

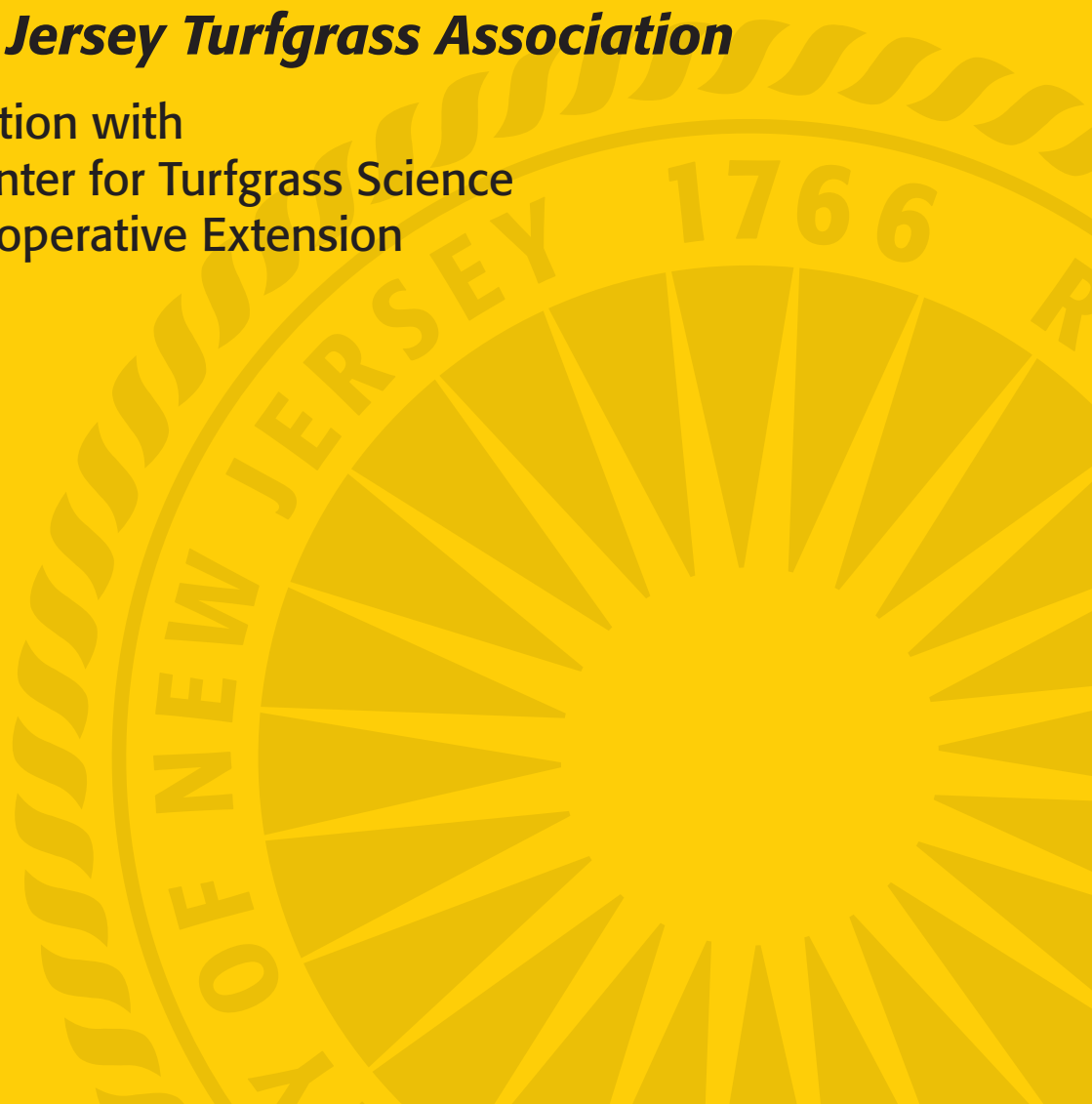
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The Rutgers Turfgrass Proceedings is published yearly by the Rutgers Center for Turfgrass Science, Rutgers Cooperative Extension, and the New Jersey Agricultural Experiment Station, School of Environmental and Biological Sciences, Rutgers, The State University of New Jersey in cooperation with the New Jersey Turfgrass Association. The purpose of this document is to provide a forum for the dissemination of information and the exchange of ideas and knowledge. The proceedings provide turfgrass managers, research scientists, extension specialists, and industry personnel with opportunities to communicate with co-workers. Through this forum, these professionals also reach a more general audience, which includes the public.

This publication includes lecture notes of papers presented at the 2011 GREEN EXPO Turf and Landscape Conference. 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.

Special thanks are given to those who have submitted papers for this proceedings, to the New Jersey Turfgrass Association for financial assistance, and to Barbara Fitzgerald, Anne Diglio, and Ann Jenkins for administrative and secretarial support.

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

PERFORMANCE OF FINE FESCUE CULTIVARS AND SELECTIONS IN NEW JERSEY TURF TRIALS

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The fine fescues (*Festuca* spp.) comprise a group of several species of fine-leaved cool-season turfgrasses that perform well in acidic soils and under infertile or droughty conditions. The fine fescues are also well adapted to moderate levels of shade, which, compared to most cool-season turfgrasses, makes them better suited to low maintenance situations. They can form a dense cover that may persist for years without any maintenance inputs. Fine fescues seeded to the base of trees where light intensity is low and there is competition for water and nutrients usually survive long after other species have disappeared. Under these conditions, fine fescues often out-compete the other cool-season turfgrasses that normally predominate under more favorable levels of light, moisture, and nutrition. In general, fine fescues are not, however, well adapted to wet soil conditions (Murphy, 1996).

Six species of fine fescues are primarily used for turfgrass purposes, three of which are subspecies of *F. rubra*. Strong creeping red (*F. rubra* L. subsp. *rubra*) and slender creeping red fescues [*F. rubra* L. var. *litoralis* Vasey ex Beal] are commonly referred to as creeping red fescues since they both spread by rhizomes. The strong creepers, as the name implies, have more vigorous rhizomes and a more open and aggressive growth habit.

The third subspecies of red fescue, Chewings fescue [*F. rubra* L. subsp. *fallax* (Thuill.) Nyman], is a bunch type grass. The Chewings fescues are usually dense and low growing and, compared to other fine fescues, are better able to tolerate a lower mowing height. Their ability to perform well in areas that have less than optimal growing conditions and to provide a longer-lasting cover if maintenance is reduced or abandoned makes them a popular addi-

tion to home lawn mixes. In general, the Chewings fescues perform best in regions with cooler summer climates such as the maritime (Turgeon, 1980).

Hard fescue (*F. brevilipa* R. Tracey) is another major species used for turf; sheeps (*F. ovina* L.) and blue (*F. glauca* Vill.) fescues play lesser roles. Hard fescues are generally dark green and are known to maintain good color during moderate periods of drought stress. They form a very dense cover and, compared to Chewings fescues, are considered more tolerant of heat, drought, and low fertility. Hard fescues are fairly resistant to disease, even under low maintenance, which makes them well-adapted for use on steep banks for erosion control and in many other low maintenance situations.

Sheeps and blue fescues range in color from various shades of blue or green to a silvery-blue or silvery-green. As a result, they are not generally added to mixtures with other turfgrasses. Their non-aggressive, bunch-type growth habit allows them to be added to wildflower mixes where they make an interesting addition of color, aid in erosion prevention, and do not out-compete the flowers. Their use is also becoming more popular in ornamental landscapes where they are used for the unique and dramatic color contrast they can provide.

Fine fescues can become soft, succulent, and thatchy when heavily fertilized, leaving them more susceptible to diseases and summer heat stress. Ideally, fine fescues shouldn't be fertilized with more than about 1 to 2 lb nitrogen per 1000 ft² per year. In light of current demands for water conservation and the heightened concern about fertilizer usage, fine fescues are species the turf industry can use in certain situations to address some of these issues.

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Many newer cultivars of fine fescue contain a *Neotyphodium* endophyte that improves drought tolerance as well as resistance to many turf insects and some diseases (of added benefit because chemical inputs may be reduced). *Neotyphodium* is a non-pathogenic fungus that grows in the plant within the leaf sheath and crown. The benefits of the endophyte are seldom seen during low stress growing conditions but are often dramatic under stress.

Two other species of fine fescue currently under evaluation for low maintenance situations are tufted hairgrass (*Deschampsia cespitosa* L.) and *Koeleria* sp. Although both of these species tolerate low maintenance under some climatic conditions, they are not yet well adapted to the long, hot, and humid summers of the northeast. Studies continue to improve the potential of these species to become viable, low maintenance turfs in our climate.

Although the Rutgers turfgrass breeding program has improved many of the characteristics desired for a superior fine fescue turf, further work is needed, particularly in the areas of disease and insect resistance. Rutgers continues to cooperate with the National Turfgrass Evaluation Program (NTEP), which evaluates many cultivars, collections, and experimental selections for turf performance across a wide range of geographical locations.

PROCEDURES

Five fine fescue turf trials were conducted at the Rutgers Biology and Pathology Research and Extension Station in Adelphia, NJ (Tables 1 to 5). One trial (Table 5) was included to evaluate fine fescues as well as other species under extremely low maintenance. All tests consisted of 3 x 5 ft plots. The fine fescues were sown at 3.7 lb per 1000 ft²; in the low maintenance test, various species were sown at rates indicative of a low maintenance seeding rate for that species.

Plots were replicated three times in a randomized complete block design. Tests were maintained at different fertility levels and mowing heights depending on the objectives of the test as well as the occurrence of disease or insects. Mowing height and fertilizer inputs of all tests are shown in Table 6. All tests were treated with pre-emergent herbicides and broadleaf weed control. The fine fescue trials (Tables 1 to 4) were irrigated to prevent severe stress and were mowed frequently with reel mowers to avoid exces-

sive accumulation of clippings. After establishment, the low maintenance trial (Table 5) received no additional irrigation other than natural rainfall and was maintained with a rotary mower.

The 2008 Trial (Table 2) includes the 2008 National Fineleaf Fescue Test established in cooperation with the National Turfgrass Evaluation Program (NTEP).

EVALUATION

All tests were visually rated throughout the year on a scale of 1 to 9, where 9 represented the most desirable turf quality. Turf quality is a subjective characteristic that includes density, texture, color, growth habit, damage due to diseases or insects, and overall performance. Trials were rated monthly throughout the growing season for turf quality as well for other characteristics such as disease or live turf. Plots were rated by different evaluators to help minimize personal biases towards a particular trait.

Data for all trials were statistically analyzed using analysis of variance, and means were separated using Fisher's protected least significant difference (LSD) means separation test. Results in Tables 1 to 4 are presented with selections grouped according to species and ranked according to the best overall turf performance (multiple-year quality average). Results of the low maintenance test (Table 5) were not sorted by species and were ranked solely by overall turf quality average so that species trends could be easily seen and individuals that performed differently from similar entries could be identified.

Care should be used when drawing conclusions from some of these trials. First, these tests were grown as monocultures in full sun. These conditions tend to cause different stresses that may not occur under normal conditions. Second, the 2010 tests (Tables 4 and 5) were in their first year of evaluation. Some cultivars perform much differently during establishment than they do after a mature sod has developed.

RESULTS AND DISCUSSION

Turf Quality

As a group, the hard fescues were rated most highly for average turf quality, followed closely by the

Chewings and strong creeping fescues (Tables 2 and 3). Hard fescues IS-FL 42, IS-FL 45, IS-FL 46, and IS-FL 48 exhibited the highest turf quality, while this trait for Reliant IV, MG2 Comp, and Scaldis II was poor. Chewings fescues CW2 Comp, Rushmore, IS-FRC 30, and IS-FRC 33 also rated well; SRX 3K, and Scaldis II, however, did not. The top performing strong creeping red fescue selections included IS-FRR 61, OR1, and IS-FRR 55, whereas the quality of cultivars Boreal and Aruba was low. In general, turf quality for the slender creeping red fescues and sheeps fescues was poor. Of the slender creeping red fescues evaluated, selections SRX 55R and SRX 5500 demonstrated the highest turf quality ratings, while cultivars Dawson and Reggae were the poorest performers.

Although improvement in the turf quality of tufted hairgrass and blue fescues continues, these species ranked lower than the others in overall turf quality; ratings for tufted hairgrass varieties SED comp and SLD comp and blue fescue SR 3200 were poor. It is interesting to note that many of the top performers within all species evaluated were new selections and experimental varieties. The ability of these new experimental selections to outperform the commercially available varieties attests to the continued improvements being made in fine fescue breeding.

Wear Tolerance

Fine fescues are not recommended for use in high traffic areas due to very poor wear tolerance and recovery. These grasses do perform well, however, under low maintenance conditions and, compared to other turf species, have many advantageous characteristics such as fine leaf texture, low water and nitrogen requirements, and good tolerance to shade, drought, and poor soil conditions. Improvements in wear tolerance in the fine fescues would increase the utility of these species and provide turf managers with a greater selection of turf species to use. Wear was simulated on the 2007 (Table 1) trials by using a novel wear simulator (Bonos et al., 2001), which is an engine driven device with rotating rubber paddles that repeatedly hit the turf.

In the 2007 trial in Table 1, ratings for wear tolerance as well as wear recovery were reported. The hard fescues were best for wear tolerance and recovery, particularly cultivars and selections Beacon, IS-FL 40, SRX-NJU, and SR3150; Reliant IV, Rescue 911, and Soil Guard, however, had the lowest rat-

ings for the species. Among the Chewings fescues, experimental varieties CW1 Comp, IS-FRC30, RAD-FC23, and CW2 Comp rated highest for wear recovery, while these traits for cultivars 7 Seas, Ambrose, and Columbra II were poor. Again, these results emphasize improvements to the fine fescues as a result of breeding. In general, the strong creeping red fescues, slender creeping red fescues, and the sheeps and blue fescues as well as tufted hairgrass exhibited poor wear tolerance and recovery. Within these species, the strong creeping red fescues OS2 Comp and IS-FRR 51 and Hard x Blue fescue SRX 3HBO had the highest ratings for wear tolerance and recovery, while these traits for tufted hairgrass entry BBP+EDD, strong creeping red fescue entry RAD-FR26, and slender creeping red fescue cultivar Shoreline were poor.

Disease Resistance

Disease resistance within the fescue species can be quite variable. The performance of the entries in the 2007 trial (Table 1) includes ratings for leaf spot (caused by *Bipolaris sorokiniana*). Leaf spot appears as dark lesions that girdle leaf blades and sheathes, causing yellowing and dieback from tip. This disease can result in severe thinning of the turf. As seen in Table 1, the hard fescues were the least diseased; Beacon and experimental varieties EG2 Comp, SRX NJU, and IS-FL 40 received the highest ratings. Resistance to leaf spot for most of the other fine fescues was poor (mean ratings ≤ 5.0); the tufted hairgrass selection BBP+EDD was the most diseased (mean rating = 1.0) (Table 1).

The performance of the entries in the 2008 trial (Table 2) includes ratings for dollar spot caused by the fungus *Sclerotinia homoeocarpa*. Dollar spot, one of the most common diseases of cool-season turfgrasses, is particularly troublesome in fine fescue, causing silver dollar-shaped spots of dead turf which can converge to form larger areas of damage (Belanger et al., 2005; Bonos et al., 2007). As seen in Table 2, the Chewings and hard fescues were the least diseased. Chewings fescues Intreague 2, Rushmore, IS-FRC 30, and TD2 Comp and hard fescues IS-FL45, Oxford, and IS-FL 47 were the most disease resistant. While the strong creeping red fescues as a group tended to be susceptible to dollar spot, particularly the entries Cardinal, Boreal, and RAD-FR27, several experimental varieties exhibited good disease resistance. Some of these entries included IS-FRR61, PSG-5RM, and ISS-FRR60 (Table 2).

Low Maintenance

Performance under low maintenance is an important characteristic since many home lawns are maintained under these conditions. In addition, there is growing interest in reducing fertilization and irrigation in turfgrass areas for both environmental and economic reasons. Turf quality, turf establishment, and drought tolerance performance in the 2010 low maintenance test is shown in Table 5. This trial was not sorted by species to permit comparison among species as well as to identify the exceptional performance of any individual grass. It should be noted that since these tests received some fertilizer and water during the establishment year, the real effects of low maintenance are not yet evident. If previous trends continue, the performance of many of these entries will decline during the next few years.

As seen in Table 5, the tall and hard fescues demonstrated persistence under low maintenance environments and outperformed most of the other species in overall turf quality, wear tolerance, wear recovery, and drought tolerance ratings. Some of the top performing entries include tall fescues LSD Comp, Grande 3, and Faith, and hard fescues Firefly and Reliant IV. In contrast, the forage tall fescues Jesup Max Q and Martin 2 did not perform well under low maintenance conditions. It is worth mentioning that many of the cultivars and selections that showed the best turf quality also had high drought tolerance ratings. It will be interesting to note the interactions among some of these grasses as the cumulative impact of low maintenance becomes evident and to look not only for trends among the various species, but for outstanding selections within the different species. These data will provide breeders the opportunity to improve the performance of each species under low maintenance.

Overall, it is encouraging to see that many of the higher-ranking fine fescues within all species are new experimental selections. Although advances in breeding efforts continue, there is still need for considerable improvement in resistance to leaf spot and red thread, resistance to summer patch (particularly in the hard fescues), and increased seed production.

One little-studied area that could make a significant impact on the use of fine fescues in a wider array of situations is the improvement of wear tolerance, particularly under drought stress conditions. Breeding efforts at Rutgers continue in an effort to develop high quality turfgrasses with the ability to make a great environmental impact with minimal environmental cost.

ACKNOWLEDGMENTS

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Table 1. Performance of fine fescue cultivars and selections in a turf trial seeded in September 2007 at Adelphia, NJ.

Cultivar or Selection	-----Turf Quality ¹ -----					Leaf Spot ² May 2011	Wear Tolerance ³ July 2011	Wear Recovery ⁴ Aug. 2011
	2008- 2011 Avg.	2008 Avg.	2009 Avg.	2010 Avg.	2011 Avg.			
STRONG CREEPING RED FESCUE								
1 OS4 Comp	6.3	5.6	5.1	5.8	5.0	4.0	4.3	5.4
2 CAR Comp	6.3	5.4	4.9	5.2	5.2	4.0	3.0	5.2
3 IS-FRR 51	6.3	5.4	5.5	5.8	5.7	4.7	5.0	5.6
4 Jasper II	6.0	4.8	4.1	4.5	4.1	4.7	3.0	4.4
5 RCR Comp	5.7	5.2	4.5	5.4	4.6	3.3	4.3	5.0
6 SR 5250	5.7	4.5	4.0	4.4	3.9	3.3	3.0	4.2
7 OS2 Comp	5.3	5.5	5.2	6.2	5.1	4.3	5.7	5.5
8 SJC Comp	5.3	4.6	4.7	5.2	4.9	4.3	4.0	4.8
9 OS1 Comp	5.0	5.2	4.9	5.7	4.8	4.7	3.3	5.2
10 RM Comp	5.0	5.8	5.4	5.8	5.2	4.7	4.0	5.5
11 Garnet	5.0	4.8	4.4	4.4	4.0	3.7	3.7	4.4
12 Splendor	4.7	4.0	3.3	4.0	3.7	2.7	3.0	3.8
13 Shademaster II	4.7	5.1	3.6	4.4	3.9	3.3	3.0	4.3
14 McAlpin	4.7	5.4	4.4	5.2	4.5	4.7	3.0	4.9
15 OS3 Comp	4.3	4.7	4.9	5.3	4.4	4.0	4.3	4.8
16 IS-FRR 52	4.3	5.4	5.6	6.1	5.1	4.3	4.3	5.6
17 Audubon	4.3	4.4	4.1	4.6	4.3	3.0	4.0	4.4
18 RAD-FR7	4.3	5.3	5.4	5.7	5.0	4.7	4.0	5.3
19 Epic	4.0	4.0	3.8	4.0	3.4	3.7	2.7	3.8
20 RAD-FR25	4.0	5.3	3.7	4.5	4.0	4.0	3.7	4.4

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(Continued)

Table 1. Fine fescue turf trial, 2007 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Leaf Spot ² May 2011	Wear Tolerance ³ July 2011	Wear Recovery ⁴ Aug. 2011
	2008- 2011 Avg.	2008 Avg.	2009 Avg.	2010 Avg.	2011 Avg.			
STRONG CREEPING RED FESCUE (cont.)								
21 Shademaster III	4.0	4.9	4.9	5.4	4.9	4.0	4.0	5.0
22 Gibraltar	4.0	4.1	3.9	4.0	3.6	2.7	3.0	3.9
23 IS-FRR 55	3.7	5.1	4.8	5.8	5.0	4.0	4.0	5.2
24 Razor	3.7	4.7	3.7	3.8	3.1	3.0	3.0	3.8
25 Aberdeen	3.7	4.6	3.5	4.3	3.2	3.0	2.7	3.9
26 Wendy Jean	3.7	4.4	3.4	4.0	3.5	3.7	3.0	3.8
27 RAD-FR26	3.3	4.9	3.2	3.6	2.9	2.3	2.3	3.7
28 Crossbow	3.3	5.0	3.2	3.7	3.4	2.3	3.0	3.8
29 Cindy Lou	3.0	4.2	3.1	3.8	3.0	2.3	2.7	3.5
30 RAD-FR21	2.7	5.3	4.1	4.7	3.9	3.3	3.0	4.5
31 Contender	2.7	4.5	3.8	4.1	3.4	3.3	2.7	4.0
32 SR 5210	2.0	3.6	3.2	3.4	3.1	2.7	2.7	3.3
33 Aruba	1.7	3.0	2.8	3.1	2.9	2.3	3.7	2.9
CHEWINGS FESCUE								
1 CW2 Comp	5.7	5.6	5.8	5.9	5.2	4.3	5.3	5.6
2 RAD-FC23	5.7	6.1	5.6	6.7	5.4	5.3	5.3	5.9
3 CW1 Comp	5.0	5.5	5.5	5.9	5.2	4.7	6.3	5.5
4 RAD-FC22	5.0	5.2	5.2	5.5	4.5	3.7	3.7	5.1
5 RAD-FC9	5.0	5.5	5.8	5.8	4.9	3.3	4.0	5.5

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(Continued)

Table 1. Fine fescue turf trial, 2007 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Leaf Spot ² May 2011	Wear Tolerance ³ July 2011	Wear Recovery ⁴ Aug. 2011
	2008- 2011 Avg.	2008 Avg.	2009 Avg.	2010 Avg.	2011 Avg.			
CHEWINGS FESCUE (cont.)								
6 SR 5130	5.0	5.6	5.2	4.9	4.0	4.3	4.0	4.9
7 IS-FRC 30	4.7	5.2	5.1	6.4	4.9	4.0	5.3	5.4
8 RAD-FC24	4.7	5.5	5.5	6.1	4.9	4.7	5.0	5.5
9 AM-FRC 26	4.7	5.7	5.6	6.1	4.9	4.0	4.3	5.6
10 PST-Syn-4CTE	4.3	5.3	5.0	4.7	4.2	3.7	4.3	4.8
11 7 Seas	4.3	5.4	5.1	4.8	4.3	4.0	3.0	4.9
12 OC1	4.0	5.2	5.2	5.3	4.8	4.0	4.0	5.1
13 Longfellow II	4.0	5.2	5.0	4.7	4.3	4.0	4.0	4.8
14 Silhouette	4.0	4.8	5.0	4.6	3.8	3.0	4.0	4.6
15 SR 5100	4.0	2.0	3.8	4.9	4.7	4.7	4.3	3.8
16 Columbra II	3.7	4.3	4.6	4.6	3.8	3.7	3.3	4.3
17 Northbound	3.7	4.9	4.7	4.8	4.4	3.3	3.7	4.7
18 Treazure II	3.7	5.0	5.0	5.4	4.5	4.0	5.0	5.0
19 Ambrose	3.3	5.1	4.6	4.3	3.7	3.7	3.3	4.5
20 J-5	3.3	4.5	4.6	4.6	4.2	4.3	4.3	4.5
21 Jamestown II	2.3	3.7	3.9	3.5	3.5	3.0	3.7	3.7
22 Shadow II	2.3	4.9	4.7	4.4	3.7	3.7	4.0	4.4
23 PST-Syn-4CIB	2.3	4.6	4.9	5.3	4.4	3.3	4.0	4.8

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(Continued)

Table 1. Fine fescue turf trial, 2007 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Leaf Spot ² May 2011	Wear Tolerance ³ July 2011	Wear Recovery ⁴ Aug. 2011
	2008- 2011 Avg.	2008 Avg.	2009 Avg.	2010 Avg.	2011 Avg.			
HARD FESCUE								
1 MG3 Comp	5.7	5.3	5.6	6.5	5.7	6.0	6.7	5.8
2 MG4 Comp	5.7	5.5	5.6	6.6	5.6	5.7	6.3	5.8
3 EG1 Comp	5.3	5.7	5.4	6.6	5.5	6.0	6.3	5.8
4 EG2 Comp	5.3	5.1	5.4	6.6	6.1	6.7	7.3	5.8
5 IS-FL 40	5.0	5.7	5.7	7.1	6.1	6.3	7.0	6.1
6 IS-FL 42	5.0	4.6	5.4	6.4	5.6	6.3	6.3	5.5
7 PST-4HES	5.0	5.1	5.4	5.7	5.0	5.3	6.3	5.3
8 Beacon	4.7	4.8	5.3	6.4	5.6	7.0	7.7	5.5
9 WB	4.7	5.1	5.4	6.5	5.4	5.7	5.7	5.6
10 Scaldis II	4.7	3.0	4.7	5.6	4.9	4.7	5.7	4.6
11 Soil Guard	4.3	5.6	4.7	6.0	4.6	5.0	5.3	5.2
12 Viking	4.3	4.7	5.4	6.3	5.2	6.0	6.0	5.4
13 Ecostar	4.3	5.2	5.0	5.5	4.5	5.7	6.3	5.1
14 MG1 Comp	4.0	5.1	5.6	6.8	5.8	6.0	6.7	5.8
15 Rescue 911	4.0	5.2	4.7	5.5	4.3	5.0	5.0	4.9
16 SRX 3K	4.0	5.1	5.1	5.4	4.4	5.3	5.3	5.0
17 Aurora II	4.0	4.6	4.7	5.5	4.4	5.0	5.3	4.8
18 PST-4NY	4.0	5.0	5.1	5.8	5.0	5.7	5.7	5.2
19 AM-FL39	4.0	4.9	5.1	5.6	5.0	5.3	6.0	5.2
20 Predator	4.0	5.4	5.6	6.8	5.7	5.7	6.0	5.9

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(Continued)

Table 1. Fine fescue turf trial, 2007 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Leaf Spot ² May 2011	Wear Tolerance ³ July 2011	Wear Recovery ⁴ Aug. 2011
	2008- 2011 Avg.	2008 Avg.	2009 Avg.	2010 Avg.	2011 Avg.			
HARD FESCUE (cont.)								
21 SR 3100	4.0	5.1	5.1	5.8	4.6	5.3	5.3	5.2
22 SR 3150	3.7	5.3	5.4	5.6	4.8	5.3	6.7	5.3
23 SRX NJU	3.3	5.1	5.2	5.6	4.9	6.3	6.3	5.2
24 MG2 Comp	3.0	5.4	5.9	6.7	6.0	6.3	6.7	6.0
25 Reliant IV	2.0	4.9	5.1	6.0	4.7	5.7	5.0	5.2
SLENDER CREEPING RED FESCUE								
49 1 Shoreline	5.7	4.9	4.1	4.1	3.3	3.0	2.3	4.1
2 SRX 5500	5.0	4.4	4.5	5.4	4.9	4.7	4.7	4.8
3 Dawson	4.7	3.9	4.0	4.5	4.6	3.7	4.7	4.2
4 Seabreeze GT	4.3	4.0	3.8	3.8	4.1	3.3	4.0	3.9
BLUE FESCUE								
1 SR 3210	5.3	3.2	3.5	4.5	4.3	3.7	4.7	3.9
2 SR 3200	3.3	3.1	4.0	4.5	3.8	4.3	3.7	3.9
BLUE X HARD FESCUE								
1 Bighorn GT	5.3	5.1	4.4	5.3	3.8	4.3	4.0	4.6
2 Little Bighorn	4.7	4.4	3.8	4.8	3.0	4.0	3.7	4.0
HARD X BLUE FESCUE								
1 SRX 3BHO	4.3	5.2	5.1	5.8	5.1	5.0	5.7	5.3

(Continued)

Table 1. Fine fescue turf trial, 2007 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----					Leaf Spot ² May 2011	Wear Tolerance ³ July 2011	Wear Recovery ⁴ Aug. 2011
	2008-2011 Avg.	2008 Avg.	2009 Avg.	2010 Avg.	2011 Avg.			
SHEEPS FESCUE								
1 Azure	4.0	4.1	3.6	3.8	3.4	3.0	3.3	3.7
2 RAD-FO7	4.0	3.7	4.1	4.4	4.0	4.0	4.0	4.1
TUFTED HAIRGRASS								
1 BBP+EDD	1.0	2.6	2.2	4.1	1.0	1.0	1.0	2.5
LSD at 5% =	0.6	0.9	0.8	1.0	0.7	1.8	1.2	1.4

¹9 = best turf quality

²9 = least disease

³9 = least wear

⁴9 = best wear recovery

Table 2. Performance of fine fescue cultivars and selections in a turf trial seeded in September 2008 at Adelphia, NJ. (Includes all entries from the 2008 NTEP Fine Fescue Trial.)

Cultivar or Selection	-----Turf Quality ¹ -----				Dollar Spot ² Sept. 2011
	2009-2011 Avg.	2009 Avg.	2010 Avg.	2011 Avg.	
HARD FESCUE					
1 IS-FL 42	6.1	6.1	6.2	5.9	6.7
2 IS-FL 45	6.0	6.0	6.3	5.9	7.7
3 MN-HD1	5.9	5.6	6.0	6.0	5.7
4 IS-FL 46	5.8	5.5	5.9	5.8	6.3
5 Predator	5.7	5.9	5.5	5.8	6.7
6 TH5 Comp	5.7	5.9	5.8	5.3	6.7
7 Spartan II	5.6	5.2	5.4	6.1	6.0
8 TH6 Comp	5.6	6.1	5.3	5.3	5.7
9 NC-HFI	5.6	5.5	5.6	5.6	6.3
10 Reliant IV	5.5	5.4	5.7	5.5	6.3
11 Lucy	5.5	5.6	5.5	5.4	6.3
12 Beacon	5.5	5.4	5.4	5.6	6.0
13 TH3 Comp	5.5	6.0	5.1	5.3	5.0
14 Oxford	5.3	5.2	5.5	5.3	7.0
15 Matterhorn	5.3	5.3	5.4	5.2	7.0
16 TH4 Comp	5.3	5.2	5.7	5.0	5.0
17 PST-4HES	5.3	5.3	5.4	5.1	5.3
18 Gotham	5.2	5.6	5.2	4.9	5.0
19 WB	5.2	5.6	5.1	4.9	5.7
20 S2S	5.1	5.3	5.3	4.8	6.0
21 IS-FL-47	5.1	4.9	5.3	5.2	7.0
22 SR 3150	5.1	5.0	5.3	4.9	5.0
23 Berkshire	5.0	5.2	5.1	4.8	5.3
24 SR 3100	4.9	4.9	5.0	4.8	6.0
25 Eureka II	4.4	4.4	4.9	4.1	5.0
26 AHF-116	4.4	4.3	4.6	4.2	5.3
27 SRX 3K	4.2	4.5	4.3	3.9	4.0
28 Spartan	4.1	4.4	4.2	3.7	4.0
29 PST-Syn-4NOR-H	3.9	4.3	4.0	3.3	5.0
30 GO-HBF	3.5	5.0	3.0	2.4	3.7
31 Scaldis II	2.4	1.5	2.6	3.3	4.3

(Continued)

Table 2. Fine fescue turf trial, 2008 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----				Dollar Spot ² Sept. 2011
	2009-2011 Avg.	2009 Avg.	2010 Avg.	2011 Avg.	
CHEWINGS FESCUE					
1 Rushmore	5.9	5.9	6.4	5.4	8.3
2 IS-FRC 30	5.8	5.9	6.3	5.3	8.0
3 IS-FRC 33	5.8	5.9	6.3	5.3	8.3
4 IS-FRC 34	5.8	6.0	6.3	5.1	8.3
5 Radar	5.5	5.6	5.4	5.4	8.3
6 IS-FRC 33	5.4	5.7	5.7	4.9	8.3
7 TD1 Comp	5.4	5.8	5.3	5.1	7.3
8 PSG 5OC3	5.4	5.6	5.8	4.7	8.0
9 RAD-FC16	5.3	5.4	5.5	5.1	7.7
10 IS-FRC 35	5.3	5.2	5.9	4.8	8.3
11 RAD-FC11	5.3	5.9	5.2	4.7	6.7
12 Fairmont	5.2	5.5	5.3	4.8	7.3
13 TD2 Comp	5.1	5.8	5.0	4.5	8.3
14 Treazure II	5.0	5.1	5.4	4.7	7.7
15 SR 5130	5.0	5.3	5.0	4.7	6.7
16 Zodiac	5.0	4.8	5.4	4.7	8.0
17 7 Seas	4.8	5.4	4.7	4.4	5.3
18 Intrigue 2	4.8	4.6	5.1	4.5	8.7
19 PST-Syn-4TS-C	4.6	4.8	4.8	4.4	6.7
20 Columbra II	4.6	5.1	4.6	4.2	6.0
21 PST-4IB-C Bulk	4.6	4.6	5.1	4.0	6.7
22 Lacrosse	4.5	5.0	4.5	3.9	5.7
23 Longfellow II	4.4	5.0	4.4	4.0	6.3
24 4SHR-CH	4.4	4.6	4.8	3.8	7.3
25 PST-4CSD	4.4	4.3	4.8	4.0	5.7
26 PST-Syn-4C30-C	4.4	4.6	4.7	3.8	7.0
27 Ambrose	4.4	4.6	4.4	4.0	5.7
28 Silhouette	4.3	4.9	4.4	3.8	5.3
29 Ambassador	4.3	4.9	4.2	3.7	5.0
30 Magic Wand	4.2	4.9	4.1	3.6	3.7
31 Casade	4.0	4.3	4.0	3.6	6.0
32 SR 5100	3.9	4.2	4.1	3.5	6.0
33 SRX 5SDP2	3.8	4.0	4.0	3.4	6.0
34 OC1	3.4	4.3	3.2	2.7	2.0

(Continued)

Table 2. Fine fescue turf trial, 2008 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----				Dollar Spot ² Sept. 2011
	2009-2011 Avg.	2009 Avg.	2010 Avg.	2011 Avg.	
STRONG CREEPING RED FESCUE					
1 IS FRR 61	5.8	5.8	6.4	5.4	8.0
2 PSG 5RM	5.8	6.2	5.8	5.4	8.0
3 IS-FRR 55	5.6	5.4	6.3	5.3	7.3
4 IS FRR 60	5.5	5.4	5.9	5.3	8.0
5 OS2	5.4	5.4	5.3	5.5	7.3
6 ASC 245	5.4	5.7	5.5	4.9	7.3
7 B6 Comp	5.2	5.3	5.4	4.9	6.7
8 R6 Comp	5.1	5.3	5.3	4.8	6.7
9 PST-Syn-4OR8	5.1	5.1	5.0	5.1	6.0
10 RAD-FR13	5.0	4.8	5.4	4.7	6.0
11 OS1	5.0	5.2	5.2	4.5	6.0
12 Navigator II	4.9	5.0	4.8	4.9	6.7
13 IS-FRR 51	4.8	5.8	3.9	4.7	6.0
14 Shademaster III	4.7	4.9	4.3	4.8	6.0
15 PST-Syn-4MD8	4.4	5.2	4.1	4.0	4.3
16 IS-FRR 62	4.4	5.0	4.2	3.9	5.7
17 PST-8000	4.0	5.1	3.5	3.4	4.0
18 Jasper II	3.9	4.9	3.4	3.5	4.3
19 4CRBL-08	3.9	4.0	4.0	3.7	4.0
20 Garnet	3.8	4.9	3.2	3.4	4.0
21 Wendy Jean	3.8	4.2	3.5	3.7	4.7
22 Pathfinder	3.8	4.0	3.6	3.7	6.0
23 Lustrous	3.7	4.4	3.4	3.2	3.7
24 Cardinal	3.7	4.5	3.1	3.4	3.3
25 SR 5250	3.7	4.6	3.1	3.4	5.3
26 Epic	3.6	4.5	2.9	3.3	4.0
27 Razor	3.6	4.5	3.0	3.3	5.0
28 Contender	3.6	4.3	3.3	3.1	4.7
29 Cindy Lou	3.6	4.4	3.1	3.2	4.3
30 Bargena III	3.4	3.9	3.3	3.0	3.3
31 Aberdeen	3.4	3.9	3.1	3.1	3.7
32 RAD-FR27	3.3	4.7	2.6	2.6	2.3
33 Gibraltar	3.3	3.9	2.9	3.1	4.3
34 ACR10-08	3.3	4.1	2.9	2.8	3.7
35 4DEN-CR	3.2	4.2	2.7	2.7	3.3

(Continued)

Table 2. Fine fescue turf trial, 2008 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----				Dollar Spot ² Sept. 2011
	2009-2011 Avg.	2009 Avg.	2010 Avg.	2011 Avg.	
STRONG CREEPING RED FESCUE (cont.)					
36 SR 5210	3.2	3.5	3.0	3.0	4.3
37 GO-ABH	3.0	4.2	2.6	2.3	2.7
38 Boreal	2.8	2.9	2.9	2.6	3.3
SLENDER CREEPING RED FESCUE					
1 Shoreline	4.0	4.1	4.2	3.8	5.0
2 GO-ABC	4.0	4.7	3.7	3.6	3.7
3 PST-Syn-4SEA-SL	4.0	4.8	3.8	3.3	4.3
4 Dawson	3.3	2.9	3.4	3.5	5.0
BLUE X HARD FESCUE					
1 Bighorn	3.9	4.0	3.7	4.1	5.0
UNKNOWN					
1 07-1	3.2	3.2	3.1	3.2	5.3
2 MP FF1	3.1	2.7	3.1	3.5	5.3
3 MP FF2	2.9	2.3	3.1	3.4	5.0
BLUE FESCUE					
1 SR 3200	2.8	2.1	2.7	3.6	5.7
2 SR 3210	2.6	2.6	2.6	2.7	4.7
LSD at 5% =	0.5	0.5	0.6	0.8	1.7

¹9 = best turf quality

²9 = least disease

Table 3. Performance of fine fescue cultivars and selections in a turf trial seeded in September 2009 at Adelphia, NJ.

Cultivar or Selection	-----Turf Quality ¹ -----		
	2010-2011 Avg.	2010 Avg.	2011 Avg.
HARD FESCUE			
1 IS-FL 46	6.4	6.2	6.6
2 IS-FL 48	6.1	5.7	6.5
3 WB	6.0	6.2	5.8
4 S2	6.0	6.1	5.9
5 Beacon	6.0	6.1	5.8
6 H93 comp	6.0	6.1	5.8
7 PSG 3TH3-22B	5.9	5.8	6.0
8 IS-FL 45	5.8	6.1	5.6
9 IS-FL 55	5.8	5.9	5.7
10 IS-FL 53	5.8	5.7	5.9
11 S2S	5.8	5.8	5.8
12 PSG 3TH3-11	5.8	5.7	5.9
13 Spartan II	5.8	5.7	5.9
14 H91 comp	5.8	5.7	5.9
15 H92 comp	5.7	5.8	5.7
16 PSG 3TH3-27	5.7	5.8	5.6
17 H94 comp	5.6	5.5	5.7
18 IS-FL 42	5.6	5.5	5.7
19 Reliant IV	5.6	5.7	5.5
20 PSG 3TH3-15	5.6	6.0	5.1
21 PSG 3TH3-22A	5.5	5.7	5.3
22 PST-4HES	5.4	5.6	5.3
23 S2S E+	5.4	5.6	5.2
24 IS-FL 47	5.3	5.4	5.3
25 IS-FL 54	5.3	5.3	5.3
26 Matterhorn	5.3	5.5	5.2
27 SR 3150	5.3	5.2	5.3
28 Predator	5.2	5.1	5.4
29 IS-FL 39	5.2	5.1	5.3
30 PSG 3TH3-24	5.2	5.6	4.8
31 IS-FL 52	5.0	4.8	5.2
32 PST-4NY	5.0	5.0	5.0
33 Oxford	5.0	5.0	4.9
34 SR 3100	5.0	5.1	4.8
35 Aurora II	4.8	5.2	4.5

(Continued)

Table 3. Fine fescue turf trial, 2009 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----		
	2010-2011 Avg.	2010 Avg.	2011 Avg.
HARD FESCUE (cont.)			
36 AZB-1	4.7	4.7	4.6
37 AZB-14	4.5	4.6	4.4
38 AZB-9	4.4	4.7	4.2
39 PST-Syn-4RUB	4.3	4.3	4.3
40 AZB-8	4.3	4.6	4.0
41 Eureka II	4.3	4.2	4.3
42 AZB-5	4.3	4.4	4.2
43 AZB-3	4.2	4.3	4.2
44 AZB-4	4.2	4.4	4.1
45 AZB-7	4.2	4.2	4.2
46 AZB-6	4.2	4.3	4.0
47 AZB-11	4.2	4.4	3.9
48 AZB-10	4.1	4.3	3.9
49 SRX3K	4.1	4.0	4.1
50 AZB-12	4.1	4.4	3.7
51 PST-4DON	4.0	4.4	3.6
52 AZB-2	4.0	4.2	3.8
53 AZB-15	4.0	4.2	3.8
54 AZB-13	3.8	4.0	3.6
55 AZB Bulk	3.8	4.1	3.4
56 Aurora Gold	2.8	2.7	2.8
57 PSG 3TH3-6	5.6	5.8	5.3
58 PSG 3TH3-8	5.1	5.3	5.0
STRONG CREEPING RED FESCUE			
1 IS-FRR 68	5.6	5.8	5.4
2 PSG 5B242	5.6	5.4	5.7
3 PSG 5RJ6	5.5	5.4	5.7
4 PSG 5RJ5	5.4	5.2	5.6
5 PSG 5RJ2	5.4	5.4	5.4
6 PSG 5RJ7	5.4	5.4	5.3
7 PSG 5RJ8	5.4	5.5	5.3
8 Navigator II	5.2	5.3	5.0
9 PSG 5RJ1	5.2	5.1	5.2
10 PSG 5RJ4	5.2	5.1	5.2

(Continued)

Table 3. Fine fescue turf trial, 2009 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----		
	2010-2011 Avg.	2010 Avg.	2011 Avg.
STRONG CREEPING RED FESCUE (cont.)			
11 PSG 5RJ3	5.0	4.9	5.1
12 IS-FRR 51	5.0	5.4	4.6
13 STC2 comp	4.9	4.9	5.0
14 PSG 5RJ9	4.9	4.9	5.0
15 Shademaster III	4.9	5.0	4.8
16 IS-FRR 67	4.8	5.0	4.6
17 OS2	4.8	5.4	4.2
18 PSG 5RM	4.8	5.4	4.1
19 STC1 comp	4.7	5.0	4.4
20 Epic	4.7	5.0	4.3
21 IS-FRR 60	4.7	5.2	4.2
22 IS-FRR 55	4.6	5.5	3.7
23 IS-FRR 61	4.5	4.9	4.0
24 IS-FRR 62	4.4	5.2	3.5
25 Lustrous	4.3	4.6	4.1
26 Garnet	4.3	4.7	3.9
27 Jasper II	4.3	4.9	3.6
28 Foxy II	4.2	4.2	4.2
29 PST-8000	4.2	4.4	4.0
30 PST-4CR10	4.2	4.4	4.0
31 Razor	4.1	4.4	3.9
32 SR 5250	4.0	4.3	3.8
33 Pathfinder	4.0	4.3	3.7
34 Audubon	3.9	4.0	3.9
35 Gibraltar	3.8	4.3	3.3
36 PST-4DEN	3.8	4.3	3.4
37 Aberdeen	3.8	4.4	3.1
38 Cindy Lou	3.7	3.9	3.5
39 Wendy Jean	3.5	4.0	3.1
40 Splendor	3.2	3.5	2.9
41 SR 5210	3.0	3.2	2.8

(Continued)

Table 3. Fine fescue turf trial, 2009 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----		
	2010-2011 Avg.	2010 Avg.	2011 Avg.
CHEWINGS FESCUE			
1 IS-FRC 39	5.5	5.6	5.5
2 Rushmore	5.5	5.8	5.1
3 PSG OC3	5.4	5.6	5.2
4 IS-FRC 30	5.3	5.4	5.2
5 TCP	5.3	5.4	5.1
6 IS-FRC 34	5.3	5.4	5.1
7 IS-FRC 36	5.2	5.2	5.1
8 SR 5130	5.1	5.3	4.8
9 Longfellow II	5.0	4.9	5.0
10 IS-FRC 33	4.9	5.0	4.9
11 Magic Wand	4.9	5.0	4.8
12 7 Seas	4.8	4.9	4.7
13 IS-FRC 35	4.7	4.7	4.8
14 Intrigue II	4.7	4.7	4.7
15 Treazure II	4.7	4.6	4.7
16 Compass	4.6	4.7	4.5
17 PST-R4TC	4.6	4.7	4.5
18 Columbra II	4.5	4.8	4.2
19 PST-4C30D	4.4	4.4	4.5
20 Shadow II	4.4	4.7	4.2
21 SR 5100	4.4	4.4	4.4
22 Ambassador	4.2	4.2	4.2
23 PST-4CSD	4.0	4.0	3.9
24 Jamestown IV	3.9	4.1	3.7
25 Silhouette	3.5	3.4	3.6
26 PSG 5SD2	3.4	3.7	3.1
27 Victory II	1.9	1.7	2.1
BLENDS			
1 SCFF1	4.9	5.1	4.6
2 SCFF3	4.6	4.8	4.4
3 SCFF2	4.4	4.5	4.3
SHEEPS FESCUE			
1 Marco Polo	4.5	4.6	4.4
2 Azure	3.4	3.8	3.1

(Continued)

Table 3. Fine fescue turf trial, 2009 (continued).

Cultivar or Selection	-----Turf Quality ¹ -----		
	2010-2011 Avg.	2010 Avg.	2011 Avg.
SLENDER CREEPING RED FESCUE			
1 SRX 52961	4.3	4.8	3.7
2 Shoreline	4.2	5.0	3.5
3 PST-4SEA	4.1	4.5	3.8
4 Seabreeze GT	4.0	4.4	3.5
5 ASRO 50	4.0	4.4	3.5
6 SRX 5500	3.7	4.1	3.2
BLUE X HARD FESCUE			
1 Little Bighorn	4.0	4.1	3.8
2 Bighorn GT	3.5	3.5	3.5
TUFTED HAIRGRASS			
1 PST-Syn-DC8	2.9	4.1	1.8
2 DCM-bulk	2.9	3.9	1.8
3 SCDES	2.5	3.4	1.6
BLUE FESCUE			
1 SR 3210	1.8	1.7	1.8
LSD at 5% =	0.7	0.8	0.8

¹9 = best turf quality

Table 4. Performance of fine fescue cultivars and selections in a turf trial seeded in September 2010 at Adelphia, NJ .

Cultivar or Selection	-----Turf Quality ¹ ----- 2010-2011 Avg.	Cultivar or Selection	-----Turf Quality ¹ ----- 2010-2011 Avg.
STRONG CREEPING RED FESCUE			
1 PSG 5RM	6.5	36 4RED	4.3
2 3-10 FRR Bulk	6.1	37 4CRD-P	4.2
3 PSG 5J1551	6.0	38 Aberdeen	4.2
4 2-10 FRR Bulk	6.0	39 Fortitude	4.1
5 OS2	6.0	40 Pathfinder	4.1
6 OS3	5.9	41 Navigator	3.9
7 PSG 5RJ5L	5.7	42 OR C1-5	3.7
8 OR1	5.7	43 BRSDT	3.3
9 FT7 Comp	5.7	44 OR C1-3	3.2
10 Jasper II	5.5	45 OR C1-1	2.9
11 FT3 Comp	5.4	46 SR 5210	2.9
12 FT6 Comp	5.4	47 OR C1-4	2.9
13 FT1 Comp	5.4	48 BRSHST	2.8
14 Syn-4ED0	5.4	49 BRSHSM	2.7
15 OR C1-6	5.4	50 SR 52961	2.6
16 FT2 Comp	5.3	51 Boreal	2.4
17 PST-Syn-4BED	5.3	52 07-1FF	1.9
18 Cardinal	5.2	53 Cindy Lou	1.6
19 PSG 5RJE	5.2		
20 4CRD-8	5.1	CHEWINGS FESCUE	
21 OR C1-2	5.1	1 Carson	6.2
22 Garnet	5.1	2 CK2 Comp	5.9
23 FT5 Comp	5.0	3 MVS-FRC 101	5.8
24 PPG-FRR 103	4.9	4 OC1	5.7
25 Lustrous	4.9	5 PSG 50C3	5.6
26 Custer	4.9	6 Lot 08-5	5.4
27 4GRY	4.9	7 ACF 266	5.4
28 Epic	4.8	8 Intrigue	5.4
29 Razor	4.8	9 PPG-FRC 103	5.3
30 FT4 Comp	4.8	10 SR 5130	5.3
31 Shademaster III	4.8	11 Lot 08-4	5.2
32 SR 5250	4.6	12 CK1 Comp	5.2
33 Tiara	4.4	13 Intrigue 2	5.2
34 Audubon	4.4	14 CW1	5.0
35 Syn-4SPY	4.3	15 Syn-4CH20-10	5.0

(Continued)

Table 4. Fine fescue turf trial, 2010 (continued).

Cultivar or Selection	-----Turf Quality ¹ ----- 2010-2011 Avg.	Cultivar or Selection	-----Turf Quality ¹ ----- 2010-2011 Avg.
CHEWINGS FESCUE (cont.)		16	Rescue 911 4.3
16	7 Seas 4.9	17	Aurora Gold 4.0
17	Treazure II 4.8	18	Aurora II 3.9
18	1-10 FRC Bulk 4.8	19	Spartan 3.8
19	Ambassador 4.7	20	MP 1.2
20	PST-Syn-4WSH 4.7	BLEND	
21	Columbra II 4.7	1	SCFF2 5.2
22	Compass 4.7	2	SCFF4 4.8
23	J-5 4.6	3	SCFF1 4.4
24	Longfellow II 4.6	4	SCFF3 3.8
25	R4TC 4.6	SLENDER CREEPING RED FESCUE	
26	Jamestown IV 4.4	1	ASR050 4.6
27	Ambrose 4.5	2	Seabreeze GT 4.4
28	4CHT 4.3	3	4SEA 4.3
29	Silhouette 4.1	4	Shoreline 4.1
30	Shadow II 4.1	BLUE X HARD FESCUE	
31	Tiffany 4.0	1	Bighorn GT 3.9
32	Sandpiper 3.8	2	Little Bighorn 3.4
33	4CHY 3.8	SHEEPS FESCUE	
34	SR 5100 3.5	1	Azure 3.6
HARD FESCUE		BLUE FESCUE	
1	BM2 Comp 6.0	1	SR 3210 3.3
2	Reliant IV 5.8	<hr/>	
3	Predator 5.8	LSD at 5%= 0.8	
4	PSG 3J2921 5.8	<hr/>	
5	TE1 Comp 5.7		
6	Firefly 5.7		
7	BM1 Comp 5.7		
8	S2SE+ 5.6		
9	PSG 3TH3 5.4		
10	TE2 Comp 5.4		
11	Berkshire 5.4		
12	SR 3150 4.9		
13	4NY 4.9		
14	Nordic 4.9		
15	Oxford 4.8		

¹9 = best turf quality

Table 5. Performance of turfgrass cultivars and selections in a low maintenance trial seeded in September 2010 at Adelphia, NJ.

Cultivar or Selection	Species	Turf Quality ¹ 2011 Avg.	Turf Establishment ² Oct. 2010 Avg.	Drought Tolerance ³ June 2011 Avg.
1 LSD Comp	Tall Fescue	7.1	9.0	7.3
2 Firefly	Hard Fescue	7.1	8.7	7.7
3 Reliant IV	Hard Fescue	7.1	8.7	7.7
4 Grande 3	Tall Fescue	6.9	9.0	5.7
5 OS-3	Strong Creeping Red Fescue	6.9	7.0	6.7
6 Faith	Tall Fescue	6.8	9.0	6.0
7 FSD Comp	Tall Fescue	6.8	9.0	6.3
8 Intrigue 2	Chewings Fescue	6.6	8.3	6.7
9 FCE 3	Tall Fescue	6.5	8.3	7.0
10 RK6	Tall Fescue	6.5	8.7	7.0
11 Firecracker	Tall Fescue	6.5	8.7	5.3
12 ATF-1224	Tall Fescue	6.5	9.0	5.7
13 TPC Comp	Tall Fescue	6.5	9.0	7.3
14 Shenandoah III	Tall Fescue	6.4	9.0	6.3
15 ATM Tall Fescue	6.4	9.0	6.0	
16 Monet	Tall Fescue	6.4	9.0	5.7
17 Cardinal	Strong Creeping Red Fescue	6.4	8.0	6.0
18 Essential	Tall Fescue	6.4	9.0	6.0
19 Rebel Advance	Tall Fescue	6.4	9.0	6.3
20 Nordic	Hard Fescue	6.4	8.3	7.7
21 CW1	Chewings Fescue	6.4	8.0	4.7
22 ASR 050 Slender	Strong Creeping Red Fescue	6.4	7.0	5.3
23 OR1	Strong Creeping Red Fescue	6.4	8.3	6.3
24 RP2 T	all Fescue	6.3	9.0	6.3
25 Van Gogh	Tall Fescue	6.3	9.0	6.0

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(Continued)

Table 5. Fine fescue trial, low maintenance, 2010 (continued).

	Cultivar or Selection	Species	Turf Quality ¹ 2011 Avg.	Turf Establishment ² Oct. 2010 Avg.	Drought Tolerance ³ June 2011 Avg.
	26 Oxford	Hard Fescue	6.3	7.7	7.3
	27 Carson	Chewings Fescue	6.3	7.7	7.3
	28 Justice	Tall Fescue	6.3	9.0	5.7
	29 3rd Millenium	Tall Fescue	6.3	9.0	6.0
	30 Falcon IV	Tall Fescue	6.2	8.3	6.0
	31 Mustang 4	Tall Fescue	6.2	9.0	5.3
	32 Traverse SRP	Tall Fescue	6.2	8.7	6.0
	33 Intrigue	Chewings Fescue	6.2	8.0	5.3
	34 Harpoon	Hard Fescue	6.2	7.3	7.3
	35 ATF-1236	Tall Fescue	6.1	9.0	6.0
3	36 Picasso	Tall Fescue	6.1	9.0	5.0
	37 Ambassador	Chewings Fescue	6.1	7.3	5.3
	38 Falcon NG (CE 1)	Tall Fescue	6.1	9.0	6.0
	39 Culumbra	Chewings Fescue	6.1	8.0	6.0
	40 SR 5130	Chewings Fescue	6.1	7.7	7.0
	41 Compass	Chewings Fescue	6.1	7.7	6.0
	42 Spyder LS	Tall Fescue	6.0	9.0	6.3
	43 Hood	Chewings Fescue	6.0	8.7	5.7
	44 OC1	Chewings Fescue	6.0	8.0	5.7
	45 Culumbra II	Chewings Fescue	6.0	8.3	6.7
	46 Rhambler SRP	Tall Fescue	6.0	9.0	6.0
	47 Speedway	Tall Fescue	6.0	9.0	6.0
	48 Ambrose	Chewings Fescue	6.0	8.3	5.7
	49 Scorpion II	Tall Fescue	5.9	8.7	4.7
	50 Rembrandt	Tall Fescue	5.9	9.0	6.3

(Continued)

Table 5. Fine fescue trial, low maintenance, 2010 (continued).

Cultivar or Selection	Species	Turf Quality ¹ 2011 Avg.	Turf Establishment ² Oct. 2010 Avg.	Drought Tolerance ³ June 2011 Avg.
51 SR 8650	Tall Fescue	5.9	9.0	5.7
52 Scorpion II	Tall Fescue	5.9	8.7	4.7
53 Rembrandt	Tall Fescue	5.9	9.0	6.3
54 SR 8650	Tall Fescue	5.9	9.0	5.7
55 Custer	Strong Creeping Red Fescue	5.9	6.3	4.7
56 Masterpiece	Tall Fescue	5.9	9.0	4.3
57 Jaguar 4G	Tall Fescue	5.9	9.0	7.3
58 Inferno	Tall Fescue	5.9	9.0	6.3
59 Six Point	Tall Fescue	5.8	9.0	5.3
60 2nd Millenium	Tall Fescue	5.8	9.0	4.3
61 Millenium	Tall Fescue	5.8	9.0	6.0
62 Cayenne	Tall Fescue	5.8	8.3	6.3
63 Epic	Strong Creeping Red Fescue	5.8	7.7	5.7
64 DaVinci	Tall Fescue	5.7	8.7	5.3
65 Pixie	Tall Fescue	5.7	8.7	4.3
66 Fortitude	Strong Creeping Red Fescue	5.6	3.7	5.7
67 Tiara	Strong Creeping Red Fescue	5.5	7.0	5.7
68 ATF-1334	Tall Fescue	5.5	9.0	6.0
69 Cezanne RZ	Tall Fescue	5.4	8.7	5.3
70 Pathfinder	Strong Creeping Red Fescue	5.4	8.7	4.7
71 Arid 3	Tall Fescue	5.3	9.0	5.0
72 ATF 1327	Tall Fescue	5.3	9.0	5.3
73 MRD Comp	Tufted Hairgrass	5.1	6.3	8.0
74 Eugene	Strong Creeping Red Fescue	5.0	7.7	4.3
75 LRD Comp	Tufted Hairgrass	5.0	6.0	7.7

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(Continued)

Table 5. Fine fescue trial, low maintenance, 2010 (continued).

Cultivar or Selection	Species	Turf Quality ¹ 2011 Avg.	Turf Establishment ² Oct. 2010 Avg.	Drought Tolerance ³ June 2011 Avg.
76 Azure	Sheeps Fescue	4.8	7.7	5.0
77 Shade King	Tufted Hairgrass	4.7	7.3	6.7
78 Green Keeper	Tall Fescue	4.7	7.3	5.7
79 ERD Comp	Tufted Hairgrass	4.7	6.7	7.3
80 SRX 52961	Strong Creeping Red Fescue	4.4	2.3	3.7
81 Jesup Max Q	Forage Tall Fescue	3.3	9.0	4.0
82 K-31	Tall Fescue	3.2	8.3	4.7
83 Martin 2	Forage Tall Fescue	2.9	7.7	4.0
84 Shiloh II	Tall Fescue	2.7	9.0	5.0
LSD at 5% =		0.8	0.8	1.3

¹9 = best turf quality

²9 = best establishment

³9 = best drought tolerance

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

	2008		2009		2010		2011	
	N ¹	Ht ²	N	Ht	N	Ht	N	Ht
Table 1 (2007).....	1.3	1.5	1.5	1.5	1.0	1.5	0.5	1.5
Table 2 (2008 NTEP).....			1.0	1.5	1.0	1.5	1.0	1.5
Table 3 (2009).....					1.0	1.5	1.0	1.5
Table 4 (2010).....							1.0	1.5
Table 5 (2010 Low Maintenance)					0	2.5	0	2.5

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¹Annual N applied (lb/1000 ft²)
²Mowing height in inches