LOUISIANA CROPS NEWSLETTER

Cotton, Corn, Soybeans, Sorghum

LSU AgCenter Research & Extension

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Root-knot Nematode

The Southern root-knot nematode has been found in several fields throughout the state.

The Southern root-knot nematode has the longest history of causing problems in our state on cotton. It was recognized as far back as the late 1800s. This nematode is one the easiest to recognize because it forms distinct galls on the root system. Levels of this nematode that are very high at the time of planting can cause the most problems with severe stunting or even plant death to both cotton and soybean. Low to moderate levels of the nematode at planting can build up during the growing season and cause problems late in the season such as early cutout for cotton or even premature death of soybean plants. This nematode is limited to the coarse-textured soils such as the loamy sands, sandy loams, loams, and some of the silt loams. Crop rotation helps some but most of the crops that are produced in Louisiana are considered susceptible. Corn is often grown in rotation with either cotton or soybeans but can still support large populations of the root-knot nematode. Cotton producers should be sure to treat problem fields with a nematicide. Fumigants should be used if the problem is considered severe. Seed treatment nematicides should be used when populations are considered low to moderate. The greatest problems with this nematode tend to occur when cotton is grown continuously for more than one year. Soybean producers should consider planting a resistant varieties in probem fields.

Section 24c Granted for Acephate in Louisiana Soybeans

EPA REG. NO. 5481-8978
EPA SLN NO. LA13-0007

For Use on Soybeans in Louisiana Only

FIFRA 24(c) SPECIAL LOCAL NEED LABEL

DIRECTIONS FOR USE

For distribution and use only within the state of Louisiana. This label for Orthene 97 expires and must not be distributed or used in accordance with this SLN registration after August 8, 2018.

This label and the federal label for this product must be in the possession of the user at the time of pesticide application. Follow all applicable directions, restrictions and precautions on this 24(c) label and the main EPA-registered label. It is a violation of Federal law to use this product in a manner inconsistent with its labeling. *As with any crop-protection product, always read and follow label directions.*

SOYBEANS

APPLICATION METHOD	PESTS CONTROLLED	RATES OF ORTHENE 97 PER ACRE	REMARKS	DAYS TO HARVEST
FOLIAR **By Air:** 5 to 10 gals./A of spray **By Ground:** 10 to 50 gals./A of spray	Grasshopper Thrips	0.25 to 0.5 lb.	Repeat treatment as necessary to maintain control, but do not exceed a maximum of 2 lbs./A (2 lbs. ai/A) per season.	14
	Potato Leafhopper Stink Bugs	0.5 to 1 lb.		
	Armyworms (except Beet) Bean Leaf Beetle Cabbage Looper Green Cloverworm Mexican Bean Beetle Soybean Aphid Threecornered Alfalfa Hopper Velvetbean Caterpillar	0.75 to 1 lb.		

This special local need label allows soybean producers to apply a maximum of 2lbs (ai/acre) of acephate per season. The previous maximum was 1.5lbs (ai/acre) per season.

For more information or if you have any questions or concerns, please contact:

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Dr. Jeff Davis at 225-747-0351 (cell) or 225-578-5618 (office)

Sugarcane Aphids in Louisiana Grain Sorghum

Sebe Brown, David Kerns, Julien Beuzelin, Jeff Davis: LSU AgCenter Entomologists

Over the past few weeks, David Kerns and I have received numerous reports of aphids colonizing grain sorghum from preboot to harvest maturity. Louisiana typically has three species of aphids that colonize grain sorghum - corn leaf aphid, yellow sugarcane aphid and green bug.

However, the aphids colonizing the majority of these fields were determined to be *Melanaphis sacchari* (Zehntner) or the sugarcane aphid by Jeff Davis an LSU AgCenter Entomologist.

The sugarcane aphid is a small, soft bodied insect that varies in color according to host plant and environmental conditions. It is typically greenish- yellow when feeding on sorghum but can be brown, yellow, purple or pink. *M. sacchari* feeds primarily on members of the Gramineae family of grasses including sugarcane, sorghum, rice, Bermuda grass, millet, etc. The geographical distribution of the sugarcane aphid includes areas of the world that cultivates sugarcane and grain sorghum.

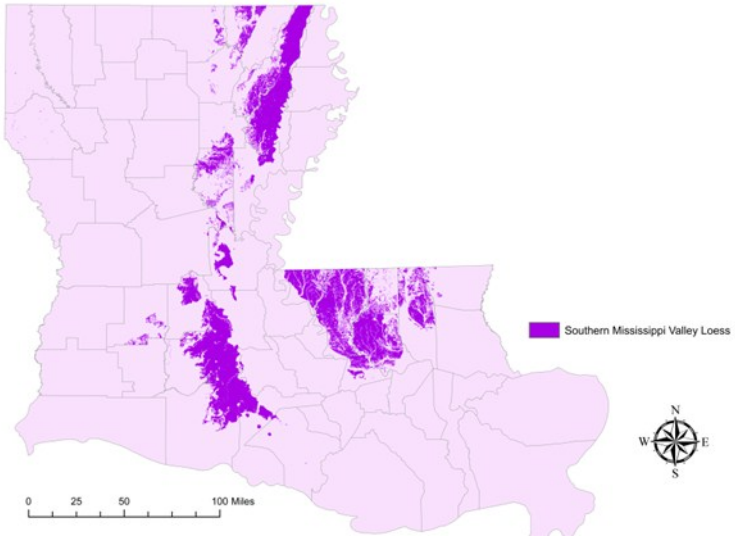
Sugarcane Aphids: Photo by J. Beuzelin

Damage to sorghum by the sugarcane aphid is dictated by many factors including population density and infestation duration. *M. sacchari* infestations typically occur early in the growing season with damaging populations often not developing until later growth stages. Sugarcane aphids often experience significant population surges from boot to soft dough, heading to harvest and thrive in temperatures above 70°F. Sugarcane aphid populations have reached numbers so large, in some Louisiana fields, that harvest efficiency has decreased resulting in equipment failure and work stoppages. The extreme numbers of aphids going through the combine at harvest is resulting in separator belt slippage leading to belt failure.

Soils in Louisiana – Southern Mississippi Valley Loess

Beatrix Haggard, LSU AgCenter
Josh Lofton, LSU AgCenter

Previously we looked at how diverse the soils of Louisiana are. We also saw that NRCS has identified regions throughout the state that have similar parent materials (soil forming sediment) and vegetation. This article will focus on the loess soils found in Louisiana, the region that encompasses these soils is known as the Southern Mississippi Valley Loess (MLRA: 134). This region is found in Mississippi, Tennessee, Louisiana, Arkansas, Kentucky, Missouri, and Illinois. There are three main zones of this Major Land Resource Area (MLRA), which are predominately found in the following parishes: West Carroll, Richland, Franklin, Evangeline, St. Landry, Acadia, Lafayette, Vermillion, West Feliciana, East Feliciana, East Baton Rouge, Livingston, Ascension, Iberia, and Tangipahoa (Figure 1).



The soils found in this MRLA are characterized by thick silt deposits, these sediments were deposited when fine sediments were exposed to high winds which carried the sediments to the higher areas of the Mississippi valley. Loess sediments were deposited from 10,000 to 130,000 years ago, the amount of time these sediments have been in place has allowed for very well developed soils to be present, including Ultisols, Alfisols, and Mollisols. The table below shows the typical soil fertility of the above soil orders.

Table 1. Soil orders and their natural fertility.

Soil Order	Soil Suborder	Natural Fertility	Common Soil Series
Ultisols	Udults	Low	Lytle, Tangi, Toula
Alfisols	Aqualfs	Moderate to High	Calhoun, Frost , Foley, Gilbert, Mowata, Patoutville
	Udalfs	Moderate to High	Calloway, Coteau, Gigger, Memphis
Mollisols	Aquolls	High	Andry, Jeanerette

The soil series discussed below are examples of the three soil orders in this MLRA.

Tangi Series - Ultisol
This soil series is of moderate extent in Louisiana. A typical profile has a silt loam texture at the surface, which transitions into a loam and clay loam further down in the profile. Fragipans which are present in this soil often limit root growth and are a source of acidity. Drainage is moderate with slow to medium runoff, perched water tables exist above the fragipan during the winter. Historically these soils were developed below forests (pines) and are still vegetated by forests or pasture.

Other Ultisols follow similar trends regarding texture, acidity, and drainage. However, there may or may not be a root limiting layer. These soils are not typically production agriculture lands.

Gigger Series - Alfisol

This soil series has a silt loam surface with silty clay loam below. As with the Tangi series, fragipans are present in the subsoil. The acidity is very high below the surface of the Gigger and this zone can cause many issues with not only root development, but the availability of nutrients. The drainage is moderately well and permeability is slow, due to these factors the soils can dry rapidly. Once again, there is a perched water table above the fragipan during the winter months. The presence of iron and manganese, combined with low oxygen when water is perched above the fragipan, result in the formation of black Fe/Mn concretions as seen below (Figure 2).

Figure 2. Iron-manganese (Fe/Mn) masses in Gigger series.

Other Alfisols in this MLRA are of similar textures and will sometimes have a fragipan. The soils are naturally acidic and require a liming schedule to keep productivity high. These soils are commonly used for agricultural production, pastureland, and some native woodland.

Jeanerette Series - Mollisol

This soil series has a silt loam surface texture and much higher organic matter than the previously discussed series. There is calcium carbonate further down in the profile, this in turn causes a more alkaline subsoil compared to both the Ultisols and Alfisols discussed. These soils are poorly drained and experience a high water table during the winter months.

Mollisols are very fertile soils and are sometimes described as the “Breadbasket of the world”. The native vegetation was grasslands which helped develop the dark color and high organic matter (Figure 3). These soils are commonly used for production agriculture in Southern Louisiana.

Overall, the Southern Mississippi Valley Loess has influenced the development of soils with silt loam surface textures and soils which are acidic in nature.

Master Farmer University

This fall, the Louisiana Master Farmer Program (LMFP) will offer a "Master Farmer University" on October 24-25, 2013 at the LSUA campus just south of Alexandria, LA. This two day workshop will begin with a Phase I classroom training on October 24th and will include presentations on water quality standards, commodity specific Best Management Practices, SPCC, NRCS programs, and other timely environmental information. Lunch will be served and the training will conclude mid-afternoon. This will be followed with a short field tour on October 25th at the Dean Lee Research Station and nearby farms and will serve as Phase II of the LMFP. This tour will allow producers to interact with researchers and specialists, and view commodity specific conservation practices and demonstrations. Some of these will include nutrient runoff from winter pastures, remote sensing, calculating crop residue from various crops, as well as other livestock and crop conservation practices. Each day will also serve as three hours of CEU's for certified Master Farmers.

Pre-registration is required to accommodate for room and lunch availability.

More details regarding registration will be sent out as soon as they are confirmed. Please contact Donna Morgan at 318-613-9278, Ernest Girouard at 337-852-3986 or James Hendrix at 318-766-3320 for more information.

Secure Optimal Yield (SOY) Scholarship

The 2014-2015 Secure Optimal Yield Scholarship is a $5,000 one-time scholarship award presented to an eligible High School Senior who is going to pursue Agriculture as a degree area of study at any accredited College or University. The scholarship is managed by the American Soybean Association and is made possible through a grant by BASF Corporation.

The scholarship will be presented in $2,500 increments per semester. The student must maintain successful academic progress and be in good standing with the College or University to receive the full amount of the scholarship. **Candidates may apply**

on-line September 15 through November 15, 2013. Final selection will be made the first week of December during the ASA Board meeting. The student will be notified prior to an official announcement made during Commodity Classic in San

Antonio on February 28, 2014.

BASF sponsors the winner and one parent to attend Commodity Classic for two days to participate and receive special recognition at the ASA Awards Banquet on the Friday night of Commodity Classic. See below for specific scholarship requirements.

For more information and to apply go to:

www.soygrowers.com/award-program/soy-scholarship

If you believe, belong.

For more information, please contact: Kathie Mullen
American Soybean Association
kmullen@soy.org • 800-688-7692 x1302

Goss's wilt (GW) in Corn

Goss's story does not end with corn harvest. We are in the middle of harvest statewide and it is time to finish the job concerning GW for this season. As had been stated when GW was discovered, the disease management process is simple. After harvest, bury the corn residue as soon as possible after harvest. Some are choosing to burn the remaining stalks. Burning the stalks and leaf trash is not necessary, but, if there are no restrictions to burning in your area, it is fine to do so. **Remember, though, that burning does not completely destroy the bacterium that causes GW and burying the burned or unburned residue is still necessary!**

Below is an abstract out of the University of Illinois of a study on corn residue management. It proves the effectiveness of burying corn residue after harvest.

Effect of corn residue management practices on Goss's wilt of corn.
K. MEHL (1), K. A. Ames (1), C. A. Bradley (1) (1) University of Illinois, Urbana, IL, U.S.A.

Goss's wilt of corn, caused by *Clavibacter michiganensis* subsp. *nebraskensis* (*Cmn*), is an emerging disease in Illinois that has caused yield reductions in affected fields. Because *Cmn* survives in corn residue, Goss's wilt is more severe in fields with more residue. With current economics favoring corn production, a trend in Illinois has been to plant corn in consecutive years in the same field, which increases the residue in the field and the risk of Goss's wilt. A field trial was conducted near Urbana, IL in 2012 to determine the effect of corn residue management on Goss's wilt. Different tillage (no-till, chisel plow, or moldboard plow) were used on a field that had severe Goss's wilt the previous season. Within the different tillage regimes, 10 different corn hybrids susceptible to *Cmn* were planted, Goss's wilt incidence was evaluated, and grain yields were determined. Tillage had a significant ($P < 0.0001$) effect on Goss's wilt incidence, but not on grain yield. Plots that were not tilled (no-till) had the greatest amount of corn residue and the greatest Goss's wilt incidence (11.2%), while plots that were chisel or moldboard plowed had the least residue and the least Goss's wilt incidence (1.1% and 0.04%, respectively). These results indicate that tillage can be an effective component of managing Goss's wilt; however, corn growers must weigh the benefit of disease management vs. the risk of erosion when making a residue management decision.

Next year…

1. Rotate with a non-host, such as soybeans.
2. Plant the most resistant hybrid available the next time corn is in the field.

Coming soon…

Yield loss information from GW fields in Louisiana. (Overall yield loss region wide was low, but within affected areas the losses were much greater.) Specifics later…

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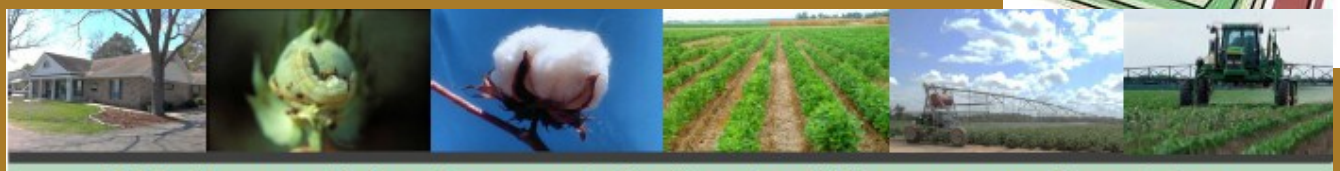
Upcoming Calendar of Events



2013 Macon Ridge Research Station Pest Management and Crop Production Field Day

When: Thursday, September 5th
Coffee and doughnuts at 8:30 a.m., field tours begin at 9:00 a.m.

Where: Tours begin at the Tom H. Scott Research, Extension, and Education Center
212 Macon Ridge Road, Building B Winnsboro, LA

Topics to be discussed by LSU AgCenter Research and Extension faculty during and following the field tour include:

Effect of Management Practices on Late-Season Soybean Quality
Influence of Starter Fertilizer on Corn and Grain Sorghum Yield and Plant Development
Pesticide Application Technology
Pest Management Strategies
Residue Management and Fall Fertilizer Applications
Utilization of Cover Crops in Production Systems
Biofuel/Biochemical Crop Production
Wheat Variety Selection and Production Practices

Please join us as we showcase and discuss our 2013 research and demonstration plots. Sponsored lunch will be provided at noon. Contact Donnie Miller, Research Coordinator, at 318-435-2157 or dmiller@agcenter.lsu.edu for information concerning the field day.

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for the latest research-based information on just about anything, visit our Web site: www.lsuagcenter.com

LSU AgCenter Research & Extension

LA Ag Industries Association Annual Convention January 14-15, 2014 Paragon Casino, Marksville.

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LSU AgCenter
Research & Extension

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Asst. Integrated Pest Management, Northeast	Cotton, Corn, Soybean, Grain Sorghum	Sebe Brown	318-498-1283	sbrown@agcenter.lsu.edu
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http://louisianacrops.com

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