

Missouri Ag News

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Missouri's Miracle Cotton Crop

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Engineering	Livestock
Forestry	Other



Cotton defoliation and harvest has finally begun. According to the Missouri Crop Progress and Condition Report for the week ending September 25 harvest is shown to be at 3 percent complete. This is about two weeks behind last year and normal.

A bright spot for Missouri producers this season has been the number of heat units that have been produced. This is also known as DD-60's which is a measure of how much temperature is available.

Temperature is the driving force for all cotton growth and development. The heat units accumulated from May 1 through September 1 is 2262 this season. Last year at this time, the number was 2446

which was the highest in the past eight years. By September 22, we had reached 2465 which is more than sufficient to produce an exceptional

crop. By comparison, the highest yield produced in 2008 was 1106 pounds per acre and we had only 1673 heat units on September 1. In 2004 with a yield of 1054, we only had 1919 heat units accumulated by that date. So there is a lot more things happening to produce higher yields than heat units alone.



This picture was submitted to the Missouri Department of Agriculture for the 2010 Focus on Missouri Agriculture Photo Contest by Amie Schleicher. Amie took this picture in the fall of 2009 when the cotton was nearing harvest close to Sikeston, Missouri. Missouri's most fertile soil for cotton production is in the southeast region.

To get an idea of our yield potential and our standing compared with other states, the USDA Cotton and Wool Outlook Report dated September 13,

“Miracle Cotton Crop” continued.....

shows our potential. If you look at the total production for upland cotton, you will see that we rank 7th behind Texas, Georgia, Arkansas, North Carolina, Mississippi and Tennessee. If you look at the projected yield per acre, Missouri is ahead of all of the Southeastern, Delta, and Southwest states. In the West, Arizona and California are estimated to yield 1510 and 1485 pounds per acre, respectively. Missouri is projected to yield 1092 pounds per acre.

Defoliation is continuing and the cooler temperatures are delaying leaf drop. There are a number of methods used to determine when to defoliate. These include the Cotman method (Nodes Above White Flower 5 plus 850 heat units), Nodes Above Cracked Boll, Percent Open Boll, the Sharp Knife Technique and the Hal Lewis method. This last method was developed to prevent micronaire from reaching the penalty range.

Research at the Delta Center over three years has shown that the Hal Lewis Method for determining defoliation is superior to 60% open, 4 nodes above cracked boll, and the Cotman method. The instructions can be found at the following internet link for a word document <http://aes.missouri.edu/delta/cotton/news/archives/02aughal.doc>

or for a web link to instructions at

https://docs.google.com/viewer?a=v&q=cache:t8ZWXXz5rGQJ:aes.missouri.edu/delta/cotton/news/archives/02aughal.doc+cotton+micronaire+test&hl=en&gl=us&pid=bl&srcid=ADGEESjva7pGMK0Re2bMbgssvzdiVqv_HF4vIJBKGNuzoimwhmBZj6GTS873xXV2W-oys5WAU7e_1_9ZNtt8iCQPAtoqW3vgRDggMHTcgp4IRxd6JPNxOAoszdCOmt7JYqwyotfhbV&sig=AHIEtbRyIFa1RQ2mZA-sNX_OIQHa-Hz5ng

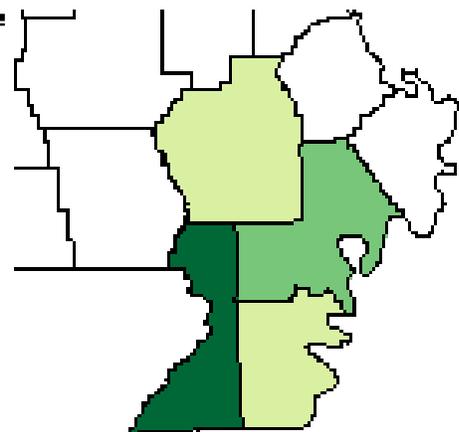
The soil testing lab can do these samples for \$10 per sample. For more information, call David Dunn or Andrea Jones at (573) 379-5431.

Looking back over the season, we had challenges from excess rainfall, flooding, and glyphosate resistant pigweeds. Growers used many strategies to control the pigweeds including hand hoeing. While weed control was effective, it was also an expensive proposition. There were numerous fields that had nutrient deficiencies from leaching of nutrients such as nitrogen, sulphur, and potassium. We reached the abnormally dry drought stage in Missouri later in the year but it is easy to see the impact of irrigation by looking outside of the pivot circle.

Mike Milam, Agronomy Specialist, University of Missouri Extension, Kennett, MO

Missouri Cotton Production by County in 2009

Source: USDA/NASS—Missouri Field Office



Biomass Thoughts

Over the past few weeks, we have begun work on a couple of projects that if forthcoming, would utilize biomass in the Southeast Missouri region. Each of the projects would have a positive economic impact on a specific community or area within the region.

There are three potential sources for biomass in Southeast Missouri. They are (a) woody biomass from the Ozark area (b) crop residue from the Bootheel region and (c) dedicated crops from marginal crop or pastureland in the region. Each of these sources has their own advantages and disadvantages.

There is no doubt that the farmers and landowners can produce and deliver biomass materials – for a price, however the inherent problem with biomass comes down to the timeframe for delivery. A typical biomass plant – whether a pellet, a biomass to ethanol or a co-firing plant must operate constantly in order to pay for the capital cost of the facility. There are economies of scale, where a larger facility operating at full capacity would be able to produce, whatever product, for less cost than a small plant.

Let's say we have a plant that uses 2 tons per hour of large round bales of biomass – this could be corn stalks, wheat straw or low quality hay. If the plant operates 20 hours per day, then it would utilize 40 tons per day, or 80, 1000 pound large round bales of hay. A typical Southeast Missouri

livestock farmer, for example with 50 cows, may use about 300 large round bales per year; so within about 4 days – this plant could utilize your hay crop. This is a very small plant. The largest wood pellet plant is designed to ship 560,000 tons per year. So

instead of 80 bales per day, think 3000.

The problem with hay, straw or corn stover is that, in Southeast Missouri, we receive about 48 inches of annual rainfall – so the long term outside storage of these materials would be problematic. The construction of hay storage barns would work, but may not be cost effective.

Solutions, as I have heard them, include

the densification of biomass materials in small local facilities; the utilization of wood – which can be stored outside, without gaining much moisture; utilization of multiple feedstock with different harvest dates and scaling down or intermittent operation of facilities. Each of these scenarios must be studied to determine their profitability.

Naturally problems exist in the development of any new industry, and there are no silver bullets. If this one is developed – it would have a positive economic impact on the region. However, farmers and landowners must be involved, for this industry to exist, and at the end they should receive their fair share of the rewards.

Van Ayers, Agriculture and Rural Development Specialist, University of Missouri Extension, Boonville, MO.



Picture courtesy of US-NRCS at www.io.nrcs.usda.gov

FALL - Time to Manage Ryegrass and Scout for Aphids in Wheat!

Bromus secalinus L.
brome grass, cheat,
chess, rye brome

Bromus: from the
Greek *bromos*, an
ancient name for the
oat

secalinus: like rye



As wheat emerges, scouting for weeds and aphids should begin. Ryegrass and cheat, are weeds best managed in the fall. Typically these weeds start near ditches and field borders. It is important to identify ryegrass because products that work on ryegrass will not work on the brome grasses (cheat). However, in recent years a package mixed product has been available that offers control of both grass weeds. Identifying features of ryegrass include: waxy, shiny leaves compared to wheat and unlike cheat, ryegrass is hairless.

Ryegrass and cheat products are most effective on small, less than

2-tiller plants. Therefore, fall is typically the application window. Spring applications could result in poor control if weeds are greater than 2-tiller. These products have specific

requirements, so carefully read and follow label directions. Rotation of crops and chemistry can reduce chances of resistance.

Fall also means aphids. Two aphid species in particular are greenbug and bird cherry-oat. Greenbug aphids damage 1 to 2-tiller wheat by feeding and injecting toxin into the feeding site. Threshold numbers for greenbug are 25 or more aphids per linear foot of row on 1 to 2-tiller wheat. Bird cherry-oat aphid feed and vector barley yellow dwarf (BYD) virus. Thresholds in MO are 12 or more bird cherry-oat aphids per linear foot of row in the fall and early spring.

For further information on weed identification or aphid scouting contact your local MU extension center and ask for IPM guide 1022, "Management of Soft Red Winter Wheat" and M171, "MO Pest Management Guide". You can also find them on the web at the following links:

<http://extension.missouri.edu/publications/DisplayPub.aspx?P=IPM1022>

<http://extension.missouri.edu/publications/DisplayPub.aspx?P=M171>

Anthony Ohmes, Agronomy Specialist, University of Missouri Extension, Charleston, MO

Preparing for Rice in 2012

Now is the time to note good and bad spots in your rice fields. There is no better time or place to view problems than at harvest on the combine. I know it's the last thing you want to think about during the most hectic time of the year. BUT, if you can take a

quick note recording location and a brief description of the problem it could be very beneficial and profitable for next year. Leave a pen and pad in the cab so you can quickly and easily describe the problem and location or make a mental note and record it when

you stop. If possible try to determine if it is fertility, disease, water or something else. Call your consultant and have him look at it.

Sam Atwell, Agronomy Specialist, University of Missouri Extension, New Madrid, MO.

69th SEMO Bull Sale



SEMO Bull Sale to be held
Friday, October 28
at the Farmington Livestock Auction

20 bulls have been consigned:

(2 Hereford, 11 Angus, 5 Charolais, 2 Simmental)

Find all the sale information at www.semobeef.com on October 1. Catalogs will also be available and mailed out at that time. If you are interested in enrolling bulls in the next bull sale scheduled for March 23, call Kendra Graham at 573-224-5600 for an enrollment form. The enrollment forms will be due January 2012.

The 2011 Rice Crop - A Look Back

“Fields with inadequate fertility often expressed their effects as stem rot, cercospora (narrow brown leaf spot), and to a limited extent bacterial panicle blight and other diseases.”

The 2011 rice crop is in full swing with over 30% of the rice harvested. While yields are ranging from very good, to poor, many are struggling with yields ranging 20-40 bushels/acre below normal.

As you look back and try to prevent low yields, below are just a few observations. The heat was certain a factor but, in and of itself, was only partially responsible.

Water management proved to be crucial. The heat and drought strained the irrigation abilities of

the date at which yields began to be negatively impacted seemed to be much earlier than normal, probably due to early heat.

Low fertility, particularly potassium, was observed. Fields with inadequate fertility often expressed their effects as stem rot, cercospora (narrow brown leaf spot), and to a limited extent bacterial panicle blight and other diseases.

Excessive rainfall early in the growing season resulted in severe flooding in some areas. Rice was submerged in some areas for an extended period of time and the yields were affected.

Excessive lodging occurred in many fields. Some possible causes were several short strong wind storms, varieties, rice after rice rotation, soil types, later planting dates, not enough potassium fertilizer, too much nitrogen fertilizer and stem diseases.

STINKBUGS, were heavy again this year resulting in some blanking and pecky rice.

Sam Atwell, Agronomy Specialist, University of Missouri Extension, New Madrid, MO.



Cercospora of rice
courtesy WordPress.com

many growers and ultimately caused yield losses. Hot spots or areas where water never reached were evident in some fields. Planting date had a significant effect, as it normally does. However,

Acorn Poisoning

Now is the time of year to be on the lookout for acorn poisoning. Most people have heard of acorn poisoning and may have even had animals die from it. Acorns, oak leaves and oak bark contain tannins that, when consumed in large amounts, release toxins in the intestines and kidneys. These toxins cause lesions to form in the kidneys, liver and digestive tract reducing their function eventually shutting them down.

Signs of acorn poisoning vary according to the quantity of acorns consumed. The first signs are that the animal stops eating, is depressed and does not excrete manure regularly. Excessive thirst, frequent urination, and hard dark feces occur next. Black tarry diarrhea will occur one to two weeks after consumption of acorns and the animal may not live 5-7 days after the first sign of consumption. Cattle, sheep, horses and pigs are most susceptible to acorn poisoning. Goats, deer and other wild animals have a chemical in their saliva that binds to the toxin,

reducing or eliminating the amount that reaches the digestive tract.



The best way to deal with acorn poisoning is to prevent it. Keep livestock away from acorn or oak brush covered pastures or fence them out of forests. Adding calcium hydroxide to feeds can prevent poisoning if you are unable to keep animals away from acorns and oak brush. Rations containing 10-15% calcium hydroxide are recommended but check with your veterinarian first before feeding. If an animal has eaten acorns and you see early signs of toxicity remove the animal from the pasture and give them fresh water and good quality hay. Oral drenching of a calcium hydroxide solution will help neutralize the tannin toxins. If the

animal continues to eat, it will most likely survive and regain weight quickly. A residual effect of acorn poisoning is the possibility of malformed calves if the acorns were consumed during the second trimester of pregnancy. Poor nutrition when the animal consumed the acorns also contributes to the severity of malformation in the calves.

“Acorn calves” may be born with shortened legs, deformed hooves, domed skull or long narrow head, and laxity of the joints. These calves will be stunted and grow poorly.

Acorn poisoning is generally rare and most of the time an animal will not eat enough acorns to cause toxicity. However, there is always that one cow that will actually seek out acorns. With a little management and possibly fencing you can prevent the loss of an animal and the offspring she is carrying.

Kendra Graham, Livestock Specialist, University of Missouri Extension, Greenville, MO.

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Feeding By-Products to Livestock

Dr. Justin Sexten, Extension Beef Specialist from the University of Missouri will discuss by-product types, feeding methods and how to store them.

TUESDAY, OCTOBER 25

6:00 P.M.—8:30 P.M.

**First United Methodist Church
(5th and Main St.) Poplar Bluff, MO**

**\$5.00 per
person**

Pre-registration requested by calling 573-686-8064

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