7	4.4
73	Rambo	5.3	5.1	5.4	4.7	5.0	5.0
74	A97-30	5.3	5.2	5.3	4.0	4.7	5.3
75	Rita	5.3	5.5	5.0	5.3	3.7	5.3
76	Misty	5.3	5.0	5.5	6.3	5.0	4.7
77	H92-612	5.2	5.5	4.9	4.3	5.3	4.7
78	NuBlue	5.2	5.4	5.1	4.3	3.3	4.3
79	Glade	5.2	4.8	5.7	3.3	3.3	3.0
80	America	5.2	5.4	5.1	4.0	3.3	5.3
81	Shamrock	5.2	5.2	5.2	5.0	5.0	4.7
82	B3-171	5.2	5.2	5.2	4.7	4.7	4.3
83	A93-372	5.2	5.3	5.1	4.0	4.0	4.7
84	PST-697	5.2	5.5	4.8	5.3	4.7	5.3
85	ZPS-309	5.2	5.3	5.0	5.3	4.7	4.0
86	A91-646	5.2	5.6	4.7	6.0	5.3	4.3
87	NuStar	5.2	5.0	5.4	3.3	4.3	4.7
88	A95-1055	5.2	5.3	5.0	4.3	3.3	5.0
89	A96-352	5.1	5.2	5.1	3.7	3.7	5.3
90	SCEC-219	5.1	5.2	5.1	4.3	4.3	3.3

(Continued)

Table 8 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----			Winter Appearance ² March 1999	Spring Green-up ³ April 1999	Leaf Spot ⁴ May 1999
		1998-1999 Avg.	1998 Avg.	1999 Avg.			
91	Cabernet	5.1	5.2	5.1	5.0	6.7	4.0
92	H94-290	5.1	5.1	5.1	5.3	4.7	6.3
93	H94-232	5.1	5.4	4.8	4.3	5.7	4.7
94	A93-427	5.1	5.3	4.9	4.7	4.7	3.7
95	Chicago	5.1	5.0	5.2	4.3	3.7	4.7
96	H92-208	5.1	4.8	5.3	4.0	5.0	4.7
97	B3-203	5.1	5.1	5.0	4.0	4.3	4.7
98	A91-703	5.0	5.0	5.1	6.3	6.0	4.3
99	ZPS-204	5.0	5.3	4.6	5.0	4.5	4.9
100	H92-558	5.0	5.1	4.9	4.0	3.0	5.3
101	A91-702	5.0	4.8	5.1	6.3	7.0	4.0
102	Cobalt	5.0	5.1	4.8	5.0	3.7	4.7
103	B3-170	4.9	4.9	4.9	4.0	3.3	4.7
104	B3-71	4.9	4.3	5.5	4.3	4.3	4.3
105	Unique	4.9	4.8	4.9	4.2	4.0	4.7
106	H94-329	4.9	4.7	5.1	4.3	5.7	4.7
107	Dellwood	4.9	4.5	5.3	5.7	6.3	3.3
108	Preakness	4.9	4.8	5.0	4.3	5.0	3.3
109	A96-384	4.9	4.9	4.8	5.0	4.7	5.0
110	A95-418	4.9	4.9	4.8	4.0	3.3	6.0
111	Baron	4.8	5.0	4.7	4.0	4.0	4.3
112	Blue Chip	4.8	5.1	4.5	4.0	4.0	4.0
113	Suffolk	4.8	4.3	5.3	5.3	4.7	4.3
114	Kelly	4.7	4.6	4.8	4.0	3.7	3.7
115	Sodnet	4.7	4.6	4.9	4.3	4.0	4.7
116	J-1555	4.7	4.5	4.9	4.0	4.0	4.0
117	H94-374	4.7	5.0	4.4	5.0	3.7	4.7
118	Aspen	4.7	4.7	4.7	5.3	4.0	5.7
119	Nassau	4.7	4.8	4.5	5.7	3.7	4.7
120	H94-328	4.6	5.1	4.1	5.0	7.3	1.0

(Continued)

Table 8 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----			Winter Appearance ² March 1999	Spring Green-up ³ April 1999	Leaf Spot ⁴ May 1999
		1998-1999 Avg.	1998 Avg.	1999 Avg.			
121	SR 2100	4.6	4.8	4.4	3.3	3.7	4.0
122	Limousine	4.6	4.4	4.8	4.7	4.0	3.0
123	Pp-8	4.6	4.5	4.6	5.0	5.7	3.3
124	Muddy Pk	4.5	4.6	4.5	6.0	7.0	1.0
125	Huntington	4.5	4.7	4.3	3.7	4.3	3.3
126	PST-BM3	4.5	4.9	4.1	7.7	7.3	2.3
127	H86-749	4.4	4.6	4.2	6.0	6.7	1.7
128	SR 2000	4.4	4.3	4.5	4.7	4.7	5.3
129	Voyager	4.4	4.3	4.4	4.3	6.3	2.7
130	CIS-Pp 202	4.1	3.4	4.7	4.7	3.7	4.7
131	SCEC-196	4.0	4.3	3.7	6.0	7.3	1.7
132	Denim	4.0	3.2	4.8	4.7	2.7	5.3
133	CIS-Pp 201	4.0	3.1	4.9	4.3	4.0	5.3
134	94 AN-8	3.8	3.7	3.9	3.0	3.7	3.7
135	SCEC-133	3.7	3.9	3.4	5.3	6.3	1.3
136	Kenblue	3.6	3.9	3.2	4.7	6.7	1.0
137	SCEC-204	3.5	3.5	3.5	4.7	6.7	1.0
138	S-21	3.5	3.1	3.8	6.0	6.7	1.3
139	94 AN-5	3.3	3.4	3.3	5.7	5.7	1.0
140	SCEC-157	3.0	3.3	2.8	4.0	6.7	1.0
141	95 AN-26	2.9	3.0	2.8	4.7	4.7	1.7
142	SCEC-215	2.4	2.0	2.7	4.3	5.3	1.0
	LSD at 5% =	0.6	0.9	0.6	1.1	1.5	1.1

¹9 = best turf quality²9 = best winter appearance; winter appearance is based on winter color, activeness, and dark green color³9 = earliest spring green-up⁴9 = least leaf spot

Table 9. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1998 at North Brunswick, NJ.

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Seedling Vigor ² Sept. 1998	Drought Recovery ³ Aug. 1999
1	Impact	7.0	6.0	4.3
2	NuGlade	7.0	6.7	3.7
3	Moonlight	6.9	6.3	5.7
4	Blue Moon	6.9	7.0	3.7
5	H94-293	6.6	7.0	4.7
6	A96-424	6.5	7.7	7.3
7	Award	6.5	7.0	3.0
8	A96-427	6.4	6.7	6.0
9	A96-423	6.4	6.7	7.0
10	A94-677	6.4	6.0	6.7
11	H94-753	6.4	5.3	5.0
12	Midnight	6.3	6.7	3.3
13	A95-284	6.3	7.0	5.0
14	Indigo	6.2	6.7	3.3
15	A95-2007	6.2	5.7	2.0
16	Langara	6.2	6.3	4.7
17	Rugby II	6.2	6.0	3.7
18	A96-451	6.1	5.0	5.3
19	A96-368	6.1	5.7	4.7
20	A96-415	6.1	5.7	6.0
21	A96-402	6.1	4.7	5.7
22	Bordeaux	6.1	6.7	5.3
23	A96-337	6.1	5.7	6.3
24	Glade	6.1	6.0	3.7
25	A96-763	6.0	7.0	5.7
26	A96-328	6.0	6.7	5.0
27	H94-288	6.0	8.0	6.0
28	ZPS-204	6.0	5.7	3.0
29	C-74	6.0	6.3	7.3
30	Princeton P-105	5.9	6.0	4.7

(Continued)

Table 9 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Seedling Vigor ² Sept. 1998	Drought Recovery ³ Aug. 1999
31	A96-739	5.9	6.0	6.0
32	H94-374	5.9	7.0	4.3
33	A96-714	5.9	5.3	7.7
34	H94-232	5.9	5.0	3.7
35	H92-203	5.9	7.0	7.3
36	Blackstone	5.9	7.0	2.3
37	A96-348	5.8	5.3	5.3
38	A96-408	5.8	5.7	4.3
39	America	5.8	7.3	6.7
40	A95-490	5.8	5.3	4.0
41	A96-481	5.7	4.7	5.0
42	A93-200	5.7	7.0	4.7
43	A95-439	5.7	4.3	5.3
44	A96-407	5.7	5.0	5.3
45	H94-321	5.7	6.0	6.3
46	Cobalt	5.7	6.3	5.0
47	CVB 19111	5.7	6.7	1.7
48	A98-2037	5.6	6.0	7.3
49	Julia	5.6	7.7	2.7
50	H94-313	5.6	4.3	4.3
51	A98-2038	5.6	3.7	5.3
52	A95-1055	5.6	6.3	6.7
53	A95-1021	5.6	5.0	3.3
54	H92-543	5.6	4.3	6.3
55	A96-715	5.5	4.7	7.3
56	Dellwood	5.5	5.7	4.7
57	Blacksburg	5.5	5.0	2.3
58	A93-201	5.5	7.7	3.3
59	Wildwood	5.5	6.0	5.0
60	A96-416	5.5	5.0	5.7

(Continued)

Table 9 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Seedling Vigor ² Sept. 1998	Drought Recovery ³ Aug. 1999
61	A98-2040	5.5	4.7	6.7
62	Chicago	5.4	6.3	4.0
63	A96-324	5.4	4.7	5.3
64	Rambo	5.4	6.7	3.3
65	A96-332	5.3	5.0	6.3
66	A98-2039	5.3	6.7	4.3
67	H94-221	5.3	5.0	6.0
68	H94-550	5.3	5.7	2.0
69	Cheri	5.3	6.3	6.7
70	Cabernet	5.3	4.7	4.3
71	Alpine	5.3	7.0	3.7
72	Eclipse	5.3	7.3	2.3
73	A95-1009	5.2	4.0	4.7
74	Blue Chip	5.2	6.3	3.0
75	A94-976	5.1	5.3	2.7
76	A88-532	5.1	4.3	4.0
77	Aspen	5.1	6.7	3.7
78	NuStar	5.1	6.0	3.3
79	A97-30	5.0	6.7	5.3
80	Rugby	5.0	7.3	2.7
81	A84-413	5.0	5.0	2.3
82	A96-386	4.9	4.7	5.0
83	H94-654	4.9	2.7	3.3
84	Bel 21	4.9	7.7	2.0
85	H94-235	4.9	4.3	4.3
86	Eagleton	4.9	6.3	5.7
87	A96-297	4.9	5.3	3.3
88	A91-703	4.9	4.7	4.3
89	H94-460	4.9	2.0	5.3
90	A90-287	4.8	3.3	6.0

(Continued)

Table 9 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Seedling Vigor ² Sept. 1998	Drought Recovery ³ Aug. 1999
91	A93-417	4.8	3.7	3.7
92	Jefferson	4.8	6.3	5.3
93	Dragon	4.8	7.3	4.0
94	H94-690	4.7	2.0	3.7
95	A93-238	4.7	2.7	6.3
96	H92-558	4.7	3.7	5.0
97	A96-351	4.7	4.3	6.0
98	A93-453	4.7	3.7	4.3
99	A95-405	4.7	2.0	5.0
100	A91-635	4.7	4.7	3.3
101	A91-702	4.6	4.7	5.7
102	Unique	4.6	3.0	6.0
103	A95-418	4.5	2.3	4.3
104	CVB 17921	4.5	6.3	4.3
105	A96-308	4.5	3.0	3.3
106	Cesar	4.5	5.7	3.0
107	Kelly	4.5	6.3	5.3
108	Touchdown	4.5	6.0	2.7
109	A96-729	4.5	3.3	6.0
110	Brunswick	4.5	4.7	2.7
111	Caliber	4.5	6.7	3.0
112	A95-1930	4.4	4.7	4.3
113	A95-410	4.4	5.0	3.7
114	Suffolk	4.4	6.0	2.0
115	A96-293	4.3	2.7	3.7
116	A96-323	4.3	1.7	5.0
117	A95-1667	4.3	1.7	4.0
118	Nassau	4.3	6.7	3.7
119	A95-1701	4.3	4.3	5.3
120	SR 2109	4.3	2.3	3.0

(Continued)

Table 9 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Seedling Vigor ² Sept. 1998	Drought Recovery ³ Aug. 1999
121	A96-305	4.2	2.7	4.3
122	NuBlue	4.2	6.7	2.3
123	Baron	4.2	6.3	3.3
124	H94-707	4.1	1.7	3.3
125	H94-171	4.1	2.7	3.0
126	Miracle	4.1	7.0	2.7
127	A96-303	4.1	4.0	4.3
128	A95-343	4.1	3.3	5.7
129	A94-314	4.1	2.3	4.0
130	Freedom	4.1	3.3	4.0
131	Muddy Pk	3.9	4.0	3.7
132	Classic	3.9	6.7	3.0
133	Huntsville	3.9	6.3	3.3
134	A96-270	3.8	1.7	4.7
135	A96-298	3.8	1.7	3.7
136	A89-391	3.8	1.7	5.7
137	A96-319	3.7	1.0	4.0
138	CVB 19863	3.7	6.3	1.7
139	S-21	3.6	7.0	5.3
140	Crest	3.6	2.7	4.3
141	Roselawn	3.2	1.7	4.3
142	Reveille TB x KB hybrid	3.1	4.7	2.7
	LSD at 5% =	0.9	1.3	2.0

¹9 = best turf quality

²9 = highest seedling vigor

³9 = best drought recovery

Table 10. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1998 at Adelphia, NJ.

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Establishment ² Sept. 1999	Color ³ Dec. 1999	Leaf Spot ⁴ May 1999
1	A97-1409	7.1	6.3	8.0	7.0
2	A97-1323	6.7	6.0	6.3	5.7
3	Langara	6.6	6.0	6.0	6.0
4	A95-284	6.5	6.0	8.3	6.3
5	A97-410	6.5	4.0	7.0	4.7
6	A96-415	6.4	5.0	7.0	6.7
7	Moonlight	6.4	4.3	8.3	8.0
8	A97-493	6.4	6.0	9.0	4.3
9	H94-460	6.3	4.3	7.0	6.0
10	A96-468	6.3	4.7	7.0	7.3
11	A97-1510	6.3	5.3	7.0	6.7
12	AG-K981	6.3	5.0	6.7	6.0
13	A96-270	6.2	4.7	7.7	6.0
14	A95-2007	6.2	5.7	7.7	5.7
15	A97-458	6.2	5.7	8.0	5.7
16	A97-1280	6.2	5.3	6.0	7.7
17	A97-1333	6.2	5.3	6.3	6.3
18	AG K983	6.2	5.0	6.7	5.7
19	York Harbor G+T-4	6.2	4.7	7.0	6.7
20	Rita	6.2	5.7	8.0	5.7
21	H94-753	6.1	5.3	8.7	6.0
22	A95-439	6.1	4.7	7.0	5.3
23	A95-1055	6.0	6.0	7.0	6.3
24	A97-1276	6.0	5.3	7.0	6.7
25	A97-1579	6.0	6.0	6.7	6.7
26	ZPS-2183	6.0	5.7	3.7	6.3
27	Showcase	6.0	5.7	4.7	6.7
28	Bordeaux	5.9	6.0	8.0	6.3
29	ZPS-204	5.9	7.0	6.3	5.0
30	A96-416	5.9	5.3	8.3	6.0

(Continued)

Table 10 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Establishment ² Sept. 1999	Color ³ Dec. 1999	Leaf Spot ⁴ May 1999
31	H94-235	5.9	5.3	9.0	7.7
32	H94-288	5.9	6.3	4.7	6.7
33	H94-293	5.9	6.0	6.3	7.0
34	Princeton P-105	5.9	5.7	6.0	6.0
35	A97-1271	5.9	5.3	7.3	7.3
36	A97-1343	5.9	5.3	7.0	6.7
37	A97-1431	5.9	5.0	6.7	6.3
38	A97-1263	5.9	6.0	4.7	5.7
39	NJGD	5.9	5.0	4.7	5.0
40	A96-328	5.8	6.7	6.7	5.7
41	A98-2038	5.8	4.3	8.7	7.0
42	A94-677	5.8	5.3	6.7	5.7
43	H94-707	5.8	4.7	6.0	5.3
44	A98-2256	5.8	5.0	5.3	6.7
45	A97-884	5.8	6.0	4.7	4.7
46	A97-890	5.8	6.0	4.0	5.0
47	Brilliant	5.8	5.3	5.3	5.3
48	A96-714	5.7	6.3	5.3	6.7
49	A96-337	5.7	5.7	7.7	5.7
50	C-74	5.7	6.3	4.7	5.7
51	A96-402	5.7	6.0	7.0	6.0
52	A96-408	5.7	6.3	7.7	7.3
53	A96-424	5.7	6.0	4.7	5.7
54	A95-1009	5.7	5.3	6.0	6.7
55	A95-418	5.7	4.3	6.3	7.0
56	A96-297	5.7	6.3	7.0	6.0
57	A96-298	5.7	4.3	6.7	6.3
58	SR 2109	5.7	4.7	4.7	6.7
59	H94-550	5.7	5.7	5.0	5.0
60	H92-203	5.7	6.3	5.0	6.7

(Continued)

Table 10 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Establishment ² Sept. 1999	Color ³ Dec. 1999	Leaf Spot ⁴ May 1999
61	Award	5.7	6.3	4.3	5.7
62	NuGlade	5.7	5.3	4.7	5.3
63	A97-408	5.7	6.0	8.7	5.0
64	A97-1244	5.7	6.0	6.3	5.3
65	A97-1272	5.7	5.0	5.7	6.3
66	H92-109	5.7	5.7	5.0	6.0
67	ZPS-309	5.7	5.3	3.3	6.0
68	A82-562	5.7	4.3	5.0	4.7
69	IBM4	5.7	4.0	7.0	5.3
70	H94-690	5.6	5.7	6.0	5.0
71	A93-200	5.6	6.0	4.3	4.7
72	A96-324	5.6	5.3	8.0	5.7
73	A96-729	5.6	5.3	5.7	4.7
74	A98-2037	5.6	5.0	6.3	6.3
75	H94-221	5.6	5.7	5.0	7.3
76	A88-532	5.6	5.3	4.7	6.0
77	A93-201	5.6	6.3	5.3	4.7
78	A96-319	5.6	4.7	5.7	5.3
79	Jefferson	5.6	7.3	7.3	4.3
80	Cobalt	5.6	5.3	7.7	6.0
81	Suffolk	5.6	6.0	4.3	5.0
82	Wildwood	5.6	6.0	6.0	5.7
83	Shamrock	5.5	6.3	4.3	5.0
84	A96-427	5.5	6.3	5.7	6.0
85	A96-715	5.5	4.7	7.3	6.0
86	A95-1701	5.5	6.7	7.0	5.3
87	H92-543	5.5	6.0	4.7	5.0
88	A96-293	5.5	5.7	8.0	5.7
89	Blackstone	5.5	5.7	7.7	4.0
90	A97-474	5.5	6.0	8.3	5.3

(Continued)

Table 10 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Establishment ² Sept. 1999	Color ³ Dec. 1999	Leaf Spot ⁴ May 1999
91	A97-888	5.5	6.0	4.0	4.3
92	A97-904	5.5	6.3	4.0	5.0
93	B3-203	5.5	5.0	4.3	5.3
94	A98-2040	5.4	4.7	7.0	5.7
95	A95-1930	5.4	6.0	7.7	5.3
96	H92-558	5.4	5.7	4.7	5.7
97	A93-417	5.4	6.0	5.0	7.0
98	A96-308	5.4	4.3	6.0	5.0
99	H94-654	5.4	5.0	5.3	6.0
100	A89-391	5.4	6.0	4.0	4.0
101	Rambo	5.4	5.3	5.3	4.7
102	Caliber	5.4	6.7	4.7	5.3
103	Liberator	5.4	6.0	4.7	5.0
104	JDSB-93	5.4	5.0	3.7	5.0
105	PST-697	5.4	3.0	8.0	6.0
106	North Star	5.4	4.0	3.7	6.7
107	H94-374	5.3	6.0	6.0	5.3
108	A96-348	5.3	4.7	5.3	5.7
109	A96-332	5.3	5.3	7.3	6.3
110	A96-423	5.3	5.7	7.0	6.3
111	A95-1021	5.3	6.0	5.0	6.3
112	A90-287	5.3	6.7	5.0	6.3
113	A95-1667	5.3	4.3	5.3	6.7
114	A94-976	5.3	6.0	3.7	4.7
115	H94-313	5.3	6.0	7.3	5.3
116	A94-314	5.3	5.3	5.3	5.3
117	A84-413	5.3	5.7	5.0	5.3
118	Midnight	5.3	5.3	5.0	5.3
119	Impact	5.3	5.0	5.0	5.3
120	Rugby	5.3	6.0	3.7	5.0

(Continued)

Table 10 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Establishment ² Sept. 1999	Color ³ Dec. 1999	Leaf Spot ⁴ May 1999
121	Indigo	5.3	5.7	4.3	5.3
122	A97-741	5.3	5.0	9.0	4.3
123	A97-1268	5.3	4.7	7.0	6.0
124	A97-1294	5.3	5.7	8.0	5.3
125	A97-1297	5.3	5.7	5.7	6.3
126	A96-305	5.2	5.0	8.3	5.0
127	Julia	5.2	6.7	4.3	5.3
128	A96-763	5.2	6.3	6.3	6.0
129	A98-2039	5.2	5.7	5.3	5.0
130	A96-368	5.2	6.0	6.7	6.7
131	A95-405	5.2	4.7	5.3	5.0
132	A96-323	5.2	4.3	6.3	6.3
133	H94-232	5.2	6.0	8.3	4.3
134	Aspen	5.2	5.7	6.0	5.0
135	A97-882	5.2	6.0	4.0	5.0
136	A97-944	5.2	6.3	3.7	5.0
137	A97-1258	5.2	5.3	4.7	6.0
138	A97-1511	5.2	6.0	6.7	5.7
139	Pp8	5.2	5.0	6.0	4.7
140	Optigreen	5.2	5.7	3.3	5.7
141	H94-321	5.1	6.7	7.3	4.7
142	A96-739	5.1	5.7	5.7	5.0
143	A96-351	5.1	5.0	7.3	6.3
144	A95-410	5.1	5.3	3.3	5.3
145	Rugby II	5.1	5.3	5.3	4.7
146	Ram I	5.1	5.7	7.3	4.3
147	A90-1117	5.1	5.7	6.0	4.0
148	A97-955	5.1	6.0	3.7	4.3
149	Cabernet	5.0	6.3	5.0	4.7
150	A96-303	5.0	5.3	9.0	5.7

(Continued)

Table 10 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Establishment ² Sept. 1999	Color ³ Dec. 1999	Leaf Spot ⁴ May 1999
151	Dragon	5.0	5.3	6.7	4.3
152	America	5.0	5.7	5.0	5.3
153	A97-30	5.0	6.0	4.3	5.3
154	A96-481	5.0	5.7	5.3	6.0
155	A93-453	5.0	6.7	5.0	5.3
156	Chicago	5.0	5.3	3.7	5.7
157	A97-876	5.0	6.3	6.0	4.0
158	A97-895	5.0	5.0	6.0	5.3
159	Liberty	5.0	3.7	3.3	5.0
160	SCR-320	5.0	3.3	4.0	5.7
161	Serene	5.0	5.0	3.7	3.7
162	A96-451	4.9	5.0	5.0	6.3
163	Dellwood	4.9	6.3	6.0	3.7
164	A93-238	4.9	6.3	3.3	4.0
165	Brunswick	4.9	5.3	3.3	4.3
166	Glade	4.9	6.0	4.3	4.3
167	Alpine	4.9	5.3	4.0	6.0
168	Samoa	4.9	6.7	3.3	4.3
169	Explorer	4.9	6.0	3.7	5.7
170	JC91L2	4.9	3.7	4.0	6.0
171	A96-407	4.8	4.3	7.7	6.0
172	Blue Moon	4.8	5.3	4.0	4.7
173	Kelly	4.8	5.7	4.0	5.3
174	NuBlue	4.8	5.7	3.7	5.0
175	Eclipse	4.8	5.7	4.0	4.3
176	SCR-282	4.8	2.0	3.0	6.0
177	97-SCEC-196	4.8	7.3	5.0	3.7
178	A91-703	4.7	5.7	4.3	4.3
179	Cheri	4.7	6.0	3.0	4.7
180	Touchdown	4.7	6.0	3.3	5.0

(Continued)

Table 10 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Establishment ² Sept. 1999	Color ³ Dec. 1999	Leaf Spot ⁴ May 1999
181	A91-702	4.6	6.7	5.0	4.0
182	Cesar	4.6	5.0	4.0	5.7
183	NuStar	4.6	6.0	4.3	4.0
184	A95-490	4.5	5.7	6.7	3.3
185	A95-343	4.5	6.0	5.3	3.3
186	A91-635	4.5	6.0	5.0	4.0
187	97-SCEC- 219	4.5	5.3	3.3	5.0
188	97-CNC-254	4.5	6.0	4.0	3.7
189	A96-386	4.4	5.3	4.3	6.0
190	CVB 19863	4.4	5.7	4.0	3.7
191	Blacksburg	4.4	4.0	5.3	4.7
192	Huntsville	4.4	6.0	8.0	3.0
193	AG K982	4.4	5.0	7.0	3.7
194	Bel 21	4.3	7.0	2.7	3.3
195	Blue Chip	4.3	3.7	3.0	5.3
196	Baron	4.3	5.3	2.7	5.7
197	AG K986	4.3	6.3	4.0	2.3
198	Classic	4.2	7.7	5.7	3.0
199	Crest	4.2	2.3	3.0	5.0
200	H94-171	4.1	5.3	4.3	4.3
201	Eagleton	4.1	6.0	2.7	3.7
202	AG-K984	4.1	4.7	5.7	4.7
203	CVB 19111	4.0	5.7	2.7	4.3
204	CPA-421	4.0	2.7	5.0	5.7
205	Muddy Pk	3.9	6.7	4.0	1.7
206	Nassau	3.9	5.0	4.7	3.7
207	CAS-NA	3.9	2.0	5.0	5.7
208	AG K987	3.9	6.3	3.3	3.3
209	94AN-8	3.8	3.3	3.3	5.0
210	Roselawn	3.7	5.3	6.7	2.0

(Continued)

Table 10 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Establishment ² Sept. 1999	Color ³ Dec. 1999	Leaf Spot ⁴ May 1999
211	Miracle	3.7	5.3	1.3	4.3
212	Freedom	3.7	1.7	5.7	6.0
213	S-21	3.7	7.0	5.7	1.7
214	95AN-24	3.6	2.7	5.7	5.7
215	AG K985	3.6	4.3	6.3	3.7
216	Sidekick	3.6	3.3	4.7	4.7
217	CVB 17921	3.5	3.7	2.0	4.7
218	95AN-26	3.4	2.0	5.0	5.0
219	Reveille TBxKB hyb	2.5	4.3	4.3	4.3
	LSD at 5% =	0.9	1.1	1.5	1.4

¹9 = best turf quality

²9 = best establishment

³9 = darkest green color

⁴9 = least leaf spot

Table 11. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1998 at Pittstown, NJ. (Low Maintenance Kentucky Bluegrass Test-Pittstown.)

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Emergence ² Oct. 1998	Establish- ment ³ Oct. 1998	Winter Color ⁴ March 1999	Cover ⁵ May 1999	Color ⁶ May 1999	Live Green Tissue ⁷ Aug. 1999
1	Moonlight	6.4	2.3	6.3	5.0	7.3	8.0	5.3
2	A95-1064	6.2	4.0	7.0	6.7	8.7	7.0	7.0
3	A96-715	6.1	3.3	6.7	5.0	7.7	6.7	6.0
4	Blackstone	6.1	4.0	7.0	6.3	7.3	6.0	5.3
5	Liberator	6.0	4.7	7.0	4.0	7.3	6.7	6.7
6	A96-328	6.0	5.0	7.0	5.0	6.3	5.0	6.3
7	A95-439	6.0	2.3	5.7	4.7	7.7	7.0	6.7
8	A96-415	5.9	3.7	6.3	6.0	7.0	6.7	7.7
9	Midnight	5.9	3.7	6.3	4.0	7.3	6.7	5.0
10	A96-402	5.8	4.3	7.3	5.3	7.7	6.7	6.3
11	A96-407	5.8	2.0	6.3	5.3	7.3	5.7	6.0
12	A96-396	5.7	4.7	7.0	5.7	7.7	5.3	6.0
13	H94-707	5.7	2.0	6.0	4.3	6.7	6.3	4.7
14	A95-410	5.7	2.7	6.0	5.0	8.7	4.3	4.7
15	A96-386	5.7	4.0	7.0	5.0	7.3	5.7	5.3
16	A90-287	5.7	4.3	7.7	3.7	7.7	4.7	5.7
17	Langara	5.7	4.3	7.3	4.3	7.0	5.3	6.0
18	Bordeaux	5.6	5.3	8.0	5.3	8.3	6.0	5.0
19	A95-418	5.6	3.7	7.0	5.0	7.0	6.3	5.3
20	A96-423	5.6	5.0	7.7	5.3	7.0	5.7	5.7

(Continued)

Table 11 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Emergence ² Oct. 1998	Establish- ment ³ Oct. 1998	Winter Color ⁴ March 1999	Cover ⁵ May 1999	Color ⁶ May 1999	Live Green Tissue ⁷ Aug. 1999
21	Princeton P-105	5.6	3.7	6.7	4.3	7.3	5.3	5.3
22	H94-232	5.6	3.3	6.3	4.7	7.7	4.3	4.7
23	Wildwood	5.6	5.0	7.7	5.7	8.3	5.7	6.0
24	A96-763	5.5	5.0	7.3	4.0	7.7	6.0	6.0
25	A93-201	5.5	3.3	6.0	5.3	8.7	3.7	5.0
26	H94-374	5.5	5.0	7.7	4.7	8.7	4.7	5.0
27	A96-451	5.5	3.3	6.0	5.7	7.0	5.3	5.3
28	ZPS-204	5.5	5.3	7.7	4.3	9.0	4.3	4.7
29	A96-324	5.4	4.0	7.3	4.7	9.0	5.3	5.7
30	A93-330	5.4	3.3	7.3	4.7	7.0	7.0	4.7
31	Unique	5.4	1.7	4.7	4.7	6.0	6.7	6.3
32	A93-453	5.3	4.3	7.7	2.7	7.0	5.0	5.3
33	A96-332	5.3	4.3	7.0	4.3	8.3	5.0	6.0
34	A96-408	5.3	3.0	6.7	5.0	6.7	6.7	5.0
35	A96-351	5.3	4.3	6.7	5.3	8.3	5.3	5.3
36	H92-558	5.3	4.0	7.3	3.3	6.3	4.3	4.7
37	Cabernet	5.3	4.3	7.3	5.3	8.0	4.7	5.3
38	A96-337	5.3	4.7	7.7	4.0	8.0	4.7	4.7
39	A96-416	5.3	4.7	7.0	5.0	7.7	4.7	6.0
40	A96-427	5.3	5.0	7.3	4.3	8.0	5.0	5.0

(Continued)

Table 11 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Emergence ² Oct. 1998	Establish- ment ³ Oct. 1998	Winter Color ⁴ March 1999	Cover ⁵ May 1999	Color ⁶ May 1999	Live Green Tissue ⁷ Aug. 1999
41	A93-417	5.3	4.3	7.3	3.3	7.0	5.0	5.0
42	H92-557	5.3	3.3	6.7	3.0	7.0	4.7	5.3
43	A96-360	5.2	3.7	6.7	4.3	5.7	5.3	5.3
44	A96-361	5.2	3.7	6.3	4.3	7.3	5.0	5.0
45	A96-766	5.2	2.7	5.7	4.7	6.0	6.7	5.3
46	Explorer	5.2	3.0	6.3	4.3	6.7	5.7	5.0
47	Alpine	5.2	3.7	7.0	4.0	6.0	5.3	4.7
48	A96-348	5.2	3.0	6.0	4.3	6.3	5.7	5.3
49	A96-424	5.2	4.7	7.7	4.0	8.0	6.0	5.3
50	A96-481	5.2	3.3	7.0	4.7	8.0	4.3	4.7
51	Dragon	5.2	5.0	7.0	4.3	8.0	3.3	5.3
52	Indigo	5.2	4.0	6.3	4.7	6.3	5.7	6.7
53	A96-739	5.1	5.7	7.3	4.3	7.7	5.7	5.3
54	Blacksburg	5.1	1.0	3.0	4.0	5.3	6.0	4.7
55	A84-413	5.1	3.7	6.7	3.7	7.0	5.0	5.3
56	A97-307	5.1	4.7	8.0	5.0	8.7	3.7	5.0
57	SCR-320	5.1	1.0	3.7	4.0	4.7	5.7	6.3
58	Shamrock	5.0	3.0	6.0	5.0	7.3	4.0	5.7
59	A96-418	5.0	4.7	7.0	4.0	8.0	5.3	5.3
60	CNC-254	5.0	2.7	6.0	4.7	9.0	4.0	4.7

(Continued)

Table 11 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Emergence ² Oct. 1998	Establish- ment ³ Oct. 1998	Winter Color ⁴ March 1999	Cover ⁵ May 1999	Color ⁶ May 1999	Live Green Tissue ⁷ Aug. 1999
61	SCEC-196	5.0	4.7	7.7	6.7	9.0	4.0	5.3
62	ZPS-309	5.0	2.0	5.3	4.3	7.7	4.0	5.7
63	SROKBG 8	5.0	1.0	3.0	3.7	5.3	5.0	6.7
64	SROKBG 6	4.9	1.0	3.0	3.7	4.3	4.7	7.3
65	A93-200	4.9	5.7	7.7	5.0	9.0	3.3	5.3
66	Samoa	4.9	7.0	8.3	3.0	8.3	4.7	4.3
67	A91-702	4.8	5.7	8.3	5.3	9.0	4.0	5.7
68	A91-703	4.8	6.0	9.0	5.0	8.7	4.0	5.0
69	SCEL-219	4.8	2.7	5.3	5.0	6.7	3.7	5.7
70	Touchdown	4.8	3.3	6.7	4.7	7.3	3.3	5.7
71	America	4.7	3.7	6.7	4.0	6.7	4.3	5.3
72	Roselawn	4.7	5.0	7.3	4.3	8.7	3.3	5.0
73	H94-225	4.7	3.7	7.3	5.0	7.7	5.7	4.3
74	A97-30	4.7	5.0	7.3	5.0	8.3	3.7	4.7
75	SCR-282	4.5	1.0	3.3	2.7	6.0	4.0	5.7
76	Dellwood	4.5	5.0	6.7	5.3	9.0	3.7	4.7
77	SCEC-204	4.5	4.3	7.3	4.3	9.0	3.7	5.0
78	SCEC-183	4.4	4.3	7.7	6.3	9.0	2.7	5.0
79	Pp 8	4.4	2.0	5.3	4.7	8.0	3.7	3.3
80	Liberty	4.4	1.0	3.3	3.3	5.0	4.3	5.3

(Continued)

Table 11 (continued).

	Cultivar or Selection	Turf Quality ¹ 1999 Avg.	Emergence ² Oct. 1998	Establishment ³ Oct. 1998	Winter Color ⁴ March 1999	Cover ⁵ May 1999	Color ⁶ May 1999	Live Green Tissue ⁷ Aug. 1999
81	Bel 21	4.3	5.3	8.3	2.7	9.0	3.3	2.7
82	SCEC-194	3.9	4.0	7.3	3.7	8.7	2.7	4.3
83	SCEC-157	3.9	1.7	4.3	4.3	6.0	3.7	2.0
84	Sidekick	3.9	1.3	4.0	3.3	5.7	3.3	3.7
85	CAS-NA	3.6	1.0	3.0	3.5	3.3	5.0	3.3
86	94AN-8	3.5	1.0	3.0	4.5	3.0	5.3	5.0
87	95AN-24	3.4	1.3	2.3	4.0	4.0	5.0	4.0
88	Reveille TB x KB hyb	2.8	1.0	4.0	3.5	2.7	3.3	4.0
89	SROKBG 7	2.4	3.0	6.7	3.0	8.3	5.0	1.0
90	Tekapo Orch. grass	2.1	8.0	9.0	1.0	9.0	2.0	2.3
	LSD at 5% =	0.5	1.3	1.0	1.2	1.4	1.0	1.5

¹9 = best turf quality²9 = best emergence³9 = best establishment⁴9 = best winter color⁵9 = most cover⁶9 = darkest green color⁷9 = most live green tissue

Table 12. Yearly nitrogen (N) applied and mowing height (Ht) on Kentucky bluegrass tests established at Adelphia, North Brunswick, and Pittstown, NJ.

	1995		1996		1997		1998		1999	
	N ¹	Ht ²	N	Ht	N	Ht	N	Ht	N	Ht
Table 1 (1994 Adelphia)	5.6	1.5	3.6	1.5	2.8	1.5	2.4	1.5	0.7	1.5
Table 2 (1994 Adelphia)	6.6	1.5	3.6	1.5	2.8	1.5	2.4	1.5	0.7	1.5
Table 3 (1995 North Brunswick)			3.8	1.5	4.6	1.5	2.5	1.5	2.0	1.5
Table 4 (1995 Adelphia)			4.9	1.5	5.2	1.5	3.6	1.5	2.8	1.5
Table 5 (1995 North Brunswick)			1.6	3.0	1.7	3.0	0.6	1.5	0	3.0
Table 6 (1996 North Brunswick)					3.7	1.5	2.3	1.5	2.8	1.5
Table 7 (1996 Adelphia)					4.3	1.5	4.5	1.5	2.8	1.5
Table 8 (1997 Adelphia)							2.0	1.5	3.5	1.5
Table 9 (1998 North Brunswick)									1.9	2.5
Table 10 (1998 Adelphia)									2.8	1.5
Table 11 (1998 Pittstown)									1.3	2.5

¹Annual N applied (lbs/1000 ft²)

²Mowing height in inches