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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 2007 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

### DID KENTUCKY BLUEGRASS AND TALL FESCUE CULTIVARS AND SELECTIONS DIFFER IN RESPONSE TO TRAFFIC STRESS IN 2007?

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Increased use of sports fields and other recreational sites presents a difficult challenge for turfgrass managers responsible for maintaining uniform and safe natural playing surfaces. Establishment of traffic stress tolerant cultivars of Kentucky bluegrass (*Poa pratensis* L.) and tall fescue (*Festuca arundinacea* Schreb.), or mixtures of the two species, can help sports field managers maximize the safety and playability of sports fields.

Kentucky bluegrass is frequently established on lawns, parks, cemeteries, institutional grounds, and other comparable general purpose lawn areas; its vigorous rhizome development makes Kentucky bluegrass well-adapted for use on sports fields and other heavily trafficked surfaces (Beard, 1973). Puhalla et al. (1999) notes that Kentucky bluegrass is one of the most commonly used turfgrass species in sports fields grown in cool season climates.

Over 30 years ago, tall fescue was recognized for its wear tolerance and its adaptation for use on intensively trafficked sports fields and playgrounds in the transitional zone between the cool and warm humid regions of the United States. Its coarse leaf texture, formation of turfgrass stands with very low shoot density, and inability to blend well with other commonly used cool-season turfgrasses, however, were attributes that led turfgrass managers to establish other turfgrasses in areas where a high guality turf was desired (Beard, 1973). Since the release of the cultivar Rebel in 1979 (Funk et al., 1981), turfgrass breeders have continued to improve the turfgrass quality of tall fescue by producing cultivars with a darker color, finer leaf texture, lower growth habit, denser turf canopy, and increased resistance to disease. The result is that new tall fescue cultivars

can now be used for lawns, parks, and sports fields without compromising turfgrass quality (Bokmeyer et al., 2007).

Excessive foot traffic on cool-season turfgrasses established on recreational sites can lead to major damage (Carrow and Petrovic, 1992), particularly when these sites are used as athletic fields. Minner et al. (1993) notes that traffic is the most frequent and damaging stress to turfgrasses used as a sports turf. Researchers have recognized the inherent challenges associated with managing high-traffic sports fields; thus, many research efforts have been focused on turfgrass traffic tolerance (Hacker, 1987; Minner et al., 1993; Shearman and Beard, 1975; Taivalmaa et al., 1998). Beard (1973) characterized traffic and identified the following stresses as components of traffic: wear, soil compaction, divoting, and soil displacement. Wear injury affects aboveground plant parts and is defined as the immediate result of the crushing, tearing, and shearing actions of foot and vehicular traffic; soil compaction is a chronic stress associated with increased soil bulk density, loss of soil structure, and reduced aeration, water infiltration, and water storage (Beard et al., 1974; Shearman, 1988). Soil displacement and divoting can often contribute to a decline in the quality of sports field surfaces; however these stresses have not typically been assessed in research.

Many traffic simulators have been developed (Bourgoin and Mansat, 1982; Cockerham and Brinkman, 1989; Evans, 1988; Henderson et al., 2005; Shearman et al., 1974; Younger, 1961). Most of the simulators developed mimic the effects of trampling, which imparts wear and compaction of soil (Bourgoin and Mansat, 1982; Cockerham and Brinkman, 1989;

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Evans, 1988; Henderson et al., 2005; Taivalmaa et al., 1998). Recently, Vanini et al. (2007) compared the severity of traffic effects (wear and compaction) on Kentucky bluegrass produced by the simulators developed by Cockerham and Brinkman (1989) and Henderson et al. (2005). Shearman and co-workers (1974) developed a wear simulator for small plot evaluations that resulted in wear injury without soil compaction. Although very effective, these wear/ traffic simulators were not designed to travel across large numbers of turf plots in a relatively short period of time. Bonos et al. (2001) described a wear simulator designed to quickly and uniformly apply wear to a large number of turfgrass evaluation plots. Turfgrass species differ greatly in their ability to withstand the abrasion and compaction of traffic (Gaussoin, 1994). Wear tolerance of turfgrass species and mixtures has been evaluated by a number of researchers (Bourgoin and Mansat, 1982; Canaway, 1981; Fushtey et al., 1982; Taivalmaa et al., 1998). Evaluation of cultivars within a particular species has also been conducted (Bonos, et al., 2001; Evans, 1988; Minner et al., 1993; Wood and Law, 1972).

Recently, several studies have been conducted to assess the wear tolerance of newer Kentucky bluegrass cultivars (Brosnan et al., 2005; Lathrop et al., 2002; Park et al., 2004; Park et al., 2005); however, efforts have only begun to assess the effect of the time of year on the wear tolerance of Kentucky bluegrass. Park et al. (2007) reported on the effect of fall-applied wear on cultivars and selection comprising the 2005 National Turfgrass Evaluation Program (NTEP) Kentucky Bluegrass Test.

There is limited information available regarding the traffic (wear and compaction) tolerance of newer tall fescue cultivars. Park et al. (2004) identified numerous cultivars and selections comprising the 2001 NTEP Tall Fescue Test that had improved tolerance to simulated wear and compaction applied in 2002 and 2003. Additionally, the 2001 NTEP tall fescue test was assessed under traffic stresses using the traffic simulator described by Cockerham and Brinkman (1989) in Michigan (Bughrara, 2007). These researchers have not examined the effect of time of year on the traffic tolerance of tall fescue.

Kentucky bluegrass and tall fescue cultivar recommendations are needed for sports fields that receive play at a specific time of the year (spring, summer, or fall). The objectives of these studies were to assess the wear tolerance and recovery of Kentucky bluegrass during summer and the traffic (wear and compaction) tolerance of tall fescue in fall.

#### MATERIALS AND METHODS

#### Kentucky Bluegrass Evaluation Trial

Entries of the 2005 NTEP Kentucky bluegrass trial, established in September 2005, were evaluated for wear tolerance and recovery during July through September 2007. Wear was previously applied to this test in October 2006 (Park et al., 2007). The test was conducted on a well-drained Nixon sandy loam at the Horticultural Research Farm II in North Brunswick, NJ. Individual plot size was 9 x 5 ft. Soil test results from April 2007 indicated that the soil pH was 6.0; soil phosphorous was 291 lb/acre; and soil potassium was 214 lb/acre. The test was mowed 2 to 3 times per week with a reel mower at a height of 1.5 inches. The test was irrigated as necessary to avoid drought stress. Annual nitrogen applications for 2007 totaled 4.0 lb/1000 ft2. Annual K2O applied to the test area was 1.4 lb/1000 ft2. The experimental design was a randomized complete block design with three replications.

#### Wear Simulation on Kentucky Bluegrass

The wear simulator used was a modified version of the M24C5A Sweepster described by Bonos et al. (2001). The simulator was operated at a ground speed of 2.5 mph and at 250 rpm for the paddles. Wear treatments were applied on 25, 26, and 27 July 2007 to the 1/3<sup>rd</sup> portion of each plot that received wear in October 2006. Six passes were made on each of the three application dates; every other pass was made in the opposing direction of the previous pass.

#### **Evaluation of Kentucky Bluegrass**

Each plot was rated throughout the growing season for visual turf quality (i.e., overall appearance, turf color, uniformity, density, mowing quality, reduced rate of vertical growth, leaf texture, and damage due to insects or diseases). Spring green-up, seedhead development, leaf spot susceptibility, and drought tolerance were also rated as separate characteristics. A 1 to 9 scale was utilized for all ratings, where 9 represented the best turf characteristic. Plots were rated for percent (fullness) turfgrass cover immediately before the initiation of wear using a 0 to 100% scale, where 0 represented the absence of a turfgrass canopy and 100% equaled full cover. Fullness of cover was rated after 6, 12, and 18 passes of the wear simulator to assess wear tolerance. Fullness of cover was also rated at 10, 19, and 56 days after wear (DAW) to assess turfgrass recovery. Turfgrass bruising injury was assessed at 10 and 20 DAW on a 1 to 9 scale, where a 9 represented no discoloration (bruising). All data were subjected to analysis of variance and means were separated using the Fisher's protected least significant difference.

#### **Tall Fescue Evaluation Trial**

Entries of the 2006 NTEP tall fescue trial, as well as the following commercially-available tall fescue blends: Pennington's Best (Forte [33%], Prospect [33%], and Signia [33%]) and Water Saver (Labarinth (RTF) tall fescue [34%], Aztec II [24%], Focus [20%], and Rendition [20%]) were evaluated for traffic tolerance during October through November 2007. The test was established in September 2006 on a welldrained Nixon sandy loam at the Rutgers Horticultural Research Farm II in North Brunswick, NJ. Plot size was 6 ft x 5 ft. Soil test results from November 2007 indicated that the soil pH was 5.9; soil phosphorous was 105 lb/acre; and soil potassium was 302 lb/acre. The test was mowed 1 to 2 times a week with a rotary mower at a height of 2.5 inches. The test was irrigated as necessary to avoid drought stress. Annual nitrogen applications for 2007 totaled 4.0 lb/1000 ft2. The experimental design was a randomized complete block design with three replications.

#### **Traffic Simulation on Tall Fescue**

Both wear and compaction stresses (traffic) were applied to the trial. The wear simulator discussed previously was used to apply wear. A total of 24 passes of the wear simulator were applied over 3 days (8 passes on 2 October; 8 passes on 3 October; and 8 passes on 4 October 2007) to one-half of each plot. Every other pass was made in the opposing direction of the previous pass.

Ten passes of a 1264-kg vibratory pavement roller (vibratory function engaged) were applied on 10 October 2007 to compact the soil over the same portion of the plots that wear was applied. Similar to wear application, every other pass was made in the opposing direction of the previous pass.

#### **Evaluation of Tall Fescue**

To assess turfgrass establishment, each plot was rated in the fall of 2006 for live cover (0 to 100%, where 100% = full live cover). The test was rated throughout the growing season for visual turf quality (i.e., overall appearance, turf color, uniformity, density, mowing quality, reduced rate of vertical growth, leaf texture, and damage due to insects or diseases). Spring green-up and susceptibility to brown patch were also rated as separate characteristics in 2007. A 1 to 9 scale was utilized for all ratings, where 9 represented the best turf characteristic.

To assess tall fescue wear tolerance, visual ratings of live cover were taken after 8, 16, and 24 passes of the wear simulator. Cover was also rated before compaction was applied (6 days after wear [DAW]) and on 1 November (22 days after compaction [DAC]). All data were subjected to analysis of variance, and means were separated using the Fisher's protected least significant difference (LSD) test at p < 0.05.

#### **RESULTS AND DISCUSSION**

#### Kentucky Bluegrass

*Non-wear assessment of Kentucky bluegrass.* Kentucky bluegrass cultivars and selections with the best turfgrass quality (2006, 2007, and averaged for 2006 and 2007) included Midnight II, Nu Destiny, J-2870, Excursion, Impact, Midnight, Beyond, J-2399, Everest, Award, J-1466, Everglade, J-1326, NA-3248, J-2024, and J-2404 (Table 1). The poorest turf quality in 2006, 2007, and for the 2006/2007 average was exhibited by Kenblue and DLF 76-9075; turf quality for Reveille displayed in 2006 and for the 2006/2007 average was also poor (Table 1).

Drought tolerance was good for numerous cultivars and selections in late summer 2007 (Table 2). Commercially available cultivars with the best drought tolerance (based on the 2007 average) were Award, Mystere, Beyond, Starburst, Rugby II, Belissimo, America, Skye, Excursion, Blueberry, Impact, Princeton 105, Nu Destiny, Bluestone, Kenblue, Washington, Midnight, Rhythm, NuGlade, Barrister, Pinot, Everest, Spitfire, Zinfandel, Glenmont, Reveille, Corsair, Argos, Touche, Prosperity, Midnight II, Blue Note, Volt, and Avid. Harmonie and CP 76-9068 were the most sensitive to drought stress in 2007 (Table 2). Other cultivars and selections with an unacceptable drought stress tolerance rating (average 2007 rating < 6.0) included CPP 822, SW AG 514, Julia, Bariris, DP 76-9066, CPP 821, Dynamo, J-2791, and CPP 817.

Early green-up (April 2007) was evident for Mystere, Diva, Starburst, Wild Horse, Skye, Kenblue, Belissimo, America, and Washington (Table 2). Park et al. (2007) reported that Kenblue and Mystere had the earliest green-up in April 2006. This characteristic was poor for 34 cultivars and selections in 2007 (Table 2); among these, Shortell et al. (2005) identified Impact, NuGlade, J-2791, Barrister, Award, Nu Destiny, Bluestone, Midnight II, Everglade, Beyond, Excursion, Midnight, Rhythm, and Everest as Compact-Midnight Type cultivars. Bonos et al. (2004) reported that Kentucky bluegrass cultivars comprising the Compact-Midnight Type have long winter dormancy and display a purple and/or straw coloration during prolonged dormant periods.

Seedhead formation assessed on 18 May 2007 indicated that Baron, BAR VV 9630, BAR VV 9634, and BAR VV 8536 had the greatest number of seedheads (Table 2). In addition, the level of seedheads produced by Bandera, A98-689, and PST-101-390 was unacceptable (seedheads < 6.0) (Table 2). Baron is classified as a BVMG (Baron, Victa, Merit, and Gnome); seedhead formation and stemminess is a common characteristic of cultivars within this type (Bonos et al., 2004).

Assessment of Kentucky Bluegrass subjected to wear. Fullness of turfgrass cover after 18 passes of the wear simulator (wear tolerance) on 27 July 2007 was greatest for Harmonie, CP 76-9068, CPP 822, CPP 821, Julia, NA-3257, and Bariris (Table 3). These cultivars and selections were also among the most wear tolerant after fall wear on 9 October 2006 (Table 3). The cultivars with the greatest density before wear on 25 July 2007 included Harmonie, Julia, Everglade, Bariris, Impact, Excursion, Award, Dynamo, Skye, Washington, Touche, and Spitfire (CP 76-9068, CPP 821, CPP 822, NA-3257 were selections within this grouping) (Table 3). The performance characteristics of Julia and Bariris were consistent with a previous report (Park et al., 2004).

The least fullness of turfgrass cover (poorest wear tolerance) after 18 passes of wear in 2007 was observed in plots of Zinfandel, A01-299, America, H98-701, STR 2553, PSG 366, A99-2377, 1QG-38,

A95-410, A99-3119, A00-247, and DLF 76-9075 (Table 3). In addition, Zinfandel, A01-299, and PSG 366 were the lowest ranked before wear on 25 July 2007 (Table 3). DLF 76-9075 was the lowest ranked selection in the trial for fall-applied wear in 2006.

Julia, BAR VV 0709, CP 76-9068, CPP 821, Bariris, Harmonie, Emblem, SW AG 514, CPP 822, PST-1A1-899, and NA-3248 had the greatest fullness of cover (best recovery) at 56 DAW (21 September 2007) (Table 4). Park et al. (2005) reported that Julia Type cultivars were among the best performing types under simulated wear and compaction. In 2007, Zinfandel, H98-701, PSG 366, America, A01-299, Volt, CPP 817, MSP 3722, and Corsair had the poorest recovery among all cultivars and selections at 56 DAW (Table 4). In comparison, DLF 76-9075 and Kenblue were the lowest ranked cultivars for recovery when fullness of cover was assessed 42 DAW in 2006.

Bruising following summer-applied wear (20 DAW in 2007) was greatest for Harmonie, CPP 817, A93-201, and PSG 366 (Table 4), and unacceptable levels of bruising 20 DAW (bruising < 6.0) were observed on Bariris, Skye, Bandera, Dynamo, Spitfire, Bluestone, Blue Note, Shiraz, Glenmont, America, Baron, Corsair, Argos, Shamrock, Zinfandel, Aviator, Wild Horse, and Volt (Table 4). Unacceptable bruising 22 DAW in 2006 (31 October 2006) and 20 DAW in 2007 (16 August 2007) were observed on A99-3122, CPP 822, DLF 76-9075, DP 76-9066, Harmonie, J-2791, and CP 76-9068.

Based on 2007 data, the inability of entries to tolerate drought stress (assessed in the absence of wear) appears to be associated with entries that also had symptoms of bruising after wear. All entries with an average drought stress rating of < 6.0 (Table 2) sustained unacceptable bruising (< 6.0) at 20 DAW (Table 4). Thus, the superior wear tolerance observed for Bariris, Harmonie, CPP 821, CP 76-9068, and CPP 822 was offset by poor drought stress tolerance in the absence of wear and unacceptable levels of bruising after wear in summer 2007 (Harmonie, CPP 822, and CP 76-9068 had unacceptable bruising in 2006 as well). Additional irrigation to manage these drought and bruising symptoms on sports fields may be necessary for these entries; these additional irrigation demands may interfere with field use. Interestingly, while Julia also exhibited drought stress symptoms (Table 2), these symptoms did not translate into unacceptable bruising after wear (Table 4).

#### Tall fescue

*Non-wear assessment of tall fescue*. Tall fescue cultivars and selections with the greatest average turfgrass quality in 2007 included Bullseye, Monet, Z-2000, SC-1, MVS-MST, ATM, TG 50-9460, RK 5, IS-TF-154, RKCL, DP 50-9440, NA-BT-1, Hemi, Turbo, PST-5WMD, Speedway, ATE, Rhambler, and RP 3 (Table 5). The poorest performing entry was Kentucky 31. Poor turfgrass quality exhibited by Kentucky 31 has been widely reported in other research trials (Bokmeyer et al., 2005; Bokmeyer et al., 2006; Bokmeyer et al., 2007; Park et al., 2004; Wilson et al., 2004).

Tall fescue establishment was best (greater fullness of cover on 4 October 2006) for Millennium SRP, Monet, K06-WA, Lindbergh, Plato, RK 4, CE-2, CE-4, RK 5, and SH 3 (Table 5). The least fullness of cover was exhibited by IS-TF-138, J-130, 312, BGR-TF2, PSG-RNDR, and Pennington's Best. The earliest green-up in the spring (25 April 2007) occurred on plots of Kentucky 31, Rembrandt, CE 1, CE-4, 06-DUST, Biltmore, Einstein, and GO-1BFD (Table 5). Spring green-up was very slow for 71 one entries, included Lindbergh, Bullseye, Speedway, Cezanne, Turbo, Tahoe II, SR 8650, Tulsa III, Aristotle, Skyline, Pennington's Best, and Hunter.

Brown patch was not as severe for 72 entries on 24 July 2007 compared to others in this test; these included SR 8650, Millennium SRP, Rhambler, Van Gogh, Firenza, Hemi, Bullseye, Monet, Escalade, Titanium, Justice, Speedway, Cezanne, Turbo, Tahoe II, Rebel IV, Pennington's Best, Magellan, and Skyline (Table 5). Three selections, NA-BT-1, PST-5WMD, and RK 6, displayed no disease symptoms (brown patch = 9) under modest disease pressure. The greatest incidence of brown patch occurred on DKS, AST 7003, Hunter, 312, PSG-TTST, Kentucky 31, Biltmore, Einstein, Padre, Water Saver, AST-3, Plato, KZ-1, AST 7002, GO-1BFD, Col-M, AST-2, Col-J, ATF 1247, Tulsa III, and ATF 1328 (Table 5).

Assessment of tall fescue subjected to traffic. The greatest fullness of cover (best wear tolerance) after 24 wear passes at 5 DAW was recorded for SC-1, SH 3, MVS-MST, Bullseye, Z-2000, Firenza, ATM, IS-TF-154, Hemi, Rhambler, Monet, K06-WA, RP 3, IS-TF-153, IS-TF-128, and Turbo (Table 6). This rating was less than 50% after 24 passes of wear at 5 DAW for Plato, Silverado, 312, Col-J, PSG-RNDR, Pennington's Best, Aristotle, Water Saver,

BAR Fa 6363, and Kentucky 31. Thirty-nine entries were ranked in the top statistical category for traffic tolerance (greatest fullness of cover) at 21 DAC and included the commercially available entries Rebel IV, Firenza, Titanium, Bullseye, Hemi, Turbo, Monet, Padre, SR 8650, Biltmore, Rembrandt, and Escalade (Table 6). Park et al. (2004) reported that both Padre and Escalade had superior traffic tolerance after applications of wear and compaction in 2002 and 2003.

The poorest traffic tolerance at 21 DAC was exhibited by Kentucky 31, BAR Fa 6363, 312, LS-11, Hunter, Water Saver, Pennington's Best, PSG-RNDR, JT-33, KZ-1, BAR Fa 6253, JT-36, STR-8GRQR, ATF 1328, NA-SS, GWTF, IS-TF-135, and IS-TF-151 (Table 6). In addition, Kentucky 31 had the lowest fullness of turfgrass cover after 24 passes of wear at 5 DAW (Table 6) and had very poor traffic tolerance in a previous trial (Park et al., 2004).

The entries with the best average turf quality (without traffic) in 2007 and the greatest fullness of cover after wear (5 October) and 21 DAC included Bullseye, Monet, Z-2000, SC-1, ATM, IS-TF-154, RKCL, Hemi, Turbo, and RP 3 (Tables 5 and 6).

#### CONCLUSIONS

Variation among Kentucky bluegrass and tall fescue cultivars and selections for fullness of cover after simulated traffic stresses was observed in 2007. Cultivars with better performance under traffic stress should be included in seed blends and mixes for sports fields. Further research will help to identify whether cultivar selection needs to consider the season(s) of use/play. Several Kentucky bluegrass cultivars and selections with very good wear tolerance had greater sensitivity to drought stress in the absence of wear and were severely bruised after wear. This characteristic may be unacceptable, and additional irrigation will likely be required to avoid these symptoms. Thus, turf managers may need to consider fullness of cover, drought stress and bruising data as part of the cultivar selection process for Kentucky bluegrass.

#### REFERENCES

Beard, J. B. 1973. Turfgrass: Science and culture. Prentice-Hall, Englewood Cliffs, NJ.

- Beard, J. B., J. F. Wilkinson, and R. C. Shearman. 1974. Turfgrass wear tolerance: The anatomical and physiological basis. Proc. 44th Ann. Michigan Turf. Conf., East Lansing, 3:1-2.
- Bokmeyer, J. M., R. F. Bara, D. A. Smith, M. M. Wilson, W. K. Dickson, S. A. Bonos, J. A. Murphy, and W. A. Meyer. 2007. Performance of tall fescue cultivars and selections in New Jersey Turf trials. Rutgers Turfgrass Proc. 38:135-158.
- Bokmeyer, J. M., R. F. Bara, D. A. Smith, M. M. Wilson, B. S. Park, W. K. Dickson, S. A. Bonos, J. A. Murphy, and W. A. Meyer. 2006. Performance of tall fescue cultivars and selections in New Jersey turf trials. Rutgers Turfgrass Proc. 37:125-161.
- Bokmeyer, J. M., W. A. Meyer, J. A. Murphy, S. A. Bonos, R. F. Bara, D. A. Smith, M. M. Wilson, and W. K. Dickson. 2005. Performance of tall fescue cultivars and selections in New Jersey turf trials. Rutgers Turfgrass Proc. 36:151-185.
- Bonos, S. A., E. Watkins, J. A. Honig, M. Sosa, T. J. Molnar, J. A. Murphy, and W. A. Meyer. 2001. Breeding cool-season turfgrasses for wear tolerance using a wear simulator. Int. Turfgrass Society Res. J. 9:137-145.
- Bonos, S. A., W. K. Dickson, B. S. Park, E. Watkins, R. F. Bara, D. A. Smith, M. M. Wilson, T. J. Lawson, J. Clark, J. A. Murphy, C. R. Funk, and W. A. Meyer. 2004. Performance of Kentucky bluegrass cultivars and selections in New Jersey turf trials. Rutgers Turfgrass Proc. 35:45-111.
- Bourgoin, B., and P. Mansat. 1982. Artificial trampling and players traffic on turfgrass mixtures. Rasen-Turf-Gazon 4:72-79.
- Brosnan, J. T., J. S. Ebdon, and W. M. Dest. 2005. Characteristics in diverse wear tolerant genotypes of Kentucky bluegrass. Crop Sci. 45:1917-1926.
- Bughrara, S. 2007. Performance of tall fescue cultivars in Michigan: 2001-06. 2006 Michigan State Turfgrass Res. Rep. 2:1-8.
- Canaway, P. M. 1981. Wear tolerance of turfgrass species. J. Sports Turf Res. Inst. 57:108-121.

- Carrow, R. N., and A. M. Petrovic. 1992. Effects of traffic on turfgrass. Pages 285-330 *in*: D. V. Waddington, R. N. Carrow, and R. C. Shearman, eds. Turfgrass. Agronomy Monogr. 32. ASA, CSSA, and SSSA, Madison, WI.
- Cockerham, S. T. and D. J. Brinkman. 1989. A simulator for cleated-shoe sports traffic on turfgrass research plots. California Turfgrass Culture 39:9-10.
- Evans, G. E. 1988. Tolerance of selected bluegrass and fescue taxa to simulate human foot traffic. J. Environ. Hort. 6:10-14.
- Funk, C. R., R. E. Engel, W. K. Dickson, and R. H. Hurley. 1981. Registration of Rebel tall fescue. Crop Sci. 21:632.
- Fushtey, S. G., D. K. Taylor, and D. Fairey. 1982. The effect of wear stress on survival of turfgrass in pure stands and in mixtures. Can J. Plant Sci. 63:317-322.
- Gaussion, R. E. 1994. Choosing traffic-tolerant turfgrass varieties. Sports Turf 10:25-26.
- Hacker, J. W. 1987. Wear tolerance in amenity and sports turf: A review 1980-85. Acta Horticulturae 195:35-41.
- Henderson, J. J., J. L. Lanovaz, J. N. Rogers, III, J. C. Sorochan, and J. T. Vanini. 2005. A new apparatus to simulate athletic field traffic: The Cady Traffic Simulator. Agron. J. 97:1153-1157.
- Lathrop, A. D., A. S. McNitt, and D. M. Petrunak. 2002. Divoting potential of different varieties of Kentucky bluegrass grown on sand maintained at three mowing heights and three wear levels. Pages 131-132 *in*: A. Lathrop, ed. 2002 Turfgrass Research Report. The Pennsylvania State University, University Park, PA.
- Minner, D. D, J. H. Dunn, S. S. Burghrara, and B. S. Fresenburg. 1993. Traffic tolerance among cultivars of Kentucky bluegrass, tall fescue, and perennial ryegrass. Int. Turfgrass Society Research J. 7:687-694.
- Park, B. S., J. A. Murphy, T. J. Lawson, J. E. Devaney, W. K. Dickson, J. B. Clark, S. A. Bonos, and W. A.

Meyer. 2007. Assessment of Kentucky bluegrass subjected to fall-applied wear. Rutgers Turfgrass Proc. 38:179-196.

- Park, B. S., J. A. Murphy, W. A. Meyer, S. A. Bonos, J. den Haan, D. A. Smith, and T. J. Lawson. 2004. Traffic tolerance of cool-season turfgrasses. Rutgers Turfgrass Proc. 35:49-118.
- Park, B. S., J. A. Murphy, W. A. Meyer, S. A. Bonos, J. den Haan, D. A. Smith, and T. J. Lawson. 2005. Performance of Kentucky bluegrass within phenotypic classifications as affected by traffic. Int. Turfgrass Society Res. J. 10:618-626.
- Puhalla, J., J. Krans, and M. Goatley. 1999. Sports Fields: A manual for design construction and maintenance. Wiley and Sons, Inc., Hoboken, NJ.
- Shearman, R. C. 1988. Improving sports turf wear tolerance. Proc. 58th Ann. Michigan Turf. Conf. 17:153-155.
- Shearman, R. C., and J. B. Beard. 1975. Turfgrass wear tolerance mechanisms: I. Wear tolerance of seven turfgrass species and quantitative methods for determining turfgrass wear injury. Agron. J. 67:208-211.
- Shearman, R. C., J. B. Beard, C. M. Hansen, and R. Apaclla. 1974. Turfgrass wear simulator for small plot investigations. Agron. J. 66:332-334.

- Shortell, R. R., W. K. Dickson, B. S. Park, R. F. Bara, D. A. Smith, M. M. Wilson, T. J. Lawson, J. Clark, S. A. Bonos, J. A. Murphy, C. R. Funk, and W. A. Meyer. 2005. Performance of Kentucky bluegrass cultivars and selections in New Jersey turf trials. Rutgers Turfgrass Proc. 36:49-118.
- Taivalmaa, S. L., H. Talvitie, L. Jauhiainen, and O. Niemelainen. 1998. Influence of wear-stress on turfgrass species and cultivars in Finland. J. Turfgrass Sci. 74:52-62.
- Vanini, J. T., J. J. Henderson, J. C. Sorochan, and J. N. Rogers III. 2007. Evaluating traffic stress by the Brinkman Traffic Simulator and Cady Traffic Simulator on a Kentucky bluegrass stand. Crop Sci. 47:782-786.
- Wilson, M. M., W. A. Meyer, E. Watkins, J. A. Murphy, S. A. Bonos, R. F. Bara, D. A. Smith, W. K. Dickson. 2004. Performance of tall fescue cultivars and selections in New Jersey turf trials. Rutgers Turfgrass Proc. 35:151-181.
- Wood, G. M., and A. G. Law. 1972. Evaluating Kentucky bluegrass cultivars for wear resistance. Page 65 in 1972 Agronomy abstracts. ASA, Madison, WI.
- Younger, V. B. 1961. Accelerated wear tests on turfgrasses. Agron. J. 53:217-218.

					Turf C	Quality <sup>1</sup>			
	Cultivar or Selection	2006- 2007 Avg.	2006 Avg.	2007 Avg.	May 2007	June 2007	July 2007	Aug. 2007	Sept 2007
1	Midnight II	7.9	7.7	8.1	7.0	8.0	8.7	8.3	8.7
2	Nu Destiny	7.7	7.4	7.9	7.3	8.0	8.3	7.7	8.3
3	J-2870	7.6	7.5	7.7	6.7	7.3	8.7	7.7	8.3
	Excursion	7.6	7.6	7.7	6.3	8.0	8.3	8.0	7.7
)	Impact	7.5	7.3	7.6	7.3	7.3	7.7	7.3	8.3
	Midnight	7.4	7.5	7.3	5.7	7.3	7.7	8.0	8.0
,	Beyond	7.4	7.3	7.4	5.7	7.3	8.0	8.3	7.7
3	J-2399	7.3	7.2	7.4	5.3	7.3	8.0	8.0	8.3
)	Everest	7.3	7.6	7.1	6.3	6.3	7.3	7.3	8.0
)	Award	7.3	7.1	7.5	6.7	7.3	7.7	7.3	8.3
	J-1466	7.3	7.1	7.5	5.0	7.7	8.7	8.0	8.3
2	Everglade	7.2	7.1	7.4	7.0	7.0	8.3	7.0	7.7
3	J-1326	7.2	7.3	7.0	5.0	8.0	7.0	7.3	7.7
ŀ	NA-3248	7.1	7.0	7.3	6.7	6.7	7.7	7.0	8.3
;	J-2024	7.1	7.0	7.1	5.3	7.0	8.0	7.3	8.0
	J-2404	7.0	7.1	7.0	5.7	6.7	8.3	7.0	7.3
7	Prosperity	6.9	6.6	7.1	6.3	6.0	8.0	7.7	7.7
3	Bd 03-84	6.8	6.2	7.3	7.7	7.3	7.7	6.7	7.3
9	Blueberry	6.8	6.9	6.6	4.7	6.3	7.7	6.7	7.7
)	J-1334	6.8	6.7	6.8	5.3	6.3	7.3	7.0	8.0
	Bluestone	6.7	6.8	6.5	5.3	6.0	6.7	7.3	7.3
	MSP 3723	6.7	6.7	6.6	7.0	6.0	6.7	6.3	7.0
	A99-523	6.6	6.4	6.8	7.0	7.0	6.0	6.3	7.7
1	J-2502	6.6	6.5	6.6	5.3	6.3	7.3	6.7	7.3
5	Barrister	6.6	6.1	7.0	6.0	7.0	7.3	7.0	7.7
									(Coi

Table 1.Performance of Kentucky bluegrass cultivars and selections in a turf trial established in September 2005 at North Brunswick, NJ. (Includes all entries of the 2005 National Turfgrass Evaluation Program (NTEP) Kentucky Bluegrass Test.)

Turf Quality1									
		2006-			Turi G	county			
	Cultivar or	2007	2006	2007	May	June	July	Aug.	Sept.
	Selection	Avg.	Avg.	Avg.	2007	2007	2007	2007	2007
26	J-3429	6.5	6.5	6.5	6.3	7.0	7.0	5.3	7.0
27	NA-3257	6.5	6.4	6.5	7.3	5.7	6.7	5.7	7.3
28	Rhythm	6.5	6.4	6.6	5.0	7.0	6.3	7.3	7.3
29	POPR 04594	6.5	6.3	6.5	6.7	5.3	7.0	5.7	8.0
30	Diva	6.4	6.2	6.6	8.0	6.3	7.0	5.0	6.7
31	Bd 98-2108	6.4	6.3	6.4	6.0	6.7	6.0	6.7	6.7
32	A00-1400	6.4	6.7	6.1	5.7	6.7	5.3	6.3	6.3
33	Skye	6.4	5.8	6.9	7.0	6.7	7.7	6.7	6.7
34	A97-1560	6.4	6.0	6.7	7.0	6.7	6.0	6.7	7.0
35	NuGlade	6.3	5.9	6.8	5.7	6.0	7.0	7.0	8.3
36	PST-1A1-899	6.3	6.0	6.6	7.0	6.3	6.3	5.7	7.7
37	Bd 03-159	6.2	7.1	5.3	4.0	7.0	5.0	4.3	6.0
88	Argos	6.2	6.1	6.3	6.7	6.0	7.0	6.0	6.0
39	Starburst (STR 2703)	6.2	5.9	6.5	6.0	6.3	6.7	6.7	7.0
0	MSP 3724	6.2	6.4	6.0	6.3	5.7	6.0	6.0	6.0
11	Bewitched	6.2	6.7	5.6	5.0	5.0	5.7	6.0	6.3
12	Julia	6.2	6.2	6.1	6.7	6.3	7.7	5.3	4.7
13	A99-2559	6.2	6.0	6.4	6.0	6.0	7.0	6.7	6.3
4	Princeton 105	6.2	5.7	6.6	6.7	5.7	6.3	6.3	8.0
15	Belissimo	6.1	6.4	5.9	6.3	5.3	5.7	6.3	5.7
6	Emblem (PST-Y2K-169)	6.1	5.5	6.7	4.7	6.7	7.7	7.3	7.3
7	PST-99 (A00-99)	6.1	6.2	6.1	7.0	6.0	5.3	5.7	6.3
8	A96-1368	6.1	6.3	6.0	6.7	6.0	5.0	4.7	7.7
19	J-2791	6.1	5.9	6.3	6.7	6.0	7.0	5.3	6.3
50	Crusader (NA-3271)	6.1	6.0	6.1	5.7	6.0	5.7	6.3	7.0

Turf Quality1									
	Cultivar or	2006- 2007	2006	2007	May	June	July	Aug.	Sept.
	Selection	Avg.	Avg.	Avg.	2007	2007	2007	2007	2007
51	Bd 99-2103	6.1	6.2	5.9	5.3	5.7	5.0	7.7	6.0
52	SPTR 2959	6.1	6.1	6.0	6.0	5.7	5.7	5.7	7.0
53	A95-410	6.0	6.4	5.7	3.7	6.0	5.7	6.3	7.0
54	RAD-343	6.0	6.2	5.9	6.3	6.0	5.3	5.7	6.0
55	Washington	6.0	5.8	6.3	5.7	5.7	6.3	6.3	7.3
56	PST-101-390	6.0	6.3	5.7	5.0	5.7	6.7	4.7	6.7
57	A99-2427	6.0	5.8	6.2	6.7	6.3	5.0	6.0	7.0
58	Rugby II	6.0	5.3	6.7	5.7	6.7	7.0	7.0	7.3
59	Bariris	6.0	5.8	6.1	6.7	5.3	7.7	4.7	6.3
60	SW AG 514	6.0	6.1	5.9	5.0	7.3	7.7	4.3	5.0
61	CP 76-9068	6.0	6.7	5.2	7.0	6.7	5.7	3.0	3.7
62	Touche (STR 23180)	6.0	5.6	6.3	6.3	6.0	6.0	6.0	7.0
63	Bd 95-1930	5.9	5.8	6.1	6.7	6.3	5.7	5.0	6.7
64	CPP 822	5.9	6.3	5.5	8.3	5.7	5.7	3.3	4.3
65	1QG-38	5.8	6.1	5.6	5.7	5.0	5.3	6.3	5.7
66	DP 76-9066	5.8	5.9	5.8	5.7	7.3	7.3	4.3	4.3
67	STR 2553	5.8	5.7	5.9	6.0	5.7	5.7	5.7	6.3
68	Shiraz (LTP-73)	5.8	5.7	5.9	6.0	5.7	5.7	6.0	6.0
69	CPP 821	5.8	5.8	5.7	7.7	4.7	6.0	3.7	6.3
70	Blue Note (A01-349)	5.8	5.8	5.7	5.7	5.3	6.3	4.7	6.3
<b>'</b> 1	PST-109-752	5.8	5.2	6.3	5.7	7.0	6.3	5.3	7.0
72	AKB449	5.7	6.1	5.3	5.7	5.3	6.3	4.3	4.7
73	A97-1287	5.7	5.4	5.9	6.0	5.7	5.7	6.3	6.0
74	Spitfire (STR 2485)	5.7	5.8	5.5	6.3	5.7	5.7	4.7	5.3
75	Harmonie	5.6	6.1	5.1	8.0	6.0	5.7	3.0	3.0

	Turf Quality1								
		2006-			i di i d	caunty			
	Cultivar or	2007	2006	2007	May	June	July	Aug.	Sept.
	Selection	Avg.	Avg.	Avg.	2007	2007	2007	2007	2007
76	A03-66	5.6	5.7	5.6	6.3	6.0	5.0	4.7	6.0
77	H94-305	5.6	5.2	6.0	6.7	5.3	5.7	7.0	5.3
78	MSP 3722	5.6	5.7	5.3	5.3	5.3	5.3	5.3	5.3
79	A00-247	5.5	5.8	5.2	5.3	5.0	4.7	6.0	5.0
80	RAD-762	5.5	5.4	5.6	6.3	5.7	5.7	5.0	5.3
81	A99-2377	5.5	6.1	4.9	6.3	5.3	4.0	4.3	4.7
82	Bd 98-1358	5.5	5.8	5.1	7.0	4.0	4.7	4.0	6.0
83	BAR VV 0665	5.5	5.4	5.5	4.0	5.0	7.3	5.7	5.3
84	Wild Horse (A97-890)	5.4	5.7	5.1	5.7	5.7	5.0	3.7	5.7
85	A00-1254	5.4	5.4	5.5	5.7	5.3	5.0	6.3	5.0
86	Avid	5.4	5.8	5.0	5.3	4.3	5.7	4.7	5.0
87	RAD-504	5.4	5.2	5.7	5.7	6.0	5.0	5.7	6.3
88	A93-201	5.4	5.9	4.9	6.7	4.7	3.0	3.3	7.0
89	CPP 817	5.4	5.5	5.2	7.7	5.0	6.0	2.3	5.0
90	PSG 711	5.4	5.3	5.5	7.3	4.7	5.3	4.7	5.3
91	Shamrock	5.4	5.4	5.3	5.3	4.7	4.7	4.7	7.0
92	Arrowhead (NA-3261)	5.4	4.9	5.9	6.3	5.0	6.0	6.0	6.0
93	Mystere	5.4	5.2	5.5	5.7	5.3	4.7	6.3	5.7
94	A98-948	5.3	5.5	5.1	6.3	5.7	4.0	3.7	5.7
95	A99-3119	5.3	5.5	5.1	5.7	4.3	5.7	4.3	5.3
96	Glenmont	5.3	5.6	4.9	4.3	4.7	5.0	5.3	5.3
97	A98-689	5.2	5.6	4.9	5.3	5.0	5.0	4.0	5.0
98	America	5.2	5.4	5.1	6.3	4.7	4.7	4.3	5.3
99	RAD-0AN64	5.1	4.9	5.3	6.3	4.7	5.7	4.3	5.7
100	BAR VV 0709	5.1	4.4	5.7	5.0	4.3	7.0	6.0	6.0

					Turf G	uality <sup>1</sup>			
	Cultivar or Selection	2006- 2007 Avg.	2006 Avg.	2007 Avg.	May 2007	June 2007	July 2007	Aug. 2007	Sept. 2007
101	PST-101-73	5.0	5.3	4.7	5.3	4.0	4.0	4.7	5.3
102	Bandera (SPTR 2LM95)	5.0	4.8	5.1	4.7	4.3	5.7	5.0	5.7
103	Pinot (LTP-149)	4.9	4.9	5.0	5.0	4.7	4.0	5.7	5.7
104	Dynamo	4.9	4.6	5.1	5.0	5.7	5.3	4.7	5.0
105	A99-3122	4.9	4.3	5.5	6.7	5.7	4.7	4.3	6.0
06	Volt (A98-999)	4.9	5.3	4.5	5.3	4.0	4.0	4.0	5.0
07	H98-701	4.8	5.1	4.5	5.0	4.0	4.7	4.7	4.0
08	PSG 366	4.7	4.7	4.7	4.0	4.7	4.0	4.7	6.0
09	A01-299	4.7	5.2	4.1	4.3	4.3	4.0	3.7	4.3
10	BAR VV 9634	4.6	4.8	4.4	5.0	3.3	3.7	4.7	5.3
111	BAR VK 0710	4.6	4.9	4.4	5.7	4.3	3.7	4.0	4.3
112	DP 76-9081	4.6	4.6	4.5	3.3	4.0	5.7	4.3	5.3
113	Aviator (NA-3259)	4.5	4.5	4.5	6.0	4.0	5.0	3.3	4.3
14	Zinfandel (LTP 2949)	4.5	5.3	3.6	4.3	4.0	3.7	3.0	3.0
15	Corsair (NA-3249)	4.4	4.6	4.1	5.3	4.3	4.0	3.3	3.7
116	Baron	4.4	4.6	4.2	3.7	3.7	4.3	4.0	5.3
117	BAR VV 9630	4.3	4.5	4.0	4.3	3.3	3.7	4.3	4.3
118	BAR VV 8536	4.3	4.3	4.2	3.3	4.3	5.0	3.3	5.0
119	Reveille	3.9	3.2	4.5	5.3	3.7	4.3	4.0	5.0
20	DLF 76-9075	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.7
21	Kenblue	3.1	3.1	3.1	3.0	3.7	4.0	2.0	3.0
	LSD at 5% =	0.9	1.0	1.1	1.9	1.6	1.7	1.8	1.7

<sup>1</sup>9 = best turf quality

		F	)rought Stres	SS <sup>1</sup>	Leaf Spot <sup>2</sup>	Seed- heads <sup>3</sup>	Spring Green-up⁴
	Cultivar or	2007	Sept. 4	Aug. 16	May 18	May 18	April 24
	Selection	Avg.	2007	2007	2007	2007	2007
1	J-2024	9.0	9.0	9.0	9.0	9.0	1.7
2	Award	9.0	9.0	9.0	9.0	9.0	2.0
3	A99-2559	9.0	9.0	9.0	9.0	9.0	7.3
4	BAR VV 0709	9.0	9.0	9.0	5.3	9.0	7.0
5	Mystere	9.0	9.0	9.0	7.7	9.0	8.3
6	A99-523	9.0	9.0	9.0	9.0	9.0	7.3
7	Beyond	9.0	9.0	9.0	8.0	8.7	1.7
8	MSP 3723	9.0	9.0	9.0	9.0	8.3	7.7
9 10	A00-247 1QG-38	9.0 9.0	9.0 9.0	9.0 9.0	8.7 9.0	8.3 8.3	6.0 6.3
10	IQG-30	9.0	9.0	9.0	9.0	0.3	0.3
11	A97-1560	9.0	9.0	9.0	9.0	8.3	7.7
12	Starburst (STR 2703)	9.0	9.0	9.0	9.0	8.0	7.3
13	PST-99 (A00-99)	9.0	9.0	9.0	9.0	8.0	7.7
14	Rugby II	9.0	9.0	9.0	9.0	7.7	3.3
15	STR 2553	9.0	9.0	9.0	9.0	7.7	6.7
16	Belissimo	9.0	9.0	9.0	9.0	7.3	6.7
17	America	9.0	9.0	9.0	9.0	7.3	6.7
18 19	PST-101-73 RAD-504	9.0 9.0	9.0 9.0	9.0 9.0	9.0 8.3	7.0 6.7	6.7
20	H98-701	9.0 9.0	9.0 9.0	9.0 9.0	8.3 9.0	6.3	6.0 6.0
20	1190-701	9.0	9.0	9.0	9.0	0.5	0.0
21	BAR VV 9634	9.0	9.0	9.0	9.0	3.0	5.7
22	A00-1400	8.8	9.0	8.7	9.0	9.0	3.3
23	A00-1254	8.8	9.0	8.7	9.0	9.0	5.3
24	A97-1287	8.8	9.0	8.7	9.0	9.0	7.7
25	Skye	8.8	9.0	8.7	9.0	8.7	7.0
26	A99-2377	8.8	9.0	8.7	9.0	8.7	6.0
27	Bd 99-2103	8.8	9.0	8.7	9.0	7.7	5.0
28	BAR VV 9630	8.8	9.0	8.7	9.0	3.7	6.0
29	J-1334	8.8	8.7	9.0	9.0	9.0	2.0
30	J-2399	8.8	8.7	9.0	9.0	9.0	1.0
31	Excursion	8.8	8.7	9.0	8.3	9.0	1.7
32	A99-2427	8.8	8.7	9.0	9.0	9.0	5.0
33	Blueberry	8.8	8.7	9.0	9.0	8.3	2.7
34	PSG 711	8.8	8.7	9.0	9.0	6.7	7.0
35	Impact	8.7	9.0	8.3	9.0	9.0	2.7

Table 2.Drought stress, spring green-up, and leaf spot and seedhead severity of Kentucky bluegrass<br/>cultivars and selections in a turf trial seeded in September 2005 at North Brunswick, NJ. (In-<br/>cludes all entries of the 2005 National Turfgrass Evaluation Program (NTEP) Kentucky Blue-<br/>grass Test.)

	Cultivar or Selection	D 2007 Avg.	orought Stres Sept. 4 2007	Aug. 16 2007	Leaf Spot² May 18 2007	Seed- heads <sup>3</sup> May 18 2007	Spring Green-up⁴ April 24 2007
36 37 38 39 40	NA-3248 Princeton 105 MSP 3722 DLF 76-9075 A99-3119	8.7 8.7 8.7 8.7 8.7 8.7	9.0 9.0 9.0 9.0 9.0	8.3 8.3 8.3 8.3 8.3	9.0 9.0 9.0 6.7 9.0	9.0 9.0 8.7 8.3 6.7	8.0 4.3 3.3 5.0 4.7
40 41 42 43 44 45	Bd 98-2108 Bd 03-84 DP 76-9081 J-1466 Nu Destiny	8.7 8.7 8.7 8.7 8.7 8.7	8.7 8.7 8.7 8.7 8.7 8.7	8.7 8.7 8.7 8.7 8.7 8.7	9.0 9.0 4.3 8.3 9.0	9.0 9.0 9.0 9.0 9.0 9.0	6.3 6.3 5.7 2.0 2.0
46 47 48 49 50	Bluestone RAD-343 H94-305 J-2870 MSP 3724	8.7 8.7 8.7 8.7 8.7	8.7 8.7 8.3 8.3	8.7 8.7 9.0 9.0	8.3 9.0 8.3 8.7 9.0	9.0 9.0 9.0 9.0 7.7	2.0 5.3 8.0 2.0 6.7
51	POPR 04594	8.5	9.0	8.0	6.7	9.0	8.0
52	Kenblue	8.5	9.0	8.0	4.3	8.7	7.0
53	RAD-762	8.5	8.7	8.3	9.0	9.0	6.0
54	Washington	8.5	8.7	8.3	8.0	9.0	6.7
55	A01-299	8.5	8.7	8.3	9.0	9.0	3.3
56	Midnight	8.5	8.3	8.7	9.0	9.0	1.7
57	Rhythm	8.5	8.3	8.7	8.3	9.0	1.7
58	J-1326	8.5	8.3	8.7	8.3	8.7	2.0
59	NuGlade	8.5	8.3	8.7	8.3	8.7	2.7
60	Barrister	8.5	8.3	8.7	9.0	8.3	2.3
61	Pinot (LTP-149)	8.5	8.3	8.7	9.0	8.0	5.3
62	Everest	8.5	8.0	9.0	9.0	9.0	1.7
63	Spitfire (STR 2485)	8.3	8.7	8.0	9.0	8.3	6.0
64	Zinfandel (LTP 2949)	8.3	8.7	8.0	9.0	8.3	2.7
65	Glenmont	8.3	8.7	8.0	9.0	8.0	4.7
66	BAR VK 0710	8.3	8.7	8.0	9.0	7.7	5.7
67	J-2404	8.3	8.3	8.3	8.7	9.0	2.0
68	Bd 95-1930	8.3	8.3	8.3	9.0	8.7	6.3
69	Reveille	8.3	8.3	8.3	8.3	7.3	5.7
70	PSG 366	8.2	8.7	7.7	9.0	7.3	4.0

	Cultivar or Selection		orought Stres Sept. 4 2007	68 <sup>1</sup> Aug. 16 2007	Leaf Spot² May 18 2007	Seed- heads <sup>3</sup> May 18 2007	Spring Green-up⁴ April 24 2007
71 72 73 74 75	A96-1368 Corsair (NA-3249) Argos Touche (STR 23180) Bd 03-159	8.2 8.2 8.2 8.2 8.2 8.2	8.3 8.3 8.3 8.3 7.7	8.0 8.0 8.0 8.0 8.7	8.3 9.0 8.7 9.0 9.0	9.0 8.7 8.3 8.0 9.0	7.7 3.7 6.0 4.3 2.3
76 77 78 79 80	J-2502 Prosperity Midnight II Blue Note (A01-349) Volt (A98-999)	8.2 8.2 8.2 8.0 8.0	7.7 7.7 7.7 9.0 8.7	8.7 8.7 7.0 7.3	8.7 9.0 9.0 9.0 8.7	9.0 9.0 9.0 8.0 8.0	2.0 4.7 2.0 6.3 5.7
81	A95-410	8.0	8.7	7.3	8.7	6.7	2.0
82	Avid	8.0	8.3	7.7	9.0	9.0	2.0
83	AKB449	7.8	8.7	7.0	9.0	8.7	2.7
84	RAD-0AN64	7.8	8.3	7.3	9.0	9.0	4.3
85	A03-66	7.8	8.0	7.7	9.0	7.7	6.0
86	Arrowhead (NA-3261)	7.8	8.0	7.7	9.0	7.3	6.3
87	Everglade	7.8	7.3	8.3	9.0	9.0	2.0
88	SPTR 2959	7.7	8.3	7.0	9.0	6.3	7.0
89	Diva	7.7	8.0	7.3	9.0	8.3	7.7
90	J-3429	7.7	7.7	7.7	9.0	9.0	3.3
91	Bewitched	7.7	7.7	7.7	9.0	7.7	2.0
92	Aviator (NA-3259)	7.7	7.7	7.7	8.0	7.7	4.3
93	Emblem (PST-Y2K-169)	7.7	7.3	8.0	9.0	9.0	1.7
94	PST-1A1-899	7.7	7.3	8.0	8.7	8.3	6.7
95	BAR VV 8536	7.5	8.0	7.0	9.0	2.7	4.0
96	Shiraz (LTP-73)	7.5	7.7	7.3	9.0	9.0	5.3
97	Crusader (NA-3271)	7.5	7.3	7.7	9.0	8.7	3.3
98	Wild Horse (A97-890)	7.2	8.3	6.0	9.0	7.7	7.3
99	A99-3122	7.2	7.3	7.0	9.0	7.0	6.0
100	A98-689	7.2	7.3	7.0	9.0	5.3	5.0
101	PST-109-752	7.2	6.7	7.7	8.7	9.0	4.7
102	Bd 98-1358	7.0	7.7	6.3	9.0	7.7	7.0
103	Shamrock	7.0	7.3	6.7	9.0	8.0	6.0
104	Bandera (SPTR 2LM95)	7.0	7.0	7.0	8.7	5.7	2.7
105	A98-948	6.7	7.0	6.3	8.7	8.3	6.7

		D	orought Stres	SS <sup>1</sup>	Leaf Spot <sup>2</sup>	Seed- heads <sup>3</sup>	Spring Green-up⁴
	Cultivar or Selection	2007 Avg.	Sept. 4 2007	Aug. 16 2007	May 18 2007	May 18 2007	April 24 2007
106	A93-201	6.5	7.3	5.7	9.0	9.0	7.7
107	BAR VV 0665	6.5	6.7	6.3	6.0	8.3	3.3
108	NA-3257	6.5	6.0	7.0	9.0	8.3	6.0
109	Baron	6.2	6.3	6.0	8.3	2.7	3.7
110	PST-101-390	6.2	5.7	6.7	8.3	5.3	5.0
111	CPP 817	5.7	6.7	4.7	9.0	9.0	7.3
112	J-2791	5.7	5.7	5.7	9.0	9.0	2.7
113	Dynamo	5.2	4.7	5.7	9.0	8.0	2.3
114	CPP 821	5.0	5.0	5.0	9.0	9.0	6.7
115	DP 76-9066	4.7	4.3	5.0	9.0	8.0	1.7
116	Bariris	4.5	4.7	4.3	9.0	8.0	5.0
117	Julia	4.5	3.7	5.3	9.0	8.7	6.3
118	SW AG 514	4.3	4.0	4.7	9.0	8.3	2.3
119	CPP 822	3.8	3.7	4.0	9.0	9.0	5.3
120	CP 76-9068	2.7	2.3	3.0	9.0	9.0	5.0
121	Harmonie	2.2	1.7	2.7	9.0	9.0	4.3
	LSD at 5% =	1.1	1.2	1.4	0.9	1.4	1.8

<sup>1</sup>9 = least drought stress<sup>2</sup>9 = least disease

<sup>3</sup>9 = fewest seedheads

<sup>4</sup>9 = earliest spring green-up

			Sumn	ner 2007		Fall	2006
		July 27	July 26	July 25			Sept. 29
	Cultivar or				Number of Pa		
	Selection	18	12	6	0	18	0
				-	-		-
1	Harmonie	95.0	95.0	96.7	98.3	76.7	94.0
2	CP 76-9068	93.3	96.7	95.0	98.3	73.3	97.7
3	CPP 822	91.7	95.0	93.3	95.0	71.7	95.3
4	CPP 821	91.7	91.7	93.3	96.7	68.3	89.0
5	Julia	88.3	88.3	90.0	93.3	73.3	83.3
6	NA-3257	85.0	81.7	80.0	88.3	71.7	73.3
7	Bariris	85.0	86.7	86.7	90.0	70.0	82.3
8	SW AG 514	78.3	85.0	86.7	95.0	65.0	90.0
9	Nu Destiny	78.3	81.7	83.3	85.0	70.0	85.0
10	BAR VV 0709	78.3	78.3	83.3	93.3	56.7	80.0
10	DAIL VV 0703	10.5	70.5	00.0	30.0	50.7	00.0
11	Beyond	76.7	78.3	80.0	83.3	70.0	75.0
12	DP 76-9066	75.0	78.3	81.7	91.7	60.0	82.3
13	Impact	75.0	75.0	80.0	90.0	65.0	83.3
14	J-2870	73.3	78.3	83.3	83.3	65.0	85.7
15	Award	73.3	75.0	81.7	88.3	60.0	78.3
16	Excursion	73.3	78.3	81.7	90.0	71.7	86.7
17	PST-109-752	73.3	78.3	80.0	90.0	61.7	76.7
18	PST-101-390	73.3	75.0	81.7	86.7	58.3	80.0
19	J-1334	71.7	73.3	80.0	80.0	66.7	82.3
20	J-2024	71.7	75.0	80.0	85.0	71.7	75.0
21	Everglade	71.7	80.0	83.3	93.3	63.3	82.3
22	NuGlade	71.7	75.0	80.0	86.7	66.7	81.7
23	Emblem (PST-Y2K-169)	71.7	76.7	83.3	86.7	58.3	81.0
23	Prosperity	71.7	71.7	76.7	83.3	71.7	80.0
24	NA-3248	71.7	78.3	81.7	91.7	66.7	86.7
25	NA-5240	/ 1./	70.5	01.7	51.7	00.7	00.7
26	Barrister	71.7	75.0	81.7	85.0	66.7	75.0
27	Midnight II	71.7	76.7	80.0	83.3	76.7	85.0
28	A96-1368	71.7	78.3	81.7	88.3	65.0	81.7
29	Crusader (NA-3271)	70.0	75.0	80.0	86.7	56.7	75.0
30	J-2399	70.0	75.0	81.7	85.0	70.0	84.0
04		70.0		00.0	06 7	60.0	00.0
31	RAD-343	70.0	75.0	80.0	86.7	63.3	80.0
32	Dynamo	70.0	73.3	81.7	88.3	48.3	66.7
33	J-1326	68.3	73.3	78.3	85.0	73.3	84.3
34	J-1466	68.3	76.7	80.0	86.7	66.7	83.3
35	J-3429	68.3	80.0	80.0	88.3	68.3	81.7

Table 3.Wear tolerance (fullness of turfgrass cover) of Kentucky bluegrass cultivars and selections<br/>subjected to wear in a turf trial seeded in September 2005 at North Brunswick, NJ. (Includes all<br/>entries of the 2005 National Turfgrass Evaluation Program (NTEP) Kentucky Bluegrass Test.)

			Summ		Fall 2006		
		July 27	July 26	July 25		Oct. 9	Sept. 29
	Cultivar or		Wear	Tolerance (I	Number of Pa	asses)1	
	Selection	18	12	6	0	18	0
36	Everest	68.3	76.7	80.0	86.7	75.0	78.3
37	J-2404	66.7	75.0	78.3	86.7	71.7	83.3
38	Skye	66.7	73.3	80.0	88.3	61.7	73.3
39	Starburst (STR 2703)	66.7	71.7	76.7	86.7	36.7	68.3
40	PST-1A1-899	66.7	71.7	80.0	85.0	45.0	75.0
41	BAR VV 0665	66.7	70.0	78.3	90.0	53.3	76.7
42	AKB449	66.7	66.7	75.0	85.0	51.7	71.7
43	J-2791	65.0	75.0	81.7	88.3	58.3	88.3
44	Rhythm	65.0	66.7	75.0	80.0	66.7	80.0
45	Bandera (SPTR 2LM95)	65.0	70.0	76.7	85.0	45.0	58.3
46	POPR 04594	65.0	73.3	78.3	85.0	58.3	73.3
47	Midnight	63.3	73.3	76.7	85.0	70.0	78.3
48	A98-689	63.3	73.3	76.7	90.0	46.7	73.3
49	J-2502	63.3	66.7	75.0	78.3	68.3	80.0
50	Washington	63.3	75.0	78.3	88.3	63.3	80.0
51	Bd 03-84	61.7	70.0	80.0	88.3	58.3	76.7
52	Bewitched	60.0	70.0	76.7	78.3	65.0	80.0
53	Bluestone	60.0	61.7	73.3	75.0	66.7	76.7
54	Touche (STR 23180)	60.0	71.7	78.3	88.3	65.0	78.3
55	A99-523	60.0	68.3	75.0	80.0	58.3	80.0
56	Rugby II	58.3	68.3	76.7	83.3	58.3	76.7
57	Reveille	58.3	65.0	71.7	78.3	36.7	56.7
58	Baron	58.3	65.0	73.3	83.3	45.0	61.7
59	Mystere	58.3	63.3	71.7	78.3	38.3	62.7
60	Shamrock	56.7	65.0	71.7	83.3	51.7	76.7
61	Bd 98-1358	56.7	63.3	76.7	83.3	51.7	71.7
62	A00-1254	56.7	61.7	71.7	76.7	45.0	66.7
63	Bd 03-159	55.0	65.0	68.3	70.0	60.0	81.0
64	CPP 817	55.0	70.0	80.0	83.3	51.7	70.0
65	RAD-762	55.0	70.0	75.0	85.0	58.3	75.0
66	A99-2559	55.0	63.3	75.0	83.3	48.3	73.3
67	RAD-504	55.0	60.0	70.0	80.0	26.7	66.7
68	Spitfire (STR 2485)	55.0	63.3	76.7	88.3	61.7	76.7
69	BAR VV 8536	55.0	60.0	70.0	85.0	43.3	65.0
70	Shiraz (LTP-73)	55.0	65.0	71.7	83.3	56.7	75.0

			Summ	or 2007		Fall 2006		
		July 27	July 26	July 25			Sept. 29	
	Cultivar or		Wear		Number of Pa			
	Selection	18	12	6	0	18	0	
71	Pinot (LTP-149)	55.0	58.3	66.7	71.7	51.7	65.0	
72	H94-305	55.0	61.7	68.3	81.7	50.0	71.7	
73	Corsair (NA-3249)	53.3	65.0	73.3	75.0	43.3	55.0	
74	Blueberry	53.3	65.0	73.3	76.7	61.7	75.0	
75	DP 76-9081	53.3	65.0	71.7	85.0	41.7	71.7	
76	A98-948	53.3	66.7	73.3	86.7	58.3	76.7	
77	Blue Note (A01-349)	53.3	60.0	73.3	81.7	61.7	78.3	
78	RAD-0AN64	53.3	65.0	68.3	75.0	43.3	68.3	
79	Princeton 105	53.3	63.3	75.0	85.0	56.7	76.0	
80	A99-2427	53.3	61.7	71.7	71.7	53.3	66.7	
81	MSP 3723	51.7	60.0	75.0	78.3	58.3	76.7	
82	PSG 711	51.7	60.0	71.7	78.3	53.3	70.0	
83	Diva	51.7	63.3	75.0	81.7	58.3	81.7	
84	Kenblue	50.0	65.0	71.7	81.7	33.3	51.7	
85	Argos	50.0	61.7	70.0	85.0	58.3	80.0	
86	SPTR 2959	50.0	66.7	75.0	86.7	45.0	78.3	
87	BAR VV 9634	50.0	58.3	71.7	78.3	56.7	63.3	
88	MSP 3724	48.3	61.7	75.0	73.3	56.7	73.3	
89	A99-3122	48.3	63.3	71.7	78.3	41.7	56.7	
90	A97-1560	48.3	60.0	71.7	80.0	55.0	79.3	
91	Arrowhead (NA-3261)	46.7	61.7	70.0	81.7	46.7	71.7	
92	A03-66	46.7	56.7	70.0	80.0	43.3	68.3	
93	Wild Horse (A97-890)	45.0	61.7	70.0	86.7	51.7	73.3	
94	Bd 95-1930	45.0	65.0	75.0	85.0	60.0	78.3	
95	BAR VK 0710	45.0	53.3	66.7	75.0	46.7	63.3	
96	A93-201	45.0	60.0	70.0	76.7	56.7	76.7	
97	A97-1287	43.3	53.3	65.0	71.7	46.7	68.3	
98	Avid	43.3	58.3	66.7	70.0	60.0	70.0	
99	BAR VV 9630	41.7	56.7	63.3	73.3	53.3	63.3	
100	Bd 98-2108	40.0	53.3	68.3	75.0	56.7	70.0	
101	Bd 99-2103	40.0	48.3	63.3	66.7	50.0	75.0	
102	Glenmont	40.0	51.7	60.0	73.3	36.7	70.0	
103	Belissimo	40.0	53.3	65.0	73.3	58.3	78.3	
104	PST-101-73	40.0	53.3	65.0	70.0	43.3	68.3	
105	PST-99 (A00-99)	40.0	63.3	73.3	76.7	60.0	74.3	

			Summ	ner 2007		Fall	2006
		July 27			July 25		
	Cultivar or			Tolerance (N	lumber of Pa	asses)1	
	Selection	18	12	6	0	18	0
106	MSP 3722	38.3	51.7	63.3	66.7	43.3	70.0
107	A00-1400	38.3	50.0	65.0	76.7	43.3	76.7
108	Volt (A98-999)	38.3	48.3	68.3	76.7	38.3	73.3
109	Aviator (NA-3259)	38.3	53.3	65.0	80.0	35.0	61.7
110	DLF 76-9075	36.7	50.0	63.3	73.3	11.7	43.3
111	A00-247	36.7	55.0	63.3	76.7	51.7	73.3
112	A99-3119	36.7	53.3	68.3	75.0	55.0	73.3
113	A95-410	35.0	55.0	71.7	76.7	28.3	71.7
114	1QG-38	35.0	51.7	68.3	71.7	58.3	75.0
115	A99-2377	35.0	50.0	58.3	68.3	46.7	73.3
116	PSG 366	31.7	43.3	56.7	63.3	31.7	70.0
117	STR 2553	31.7	51.7	63.3	75.0	50.0	73.3
118	H98-701	31.7	48.3	61.7	68.3	50.0	63.3
119	America	28.3	51.7	68.3	68.3	53.3	73.3
120	A01-299	25.0	38.3	51.7	58.3	43.3	73.3
121	Zinfandel (LTP 2949)	23.3	40.0	51.7	56.7	51.7	61.7
	LSD at 5% =	14.1	10.7	8.1	10.5	12.0	10.8

<sup>1</sup> Wear tolerance assessed as percent (fullness) of turfgrass cover using a 0 to 100% scale (0 = absence of turfgrass canopy to 100 = full cover).

Table 4. Recovery and bruising injury of Kentucky bluegrass cultivars and selections subjected to simulated wear in a turf trial seeded in September 2005 at North Brunswick, NJ. (Includes all entries of the 2005 National Turfgrass Evaluation Program (NTEP) Kentucky Bluegrass Test.)

			Summer 2007				er 2007		Fall 2006	
		Sept. 21	Aug. 15	Aug. 6	Nov. 20	Aug. 16	Aug. 6	Nov. 20	Oct. 31	Oct. 24
	Cultivar or Selection	Recove 56	ry from Wear 19	Oays afte 10	r Wear) <sup>1</sup> 42	20	Bruising Ir 10	njury (Days a 42	tter vvear)2 22	15
		50	19	10	42	20	10	42	22	
1	Julia	98.3	85.0	90.0	86.7	6.3	6.3	8.7	8.0	8.3
2	BAR VV 0709	95.0	78.3	78.3	83.3	8.3	5.7	9.0	8.3	7.7
3	CP 76-9068	93.3	83.3	91.7	81.7	4.0	4.3	6.0	4.3	4.3
4	CPP 821	91.7	81.7	86.7	83.3	4.0	4.3	8.0	6.0	5.3
5	Bariris	90.0	81.7	86.7	90.0	5.7	5.0	8.7	8.3	8.0
6	Harmonie	88.3	73.3	91.7	85.0	1.3	4.0	6.7	5.0	4.0
7	Emblem (PST-Y2K-169)	88.3	68.3	68.3	68.3	7.3	5.3	7.3	5.3	4.0
8	SW AG 514	86.7	78.3	86.7	73.3	4.3	6.0	7.7	6.7	6.7
9	CPP 822	86.7	81.7	90.0	85.0	3.7	3.7	7.3	5.0	4.7
10	PST-1A1-899	86.7	60.0	61.7	63.3	5.0	3.7	8.3	6.0	5.0
11	NA-3248	86.7	63.3	61.7	80.0	5.7	5.0	9.0	8.0	7.3
12	Prosperity	85.0	75.0	73.3	76.7	7.3	6.3	8.3	7.0	6.3
13	POPR 04594	85.0	71.7	65.0	66.7	7.0	5.0	7.7	6.3	5.7
14	Nu Destiny	83.3	76.7	73.3	78.3	8.0	6.7	8.3	6.7	6.7
15	PST-101-390	83.3	68.3	66.7	65.0	6.0	5.0	8.0	6.0	5.3
16	J-2399	81.7	73.3	68.3	80.0	7.7	7.0	8.0	7.0	6.3
17	J-2870	81.7	75.0	76.7	85.0	8.3	6.7	8.7	7.3	7.3
18	J-3429	81.7	70.0	70.0	85.0	6.3	4.0	8.3	6.3	5.3
19	NuGlade	81.7	73.3	71.7	80.0	6.7	6.0	8.3	6.7	6.0
20	Impact	81.7	73.3	70.0	88.3	7.7	6.3	8.7	7.3	6.7

		{	Summer 200	)7	Fall 2006	Summe	er 2007		Fall 2006 -	
		Sept. 21	Aug. 15	Aug. 6	Nov. 20	Aug. 16	Aug. 6	Nov. 20	Oct. 31	Oct. 24
	Cultivar or			ır (Days afte	r Wear)1			njury (Days a		
	Selection	56	19	10	42	20	10	42	22	15
21	Dynamo	81.7	71.7	66.7	75.0	5.3	4.3	8.7	7.7	6.7
22	A96-1368	81.7	75.0	71.7	76.7	6.7	5.7	8.0	7.7	6.3
23	Everglade	80.0	75.0	76.7	88.3	7.0	5.7	8.3	6.3	5.7
24	Beyond	80.0	71.7	68.3	88.3	7.3	6.7	9.0	8.0	7.3
25	Excursion	80.0	70.0	66.7	91.7	7.3	6.7	8.7	7.0	6.3
26	NA-3257	80.0	76.7	78.3	80.0	6.7	5.0	8.0	8.0	7.3
27	Washington	80.0	73.3	68.3	73.3	7.3	6.0	8.7	7.3	6.7
28	Rhythm	80.0	60.0	58.3	85.0	6.7	6.0	9.0	7.3	6.7
29	PST-109-752	80.0	78.3	73.3	73.3	7.7	5.7	9.0	8.0	7.3
30	Barrister	80.0	71.7	68.3	81.7	7.0	6.7	8.7	7.3	7.0
31	BAR VV 0665	80.0	63.3	58.3	70.0	5.0	3.7	8.3	7.3	7.0
32	Midnight II	80.0	66.7	70.0	85.0	6.0	6.0	8.7	7.3	7.0
33	A99-523	80.0	65.0	66.7	71.7	7.0	6.0	8.0	7.7	6.7
34	Midnight	78.3	63.3	66.7	88.3	6.3	6.3	8.3	7.0	7.0
35	DP 76-9066	78.3	61.7	58.3	75.0	3.3	2.0	7.7	5.0	3.7
36	DP 76-9081	78.3	61.7	51.7	65.0	5.3	5.0	7.7	6.7	5.7
37	J-2791	78.3	68.3	68.3	71.7	5.7	5.7	7.3	4.7	4.0
38	Everest	78.3	68.3	70.0	90.0	6.7	5.3	8.7	7.3	7.3
39	A99-2559	78.3	66.7	66.7	76.7	7.3	6.0	9.0	7.7	7.3
40	Skye	78.3	65.0	63.3	71.7	5.7	4.7	8.0	6.3	6.0
41	Starburst (STR 2703)	78.3	76.7	70.0	63.3	8.0	6.3	8.7	6.0	5.7
42	Bewitched	76.7	68.3	61.7	80.0	6.7	6.0	7.3	6.3	4.7
43	J-1466	76.7	76.7	73.3	81.7	7.7	7.3	8.3	7.0	6.7
44	J-2024	76.7	66.7	68.3	85.0	7.0	6.3	9.0	7.7	7.3
45	J-2502	76.7	60.0	58.3	80.0	6.3	5.7	7.7	6.7	6.0

		{	Summer 200	7	Fall 2006	Summe	er 2007		-Fall 2006 -	
		Sept. 21	Aug. 15	Aug. 6	Nov. 20	Aug. 16	Aug. 6	Nov. 20	Oct. 31	Oct. 24
	Cultivar or			r (Days afte	r Wear)1			ijury (Days a		
	Selection	56	19	10	42	20	10	42	22	15
46	Rugby II	76.7	65.0	61.7	71.7	6.0	5.7	8.0	6.7	5.7
47	RAD-343	76.7	66.7	63.3	75.0	6.3	4.3	8.3	7.0	6.3
48	Bandera (SPTR 2LM95)	76.7	66.7	65.0	70.0	5.7	4.0	7.7	7.0	5.0
49	Touche (STR 23180)	76.7	71.7	61.7	73.3	6.3	4.0	8.3	6.0	6.0
50	Crusader (NA-3271)	75.0	65.0	66.7	73.3	6.7	4.3	8.0	6.0	4.3
51	MSP 3723	75.0	61.7	58.3	73.3	7.3	6.0	8.3	7.7	7.0
52	Blueberry	75.0	61.7	53.3	73.3	7.0	5.3	8.0	6.7	5.7
53	J-1326	75.0	68.3	68.3	85.0	6.3	6.3	8.7	7.3	6.7
54	J-1334	75.0	65.0	68.3	83.3	7.7	7.0	8.7	7.3	7.0
55	J-2404	75.0	68.3	66.7	83.3	7.0	6.0	8.3	7.3	7.0
56	A97-1560	75.0	58.3	56.7	66.7	6.3	5.7	7.0	7.0	5.7
57	A98-689	73.3	68.3	68.3	65.0	5.7	4.3	7.3	5.7	5.3
58	Belissimo	73.3	48.3	43.3	68.3	6.3	5.3	7.3	6.7	7.0
59	H94-305	73.3	66.7	53.3	68.3	7.0	4.7	9.0	7.3	8.0
60	Princeton 105	73.3	63.3	60.0	71.7	6.0	4.3	8.3	6.7	5.7
61	A99-3122	73.3	51.7	50.0	55.0	4.0	3.0	7.3	5.3	5.0
62	Bd 98-2108	71.7	51.7	41.7	66.7	4.7	3.3	9.0	7.0	6.7
63	MSP 3724	71.7	55.0	51.7	75.0	6.0	4.3	8.7	7.0	7.0
64	Award	71.7	65.0	63.3	85.0	6.7	6.3	8.7	7.3	6.7
65	A00-1254	71.7	53.3	56.7	65.0	6.3	5.0	8.0	6.7	6.0
66	Avid	71.7	56.7	48.3	76.7	6.0	5.7	8.7	7.3	7.3
67	RAD-504	71.7	55.0	58.3	68.3	5.0	3.7	8.3	7.0	6.3
68	Pinot (LTP-149)	71.7	58.3	53.3	68.3	6.0	4.0	8.0	7.0	5.7
69	Diva	71.7	60.0	53.3	63.3	6.7	4.3	7.3	6.3	5.0
70	PST-99 (A00-99)	71.7	56.7	56.7	71.7	6.7	5.7	8.0	7.3	6.7

		6	Summer 200	7	Fall 2006	Summe	r 2007		Fall 2006 -	
		Sept. 21	Aug. 15	Aug. 6	Nov. 20	Aug. 16	Aug. 6	Nov. 20	Oct. 31	Oct. 24
	Cultivar or	Recove		r (Days afte	r Wear)1		Bruising Ir	njury (Days a	fter Wear) <sup>2</sup>	
	Selection	56	19	10	42	20	10	42	22	15
71	A99-2427	71.7	61.7	60.0	76.7	6.3	5.0	9.0	7.7	6.7
72	Bd 03-84	70.0	68.3	58.3	68.3	6.7	4.7	8.0	7.3	6.0
73	A00-247	70.0	46.7	40.0	68.3	5.0	4.3	7.3	7.0	6.3
74	Blue Note (A01-349)	70.0	50.0	48.3	75.0	5.0	3.3	8.3	7.0	6.7
75	A97-1287	70.0	48.3	43.3	71.7	5.0	4.3	8.3	8.0	7.3
76	Spitfire (STR 2485)	70.0	61.7	55.0	68.3	5.3	4.0	8.0	6.3	5.7
77	PSG 711	70.0	58.3	51.7	66.7	5.7	5.3	7.3	6.7	6.7
78	Baron	70.0	60.0	55.0	70.0	4.3	3.7	7.0	6.7	6.3
79	Shamrock	68.3	53.3	48.3	68.3	3.7	3.0	8.0	6.7	5.7
80	Bd 95-1930	68.3	61.7	51.7	66.7	6.0	4.3	8.0	6.3	5.3
81	Bd 98-1358	68.3	41.7	38.3	71.7	3.7	2.0	8.3	7.3	6.0
82	Bd 03-159	68.3	53.3	48.3	75.0	6.3	4.3	8.3	6.0	5.3
83	A98-948	68.3	56.7	51.7	78.3	4.7	3.7	8.7	8.0	6.3
84	Argos	68.3	56.7	51.7	71.7	4.0	3.0	8.0	7.0	5.7
85	Bluestone	68.3	51.7	55.0	80.0	5.0	4.7	8.3	6.7	6.7
86	RAD-762	68.3	60.0	51.7	71.7	5.7	4.7	8.7	7.7	6.0
87	A99-3119	68.3	51.7	45.0	68.3	5.0	5.0	7.3	7.3	6.7
88	Reveille	68.3	63.3	56.7	60.0	7.0	4.7	8.0	6.3	5.3
89	PST-101-73	68.3	51.7	40.0	61.7	5.3	5.0	7.7	6.7	6.0
90	BAR VK 0710	68.3	61.7	46.7	71.7	6.0	5.3	7.7	7.3	7.3
91	Wild Horse (A97-890)	66.7	48.3	46.7	73.3	3.3	2.7	8.3	7.7	7.0
92	A95-410	66.7	48.3	41.7	63.3	4.3	2.7	8.0	6.7	4.7
93	SPTR 2959	66.7	55.0	46.7	70.0	3.7	3.0	8.3	7.0	6.7
94	1QG-38	66.7	45.0	40.0	68.3	6.0	5.0	8.0	7.0	7.0
95	BAR VV 8536	66.7	56.7	50.0	63.3	5.3	3.7	6.7	6.0	6.0

		S	ummer 200	7	Fall 2006	Summe	er 2007		Fall 2006 -	
	<b>•</b> • •	Sept. 21	Aug. 15	Aug. 6	Nov. 20	Aug. 16	Aug. 6	Nov. 20	Oct. 31	Oct. 24
	Cultivar or				r Wear)¹			njury (Days a		
	Selection	56	19	10	42	20	10	42	22	15
96	Mystere	66.7	55.0	53.3	68.3	6.0	4.3	8.7	8.0	7.7
97	AKB449	66.7	43.3	38.3	66.7	3.3	2.0	8.7	6.3	5.0
98	Arrowhead (NA-3261)	65.0	56.7	55.0	61.7	6.0	4.0	8.0	6.3	5.0
99	Kenblue	65.0	58.3	51.7	48.3	6.3	4.0	7.7	6.3	6.3
100	Bd 99-2103	65.0	48.3	43.3	63.3	5.7	4.0	7.3	6.0	5.3
101	DLF 76-9075	65.0	51.7	36.7	38.3	3.7	3.7	8.3	5.0	4.0
102	A00-1400	65.0	53.3	46.7	68.3	5.7	4.0	8.3	6.7	5.7
103	STR 2553	65.0	46.7	40.0	66.7	5.7	4.3	8.0	7.3	5.7
104	Shiraz (LTP-73)	65.0	50.0	40.0	73.3	4.7	3.0	8.7	6.3	6.0
105	A03-66	65.0	46.7	46.7	70.0	4.3	2.7	8.3	6.7	5.7
106	Glenmont	63.3	43.3	38.3	50.0	4.7	2.3	6.0	6.3	5.0
107	RAD-0AN64	63.3	58.3	51.7	65.0	4.7	4.3	7.7	7.0	5.7
108	A93-201	63.3	41.7	40.0	81.7	3.0	2.3	9.0	7.7	6.0
109	Aviator (NA-3259)	61.7	46.7	40.0	65.0	3.7	2.7	8.3	6.3	5.7
110	BAR VV 9634	61.7	55.0	50.0	73.3	4.7	4.3	8.3	7.7	7.3
111	BAR VV 9630	61.7	41.7	43.3	73.3	4.0	3.7	7.7	8.3	7.3
112	A99-2377	61.7	46.7	35.0	65.0	5.3	4.0	8.0	6.0	5.0
113	Corsair (NA-3249)	60.0	46.7	43.3	65.0	4.0	3.3	8.3	6.3	5.0
114	MSP 3722	60.0	48.3	43.3	65.0	5.7	4.7	8.0	7.3	6.7
115	CPP 817	60.0	36.7	40.0	71.7	2.0	2.0	8.0	6.3	4.3
116	Volt (A98-999)	60.0	40.0	35.0	70.0	3.3	2.0	7.7	6.3	5.7
117	A01-299	60.0	45.0	33.3	68.3	5.0	4.3	7.7	6.3	5.7
118	America	60.0	43.3	33.3	65.0	4.3	4.0	7.0	7.0	6.7
119	PSG 366	58.3	36.7	33.3	60.0	2.7	2.3	8.3	6.0	4.7
120	H98-701	58.3	41.7	36.7	61.7	5.3	4.7	6.7	6.7	7.0

	Cultivar or	Sept. 21	Aug. 15	Aug. 6	Fall 2006 Nov. 20 r Wear)¹	Aug. 16	Aug. 6	Nov. 20	Fall 2006 Oct. 31 fter Wear)²	Oct. 24
	Selection	56	19	10	42	20	10	42	22	15
121	Zinfandel (LTP 2949)	48.3	33.3	26.7	66.7	3.7	3.0	8.3	6.3	5.7
	LSD at 5% =	11.9	12.6	12.9	10.5	1.7	1.5	1.0	1.1	1.3

<sup>1</sup> Recovery from wear assessed as percent (fullness) of turfgrass cover using a 0 to 100% scale (0 = absence of turfgrass canopy to 100 = full cover)

<sup>2</sup> 9 = least bruising (discoloration resulting from wear)

Se 1 Bu 2 Mu 3 Z- 4 SO 5 M' 6 AT 7 TO 8 RI 9 IS 10 RI 11 DI 12 N/ 13 He	Cultivar or			200	7 Turf Ou	olity1			ment <sup>2</sup> Oct. 4	- Spring Green-up <sup>3</sup> April 25	Brown Patch⁴ July 24
2 Mi 3 Z- 4 SC 5 M <sup>1</sup> 6 A1 7 TC 8 Ri 9 IS 10 Ri 11 Di 12 N/ 13 He	election	Avg.	May	June	July	Aug.	Sept.	Oct.	2006	2007	2007
2 Mi 3 Z- 4 SC 5 M <sup>1</sup> 6 A1 7 TC 8 Ri 9 IS 10 Ri 11 Di 12 N/ 13 He	sullseye	7.9	7.0	7.3	8.3	8.3	8.3	8.0	35.0	3.3	8.3
4 SC 5 M <sup>1</sup> 6 A1 7 TC 8 RH 9 IS 10 RH 11 DF 12 NA 13 He	Ionet (LTP-610 CL)	7.5	7.0	7.0	6.7	8.0	8.0	8.3	50.0	5.3	8.0
5 M <sup>1</sup> 6 A1 7 TC 8 RI 9 IS 10 RI 11 DF 12 N/ 13 He	-2000	7.4	7.3	6.7	7.0	7.0	7.7	8.7	33.3	3.3	7.0
6 A1 7 TC 8 RI 9 IS 10 RI 11 DI 12 N/ 13 He	6C-1	7.4	5.3	8.0	7.7	6.7	8.0	8.7	36.7	3.7	7.7
7 TC 8 RH 9 IS 10 RH 11 DH 12 NA 13 He	IVS-MST	7.4	6.3	7.3	6.7	7.7	8.7	7.7	31.7	4.3	7.7
8 RI 9 IS 10 RI 11 DI 12 N/ 13 He	ТМ	7.4	5.7	6.3	7.7	7.7	8.3	8.7	38.3	4.7	8.0
9 IS 10 RI 11 DI 12 N/ 13 He	G 50-9460	7.3	6.3	7.3	7.7	6.7	8.0	8.0	36.7	5.0	8.7
10 RH 11 DH 12 N/ 13 He	RK 5	7.3	6.7	7.0	7.7	6.3	8.0	8.3	43.3	3.3	8.3
11 DF 12 N/ 13 He	S-TF-154	7.3	6.0	7.3	7.0	7.0	8.3	8.3	33.3	4.3	8.0
12 N/ 13 He	RKCL	7.3	6.3	5.7	6.3	8.3	8.0	9.0	38.3	3.7	8.0
13 He	P 50-9440	7.2	7.3	7.0	6.3	6.7	7.7	8.3	31.7	3.0	6.7
	IA-BT-1	7.2	5.3	6.7	7.3	7.7	8.0	8.0	30.0	4.7	9.0
	lemi	7.1	5.3	7.0	8.3	7.0	7.3	7.7	26.7	3.7	8.3
14 Tu	urbo	7.1	5.7	6.0	7.7	6.3	8.3	8.7	26.7	3.0	8.0
15 PS	ST-5WMD	7.1	6.3	6.7	7.0	6.7	8.0	7.7	26.7	4.7	9.0
16 Sp	peedway (STR-8BPDX)	7.0	6.7	6.3	7.0	7.0	7.7	7.3	28.3	3.3	8.0
	TE Í	7.0	5.7	7.0	7.0	6.7	7.3	8.3	33.3	5.3	8.3
18 Rł	Rhambler	7.0	6.0	6.3	6.7	7.0	7.7	8.0	28.3	4.3	8.3
19 RI	RP 3	6.9	6.3	7.7	6.7	6.3	7.0	7.7	30.0	3.3	8.7
20 Rł	RK 4	6.8	6.3	7.3	6.0	6.0	7.3	7.7	45.0	3.3	7.7
21 Sł	SH 3	6.8	5.7	5.3	6.7	6.7	8.7	8.0	41.7	4.3	8.7
22 Rł	RK 6	6.8	6.0	6.0	6.7	6.0	8.0	8.0	36.7	4.3	9.0
	1illennium SRP	6.7	6.7	7.3	7.0	6.0	7.7	5.7	53.3	4.7	8.3
24 IS	S-TF-128	6.7	6.3	6.0	7.3	6.7	8.0	6.0	25.0	3.0	8.0
	1VS-TF-158	6.7	7.0	6.3	7.3	5.7	7.3	6.7	31.7	3.3	8.0

Table 5.Performance of tall fescue cultivars and selections in a turf trial seeded in September 2006 at North Brunswick, NJ. (Includes all entries of the 2006 National Turfgrass Evaluation Program (NTEP) Tall Fescue Test.)

	Cultivar or			200	7 Turf Qua	alitv1			Establish ment <sup>2</sup> Oct. 4	- Spring Green-up <sup>3</sup> April 25	Brown Patch⁴ July 24
	Selection	Avg.	May	June	July	Aug.	Sept.	Oct.	2006	2007	2007
26	M4	6.7	4.7	5.3	7.3	7.0	7.3	8.3	25.0	3.3	8.3
27	RP 2	6.6	6.0	6.0	6.3	6.0	7.3	8.0	28.3	4.0	8.3
28	Escalade	6.6	6.0	6.3	7.0	6.7	6.7	6.7	33.3	5.3	8.0
29	Firenza	6.6	6.0	5.7	6.7	6.7	7.0	7.3	33.3	3.7	8.3
30	K06-WA	6.5	4.7	5.7	5.0	6.3	8.7	9.0	48.3	3.7	7.7
31	DP 50-9407	6.5	6.3	6.3	6.7	5.3	7.0	7.3	36.7	4.3	8.3
2	IS-TF-159	6.5	5.3	6.0	6.3	6.3	7.3	7.7	23.3	2.3	8.3
3	J-140	6.4	6.0	6.3	6.0	6.0	7.0	7.3	31.7	3.0	8.3
4	STR-8BB5	6.4	5.7	6.3	6.0	5.7	6.7	8.0	28.3	3.7	7.0
5	BBM	6.3	5.3	6.0	5.7	6.0	7.3	7.3	23.3	3.3	6.7
6	IS-TF-138	6.3	5.0	5.7	5.3	6.3	7.3	8.0	16.7	1.7	7.3
37	SR 8650 (STR-8LMM)	6.3	6.0	6.3	6.0	5.3	7.0	7.0	21.7	2.7	8.7
8	RNP	6.2	6.3	6.7	6.7	6.0	5.7	6.0	26.7	3.7	7.7
39	CE-2	6.2	6.3	5.3	6.0	6.3	6.3	7.0	45.0	5.0	7.7
-0	CE-4	6.2	6.7	6.7	4.7	5.7	6.3	7.3	45.0	6.0	6.7
1	DKS	6.2	6.3	8.0	4.7	5.7	6.0	6.7	25.0	3.0	5.7
2	RK-1	6.2	5.3	6.0	5.0	5.3	7.7	8.0	25.0	3.7	7.7
3	Van Gogh (LTP-RK2)	6.2	4.0	5.3	5.0	6.3	7.7	8.7	26.7	4.3	8.3
4	IS-TF-153	6.2	6.0	5.7	6.3	6.0	6.3	6.7	26.7	3.0	8.7
-5	JT-41	6.1	7.3	6.3	5.0	5.3	6.3	6.0	30.0	3.7	6.7
6	Rebel IV	6.1	5.3	6.0	7.0	5.7	6.0	6.3	35.0	5.3	7.7
7	IS-TF-147	6.0	5.7	5.7	5.3	5.3	6.7	7.3	26.7	2.7	7.7
8	CE 1	6.0	4.7	6.0	5.3	6.0	6.7	7.3	26.7	6.7	7.7
.9	AST-2	6.0	6.7	7.0	5.7	5.3	6.0	5.3	30.0	3.0	6.0
0	BGR-TF1	6.0	6.3	6.0	5.7	5.3	5.7	6.7	20.0	3.0	7.3

C	Cultivar or			200	7 Turf Qua	alitv1			Establish ment² Oct. 4	- Spring Green-up <sup>3</sup> April 25	Brown Patch⁴ July 24
	Selection	Avg.	May	June	July	Aug.	Sept.	Oct.	2006	2007	2007
51 L	.S-03	6.0	6.7	7.0	5.3	5.0	6.3	5.7	25.0	2.0	7.3
	S-TF-152	5.9	4.3	5.3	6.3	5.3	6.7	7.7	28.3	1.7	7.3
	/IVS-BB-1	5.9	6.0	5.3	5.7	5.7	7.0	6.0	33.3	3.0	7.3
54 P	°SG-82BR	5.9	6.0	5.0	5.7	5.3	7.0	6.7	28.3	4.7	7.3
55 A	AST-4	5.9	6.0	6.7	5.7	5.7	6.0	5.7	35.0	3.0	6.7
56 A	NST-3	5.9	6.7	6.7	5.3	5.3	5.7	5.7	28.3	4.7	6.3
	PST-5HP	5.8	5.0	6.0	4.7	5.7	7.0	6.7	28.3	3.3	7.0
	S-TF-135	5.8	6.3	5.3	5.3	5.0	5.7	7.0	20.0	2.0	7.3
	AST 7003	5.8	6.0	5.7	4.7	5.3	6.7	6.3	25.0	3.0	5.7
60 F	alcon IV	5.8	5.0	6.0	6.0	5.0	5.7	7.0	30.0	5.3	7.0
61 D	)P 50-9411	5.8	5.7	4.7	5.3	5.0	6.3	7.7	30.0	2.7	7.0
62 G	GE-1	5.8	5.7	6.7	5.3	5.0	5.7	6.3	38.3	3.3	7.3
	S-TF-161	5.7	5.0	5.7	6.3	5.0	5.7	6.7	28.3	2.0	7.7
	Col-M	5.7	6.0	6.0	4.7	4.7	6.7	6.3	21.7	3.3	6.0
65 C	CS-TF1	5.7	6.7	5.3	6.0	5.3	5.7	5.3	25.0	2.7	8.0
66 K	(Z-1	5.7	5.7	5.7	5.0	5.0	6.7	6.3	23.3	3.0	6.3
67 C	Col-J	5.7	6.3	6.3	4.3	4.7	7.0	5.7	28.3	3.0	6.0
68 T	ahoe II	5.7	6.7	6.3	5.7	4.0	5.7	6.0	30.0	2.7	8.0
	-130	5.7	5.0	5.7	5.3	5.7	6.0	6.3	16.7	2.3	7.0
70 P	Padre	5.7	6.3	4.7	4.7	5.0	7.3	6.0	33.3	5.3	6.3
71 C	Cezanne (LTP-CRL)	5.6	5.0	5.0	5.3	5.3	6.7	6.3	21.7	3.3	8.0
	S-TF-151	5.6	4.7	5.7	6.0	5.7	6.0	5.7	28.3	1.7	8.0
	T-42	5.6	5.7	5.7	5.7	5.7	5.3	5.7	30.0	4.0	8.3
	T-33	5.6	6.3	6.0	4.7	5.0	6.3	5.3	30.0	3.3	6.7
75 L	S-06	5.6	6.0	4.3	5.0	5.7	6.0	6.7	26.7	1.7	7.3

	Cultivar or			200	7 Turf Qua	alitv1			Establish ment² Oct. 4	- Spring Green-up <sup>3</sup> April 25	Brown Patch⁴ July 24
	Selection	Avg.	May	June	July	Aug.	Sept.	Oct.	2006	2007	2007
76	MVS-341	5.6	7.0	6.7	5.3	3.7	5.0	5.7	31.7	3.3	7.7
77	BAR Fa 6253	5.5	5.7	5.0	5.0	5.3	6.7	5.7	26.7	3.0	8.0
78	ATF 1328	5.5	5.0	6.0	5.7	5.0	5.7	5.7	18.3	2.3	6.0
79	RAD-TF17	5.5	6.0	5.0	5.0	5.3	5.7	6.0	31.7	3.0	6.7
30	JT-36	5.5	6.3	6.0	4.7	5.0	5.7	5.3	35.0	3.3	7.0
31	JT-45	5.5	6.7	5.0	4.7	4.7	6.0	6.0	28.3	2.0	7.7
32	KZ-2	5.5	6.3	5.7	5.0	5.3	6.3	4.3	26.7	2.7	6.7
33	Tulsa III	5.4	5.7	5.7	4.3	5.0	6.0	6.0	21.7	2.7	6.0
34	Rembrandt	5.4	5.7	6.0	5.0	4.0	5.7	6.0	38.3	7.3	6.7
35	312	5.3	5.3	6.0	4.0	4.7	5.7	6.3	16.7	1.7	5.3
36	BGR-TF2	5.3	6.3	5.3	5.0	4.7	5.7	5.0	16.7	2.3	7.7
37	LS-11	5.3	5.0	5.0	5.0	5.0	6.3	5.7	21.7	2.0	7.7
38	Burl-TF8	5.3	4.7	5.0	5.3	5.0	5.7	6.0	33.3	2.7	7.3
39	PSG-85QR	5.3	4.7	5.3	5.3	5.3	5.7	5.3	25.0	2.7	7.7
90	GWTF	5.3	5.7	5.3	5.0	5.3	5.0	5.3	26.7	2.0	6.7
91	Skyline	5.2	5.7	6.0	5.0	4.3	4.7	5.7	20.0	2.3	7.3
92	Justice	5.2	4.3	5.3	5.3	5.0	5.7	5.7	30.0	4.0	8.0
93	Einstein	5.2	5.7	6.7	4.3	4.7	5.3	4.7	40.0	5.7	6.3
94	Titanium	5.2	4.7	5.0	6.0	5.0	5.3	5.3	38.3	4.7	8.0
95	06-DUST	5.1	5.0	5.7	4.7	4.7	5.0	5.7	33.3	6.0	7.0
96	Col-1	5.1	4.7	5.7	5.3	4.7	5.0	5.3	26.7	2.3	6.7
97	NA-SS	5.1	5.7	5.7	4.7	4.3	5.0	5.3	23.3	3.3	6.7
98	06-WALK	5.1	5.3	6.0	5.0	3.7	5.7	5.0	25.0	3.0	7.7
99	ATF 1247	5.1	5.0	5.0	5.0	4.3	5.0	6.0	25.0	3.0	6.0
00	AST 7002	5.1	5.0	5.0	4.3	5.0	5.3	5.7	18.3	3.0	6.3

									Establish ment <sup>2</sup>	- Spring Green-up <sup>3</sup>	Brown Patch⁴
	Cultivar or			200	7 Turf Qua	ality <sup>1</sup>			Oct. 4	April 25	July 24
	Selection	Avg.	May	June	July	Aug.	Sept.	Oct.	2006	2007	2007
101	AST-1	5.1	5.0	4.3	5.0	4.7	6.0	5.3	21.7	1.7	7.0
102	Hunter	5.0	5.7	5.0	4.0	4.7	5.3	5.3	20.0	1.3	5.7
103	ATF-1199	5.0	4.7	5.3	4.3	4.7	5.3	5.7	25.0	2.3	7.7
104	AST 7001	5.0	6.0	5.3	4.7	4.3	4.3	5.0	28.3	2.3	6.7
105	PSG-TTRH	4.9	4.7	5.7	5.3	4.3	5.0	4.7	26.7	2.7	7.7
06	Biltmore	4.9	5.7	5.0	4.0	4.3	5.3	5.0	30.0	6.0	6.3
107	MVS-1107	4.8	5.3	5.3	4.3	4.3	4.3	5.3	23.3	4.7	7.7
108	Magellan	4.8	5.0	5.3	3.7	4.3	5.3	5.0	31.7	4.3	7.3
109	STR-8GRQR	4.6	4.7	5.3	4.3	4.0	5.0	4.0	25.0	4.0	7.0
110	BAR Fa 6363	4.5	4.7	4.3	4.0	4.0	4.7	5.0	30.0	2.3	6.7
111	Plato	4.3	5.7	4.0	3.0	3.7	4.7	4.7	46.7	4.0	6.3
112	Lindbergh	4.3	5.3	4.7	3.7	3.7	4.3	4.3	48.3	3.3	6.7
113	PSG-TTST	4.2	4.7	4.7	3.7	3.3	5.0	4.0	33.3	4.0	4.7
114	GO-1BFD	4.2	4.0	4.0	4.0	3.7	5.0	4.3	23.3	5.7	6.0
115	PSG-RNDR	4.1	4.3	4.0	3.7	3.7	4.3	4.7	15.0	1.3	7.3
116	Aristotle	3.9	5.0	4.3	3.7	3.3	3.7	3.3	36.7	2.3	6.7
117	Pennington's Best	3.8	4.0	4.0	3.3	3.7	3.7	4.0	5.0	1.7	7.7
118	Silverado	3.5	4.7	4.3	3.0	2.7	3.0	3.3	36.7	4.0	6.7
119	Water Saver	3.4	3.7	3.3	3.3	2.7	3.7	3.3	36.7	4.7	6.3
20	Kentucky 31	1.1	1.7	1.0	1.0	1.0	1.0	1.0	33.3	7.7	6.3
	LSD at 5% =	1.0	1.9	1.9	1.8	1.2	1.3	1.5	12.7	2.2	1.8

<sup>1</sup>9 = best turf quality

<sup>2</sup>Establishment (percent) using a 0 to 100% scale, where 0 = absence of turf canopy to 100 = full cover <sup>3</sup>9 = earliest spring green-up

<sup>4</sup>9 = least disease

		\					
	Cultivar or	21 DAC <sup>2</sup>	24	16	8	0	5 DAW <sup>3</sup>
	Selection	Nov. 1	Oct. 5	Oct. 4	Oct. 3	Oct. 1	Oct. 10
1	RKCL	51.7	73.3	85.0	88.3	96.7	58.3
2	TG 50-9460	51.7	63.3	80.0	86.7	91.7	58.3
3	Z-2000	50.0	75.0	83.3	86.7	93.3	65.0
4	NA-BT-1	50.0	68.3	85.0	90.0	95.0	61.7
5	CE 1	50.0	66.7	76.7	81.7	86.7	55.0
6	CE-2	50.0	60.0	76.7	81.7	88.3	56.7
7	DP 50-9440	48.3	70.0	81.7	91.7	95.0	58.3
8	Rebel IV	48.3	61.7	76.7	83.3	83.3	51.7
9	Firenza	46.7	75.0	85.0	88.3	90.0	65.0
10	RP 2	46.7	71.7	81.7	86.7	93.3	58.3
11	RK-1	46.7	71.7	81.7	88.3	91.7	58.3
12	PST-5WMD	46.7	70.0	83.3	88.3	93.3	60.0
13	Titanium	46.7	63.3	76.7	80.0	85.0	55.0
14	Bullseye	45.0	75.0	83.3	90.0	96.7	66.7
15	Hemi	45.0	73.3	81.7	90.0	91.7	61.7
16	Turbo	45.0	71.7	80.0	90.0	93.3	60.0
17	CE-4	45.0	56.7	70.0	83.3	88.3	50.0
18	SC-1	43.3	81.7	86.7	91.7	96.7	70.0
19	SH 3	43.3	78.3	85.0	90.0	95.0	68.3
20	Monet (LTP-610 CL)	43.3	73.3	86.7	91.7	95.0	60.0
21	RP 3	43.3	71.7	85.0	86.7	88.3	65.0
22	IS-TF-153	43.3	71.7	78.3	85.0	86.7	63.3
23	M4	43.3	70.0	83.3	83.3	91.7	60.0
24	Padre	43.3	66.7	80.0	83.3	86.7	55.0
25	SR 8650 (STR-8LMM)	43.3	65.0	78.3	80.0	86.7	56.7
26	DP 50-9411	43.3	63.3	80.0	81.7	90.0	53.3
27	J-140	43.3	60.0	78.3	83.3	91.7	55.0
28	Biltmore	43.3	60.0	75.0	80.0	81.7	51.7
29	Rembrandt	43.3	53.3	73.3	80.0	86.7	46.7
30	ATM	41.7	75.0	86.7	95.0	98.3	63.3
31	IS-TF-154	41.7	75.0	85.0	88.3	95.0	61.7
32	RK 6	41.7	73.3	85.0	90.0	91.7	55.0
33	ATE	41.7	70.0	86.7	91.7	95.0	66.7
34	RK 5	41.7	70.0	81.7	83.3	95.0	58.3
35	BBM	41.7	68.3	81.7	86.7	88.3	63.3

Table 6.Traffic stress tolerance (fullness of turfgrass cover) of tall fescue cultivars and selections<br/>subjected to wear and compaction in a turf trial established in September 2006 at North Bruns-<br/>wick, NJ. (Includes all entries of the 2006 National Turfgrass Evaluation Program (NTEP) Tall<br/>Fescue Test.)

		Wear Tolerance (Number of Passes) <sup>1</sup>						
	Cultivar or	21 DAC <sup>2</sup>	24	16	8 8	0	5 DAW <sup>3</sup>	
	Selection	Nov. 1	Oct. 5	Oct. 4	Oct. 3	Oct. 1	Oct. 10	
36	JT-41	41.7	66.7	80.0	86.7	86.7	56.7	
37	STR-8BB5	41.7	58.3	78.3	81.7	88.3	51.7	
38	Escalade	41.7	58.3	73.3	83.3	90.0	55.0	
39	AST-4	41.7	56.7	71.7	80.0	85.0	50.0	
40	K06-WA	40.0	73.3	81.7	91.7	96.7	60.0	
41	IS-TF-159	40.0	70.0	80.0	83.3	85.0	60.0	
42	Falcon IV	40.0	65.0	76.7	81.7	85.0	51.7	
43	PST-5HP	40.0	63.3	80.0	83.3	88.3	60.0	
44	GE-1	40.0	63.3	75.0	81.7	85.0	53.3	
45	RAD-TF17	40.0	61.7	73.3	78.3	85.0	51.7	
46	KZ-2	40.0	56.7	75.0	80.0	86.7	50.0	
47	Einstein	40.0	55.0	76.7	81.7	86.7	46.7	
48	DKS	40.0	55.0	70.0	76.7	86.7	53.3	
49	CS-TF1	40.0	53.3	73.3	80.0	83.3	50.0	
50	MVS-MST	38.3	78.3	85.0	91.7	96.7	68.3	
51	Speedway (STR-8BPDX)	38.3	68.3	81.7	85.0	90.0	60.0	
52	PSG-82BR	38.3	66.7	81.7	85.0	88.3	61.7	
53	Van Gogh (LTP-RK2)	38.3	66.7	81.7	88.3	93.3	60.0	
54	MVS-TF-158	38.3	66.7	78.3	86.7	90.0	56.7	
55	PSG-85QR	38.3	66.7	78.3	81.7	83.3	55.0	
56	IS-TF-138	38.3	63.3	78.3	85.0	90.0	56.7	
57	DP 50-9407	38.3	61.7	76.7	86.7	93.3	55.0	
58	MVS-1107	38.3	60.0	70.0	76.7	83.3	48.3	
59	Cezanne (LTP-CRL)	38.3	58.3	75.0	78.3	86.7	53.3	
60	ATF 1247	38.3	58.3	73.3	80.0	85.0	45.0	
61	ATF-1199	38.3	56.7	75.0	80.0	85.0	53.3	
62	AST-2	38.3	56.7	73.3	78.3	86.7	48.3	
63	06-DUST	38.3	53.3	71.7	78.3	86.7	45.0	
64	Tahoe II	38.3	51.7	68.3	76.7	83.3	43.3	
65	Plato	38.3	48.3	65.0	73.3	78.3	38.3	
66	Rhambler	36.7	73.3	85.0	86.7	93.3	61.7	
67	Millennium SRP	36.7	63.3	80.0	86.7	90.0	46.7	
68	IS-TF-152	36.7	61.7	73.3	81.7	90.0	56.7	
69	Lindbergh	36.7	60.0	70.0	78.3	80.0	45.0	
70	Turbo R2 (Burl-TF8)	36.7	58.3	78.3	81.7	83.3	46.7	
	. ,							

		Wear Tolerance (Number of Passes)1						
	Cultivar or	21 DAC <sup>2</sup>	24	16	8	0	5 DAW <sup>3</sup>	
	Selection	Nov. 1	Oct. 5	Oct. 4	Oct. 3	Oct. 1	Oct. 10	
71	JT-45	36.7	58.3	70.0	80.0	86.7	53.3	
72	AST-1	36.7	56.7	71.7	80.0	83.3	50.0	
73	AST 7002	36.7	55.0	78.3	81.7	85.0	50.0	
74	PSG-TTST	36.7	50.0	70.0	75.0	80.0	41.7	
75	RK 4	35.0	73.3	81.7	86.7	91.7	55.0	
76	IS-TF-128	35.0	71.7	78.3	85.0	86.7	63.3	
77	IS-TF-147	35.0	65.0	83.3	85.0	88.3	58.3	
78	J-130	35.0	61.7	73.3	81.7	86.7	50.0	
79	BGR-TF2	35.0	61.7	73.3	75.0	81.7	45.0	
80	BGR-TF1	35.0	60.0	75.0	83.3	88.3	50.0	
81	Col-M	35.0	60.0	73.3	80.0	86.7	48.3	
82	JT-42	35.0	58.3	76.7	83.3	85.0	53.3	
83	AST 7003	35.0	56.7	75.0	78.3	86.7	51.7	
84	Skyline	35.0	55.0	75.0	76.7	80.0	40.0	
85	LS-06	35.0	55.0	71.7	80.0	86.7	40.0	
86	AST-3	35.0	53.3	71.7	81.7	81.7	46.7	
87	Magellan	35.0	53.3	71.7	78.3	81.7	45.0	
88	GO-1BFD	35.0	53.3	68.3	76.7	81.7	43.3	
89	AST 7001	35.0	51.7	70.0	80.0	83.3	45.0	
90	RNP	35.0	50.0	70.0	75.0	86.7	50.0	
91	Silverado	35.0	48.3	61.7	70.0	75.0	36.7	
92	Aristotle	35.0	41.7	58.3	70.0	75.0	31.7	
93	MVS-BB-1	33.3	71.7	80.0	86.7	88.3	58.3	
94	MVS-341	33.3	65.0	78.3	81.7	83.3	45.0	
95	Tulsa III	33.3	63.3	76.7	80.0	81.7	48.3	
96	IS-TF-161	33.3	60.0	78.3	80.0	86.7	51.7	
97	PSG-TTRH	33.3	58.3	70.0	76.7	81.7	45.0	
98	Justice	33.3	56.7	76.7	80.0	85.0	55.0	
99	LS-03	33.3	56.7	73.3	80.0	90.0	51.7	
100	Col-1	33.3	55.0	73.3	80.0	81.7	48.3	
101	06-WALK	33.3	55.0	66.7	75.0	81.7	43.3	
102	Col-J	33.3	46.7	65.0	75.0	83.3	38.3	
103	IS-TF-151	31.7	65.0	81.7	83.3	86.7	51.7	
104	IS-TF-135	31.7	63.3	78.3	80.0	88.3	48.3	
105	GWTF	31.7	58.3	75.0	78.3	81.7	50.0	

		Wear Tolerance (Number of Passes)1						
	Cultivar or	21 DAC <sup>2</sup>	24	16	8	0	5 DAW <sup>3</sup>	
	Selection	Nov. 1	Oct. 5	Oct. 4	Oct. 3	Oct. 1	Oct. 10	
106	NA-SS	31.7	58.3	71.7	78.3	81.7	48.3	
107	ATF 1328	31.7	55.0	75.0	78.3	86.7	50.0	
108	STR-8GRQR	31.7	55.0	68.3	76.7	81.7	40.0	
109	JT-36	30.0	56.7	78.3	81.7	83.3	48.3	
110	BAR Fa 6253	30.0	55.0	73.3	81.7	85.0	53.3	
111	KZ-1	30.0	55.0	73.3	81.7	88.3	48.3	
112	JT-33	30.0	51.7	73.3	80.0	85.0	51.7	
113	PSG-RNDR	30.0	45.0	61.7	71.7	78.3	35.0	
114	Pennington's Best	30.0	43.3	65.0	71.7	76.7	35.0	
115	Water Saver	30.0	38.3	60.0	70.0	75.0	35.0	
116	Hunter	28.3	53.3	71.7	75.0	83.3	45.0	
117	LS-11	28.3	50.0	70.0	78.3	88.3	43.3	
118	312	28.3	48.3	66.7	75.0	86.7	36.7	
119	BAR Fa 6363	26.7	38.3	61.7	70.0	80.0	33.3	
120	Kentucky 31	21.7	13.3	28.3	38.3	51.7	16.7	
	LSD at 5% =	10.0	10.9	8.1	5.9	5.9	11.5	

<sup>1</sup>Traffice stress tolerance assessed as percent (fullness) of turfgrass cover using a 0 to 100% scale (0 = absence of turfgrass canopy to 100 = full cover)

 $^{2}$ DAC = days after compaction

<sup>3</sup>DAW = days after wear



*Cooperating Agencies:* Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and County Boards of Chosen Freeholders. Rutgers Cooperative Extension, a unit of the Rutgers New Jersey Agricultural Experiment Station, is an equal opportunity program provider and employer.