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Calendar of Events

August - September

August

14 Extension Farm Field Day
See flyer

21 IFAS CEU Day 2012

Six (6) CEU's for multiply categories and two (2) CEU's for Chapter 481 Applicators. For more information call 850.675.6654 and see flyer.

22 Testing for Private and Ornamental and Turf license will be held:
Milton Extension Office.
8:00 a.m. For more information contact Blake Thaxton 850-623-3868

We're on the Web:

<http://santarosa.ifas.ufl.edu>

The Santa Rosa Ag. Sheet Newsletter is available at:
<http://santarosa.ifas.ufl.edu/agriculture.shtml>

The Foundation for The Gator Nation

An Equal Opportunity Institution



Beef Management Calendar

AUGUST

- Cut corn silage.
- Cut hay.
- Apply lime for fall and winter crops.
- Harvest Bahiagrass seed.
- Check mineral feeder.
- Update market information and marketing plans.
- Check for army worms, spittlebugs, and mole crickets, and treat if necessary.
- Check dust bags.
- Wean calves and cull cow herd.
- Watch for evidence of abortions.
- Observe animals regularly for signs of disease.
- If cattle grubs were found on cattle last winter or heel flies were observed in the pasture, treat for cattle grubs this month.

SEPTEMBER.

- Cut hay
- Heavily graze pastures to be interplanted to cool season pastures.
- Check mineral feeder.
- Check for mole crickets, spittlebugs, and grassloopers, and treat if necessary.
- Check dust bags.
- Wean calves and cull cow herd if not already done. Remove open, unsound poor producing or over age cows.
- Train cowboys to observe normal and abnormal behavior and signs of disease.
- Be sure any replacement purchases are healthy and have been calfhood vaccinated for brucellosis.
- September or October is a good time to deworm the cow herd if internal parasites are a problem.
- When replacement heifers are weaned, give them required vaccinations and teach them to eat – then put them on a good nutrition program.
- Determine bull replacement needs, develop selection criteria, and start checking availability of quality animals.
- Review winter feed supply and feeding plans so that needed adjustments can be made before supplies tighten and prices rise.

APHIDS and PEANUTS

On July 16 I was called out to a peanut field in Santa Rosa County. There I met with producer Steven Godwin, and CPS agronomist Greg Esco, to look at aphids they had found in the field while they were scouting for lesser cornstalk borer. The jury is still out on an official identification of the insect from the scientist and what type of impact, if any, these critters may have. The following is what I know from scouting numerous Santa Rosa County peanut fields the last two weeks with Mike Donahoe. The photos show the aphids and their numbers that we found in the first field. As we walked through the field we would find areas with heavy populations, other areas with very light population and areas with little to no aphids present. The producer elected to apply an insecticide treatment to this field. The aphid population was knocked back.

Many other peanut fields have been scouted but we have not come across a field with the number of aphids present in the first field. One thing Mike and I noticed while scouting was, the fields that did have aphids present there was a significantly higher populations of fire ants working the fields. You can look in your field for these aphids somewhat in the same manner you would scout for lesser cornstalk borers. We found them down in the canopy at, and just above the soil surface.

In the last few days we have gone back to the fields we originally scouted for aphids, with some that had received insecticide treatments and some did not. All of these fields had not one commonality; it was hard for us to find live aphids to get a count and live samples for the scientist to process. We did find colonies of parasitized dead aphids, or mummies, in the non-treated fields.

It looks like the bug will probably be officially identified as the cowpea aphid. As I mentioned earlier, the scientists are still working to get a positive identification on the aphids found in large numbers (20 – 40 per peg).

The cowpea aphid has a broad host range with a preference for legume crops. It is known to occur in at least 28 states. It is velvety black in appearance has a distinct waxy cover. Cowpea aphid is relatively small 1.5 to 2.5 mm long. The adult may be winged or wingless and is usually shiny black, while nymphs are smoky gray.



CALCIUM

Calcium is needed for high quality peanuts and that makes calcium management one of the more critical aspects of peanut production. Failure to supply adequate soluble calcium in the pegging zone during pegging and pod fill results in “pdpa,” poor pod fill, low seed germination and higher incidence of aflatoxin.

Why is it so important to have soluble calcium in the pegging zone? Maybe I can explain it by loosely comparing our own circulatory system to that of the peanut plant. Just as we have veins and arteries, plants also have two sets of “pipes” that transport nutrients to the tissue. One of these, the “xylem” transports water and mineral salts upward from the roots of the plant; the second, called the “phloem” transports foods manufactured by the leaves downward through the plant.

Calcium taken up by the roots is transported upward through the plant by the “xylem,” but little if any is transported downward through the “phloem.” Once the peanut begins to peg, and since calcium is transported upward through the xylem and not carried downward by the phloem, the downward developing fruit must absorb its needed calcium directly from the soil-water solution around it.

This is also one reason why it is so critical to maintain soil moisture during the pod-fill period 60 to 90 days after planting. There must be enough water in the soil for the calcium to go into solution and move into the developing pod. Calcium deficiencies have been observed when a water soluble form of calcium was applied under extremely dry conditions. However, it has also been shown that application of gypsum to the pegging zone improved calcium uptake by the pod in dry years and caused a significant increase in yield and grade.

Calcium is “passively” absorbed by the developing peanut fruit. In other words, the amount absorbed depends on the concentration of water soluble calcium in the soil solution and the amount of water absorbed by the plant.

University of Florida recommendations are to apply gypsum to peanuts not grown for seed when the soil test level falls below 250 ppm calcium and/or when the calcium to potassium ratio drops below 3 to 1, that is at least three times as much calcium as potassium.

It has been demonstrated that excess potassium in the pegging zone during fruit development will interfere with calcium utilization by the fruit and result in the need for a higher level of soil calcium. Gypsum is recommended for all peanuts grown for seed and for “Virginia” types regardless of the soil test level for either calcium or potassium.

If the soil test indicates supplemental calcium is needed, it should be in a water soluble form and applied as a topdressing at the early flowering stage. Calcium sulfate, commonly known as gypsum or landplaster, is the recommended material to use. The amount per acre needed will depend on the formulation and whether broadcast or banded. Formulations commonly available in our area range from 16 to 21 percent calcium. The usual recommended rate for runner peanuts is 150 to 200 pounds of elemental calcium per acre and 300 to 400 pounds for Virginia types.

Cotton Harvest Timing and Defoliation

Harvest preparation is one of the last, but key, decisions of the season for a cotton farmer. Knowing when to “pull the trigger” is not always easy, and many factors have to be considered. Proper timing of harvest aid applications is important for optimizing both yield and quality of the crop. Preparing for harvest is a season-long process.

Defoliation decisions should be based on the crop and the crop environment. Plant maturity is usually the most important consideration, but other factors such as picking capacity, custom harvesting, and weather are also important. The goal for the producer is to determine the boll population that contributes significantly to yield and to harvest that crop of bolls at the optimum time.

Percent Open Bolls

Percent open bolls is a useful tool to determine when to defoliate cotton-but it's only one of several methods to use to make a decision. We need to look at a combination of factors. An old rule of thumb is to defoliate when 60% of the bolls are open. However this method has limitations and depends on fruit distribution and gaps (no bolls present at fruiting sites). Research in Louisiana and other states has shown maximum yield can be achieved with application ranging from 42 percent to 81 percent open, depending on crop maturity and fruit distribution.

Nodes Above Cracked Boll (NACB)

Another method is nodes above cracked boll (NACB). NACB is determined by locating the uppermost first-position boll that is cracked open and counting the number of main-stem nodes to the uppermost harvestable boll. Research has shown that once NACB reaches four, the crop can be safely defoliated without significant weight or quality loss.

Heat Unit Accumulation

Measuring accumulated heat units (DD 60s) past cutout is another method to help schedule defoliation. Generally, cutout is defined as the time when five mainstem nodes are present above the uppermost first position white flower (NAWF=5). DD60 heat units are calculated using the formula: maximum daily temperature + minimum daily temperature divided by 2, minus a base temperature of 60° F equals total daily heat units $[(T_{Max} + T_{Min} / 2) - T_{60} = DD60s]$. For example, a daily high and low of 88 and 76° F results in $(88 + 76 / 2) - 60 = 22$ DD60s for the day. In general, when 850-950 DD60s are accumulated from NAWF = 5, the field should be mature enough to defoliate. However, this may vary from year to year and from field to field due to rainfall patterns, soil types, or daily high temperatures. Therefore, the field should also be physically examined before a harvest aid is applied.

Cutting Bolls

Whatever method is used, growers should check bolls for maturity. Mature bolls are difficult to cut in cross section with a sharp knife without stringing the fiber. The seed will be completely filled out with no “jelly” in the center. The seed coats of mature seeds are tan to brown as opposed to the white and pale color of immature seeds. The presence of a thin, brown line around the seed indicates the boll is mature enough not to be adversely affected by application of a harvest-aid chemical. Bolls require 40 to 60 days from bloom to mature, depending on temperature. Bolls set late in the season take longer to mature and may never be harvestable. In most years, blooms after the first week of September will not have enough time to develop into open bolls in north Florida.

The most important thing to remember is that there is no one-size-fits-all approach to defoliation timing. You have to make decisions on a field-by-field basis and not rely on any one method. With any method, check fields regularly to track the development of the crop and sample enough plants in different areas of the field to ensure that the sample is representative of the overall field status. It's often best to use a combination of these methods to make a final harvest aid treatment decision.

Harvest Scheduling

In addition to crop maturity, another other major consideration for harvest-aid application is picker availability. Applications should be timed so that harvesting can keep up with defoliation. Harvest aids should be applied approximately 12 to 14 days ahead of picking. Under optimum conditions, the crop could be ready to harvest within 7 days after application. The interval between application and harvest may increase as temperatures drop later in the season.

Harvest aid performance is affected by temperature, plant condition, spray coverage, and product rate. Temperature is the main factor in determining harvest aid rate and it can have a significant impact on the activity of various defoliant. Defoliant work best on mature cotton under warm, humid conditions. Cool temperatures at the time of application, and for 3 to 5 days afterwards, can retard defoliant activity and cause less than desirable results. If possible, materials should not be applied during cool snaps. When nighttime temperatures drop into the low 60s, activity of thidiazuron products (i.e. Dropp, Freefall, Klean-Pik, Thidiazuron, etc.) is reduced. Table 1. lists expected activity of various defoliant.

Most harvest-aids do not translocate throughout the plant. Therefore, thorough spray coverage is essential for acceptable results with all harvest aids. Most labels call for ground applications in 10 to 25 gallons of water per acre (GPA) and aerial in at least 5 GPA. Lower carrier volumes increase the likelihood of needing a second application.

Mode of Action of Harvest-Aids

Harvest-aids work in one of two ways; by herbicidal or hormonal activity. Herbicidal harvest-aids injure the leaf, stimulating the production of ethylene. The ethylene promotes abscission, or leaf drop. If these are applied at rates too high for the temperature, they kill the leaf too quickly before ethylene can be produced. This results in desiccation or "leaf stick" instead of leaf drop. Aim, Blizzard, Def, Folex, ET, Harvade, and Resource are herbicidal-type defoliant.

Hormonal harvest-aids increase the ethylene concentration in the leaves and plant without causing any injury. Dropp, Freefall, Klean-Pik, and ethephon (Prep, Finish, FirstPick, etc.) are hormonal harvest-aids. Because these hormonal-type defoliant do not cause the leaf injury like the herbicidal types, they are not as likely to cause desiccation or "leaf stick".

There is no best harvest aid material that will defoliate, stimulate boll opening, prevent regrowth, and perform equally well under various conditions. Combinations of products can result in good performance under a broad range of conditions that normally occur in north Florida. Boll-opening materials, listed below, are often used in combination with defoliation materials to increase the percentage of the crop harvested during the first picking or possibly to eliminate the need for a second picking.

Regrowth suppression is important if you cannot harvest the crop within 10 days following application. According to Dr. Mike Patterson, Extension Weed Scientist with Auburn University, on Roundup Ready or Roundup Ready Flex cotton, the only materials that provide significant re-growth suppression are those that contain thidiazuron as an active ingredient. These products include Dropp

SC (and generic versions) and Ginstar and will usually suppress re-growth for up to three weeks if used at the appropriate rate. On conventional (non-transgenic) varieties, glyphosate (Roundup, etc.) can be used to suppress re-growth.

Updated listings of harvest aid materials and combination choices can be found on the university web sites referenced below.

Table 1. Expected activity of various defoliant as compiled by Drs. Donnie Miller, Daniel Stephenson, and Kohn Kruse in the 2011 Cotton Harvest Aid Guidelines for Louisiana.

Table of Expected Activity of Various Defoliant					
Material	Estimated minimum temp. (°F)	Expected activity			
		Mature leaves	Juvenile growth	Regrowth prevention	Boll opening
Def 6/Folex 6 EC	60	Excellent	Fair	Poor	None
Thidiazuron	65	Excellent	Excellent	Excellent	None
Harvade	55	Good-Excellent	Fair	Poor	None
Leafless	65	Excellent	Excellent	Excellent	None
Ginstar EC	60	Excellent	Excellent	Excellent	None
Aim EC	55	Good-Excellent	Excellent	Poor	None
ET	55	Good-Excellent	Excellent	Poor	None
Resource	55	Good-Excellent	Excellent	Poor	None
Blizzard	55	Good-Excellent	Excellent	Poor	None
Prep/SuperBoll, others	60	Fair	Poor	Poor	Excellent
Finish 6 Pro	60	Excellent	Poor	Fair	Excellent
FirstPick	60	Good-Excellent	Poor	Poor-Fair	Excellent
Glyphosate	55	Fair	Fair	Excellent	None
Sodium Chlorate	55	Fair	Fair	Poor	None
Paraquat	55	Desiccation	Excellent	Poor	Fair

The use of trade names is solely for the purpose of providing specific information. University of Florida IFAS Extension does not guarantee or warranty the products named, and references to them does not signify approval to the exclusion of other products of suitable composition.

References

- Edmisten, K. 2012. Cotton defoliation. pp. 147-165. *In* 2012 Cotton Information. North Carolina Cooperative Extension Service. <http://www.cotton.ncsu.edu/>
- Miller, D., D. Stephenson, and J. Kruse. 2011. 2011 Cotton Harvest Aid Guidelines for Louisiana. Louisiana State University Agricultural Center. Pub. 3194: 9 pp. <http://www.lsuagcenter.com/>
- Patterson, M. 2009. Cotton defoliation 2009. pp. 4-5. *In* Alabama Cotton Picksack Newsletter. Late Aug/Sep 2009. Alabama Cooperative Extension System. PSK-8-09. <http://www.alabamacrops.com>
- Whitaker, J. 2012. Cotton defoliation / harvest aid options. pp. 113-120. *In* 2012 Georgia Cotton Production Guide. The University of Georgia College of Agricultural and Environmental Sciences Cooperative Extension. <http://ugacotton.com>
- Wright, D.L., and B.J. Brecke. 2009. 2009 Cotton Defoliation and Harvest Aid Guide. University of Florida/IFAS Extension. SS-AGR-181. <http://edis.ifas.ufl.edu/AG188>

COTTON LEAF SPOT

Corynespora leaf spot disease has increased in recent weeks and many fields in the county have been treated at least once with either Twinline or Headline fungicides. The frequent showers we've been getting appear to be a critical trigger for disease development and spread. While it's getting late, producers and consultants are advised to check cotton for symptoms of Corynespora leaf spot as they scout weekly for insect pests. Labels for both Twinline and Headline specify that the first fungicide application may be made when first symptoms appear in the lower leaf canopy. A second application may be made 7 to 14 days later if conditions are conducive for disease development. Be aware that this disease can be a significant problem and that late fungicide applications are not much better than no fungicide sprays. Corynespora leaf spots usually are up to ¼ to ½ inches in diameter and have a distinct "target spot" pattern with alternating light and dark brown bands of dead tissue.

We have also seen minor leaf spotting caused by Stemphylium, Alternaria, and/or Cercospora fungi in cotton. Leaf spotting attributed to these fungi is associated with a potash deficiency and has not been shown to respond to fungicide treatments. Individual leaf spot lesions of Stemphylium, Alternaria, and Cercospora are much smaller and circular in shape than Corynespora leaf spots. [References: A. Hagan. Alabama IPM Communicator. Vol.3, No. 14. and B. Kemerait. UGA Extension Row Crop Disease update for 3 August 2012.]

EXTENSION

Farm Field Day

West Florida Research and Education Center

August 14, 2012

*Jay Research Facility
4253 Experiment Road
Jay, FL 32526*



Registration: 8:00AM
Research Tour: 8:30AM
Catered Lunch: 12:00PM



Register Online at MiltonGators.com

or

Call Robin Vickers at 850-983-5216 ext. 113 or 850-393-7334

FIELD DAY TOPICS

- Peanut and Cotton Varieties
- Cotton Disease Management
- Subsurface drip irrigation and fertigation
- Bioenergy
- Climatology
- Peanut Disease Management
- Weed Management
- Soil Sampling Strategies



August 14, 2012 at 6 p.m.

Cost: \$10 per person

Santa Rosa County Extension – 6263 Dogwood Dr – Milton, FL 32570

Registration Deadline is August 10, 2012



Topics

Planning Prescribed Grazing on Pastures

Andrew Hopkins – NRCS Regional Grazing Specialist

Nutrition Requirements for Grazing Animals

Mindy Hittle-McNair – Walton County UF/FAS Extension Agriculture Agent

Options in Winter Forage Varieties and Planting Recommendations

Dr. Ann Blount – UF/IFAS Forage Specialist

Conservation Planning with NRCS

Jason Hayford – Walton County District Conservationist NRCS

NRCS Programs

Randy English NRCS Resource Conservationist



Each site will be hosting a follow up field day on the concepts covered during the class. Registration will cover both programs and materials.

For more information:

Santa Rosa County Extension – 6263 Dogwood Dr – Milton, FL 32570

850.623.3868 – santarosa.ifas.ufl.edu

IFAS CEU DAY-2012

Need CEUs? An opportunity for licensed pesticide applicators to earn CEUs will be held August 21, 2012 from 7:30 to 3:00 CST. The event will be held at the Jay Community Center. An applicator can attend any or all of the 6 sections for pesticide licensing recertification credit.

A total of 6 FDACS-approved CEUs are available for the entire day in the following categories:

- Aerial Application - Agricultural
- Agricultural Row Crop
- Agricultural Tree Crop
- Aquatic Pest Control
- Demonstration & Research
- Forest Pest Control
- Natural Areas Weed Management
- Private Applicator Agriculture
- Right-of-Way Pest Control
- Pest Control Operator - Lawn & Ornamental
- Limited Commercial Landscape Maintenance
- Limited Lawn & Ornamental Pest Control
- Ornamental & Turf

\$10.00 PER PERSON FOR SIX CEU'S AND IT INCLUDES LUNCH!

Section Time	Topic Title	Speaker(s)
7:30-8:00	Register and convene	
8:00-8:50	Vegetation management in forests and transmission lines	(Patrick Minogue)
9:00-9:50	Integrating biological controls and herbicides	(Jim Cuda)
10:00-10:50	Identification and integrated management of pasture weeds and forage tolerance – will focus on dogfennel, tropical soda apple, blackberry and other briars	(Brent Sellers)
10:50-12:00	Lunch (Provided)	
12:00-12:50	Managing herbicide applications against development of resistance	(William Haller)
1:00-1:25	Seedbank dynamics and long term integrated weed management	(Ramon Leon)
1:25-1:50	Herbicide injury to vegetables from off target sprays	(Peter Dittmar)
2:00-2:25	Integrated management of cogongrass	(Greg MacDonald)
2:25-2:50	New and/or difficult to control upland, wetland, and aquatic invasive plants	(Ken Langeland)
2:50-3:00	Evaluations and issue CEU attendance forms	(Fred Fishel)

If paying by check OR money order make payable to:
Santa Rosa County Extension Advisory Fund (SRCEAF)

Interested in attending? Call (850) 675-6654 or e-mail janiskay@ufl.edu

Applicators with Chapter 482 License who wish to pursue only a couple (2) of CEU's for Lawn & Ornamental , Limited Lawn & Ornamental, or Limited Commercial Landscape Maintenance may attend beginning at 12:00 PM.

The use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee, warranty, or endorsement of the product names and does not signify that they are approved to the exclusion of others.

Sincerely,

Mike Donahoe
County Director
Santa Rosa County

John D. Atkins
Extension Agent
Santa Rosa County