

Sports Field Managers Association of New Jersey has recently set the date for the

Third Annual SFMANJ Field Day/ Outdoor Trade Show and Equipment Demonstration Day.

Tuesday, August 17th is the date and Plainsboro Township Community Park is the place. This is definitely a day to mark on your calendar. The day has been planned with the support of, New Jersey Turfgrass Association, the New Jersey landscape Contractors Association, the Irrigation Association of New Jersey and New Jersey Recreation and Park Association. This event will without a doubt prove to be the largest of its kind in the State of New Jersey.

Commercial vendors from all over the tri state area will be present to display their products, services and equipment. Equipment demonstrations will include but not be limited to irrigation equipment, skid-steers, trenchers, tillers, blenders, mowers, tractors, topdressers, aerators, edger's, line painters, groomers, utility vehicles etc.

If you don't find it at our trade show, it probably doesn't exist. Those that know will be available to answer all your questions. If they can't tell you how, they'll be able to show you how.

Time will be allocated for hands on operation of all the equipment being demonstrated. In addition, educational sessions will be provided in cooperation with the New Jersey Landscape Contractors Association and the Irrigation Association of New Jersey.

Come out and see what's new and exciting while at the same time showing support for the green industry. Watch for more information about attending and participating as a vendor in NJTA CLIPPINGS, NJLCA TIMES, LESURE TIMES, SFMANJ Update and member mailings. ♦

SFMANJ Business

Next Board of Directors Meeting – June 11, Thurs. 5:30pm. At Rutgers University, Geiger building.

If you work for a professional facility and are interested in serving on the Board of Directors of SFMANJ fax a resume to 908-730-7770. You must be a member in good standing. ♦

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SFMANJ does not necessarily support the opinions of those reflected in the following articles.

Rutgers Corner – A summary of turfgrass traffic tolerance research

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For sports field managers, relying on non-trafficked turfgrass quality data generated from National Turfgrass Evaluation Program variety trials and other tests conducted at university sites does not satisfactorily answer the often asked question, "What varieties should I establish on my heavy-use sports fields?" Rutgers has made significant progress to answer that question through turfgrass traffic tolerance research conducted on varieties comprising the three major turfgrass species utilized on New Jersey sports

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fields: Kentucky bluegrass, perennial ryegrass, and tall fescue.

What is traffic?

While the term “traffic” is often used interchangeably with the term “wear” when referring to turfgrass damage resulting from sports field use, it is important to understand that the term “traffic” actually encompasses four turfgrass stresses: wear, soil compaction, divoting, and soil displacement. Wear injury affects above ground plant parts and is defined as the immediate result of 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 and water infiltration rates. Divoting involves the physical removal of a piece of turf from the turfgrass stand. Soil displacement is the displacement of soil particles due to pressure, resulting in a rut or depression.

The objective of turfgrass traffic research at Rutgers was to examine the tolerance of Kentucky bluegrass, perennial ryegrass, and tall fescue varieties as affected by two stresses comprising traffic: wear and soil compaction.

The research: How we did it

National Turfgrass Evaluation Program (NTEP) trials allow for the evaluation of seventeen turfgrass species in as many as forty U.S. states and six provinces in Canada. Information such as turfgrass quality, color, density, resistance to diseases and insects, tolerance to heat, cold, drought

and traffic is collected and summarized by NTEP annually. Results can be found at www.ntep.org. Wear and soil compaction were applied to mature Kentucky bluegrass, perennial ryegrass, and tall fescue variety trials sponsored by NTEP located at Rutgers University in 2002 and 2003.

Wear was applied to individual established turfgrass plots using a wear simulator developed by removing the steel and nylon brush of a Sweepster unit and equipping the unit with rubber paddles used in potato harvesting. The modified sweepster was mounted on a Toro Groundsmaster and “passes” were administered over rows of turfgrass plots to create wear (Figure 1). Turfgrass trials received the following number of wear passes in 2002 and 2003, respectively: Kentucky bluegrass: 132 and 178; perennial ryegrass: 128 and 156; and tall fescue: 70 and 130.



Figure 1. A wear simulator was developed using a modified Sweepster unit. The steel and nylon brush on the Sweepster was replaced with rubber paddles. The modified Sweepster was mounted on a Toro Groundsmaster.

Compaction was created utilizing a 2970-pound Wacker roller (Figure 2). The roller was used to pass over rows of turfgrass plots to create compaction.

Turfgrass trials received the following number of compaction passes in 2002 and 2003, respectively: Kentucky bluegrass: 42 and 20; perennial ryegrass: 10 and 16; and tall fescue: 20 and 20.

Trafficked turfgrass quality (i.e. percent groundcover, uniformity, and density) ratings were taken monthly on trafficked plots during the growing season to visually assess traffic tolerance. Non-trafficked plots were assessed for non-trafficked turfgrass quality (i.e. overall appearance, turfgrass color, uniformity, density, mowing quality, leaf texture, and freedom from weed encroachment and/or insect/disease damage). The results of Rutgers’ turfgrass traffic tolerance for individual varieties within species are listed in Table 1.



Figure 2. A roller (2970 lbs) was used to create compaction in the test plots.

Numerous Kentucky bluegrass, perennial ryegrass, and tall fescue varieties showed good traffic tolerance compared to other varieties and experimental selections in 2002-2003. The challenges faced by New Jersey sports field managers in overseeing high-use athletic field turf necessitate traffic tolerance evaluations of cool season turfgrasses at Rutgers. When sports field managers are faced with the decision as to specific varieties to establish or overseed, the results provided in Table 1 are a valuable resource.

Literature Cited

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

Carrow, R.N. and A.M. Petrovic. 1992. Effects of traffic on turfgrasses. p. 285-330. In D.V. Waddington, R.N. Carrow, and R.C. Shearman (eds.) Turfgrass. Agronomy Monograph 32. ASA-CSSA-SSSS, Madison, WI.

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Table 1. Traffic tolerant Kentucky bluegrass, perennial ryegrass, and tall fescue varieties recommended for New Jersey sports fields based on traffic tolerance research conducted at Rutgers University in 2002-2003.

Kentucky bluegrass

Good tolerance

Award [†] Tsunami [†]	Princeton P-105 [†] NuDestiny [†]	Avalanche [†]	Midnight II [†]
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Moderately good tolerance

Ginney Barrister [†] Impact [†]	Cabernet Odyssey [†] Liberator [†]	Bariris Total Eclipse [†]	Awesome [†] Beyond
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Fair tolerance

Perfection [†] Excursion Serene [†]	Moonshadow Quantum Leap	Julia Bluestone	Arcadia [†] Jefferson
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Perennial ryegrass

Good tolerance

Prowler Stellar [†] Courage	Citation Fore [†] Sierra [†] SR 4220 [†]	Divine Esteem [†] Pacesetter [†]	SR 4350 Manhattan 4 [†]
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Moderately good tolerance

SR 4500 [†] Secretariat Catalina II Ascend Line Drive Racer II Radiant	IQ Gallery Elfin Sol ProTyme Grand Slam 2L96 [†] Pentium [†]	Pleasure XL Jet [†] Churchill Exacta [†] Brightstar II [†] Kokomo [†]	Inspire [†] Premier Gallery [†] Paragon Mach 1 [†] Gator 3 [†]
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Fair tolerance

Phantom Monterey II Affirmed	Renaissance Buccaneer Skyhawk	Majesty Summerset [†]	Paradigm Premier II
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Tall fescue

Good tolerance

Elisa Tar Heel SR 8550 [†] Silverstar [†]	Titan Ltd Olympic Gold [†] Dominion Tulsa II	Apache III [†] Jaguar 3 Masterpiece [†]	Endeavor Bingo [†]
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Moderate good tolerance

Blackwatch [†] Finelawn Elite [†] 2 nd Millennium [†] Millennium	Forte [†] Falcon IV [†] Bravo Watchdog	Tar Heel II [†] Falcon II Coyote	Padre [†] SR 8600 Barlexas
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Fair tolerance

Scorpion Tomahawk RT	Tempest Focus	Rendition [†] Wyatt	Barlexas II
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[†] Varieties showing the highest turfgrass quality when evaluated in the absence of traffic. ♦