

# Missouri Ag News

A Publication of University of Missouri Extension - Southeast Region

Volume 4, Issue 8

August 1, 2014

## Soil Sampling Questions and Answers

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Look for the color code to find articles related to the following.

Crops	Horticulture
Engineering	Livestock
Forestry	Other



### Q - Why should I do a soil test?

A - To determine the pH, phosphorus and potassium levels in the soil. A soil test can save you money on your fertilizer budget and increase production.

### Q - When is the best time during the year to take a soil sample?

A - A soil sample can be taken at any time during the year, but it is best when the soil is moist during the spring and fall.

### Q - How often should I take a soil sample?

A - Soil should be retested every two to four years to keep track of soil fertility changes.

### Q - To what depth should I go for a sample?

A - For an established field such as fescue or orchard grass, the sample should be representative of the top four to six inches. For newly established fields, a six inch depth is required.

### Q - How do I take a soil sample?

A - Collect ten to fifteen samples from each area that you wish to test. Your sample should represent 20 acres or less. Get the samples from random locations to represent the area well. Avoid the edges, waste spots, feeding and watering

areas. Any area in the field that differs based on topography, such as low wet areas, slopes and hilltops should be sampled separately. You should test each field, or area of a field, separately that has been or will be fertilized or cropped differently. Collect a small amount of the top four to six inches and place in a plastic bucket. When all the samples from a field have been collected, break and mix it all together. Collect your half pint sample from this mixture. See guide sheet **G9110** for more detail.

### Q - How much soil do I need?

A - The sample which represents each field should be about a half pint. (A cup full works well.)

### Q - How many samples do I need?

A - You should test each field separately that has been or will be fertilized or cropped differently.

### Q - How much does the test cost?

A - Contact your local extension office to obtain information on the test cost.

### Q - How long do I have to wait for my results?

A - From the time a sample is sent to the MU Soil Lab from our office,

## ....continued Q & A

it will be seven to ten days before a regional specialist receives the analysis and sends you the recommendations.

### **Q - What do my soil test results mean?**

A - A soil test result provides two sets of information; what is in the soil, such as the pH (measure of Hydrogen ions present in the soil), organic matter, P, K, Mg and Ca levels, and a recommendation on the amount of these nutrients needed to grow the desired crop. See guide sheets **G9111** and **G9112** for more detail.

### **Q - From my soil test results, how do I determine the appropriate amount of fertilizer to apply in order to add the recommended amount of nutrients?**

A – Assume your recommendation calls for a supply of N at the rate of 90lbs/acre; you can apply N using urea at 45% N or ammonium nitrate at 34% N. For example using urea to supply N at the rate of 90lbs/acre will require  $(90\text{lbs/acre} \times 100\%) \div 45\% = 200 \text{ lbs of urea/}$

acre. For more information on determining appropriate amount of fertilizer to apply contact your county extension office or your local fertilizer dealer.

### **Q - How do I determine how much limestone I need?**

A - To determine how much limestone you need in tons/acre, divide the ENM requirement on your soil test result by the ENM index for the liming material to be used (the dealer should provide the ENM index of the liming material).

### **Q - What is ENM?**

A - ENM is the Effective Neutralizing Material. The ENM for a soil is determined based upon the level of neutralizable acidity and pH.

For more information on soil sampling and fertilizer recommendations contact your local extension office.

AJ Foster, Agronomy Specialist, University of Missouri, Bloomfield, MO

## **Agronomy and Marketing Update Meeting**

August 15, 2014

9 a.m. to 12 p.m.

Cape Girardeau County Extension Center

MU Extension will have an agronomy and marketing update meeting for fall crops on August 15 at the University of Missouri Extension Center in Cape Girardeau County. The office is located in Jackson, MO. The meeting will be from 9 am until 12 pm. The meeting will provide information on wheat management with an emphasis on vomitoxin management, forage management, cover crop management, market outlook and information on utilizing drone technology. Register by calling the Extension office at (573) 243-3581 or email me at [ohmesg@missouri.edu](mailto:ohmesg@missouri.edu). When registering please leave call back or contact information in the event of cancellation.

## Pasture and Grazing Management Short Course

University of Missouri Extension and the Stoddard County Soil and Water District offer a pasture grazing management short course.

**Thursday evenings of September 4 - 25, 2014**  
**USDA building in Dexter from 6:30pm – 8:00pm**

The course is designed for experienced producers as well as beginners who want to learn more about developing pasture-grazing management systems for their livestock.

Each participant in the course will be introduced to a systematic approach to pasture and grazing management that will equip producers with knowledge to get the most of their forage and land resources to support their livestock. Participants will learn about soil properties and how management can maximize fertilizer use efficiency, best management practices to improve stand establishment, pasture renovation and weed control.

Topics to be covered are:

**Sept 4: Pasture soil and nutrient management – *Dr. AJ Foster.***

**Sept 11: Pasture species selection and establishment – *Dr. Anthony Ohmes.***

**Sept 18: Pasture renovation, weed control and new innovations in pasture management – *Dr. Anthony Ohmes.***

**Sept 25: Grazing management strategies – *NRCS Grazing Specialist.***

The cost of the course is \$35 for all four sessions or \$10 per session. Prior registration is required by August 25, 2014. Space is limited, so those who wish to participate are encouraged to register as soon as possible by contacting the Stoddard County Extension Office at 573-568-3344.

## Free Climate Data

Farmers have a new set of free tools to help them make crop decisions. The websites are important because access to historical climate data helps farm operations that depend on favorable temperatures and precipitation patterns, Massey says. To explore several weather data links go to <http://extension.missouri.edu/news/DisplayStory.aspx?N=2084>.

# Soybeans

## Soybean Disease

Fungicide application timing for soybean foliar disease management should begin at R3 soybeans. R3 is the reproductive stage of pod initiation where 3/16 inch long pods are at one of the four uppermost nodes on the main stem with a fully developed trifoliate leaf node.

For resistance management, consider rotating modes of action or using fungicides that contain both strobilurin and triazole modes of action. Fungicides available start on page 114 in [MO Manual M171: Pest Management Guide](#).

Tom Allen, Mississippi State University also provided an additional updated fungicide list: <http://www.mississippi-crops.com/2014/07/11/new-fungicide-products-available-for-soybean-production-systems/>.

The North Central Committee on Soybean Diseases and Regional Committee for Soybean Rust Pathology have an efficacy chart for foliar fungicides: <http://www.uaex.edu/publications/pdf/mp154/soybean-diseases-fungicide-efficacy.pdf>.

Sudden Death Syndrome has shown up in areas across the state. Wet conditions early provided a good environment for *Fusarium* fungus that causes SDS. The symptom that you see on the leaves however is NOT treatable with foliar fungicides since you are seeing the mycotoxin traveling in leaf veins. The visual symptoms are triggered in soybean by a hormonal change initiated when plants begin reproductive stages. Yield loss depends on variety susceptibility, stage of reproduction when symptoms begin and how wide SDS spreads across the field.



## Soybean Insects

Keep looking in particular for stinkbug and podworm. Podworm moth numbers have been low to non-existent for now but keep an eye out for late planted beans that did not reach canopy closure and are producing pods. Moths like that situation. Stinkbugs also target flowering plants to lay eggs. Stinkbug threshold is an average of 9/25 sweeps from reproductive stages R1 – R6.



Podworm on Soybean - courtesy Clyde Burchett, AgVenture

Also, keep an eye out on kudzu bug. This bug is making its way west and is currently in parts of Kentucky and Tennessee, two states that border us. There is a monitoring network and information on this emerging pest at the KudzuBug website: <http://www.kudzubug.org/index.html>

David Reinbott, Agriculture Business Specialist, University of Missouri, Benton, MO.

Sudden Death Syndrome in Soybean - courtesy IPM.Missouri.edu

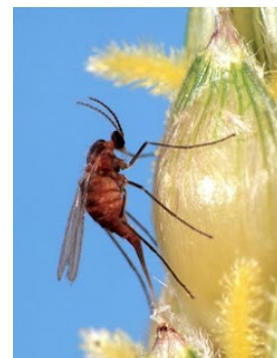


## Grain Sorghum Insects

The milo field I drive by each day has not begun to head yet, however, it is not too early to plan ahead for insect management. Sorghum midge larva attack grain. Adult midge are orange with dark wings. Milo seed heads flower from the top down. Threshold is 1 midge adult per head during bloom. Milo pollinates over approximately 7 days. Scout fields in morning. The use of a gallon clear plastic bag placed around the seed head helps ID the small gnat size midge as they fly off of a flower. Scout 10 random seed heads in 10

locations. Pyrethroids provide good control. MU guide on sorghum midge provides a picture of the tiny insect: <http://extension.missouri.edu/p/q7140>.

David Reinbott, Agriculture Business Specialist, University of Missouri, Benton, MO.



Adult Sorghum Midge - courtesy of Texas A&M.

## Organic Certification Cost Share

On Oct. 31, 2002, the U.S. Department of Agriculture (USDA) announced the creation of the

USDA-NOP Organic Certification Cost Share Program, authorized by the 2002 Farm Bill.

This program, funded with a total of \$5 million in federal monies, allocates funds to state organic programs in proportion to the number of organic producers and handlers within each state. In 2014 this funding was increased to \$11.5 million through 2018. The state organic programs, in turn, reimburse each eligible producer, processor or handler for up to 75% of their certification costs, not to exceed \$750 per certification, classification of certification or renewal on an annual basis.

The Missouri Department of Agriculture signed a cooperative agreement with USDA-National Organic Program (NOP) on June 13, 2014 to implement the certification cost-share program. Under the cooperative agreement, the state Department of Agriculture has agreed to review applications from certified Missouri organic producers (crop, wild crop or livestock), processor and handlers of agricultural products

who obtained certification under the National Organic Program (NOP). MDA then disperses the available funds to qualified applicants. Applications for cost share funds are reimbursed in the order they are received, until funds are exhausted or the eligibility period ends, whichever comes first.

### What is Required?

Anyone achieving initial certification, renewal or recertification is eligible for reimbursement funds, as long as they complete the application for cost-share funds and include the following items:

1. Copy of current certificate of organic operation
2. Copy of itemized invoices, showing fees assessed for certification
3. Organic Certification Cost Share Program Application (PDF Document)
4. Vendor Input Form Application (PDF Document)

For more information go to the Missouri Department of Agriculture website at <http://agriculture.mo.gov/abd/organic/certcostassistance.php> or contact Charlie Harper at [Charlie.Hopper@mda.mo.gov](mailto:Charlie.Hopper@mda.mo.gov).

This free event will showcase various aspects of crop production including vegetables, cover crops, and pest management tools that are effective and help conserve beneficial arthropods.

Small- and mid-scale farmers and gardeners will receive research-based information / demonstrations on various aspects of sustainable agriculture.



Cooperative Extension

# VEGETABLE

and *INTEGRATED PEST MANAGEMENT*

# FESTIVAL

4:00 – 7:00 pm, Thursday, August 14, 2014

Lincoln University George Washington Carver Farm

3804 Bald Hill Road, Jefferson City, MO, 65101

### Demonstrations and Presentations

Cover Crops for Vegetables ~ Sweet / Chili Pepper Production ~ Integrated Disease Management of Watermelon ~ Research Update on Trap Cropping ~ Weed and Insect Pest Management in Jack-o'-Lantern Pumpkin Production ~ Native Plants as Specialty Crops ~ Native Plants for Native Pollinators ~ Aquaculture: Friends and Pests ~ Missouri Aquaculture Eats ~ Cover Crop Grazing by Goats / Sheep ~ Edamame / Soybean Variety Trial ~ Living Mulch with Sweet Corn / Green Beans ~ Monitoring and Management of Invasive Insects including Spotted Wing Drosophila (SWD) – free bait and traps.

## WATERMELON AND TOMATO TASTING!

This is a FREE event, registration is not required but encouraged. To register, contact Vonna Kesel at [keselv@lincolnu.edu](mailto:keselv@lincolnu.edu) or (573) 681-5312. Please let us know if you require special accommodations.

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Stoddard County  
Soil and Water District



## PASTURE AND GRAZING MANAGEMENT SHORT COURSE



**USDA Building, 18450 Ridgeview Lane,  
Dexter, MO 63841**

Thursday Evenings, Sept 4-25, 2014  
6:30 pm-8:00pm



### Sept 4: Pasture soil and nutrient management

Session will equip participants with fundamental knowledge of soil chemical, physical and biological properties and how management can maximize fertilizer use efficiency. – Dr. AJ Foster.

### Sept 11: Pasture species selection and establishment

Session will equip participants with an understanding of selecting and matching suitable species with land resource and the best practices to improve stand establishment. –Dr. Anthony Ohmes.

### Sept 18: Pasture renovation, weed control and new innovations in pasture management

Session will expose participants to several management approaches for pasture renovation, practices for controlling weeds and new innovative technologies currently used for improving pasture productivity. –Dr. Anthony Ohmes.

### Sept 25: Grazing management strategies

This session will put it all together and explore the concept of animal/pasture interaction. – NRCS Grazing Specialist.



**Prior registration is required by  
Monday, August 25, 2014**

Educational materials and light refreshments will be  
provided each night.

**1.0 CEU credit for each session**



#### Pasture and Grazing Management Short Course Registration Form

Name (s): \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Please circle dates attending:**

Entire Course

Sept 4: Pasture soil and nutrient management

Sept 11: Pasture species selection and establishment

Sept 18: Pasture renovation, weed control and innovations

Sept 25: Grazing management strategies

**Course Fee:** \$10 per night or \$35 for the entire course

Please include check payable to MU Extension Stoddard County along with your registration form by Monday, August 25, 2014.

**Registration:** Call 573-568-3344, Mail registration form to MU Extension Stoddard County, 316 S. Prairie, P.O. Box 169, Bloomfield, MO 63825, or fax to 573-568-2261.

**Please check:** I am attending the course because:  I graze horses  I graze cattle  I graze sheep/goats  I graze other livestock

I am new to pasture management and would like to learn more

**If you have special needs that need accommodated, please contact the office two weeks in advance.**

**Equal Opportunity/ADA Institution**



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## Future Meetings & Events -

**Pasture and Grazing Management Short Course Thursday evenings in September 4 to 25, 2014.** USDA Building in Dexter, MO. Register by August 15 at the Stoddard County Extension Center. 573-568-2261.

**Agronomy and Marketing Update Meeting - August 15, 2014.** Cape Girardeau County Extension Center in Jackson, MO. 9 a.m. to 12 p.m. Register by calling the Extension office at (573) 243-3581 or email me at [ohmesg@missouri.edu](mailto:ohmesg@missouri.edu).

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: Many openings for full – time agriculture specialist related positions are available :  
: throughout the state at the University of Missouri. For a list of positions and more :  
: information go to <http://extension.missouri.edu/about/jobs.aspx>. :  
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Commodities and markets - <http://extension.missouri.edu/scott/crop-budgets.aspx>

2014 Farm Bill - <http://extension.missouri.edu/scott/Farm-bill.aspx>