



## September

The 2006 Turf Grass Research Field Day was held September 14, on the Sunshine Course at Midwest Golf House. The following researchers were on hand to present and discuss their findings:

### Hank Wilkinson University of Illinois

#### *Spreading Tall Fescue Turfgrasses*

There are now several companies that market rhizomatous tall fescue varieties. A sample of "RTF" sod, marketed by Barenbrug, was on display. Fourteen varieties are being studied at Urbana. The rate and length of rhizomes are varied with each variety. It is possible for rhizomatous tall fescue varieties to form a dense sod that may be harvested without the aide of netting. Rhizomatous tall fescue does mix well with bluegrass to produce a very wear tolerant turf. "RTF" sod is more wear tolerant than non- rhizomatous tall fescue.

### Derek Settle and Randy Kane Chicago District Golf Association

#### *Methods to Suppress Moss on Putting Greens.*

The following treatments, applied on two-week intervals, in a 2 gallon of water per thousand sq.ft. solution, beginning April 21, were all effective at rapidly reducing moss encroachment and health in May of 2006: Baking Soda - 6oz/gallon (carefully spot applied to avoid bentgrass phytotoxicity)

Quicksilver - 6 oz per acre

Daconil Ultrex - 3.2 oz per 1000 sq.ft.  
Daconil Ultrex - 5 oz per 1000 sq.ft.  
Daconil Ultrex - 3.2 oz + Fore - 4 oz +  
Spotrete - 5 oz per 1000 sq.ft.

### Rich Pyter, Tom Voigt, Emily Heaton, and Steve Long

#### *Miscanthus: An Ornamental Energy Crop*

Experiments have been underway in Illinois to effectively produce energy from the combustion of grass. *Miscanthus giganteus* is a perennial grass from Asia which grows up to 14 feet tall in Central Illinois. Now that's some serious ganja!

*Miscanthus* has yielded twice the bio-mass of the U.S. Department of Agriculture and Energy's model bio-mass species: Switchgrass. *Miscanthus* requires minimal input. Research at Urbana has focused on ideal production methods, e.g., optimal size and planting depths for transplanted rhizomes; tolerance to pre- and post-emergent herbicides used to control weeds in plantings.

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**W. Sharp and Bruce Branham,  
University of Illinois**

*Broadleaf Weed Control in Creeping Bentgrass –  
What is Safe?*

Mowing height has a dramatic impact on creeping bentgrass tolerance to herbicides. At fairway height, there are many products and application rate options which may be safely used to control broadleaf weeds in creeping bentgrass turf. In trials conducted earlier this summer at Urbana, only Lontrel caused no visible bentgrass injury at putting green height. "Due to its excellent turf safety and white clover control, Lontrel should be given strong consideration for controlling broadleaf weeds in creeping bentgrass turf."

**W. Sharp and Bruce Branham,  
University of Illinois**

*Outplay – a New Herbicide for use on Turf*

Outplay is a new herbicide product from Syngenta that is expected to receive registration in 2008.

"Outplay is an inhibitor of pigment biosynthesis. Affected plants turn white from lack of pigments and can eventually die from a lack of photosynthetic food production. Outplay is very safe on Kentucky bluegrass, but very phytotoxic on creeping bentgrass. On a golf course this could be used to keep creeping bentgrass out of Kentucky bluegrass roughs. However, be aware that creeping bentgrass is very difficult to completely eradicate and yearly applications will be required to achieve a high level of control. At least three sequential applications of Outplay are needed to achieve control."

In addition to providing post emergence crabgrass control, it has also been observed that Outplay shows significant activity on annual bluegrass when applied in late October or early April.

**Kenneth L. Diesburg,  
Southern Illinois University**

*Warm Season Grasses in Northern Illinois*

In 2003, 40 genotypes of winter-hardy zoysia were established at Midwest Golf House. To date, every one of these plants has survived our winters. Some varieties are similar in texture to Kentucky bluegrass, but the compatibility of winter-hardy zoysias with cool-season grasses in northern Illinois remains to be tested.

**Derek Settle and Randy Kane,  
Chicago District Golf Association**

*Fairy Ring on Greens: Difficult to Control*

At a Chicago area golf club the following treatments were made with, and also without, 6 oz of watered-in Revolution wetting agent, on 28 day intervals beginning June 6:

Bayleton 2 oz.	Heritage 2 oz.
ProStar 4.5 oz.	Banner MAXX 2 oz.
Headway 3 oz.	Insignia .9 oz.

Only type 2 fairy ring (green rings) occurred on the putting green used for this study. The use of wetting agent did not enhance the efficacy of the fungicides, probably because the type 2 fairy rings do not generate hydrophobic conditions as do the more problematic type 1 fairy ring.

"In conclusion, various fungicides did suppress fairy ring, but none could provide complete control. Some treatments reduced visual quality due to a growth regulator/phytotoxicity effect that can thin or bronze the turfgrass during high temperature stress."

**Derek Settle and Randy Kane,  
Chicago District Golf Association**

*Bentgrass Cultivar Trial for Golf Course Fairways  
and Tees*

As a part of the National Turf grass Evaluation Program, a section of fairway on the CDGA Sunshine Course at Midwest Golf House was chosen along with 23 other sites across America for evaluation of 28 cultivars for golf course fairways and tees. Plots were evaluated by the following criteria:

*Dollar Spot*

"SR1119 had highest dollar spot susceptibility, and the majority of other creeping bentgrass cultivars (19 of 21) displayed good resistance. A trend of best dollar spot resistance occurred with L93, Princeville, 13M, Pennlinks II, and Declaration."

*Brown Patch*

"Pennlinks II and Seaside had highest susceptibility to brown patch. SR1150, Authority and Alpha also tended to be susceptible as they were not significantly different from Pennlinks II and Seaside. Most cultivars (17 of 21) displayed good brown patch resistance."

*Turf Density*

"Older cultivars, Seaside and Penncross, have poor density. Most new creeping bentgrass cultivars (14 of 21) are very dense. The new Penn releases were different and Penneagle II was denser than Pennlinks II; probably due to increased brown patch susceptibility/damage."

*Turf Quality*

"This summer, conditions of high disease pressure and supraoptimal temperature stress were present mid-July to mid-August. Nevertheless, many cultivars displayed good quality through summer. Poorest quality was not produced by disease, but reflected older genetics of coarse leaf texture and an open turf canopy – Seaside and Penncross. New cultivars have improved characteristics of color, density, leaf texture, uniformity, disease resistance, and heat tolerance. Named varieties which are well adapted to northern Illinois include; L-93, Declaration, Mackenzie, Kingpin, Independence, Shark, Penneagle II, Pennlinks II, Authority, T1, and Bengal."

**Tom Voigt, University of Illinois**

*Comparison of Biosolids to Other Nutrient Source  
for Lawn Turf*

The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) operates seven reclamation plants that handle a daily flow of 1.5 billion gallons and produce approximately 180,000 tons of biosolids annually.

Plots were developed at Midwest Golf House in July of 2006 to evaluate MWRDGC biosolids along side Nature Safe 10-2-8, Milorganite 6-2-0, Sustane 5-2-4, 50% Sulfur Coated Urea 24-3-14, Urea 46-0-0, and a check plot.

Products will be applied at 1 pound of nitrogen per 1000 sq.ft. in Spring, early Fall, and late Fall. Soil tests were

taken before the study began to determine the effects of the treatments on P, K, pH, OM, and bulk density. Turf tissue will be tested to determine mineral composition prior to beginning the study and then annually each fall in 2006, 2007, and 2008. Turf quality will be evaluated monthly April-October, 2007-2008. Turf density and thatch will be measured in October 06, 07, and 08.

### **Phil Nixon, University of Illinois**

#### *True White Grubs*

"There were several reports of true white grubs, the larvae of May beetles, damaging turf in Illinois this summer. The most common May beetle species that attack turfgrass in Illinois have 3-year life cycles. True white grubs are one-inch long, heavy-bodied, reddish brown to dark brown May beetles, which hide in the soil or thatch during the day and emerge just-before to just-after dusk. Eggs are laid in the soil. The eggs hatch into grubs that are C-shaped, with brown heads and three pairs of legs. True white grubs have a characteristic raster pattern of two parallel rows of spines on the underside of the last abdominal segment. Mature grubs are 1 to 1-1/2 inches long."

"The grubs hatch in June and July and feed on turfgrass roots into fall. They descend deeper into the soil through winter and come back to the root zone in the spring to feed throughout the spring, summer, and fall of the second year, descending deeper again into the soil as winter approaches. In the spring of the third year, the grubs ascend to feed for a short time on turfgrass roots in the spring and then descend to pupate. Adults emerge from pupae in late summer and remain in the soil for the winter. The following spring the adults emerge from the soil to repeat the life cycle."

"During the first year the grubs are small and do not do much damage to turfgrass root systems. Damage most frequently occurs during the second year when the grubs are large and feeding occurs from spring to fall. During the third year, grubs feed only for a few weeks in the spring, when normal rainfall helps to replace eaten roots. High populations of at least 10-12 grubs per square foot cause turf to turn brown. Damage can occur anytime from spring through fall."

"Control for first-year true white grubs can be obtained with the same products and timing used to control Japanese beetle and masked chafers. The true white grubs that we are seeing presently can be controlled with Dylox, but 50% control is all that might be expected from a single application.."

### **David Smitley, Michigan State University**

#### *Imidacloprid Drenches for Emerald Ash Borer*

"Imidacloprid drenches have given a high level of control and restored ash trees to excellent health, even in heavily infested areas, when small ash trees (< 6" dbh) are drenched each spring. There are also several studies in progress where larger ash trees have received a basal drench each spring, but with mixed results."

### **Matt Mechenes and Tom Voigt, University of Illinois**

#### *Warm-Season Native Grasses for Playable Midwestern Golf Course Roughs*

At the CDGA Sunshine Course, five types of Blue gramma are being grown alone or in mixed stands with buffalograss. In previous studies Blue gramma created high-quality un-mowed playable roughs. It is envisioned that the outcome of this research will assist Midwestern golf course superintendents, designers, and architects to create better playable un-mowed roughs.

### **Derek Settle, Randy Kane and Lee Miller, Chicago District Golf Association**

#### *Fine Leaf fescue Trials for Low Maintenance Sites*

As a part of the National Turf grass Evaluation Program, 53 varieties of fine fescues have been planted in plots at the CDGA Sunshine Course, and will be managed under a low maintenance regimen. Varieties will be rated for density, seed head number, and seed head aesthetics.

### **Derek Settle, Randy Kane and Lee Miller, Chicago District Golf Association**

#### *Early Fungicide Application Strategies for Control of Dollar Spot in Fairways*

"It is difficult to predict when dollar spot disease begins each year. Early fungicide applications are optimal one month prior to dollar spot development. A single Emerald application on June 1 provided suppression of dollar spot thru August on the L-93 fairways at the Sunshine Course, whereas applications made on May 1, and May 15 were too early. In contrast, none of the three early dollar spot single application dates suppressed dollar spot at an older established Chicago area golf course with mixed bent/poa fairways. This strategy may be best suited for new monostands of relatively resistant, creeping bentgrass."



After lunch at the Field Day, an equipment demonstration took place. Pictured above is Toro's new Pro Sweep 5200 picking up aerification plugs on the Sunshine Course's 1st tee.