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This publication includes lecture notes of papers presented at the 2005 New Jersey Turfgrass Expo. Publication of these lectures provides a readily available source of information covering a wide range of topics and includes technical and popular presentations of importance to the turfgrass industry.

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

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

PERFORMANCE OF BENTGRASS CULTIVARS AND SELECTIONS IN NEW JERSEY TURF TRIALS

Matthew J. Koch, Eric N. Weibel, Dirk A. Smith, William K. Dickson, Joseph B. Clark,
Stacy A. Bonos, James A. Murphy, Bruce B. Clarke, and William A. Meyer ¹

Bentgrass species have the distinct ability to form very dense, uniform, and fine textured surfaces under an extremely low height of cut. Because of these unique qualities, bentgrasses can be used in specialized, high maintenance areas such as golf course fairways, tees, and putting greens. Some of the more popular species used for turf include creeping bentgrass (*Agrostis palustris* Huds.; synonym = *A. stolonifera* L.), colonial bentgrass (*A. tenuis* L. or *A. capillaris* L.), velvet bentgrass (*A. canina* L.), and less frequently, highland or dryland bentgrass (*A. castellana* Boiss. & Reut.). Creeping and velvet bentgrasses are best conditioned for the very low cutting heights required for golf course greens in the United States and other regions of the world.

Creeping bentgrass is highly stoloniferous and has prostrate growth, so this grass persists well under very low mowing heights. This species is highly adapted to both cool, temperate as well as warm, humid regions of the United States, making it the most popular species used on golf course putting greens. Its vigorous, spreading growth habit also contributes to its use. In 1954, H.B. Musser released Penncross, the first seeded variety of creeping bentgrass (Musser, 1959). Since that time, breeding efforts have markedly improved creeping bentgrass varieties to withstand the increasing demands of the game of golf, addressing the need for better turf quality, darker green color, improved shoot density, and improved traffic tolerance and recuperative ability, as well as increased disease and stress tolerance compared to older varieties.

Colonial bentgrass, also referred to as browntop, has traditionally been used as a lawn grass in the areas of northern Europe and New Zealand that have mild (cool and humid) summers. Compared to creeping bentgrass, colonial bentgrass has a finer leaf texture and a more upright and less aggressive spread-

ing growth habit. In addition, this bentgrass is generally better adapted for fairway or tee use in the warmer summer climates of the United States and performs best in New Jersey when mowed no lower than 3/8 of an inch. Compared to creeping bentgrass, colonial bentgrass typically has a brighter green color, better color retention during cool weather, better resistance to dollar spot (caused by *Sclerotinia homoeocarpa*), and better wear tolerance. Colonial bentgrass is more susceptible, however, to brown patch (caused by *Rhizoctonia solani*). While this disease is not lethal, the playability of golf courses may be affected if brown patch is not controlled. Current breeding efforts include improving the tolerance of colonial bentgrass to this disease.

Velvet bentgrass forms the finest-textured and most dense turf of the bentgrasses and can nearly resemble green velvet when managed properly. It spreads mainly through profuse production of erect tillers with short stolons. This grass can tolerate very close mowing, heat, cold, and shade, and is one of the most drought resistant of the bentgrasses used for turf (Skogley, 1973). Due to the density and vigor of this turf, even under very low mowing conditions, velvet bentgrass has been shown to be extremely effective at preventing the encroachment of the most prolific weed on a golf course, *Poa annua*. The spread of velvet bentgrass via stolons is more aggressive than colonial bentgrass, but not as strong as with creeping bentgrass. Velvet bentgrass can form excessive thatch, especially at higher fertility rates and higher cutting heights, and can thus become problematic if not maintained properly. This species is also susceptible to red thread (caused by *Laetisaria fuciformis*) and copper spot (*Gloeocercospora sorghi*), but has good resistance to dollar spot and brown patch. Seedlings of velvet bentgrasses are susceptible to Pythium seedling root rot during establishment. Velvet bentgrass has not

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

been used extensively for high maintenance turf, largely because its range of adaptation has not been well recognized. Selections of velvet bentgrass have persisted for many years in trials under New Jersey growing conditions. As recent research at Rutgers indicates, the species may one day serve as a viable alternative to creeping bentgrass for use on golf course greens as proper cultural management inputs are developed. Early indications show that a lower fertility requirement is needed to maintain a velvet bentgrass turf when compared to one with creeping bentgrass under the same conditions.

The New Jersey Agricultural Experiment Station participates in the National Turfgrass Evaluation Program (NTEP), which evaluates many species of turfgrass, including bentgrasses, throughout the United States. The Rutgers turfgrass breeding program conducts extensive field evaluations of collections and new material developed in the improvement program, many of which are a result of recent collection trips within the United States and throughout Europe and Asia. Collections from Norway, Sweden, Spain, Portugal, France, Finland, Switzerland, Scotland, Italy, Greece, Poland, Holland, Bulgaria, Romania, Croatia, China, and the Slovak Republic, which are the centers of origin for many turf species used in the United States, serve to enhance the genetic diversity of the germplasm used in this breeding program. The Rutgers turfgrass breeding program focuses on improving turfgrasses for overall quality, color, density, uniformity, texture, disease resistance, salt tolerance, traffic tolerance, and many other aspects of a turf to be grown for a variety of purposes.

PROCEDURES

Bentgrass evaluation trials were established at the Rutgers Horticultural Research Farm II in North Brunswick, NJ in the fall of 2001 (Tables 1 to 3), 2002 (Tables 4 and 5), 2003 (Tables 7 and 9), and 2004 (Tables 10 and 11). Two of the trials planted in the fall of 2003 (Tables 6 and 8) included all entries of the 2003 National Bentgrass Test coordinated by NTEP. Trials were established on a modified Nixon loam, except the 2003 NTEP putting green trial (Table 6), which was seeded on a sand root zone built to USGA specifications. Plot size was 3 X 5 ft for all trials, except the 2003 NTEP trials (greens and fairway/tee) which were 4 X 6 ft. Plots were hand-seeded at a rate of approximately 0.5 lb/1000 ft². All tests were arranged in a randomized complete block design with three replications.

All sites were well drained and openly exposed to both sunlight and air circulation (with the exception of the 2003 NTEP putting green trial, which had enclosed air circulation). The annual rate of nitrogen applied, mowing height, cultivation/topdressing practices, and pesticide applications for each test are presented in Table 12. The putting green tests were mowed five to six times per week during periods of active growth with a triplex or walk-behind reel mower equipped to collect clippings. The fairway tests were mowed and clippings were removed three times per week with a triplex reel mower during periods of active growth. Soil pH was maintained in the range of 6.0 to 6.5 with agricultural limestone. All tests were irrigated to avoid drought stress.

Plots were evaluated frequently during the growing season for overall turf quality (i.e., turf density, texture, uniformity, color, growth habit, and degree of damage due to diseases and insects). Turf quality, spring green-up, color, density, and disease were rated on a 1 to 9 scale, where 9 represented the most desirable turf characteristic. Disease ratings included brown patch (Tables 7 and 11), dollar spot (Tables 7, 9, and 11), copper spot (Table 10), and red leaf spot (Tables 5 and 10). All data were subjected to analysis of variance. Means were separated using Fisher's protected least significant difference (LSD) means separation test.

RESULTS AND DISCUSSION

Turf Quality Evaluations

Entries in Tables 1 through 9 are ranked according to their overall multi-year quality average. Entries in Tables 10 and 11 are ranked according to their turf quality average in 2005. Throughout the years, a few varieties in each bentgrass species have stood out among the rest. For creeping bentgrasses maintained at a putting green height of cut, Authority, Declaration, Tyee, and Shark all performed very well, whereas the turf quality of Penncross, Providence, Viper, and Crenshaw was poor. At a fairway height, the turf quality was excellent for Authority and Declaration and poor for Providence, Southshore, Penncross, and Crenshaw.

Velvet bentgrasses are also rated for turf quality every year. In trials evaluated in 2005, varieties such as Venus, Greenwich, and Villa were rated among the best in every putting green test in which they were entered, whereas ISC comp, IVC comp, SRX 7EW

88-34, and SR 7200 were rated among the worst under a 1/8 inch height of cut. Interestingly, cultivar SR 7200, along with Greenwich, performed the best at a fairway height of cut. Velvet bentgrass cultivars Barbella and PST-VE52 Bulk were among the worse performers on fairways (Table 9).

Turf quality was also rated for colonial bentgrass. Since this species is best suited for a slightly higher height of cut than a putting green, it was no surprise that colonial bentgrass cultivars did not perform very well when cut to 1/8 inch. The cultivar Tiger II received the lowest score for colonial bentgrasses in putting green trials. Fairway heights are more suited for this species, and cultivars 9ER Bulk-5, SRX 781-22, 9BNC-2001, EWTR comp, HCG comp, and PST-SYN-9BC3 all received high scores, whereas SRX 781-21 did not.

Dollar Spot

While potentially one of the more damaging diseases on golf courses in New Jersey, dollar spot can be easily controlled with the use of fungicides. Unfortunately, disease control can be expensive because dollar spot occurs so frequently, and resistance of the causal agent to fungicides has become more prevalent. Breeding for dollar spot resistance in bentgrass is an important objective of the Rutgers breeding program. Although velvet and colonial bentgrasses typically are more resistant to dollar spot, results from recent trials indicate that significant improvements in creeping bentgrasses have been made. For example, in the 2003 putting green trial (Table 7), the creeping bentgrasses Declaration, L-93, and Kingpin had the highest ratings for resistance to dollar spot, whereas disease resistance of Crenshaw and Independence was poor. In the 2003 fairway trial (Table 9), creeping bentgrasses Benchmark and Declaration as well as colonial bentgrasses PST-9R3 and PST-9VN all rated well for resistance. Ratings for disease resistance in SRX 1H Blue and Century creeping bentgrasses, however, was low. Colonial bentgrasses 9108-1 & 5 and LDP Comp rated the highest in the 2004 fairway trial, while the most resistant creeping bentgrasses included SRX 1WM231 and Declaration (Table 11). The most susceptible selections included Penncross and Century creeping bentgrasses.

Brown Patch

Velvet bentgrass is the most tolerant of brown patch among the bentgrass species used for turf, and creeping bentgrass is typically more resistant than colonial bentgrass. For example, in the 2004 fairway trial (Table 11), velvet bentgrasses PST-EVX-Bulk, Villa, IS-AP14, and the creeping bentgrass Shark were among the entries most tolerant of this disease. The least tolerant entries included the colonial bentgrasses SRX 781-21 and SRX 780-19 and the creeping bentgrasses Penncross and Providence. Much progress has been made in breeding colonial bentgrasses for improved resistance to this disease. The colonial bentgrasses BCD comp and 9111-6-12, specifically selected for brown patch resistance, were much more tolerant of this disease than commonly used cultivars such as SR 7150, SR 7100, Alister, and Tiger II.

Red Leaf Spot

Ratings for the disease red leaf spot, caused by the fungus *Drechslera erythrospila*, were completed on the 2002 fairway trial in June (Table 5) and the 2004 putting green trial in July (Table 10). Compared to colonial bentgrass varieties, velvet and creeping bentgrasses typically rate much higher for resistance to this disease. The highest scoring cultivars in the 2002 trial included the creeping bentgrasses CIS AP-12 and SRX 1G 32 as well as the velvet bentgrasses Venus and SR 7200. The lowest rated entries were the colonial bentgrass varieties SRX 7MOBB and SRX 7EE5. In the 2004 trial, the creeping bentgrass SRX 146-12, colonial bentgrass PST-9PIN, and velvet bentgrasses Greenwich and VE3 Comp were the most resistant to red leaf spot, whereas Penncross and Seaside II creeping bentgrasses did not perform well.

Copper Spot

In the Northeast, copper spot commonly occurs during late spring due to the warm, wet conditions that are typical that time of year. The causal agent of this disease, *Gloeocercospora sorghi*, is a fungus that produces 3- to 4-inch red-brown patches on the turf. In the 2004 putting green trial (Table 10), the colonial bentgrass cultivars were typically more resistant to

this disease than both the velvet and creeping bentgrasses. The top ranking entries for this rating were colonial bentgrasses Glory and Alister, and the poorest performers were the creeping bentgrasses FDS2 Comp and SRX 1WM236.

Spring Green-Up and Fall Dormancy

Spring green-up data was collected for both 2003 putting green trials (Tables 6 and 7). Compared to the velvet bentgrasses, the creeping bentgrasses generally green-up better in the spring. Several creeping bentgrass entries that possessed early green-up qualities included the cultivars Declaration (Tables 6 and 7) and Penn G-2 (Table 6). Villa velvet bentgrass had the best rating among all of the velvet bentgrass entries. The lowest ratings went to the bentgrasses Penncross and Crenshaw and the velvet bentgrass Greenwich. Shark and Authority creeping bentgrasses had the best ratings for spring green-up in the 2003 putting green trial, whereas SR 1119 and Crenshaw had the poorest (Table 7).

In contrast to spring green-up, fall dormancy was rated for the 2003 NTEP fairway trial (Table 8). The cultivars showing the least dormancy included PST-OEB, Bengal, and Pennlinks creeping bentgrasses, whereas the cultivars showing the most fall dormancy were IS-AT 7, EWTR, and Bardot colonial bentgrasses.

Establishment

The 2004 putting green and fairway trials were given numerical values to evaluate how well each variety established from seed. The creeping bentgrass varieties SRX 1BL2G, Penneagle II, T-1, Southshore, Putter, Providence, and Seaside II, the velvet bentgrass Greenwich, and the colonial bentgrass Glory all ranked very high in the putting green trial (Table 10). Century creeping bentgrass and EVA Comp velvet bentgrass had the worst establishment, whereas the colonial varieties 9114-1-6, 9118-1-6b, 9113-1&5, and 9107-6-12 were the slowest to establish in the fairway trial (Table 11).

Scalping

Scalping was evaluated in July for the 2003 NTEP fairway trial (Table 8). Most varieties had little to no scalping damage at the 3/8-inch cutting height. The poorest performers for this characteristic included Declaration, SR 1150, IS-AP 14, and LS-44 creeping bentgrasses. The damage due to scalping for

the remainder of the varieties in this test were at acceptable levels.

Density and Leaf Texture

Turfgrass density and leaf texture were measured for the 2003 NTEP putting green and fairway trials in October. Leaf texture is a measure of the width of the leaves, and density is a number given to quantify the number of shoots per unit area. The velvet bentgrasses ranked the highest for these traits compared to the creeping or colonial bentgrasses. In the fairway trial, SR 7200 velvet bentgrass had the highest possible rating for both density and leaf texture, and Shark, MacKenzie, and Authority performed the best of the creeping bentgrasses (Table 8). Entries with the poorest turf density and leaf texture ratings were Seaside, Penncross, Princeville, and Pennlinks creeping bentgrasses. In the putting green trial (Table 6), velvet bentgrasses Villa, Legendary, Venus, Vesper, and SR 7200 all received the highest scores for these characteristics, while Penncross, Pennlinks II, and Penneagle creeping bentgrasses rated the poorest.

Genetic Color

Genetic color was rated in October on the 2003 NTEP putting green and fairways trials. High numbers were assigned to plots that had a dark green color while lighter green or yellowish turf received lower numbers. Typically, velvet and colonial bentgrasses have a light green color, whereas creeping bentgrasses have a darker green color. In some cases, creeping bentgrass cultivars exhibit an almost blue-green coloration. In the putting green trial (Table 6), the creeping bentgrasses T-1, Alpha, and Crenshaw were the darkest green, and the velvet bentgrasses Venus and SR 7200 and the creeping bentgrasses Century, Penneagle, and Penncross were lighter in color. Pennlinks, Bengal, and PST-OEB creeping bentgrasses were ranked the best in the fairway trial (Table 8). The lowest numbers were assigned to IS-AT 7, EWTR, and Bardot creeping bentgrass varieties.

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Table 1. Performance of creeping bentgrass cultivars and selections in a putting green trial seeded in September 2001 at North Brunswick, NJ.

	Cultivar or Selection	-----Turf Quality ¹ -----				
		2002-2005 Avg.	2002 Avg.	2003 Avg.	2004 Avg.	2005 Avg.
1	C952	6.5	7.2	6.0	6.2	6.4
2	C953	6.4	7.6	5.4	6.7	6.0
3	C954	5.9	6.1	5.6	5.7	6.1
4	Penn A-1	5.4	5.7	5.6	5.2	5.2
5	PST OEB	5.3	6.3	5.6	4.9	4.4
6	Syn ORO	5.3	5.5	6.0	5.1	4.6
7	PST-OPNB	5.2	5.9	5.5	4.5	5.0
8	Penn A-2	5.1	5.7	5.2	4.9	4.7
9	Penn G-1	5.1	5.1	5.1	5.4	4.7
10	SRX 1R1V1	5.1	5.5	4.9	5.0	4.9
11	CIS-AP9	5.0	5.7	5.2	4.5	4.4
12	SRX 1G222	4.9	6.3	4.1	4.1	5.2
13	Penn A-4	4.9	5.5	5.1	4.8	4.2
14	L-93	4.9	4.7	5.3	4.5	5.0
15	Bengal	4.9	5.8	5.0	4.4	4.4
16	Penn G-6	4.9	4.7	5.1	5.0	4.6
17	Penneagle II	4.9	5.7	4.4	4.5	4.8
18	SRX 146-12	4.9	5.2	4.5	4.9	4.9
19	Seaside II	4.8	4.0	5.5	5.2	4.7
20	SRX R1E2	4.8	5.4	4.5	5.0	4.5
21	Nu-Penn Blend	4.8	5.4	5.0	4.7	4.2
22	SRX 1G32	4.8	5.6	4.5	4.5	4.6
23	SRX 1G46	4.8	5.8	3.8	4.5	5.2
24	SRX 1G54	4.8	6.2	3.9	3.9	5.1
25	ORU-2001	4.7	5.8	4.7	4.2	4.1
26	SRX 1G68	4.6	5.9	4.2	4.1	4.3
27	Independence	4.6	5.8	3.8	3.7	4.9
28	SRX 1G56	4.5	5.0	3.4	4.2	5.4
29	PST ORM-1	4.5	4.4	5.1	4.2	4.0
30	SRX 1H Blue	4.5	4.8	4.4	4.3	4.4
31	SRX 1G57	4.4	4.9	3.8	4.3	4.5
32	SRX W1CR1	4.4	5.1	4.7	4.3	3.6
33	Penneagle	4.4	4.2	4.8	4.3	4.0
34	SRX 1G44	4.4	5.5	3.3	4.1	4.6
35	SRX 1W1CR2	4.3	4.9	4.4	3.8	4.2

(Continued)

Table 1 (continued).

	Cultivar or Selection	-----Turf Quality ¹ -----				
		2002-2005 Avg.	2002 Avg.	2003 Avg.	2004 Avg.	2005 Avg.
36	SRX 1W1CR3	4.3	5.2	3.5	3.9	4.4
37	Pennway Blend	4.2	4.3	4.7	3.8	4.1
38	SRX 1COCR	4.2	4.8	4.3	4.0	3.7
39	Pennlinks II	4.1	4.7	5.2	3.4	3.1
40	SRX 1H Pink	4.1	4.4	4.5	4.1	3.4
41	SRX 1D1N	4.1	4.9	4.0	3.7	3.8
42	SRX 1NJ H	4.1	4.4	4.7	3.4	3.8
43	Pick 01-3CB	4.0	4.1	4.6	3.6	3.7
44	Pick ECB	4.0	4.8	3.9	3.6	3.9
45	SR 1119	4.0	4.7	4.5	3.3	3.4
46	Pennlinks	4.0	3.7	4.4	4.0	3.7
47	Brighton	4.0	4.6	4.5	3.2	3.6
48	Pick Syn 96-2	3.9	5.2	3.5	3.2	3.8
49	Cato	3.9	3.5	4.3	4.0	3.7
50	Pick CB13.94.98	3.9	3.9	4.4	3.4	3.8
51	Southshore	3.9	4.0	4.1	3.6	3.9
52	PST-ORE1	3.8	3.8	4.3	3.3	3.8
53	SRX H Silver	3.8	4.2	4.2	3.2	3.5
54	Sandhill	3.8	4.7	3.9	3.1	3.5
55	Putter	3.7	3.8	4.0	3.4	3.5
56	7RMS4	3.6	4.9	3.2	2.6	3.5
57	Providence	3.5	3.3	4.2	3.1	3.3
58	C951	3.5	4.0	4.2	2.9	3.0
59	SRX MOCR1	3.5	4.4	2.9	2.9	3.9
60	7CMS4	3.5	5.1	3.4	2.1	3.2
61	01-4CB	3.4	4.2	3.6	2.6	3.0
62	Penn Trio Blend	3.3	3.0	3.7	3.2	3.3
63	MS4	3.3	4.8	3.3	2.2	3.0
64	MS7	3.2	4.1	3.8	2.1	3.0
65	Penncross	3.2	3.0	3.8	2.9	2.9
66	Regent	3.2	3.3	3.8	2.9	2.8
67	MS5	3.1	4.4	3.4	1.9	2.7
68	Pick CB4.94.01	2.9	2.8	3.6	2.8	2.6
69	Pick CB6.94.01	2.8	2.8	3.2	2.4	2.8
70	MS6	2.7	4.0	2.8	1.8	2.0

(Continued)

Table 1 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----				
	2002-2005 Avg.	2002 Avg.	2003 Avg.	2004 Avg.	2005 Avg.
LSD at 5% =	0.5	0.9	0.9	0.9	0.7

¹9 = best turf quality

Table 2. Performance of velvet bentgrass cultivars and selections in a turf trial seeded in September 2001 at North Brunswick, NJ and maintained under putting green conditions.

Cultivar or Selection	-----Turf Quality ¹ -----				
	2002-2005 Avg.	2002 Avg.	2003 Avg.	2004 Avg.	2005 Avg.
1 PST EVU	6.2	6.1	5.9	6.3	6.6
2 Venus	6.1	6.1	6.4	5.7	6.2
3 Greenwich	5.9	6.2	6.0	4.9	6.3
4 Villa	5.7	5.8	6.1	5.3	5.8
5 IVD comp	5.6	5.9	5.9	4.8	5.7
6 IVM comp	5.3	5.7	5.8	4.6	5.3
7 ISC comp	5.2	5.8	5.2	4.7	5.1
8 IVC comp	5.1	5.0	5.1	4.7	5.5
9 SR 7200	4.4	5.5	4.9	3.8	3.4
LSD at 5% =	0.6	0.9	0.9	0.8	1.1

¹9 = best turf quality

Table 3. Performance of bentgrass cultivars and selections in a fairway/tee trial seeded in September 2001 at North Brunswick, NJ.

	Cultivar or Selection	Species	-----Turf Quality ¹ -----				
			2002-2005 Avg.	2002 Avg.	2003 Avg.	2004 Avg.	2005 Avg.
1	SR 7200	Velvet	6.0	6.4	6.8	5.3	5.7
2	9ER Blk-5	Colonial	5.3	5.3	5.3	5.2	5.2
3	SRX 781-22	Colonial	5.2	6.2	5.7	5.8	3.3
4	9BNC-2001	Colonial	5.1	5.8	5.2	5.5	4.1
5	EWTR comp	Colonial	5.1	5.0	5.5	5.3	4.6
6	Glory	Colonial	4.9	5.0	4.9	5.0	4.7
7	HCDR comp	Colonial	4.8	4.8	5.6	5.1	3.5
8	Alister	Colonial	4.8	5.3	4.9	4.6	4.3
9	IBP comp	Colonial	4.7	4.0	4.9	4.9	5.2
10	Tiger II	Colonial	4.7	6.1	4.7	4.0	4.0
11	SRX IG56	Creeping	4.7	6.0	3.9	4.8	4.0
12	SRX IG32	Creeping	4.6	5.6	4.0	4.8	4.1
13	SRX IG44	Creeping	4.6	6.0	3.9	4.3	4.2
14	SRX IG57	Creeping	4.6	5.8	4.6	4.1	4.0
15	SRX 7EE25	Colonial	4.6	5.1	5.1	4.4	3.7
16	SRX 7MOBB	Colonial	4.5	6.0	4.6	4.0	3.6
17	SRX IG222	Creeping	4.5	5.7	3.7	4.8	4.0
18	SRX 1G68	Creeping	4.5	5.6	3.8	4.3	4.2
19	Heriot	Colonial	4.4	4.8	4.8	3.7	4.4
20	SRX 781-13	Colonial	4.4	5.3	4.2	4.2	4.0
21	SRX 7EE	Colonial	4.4	5.1	4.6	3.7	4.1
22	SRX 7CRCO	Colonial	4.4	6.2	4.6	3.5	3.0
23	SR 7150	Colonial	4.4	5.7	4.6	3.9	3.3
24	SRX ICOCR	Creeping	4.3	5.6	3.9	3.8	3.9
25	Bardot	Colonial	4.3	4.5	4.9	4.2	3.8
26	SRX 767-7	Colonial	4.3	5.3	4.6	3.2	4.1
27	SRX 765-11	Colonial	4.3	4.6	4.7	3.6	4.3
28	SRX IG46	Creeping	4.3	5.9	4.0	3.9	3.4
29	SR 7100	Colonial	4.3	5.1	4.0	3.6	4.2
30	SRX 7EE20	Colonial	4.3	4.6	4.9	3.8	3.7
31	SRX 781-3	Colonial	4.3	5.2	4.9	3.4	3.6
32	SRX 780-19	Colonial	4.3	4.5	4.7	3.6	4.2
33	SRX 786-6	Colonial	4.3	5.0	3.8	3.9	4.5
34	SRX 780-6	Colonial	4.3	4.6	4.4	3.4	4.7
35	Independence	Creeping	4.3	6.2	3.6	3.4	3.8

(Continued)

Table 3 (continued).

	Cultivar or Selection	Species	-----Turf Quality ¹ -----				
			2002-2004 Avg.	2002 Avg.	2003 Avg.	2004 Avg.	2005 Avg.
36	SRX IG54	Creeping	4.2	5.5	3.8	4.0	3.7
37	L-93	Creeping	4.2	4.9	4.8	3.7	3.6
38	SRX 7EE4	Colonial	4.2	5.7	4.5	3.1	3.5
39	SRX IH Silver	Creeping	4.2	5.0	4.6	3.7	3.5
40	SRX 146-12	Creeping	4.2	5.1	3.2	4.1	4.3
41	Bengal	Creeping	4.2	6.1	3.6	3.7	3.4
42	SRX IH Blue	Creeping	4.1	5.2	4.2	3.5	3.7
43	Brighton	Creeping	4.1	4.9	4.2	3.3	4.0
44	SRX IBPAA	Creeping	4.1	4.9	4.3	3.4	3.7
45	SRX 765-5	Colonial	4.1	4.6	4.4	3.3	4.0
46	SRX IH Pink	Creeping	4.1	5.4	4.4	2.9	3.5
47	SRX 7EE5	Colonial	4.0	5.7	4.4	3.0	2.9
48	SRX IDIN	Creeping	4.0	5.0	3.2	3.8	4.1
49	SRX IWJH	Creeping	4.0	4.8	4.0	3.7	3.4
50	Putter	Creeping	4.0	4.3	3.9	3.5	4.3
51	SR 1119	Creeping	4.0	5.4	3.8	3.1	3.6
52	SRX 781-21	Colonial	3.9	4.4	4.0	3.1	4.1
53	Penn G-6	Creeping	3.9	4.6	4.3	3.4	3.2
54	Providence	Creeping	3.8	4.7	4.1	3.1	3.5
55	Southshore	Creeping	3.8	4.6	3.5	2.9	4.0
56	Regent	Creeping	3.7	4.5	4.1	3.1	3.0
57	SRX 765-3	Colonial	3.7	4.5	3.8	2.6	3.8
58	PST-9ED	Colonial	3.3	2.5	3.5	3.1	4.0
59	AT-1	Colonial	3.3	2.6	3.4	3.0	4.2
	LSD at 5% =		0.5	1.0	0.9	0.9	0.8

¹9 = best turf quality

Table 4. Performance of bentgrass cultivars and selections in a putting green trial seeded in September 2002 at North Brunswick, NJ.

	Cultivar or Selection	Species	-----Turf Quality ¹ -----			
			2003- 2005 Avg.	2003 Avg.	2004 Avg.	2005 Avg.
1	007	Creeping	6.6	7.0	7.0	5.9
2	Venus	Velvet	6.5	6.8	6.5	6.4
3	Villa	Velvet	6.5	6.2	7.0	6.2
4	Authority	Creeping	6.4	6.7	6.4	6.0
5	Declaration	Creeping	6.2	6.8	5.9	5.8
6	C953	Creeping	6.1	6.4	6.6	5.5
7	Tyee	Creeping	6.1	5.6	6.7	6.0
8	HTL Comp	Creeping	6.1	6.1	6.0	6.1
9	00BAG	Velvet	6.1	6.7	6.4	5.2
10	Greenwich	Velvet	6.0	5.9	6.5	5.7
11	Vesper	Velvet	6.0	6.0	6.3	5.6
12	MacKenzie	Creeping	5.9	6.0	6.4	5.5
13	C952	Creeping	5.9	6.6	6.4	4.8
14	CIS-AP-9	Creeping	5.8	6.6	5.6	5.2
15	SRXG295D	Creeping	5.7	5.6	6.3	5.2
16	13M	Creeping	5.7	5.5	5.4	6.1
17	SRX19294D	Creeping	5.6	5.8	5.9	5.1
18	SRXG299D	Creeping	5.6	5.2	5.8	5.6
19	Benchmark DSR	Creeping	5.5	6.3	5.6	4.7
20	CIS-AP-12	Creeping	5.4	5.6	5.5	5.2
21	SRX1SQZG	Creeping	5.4	5.6	5.5	5.1
22	SRX1TR3E	Creeping	5.4	5.6	5.8	4.9
23	SR 7200	Velvet	5.4	6.3	5.3	4.5
24	PST OEB	Creeping	5.4	5.7	5.2	5.1
25	HTM Comp	Creeping	5.4	5.4	5.1	5.7
26	SRX1G49	Creeping	5.3	5.0	5.1	5.6
27	Kingpin	Creeping	5.2	5.6	5.4	4.7
28	Penn G-2	Creeping	5.2	5.6	5.2	4.9
29	SRX146-12	Creeping	5.2	4.9	4.7	6.0
30	SRX1G68	Creeping	5.2	6.0	4.9	4.8
31	SRX1TRUG	Creeping	5.1	5.3	5.1	4.9
32	SR 1150	Creeping	5.1	5.4	5.2	4.8
33	NuPenn	Creeping	5.1	5.5	5.0	4.9
34	Penn A-1	Creeping	5.1	5.7	4.9	4.8
35	SRX1G57	Creeping	5.1	5.3	4.9	5.1

(Continued)

Table 4 (continued).

	Cultivar or Selection	Species	-----Turf Quality ¹ -----			
			2003- 2005 Avg.	2003 Avg.	2004 Avg.	2005 Avg.
36	SRXG222	Creeping	5.1	4.9	5.1	5.1
37	SRX1W1G	Creeping	5.0	5.4	4.8	5.0
38	SRX1W1CR1G	Creeping	5.0	5.4	4.4	5.2
39	SRX1G32	Creeping	5.0	5.5	4.8	4.8
40	Penn G-1	Creeping	5.0	5.2	5.1	4.8
41	Penn A-2	Creeping	5.0	5.4	4.6	4.9
42	Penn G-6	Creeping	4.9	5.6	4.7	4.5
43	SRX1BL2G	Creeping	4.9	5.6	5.4	3.7
44	CIS-AP-13	Creeping	4.9	4.8	5.1	4.8
45	Bar As2	Creeping	4.9	5.2	4.5	5.0
46	SRX1G56	Creeping	4.8	5.2	4.8	4.6
47	PST SynORO	Creeping	4.8	4.8	4.4	5.3
48	Penn A-4	Creeping	4.8	4.9	4.8	4.5
49	Independence	Creeping	4.8	5.3	4.3	4.8
50	SRX1HPink	Creeping	4.7	5.4	4.3	4.6
51	CIS-AP-10	Creeping	4.7	5.1	4.4	4.7
52	SRX1HBlue	Creeping	4.7	5.1	4.6	4.5
53	CBA-98	Creeping	4.7	5.4	4.1	4.5
54	Pick Syn96-2	Creeping	4.7	5.4	3.9	4.7
55	Penneagle	Creeping	4.7	4.8	4.2	5.0
56	SRX1BPAA	Creeping	4.7	5.4	4.2	4.5
57	SRX1BL3G	Creeping	4.5	5.1	4.3	4.0
58	Pick ECB	Creeping	4.5	4.9	4.0	4.6
59	Bengal	Creeping	4.5	4.7	4.3	4.4
60	SRX1HSilver	Creeping	4.4	5.1	4.0	4.2
61	Southshore	Creeping	4.4	4.6	4.2	4.4
62	SRX1R1G1	Creeping	4.4	4.9	3.9	4.3
63	Pennlinks II	Creeping	4.4	5.6	4.1	3.5
64	SR 1119	Creeping	4.3	5.0	3.8	4.1
65	PST Syn ORM6	Creeping	4.3	4.8	4.0	4.3
66	SRX1LA1G	Creeping	4.3	4.6	3.9	4.3
67	Seaside II	Creeping	4.3	4.4	4.1	4.3
68	SRX117-23	Creeping	4.2	4.6	3.7	4.2
69	Penn A-4	Creeping	4.1	4.7	4.0	3.8
70	PST OX5Bulk	Creeping	4.1	4.2	3.8	4.4

(Continued)

Table 4 (continued).

	Cultivar or Selection	Species	-----Turf Quality ¹ -----			
			2003-2005 Avg.	2003 Avg.	2004 Avg.	2005 Avg.
71	SRX1KOP1E	Creeping	4.1	4.3	4.1	3.7
72	AZBC	Creeping	4.1	4.5	3.8	4.0
73	L-93	Creeping	4.0	4.5	3.5	4.1
74	CATO	Creeping	4.0	4.8	3.4	3.6
75	Backspin	Creeping	4.0	4.3	3.4	4.3
76	CBNGS02	Creeping	3.9	4.6	3.6	3.6
77	Pennlinks	Creeping	3.9	4.0	3.2	4.5
78	Pennway	Creeping	3.9	3.7	3.8	4.1
79	Brighton	Creeping	3.8	4.1	3.2	4.2
80	BGS94-96-02	Creeping	3.7	4.5	3.0	3.5
81	MBGC-02	Creeping	3.7	4.5	2.9	3.7
82	Penn Trio	Creeping	3.6	3.8	3.3	3.7
83	CBC-02	Creeping	3.6	3.4	3.0	4.3
84	Tiger II	Colonial	3.6	4.6	2.6	3.4
85	Penncross	Creeping	3.4	4.1	2.9	3.3
86	Providence	Creeping	3.3	3.7	2.9	3.4
87	Viper	Creeping	3.2	3.8	2.7	3.1
88	Trueline	Creeping	3.0	4.1	2.3	2.8
89	18th Green	Creeping	2.6	3.6	1.8	2.2
90	Kromi	Creeping	1.6	2.2	1.2	1.5
LSD at 5% =			0.5	0.7	0.8	0.8

¹9 = best turf quality

Table 5. Performance of bentgrass cultivars and selections in a fairway/tee trial seeded in September 2002 at North Brunswick, NJ.

Cultivar or Selection	Species	-----Turf Quality'-----				Dry Spot ² May 2005	Red Leaf Spot ³ June 2005	Dollar Spot ³ Avg. 2005
		2003-2005 Avg.	2003 Avg.	2004 Avg.	2005 Avg.			
1 Venus	Velvet	5.9	7.2	5.2	5.3	6.0	8.3	6.2
2 SR 7200	Velvet	5.9	7.0	5.8	4.8	7.3	8.0	5.7
3 HCG Comp	Colonial	5.6	5.8	5.7	5.2	5.7	4.7	5.3
4 HCF Comp	Colonial	5.2	5.0	5.6	5.0	5.3	5.7	5.5
5 Viter	Colonial	5.2	4.9	5.8	4.8	6.7	5.3	6.3
6 PST-9BNC	Colonial	5.0	5.1	5.3	4.6	6.0	5.0	4.7
7 PST-Syn-9LN	Colonial	5.0	5.3	5.1	4.7	6.7	4.3	6.7
8 Glory	Colonial	5.0	4.6	5.1	5.2	7.7	4.0	5.7
9 SRX 7CRCO	Colonial	4.9	5.6	4.8	4.3	4.7	4.3	5.7
10 C952	Creeping	4.8	6.1	5.0	3.3	3.7	8.0	4.3
11 Authority	Creeping	4.8	6.2	5.5	2.7	3.0	8.0	4.8
12 CIS AT-7	Colonial	4.8	5.6	4.7	4.2	5.0	4.0	5.5
13 Benchmark DSR	Creeping	4.8	6.6	4.1	3.6	3.0	8.3	7.0
14 EWTR Comp	Colonial	4.7	5.1	5.1	4.1	4.0	3.0	6.2
15 SRX 7E	Colonial	4.7	5.2	5.0	3.8	5.3	3.3	5.3
16 C953	Creeping	4.7	6.2	5.3	2.6	3.0	7.3	3.3
17 Alister	Colonial	4.6	4.6	4.9	4.4	6.0	4.3	4.8
18 Tiger II	Colonial	4.6	5.0	4.3	4.6	5.3	4.7	5.8
19 SRX 7EE	Colonial	4.6	4.9	4.8	4.0	5.3	4.3	5.8
20 PST-9VL Bulk	Colonial	4.6	5.5	4.4	3.8	5.5	5.0	7.0
21 Sandhill	Creeping	4.5	5.4	4.6	3.4	5.0	7.0	4.7
22 SRX 781-3	Colonial	4.5	4.9	4.4	4.2	6.0	6.0	5.8
23 PST-9VN Bulk	Colonial	4.4	4.6	4.3	4.0	5.3	5.0	5.5
24 Kingpin	Creeping	4.3	5.7	4.3	3.0	3.0	7.7	5.0
25 CIS AT-6	Colonial	4.3	5.0	4.2	3.8	4.0	2.7	5.7

(Continued)

Table 5 (continued).

Cultivar or Selection	Species	-----Turf Quality'-----				Dry Spot ² May 2005	Red Leaf Spot ³ June 2005	Dollar Spot ³ Avg. 2005
		2003-2005 Avg.	2003 Avg.	2004 Avg.	2005 Avg.			
26 SRX 7EE4	Colonial	4.3	5.2	4.2	3.6	5.3	3.0	4.8
27 PST-Syn-9PY	Colonial	4.3	4.5	4.2	4.3	5.0	3.7	6.8
28 SRX 7EE5	Colonial	4.3	5.0	4.2	3.6	3.7	1.7	6.2
29 SRX 7 MODD	Colonial	4.2	5.0	4.2	3.4	4.7	3.0	5.7
30 SRX 7MOBB	Colonial	4.2	4.7	3.9	3.9	4.3	2.3	4.5
31 SRX 780-19	Colonial	4.1	4.1	4.1	4.2	7.0	4.3	5.0
32 CIS AP-10	Creeping	4.1	5.2	4.1	3.0	4.0	7.7	3.8
33 SRX 1H Silver	Creeping	4.0	5.3	3.7	3.1	5.0	7.0	4.5
34 PST-SynA1U	Colonial	4.0	5.3	4.0	2.8	5.3	7.3	3.5
35 Penn A-4	Creeping	4.0	4.9	3.7	3.2	4.3	7.3	3.5
36 CIS AP-12	Creeping	3.9	5.1	4.1	2.5	3.0	8.7	3.0
37 Brighton	Creeping	3.9	4.5	3.4	3.8	6.7	7.3	4.0
38 SRX 1G 57	Creeping	3.9	4.9	3.9	3.0	4.7	8.3	3.5
39 SRX 1W1CR1G	Creeping	3.9	4.5	3.7	3.4	5.7	7.7	3.0
40 SRX 1 Pink	Creeping	3.8	5.0	3.4	3.2	5.3	7.0	4.3
41 SRX 781-21	Colonial	3.8	4.1	3.3	4.0	6.3	5.3	4.8
42 Trueline	Creeping	3.8	5.0	3.6	2.9	5.3	7.0	5.3
43 Providence	Creeping	3.7	4.2	3.4	3.5	5.7	7.7	4.5
44 SRX 1G 32	Creeping	3.7	4.6	4.1	2.5	3.3	8.7	3.2
45 SRX 146-12	Creeping	3.7	4.5	3.2	3.3	5.0	8.0	3.5
46 SR 1119	Creeping	3.6	4.7	3.1	3.1	6.3	6.7	3.3
47 Viper	Creeping	3.6	4.5	3.0	3.0	5.3	6.3	4.5
48 SRX 1H Blue	Creeping	3.6	4.7	2.8	3.3	6.0	7.7	4.5
49 SRX 117-23	Creeping	3.5	4.3	3.6	2.8	3.7	6.0	2.3
50 Independence	Creeping	3.5	4.9	2.7	2.8	4.3	7.0	3.2

(Continued)

Table 5 (continued).

Cultivar or Selection	Species	Turf Quality ¹				Dry Spot ² May 2005	Red Leaf Spot ³ June 2005	Dollar Spot ³ Avg. 2005
		2003-2005 Avg.	2003 Avg.	2004 Avg.	2005 Avg.			
51 SRX 1G 56	Creeping	3.5	4.8	3.6	2.1	3.7	8.3	3.0
52 SRX 1G 68	Creeping	3.5	5.2	2.9	2.4	4.0	8.3	3.8
53 Penncross	Creeping	3.4	3.7	3.3	3.3	5.7	7.7	4.8
54 SRX 1G 49	Creeping	3.4	4.7	3.5	2.2	2.7	7.7	2.8
55 Backspin	Creeping	3.4	4.3	3.2	2.7	5.7	7.7	3.0
56 PST-Syn-9NE	Colonial	2.9	2.6	2.7	3.4	7.3	5.0	4.8
57 18th Green	Creeping	2.5	3.6	1.9	1.9	5.3	6.7	4.7
LSD at 5% =		0.5	0.8	0.8	0.5	1.8	2.1	1.2

¹9 = best turf quality

²9 = least susceptible to dry spot

³9 = least disease

Table 6. Performance of bentgrass cultivars and selections in a putting green trial established in September 2003 at North Brunswick, NJ. (Includes all entries of the National Bentgrass Putting Green Test - NTEP.)

	Cultivar or Selection	Species	-----Turf Quality'-----			Spring Green-up ² April 2005	Density ³ Oct. 2005	Leaf Texture ⁴ Oct. 2005	Genetic Color ⁵ Oct. 2005
			2004-2005 Avg.	2004 Avg.	2005 Avg.				
1	Villa	Velvet	7.7	7.9	7.5	5.0	9.0	9.0	4.3
2	Legendary	Velvet	7.4	7.7	7.2	4.0	9.0	9.0	4.7
3	Venus	Velvet	7.2	7.2	7.2	4.0	9.0	9.0	4.0
4	Vesper	Velvet	7.1	7.3	7.0	3.0	9.0	9.0	4.7
5	Greenwich	Velvet	7.1	7.4	6.7	2.0	8.7	9.0	4.7
6	Tyee	Creeping	6.9	7.2	6.8	5.0	8.0	8.0	6.0
7	Declaration	Creeping	6.6	6.7	6.5	7.0	7.3	7.0	5.3
8	Shark	Creeping	6.6	6.7	6.5	5.0	8.0	8.0	4.7
9	CY-2	Creeping	6.6	6.7	6.4	4.0	7.3	7.0	4.7
10	Penn G-2	Creeping	6.6	6.7	6.5	8.3	7.7	7.3	4.7
11	Authority	Creeping	6.4	6.5	6.3	6.0	8.0	8.0	5.7
12	Penn A-2	Creeping	6.4	6.1	6.6	6.3	7.0	7.3	4.3
13	Independence	Creeping	6.2	6.4	6.1	6.0	7.0	7.7	6.3
14	MacKenzie	Creeping	6.2	6.3	5.9	5.3	8.0	8.0	5.3
15	Penn A-1	Creeping	6.1	6.1	6.0	4.0	7.7	7.7	4.7
16	SR 7200	Velvet	6.1	6.0	6.2	4.0	9.0	9.0	4.0
17	Penn A-4	Creeping	6.0	5.8	6.2	4.3	6.7	7.3	5.3
18	Penn G-6	Creeping	5.9	6.4	5.4	7.0	6.3	6.0	5.7
19	HTM comp	Creeping	5.9	5.2	6.7	6.0	7.0	7.0	5.7
20	OO7	Creeping	5.9	5.9	5.8	5.7	7.0	8.0	5.3
21	T-1	Creeping	5.8	6.1	5.5	3.0	6.3	6.7	8.3
22	LS-44	Creeping	5.6	6.2	5.0	4.0	5.3	5.7	6.3
23	Memorial	Creeping	5.4	5.5	5.3	5.3	5.0	4.7	4.3
24	Bengal	Creeping	5.4	5.5	5.4	3.3	5.7	5.7	5.3
25	Alpha	Creeping	5.3	5.3	5.3	2.3	6.3	6.7	7.7

(Continued)

Table 6 (continued).

Cultivar or Selection	Species	-----Turf Quality'-----			Spring Green-up ² April 2005	Density ³ Oct. 2005	Leaf Texture ⁴ Oct. 2005	Genetic Color ⁵ Oct. 2005
		2004-2005 Avg.	2004 Avg.	2005 Avg.				
26	Cobra II	5.3	5.6	4.9	4.3	7.0	7.3	6.3
27	Century	5.2	5.4	5.1	4.0	6.7	6.7	4.0
28	Southshore	5.2	5.2	5.2	4.3	6.0	6.7	4.3
29	L-93	5.1	5.0	5.1	3.7	5.0	5.0	5.7
30	13-M	4.9	5.2	4.7	3.7	5.0	5.3	4.7
31	Penneagle	4.9	4.8	5.0	5.0	4.3	5.3	4.0
32	SR 1119	4.8	5.4	4.3	3.3	5.0	5.7	6.7
33	Imperial	4.8	4.9	4.6	3.0	6.0	5.3	4.3
34	Kingpin	4.6	4.6	4.7	5.0	5.7	6.0	6.7
35	Benchmark DSR	4.5	4.2	4.8	5.0	6.7	6.7	6.3
36	Crenshaw	4.5	4.6	4.4	2.0	6.3	6.0	7.3
37	Alpha	4.4	4.7	4.2	2.3	5.3	5.3	6.7
38	Pennlinks II	4.1	4.9	3.3	2.3	3.7	3.3	5.3
39	Penncross	2.8	3.4	2.1	1.7	1.0	1.7	4.0
LSD at 5% =		0.7	0.7	0.9	2.1	1.2	1.3	1.3

¹9 = best turf quality
²9 = earliest spring green-up
³9 = highest shoot density
⁴9 = finest leaf texture
⁵9 = darkest green color

Table 7. Performance of creeping bentgrass cultivars and selections in a putting green trial seeded in September 2003 at North Brunswick, NJ.

Cultivar or Selection	-----Turf Quality ¹ -----			Spring Green-up ² April 2005	Brown Patch ³ July 2005	Dollar Spot ³ July 2005
	2004-2005 Avg.	2004 Avg.	2005 Avg.			
1 Declaration	6.0	6.4	5.5	3.7	4.7	8.0
2 Shark	5.9	6.1	5.7	4.7	3.7	6.3
3 Authority	5.6	5.6	5.5	4.3	2.7	7.0
4 Independence	4.9	5.3	4.5	3.7	4.7	5.7
5 L-93	4.8	5.1	4.5	4.0	4.7	7.3
6 Penn A-4	4.8	5.3	4.3	3.3	3.0	6.3
7 Southshore	3.9	4.1	3.7	3.3	4.3	6.3
8 Kingpin	3.6	3.4	3.7	3.0	4.0	7.3
9 Crenshaw	3.5	3.8	3.0	1.7	3.3	5.3
10 SR 1119	3.3	3.8	2.8	1.3	5.3	7.0
LSD at 5% =	0.6	0.7	0.8	1.9	1.3	0.9

¹9 = best turf quality

²9 = earliest spring green-up

³9 = least disease

Table 8. Performance of bentgrass cultivars in a fairway/tee trial established in September 2003 at North Brunswick, NJ. (Includes all entries of the 2003 National Bentgrass Fairway Test - NTEP.)

Cultivar or Selection	Species	-----Turf Quality ¹ -----			Scalping ² July 2005	Density ³ Oct. 2005	Leaf Texture ⁴ Oct. 2005	Genetic Color ⁵ Oct. 2005	Fall Dormancy ⁶ Nov. 2005
		2004- 2005 Avg.	2004 Avg.	2005 Avg.					
1 SR 7200	Velvet	7.5	7.7	7.4	9.0	9.0	4.3	5.7	
2 Authority	Creeping	6.7	6.5	6.9	8.0	8.0	5.0	6.7	
3 PST-OEB	Creeping	6.4	6.2	6.6	8.3	7.7	6.3	7.7	
4 Kingpin	Creeping	6.4	6.9	6.0	8.0	7.3	7.7	5.3	
5 13-M	Creeping	6.2	6.5	5.9	7.0	6.7	6.0	5.7	
6 Penneagle II	Creeping	6.2	6.1	6.3	8.7	7.3	5.7	6.7	
7 Benchmark	Creeping	6.2	6.9	5.6	7.0	6.7	7.3	4.7	
8 Alpha	Creeping	6.2	6.2	6.2	8.7	7.3	6.7	5.0	
9 LS-44	Creeping	6.2	6.2	6.1	6.3	7.3	6.3	6.0	
10 MacKenzie	Creeping	6.1	6.2	6.1	8.0	8.0	5.3	5.0	
11 Shark	Creeping	6.1	6.1	6.1	6.7	8.0	5.0	5.3	
12 T-1	Creeping	6.1	6.4	5.9	6.7	7.7	8.3	4.3	
13 Alpha	Creeping	6.0	6.0	6.1	9.0	7.3	6.7	5.7	
14 IS-AT 7	Colonial	6.0	6.5	5.6	9.0	7.0	3.7	2.7	
15 Declaration	Creeping	6.0	7.5	4.5	4.7	7.0	5.0	5.3	
16 IS-AP 14	Creeping	5.9	5.9	5.9	6.3	7.7	5.0	6.0	
17 PST-9NBC	Colonial	5.8	6.1	5.5	9.0	6.7	3.7	4.3	
18 SR 1119	Creeping	5.7	6.0	5.4	8.7	6.3	7.3	6.0	
19 PST-9VN	Colonial	5.7	6.1	5.3	9.0	5.3	3.3	3.3	
20 Independence	Creeping	5.7	5.6	5.8	8.3	7.7	5.3	5.0	
21 Bengal	Creeping	5.7	5.7	5.7	9.0	6.7	6.3	7.7	
22 SR 7150	Colonial	5.6	5.9	5.3	9.0	5.7	3.3	3.3	
23 EWTR	Colonial	5.6	6.1	5.2	9.0	7.0	2.7	2.7	
24 Pennlinks	Creeping	5.6	6.2	5.0	8.3	4.7	5.3	7.7	
25 SR 1150	Creeping	5.6	6.0	5.2	6.3	7.3	4.3	4.7	

(Continued)

Table 8 (continued).

Cultivar or Selection	Species	-----Turf Quality ¹ -----			Scalping ² July 2005	Density ³ Oct. 2005	Leaf Texture ⁴ Oct. 2005	Genetic Color ⁵ Oct. 2005	Fall Dormancy ⁶ Nov. 2005
		2004- 2005 Avg.	2004 Avg.	2005 Avg.					
26 Tiger II	Colonial	5.5	6.1	5.0	9.0	6.3	3.3	3.3	
27 L-93	Creeping	5.4	5.8	5.1	7.7	5.7	4.7	6.0	
28 Bardot	Colonial	5.3	5.8	4.8	9.0	6.0	2.3	2.7	
29 Southshore	Creeping	5.3	5.3	5.2	7.0	6.0	5.0	5.3	
30 Imperial	Creeping	4.9	4.6	5.3	8.3	6.3	4.3	5.3	
31 Princeville	Creeping	4.7	4.4	4.9	8.3	4.7	3.0	6.7	
32 Crenshaw	Creeping	4.6	4.4	4.8	9.0	6.0	5.3	6.3	
33 Pennncross	Creeping	3.9	4.0	3.8	8.7	4.3	4.7	5.0	
34 Seaside	Creeping	2.1	2.4	1.9	9.0	1.0	2.0	5.7	
LSD at 5% =		0.5	0.6	0.7	1.4	1.1	1.2	1.5	

¹9 = best turf quality
²9 = least scalping
³9 = highest shoot density
⁴9 = finest leaf texture
⁵9 = darkest green color
⁶9 = least dormant

Table 9. Performance of creeping bentgrass cultivars and selections in a fairway/tee trial seeded in October 2003 at North Brunswick, NJ.

	Cultivar or Selection	Species	-----Turf Quality ¹ -----			Dollar Spot ² Avg. 2005
			2004-2005 Avg.	2004 Avg.	2005 Avg.	
1	Greenwich	Velvet	6.6	6.5	6.8	5.7
2	Authority	Creeping	6.4	6.6	6.3	5.8
3	SR 7200	Velvet	6.0	6.1	5.9	7.3
4	PST-Syn-9BC3	Colonial	6.0	5.8	6.1	6.5
5	Declaration	Creeping	6.0	7.3	4.6	8.3
6	Shark	Creeping	5.9	6.1	5.7	5.3
7	Cobra II	Creeping	5.8	6.4	5.4	5.2
8	VE 3 Comp	Velvet	5.8	5.8	5.8	7.3
9	PST-Syn-9NCG	Colonial	5.7	5.5	6.0	7.0
10	Penneagle II	Creeping	5.7	5.7	5.8	5.3
11	Penn G-1	Creeping	5.7	5.1	6.2	4.8
12	Sandhill	Creeping	5.6	5.4	5.9	6.2
13	SRX 7CRCO	Colonial	5.6	5.5	5.8	7.5
14	Kingpin	Creeping	5.6	6.1	5.1	7.7
15	PST-9NG-Bulk	Colonial	5.5	5.3	5.8	6.2
16	Tyee	Creeping	5.5	5.5	5.6	4.5
17	Penn G-6	Creeping	5.5	5.6	5.4	5.7
18	PST-VGG Bulk	Velvet	5.5	5.2	5.8	5.3
19	PST-OEB	Creeping	5.4	5.5	5.3	5.2
20	PST-OEX Bulk	Creeping	5.4	4.7	6.0	7.0
21	SRX IG68	Creeping	5.3	5.5	5.2	3.3
22	Penn A-2	Creeping	5.3	5.2	5.6	3.5
23	Alister	Colonial	5.3	5.1	5.6	6.0
24	Benchmark DSR	Creeping	5.3	5.6	5.0	8.5
25	Penn A-1	Creeping	5.3	5.6	5.0	3.7
26	PST-OSF Bulk	Creeping	5.2	4.9	5.6	6.7
27	IS-AP-10	Creeping	5.2	4.8	5.5	4.2
28	SRX ITR3E	Creeping	5.2	5.0	5.4	4.5
29	PST-9R3	Colonial	5.1	4.8	5.4	8.2
30	IS-AP-14	Creeping	5.1	5.4	4.9	3.8
31	SRX 7MOBB	Colonial	5.1	4.9	5.3	6.5
32	L-93	Creeping	5.1	5.1	5.1	5.5
33	SRX WICRIG	Creeping	5.1	5.0	5.1	3.8
34	ORU	Creeping	5.1	5.4	4.8	3.7
35	PST-9x3 Bulk	Colonial	5.0	4.4	5.7	7.7

(Continued)

Table 9 (continued).

	Cultivar or Selection	Species	-----Turf Quality ¹ -----			Dollar Spot ² Avg. 2005
			2004-2005 Avg.	2004 Avg.	2005 Avg.	
36	SRX IG57	Creeping	5.0	5.1	5.0	3.5
37	Penneagle	Creeping	5.0	4.8	5.3	4.5
38	Glory	Colonial	5.0	5.0	5.0	7.2
39	SR 1150	Creeping	4.9	5.1	4.8	5.0
40	SRX 7EE5	Colonial	4.9	5.0	4.9	4.7
41	Independence	Creeping	4.9	4.8	5.1	3.3
42	Penn A-4	Creeping	4.9	4.9	4.9	3.8
43	PST-020 Bulk	Creeping	4.9	5.0	4.8	5.7
44	PST-9VN	Colonial	4.8	4.9	4.7	8.2
45	SRX 1H Blue	Creeping	4.8	5.0	4.6	3.0
46	SRX 1NJH	Creeping	4.8	4.6	5.0	4.3
47	SRX ISQ2G	Creeping	4.8	4.7	4.9	4.8
48	SRX 7EE4	Colonial	4.6	4.6	4.5	5.3
49	SR 1119	Creeping	4.6	4.6	4.5	4.0
50	SRX 1H Pink	Creeping	4.5	4.0	5.1	4.8
51	Bengal	Creeping	4.5	4.5	4.6	3.8
52	Southshore	Creeping	4.5	4.3	4.7	3.8
53	Brighton	Creeping	4.5	4.2	4.7	4.2
54	Imperial	Creeping	4.4	4.0	4.8	3.8
55	Bar AS 2	Creeping	4.4	4.4	4.5	3.5
56	PST-Syn-9PIN	Colonial	4.4	4.6	4.2	8.0
57	SRX 1HSilver	Creeping	4.4	4.3	4.6	5.0
58	SR 7100	Colonial	4.4	4.4	4.4	6.7
59	PST-Syn-9NT	Colonial	4.3	4.0	4.6	6.5
60	SRX 7EE	Colonial	4.2	4.5	3.9	5.7
61	Providence	Creeping	4.2	4.2	4.3	4.8
62	ORF-03	Creeping	4.2	4.0	4.5	5.2
63	PennLinks II	Creeping	4.1	3.8	4.5	4.8
64	Crenshaw	Creeping	4.1	3.8	4.4	3.7
65	Seaside II	Creeping	4.1	4.1	4.0	5.5
66	Regent	Creeping	4.1	3.8	4.5	4.7
67	Bardot	Colonial	4.1	3.7	4.4	6.3
68	PST-Syn-9LSD	Colonial	4.0	3.9	4.2	8.0
69	PST-ORR Bulk	Creeping	4.0	3.5	4.5	6.0
70	Century	Creeping	4.0	3.8	4.1	3.0

(Continued)

Table 9 (continued).

	Cultivar or Selection	Species	-----Turf Quality ¹ -----			Dollar Spot ² Avg. 2005
			2004-2005 Avg.	2004 Avg.	2005 Avg.	
71	PST-9GBS-Bulk	Colonial	3.9	3.3	4.5	8.0
72	PST-ORF	Creeping	3.8	3.7	4.0	4.8
73	Heriot	Colonial	3.6	3.5	3.7	6.7
74	PST-OGE Bulk	Creeping	3.6	3.5	3.8	4.7
75	PST-VE52 Bulk	Velvet	3.6	3.5	3.6	4.7
76	Trueline	Creeping	3.5	3.0	4.0	5.5
77	Barifera	Creeping	3.5	3.2	3.8	4.0
78	Penncross	Creeping	3.4	3.0	3.8	3.3
79	SRX 781-21	Colonial	3.2	3.1	3.4	6.2
80	PST-9IR	Colonial	3.2	3.5	2.9	6.3
81	Barbella	Velvet	2.6	2.6	2.7	4.5
LSD at 5% =			0.7	0.8	1.0	1.5

¹9 = best turf quality

²9 = least disease

Table 10. Performance of bentgrass cultivars and selections in a putting green trial seeded in September 2004 at North Brunswick, NJ.

	Cultivar or Selection	Species	Turf Quality ¹ 2005 Avg.	Establishment ² Oct. 2004	Red Leaf Spot ³ July 2005	Copper Spot ³ Aug. 2005
1	IS-AP-14	Creeping	6.7	8.3	5.7	5.7
2	Tyee	Creeping	6.5	8.3	5.7	5.7
3	Shark	Creeping	6.5	8.7	6.0	5.0
4	Greenwich	Velvet	6.4	9.0	6.7	4.3
5	MacKenzie	Creeping	6.4	8.0	6.3	5.3
6	Authority	Creeping	6.3	6.0	5.3	5.7
7	Declaration	Creeping	6.2	8.7	4.0	3.0
8	EPC Comp	Creeping	6.1	4.7	6.0	6.0
9	SRX 1BL1E	Creeping	6.0	6.0	6.0	4.0
10	Villa	Velvet	5.9	8.3	6.3	2.7
11	Kingpin	Creeping	5.8	8.0	5.7	3.7
12	SRX 1G32	Creeping	5.8	5.7	6.0	6.0
13	SRX 1BL2G	Creeping	5.8	9.0	5.3	4.3
14	SRX 1TR3E	Creeping	5.7	8.3	4.3	3.7
15	SRX 146-12	Creeping	5.6	8.7	7.0	5.3
16	Independence	Creeping	5.6	8.3	5.7	4.7
17	FDS1 Comp	Creeping	5.6	4.3	5.0	4.0
18	03-RSM-Comp	Creeping	5.5	4.0	6.3	5.0
19	SRX 1WM231	Creeping	5.5	7.7	4.7	3.7
20	DMC Comp	Creeping	5.5	4.7	6.3	5.3
21	Benchmark DSR	Creeping	5.4	7.0	6.0	2.7
22	Penn A-1	Creeping	5.3	8.7	5.0	4.3
23	VE3 Comp	Velvet	5.3	6.0	6.7	4.0
24	Penneagle II	Creeping	5.3	9.0	6.0	4.7
25	PST-OEB-B.S.	Creeping	5.3	8.3	5.3	5.0
26	Penn G-2	Creeping	5.2	7.0	5.0	4.3
27	SRX 1WM COMP	Creeping	5.2	7.0	4.7	3.3
28	PST-SYN-OSF	Creeping	5.2	5.3	5.7	6.3
29	T-1	Creeping	5.2	9.0	6.0	4.3
30	Penn A-2	Creeping	5.2	8.7	5.3	2.7
31	SRX 1WM3102	Creeping	5.1	6.7	3.7	3.0
32	SRX 1WM213	Creeping	5.1	7.7	5.0	3.3
33	PST-SYN-ONCE	Creeping	5.0	5.3	6.0	4.7
34	PST-EVX Bulk	Velvet	4.9	4.0	5.7	3.7
35	SRX 1WM236	Creeping	4.9	7.7	5.0	2.0

(Continued)

Table 10 (continued).

	Cultivar or Selection	Species	Turf Quality ¹ 2005 Avg.	Establishment ² Oct. 2004	Red Leaf Spot ³ July 2005	Copper Spot ³ Aug. 2005
36	Century	Creeping	4.9	2.0	5.0	3.3
37	SR 1150	Creeping	4.9	5.0	4.7	5.0
38	Alpha	Creeping	4.8	8.3	5.7	4.3
39	SRX 1WM385	Creeping	4.8	6.7	4.7	5.0
40	SR 7200	Velvet	4.8	8.7	5.3	2.7
41	Southshore	Creeping	4.7	9.0	5.0	3.3
42	SRX 1WM3	Creeping	4.7	7.7	4.0	3.0
43	FDS2 Comp	Creeping	4.7	4.0	4.7	1.0
44	SR 1119	Creeping	4.6	8.7	6.0	4.3
45	Penn G-1	Creeping	4.6	8.0	5.3	4.0
46	Glory	Colonial	4.5	9.0	6.0	7.7
47	Crenshaw	Creeping	4.5	8.3	4.0	4.7
48	Penn A-4	Creeping	4.4	8.3	4.7	2.7
49	SRX 1WM232	Creeping	4.4	7.0	4.0	2.0
50	SRX 1WM39	Creeping	4.4	7.3	4.3	2.3
51	MVA Comp	Velvet	4.4	3.7	6.0	3.3
52	PST-SYN-OHTY	Creeping	4.4	5.0	4.7	3.3
53	Penn A-4	Creeping	4.3	8.3	5.7	3.7
54	03-TTP- Comp	Creeping	4.2	4.0	5.3	2.7
55	Putter	Creeping	4.2	9.0	6.0	4.7
56	Penn G-6	Creeping	4.1	7.7	4.3	3.0
57	L-93	Creeping	4.1	8.7	4.7	3.7
58	Alister	Colonial	4.1	8.0	4.3	7.0
59	PST-9R3	Colonial	4.1	7.7	5.0	6.3
60	Pennlinks II	Creeping	3.9	8.7	3.0	3.7
61	PST-9PIN	Colonial	3.9	3.3	6.7	6.3
62	EVA Comp	Velvet	3.8	2.3	5.7	4.3
63	Penneagle	Creeping	3.7	8.0	4.7	3.7
64	PST-ORF	Creeping	3.6	7.3	6.0	4.3
65	Pennlinks	Creeping	3.6	8.0	4.3	3.3
66	Brighton	Creeping	3.5	8.7	5.0	4.0
67	Sandhill	Creeping	3.5	8.3	4.3	3.7
68	SRX 7EW 88-34	Velvet	3.5	7.0	4.3	4.7
69	Viper	Creeping	3.5	8.0	4.0	3.3
70	Providence	Creeping	3.4	9.0	5.3	4.3

(Continued)

Table 10 (continued).

	Cultivar or Selection	Species	Turf Quality ¹ 2005 Avg.	Establishment ² Oct. 2004	Red Leaf Spot ³ July 2005	Copper Spot ³ Aug. 2005
71	PST-9VN	Colonial	3.3	8.3	5.0	5.7
72	Penncross	Creeping	3.2	5.7	4.3	3.0
73	PST-ORF	Creeping	3.1	7.0	3.3	3.3
74	PST-91R B.S.	Colonial	3.1	4.3	6.0	6.3
75	Seaside II	Creeping	3.1	9.0	3.0	3.0
76	Penncross	Creeping	2.8	8.7	3.0	3.0
	LSD at 5% =		1.1	1.7	2.0	2.0

¹9 = best turf quality

²9 = quickest establishment

³9 = least disease

Table 11. Performance of bentgrass cultivars and selections in a fairway/tee trial seeded in September 2004 at North Brunswick, NJ.

	Cultivar or Selection	Species	Turf Quality ¹ 2005 Avg.	Establishment ² Oct. 2004	Dollar Spot ³ Sept. 2005	Brown Patch ³ Aug. 2005
1	PST-EVX-Bulk	Velvet	7.4	4.3	7.0	8.9
2	Villa	Velvet	6.9	9.0	7.3	8.8
3	SRX 1WM231	Creeping	6.7	8.7	8.0	8.3
4	SR 7200	Velvet	6.5	9.0	6.3	7.3
5	Declaration	Creeping	6.5	8.3	8.0	6.7
6	Greenwich	Velvet	6.4	9.0	6.3	7.4
7	SRX 1WM310Z	Creeping	6.2	7.7	6.7	7.9
8	BCD Comp	Colonial	6.1	4.7	6.0	6.9
9	SRX 1W236	Creeping	6.0	8.0	6.0	8.1
10	Shark	Creeping	6.0	9.0	5.0	8.6
11	Penn G-2	Creeping	5.9	9.0	4.3	7.8
12	SRX 1WM213	Creeping	5.9	8.3	6.7	8.3
13	IS-AP14	Creeping	5.9	9.0	4.0	8.6
14	SRX 1WM39	Creeping	5.8	8.3	6.0	7.8
15	9111-6-12	Colonial	5.7	5.0	7.0	6.7
16	SRX 1WM385	Creeping	5.7	8.7	5.7	7.7
17	SRX 115-22	Colonial	5.7	8.7	7.3	5.4
18	SRX 1WM Comp	Creeping	5.7	8.7	6.3	7.5
19	SRX 1WM3	Creeping	5.6	7.7	6.0	8.5
20	EBM Comp	Colonial	5.6	6.0	7.3	5.7
21	9108-1 & 5	Colonial	5.6	6.3	8.7	5.6
22	PST-SYN-9GPS	Colonial	5.6	5.7	7.7	5.4
23	LDP Comp	Colonial	5.6	3.7	8.3	4.9
24	9110-8,9 & 10	Colonial	5.5	5.7	6.3	7.0
25	SR 1150	Creeping	5.4	7.0	6.7	7.4
26	SRX 1WM232	Creeping	5.4	8.7	5.0	6.5
27	Tyee	Creeping	5.3	8.7	4.0	8.3
28	Penn A-2	Creeping	5.3	8.7	5.0	7.5
29	PST-SYN-ONCE	Creeping	5.2	6.0	3.0	8.6
30	PST-OHB Bulk	Creeping	5.2	6.0	2.3	6.4
31	SRX 1TR3E	Creeping	5.2	8.3	4.7	7.4
32	PST-SyN-OSF	Creeping	5.1	6.7	3.0	8.8
33	SRX 1G32	Creeping	5.0	6.3	2.3	8.1
34	Glory	Colonial	5.0	9.0	5.3	4.3
35	SRX 7EE5	Colonial	5.0	7.7	5.7	5.2

(Continued)

Table 11 (continued).

	Cultivar or Selection	Species	Turf Quality ¹ 2005 Avg.	Establishment ² Oct. 2004	Dollar Spot ³ Sept. 2005	Brown Patch ³ Aug. 2005
36	PST-9VN	Colonial	5.0	8.7	7.0	5.5
37	PST-9PIN	Colonial	5.0	5.7	5.3	6.6
38	PST-OEB-B.S.	Creeping	4.9	8.7	4.3	7.3
39	9107-6-12	Colonial	4.9	2.0	5.0	5.3
40	Tiger II	Colonial	4.9	9.0	7.0	4.8
41	Kingpin	Creeping	4.9	8.3	6.3	5.9
42	MacKenzie	Creeping	4.8	9.0	2.7	7.7
43	Benchmark DSR	Creeping	4.8	8.7	6.3	5.6
44	Alister	Colonial	4.8	9.0	5.0	4.2
45	Penn G-1	Creeping	4.8	9.0	3.7	6.8
46	SRX 1BLIE	Creeping	4.7	8.3	4.0	6.2
47	9111-1-6	Colonial	4.7	3.0	5.7	5.2
48	Penn G-6	Creeping	4.7	9.0	3.3	7.1
49	SRX 7CRCO	Colonial	4.6	7.7	6.7	4.3
50	9113-1&5	Colonial	4.6	2.0	5.7	5.9
51	Penneagle II	Creeping	4.6	9.0	4.3	7.1
52	Penn A-1	Creeping	4.6	8.7	5.3	5.2
53	PST-SYN-OHTY	Creeping	4.5	5.0	2.7	5.8
54	SRX 7EE	Colonial	4.5	8.0	6.3	3.5
55	Independence	Creeping	4.4	8.7	1.3	8.0
56	PST-9R3	Colonial	4.4	8.3	5.3	4.0
57	L-93	Creeping	4.4	9.0	5.3	4.9
58	T-1	Creeping	4.3	9.0	2.3	6.9
59	Pennlinks II	Creeping	4.3	9.0	4.0	4.2
60	Sandhill	Creeping	4.2	9.0	4.7	5.5
61	9118-1-6b	Colonial	4.2	2.0	5.3	3.5
62	Alpha	Creeping	4.2	9.0	1.3	6.3
63	Penn A-4	Creeping	4.2	9.0	2.3	6.3
64	SR 7100	Colonial	4.2	9.0	5.7	3.3
65	SRX 780-19	Colonial	4.1	4.7	4.7	2.7
66	PST-ORF	Creeping	4.0	8.0	3.7	3.1
67	SRX 7EE4	Colonial	4.0	7.7	3.7	3.6
68	SR 7150	Colonial	4.0	7.3	5.3	3.2
69	9118-6-12	Colonial	4.0	3.0	3.0	5.3
70	PST-SYN-016	Creeping	3.9	7.3	5.0	6.1

(Continued)

Table 11 (continued).

	Cultivar or Selection	Species	Turf Quality ¹ 2005 Avg.	Establishment ² Oct. 2004	Dollar Spot ³ Sept. 2005	Brown Patch ³ Aug. 2005
71	Century	Creeping	3.8	3.3	1.0	6.7
72	Penneagle	Creeping	3.8	8.7	4.0	6.2
73	9109-6-12	Colonial	3.8	2.3	3.3	5.3
74	PST-ORF	Creeping	3.8	7.7	3.0	3.5
75	9114-1-6	Colonial	3.8	1.7	4.7	5.3
76	Seaside II	Creeping	3.7	9.0	5.0	4.1
77	Brighton	Creeping	3.7	9.0	3.0	2.9
78	PST-91R B.S.	Colonial	3.7	6.0	7.3	3.4
79	Pennlinks	Creeping	3.6	9.0	2.3	3.8
80	Putter	Creeping	3.6	9.0	2.3	3.9
81	SRX 781-21	Colonial	3.4	7.7	6.0	2.0
82	SR 1119	Creeping	3.4	9.0	2.3	5.0
83	Penn A-4	Creeping	3.4	9.0	1.3	6.1
84	Providence	Creeping	3.2	9.0	4.0	2.7
85	Penncross	Creeping	3.1	9.0	1.3	2.3
86	Crenshaw	Creeping	3.1	9.0	1.0	6.0
87	Viper	Creeping	3.1	8.7	1.3	3.3
88	Southshore	Creeping	3.1	9.0	2.7	3.6
89	Penncross	Creeping	2.7	8.0	1.0	2.9
	LSD at 5% =		0.9	1.8	0.8	1.4

¹9 = best turf quality²9 = quickest establishment³9 = least disease

Table 12. Maintenance practices performed in 2005 on bentgrass trials at North Brunswick, NJ.

Table/Test	Fertility ¹	Mowing Height (inches)	Cultivation/Top Dress	Fungicides	Insecticides	Herbicides
1 2001 Greens	0.96	1/8	June-5/16-inch solid tine aerified (dry spots) April/May-topdressed sand May-1/4-inch verticut	June/July (2x)/Aug./Sept.- Daconil Ultrex	July/Aug.-Dylox 80 (for cutworms)	May-Dimension 1E (pre-emergence weeds)
2 2001 Velvet Greens	0.96	1/8	June-5/16-inch solid tine aerified (dry spots) April/May-topdressed sand May-1/4-inch verticut	June/July (2x)/Aug./Sept.- Daconil Ultrex	July/Aug.-Dylox 80 (for cutworms)	May-Dimension 1E (pre-emergence weeds)
3 2001 Fairway	0.96	3/8	June-5/16-inch solid tine aerified	July-Banner Maxx	Aug.-Dylox 80 (for cutworms)	May-Dimension 1E (pre-emergence weeds)
4 2002 Greens	1.58	1/8	Aug.-1/2-inch hollow tine aerified April/May/Aug./Sept.- topdressed sand	June-Emerald July/Aug.-ProStar 70WP July/Aug./Oct.-Curalan EG July-Daconil Ultrex Oct.-Banner Maxx	July-Merit 75WP (for grubs) Aug.-Dylox 80 (for cutworms)	May-Dimension 1E (pre-emergence weeds)
5 2002 Fairway	1.78	3/8	Aug.-5/8-inch hollow tine aerified/topdressed	July/Oct.-Banner Maxx Aug-Subdue/Daconil Ultrex/Signature Oct.-Curalan EG	July-Merit 75WP (for grubs) Aug.-Dylox 80 (for cutworms)	May-Dimension 1E (pre-emergence weeds)
6 2003 NTEP Greens	2.9	1/8	April/May/Aug./Sept.- topdressed sand May-verticut Aug.-5/8-inch hollow tine aerified	March-Cleary 3336 June/July/Aug.- Daconil Ultrex Aug./Sept.-Junction Sept./Nov.-Banner Maxx Sept.-Pentathion/Daconil Weather Stik Nov.-Heritage/Turficide 10G	July-Dursban Pro (for ants/earthworms) Merit 75WP (for grubs) Aug.-Dylox 80 (for cutworms)	May-Dimension 1E (pre-emergence weeds) Sept.-Quicksilver (post-emergence weeds)

(Continued)

Table 12 (continued).

Table/Test	Fertility ¹	Mowing Height (inches)	Cultivation/Top Dress	Fungicides	Insecticides	Herbicides
7 2003 Greens	2.4	1/8	April/May/Aug./Sept.– topdressed sand May–verticut Aug.–5/8-inch hollow tine aerified	June/July/Aug.– Daconil Ultrex Aug./Sept.–Junction Sept.–Pentathlon/Daconil Weather Stik/Banner Maxx	July–Dursban Pro (for ants/earthworms) Merit 75WP (for grubs) Aug.–Dylox 80 (for cutworms)	May–Dimension 1E (pre-emergence weeds) Oct.–Quicksilver (post-emergence weeds)
8 2003 NTEP Fairway	1.60	3/8	Aug.–5/8-inch hollow tine aerified/topdressed sand	March–Cleary 3336 June/July/Aug.– Daconil Ultrex Nov.–Heritage/Turficide 10G/Banner Maxx	July–Merit 75WP (for grubs) Aug.–Dylox 80 (for cutworms) Oct.–Talstar (for cutworms)	May–Dimension 1E (pre-emergence weeds)
9 2003 Fairway	1.13	3/8	None	June/July/Aug.– Banner Maxx Aug.–Heritage	July–Merit 75WP (for grubs) Aug.–Dylox 80 (for cutworms) Oct.–Talstar (for cutworms)	May–Dimension 1E (pre-emergence weeds)
10 2004 Greens	1.85	1/8	April/May/Aug./Sept.– top dressed sand Aug.–1/2-inch hollow tine aerified	Aug./Oct.–Banner Maxx Aug.–Signature/Heritage Oct.–Curalan EG	July–Merit 75WP (for grubs) Aug.–Dylox 80 (for cutworms)	May–Dimension 1E (pre-emergence weeds)
11 2004 Fairway	1.58	3/8	June–5/16-inch solid tine aerified Aug.–5/8-inch hollow tine aerified/topdressed sand	Aug.–Subdue/Signature Sept./Oct.–Banner Maxx Oct.–Curalan EG	July–Merit 75WP (for grubs) Aug.–Dylox 80 (for cutworms)	May–Dimension 1E (pre-emergence weeds)

¹Annual nitrogen applied (lb/1000 ft²)