Ohio State Turfgrass Research Field Day update

BY PAMELA J. SHERRATT, DR. JOHN R. STREET, & DEB HOLDREN

Here is a recap of presentations made before hundreds of turf managers last summer in Columbus. Please note these research results are, in many cases, preliminary results that have not been peer-reviewed and published yet:

Establishment Rate, Wear Tolerance & Recuperative Potential of Athletic Field Grasses. The aim of this study was to evaluate traditional and non-traditional athletic field grasses on a native soil and subjected to medium-high maintenance (irrigated, fertilized, aerated, and mowed). The plots were subjected to simulated traffic/wear (25 games in the fall of 2003 simulated a Midwestern high school varsity football field). Germination and establishment rate varied among treatments. First to establish (in order): Festuloliums; perennial ryegrass; tall fescue; bluegrass-

Table 1: Characteristics of Traditional and Non-Traditional Cool Season Grasses for Athletic Turf

<table>
<thead>
<tr>
<th>Cultivar (s)</th>
<th>Quality 15 WAS†</th>
<th>Traffic tolerance</th>
<th>Spring green-up</th>
<th>Rec. potential</th>
<th>Percent rhizomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labarinth tall fescue</td>
<td>7.1</td>
<td>3.0</td>
<td>4.3</td>
<td>6.1</td>
<td>10.0</td>
</tr>
<tr>
<td>Grande II tall fescue</td>
<td>8.6</td>
<td>5.8</td>
<td>5.6</td>
<td>7.5</td>
<td>11.0</td>
</tr>
<tr>
<td>Thermal Blue bluegrass hybrid</td>
<td>7.6</td>
<td>6.1</td>
<td>4.6</td>
<td>7.1</td>
<td>29.6</td>
</tr>
<tr>
<td>Orfeo Kentucky bluegrass</td>
<td>7.1</td>
<td>4.6</td>
<td>4.6</td>
<td>6.0</td>
<td>28.3</td>
</tr>
<tr>
<td>Aberelf + SR4420 (50:50) Perennial ryegrass blend</td>
<td>9.0</td>
<td>6.3</td>
<td>6.6</td>
<td>7.8</td>
<td>-</td>
</tr>
<tr>
<td>Spring Green Festulolium*</td>
<td>5.0</td>
<td>3.6</td>
<td>4.6</td>
<td>5.3</td>
<td>-</td>
</tr>
<tr>
<td>Barfest Festulolium*</td>
<td>5.0</td>
<td>3.0</td>
<td>5.3</td>
<td>5.3</td>
<td>-</td>
</tr>
<tr>
<td>Showcase Kentucky bluegrass + SR5100/SRX9861 fine fescues</td>
<td>7.1</td>
<td>4.3</td>
<td>4.3</td>
<td>6.1</td>
<td>28.3</td>
</tr>
<tr>
<td>Nexus Perennial ryegrass</td>
<td>8.6</td>
<td>5.8</td>
<td>6.3</td>
<td>8.3</td>
<td>-</td>
</tr>
<tr>
<td>Rendition tall fescue</td>
<td>8.3</td>
<td>5.6</td>
<td>6.0</td>
<td>7.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Titan Ltd., Kittyhawk 2000+</td>
<td>8.3</td>
<td>4.3</td>
<td>5.0</td>
<td>7.1</td>
<td>13.0</td>
</tr>
<tr>
<td>Rendition (3-way tall fescue blend)</td>
<td>9.0</td>
<td>5.0</td>
<td>5.3</td>
<td>7.1</td>
<td>12.3</td>
</tr>
<tr>
<td>Winter Active Fescue (WAF)</td>
<td>9.0</td>
<td>6.0</td>
<td>6.3</td>
<td>7.3</td>
<td>23.0</td>
</tr>
<tr>
<td>Grande II tall fescue + Rugby II Kentucky bluegrass (80:20 mix)</td>
<td>8.8</td>
<td>6.1</td>
<td>5.6</td>
<td>7.5</td>
<td>6.0</td>
</tr>
<tr>
<td>Rugby II Kentucky bluegrass + Renaissance perennial ryegrass (80:20 mix)</td>
<td>9.0</td>
<td>6.5</td>
<td>6.6</td>
<td>8.1</td>
<td>-</td>
</tr>
<tr>
<td>Barlennium perennial ryegrass</td>
<td>7.6</td>
<td>7.6</td>
<td>5.3</td>
<td>7.8</td>
<td>33.0</td>
</tr>
<tr>
<td>Bariris Kentucky bluegrass</td>
<td>0.5</td>
<td>1.6</td>
<td>1.9</td>
<td>1.0</td>
<td>9.5</td>
</tr>
</tbody>
</table>

† 15 WAS denotes fifteen weeks after seeding
† Data not collected from Perennial ryegrass or Festulolium cultivars
*Festuloliums are not considered "turf" grasses at this time, they are used as forage grasses.
Surface Hardness & Temperature. Currently there is only one hardness standard for synthetic turf systems. ASTM requires that average Gmax (hardness) be less than 200. Companies installing high sand to rubber ratios typically guarantee that Gmax values will not exceed about 175. Companies installing 100 percent rubber infill canary温度. Thus, if air temperature is 85°F, then the turf canopy temperature seems to mimic the ambient air temperature. On artificial turf (infill), the canopy temperatures decreased by 30°F for 30-60 minutes, whereby it returned to the original temperature.

In addition to surface hardness evaluation, this study is assessing the effect that irrigation can have on controlling surface temperatures. On natural turf, the turf canopy temperature seems to mimic the ambient air temperature. Thus, if air temperature is 85°F, then the turf canopy temperature is also 85°F. If natural turf is lightly irrigated (sprinkled), the canopy temperature decreases by about 10°F for 30-60 minutes, whereby it returned to the original temperature. On artificial turf (infill), the canopy temperature decreased by 30°F for 30-60 minutes, whereby it returned to the original temperature.

Bentgrass Removal in Kentucky Bluegrass Turf. Dr. T. Karl Danneberger & Robert Kerr say the product being used in the experiment is an experimental herbicide (Mesotrione) from Syngenta. The project was to see if the Mesotrione could remove creeping bentgrass from Kentucky bluegrass turf without affecting the Kentucky bluegrass. Treatments were applied July & August 2004. Some of the applications were made sequentially, which proved to be the most successful way of controlling the bentgrass. At the time of the field day, the results suggest that there was approximately 50-70 percent decline in the bentgrass.

Fungicides for the Curative Control of Red Thread in Perennial Ryegrass. This test, conducted by Joe Rimelspach, Dr. Mike Boehm, and Todd Hicks, was on perennial ryegrass mowed at 3.5-in. with clippings returned and no irrigation. No fertilizer was applied before the study. The soil was silt loam, pH 7.3. Treatment applications were made on May 8, May 22, and June 6. Red thread developed in early May in the area from natural inoculum. Treatments were initiated during the early stage of the disease. Significant disease reduction was observed in 13 days by all treatments. Bayleton, Heritage, Endorse, and Cuprofix all showed exceptional red thread control throughout the study. Medallion gave significant red thread control compared to the untreated plots. Rust developed in July and plots were rated 35 days after the last application of treatments. One of the lower rates of Medallion had a significant increase in the amount of rust affecting the turf.

TSSL Alternative Species Establishment. TSSL is a sand stabilizer material, consisting of polypropylene fibers and natural grass. Previous research has shown that turf species that have limited biomass (e.g., thatch) accumulation but do have aggressive establishment potential are candidates for this kind of system (in Ohio Stadium, the TSSL is seeded with 100 percent perennial ryegrass for this reason). The aim of this study is to evaluate establishment rate and performance of several "new" alternative grasses on TSSL.

Grasses are: turf-type annual ryegrass (Panthera), transitional ryegrass (TransEze), improved tall fescue (Grande II), Kentucky bluegrass x Texas bluegrass hybrid (Thermal Blue), Bermuda grass (Riviera), and tufted hair grass (Barcampsia). The rate of seed establishment potential are candidates for this kind of system (in Ohio Stadium, the TSSL is seeded with 100 percent perennial ryegrass for this reason). The aim of this study is to evaluate establishment rate and performance of several "new" alternative grasses on TSSL.

Pamela Sherratt is sports turf extension specialist at Ohio State; Dr. Street is associate professor, College of Food, Ag, and Environmental Science, Ohio State; and Deb Holdren is a Horticulture & Crop Science research associate. Sherratt also is a member of our Editorial Advisory Board.

In particular, the annual ryegrass germinated in 4 days, had achieved 60 percent cover in 7 days and was 3 inches tall by 10 days. STT
ROYALS USE COLUMBIA SEEDS
Columbia Seeds LLC, is the official seed supplier to the Kansas City Royals. Their newly renovated field was completed this spring in time for opening day. Trevor Vance, Head Superintendent, is “pleased with the arrangement and the ability to utilize high quality seed from a young and innovative company.” Products used on the park will be ClubHouse Perennial Ryegrass Blend, Armada Tall Fescue Blend, Riviera Bermudagrass and an elite Kentucky Bluegrass Blend.
Columbia Seeds LLC/888-681-7333
For information, circle 093 or see http://www.oners.ims.ca/2917-093

POST-EMERGENCE HERBICIDE
Monument 75WG is a selective post-emergence herbicide for the control of certain weeds in commercial warm-season turf markets. A sulfonylurea herbicide, Monument 75WG provides control of a broad range of weeds including all major categories of sedge species, green kyllingas, oxalis, and various other grass and broadleaf species in Bermudagrass and Zoysiagrass.
Syngenta Professional Products
800-334-9681
For information, circle 089 or see http://www.oners.ims.ca/2917-089

DIRECT-INJECT FOR TREES
The Wedge Direct-Inject Tree Treatment System injects ArborSystems chemicals directly into a tree's cambial zone without drilling, so you can treat trees in the most tree-friendly way possible. Treat almost any tree in five minutes or less. ArborSystems offers Direct-Inject Insecticides, Fungicides, PGRs, and Nutrients.
ArborSystems/800-698-4441
For information, circle 092 or see http://www.oners.ims.ca/2917-092
MARTIN JOINS QUANTUM TURF

Quantum Turf Technologies, a division of Moltan Company, has named Jeff Martin National Sales and Marketing Manager. Martin has more than 15 years of experience in the sportsturf industry at many levels, including the last 6 1/2 years in the sales, marketing, manufacturing, and distribution of professional groundskeeping products. Quantum Turf manufactures Red Diamond conditioners.

Quantum Turf Technologies/800-264-5826
For information, circle 126 or see http://www.oners.ims.ca/2917-126

WINTER FERTILIZER

Healthy, beautiful grounds and turf reflect the pride of your organization, even during the cold winter months when plant carbohydrate reserves are under extreme stress. Opti-Gro is a pacesetter in the fertilizer industry through development of the most advanced turf care products and materials, says the company.

Opti-Gro
For information, circle 073 or see http://www.oners.ims.ca/2917-073

TURFACEMVP

Turface MVP helps football and soccer fields stand up to wear and tear to provide solid, safe footing throughout the season. Leading NFL groundskeepers have found TURFACE MVP is ideal for native soil fields because it absorbs excess water to prevent muddy, torn-up turf; conditions the soil to resist compaction in wet and dry weather; and adds permanent water and air-holding space to prevent turf damage and aid in turf recovery even under intense athletic traffic.

PROFILE Products LLC/800-207-6457
For information, circle 075 or see http://www.oners.ims.ca/2917-075

TALL FESCUE

Smith Seed Services has opened www.TitanLimited.com, a website dedicated to its new tall fescue with self-repairing rhizomes. The website explains the value of rhizomes, the variety’s breeding history, and its many other characteristics that make it an ideal variety for athletic fields. Titan Ltd. tall fescue was specifically bred for rhizome growth, improved brown patch resistance, heat tolerance, and drought resistance.

Smith Seed Services/888-550-2930
For information, circle 074 or see http://www.oners.ims.ca/2917-074

AMENDMENT AND SOIL TESTING

Verify that the sand, mix, or amendment you are buying is the right one, with testing from Turf Diagnostics & Design. The company also performs rootzone mix design and testing during construction. Because they are not affiliated with any suppliers, test data and recommendations are totally unbiased, and the company does not sell any products.

Turf Diagnostics & Design/913-780-6725
For information, circle 076 or see http://www.oners.ims.ca/2917-076
SEED PROTECTION MULCH MAT
North American Green's new product comes with 180-sq. ft. of DS150, a UV accelerated, Double Net Straw Blanket, 36 four-inch BioSTAKEs and installation instructions. The perfect size for smaller projects: landscaping changes, cable or drainpipe installations, around pools, sidewalks, as well as drainage areas. The Guardian Seed Protection Mulch Mat rolls out and is easily trimmed to conform to any landscape design; holds soil, seed and fertilizer in place; and won't clump, wash or blow away like loose straw.
North American Green/800-772-2040
For information, circle 079 or see http://www.oners.ins.ca/2917-079

ECO-LITE
Eco-lite has the highest nutrient holding capacity of all physical amendments. It is ideal for newly constructed sports fields. Eco-lite holds as much water as other amendments, but it also holds potassium and ammonium nitrogen. Eco-lite is the cleanest and hardest zeolite mineral, and will not break down in the soil.
EarthWorks Natural Organic Products/610-250-9560
For information, circle 078 or see http://www.oners.ins.ca/2917-078

FUTURE OF GROWING GRASS
Anyone who uses a HydroSeeder should realize that what you put down on the soil is just as important as how you put it down. Finn Corp. has developed the Finn Additive System, designed for use in HydroSeeders for quicker seed germination and turf development. The system consists of a variety of tackifiers, fiber products, fertilizer, soil amendments, water retention agents, and dye.
These products can save anywhere from $5,000 to $10,000 depending on the acreage because they can avoid the use of sod and require less labor-intensive application.
Finn Corp./813-874-2818
For information, circle 077 or see http://www.oners.ins.ca/2917-077

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http://www.sportsturfmanager.com • STMA
TURF COLOR METER
Spectrum Technologies won an engineering award for its Turf Color Meter (TCM 500). The unit provides an objective, accurate measurement of turf color, strengthening the validity of turf quality measurement. Three modes of measurement are available, including the traditional 0-9.9 "green index."
Spectrum Technologies/800-248-8873
For information, circle 080 or see http://www.oners.ims.ca/2917-080

PENDULUM AQUACAP
Pendulum AquaCap encapsulates a new water-based formulation of BASF pendimethalin (pre-emergent active ingredient) to consistently control crabgrass, as well as more than 40 grassy and broadleaf weeds. A BASF-patented technology surrounds pendimethalin with an ultra-thin capsule, and this combination of encapsulation technology and the new water-based formulation results in virtually no odor, reduced staining potential and improved handling and storage stability.
BASF/919-547-2829
For information, circle 087 or see http://www.oners.ims.ca/2917-087

NOFIREANTS.COM GOES LIVE
Bayer Environmental Science today announces the launch of www.nofireants.com. The website provides information on all aspects of fire ant control, including fire ant biology and identification, research and trial data for TopChoice. Fire ants infest more than 325 million acres across the southern U.S. and injure more than 20 million people each year with their stings.
Bayer Environmental Science/201-307-9700
For Information, circle 082 or see http://www.oners.ims.ca/2917-082

FIELD MARKING PAINT
Pioneer’s Quik Stripe is fortified with Halogen 2000 optical brighteners to make lines pop off the field during night games and hold up during competition and severe weather. Comes ready to use in aerosol can designed not to clog and empty completely.
Pioneer Manufacturing/800-877-1500
For information, circle 081 or see http://www.oners.ims.ca/2917-081

STA-LO
Sta-Lo is a plant growth regulator that aids in increasing plant durability while reducing labor costs. Sta-Lo inhibits vertical growth and seed head formation of most warm season and cool season grasses for up to 8 weeks, thus allowing for potential root and lateral growth while improving stress tolerance.
Opti-Gro
For information, circle 083 or see http://www.oners.ims.ca/2917-083

PARK, PLAYING FIELD, OR PORT-O-POTTY?
FlightControl PLUS from SePRO Corporation is a sprayable liquid goose repellent that will send geese packing, along with the two pounds per day of droppings they produce! When turf managers and park superintendents use FlightControl PLUS, treated turf looks different to geese in the ultraviolet light spectrum. Geese who feed on treated turf experience a temporary case of indigestion and in a few days become conditioned to avoid feeding in areas where they recognize the ultraviolet absorption of FlightControl PLUS.
SePR Corp./317-580-8282
For information, circle 085 or see http://www.oners.ims.ca/2917-085

NOFIREANTS.COM GOES LIVE
Bayer Environmental Science today announces the launch of www.nofireants.com. The website provides information on all aspects of fire ant control, including fire ant biology and identification, research and trial data for TopChoice. Fire ants infest more than 325 million acres across the southern U.S. and injure more than 20 million people each year with their stings.
Bayer Environmental Science/201-307-9700
For Information, circle 082 or see http://www.oners.ims.ca/2917-082

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SePR Corp./317-580-8282
For information, circle 085 or see http://www.oners.ims.ca/2917-085
NTEP TRIALS LIKE SHARK’S TURF

Aussie Green, a new hybrid Bermudagrass from Greg Norman Turf, had good results in preliminary data from latest NTEP trials. The grass finished first in testing grounds as climatically diverse as Texas, Virginia, Georgia, Kentucky, and South Carolina, showing temperature tolerance as well as aggressive growth, sod strength, and turf density.

Greg Norman Turf Company
561-743-8818
For information, circle 086 or see http://www.oners.ims.ca/2917-086

VIGAROOT

VigaROOT is used in spray application programs to reduce stress and stimulate root growth through enhanced water and nutrient uptake and correct micronutrient deficiencies. It is a dry soluble combination of chelated iron chelated manganese, chelated zinc, natural humic substance, seaweed extract, yucca, and a proprietary blend of natural sugars, vitamins, amino acids, and beneficial bacteria.

Becker Underwood, Inc/800-232-5907
For information, circle 084 or see http://www.oners.ims.ca/2917-084

FERTILIZER

Organic-Gro PRO 20-2-6 with UFLExx works by supplying nutrients to turf while restoring proper microbial and earthworm activity for more colorful, healthier and stronger fairways and greens. Available in two formulations: SGN90 for greens and SGN150 for fairways and rough. It comes in 50 lb. bags, with 40 bags to a pallet and is also available in 1-ton bulk sack.

Organic-Gro/866-815-4839
For information, circle 088 or see http://www.oners.ims.ca/2917-088

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