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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 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. It also allows these professionals to 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 1996 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 represents performance of turfgrass cultivars and selections in New Jersey turf trials. The primary objective of these papers is to facilitate the timely dissemination of original turfgrass research for use by the turfgrass industry.

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Dr. Ann B. Gould, Editor
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PERFORMANCE OF KENTUCKY BLUEGRASS CULTIVARS AND SELECTIONS IN NEW JERSEY TURF TRIALS

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Kentucky bluegrass is an attractive grass that, through the development of an extensive rhizome system, forms a well-knit, durable sod. It is adapted to a wide range of soils and climates, and as a result, is used extensively for forage, turf, and soil stabilization and conservation. Many acres of excessively tilled and severely eroded soils have been stabilized and restored to attractive lawns and productive pastures through the use of this grass. 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 also 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 two main types of usage for Kentucky bluegrass: i) forage and conservation and ii) specialized turf. Common-type bluegrasses are widely used for soil conservation, pastures, and lower maintenance turf. Common types have erect, narrow leaves, which is typical of plants predominating in old pastures and low maintenance lawns. Early maturity, good stress tolerance, and the ability to survive dry summers in a dormant state are some general characteristics of common Kentucky bluegrasses. Turf-type Kentucky bluegrasses have a lower growth profile, respond well to higher maintenance regimes, tolerate closer mowing, and have greater resistance to leaf spot disease than the common types.

Kentucky bluegrass is an apomictic species that exhibits a great range of genetic diversity. Although apomixis presents a challenge to breeders attempting to improve Kentucky bluegrass, it provides the opportunity to produce true-to-type seed from superior genotypes. Cultivar development methods used with Kentucky bluegrass may include i) selection of naturalized ecotypes; ii) selection of single, highly apomictic plants from old pastures or turfs; iii) blending of single plant progenies; and iv) selection of single, highly apomictic plants from breeding programs using intraspecific or interspecific hybridization.

The Kentucky bluegrass improvement program at Rutgers involves extensive field evaluation of collections and new material developed in the breeding program as well as the evaluation of cultivars or selections developed by other breeders. Additionally, the turfgrass research program at Rutgers participates in the National Turfgrass Evaluation Program (NTEP), which is housed by the United States Department of Agriculture and Agricultural Research Service in Beltsville, Maryland and is sponsored by the National Turfgrass Foundation.

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PROCEDURES

Eight trials were seeded in September between 1991 and 1995 at North Brunswick or Adelphia, New Jersey (Tables 1 to 8). One low maintenance test was located at Adelphia (Table 6). The other tests were conducted under medium-high maintenance regimes. Two of the tests contained all the entries from the NTEP sponsored 1995 National Kentucky Bluegrass Trial (Tables 7 and 8). The soils at the two 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 lbs/1000 ft^2), except for the test seeded in 1995 at North Brunswick (Table 7) 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 heights for each test are presented in Table 9. 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 ft^2. Mowing was frequent enough (two or three times per week during active growth) to avoid excessive defoliation and the accumulation of clippings. Reel mowers were used to maintain a 1.5 or 2 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 or bensulide, and broadleaf weeds were controlled by an autumn application of 2,4-D and dicamba. No other pesticides were applied. Bensulide was applied in the late-summer of 1996 to the 1995 Kentucky bluegrass test at North Brunswick (Table 7) to control germination of *Poa annua*. Soil pH was normally maintained between 6.0 and 6.5 with agricultural limestone. Tests were irrigated during establishment and when needed to avoid severe drought stress. The low maintenance test (Table 6) was irrigated only during establishment.

All tests were rated frequently throughout the growing season for turf quality (i.e., attractive color, leaf texture, adequate density, uniformity, and freedom from disease and insect damage). Other characteristics, including billbug damage (Tables 3 and 6), winter color (Tables 4, 5, and 7), seedling vigor (Tables 7 and 8), turf color (Tables 7 and 8), spring greenup (Table 7), summer patch disease (Table 7), and *Poa annua* encroachment (Table 7) were evaluated separately on some tests when differences between entries were apparent. 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 of these eight tests are presented in Tables 1 through 8. Entries in each table are ranked according to their overall average (multi-year) quality. Additionally, the characteristics of billbug damage, winter color, seedling vigor, color, leaf texture, summer patch disease, and *Poa annua* encroachment observed in various tests are reported below.

Billbug damage. Billbug (*Sphenophorus* spp.) larvae feeding can result in severe damage of Kentucky bluegrass turf during the early- to mid-summer months. Larvae will feed within the leaf sheaths and crown area of bluegrass plants. Tillers of damaged plants are easily pulled out of a turf, leaving the crown and roots behind. Damage from billbug larvae can be easily misdiagnosed as drought stress injury if a thorough examination of the damaged tillers is not

performed. Damage ratings represented in Tables 3 and 6 indicate that there is tolerance or resistance within Kentucky bluegrasses to billbug insects. More research is needed to determine what mechanisms confer tolerance or resistance to billbugs. A greater understanding of these mechanisms may provide the basis to develop techniques to screen for enhanced resistance to billbugs.

Genetic Color. Genetic color is one readily observed characteristic of Kentucky bluegrass that demonstrates the broad genetic diversity that exists within the species. Many people are interested in the darkness of green color that a cultivar can exhibit (Tables 7 and 8). The retention of green color during winter months is another aspect of turf quality that may be important to some growers or consumers (Tables 4, 5, and 7).

Seedling vigor. Seedling vigor (Tables 7 and 8) is an important issue to sod growers and those establishing a Kentucky bluegrass turf from seed. Seedling vigor can be influenced by many factors including genetics, environment, management, and after-ripening dormancy. Freshly harvested seed often possess a dormancy factor that delays the germination of the seed under conditions of warm days and warm nights. This dormancy is gradually broken during storage at warm temperatures and is less pronounced if germination occurs during cool nights with frequent rainfall. Thus, plantings that utilize recently harvested seed lots that exhibit low seedling vigor during warm days and warm nights may be exhibiting varying degrees of after-ripening dormancy rather than genetic differences between varieties.

Leaf texture. Leaf texture ratings reflect the width of the leaf blade in a turf (Table 7). This is another readily visible character that reflects the broad genetic variation among cultivars and selections of Kentucky bluegrass. Leaf texture is also influenced by management factors, pests, and environmental conditions that affect shoot density of a turf; as shoot density increases, the width of leaf blades is reduced due to competition.

Summer patch disease. Summer patch, caused by *Magnaporthe poae*, is a root-infecting disease that can cause severe devastation of Kentucky bluegrass turfs. This disease is most severe on turfs that are managed at lower mowing heights and high nitrogen (particularly nitrate-N) fertility. In addition, turfs grown on soils that are highly compacted and have a pH greater than 6.5 are likely to have greater disease severity. The test established in September 1995 at North Brunswick became infected with summer patch during 1996. Ratings of disease damage indicated that Kentucky bluegrass cultivars and selections vary in resistance to this disease (Table 7). Further evaluation of this characteristic is needed to determine the stability of this response.

***Poa annua* encroachment.** *Poa annua* is a winter annual grassy weed that often invades turf grown under moderate to high levels of maintenance. Severe invasion of *Poa annua* into a turf is typically associated with low mowing, high fertility, regular supplemental irrigation, and compacted, poorly drained soils. A dense vigorous turf can limit the invasion of many weeds, including *Poa annua*. Data collected in May 1996 from the 1995 trial established at North Brunswick indicated that cultivars and selections differed in the amount of *Poa annua* encroachment during establishment (Table 7). Many of the cultivars or selections having a low seedling vigor rating had a relatively high population of *Poa annua* develop in the plots between the September 1995 seeding and May 1996 rating. Continued evaluation of the *Poa annua* population in this trial will indicate the potential for cultivars and selections to exclude *Poa annua* over many years.

Kentucky bluegrass is grown for many uses under a diverse range of soil, environmental, and management conditions. As a result, there is a demand for cultivars that will produce a durable high quality turf for an assortment of uses under a broad range of conditions. Improved resistance to important disease and insect pests, heat, drought, close mowing, shade, and wear are needed in cultivars that are expected to perform well under many situations.

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Table 1. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1991 at Adelphia, NJ.

	Cultivar or Selection	Turf Quality[1] 1992-1996 Avg.	1992 Avg.	1993 Avg.	1994 Avg.	1995 Avg.	1996 Avg.
1	Midnight	7.2	7.4	7.6	7.1	7.0	6.8
2	Princeton 104	6.6	6.8	6.2	5.8	6.7	7.5
3	America	6.5	7.5	6.4	6.8	5.9	5.9
4	Pick A81-1372	6.5	6.5	6.4	7.1	5.8	6.5
5	Princeton-105	6.4	6.7	6.5	6.3	6.3	6.3
6	Blacksburg	6.4	6.0	6.8	6.2	6.8	6.4
7	SR-2000	6.4	7.2	6.5	6.5	5.8	6.1
8	PST-638	6.4	6.9	6.3	6.3	6.4	6.0
9	SRX 2109	6.3	7.0	6.0	6.1	5.9	6.6
10	PST 514	6.2	7.2	5.7	5.8	5.7	6.5
11	Eclipse	6.1	6.5	6.1	6.4	6.3	5.5
12	Wildwood	6.1	7.2	5.7	5.8	5.7	6.1
13	NJ-1190	6.1	7.2	6.0	5.3	5.8	6.1
14	Unique	5.8	6.6	5.7	6.2	5.0	5.4
15	NuBlue	5.8	6.9	6.5	5.0	5.2	5.4
16	Alpine	5.8	6.1	5.3	5.6	6.3	5.5
17	Limousine	5.8	6.6	5.6	5.1	5.5	6.1
18	Nustar	5.8	6.3	5.2	5.6	6.4	5.3
19	Fylking	5.6	6.7	5.5	5.1	6.2	4.7
20	PST-A4-803	5.6	6.9	6.1	4.9	4.7	5.5
21	Nassau	5.6	6.8	5.7	5.4	4.5	5.6
22	Ikone	5.6	7.0	6.0	5.0	4.8	5.2
23	Opal	5.6	6.8	5.8	5.8	4.9	4.7
24	Pick 855	5.5	6.3	5.3	5.2	6.0	4.8
25	Broadway	5.5	6.0	5.6	5.1	5.5	5.4
26	Shamrock	5.5	6.5	5.6	5.4	4.6	5.4
27	Banff	5.5	6.3	6.0	5.5	4.4	5.1
28	Washington	5.4	6.0	5.3	5.2	5.8	4.6
29	Preakness	5.3	6.2	5.0	5.6	5.0	5.1
30	Suffolk	5.3	6.0	5.7	5.4	4.2	5.3

Table 1 (continued).

	Cultivar or Selection	1992-1996 Avg.	1992 Avg.	1993 Avg.	1994 Avg.	1995 Avg.	1996 Avg.
		----------Turf Quality[1]----------					
31	Canterbury	5.3	6.3	5.6	4.9	4.4	5.4
32	PST-A84-405	5.3	5.9	5.1	5.0	4.5	6.0
33	Ram I	5.3	5.4	5.5	4.4	5.7	5.4
34	Adelphi	5.3	6.0	5.1	5.3	4.6	5.3
35	Miranda	5.2	5.5	5.3	4.9	5.5	4.9
36	Livingston	5.2	6.1	5.3	5.1	4.5	5.1
37	Georgetown	5.2	6.4	5.6	5.1	4.0	4.9
38	Baron	5.0	5.7	5.3	4.3	5.1	4.7
39	Glade	5.0	3.9	5.5	4.9	6.0	4.9
40	Trenton	5.0	6.0	5.1	4.8	4.1	4.9
41	H86-690	5.0	5.2	4.6	5.5	5.0	4.5
42	HV 125	5.0	6.0	4.6	4.6	4.5	5.3
43	Dragon	4.9	6.1	5.4	4.4	4.1	4.5
44	Fortuna	4.9	5.7	5.1	4.4	5.4	3.9
45	Amazon	4.9	5.8	4.7	4.4	5.0	4.4
46	Cheri	4.8	6.0	4.8	3.7	4.5	4.9
47	Sydsport	4.7	6.1	4.6	4.1	4.1	4.9
48	H86-190	4.7	5.4	4.2	4.2	5.0	4.6
49	SR-2100	4.7	5.4	4.5	4.6	4.6	4.4
50	Silvia	4.6	5.7	4.2	4.2	4.4	4.4
51	H86-749 NB	4.5	4.3	4.1	5.3	4.6	4.3
52	4 Aces	4.5	5.1	5.2	4.1	4.3	4.2
53	Merit	4.5	5.5	5.1	3.6	4.6	3.7
54	Eagleton	4.4	4.4	4.3	4.4	4.1	4.6
55	Voyager	4.3	4.3	4.2	5.0	4.0	4.2
56	Alene	3.9	3.4	3.6	3.9	3.8	4.4
57	Huntsville	3.8	3.0	3.4	4.3	3.9	4.3
58	Park	3.3	3.4	2.9	3.5	3.2	3.6
59	Garfield	3.2	3.1	2.6	3.1	3.5	3.5
60	Pomeroy	3.2	3.1	2.5	3.0	3.4	3.7

Table 1 (continued).

	Cultivar or Selection	Turf Quality[1] 1992-1996 Avg.	1992 Avg.	1993 Avg.	1994 Avg.	1995 Avg.	1996 Avg.
61	Minnfine	3.1	2.3	1.9	3.3	3.7	4.3
62	S-21	3.1	2.6	3.0	3.0	3.4	3.5
63	Kenblue	2.8	2.4	2.2	2.6	3.1	3.7
	LSD at 5% =	0.5	0.6	0.7	0.9	0.8	0.9

[1] 9 = best turf quality

Table 2. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1992 at North Brunswick, NJ.

	Cultivar or Selection	Turf Quality[1] 1993-1996 Avg.	1993 Avg.	1994 Avg.	1995 Avg.	1996 Avg.
1	SRX-2109	6.1	5.8	6.8	6.5	5.2
2	ZPS A81-2183	6.1	6.4	6.2	6.3	5.6
3	PST-638	6.1	6.5	5.8	5.9	6.1
4	America	5.8	6.1	6.3	5.4	5.2
5	Blacksburg	5.8	6.2	6.1	5.5	5.2
6	Suffolk	5.8	5.4	5.8	6.4	5.5
7	PST C-303	5.7	5.1	6.0	6.3	5.4
8	Princeton-105	5.6	6.0	6.3	4.9	5.3
9	Washington	5.6	5.7	5.9	5.4	5.2
10	Unique	5.6	6.0	6.3	5.3	4.9
11	Columbia	5.6	5.3	5.8	6.1	5.1
12	Shamrock	5.5	5.6	6.2	5.0	5.1
13	Freedom	5.5	5.0	5.6	6.4	5.0
14	H86-697	5.5	6.5	5.8	5.4	4.2
15	NuStar	5.4	5.8	6.0	4.5	5.4
16	Eclipse	5.4	5.9	5.7	4.7	5.3
17	NJ-1190	5.4	6.2	6.1	5.1	4.1
18	Limousine	5.4	5.4	5.7	5.9	4.4
19	Georgetown	5.3	5.5	5.3	5.3	5.2
20	PST A7-244	5.3	6.2	5.9	4.4	4.7
21	Lofts1757	5.3	5.3	5.7	5.7	4.5
22	Sydsport	5.3	6.0	5.1	4.8	5.3
23	H90-1149	5.3	5.2	5.3	5.8	4.8
24	Julia	5.3	6.3	5.7	4.5	4.6
25	Livingston	5.3	6.1	5.8	4.8	4.4
26	Adelphi	5.2	5.7	5.6	5.1	4.5
27	Apex	5.2	6.4	4.7	4.6	5.1
28	H90-1172 Cascade	5.2	5.3	5.3	5.0	5.2
29	Glade	5.2	5.7	5.8	4.3	4.8
30	Midnight	5.1	4.7	5.6	4.7	5.4

Table 2 (continued).

	Cultivar or Selection	Turf Quality[1] 1993-1996 Avg.	1993 Avg.	1994 Avg.	1995 Avg.	1996 Avg.
31	A84-587 Balt City	5.1	5.2	5.2	5.3	4.6
32	J34-99	5.1	5.2	5.3	5.1	4.7
33	Optigreen	5.0	6.7	5.3	4.1	4.1
34	Bel 21	5.0	5.0	5.1	4.8	5.2
35	J-11-94	5.0	5.3	4.8	5.3	4.7
36	Cheri	5.0	6.2	5.2	4.1	4.3
37	J-327	4.9	5.8	5.4	4.5	4.0
38	Ram-I	4.9	5.8	5.1	4.2	4.4
39	Caliber	4.8	5.6	5.1	4.4	4.1
40	Dragon	4.8	5.6	4.7	4.4	4.3
41	Voyager	4.8	5.4	4.7	4.5	4.4
42	Eagleton	4.8	5.3	4.9	4.4	4.4
43	Tenn 658 IC	4.6	5.2	4.2	4.6	4.6
44	Nustar	4.6	5.5	5.1	3.8	4.0
45	Baron	4.6	5.5	5.9	3.7	3.1
46	Nublue	4.6	5.5	4.8	4.5	3.4
47	A-34	4.5	4.9	4.9	4.6	3.6
48	H87-301 RSP	4.5	5.1	4.4	3.5	5.0
49	4 Aces	4.4	5.1	4.9	4.2	3.3
50	Fylking	4.4	4.9	4.8	4.0	3.8
51	Nassau	4.4	5.4	3.9	4.0	4.1
52	Belmont	4.3	5.8	4.1	3.8	3.5
53	Classic	4.2	5.0	4.6	4.1	3.2
54	Merit	4.2	5.2	4.8	3.8	3.1
55	Nimbus	4.0	4.9	4.3	3.9	2.9
56	Amazon	4.0	5.2	4.1	3.2	3.4
57	H86-190	3.8	4.9	4.3	3.3	2.6
58	Huntsville	3.7	4.4	3.7	3.5	3.3
59	BlueStar	3.6	5.5	3.7	2.9	2.2
60	Newport	3.4	4.4	3.4	3.1	2.5

Table 2 (continued).

	Cultivar or Selection	1993-1996 Avg.	1993 Avg.	1994 Avg.	1995 Avg.	1996 Avg.
		----------Turf Quality[1]----------				
61	Kenblue	3.1	3.9	3.0	2.6	2.8
62	S-21	2.9	4.4	2.4	2.5	2.1
63	Pomeroy	2.8	4.1	2.6	2.4	2.0
64	Garfield	2.8	4.1	2.5	2.2	2.4
65	Minnfine	2.6	3.4	2.3	2.2	2.6
	LSD at 5% =	0.7	0.7	0.9	1.0	1.1

[1] 9 = best turf quality

Table 3. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in October 1993 at Adelphia, NJ.

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Billbug Damage[2] July 1996
1	A83-876 Fine type	6.8	6.8	6.8	8.3
2	A85-301 A20-6A OP	6.8	6.9	6.7	8.3
3	Midnight	6.7	6.9	6.6	8.3
4	A91-706 Ewing 5 der	6.7	6.7	6.8	8.0
5	A90-327 A25xBG	6.7	6.7	6.6	9.0
6	Ram I	6.6	6.3	6.9	7.7
7	Glade	6.2	6.5	6.0	7.7
8	A84-123 Adelphi der	6.1	6.2	6.0	8.3
9	Wildwood	6.1	6.7	5.5	6.7
10	Julia	5.9	6.0	5.9	7.3
11	SRX 2109	5.9	5.8	5.9	6.9
12	Princeton-105	5.8	6.0	5.6	7.2
13	Princeton-104	5.8	6.0	5.6	8.0
14	Eclipse	5.8	5.8	5.7	7.7
15	Washington	5.6	5.7	5.5	8.3
16	C-74	5.6	5.7	5.5	8.7
17	A91-609 Julia der	5.6	5.6	5.6	7.7
18	H90-1149	5.5	5.7	5.3	7.2
19	NuStar	5.5	6.0	5.0	5.3
20	A91-507 Del	5.4	5.4	5.4	7.7
21	Plush	5.3	5.6	5.0	7.0
22	H87-199 Patch 54	5.3	5.7	4.9	7.0
23	Limousine	5.3	5.9	4.7	6.7
24	Rita	5.2	5.1	5.2	7.2
25	Dragon	5.2	5.6	4.8	7.5
26	Penn Pro	5.1	5.0	5.2	6.7
27	Belturf	5.0	5.0	5.1	9.0
28	Classic	5.0	5.4	4.6	5.7
29	Adelphi	5.0	5.2	4.9	7.9
30	Freedom	5.0	4.9	5.1	7.3

Table 3 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Billbug Damage[2] July 1996
31	Amazon	5.0	5.0	4.9	7.0
32	Trenton	4.9	4.9	4.9	6.0
33	A84-587 Balt City	4.9	5.2	4.6	5.8
34	Belmont	4.9	5.1	4.6	5.0
35	Fylking	4.9	4.8	4.9	6.3
36	Cheri	4.8	4.6	5.1	6.3
37	H86-190	4.8	5.0	4.7	6.0
38	Shamrock	4.8	4.9	4.8	6.9
39	NuBlue	4.8	5.1	4.4	5.7
40	Suffolk	4.7	4.4	4.9	6.0
41	Lofts 1757	4.7	4.6	4.7	6.0
42	Rugby	4.6	4.7	4.6	6.0
43	Apex	4.6	4.7	4.4	5.3
44	Merion	4.6	5.2	4.0	6.3
45	Nassau	4.5	4.4	4.5	5.7
46	Huntsville	4.4	4.3	4.5	8.0
47	Georgetown	4.3	4.3	4.3	5.7
48	Wabash	4.2	4.1	4.4	8.3
49	S-21	4.2	4.6	3.8	8.3
50	Sydsport	4.2	4.2	4.2	3.7
51	Baron	4.1	4.8	3.3	5.7
52	Pomeroy	3.8	4.1	3.5	7.7
	LSD at 5% =	0.9	1.0	1.0	2.0

[1] 9 = best turf quality
[2] 9 = least billbug damage

Table 4. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1994 at Adelphia, NJ. (Medium-high Maintenance Test)

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Winter Color[2] Dec. 1996
1	Midnight	7.5	7.0	7.9	5.0
2	Wildwood	7.1	7.1	7.2	6.3
3	Blacksburg	6.8	6.7	7.0	5.0
4	Princeton 105	6.8	6.5	7.1	4.0
5	ZPS A81-2183	6.7	6.5	7.0	5.6
6	A91-706 Ewing der	6.7	6.1	7.2	5.7
7	Unique	6.6	6.8	6.3	5.5
8	America	6.5	7.0	6.0	5.3
9	C-74	6.5	6.6	6.4	6.0
10	SRX 2109	6.5	6.2	6.8	5.7
11	Apex	6.4	6.1	6.7	4.0
12	A83-876	6.3	6.6	6.0	4.7
13	H90-1149	6.3	6.5	6.0	6.3
14	NJ-1190	6.1	6.7	5.5	4.0
15	H86-697	6.1	6.2	5.9	5.7
16	A91-630	6.1	5.6	6.5	6.7
17	SR A82-2005	6.1	6.5	5.6	4.3
18	Julia	6.0	5.5	6.5	5.7
19	Ram I	6.0	6.0	6.0	5.3
20	Aspen	6.0	5.6	6.3	6.0
21	Limousine	5.9	6.3	5.5	5.0
22	LTP-621	5.9	5.6	6.2	6.8
23	NuStar	5.9	5.1	6.6	5.7
24	Eclipse	5.8	5.7	5.9	5.0
25	Glade	5.8	5.4	6.1	5.0
26	Rita	5.7	6.1	5.5	5.3
27	Preakness	5.6	5.7	5.5	5.8
28	Princeton 104	5.6	5.4	5.8	4.7
29	LTP-620	5.6	5.4	5.7	5.9
30	A91-725	5.5	5.2	5.8	5.7

Table 4 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Winter Color[2] Dec. 1996
31	Fylking	5.5	4.7	6.3	7.0
32	Adelphi	5.4	5.5	5.3	5.3
33	Trenton	5.3	5.1	5.5	7.7
34	Washington	5.3	5.0	5.7	4.7
35	NuBlue	5.3	5.2	5.5	6.3
36	Shamrock	5.3	5.5	5.1	6.3
37	Freedom	5.3	5.5	5.0	6.3
38	Rugby	5.3	5.3	5.2	7.3
39	Suffolk	5.2	5.0	5.4	7.7
40	Classic	5.2	5.4	5.0	6.7
41	Cheri	5.1	5.4	4.8	6.0
42	Lofts 1757	5.0	5.1	4.9	6.7
43	Kelly	5.0	4.9	5.1	4.0
44	Belmont	5.0	5.0	5.0	5.7
45	Liberty	4.9	5.1	4.8	7.3
46	Belturf	4.9	5.2	4.7	3.7
47	Sydsport	4.9	5.2	4.6	5.7
48	A84-587 Balt City	4.8	4.3	5.4	6.7
49	Baron	4.8	4.6	5.0	4.0
50	Amazon	4.8	4.8	4.8	5.3
51	Georgetown	4.8	5.1	4.5	7.3
52	Livingston	4.8	4.6	4.9	5.0
53	H90-1121 Rt 130	4.7	4.4	5.0	5.0
54	PST BM3	4.7	4.4	5.0	7.0
55	Penn Pro	4.6	4.6	4.6	5.3
56	Merit	4.6	4.7	4.5	3.0
57	A34	4.4	4.5	4.4	4.7
58	Canterbury	4.4	5.0	3.9	6.7
59	Nimbus	4.3	4.6	4.1	6.3
60	H86-749 NB	4.2	3.9	4.5	3.5

Table 4 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Winter Color[2] Dec. 1996
61	Plush	4.0	3.9	4.0	5.7
62	RSP	3.9	3.9	3.9	4.2
63	Bel 21	3.8	3.7	4.0	5.7
64	Huntsville	3.7	3.5	4.0	5.3
65	S-21	2.9	2.5	3.2	6.0
	LSD at 5% =	0.6	0.7	0.8	1.5

[1] 9 = best turf quality
[2] 9 = best winter color

Table 5. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1994 at Adelphia, NJ. (Medium-high Maintenance Test-2)

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Winter Color[2] Dec. 1996
1	PST-418	7.6	7.4	7.7	5.0
2	Midnight	6.9	6.1	7.7	5.0
3	Blacksburg	6.4	5.8	7.0	5.3
4	Unique	6.1	6.3	5.9	5.7
5	America	6.0	6.1	6.0	6.0
6	A118	5.8	6.0	5.7	4.3
7	Baron	4.5	4.2	4.8	3.3
	LSD at 5% =	0.6	0.7	0.7	1.2

[1] 9 = best turf quality
[2] 9 = best winter color

Table 6. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1994 at Adelphia, NJ. (Low Maintenance Test)

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Billbug Damage[2] July 1996
1	Midnight	7.0	6.5	7.5	7.7
2	Blacksburg	6.8	6.3	7.2	7.0
3	SR A82-2005	6.3	6.7	5.8	7.3
4	Apex	6.2	6.2	6.2	6.0
5	SRX 2109	6.1	6.1	6.1	6.7
6	Ram I	6.1	6.0	6.2	7.0
7	H86-1019 A25xBG	6.1	6.0	6.2	7.5
8	Wildwood	6.0	5.8	6.2	6.0
9	H90-1149	5.9	6.0	5.8	6.0
10	A91-706 Ewing der	5.9	5.5	6.2	6.3
11	A91-714	5.8	5.8	5.8	5.7
12	Rita	5.7	5.6	5.9	6.3
13	H86-697	5.7	6.1	5.2	5.0
14	H86-920 P1exBTE	5.6	5.4	5.9	5.7
15	A82-1272	5.5	5.4	5.5	5.9
16	Unique	5.5	6.0	4.9	5.7
17	ZPS A81-2183	5.4	5.2	5.6	5.7
18	Preakness	5.4	5.5	5.3	6.0
19	Princeton 104	5.3	5.1	5.5	5.7
20	America	5.3	5.8	4.7	6.3
21	A91-625	5.3	5.3	5.3	5.3
22	Cheri	5.3	5.3	5.2	6.7
23	Princeton 105	5.2	5.3	5.0	5.5
24	H86-788 J+J	5.2	5.5	5.0	6.2
25	Washington	5.2	5.0	5.3	6.7
26	A91-626	5.2	5.7	4.6	5.3
27	Eclipse	5.1	5.2	5.1	5.7
28	Fylking	5.1	5.0	5.3	5.7
29	LTP-621	5.1	5.1	5.1	5.5
30	Freedom	5.1	4.9	5.2	6.0

Table 6 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Billbug Damage[2] July 1996
31	Shamrock	5.0	5.0	5.0	5.7
32	Nimbus	5.0	5.1	4.9	5.7
33	Limousine	5.0	5.0	4.9	6.7
34	NuStar	4.9	4.9	5.0	6.7
35	Adelphi	4.9	4.9	4.8	6.3
36	Julia	4.8	5.2	4.5	5.3
37	Classic	4.8	5.1	4.5	5.0
38	Rugby	4.8	5.1	4.5	4.7
39	H90-1121 Rt 130	4.8	5.1	4.5	5.3
40	Livingston	4.8	4.7	4.9	6.3
41	Lofts 1757	4.7	4.8	4.6	5.3
42	RSP	4.7	5.2	4.1	6.2
43	Aspen	4.7	4.8	4.5	5.3
44	Suffolk	4.6	4.6	4.5	5.0
45	Belmont	4.6	4.5	4.7	4.7
46	Plush	4.5	4.6	4.5	5.3
47	H86-749 NB Cem	4.5	4.7	4.3	5.6
48	Georgetown	4.5	4.7	4.2	3.7
49	Sydsport	4.5	4.6	4.3	5.3
50	Baron	4.4	4.5	4.3	5.0
51	A84-587 Balt City	4.3	4.4	4.2	5.0
52	Trenton	4.3	4.4	4.2	3.7
53	Bel 21	4.2	4.6	3.9	5.7
54	Merit	4.2	4.4	4.0	5.7
55	Amazon	4.2	4.3	4.0	5.7
56	Penn Pro	4.0	3.6	4.5	5.0
57	Kelly	4.0	4.4	3.7	5.3
58	Glade	4.0	4.7	3.3	5.3
59	Belturf	4.0	4.9	3.1	6.5
60	Liberty	4.0	4.5	3.4	4.7

Table 6 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Billbug Damage[2] July 1996
61	Huntsville	3.8	4.5	3.1	5.7
62	Canterbury	3.7	3.7	3.6	5.3
63	A34	3.5	3.5	3.5	5.3
64	NuBlue	3.5	4.2	2.7	4.3
65	S-21	3.2	3.6	2.8	6.3
	LSD at 5% =	0.8	0.7	1.2	1.5

[1] 9 = best turf quality
[2] 9 = least billbug damage

Table 7. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1995 at North Brunswick, NJ. (Includes NTEP Medium-High Maintenance Test-1.)

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Sept. 1995	Winter Turf Quality[3] Dec. 1995	Winter Color[4] Feb. 1996	Spring Greenup[5] 1996 Avg.	Turf Color[6] Nov. 1996	Leaf Texture[7] Oct. 1996	Summer Patch[8] Sept. 1996	*Poa annua*[9] May 1996
1	H94-283 VLMP	7.2	6.0	7.7	4.7	4.8	7.7	5.3	7.3	6.3
2	Midnight	7.1	6.7	4.7	3.0	3.2	7.7	6.3	6.7	6.0
3	SR 2000	7.0	4.7	8.0	5.0	5.5	8.0	3.7	7.0	6.3
4	PST-638	6.9	6.2	4.8	5.5	5.6	7.9	6.6	7.5	6.9
5	PST-A418	6.9	4.3	8.3	5.0	4.3	8.3	3.0	6.3	4.3
6	H86-697	6.8	6.3	7.0	6.3	6.5	7.7	4.7	6.3	6.7
7	A466	6.8	4.7	9.0	5.7	5.8	8.0	5.0	5.7	6.3
8	A90-287 Julia der	6.7	6.7	5.2	3.5	4.1	7.2	6.7	7.5	6.7
9	A90-924 Julia der	6.7	5.4	5.2	3.7	4.1	7.3	6.2	7.5	6.0
10	A82-204 VT	6.6	7.3	4.3	4.0	4.8	7.7	6.7	6.7	7.0
11	Julia	6.5	6.0	5.7	4.3	4.5	6.3	7.7	6.7	6.3
12	A93-418 Julia der	6.5	3.7	5.3	4.0	4.5	7.7	5.7	7.3	6.0
13	H86-920 PIExBTE	6.3	7.0	5.0	5.7	6.0	7.0	4.7	7.0	7.3
14	PST-A7-60	6.2	4.7	4.3	3.0	2.5	7.3	8.7	7.3	4.0
15	Princeton 105	6.1	6.0	3.9	4.0	4.0	6.8	7.1	7.1	6.0
16	Indigo	6.1	5.7	5.0	4.0	4.3	7.0	7.0	5.0	6.3
17	America	6.0	7.0	5.5	4.0	4.3	6.5	6.4	7.9	7.4
18	A82-1107 VT	6.0	6.7	6.3	6.7	7.0	6.7	6.7	8.3	8.0
19	Limousine	6.0	6.7	5.7	4.0	3.7	5.3	9.0	7.0	6.0
20	A90-1128 P57xBaron der	6.0	6.7	4.3	4.7	5.3	7.3	6.3	7.0	7.0

Table 7 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Sept. 1995	Winter Turf Quality[3] Dec. 1995	Winter Color[4] Feb. 1996	Spring Greenup[5] 1996 Avg.	Turf Color[6] Nov. 1996	Leaf Texture[7] Oct. 1996	Summer Patch[8] Sept. 1996	*Poa annua*[9] May 1996
21	H90-1149	6.0	5.7	6.0	5.3	6.2	8.0	6.3	8.0	6.3
22	Princeton 104	6.0	6.7	4.7	5.0	5.8	7.0	6.3	6.3	7.3
23	Unique	5.9	6.0	6.7	5.0	4.5	6.3	7.0	8.3	6.3
24	A93-354 America der	5.9	5.7	7.0	4.7	4.8	7.3	4.7	6.3	5.7
25	A90-1413 A25xEO der	5.9	6.0	4.3	5.0	5.2	6.7	7.0	7.7	6.0
26	92-1492-5 A82-1272 der	5.9	7.0	5.7	5.7	5.5	6.3	7.3	6.3	6.7
27	Georgetown	5.8	6.7	5.7	5.7	6.8	7.0	4.7	8.0	7.0
28	Glade	5.8	7.3	3.7	3.3	3.5	6.7	7.3	6.7	6.3
29	NJ-GD	5.8	7.3	3.7	3.3	4.3	7.0	6.7	5.7	6.3
30	860-3 C-74 der	5.8	6.3	5.0	3.0	4.8	8.0	5.0	7.3	6.3
31	A93-405 A25xEO der	5.8	4.7	5.0	4.7	4.5	6.7	6.7	7.3	5.0
32	Nassau	5.8	5.0	7.0	6.3	6.5	6.7	3.7	6.7	6.3
33	Ba 81-058	5.8	5.7	6.7	5.7	5.8	8.0	6.0	8.0	6.0
34	Eclipse	5.8	5.7	5.3	4.3	5.2	7.0	5.0	8.7	5.0
35	Challenger	5.8	6.0	7.3	5.7	5.2	7.3	4.7	6.7	5.0
36	Jefferson	5.8	7.3	3.7	4.7	5.0	7.3	8.0	7.0	7.0
37	Shamrock	5.7	6.4	4.3	3.7	4.1	6.8	6.2	5.8	6.2
38	Apex	5.7	5.7	3.7	2.7	2.3	6.7	7.3	6.0	3.7
39	Platini	5.7	7.0	3.7	4.0	4.0	6.7	7.0	7.7	7.3
40	Ascot	5.7	5.7	5.3	3.0	3.2	7.3	6.0	5.7	4.3

Table 7 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Sept. 1995	Winter Turf Quality[3] Dec. 1995	Winter Color[4] Feb. 1996	Spring Greenup[5] 1996 Avg.	Turf Color[6] Nov. 1996	Leaf Texture[7] Oct. 1996	Summer Patch[8] Sept. 1996	*Poa annua*[9] May 1996
41	SR 2109	5.7	4.3	6.7	5.3	6.0	7.0	5.3	4.3	6.0
42	LTP-621	5.7	6.0	4.4	4.5	4.9	6.2	6.0	6.4	6.5
43	SR 2100	5.6	7.0	4.0	4.0	3.3	8.0	3.7	7.7	6.7
44	A90-1381 A25xEO der	5.6	6.3	4.7	3.3	3.3	7.0	6.0	7.3	5.7
45	A88-744	5.6	6.3	5.0	4.3	5.2	8.0	5.7	8.0	5.3
46	TCR-1738	5.6	4.0	4.7	4.0	3.5	8.0	6.7	6.7	3.0
47	Bartitia	5.6	6.3	6.0	4.0	4.0	6.7	7.0	5.3	7.0
48	Pick 8	5.6	4.3	6.0	5.7	4.5	7.0	5.0	5.7	5.7
49	ZPS-2572	5.6	3.3	4.3	4.3	3.5	8.0	6.3	6.7	3.3
50	MED-1497	5.6	3.7	6.0	5.0	4.3	7.3	6.7	5.3	3.3
51	A118	5.5	5.3	5.0	3.3	3.7	8.0	4.7	6.0	4.7
52	Blacksburg	5.5	7.0	6.0	4.7	3.7	6.3	4.7	4.3	6.7
53	4261 C-74 der	5.5	5.0	5.7	3.7	4.3	7.7	4.7	6.0	5.3
54	Suffolk	5.5	7.3	5.3	6.3	7.5	7.0	5.7	7.3	8.0
55	Livingston	5.5	6.7	5.0	6.0	5.7	6.7	4.7	7.0	7.0
56	ZPS-309	5.5	4.7	5.3	5.3	5.0	7.3	7.0	7.0	5.3
57	NuStar	5.5	5.3	3.0	3.3	3.3	5.7	7.0	6.0	6.3
58	PST-B3-180	5.5	5.3	6.0	4.3	4.2	6.7	7.7	8.7	5.7
59	Classic	5.4	7.0	6.3	6.0	7.3	7.0	5.7	7.3	7.7
60	Mystic	5.4	6.3	4.3	7.0	8.0	4.7	8.3	6.3	7.3

Table 7 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Sept. 1995	Winter Turf Quality[3] Dec. 1995	Winter Color[4] Feb. 1996	Spring Greenup[5] 1996 Avg.	Turf Color[6] Nov. 1996	Leaf Texture[7] Oct. 1996	Summer Patch[8] Sept. 1996	*Poa annua*[9] May 1996
61	A91-625	5.4	6.3	4.3	4.3	4.7	7.3	6.3	7.3	5.3
62	MED-18	5.4	3.3	4.0	3.3	3.0	8.0	6.3	5.7	3.7
63	PST-P46	5.4	5.3	6.3	4.7	4.2	7.3	6.0	6.0	5.7
64	Washington	5.4	7.7	3.0	3.3	5.3	7.0	6.0	6.3	7.7
65	Haga	5.3	8.0	5.7	5.7	6.5	6.3	6.7	7.7	7.3
66	A93-427 (A25xEO)xSYDS der	5.3	6.0	4.3	4.3	4.7	7.0	5.3	7.0	5.0
67	92-3154-3 PT der	5.3	5.7	4.7	3.7	4.5	8.0	4.0	6.7	6.3
68	Baronie	5.3	8.0	5.3	5.3	6.3	7.0	6.0	7.3	7.3
69	Ba 70-060	5.2	5.7	5.7	5.0	4.2	6.7	3.7	6.7	6.3
70	BAR VB 233	5.2	8.0	3.3	4.0	4.5	7.0	7.0	8.0	7.3
71	Wildwood	5.2	7.3	4.7	4.7	3.7	7.0	7.0	5.3	7.3
72	J-1567	5.2	3.7	4.7	3.3	3.3	7.7	6.0	5.0	3.0
73	Ram I	5.2	7.0	4.7	4.0	3.3	7.0	5.7	4.3	7.3
74	LTP-620	5.1	4.5	5.0	5.0	5.1	7.0	5.2	5.5	4.7
75	Dragon	5.1	5.5	4.2	5.5	4.7	6.6	5.0	7.0	6.0
76	Crest	5.1	6.0	5.7	5.0	4.3	5.7	4.0	5.3	7.3
77	Ba 75-173	5.1	6.0	5.7	4.7	4.2	6.3	3.3	5.3	7.0
78	Ba 87-102	5.1	6.0	5.3	4.0	3.3	6.3	5.0	6.0	6.0
79	Ba 73-373	5.1	5.7	5.3	4.7	3.5	6.3	4.7	5.7	6.7
80	Ba 81-270	5.1	5.0	6.7	3.7	4.0	6.0	4.3	7.3	5.3

Table 7 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Sept. 1995	Winter Turf Quality[3] Dec. 1995	Winter Color[4] Feb. 1996	Spring Greenup[5] 1996 Avg.	Turf Color[6] Nov. 1996	Leaf Texture[7] Oct. 1996	Summer Patch[8] Sept. 1996	*Poa annua*[9] May 1996
81	Ba 79-260	5.1	6.3	5.0	4.7	3.3	8.0	6.0	7.3	4.7
82	J-2582	5.1	3.3	5.3	4.3	4.8	7.3	6.0	6.3	4.0
83	Alpine	5.1	7.3	4.3	2.7	2.3	6.0	7.7	7.0	5.7
84	J-1561	5.1	3.0	4.0	3.3	2.8	8.0	5.7	5.7	2.7
85	Conni	5.0	5.0	4.3	3.7	3.2	4.7	8.0	5.0	4.3
86	Caliber	5.0	7.0	3.7	4.7	5.3	6.3	6.7	7.7	6.3
87	BAR VB 3115B	5.0	6.0	4.0	5.0	4.0	4.7	7.7	4.7	6.3
88	PST-B2-42	5.0	6.0	6.3	4.7	3.8	5.7	5.3	8.0	5.3
89	J-1576	5.0	3.7	3.3	3.7	3.2	8.0	5.7	6.3	2.0
90	PST-BO-141	5.0	5.3	6.3	5.0	4.5	6.7	7.0	8.7	5.3
91	BAR VB 5649	5.0	3.0	5.3	5.3	4.7	6.0	6.0	7.3	4.7
92	NuGlade	4.9	4.0	3.7	3.0	2.7	7.7	5.7	5.7	2.7
93	A34	4.9	7.7	4.0	4.0	4.5	6.0	7.0	7.0	7.3
94	Marquis	4.9	6.3	4.0	4.0	3.5	6.0	3.7	6.0	6.7
95	Abbey	4.9	6.0	5.3	4.3	3.7	6.0	5.3	6.7	7.0
96	J-1963	4.9	3.7	4.3	3.7	3.8	7.7	6.3	4.3	2.7
97	Allure	4.9	5.7	5.7	3.7	4.2	5.7	3.7	7.3	5.3
98	ZPS-2183	4.8	5.3	6.7	4.3	4.7	5.7	2.0	4.3	6.3
99	Fortuna	4.8	6.3	3.7	4.0	3.8	6.0	5.0	7.7	6.0
100	Ba 81-220	4.8	6.0	4.7	4.0	3.5	6.0	3.3	5.0	6.7

Table 7 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Sept. 1995	Winter Turf Quality[3] Dec. 1995	Winter Color[4] Feb. 1996	Spring Greenup[5] 1996 Avg.	Turf Color[6] Nov. 1996	Leaf Texture[7] Oct. 1996	Summer Patch[8] Sept. 1996	*Poa annua*[9] May 1996
101	HV-242	4.8	4.0	4.7	4.0	4.3	6.7	6.0	4.7	4.3
102	HV 130	4.8	6.0	3.7	4.3	3.8	7.0	6.7	6.0	5.3
103	Monopoly	4.8	7.3	2.7	3.0	4.2	5.3	7.7	7.7	7.3
104	Raven	4.7	6.3	4.3	4.0	3.3	6.0	3.3	6.3	6.3
105	Ba 81-227	4.7	4.7	5.0	4.0	4.3	7.0	3.0	6.7	5.0
106	Bronco	4.7	5.3	5.7	3.7	4.2	5.7	3.7	6.7	6.3
107	Chateau	4.7	7.0	5.3	5.0	3.5	6.3	4.0	5.0	5.3
108	MED-1580	4.7	4.0	3.0	3.7	3.2	6.3	5.7	5.0	4.3
109	Award	4.7	3.0	3.7	3.3	3.3	8.0	6.7	5.0	2.3
110	Eagleton	4.6	6.4	4.0	4.3	4.6	5.3	5.9	6.7	6.0
111	Baron	4.6	7.0	4.0	4.3	2.8	6.0	4.0	6.3	7.0
112	Coventry	4.6	6.0	5.3	3.7	3.7	5.7	4.0	6.7	6.3
113	Ba 77-702	4.6	6.3	4.7	4.0	3.0	6.0	4.0	6.0	5.3
114	Touchdown	4.5	7.0	2.7	4.0	3.5	5.0	5.7	6.0	6.7
115	BAR VB 6820	4.5	4.0	3.7	3.0	2.8	6.0	6.7	6.0	2.3
116	Pick-3561	4.5	2.7	4.7	4.7	3.8	7.0	6.0	5.7	3.3
117	Plush	4.5	7.7	4.0	4.3	4.8	5.7	4.0	5.0	7.0
118	Preakness	4.4	4.3	4.3	3.0	4.0	7.0	5.3	5.0	4.0
119	J-2579	4.4	4.3	3.7	4.0	4.3	6.7	7.3	5.3	2.7
120	Bel-21	4.3	6.3	4.3	3.0	3.7	6.0	5.3	6.7	6.0

Table 7 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Sept. 1995	Winter Turf Quality[3] Dec. 1995	Winter Color[4] Feb. 1996	Spring Greenup[5] 1996 Avg.	Turf Color[6] Nov. 1996	Leaf Texture[7] Oct. 1996	Summer Patch[8] Sept. 1996	*Poa annua*[9] May 1996
121	Nimbus	4.3	7.7	3.3	4.3	4.0	5.7	5.3	4.7	7.3
122	Pick-855	4.2	5.3	3.7	5.7	4.8	6.0	7.3	4.7	5.3
123	Ba 76-197	4.2	4.3	4.0	3.3	3.2	5.3	2.7	4.7	5.0
124	Ba 76-372	4.2	3.0	6.3	5.0	4.8	6.3	2.7	2.3	3.0
125	Compact	4.2	4.3	3.7	3.7	3.0	4.3	6.7	6.3	4.7
126	NJ-1190	4.2	5.0	5.7	4.5	4.4	5.3	5.7	2.5	5.4
127	PST-A7-245A	4.2	2.3	3.7	3.3	4.2	6.7	3.7	5.3	2.7
128	SRX-2205	4.1	6.0	3.0	3.0	2.8	5.3	5.7	4.0	6.3
129	Ba 75-163	4.1	7.0	4.0	3.3	3.8	8.0	4.3	5.0	5.0
130	LKB-95	4.1	6.7	2.7	3.7	3.5	5.3	8.0	4.7	6.0
131	Ba 81-113	4.0	5.7	4.7	3.7	3.7	6.0	2.0	4.3	5.7
132	VB 16015	3.9	4.3	6.7	5.0	4.5	8.3	3.0	5.3	3.7
133	MED-1991	3.9	4.0	3.0	3.7	3.5	7.3	5.3	5.0	2.3
134	PST-BO-165	3.8	2.3	4.0	3.3	3.7	6.7	5.7	4.7	2.3
135	Sidekick	3.6	4.0	5.3	5.0	5.2	6.3	1.7	8.0	5.3
136	H86-690	3.5	5.0	3.0	4.3	5.2	7.3	4.3	4.7	5.0
137	DP 37-192	3.4	4.7	4.0	3.0	2.2	5.7	3.7	3.3	2.7
138	J-1555	3.4	3.3	3.0	3.0	3.8	6.7	4.7	4.7	3.0
139	Ba 75-490	3.3	6.0	3.3	4.0	5.7	8.0	4.7	5.0	6.7
140	WXS-955-2	3.3	3.3	3.0	3.7	3.7	6.7	2.0	3.7	4.0

Table 7 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Sept. 1995	Winter Turf Quality[3] Dec. 1995	Winter Color[4] Feb. 1996	Spring Greenup[5] 1996 Avg.	Turf Color[6] Nov. 1996	Leaf Texture[7] Oct. 1996	Summer Patch[8] Sept. 1996	*Poa annua*[9] May 1996
141	Cardiff	3.2	4.7	3.7	4.0	4.0	6.7	5.3	2.7	3.0
142	Baruzo	3.2	6.0	2.7	2.7	2.3	6.7	5.7	4.0	5.7
143	Lipoa	3.1	6.7	2.3	2.7	3.2	6.7	5.7	2.7	3.7
144	NJ-54	3.0	3.7	4.3	4.0	3.3	4.3	1.3	3.3	3.7
145	EXP# 1589	2.5	8.3	2.7	5.0	5.7	5.7	6.0	2.0	6.7
146	Kenblue	2.3	8.3	2.0	4.0	3.8	5.3	4.7	4.0	7.7
147	Sodnet	2.1	2.0	2.7	1.7	2.3	7.3	3.3	1.3	1.7
	LSD at 0.5% =	1.0	1.4	1.3	1.0	0.9	0.9	2.0	1.9	1.3

[1] 9 = best turf quality
[2] 9 = best seedling vigor
[3] 9 = best winter turf quality
[4] 9 = best winter color
[5] 9 = most rapid spring greenup
[6] 9 = darkest color
[7] 9 = finest leaf texture
[8] 9 = least summer patch
[9] 9 = least *Poa annua*

Table 8. Performance of Kentucky bluegrass cultivars and selections in a turf trial seeded in September 1995 at Adelphia, NJ. (Includes NTEP Medium-high Maintenance Test-2)

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Oct. 1995	Turf Color[3] Nov. 1995	Turf Color[3] Oct. 1996
1	PST-638	6.9	5.4	8.2	7.9
2	PST-418	6.8	3.7	9.0	9.0
3	TCR-1738	6.8	4.7	7.0	8.3
4	128-9 C-74 OP	6.7	5.0	7.7	7.0
5	J-1567	6.7	4.0	7.0	7.7
6	H92-558 Julia der	6.6	5.0	7.7	7.7
7	Pick H94-301	6.6	5.3	5.7	6.3
8	A93-420 Julia der	6.6	5.3	8.0	8.3
9	H86-697	6.6	5.0	8.3	8.7
10	1595-7 P.T. der	6.5	4.3	7.0	7.0
11	Award	6.5	3.7	7.7	8.0
12	Midnight	6.5	5.2	6.9	8.3
13	ZPS-2572	6.5	4.3	7.7	9.0
14	1585-3 P.T. der	6.4	5.7	8.7	8.7
15	J-1576	6.4	4.7	7.0	8.0
16	A90-287 Julia der	6.4	5.2	8.2	6.9
17	92-3154-3 P.T. der	6.4	5.7	8.0	7.7
18	J-1936	6.3	4.3	6.3	7.7
19	Rita	6.3	5.7	6.9	7.5
20	PST-P46	6.3	5.3	7.7	7.3
21	A93-453 Julia der	6.3	6.0	8.3	8.0
22	MED-1497	6.3	3.7	7.0	7.3
23	4253-12 C-74 der	6.2	5.0	6.3	6.7
24	NJ-1190	6.2	3.8	7.0	4.3
25	J-1561	6.2	4.3	6.3	8.0
26	A93-421 Julia der	6.2	6.0	8.0	7.3
27	SR 2109	6.2	4.3	5.3	4.7
28	A93-417 Julia der	6.2	6.0	8.0	7.0
29	AG 508	6.2	4.0	6.3	6.0
30	HV 130	6.2	4.7	7.3	4.7

Table 8 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Oct. 1995	Turf Color[3] Nov. 1995	Turf Color[3] Oct. 1996
31	Wildwood	6.2	5.7	7.0	6.7
32	A90-924 Julia der	6.1	5.3	7.9	7.3
33	MED-18	6.1	3.7	7.0	8.0
34	Challenger	6.1	5.0	4.7	7.0
35	93KB 5	6.1	6.7	6.7	5.0
36	93-863-3 C-74 der	6.1	5.0	8.0	6.7
37	92-1492-5 A82-1272 der	6.0	6.3	4.0	4.0
38	93-860-6 C-74 der	6.0	4.7	6.3	5.3
39	Princeton 105	6.0	4.4	5.5	6.0
40	Blacksburg	6.0	4.3	7.3	6.7
41	A82-204 VT	6.0	5.7	7.0	7.7
42	93-860-2 C-74 der	6.0	5.3	6.3	6.0
43	Indigo	6.0	4.5	6.4	7.9
44	NuGlade	6.0	3.7	6.0	8.0
45	Pick 8-15-94W	6.0	5.0	4.7	6.0
46	C-74	6.0	5.0	6.3	5.2
47	860-3 C-74 der	5.9	4.7	8.3	8.3
48	92-123-9 A81-1372 der	5.9	6.0	6.3	7.3
49	PST-A7-60	5.9	3.4	6.7	6.2
50	92-2248-2 C-74 der	5.9	4.0	8.3	7.3
51	SR 2000	5.9	3.5	7.4	7.7
52	Alpine	5.9	5.0	6.3	4.7
53	Unique	5.8	5.0	7.0	4.7
54	H90-1149	5.8	6.0	6.3	7.3
55	PST-B2-42	5.8	4.7	6.7	5.7
56	America	5.8	4.8	6.4	5.3
57	PST-B3-180	5.7	5.0	7.0	6.0
58	A91-639 Forest Hill der	5.7	3.7	5.0	3.7
59	A91-625	5.7	5.3	6.7	7.3
60	BA 81-058	5.6	5.7	6.3	8.0
61	Preakness	5.6	4.3	7.9	4.8
62	H90-710 A84-605	5.6	5.0	4.3	6.3
63	PST-BO-141	5.6	4.0	6.7	5.3
64	BA 79-260	5.5	5.0	8.7	8.7
65	Freedom	5.5	7.7	3.7	6.0

Table 8 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Oct. 1995	Turf Color[3] Nov. 1995	Turf Color[3] Oct. 1996
66	NJ-GD	5.4	5.3	5.3	5.3
67	ZPS-2183	5.4	4.7	5.0	5.3
68	Glade	5.4	4.7	6.0	6.7
69	Cheri	5.4	4.0	3.7	4.3
70	Ascot	5.3	4.3	5.7	7.0
71	Bartitia	5.3	5.7	5.5	4.8
72	Shamrock	5.3	5.1	4.9	5.1
73	Jefferson	5.3	6.4	4.8	6.0
74	BAR VB 5649	5.3	5.2	6.0	5.7
75	Cobalt	5.3	3.7	4.7	4.3
76	Conni	5.3	3.7	3.7	2.7
77	A91-624	5.3	6.2	6.2	7.2
78	Julia	5.3	4.7	6.0	6.7
79	Allure	5.2	4.3	5.3	3.7
80	Eclipse	5.2	4.9	5.0	5.0
81	BAR VB 3115B	5.2	6.9	3.9	3.0
82	Pick 247	5.2	4.0	6.0	6.3
83	Crest	5.1	3.7	4.3	5.0
84	Limousine	5.1	3.9	5.2	4.7
85	Cardiff	5.1	3.0	5.7	7.3
86	Chateau	5.1	4.3	4.7	3.3
87	Platini	5.1	5.7	5.7	6.3
88	Pick-3561	5.1	3.3	6.7	5.7
89	VB 16015	5.1	3.3	9.0	9.0
90	J-2579	5.0	4.0	4.7	5.0
91	BA 81-270	5.0	4.0	4.3	3.3
92	A88-744	5.0	4.5	7.9	7.5
93	ZPS-309	5.0	5.0	7.3	6.3
94	LTP-621	5.0	5.8	5.8	5.5
95	93-1955-4 A83-876 der	5.0	5.3	7.7	5.7
96	Livingston	5.0	5.7	3.7	4.3
97	Haga	4.9	7.7	3.7	3.7
98	Liberty	4.9	5.0	5.0	7.3
99	BA 76-372	4.9	4.3	4.3	3.7
100	BAR VB 233	4.9	7.0	5.5	6.0

Table 8 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Oct. 1995	Turf Color[3] Nov. 1995	Turf Color[3] Oct. 1996
101	MED-1580	4.9	4.7	4.3	4.3
102	Coventry	4.9	4.7	5.0	3.7
103	Sydsport	4.9	4.0	4.7	4.7
104	HV 242	4.8	3.7	6.0	6.0
105	Princeton 104	4.8	5.0	4.0	6.3
106	SRX 2205	4.8	5.7	2.0	3.0
107	Lipoa	4.8	4.3	5.5	5.7
108	Fylking	4.8	5.0	5.0	5.0
109	J-2582	4.8	4.3	4.7	5.3
110	Classic	4.7	6.3	3.3	5.0
111	BAR VB 6820	4.7	1.9	5.2	6.2
112	Nimbus	4.7	6.0	2.0	2.5
113	NuStar	4.7	4.3	4.3	4.7
114	BA 75-103	4.7	4.7	8.3	7.3
115	PST-A7-245A	4.6	2.0	4.3	4.0
116	JC91 L II Cascade	4.6	5.3	3.7	5.0
117	Dragon	4.6	5.2	5.2	5.2
118	MED-1991	4.6	3.7	4.7	4.7
119	PTE Cascade	4.6	4.3	6.0	7.7
120	Sodnet	4.5	2.0	7.0	8.7
121	BA 75-173	4.5	4.3	4.0	4.0
122	Bronco	4.5	5.3	2.7	4.3
123	Nugget	4.5	4.0	4.3	5.7
124	AG 496	4.5	4.3	3.7	4.3
125	Suffolk	4.5	7.7	4.0	4.7
126	PST-B9-196	4.5	4.0	5.3	6.3
127	PST-BO-165	4.5	2.0	4.7	3.7
128	Raven	4.5	5.0	3.7	3.7
129	Fortuna	4.5	5.0	3.0	4.0
130	SR 2100	4.5	6.7	4.7	4.0
131	BA 73-373	4.4	4.7	4.0	4.0
132	BA 87-102	4.4	3.7	3.7	4.3
133	Caliber	4.4	6.8	5.4	5.0
134	Pick 855	4.4	5.0	5.7	4.3
135	Touchdown	4.4	5.9	3.2	3.5

Table 8 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Oct. 1995	Turf Color[3] Nov. 1995	Turf Color[3] Oct. 1996
136	Baronie	4.4	7.7	4.0	4.8
137	BA 70-060	4.4	5.0	4.0	4.3
138	BA 81-220	4.4	4.7	3.7	3.7
139	KBGJB91-B Cascade	4.3	4.3	5.0	6.0
140	Canterbury	4.3	5.2	4.0	6.2
141	LKB-95	4.3	6.3	4.0	3.7
142	LTP-620	4.3	5.5	5.5	6.3
143	Pick 3	4.3	4.0	5.3	6.0
144	Plush	4.3	6.0	4.0	3.7
145	Nassau	4.2	5.0	5.0	6.0
146	Pick 151	4.2	3.3	5.0	5.7
147	Pick 4	4.2	4.3	5.3	6.0
148	Marquis	4.2	4.7	3.0	3.3
149	DP 37-192	4.2	3.0	6.7	3.3
150	H86-690	4.2	5.4	5.4	7.0
151	Washington	4.2	6.4	5.9	5.2
152	Monopoly	4.2	8.7	1.0	3.3
153	J-1555	4.2	4.0	6.3	5.3
154	Baruzo	4.1	5.0	4.5	5.7
155	Amazon	4.1	4.3	4.3	4.0
156	A84-587 Balt City	4.1	6.3	4.0	5.7
157	Abbey	4.1	4.7	3.7	5.0
158	93KB 4	4.1	2.7	2.0	5.3
159	NTT 683	4.1	3.0	4.7	4.7
160	93KB 9	4.0	5.0	5.5	5.5
161	BA 77-102	4.0	4.0	2.3	3.0
162	BH 95-199	3.9	3.3	7.0	7.0
163	KB-02-04x35 Cascade	3.9	1.3	6.3	6.7
164	Bel 21	3.9	8.2	3.9	3.4
165	Eagleton	3.9	6.3	3.5	3.1
166	Ram I	3.9	1.0	5.5	7.0
167	KB-02-06Ax23 Cascade	3.8	3.0	6.7	8.0
168	BlueStar	3.8	4.7	3.7	4.0
169	93KB 8	3.8	3.3	6.3	7.3
170	BA 81-113	3.8	4.3	3.7	4.0

Table 8 (continued).

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Seedling Vigor[2] Oct. 1995	Turf Color[3] Nov. 1995	Turf Color[3] Oct. 1996
171	Baron	3.8	4.9	4.0	4.7
172	BA 75-490	3.7	6.7	4.7	6.7
173	Merion	3.7	3.3	5.0	3.3
174	RSP	3.7	7.3	3.7	3.7
175	Wx5 955-2	3.6	3.0	5.3	4.0
176	BA 81-227	3.6	4.7	4.3	3.7
177	D3WN 763	3.5	3.0	4.3	5.0
178	H90-315 Muddy PK	3.4	6.9	2.2	2.5
179	Pick 2 PSW	3.2	3.7	5.3	7.0
180	Pick Vat	3.2	7.0	2.7	3.7
181	93KB 2	3.2	4.3	3.7	4.3
182	Huntsville	3.1	6.0	5.0	4.3
183	Compact	3.1	4.7	2.3	2.0
184	93 KB1	3.1	4.3	6.0	6.7
185	H86-749 NB Cem	3.1	7.0	4.3	7.0
186	Sidekick	3.0	4.0	5.0	4.3
187	NJ-54	3.0	3.0	4.3	3.0
188	BA 76-197	3.0	3.7	2.3	3.0
189	S-21	2.9	6.7	3.0	3.7
190	Exp# 1589	2.9	8.0	4.7	3.7
191	South Dakota Cert.	2.5	5.7	3.0	3.0
192	Kenblue	2.3	8.7	3.0	3.5
	LSD at 0.5% =	0.8	1.2	1.2	1.4

[1] 9 = best turf quality
[2] 9 = best seedling vigor
[3] 9 = darkest color

Table 9. Yearly nitrogen (N) applied and mowing height (Ht) on Kentucky bluegrass tests established at Adelphia and North Brunswick, NJ.

	1991		1992		1993		1994		1995		1996	
	N[1]	Ht[2]	N	Ht	N	Ht	N	Ht	N	Ht	N	Ht
Table 1 (1991 Adelphia)	3.0	1.5	1.7	1.5	2.5	1.5	0.6	1.5	2.2	2.5	0.7	2.0
Table 2 (1992 North Brunswick)							3.7	1.5	2.0	1.5	2.8	1.5
Table 3 (1993 Adelphia)									5.5	2.0	2.1	1.5
Table 4 (1994 Adelphia)									5.6	1.5	3.6	1.5
Table 5 (1994 Adelphia)									6.6	1.5	3.6	1.5
Table 6 (1994 Adelphia)									0.7	2.5	0.0	2.5
Table 7 (1995 North Brunswick)											3.8	1.5
Table 8 (1995 Adelphia)											4.9	1.5

[1] Annual N applied (lbs/1000 ft^2).
[2] Mowing height in inches.