



# Louisiana Turfgrass Association

*Serving the turfgrass industry for over 50 years*

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## The LSU AgCenter Launches “Field of Excellence” Program

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Many Louisiana high school football fields are in very poor shape because of unsafe conditions due to compacted soils, excessive weed pressure, and overall poor turf coverage. The LSU AgCenter ‘Field of Excellence’ program will be available to selected high schools across the state. The program will provide guidance to improve the condition and overall quality of participating high school football fields.

LSU AgCenter experts working with the Field of Excellence program will provide periodic visits (usually every 2 to 3 weeks) to assess the field throughout the growing season. Recommendations will be made to improve the overall agronomic conditions (fertility, weed management, etc.), as well as implement practices to reduce dangerous soil compaction that can potentially cause serious head and spinal injuries. Following the AgCenter recommendations should dramatically improve the aesthetic appearance of the fields and allow them to recover from excessive use. The program began in late winter and ends after the final home game.

High Schools that follow the LSU AgCenter recommendations and adopt the practices will be certified as an LSU AgCenter Field of Excellence just prior to the beginning of the football season. There are currently 6 schools in the state that are participating in the program that have a chance for this honor. Participating schools completing the program will receive a banner and sign to display near the field that will indicate that the school has participated and achieved this distinction. However, the best part of the program is the dramatic change that will occur in the overall appearance and the safety and playability of the football field.



**Abbeville High School is participating in the “Field of Excellence”.**

**Ron Strahan**

## Green Industry Economics...*More on the economy.*

**In the positive corner:** In a recent column, **Robert Samuelson** made the point that bad news about the economy may have been overemphasized. Samuelson is a major voice on the economy. He is very frank about our structural problems. He seems to believe that neither our political body nor our corporate system is adequately serving the country. So when he says things may not be as bad as we think, we should listen. He notes: An increase of 162,000 payroll jobs in March that was the largest in three years. Layoffs have subsided. Job openings did not decline further, and surveys suggest future gains. Corporate chiefs, 29 % of them, expect to increase jobs over the next six months, while 21 % expect to cut. More hiring than firing is a big change. In March, the National Federation of Independent Business found no net job cuts for the first time since April 2008.

The recession has left much pent-up demand in housing (underlying need is about 1.85 million units a year, construction is about 600,000 a year), and cars and trucks (sales declined from 16.2 million in 2007 to 10.4 million in 2009).

Corporate America has a strong cash position, so companies can bet on recovery by restarting canceled investment projects.

The Bureau of the Census reports mildly encouraging news on the economy. Retail sales, factory output and inventories are higher. Consumer spending, which accounts for 70 % of economic activity, rose in the first quarter at the fastest pace in three years. Retail sales were up 0.4 % last month, the seventh straight month of increase. The strongest monthly increase was reported by building supply stores (6.9 %). Industrial production climbed in April.

**In the other corner:** **Nouriel Roubini**, one of the few people sounding the alarm on housing prior to the crash, says the U.S. economic recovery will slow in 2010. Consumers won't increase spending much, and the stimulus is wearing off. Final sales growth in the last couple of quarters was slow. He agrees that replenishing inventory drove strong GDP in recent quarters but consumer spending needs to take over and he doesn't think it will. The employment picture will improve only slowly, taking years to recover lost jobs.

Census jobs (temporary) accounted for the majority of the 300,000 jobs increase.

Recent reports indicate that Fannie Mae requested \$8.4 B more support. Because the number of bad loans made during the boom continues to rise, Fannie and Freddie losses will continue. They own or guarantee almost 31 million home loans worth about \$5.5 T, or about half of all mortgages. Anthony Sanders, a finance professor at GMU, says "the losses are not going to stop soon", and that the housing market is likely to turn sharply down in 2010.

Don Peck writes in the Atlantic Monthly that while the Great Recession appears to be over, we never fully recovered from the last one (2001) in terms of jobs and stagnant incomes through the decade. With that still in the background, the unemployment rate hit 10 % in October, and probably will have declined only a little by 2014. The average duration of unemployment now surpasses six months for the first time since that number has been tracked. For every open job in the U.S., six people are actively looking for work. The broadest measure of unemployment and underemployment reached 17.4 % in October, highest since the 1930s. From a recent survey, 44 % of families had experienced a job loss, a reduction in hours, or a pay cut in the past year.

The most recent report of home foreclosures was a little better than the same period in 2009. It also was indicated that banks have a backlog of homes to be foreclosed and have slowed the rate of foreclosure initiation, perhaps to help maintain the value of their properties.

The path of the recovery is not known. Job growth will eventually follow spending. The economic turnaround is problematic for the reasons discussed above - high unemployment, weak income growth, etc, and we should include still-tight credit and still-high consumer debt loads. With these headwinds, a big jump in consumer spending is unlikely. For the next several years, the jobs environment probably will closely resemble today's.

So, there is a little improvement over the past few months. Unemployment at these levels still implies many employed households with incomes. The spending probably will continue to be muted. A well managed business with strong customer relationships can accommodate this economy, and can be in position to take advantage of current opportunities as they appear and can be positioned to work toward longer term goals as the economy improves.

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## Take-all Root Rot

Take-all root rot, caused by the soil-borne fungus *Gaeumannomyces graminis* var. *graminis* (*Ggg*), is a disease of all warm-season turfgrasses and occurs throughout the Southeastern U.S. *Ggg* is one of several ectotrophic root-infecting fungi that are associated with turfgrasses and is frequently found in association with turfgrass roots without causing significant damage. As the name implies, this is a root disease that can be quite destructive. Symptoms are generally not evident until the roots have already been severely compromised and they generally appear during periods of stress, such as during sudden or prolonged periods of heat and drought stress.

Initial symptoms of take-all root rot are a general yellowing, thinning or drought-stressed appearance of the turf (Fig. 1). The overall density of the root system is greatly reduced (Fig. 2). As disease progresses, irregular patches of dead grass develop (Fig. 3), and diseased roots appear dark-colored and tend to be short and brittle (Fig. 4). Careful examination of stolons and the bases of the leaf sheaths with a good hand lens usually reveals the black, fungal mycelium of *Ggg* on their surfaces.

The management of take-all root rot relies primarily on the use of cultural practices to reduce stress on the turf and alter the soil environment to make it more suitable for root growth and less suitable for the pathogen. The first step is to alleviate the stress(es) that triggered the disease. These stresses can include soil compaction, drought, improper soil pH, improper mowing height and the over use of herbicides. Because the initial symptoms are often mistaken for drought stress or localized dry spots, the first inclination is to irrigate, which generally does very little good as there are no roots present to take up the water. Avoid overwatering; keep the soil moist but not wet. It is also important to ensure that the soil pH is at the low end of the range recommended for the turfgrass in question, generally a pH of about 6. It is then important to remember to use slow release acidifying forms of nitrogen so as not to begin raising the pH. Also, because we are actively trying to regrow roots it is important to provide adequate potassium as well as nitrogen; the general recommendation is to supply equal amounts of nitrogen and potassium.

None of the fungicides that are readily available to homeowners are particularly effective in controlling this disease by themselves once the disease has become established.

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Fig. 1. Initial yellowing of turf due to take-all root rot.



Fig. 2. Root systems of healthy (left) and diseased (right) turf.



Fig. 3. Severe take-all root rot.

## Virginia Buttonweed - Tough Weed Infesting Turfgrass

You don't have to worry lawn care professionals. Virginia buttonweed is back with vengeance. The perennial weed started breaking dormancy in late March and slowly began retaking its rightful throne as the king weed of southern lawns. The first plants to emerge this year were the perennial plants from last year. These plants produced a tremendous number of seeds before they went dormant prior to the onset of our "mega" winter of 2009-2010.

As temperatures warm in late spring and early summer, Virginia buttonweed seeds germinate and seedling plants are common near the perennial "mother plants". This combination of seedling and perennial plants form mats by July. It is not unusual in late summer to see weaker areas of turf choked out with mats of buttonweed covered with small white blooms. With the spring drought and lawns injured from a cold winter, this should be a record year for buttonweed problems. I get at least a call or an e-mail a day concerning this weed during the summer months.

**Very invasive** - Virginia buttonweed is widely considered the most invasive weed infesting turfgrasses in the south. The plant is very prolific and has multiple ways to reproduce including heavy seed production that occurs both above and below the ground from self pollinating flowers, rooting stem fragments, and a tap roots that allow plants to survive through winter months. Mowers set at even the lowest blade height do not interfere with growth or seed production of this plant. Due to the potential for stem fragments to root, mowing may actually aid in the spread of buttonweed. Turning the mower deck discharge toward landscape beds even starts populations of buttonweed in flowerbeds.

### Virginia Buttonweed Control?

May is good time to start treating buttonweed in spot treatments. The tender new growth is very susceptible to herbicide uptake and you will reduce the population significantly. The worst thing to do is to wait until late July and August to make the first herbicide application. As for which herbicides to pick, the following table is a list of herbicides that have shown some activity in our research when applied in multiple applications. Please don't think that you can get rid of the weed with a single application. It may take you 3 to 4 applications and combinations of different herbicides to get buttonweed under control.

Herbicide	Rate	Comments
Metsulfuron (Manor, Mansion)	0.5 to 1.0 oz/A	Also kills bahiagrass. Use no more than 0.5 oz per application in centipedegrass.
Clopyralid (Lontrel)	1.33 pt/A	Safe on all southern turfgrass. <b>Non-residential turf only.</b>
Chlorsulfuron (Corsair)	1.0 – 5.0 oz/A	Similar to metsulfuron in chemical makeup. Turf species determines the rate. Consider spot treatments.
2,4-D + dicamba +, mecoprop + carfentrazone (Speed Zone)	4 to 5 pt/A	Carfentrazone increases initial activity of the herbicide. Expect injury on St. Augustinegrass as temperatures exceed 90 F. All southern turfgrasses are on the product label.
2,4-D + dicamba +, mecoprop – (Trimec type herbicides)	Various depending on formulation	Expect injury to St. Augustinegrass as temperatures exceed 85 F. All southern turfgrasses are on the product label.

### Program Approach Works Best

As mentioned earlier, no single application takes out buttonweed. A program approach works best when trying to get an acceptable level of control. In my research trials, I have always liked an application of Speed Zone (see table) in early May followed by metsulfuron (sold under several trade names such as Mansion or Manor) in mid-June to late June. Make a second metsulfuron application 4 to 6 weeks later. I like metsulfuron because it has always performed at acceptable levels in research trials and the herbicide seems to be tolerated pretty well by St. Augustinegrass even in very hot weather.

**Ron Strahan**

## Turfgrass 101:

### What is ET?

Transpiration (water loss from the leaf as water vapor through the stomates) is the primary means of water lost from a dense sward of turf. However, water also evaporates from the soil surface and contributes to the total amount of water lost from the turf stand. The sum of water lost from evaporation and transpiration is referred to as evapotranspiration or ET. Average ET rates for warm season grasses range from 0.08 to 0.20 inches of water per day. Centipedegrass and St. Augustinegrass have higher ET rates than bermudagrass and zoysiagrass. Ultimately the turf manager should select cultural practices that result in the lowest possible ET rate and still allow good turf quality. Some factors that increase ET are increasing air and soil temperatures and wind. As relative humidity increases, ET decreases.

### Weed ID

Common lespedeza (*Lespedeza striata*) is a low growing summer annual legume that can be very difficult to manage in southern turfgrass. Some identifying characteristics includes: trifoliate leaves, hairs along leaf margins, and pink to purple flowers.

At maturity the weed forms dense mats and develops rigid difficult to mow stems. Lespedeza is a very common weed in weak poorly fertilized lawns and golf courses. I would consider it an indicator plant for low fertility. The weed does not respond to 2,4-D. One of the best herbicides on lespedeza is metsulfuron (Mansion, Manor, Blade and other trade names). Metsulfuron can be safely applied to bermudagrass, centipedegrass, St. Augustinegrass, and zoysiagrass.



### Celsius

#### A New Herbicide for Lawns

Bayer launched their new Celsius Herbicide this spring. Celsius is a mixture of 3 herbicides – iodosulfuron, thiencarbazone, and dicamba. This herbicide has a lot of promise because it provides broadleaf weed control as well as suppression of several grass species such as dallisgrass and large crabgrass. Another outstanding characteristic is how easy the herbicide is on St. Augustinegrass in hot weather. The rate range is 2.5 to 7.4 oz/acre. Virginia buttonweed is on the product label. At least two applications at the high rate will be necessary to achieve an acceptable level of buttonweed management.

### Take-all Root Rot, continued from pg. 3

However, commercial products like the strobilurins (azoxystrobin and pyraclostrobin), and to a lesser degree the triazoles (triadimefon and propiconazole), may aid in control when they are used as part of an integrated management program. Current recommendations are to make two applications in the fall (mid to late September and again in mid to late October) and one application in the spring (mid to late March). Each application should be watered in with at least ¼ inch of water to move the fungicide into the root zone where it is needed to protect the roots.



Fig. 4. Dark, short, brittle roots and dead turfgrass associated with severe take-all root rot.

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