



T-1 in Alabama

by Doug Brede, Ph.D.



Sylacauga, Alabama is best known as the site of the first documented case of an object from outer space hitting a person. On November 30, 1954, a 9 lb (4 kg) piece of what became known as the Hodges Meteorite crashed through the roof of a house, bounced off a radio, and badly bruised Mrs. Ann Hodges, who was taking an afternoon nap.

Sylacauga's 2nd claim to fame is FarmLinks golf course and its T-1 greens. Located slightly to the east of the geographical center of Alabama in Talladega County, Sylacauga is roughly 50 miles *continued pg 2*



Top photo: T-1 bentgrass covers the challenging number 5 green at FarmLinks golf course in Sylacauga, Alabama.
Bottom photo: Bunkers protect the approach to number 18 green.

Physiologists Find 2nd Source of Resistance in Gly-Rye[®]

by Doug Brede, Ph.D.

Physiologists at the University of Georgia/Griffin led by Patrick McCullough have discovered a second source of tolerance to glyphosate in **JS501** – one of Jacklin's **Gly-Rye** perennial ryegrass varieties. Glyphosate is the active ingredient in the herbicide, Roundup.

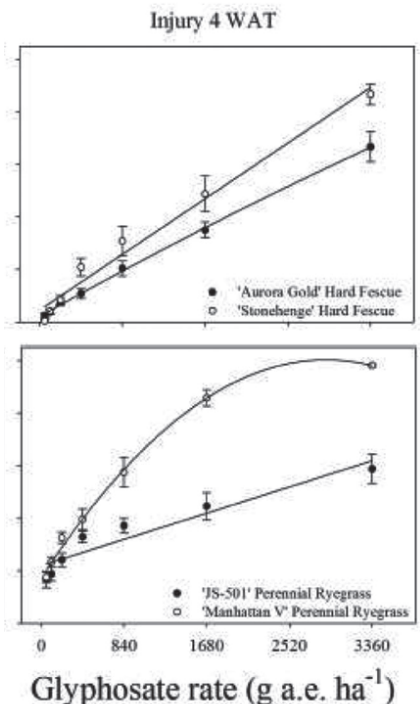
The **Gly-Rye**'s are non-GMO varieties bred with the natural ability to tolerate glyphosate applications up to 8-12 fluid ounces per acre applied during the summer. These rates are useful for controlling *Poa annua* and other difficult-to-control weeds.

The researchers ran experiments in the greenhouse and controlled-environment chamber to discover the mechanisms **JS501** and Aurora Gold hard fescue use to tolerate glyphosate. They contrasted the performance using “normal” varieties with known susceptibility to glyphosate.

In the first experiment, the researchers applied glyphosate to a series of greenhouse pots to produce a dose-response curve (see below). Turfgrass injury was assessed at 4 weeks after treatment (WAT).

Results showed that **JS501** (Gly-Rye) had 400% greater glyphosate tolerance than the susceptible ryegrass.

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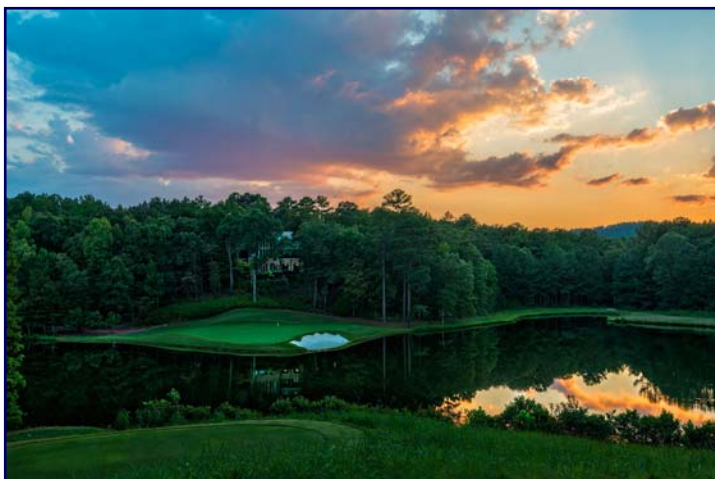
Dose-response of glyphosate herbicide on 4 turfgrass cultivars. JS501 and Aurora Gold were bred for tolerance to glyphosate. The other 2 cultivars are glyphosate susceptibility. Graph shows that Aurora Gold had only minor tolerance. JS501 was 4 times more tolerant.

T-1 Alabama, continued

(81 kilometers) southeast of Birmingham – hardly the place you would expect to see bentgrass putting greens.

Mark Langner has been superintendent there since the beginning. FarmLinks opened in 2002 as a combination rural destination and equipment demonstration golf course. Langner, a Mississippi State University grad, says that John Deere is still involved in demonstrating equipment to superintendents at FarmLinks and that they bring clients all the time.

Back in 2000, when the course was being constructed by Landscapes Unlimited of Lincoln, Nebraska, a blend of Penn A-1 and A-4 was seeded on the greens. Due to a mishap last year that killed all their greens, they replanted to T-1. They were familiar with T-1's reputation for heat tolerance and its successes at Southern golf facilities. The course was ready to open an amazing 8 weeks after seeding.



T-1 on a September morning on the 17th green at FarmLinks.

The photos in this article were taken shortly after the course withstood a grueling hot summer. By September the T-1 greens were one year old. The facility had never looked better.

FarmLinks is situated on 2,500 acres (1,010 hectares) that gave architects Michael Hurdzan and Dana Fry the opportunity to pick and choose where every hole was placed. The layout itself measures some 7,444 yards (6,807 meters), but Hurdzan and Fry had thousands of acres of diverse rolling land to use when planning the championship design. That kind of flexibility – to actually place golf holes where they fit best – is virtually unheard of.

In recent years new construction has dotted the property with additional lodging accommodations, a new office building, a 5-stand sporting clay range and a dedicated garden for farm-to-table dining.

An estimated 10,000 golf course superintendents from around the world have travelled far off the beaten path just to visit this unique course. 🏌️

2nd Source Gly-Rye Resistance, continued

Aurora Gold had only 40% greater tolerance than the susceptible fescue.

In the 2nd experiment, researchers used radioactive-labeled glyphosate solution to see where the glyphosate was moving in the plant. Both hard fescues absorbed an equal amount of applied radioactivity. **JS501**, on the other hand, absorbed half as much glyphosate as the susceptible variety.

Furthermore it “translocated half as much total radioactivity to the roots and nontreated shoots,” they found. “Tolerance in **JS501** perennial ryegrass may involve two mechanisms that include reduced absorption and target-site inhibition.” 🏠

Obama Presidential Home Planted to Jacklin Varieties

by Doug Brede, Ph.D.

The Chicago home of US President Barack Obama received a lawn makeover in October. The grass area was renovated and reestablished using a sod of 90% **Summer** tall fescue and 10% **Beyond** Kentucky bluegrass, both from Jacklin Seed.

The sod was produced at Heath Sod Farms in Coloma, WI. Proprietor Robert Heath says this mixture was selected because of the exceptionally fine blades of **Summer** which are often mistaken for bluegrass. **Summer** tall fescue adds shade tolerance to the turf, which is important on this tree-covered property. **Beyond** Kentucky bluegrass aids the stand in recovery from traffic wear and winter issues. Chicago averages 28 days per year with measurable snowfall totaling 3 feet (0.9 meters) annually at O'Hare airport. Closer to



the waterfront, they often receive far more. Major blizzards that dump ten inches (25 cm) or more in one day are rare, happening about once a decade.

According to Chicago Traveler magazine, the 44th President's Chicago home has become a tourist hot spot. Barack Obama's House is a beautiful Georgian revival mansion and is both distinguished and stunning to behold. Although visitors cannot gain access into the home or its grounds, sightseers are permitted to take photographs outside of Obama's Chicago house. The home is located in Chicago's Hyde Park at 5046 S Greenwood Ave., just a few blocks from Lake Michigan and the popular Science and Industry Museum. 🏠