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*Alabama A&M and Auburn Universities*

*Mobile County Office  
1070 Schillinger Road, North  
Mobile, Alabama 36608-5298  
Phone: 251-574-8445  
Fax: 251-574-3245*

# On The Farm

## News Letter – June 2010

*Live and Learn Luncheon:* "David's Catfish House" in Monroeville, Tuesday, June 22, starting at 11:30 a.m. Dr. Austin Hagan, Auburn University Peanut Pathologist will be speaking on *"Upping Yields and Profits on Your Peanuts by Controlling Diseases"*.

### Stink Bugs on Corn

The corn crop in Southwest Al as of today May 30<sup>th</sup> looks very promising. Many things can happen between now and harvest. However, scouting for stink bugs in your corn may up your yields. The stink bug numbers are increasing in the fields. As wheat and oats are harvested the stink bugs often move into the corn crop. Stink bug scouting on corn should begin when corn is in the seedling stage. On young plants stink bugs feed on the base of the plant and injure the growing point. Extreme feeding results in death of the plant. If the growing point is badly damaged, the plant may develop multiple stems. Moderate feeding results in a buggy whip symptom, where one side of the plant grows faster than the other and the tips of the leaves are entangled in the whorl.

Stink bugs do the most damage to corn when corn is **V15 stage** which is in the early ear formation stage. Also at this stage the **tassel is barely starting to peak through** and occurs **two weeks before silking**. The little ear shoot is only  $\frac{3}{4}$  inch long, and cannot be seen unless you pull back the leaf sheath. Stink bug damage at this time will cause the ears to be aborted or severely deformed. The ears will be C shaped or cow horned and are called banana ears. Scout again during grain fill. During silking and grain fill the stink bugs are affecting individual kernels.

If you want to protect the whole ear scouting must begin at early ear formation. That is the time stink bugs do the most damage to corn. The recommended threshold for treatment is when 1 out of 20 plants have stink bugs. Pyrethroids work well on the green species, while organophosphates work best on the brown.

Scouting for stink bugs can be difficult as they may be in one part of the field and not the other.

Fields bordering small grains or bordering pine plantations would be the most likely to have stink bugs.

## “The Cotton Ballgame”

I always enjoy learning from other farmers and sharing farming tips. This idea of the cotton ballgame was given to me by William Birdsong, the cotton Extension Agent in Houston County. Birdsong is now an Extension Area Cotton Specialist. He sees the cotton insect situation sort of like a baseball game where it is the farmer versus the insects. You have nine innings, of course, and in each inning there is a major event or insect that you need to combat.

At the beginning of the season the score is 0 to 0. In each inning you have the opportunity to hit a home run or strike out. You can gauge how you are doing by how well you take care of that insect. You may even want to score your ballgame inning by inning.

In the first inning in May your major pest is thrips with the possibility of a few aphids. The challenge here is to do a good job with your seed treatments, in-furrow insecticides or foliar application for thrips?

The second inning is early June. Plant bugs are the major insect pest at this time. Aphids may build up as well.

The third inning is mid June. The insects then are the plant bugs, aphids and bud and boll worms. During this third inning you are also side-dressing cotton with fertilizer and doing weed control.

The fourth inning is the last part of June. Plant bugs are at work. You may also have a start of bud and boll worms.

The fifth inning is the early part of July. During this time you usually have a heavy moth flight of bud and boll worms, and need to scout and be alert to any breakthroughs especially of the bud worm. If growing conventional cotton you may have to spray two to five times. If you have early planted cotton you may have to contend with stink bugs on young tender bolls. Aphids are another insect to be scouting for at this time.

The sixth inning is the third and fourth week of July. Stink bugs are the major pest in our Bollguard cotton at this time. Again, be alert to outbreaks of bud and boll worms.

The seventh inning is from late July to early August. You need to stay on top of the stink bugs and look out for fall armyworms, aphids and bud and boll worms.

The eighth inning is August. Again in the eighth stink bugs are a major problem. There may be a chance of beet armyworms, soybean loopers, whiteflies, stink bugs and again fall armyworms and bud and bollworms.

In the ninth inning (September) continue looking for all of the above.

Defoliation and harvest take you into the extra innings. Spider mites are an insect you need to look for throughout the season. Always stay alert as you are scouting your fields as these insects may not always come in these exact innings and you always need to be prepared for a curve ball.

All of this gets real interesting as you are trying to manage and maintain the rest of your farming program at the same time. Farmers at this time are combining their grain, baling hay, spraying peanuts, and hopefully scouting and spraying their cotton on a timely manner. All of this makes for a very interesting farming season. I hope this article has given you a fairly clear way of looking at your cotton insect strategy and hope you win this ballgame.

Inning	Grower	Insects
No. 1 Thrips and aphids – May		
No. 2 Plant bugs and aphids – Early June		
No. 3 Plant bugs, aphids and bud and bollworms – June		
No. 4 Plant bugs, aphids and break from Bud/Boll worms – Late June		
No. 5 Bud/Boll worms and early stink bugs – Early July		
No. 6 Stink bugs – July		
No. 7 Stink bugs, fall armyworms, Bud/Boll worms – Late July		
No. 8 Stink bugs, Beet/Fall armyworms, Loopers, whiteflies, Bud/Boll worms - August		
No. 9 Continue looking for all of the above		
Extra Inning Defoliate and Harvest – October and Nov.		
Final Score		

During June Growers are in the 2<sup>nd</sup> – 4<sup>th</sup> inning of the cotton ballgame. The primary insects during this time are the plant bugs and aphids.

**Plant Bugs:** Be sure to monitor square retention. The goal is to have at least 80 percent of first position squares at first bloom.

**Aphids:** By Dr. Phillip Roberts, UGA Cotton Entomologist. During most years aphids build to high numbers and populations eventually crash due to a naturally occurring fungus. This fungal epizootic typically occurs in late June or early July depending upon location. In most years only a small percentage of fields are treated for aphids. Decision to treat an aphid infestation is a judgment call. One must first consider if the fungal epizootic is near. Is there any indication of the fungus (i.e. Gray fuzzy aphid cadavers)? Once numerous gray fuzzy aphid cadavers are observed in a field we would expect the aphid population to crash due to the fungus in about a week. Aphids add stress to plants by feeding on and removing plant juices. Heavy accumulations of honeydew, yellowing terminals, and plant stunting should be considered prior to treating aphids.

Some have expressed concern about aphids on late planted cotton. As we mentioned earlier aphids are stress inducing pests and high populations on seedling cotton could slow maturity. However, at-plant insecticides (Temik, Cruiser, and Gaucho) are active on aphids and should provide some control for a couple of weeks. Scout and treat on an as needed basis

**Cotton Insect Hotline (1-800-851-2847)** for updates on current insect conditions. The Cotton Pest Management Newsletter and additional cotton production information is also posted on the UGA Cotton Homepage at: <http://www.ugacotton.com>

## Peanut Insects

Dr. Ayanava Majumdar is our Peanut and Vegetable Entomologist stationed at the Gulf Coast Research and Extension Center in Fairhope. By the use of pheromone traps he has collected data across the state of Alabama on insects that specifically affect peanuts and vegetables. These insects of course affect our other row crops as well. You may be interested in checking his web site for trap reports from time to time.

<http://www.aces.edu/timelyinfo/#Entomology>

## Know Your Insects

Growers are always encouraged to know their insects. Knowing how to identify them is not always easy; however, it is extremely important if going to control them.

If you find any **armyworms** in June, are they the True Armyworm or are they the Fall Armyworm?

Knowing the difference is very important as the True are harder to kill. The answer is they both look almost exactly alike with the inverted Y on their forehead. However, the Fall Armyworms only show up in the fall of the year and not in June.

## PEANUT CALCIUM REQUIREMENTS

Peanut growers have too much invested in their crop to let insufficient Calcium reduce their yields.

**Dr. Glen Harris, UGA Soil Scientist** is conducting research on the Calcium requirements on our new peanut cultivars. The University research until recently was conducted on the smaller seeded runner peanut, in particular the Florunner cultivar. The Georgia Green and the Georgia Greener are the only small seeded peanuts presently being planted. Eighty per cent of our acres are now in the medium to large seeded peanut and these varieties have a greater requirement for Calcium.

In talking with Dr. Glen Harris here are a few key guidelines to go by.

1. Any peanut saved for seed should have gypsum applied. Gypsum greatly improves the germination of that nut.
2. If you are using the lime method you do not need gypsum. Caution should be used here. The lime must be applied to the soil surface or incorporated into the top three inch zone. In this case there will be sufficient Calcium in the pegging zone. Liming fields for increasing Calcium levels should only be done if soil pH needs correcting. Many fields in Southwest Alabama now have a pH of 7.0 or above. Those fields have a good supply of Calcium, however the drawback is that at this high pH at pH 6.8 or above the micronutrient manganese is deficient which will be deficient in the peanuts, soybeans, wheat and cotton crops. Of course, if the pH is low, apply the lime as it will raise the pH making all other nutrients more available and supply the Calcium needed for the peanuts.
3. If not using the lime method use the pegging zone method. This is a well known practice in Georgia, but seldom practiced in Alabama. I think growers would benefit by taking pegging zone samples especially on any field that might be in question for Calcium. This should be done soon, before the peanuts begin to vine. The samples should be taken from the top three inches right in or near the row. For most varieties, if you have 500 pounds of calcium in the pegging zone, there is no need for gypsum application. For the larger seeded varieties such as Florida-07 and Georgia-06G the Calcium levels should be near 700 pounds.
4. Another important factor is the **Calcium to Potassium Ratio**. The Calcium to Potassium Ratio should be a 3:1 ratio or better. When there is too much K and not enough Ca. the peanut shell actually absorbs K instead of the Ca. causing pops.
5. The **rate of gypsum** to apply: Since the percent of Calcium in Gypsum and the amount of Calcium needed will vary from field to field, a safe recommendation is to apply Gypsum at 1000 lb. per acre when needed. Harris's research has shown larger seeded cultivars to show a response to the 1500 lb. per acre rate.

## Peanut Fungicide Program

Most growers in Southwest Alabama have done an excellent job with their peanut fungicide program. Having a good fungicide program is a major key to harvesting an excellent crop.

**Peanut Rx, Prescription Fungicide Programs:** Dr. Bob Kemerait, UGA Peanut Pathologist

In the upcoming growing season, peanut growers, consultants, and Cooperative Extension agents can use the completely updated 2010 Peanut Rx as an educational tool to determine the risk to tomato spotted wilt, leaf spot, white mold, and Rhizoctonia limb rot in a specific field. Growers can also use Peanut Rx to determine what steps can be taken to reduce the risk to these diseases. The 2010 Peanut Rx, which is endorsed by the University of Georgia, the University of Florida, Auburn University, and Mississippi State University, can be found in the University of Georgia's "2010 Peanut Update," on the web at [www.ugapeanuts.com](http://www.ugapeanuts.com), in various trade publications, and on prescription fungicide cards developed by a number of different companies. First, and foremost, Peanut Rx is a tool that allows growers to assess how their decisions affect disease in the fields.

**Prescription Fungicide programs are based upon Peanut Rx** and the assessed risks to leaf spot diseases, white mold, and Rhizoctonia limb rot. Fields determined to be at "high risk" need to be sprayed on a 14-day interval (or even tighter in some situations). Fields at moderate or low risk can be effectively managed at extended spray intervals that resulting fewer fungicide applications. There are many fungicide programs that can be modified to match the risk determined in a field; these programs may mix and match fungicides that are sold by different companies. In carefully choosing specific fungicide programs that incorporate a variety of products, growers can be successful in both protecting yields and in increasing profit. However, because such programs may not be recognized by any company, the growers will assume the risk for the success or failure of the program.

In 2010, a number of companies have developed SPECIFIC fungicide programs for peanut fields based upon results from the Peanut Rx program. Companies that will have prescription fungicide programs in 2010 include Syngenta, Nichino, BASF, Arysta LifeScience, Bayer CropScience, and Sipcam Agro. Others may follow.

**The Line Up of Fungicides for 2010 (as of March 2010) by: Dr. Bob Kemerait, UGA Peanut Pathologist**

**Line-up of leaf spot fungicides:**

Chlorothalonil (Bravo, Echo, etc....) at 1.5 pt/A.

Elast (dodine) at 15.0 fl oz /A or 12.8 fl oz/A when mixed with tebuconazole.

Stratego (propiconazole + trifloxystrobin) at 7.0 fl oz/A.

Tilt/Bravo (propiconazole + chlorothalonil) at 1.5 to 2.25 pt/A.

Echo/Propimax (chlorothalonil + propiconazole) at 1.0 pt + 2.0 fl oz/A.

Eminent/Echo (tetraconazole + chlorothalonil) at 7.2 fl + 1.0 pt/A.

Headline (pyraclostrobin) at 6 to 9 fl oz/A.

Topsin M (thiophanate methyl) at variable rates of 5.0 to 10.0 fl oz/A depending on mix partners.

**And the lineup for soil borne programs:**

Abound (azoxystrobin) at variable rates, standard 18.2 fl oz/A.

Artisan (flutolanil + propiconazole) at variable rates depending upon number of applications.

Convoy (flutolanil) at variable rates depending upon number of applications and must be mixed with a leaf spot material.

Evito (fluaxostrobin) at 5.7 fl oz/A.

Headline (pyraclostrobin) at 12.0-15.0 fl oz/A.

Proline (prothioconazole) at 5.7 fl oz/A in-furrow for control of CBR.

Provost (prothioconazole + tebuconazole) at 8-10.7 fl oz/A.

Tebuconazole (products such as Folicur, Muscle, Orius, Savannah, Monsoon, Tebustar, Tebuzol, etc. etc.) applied at 7.2 fl oz/A and typically tank-mixed with chlorothalonil.

Quash as of April, another fungicide that has been given only passing discussion over the past couple of years will be available to peanut growers in 2010. "Quash" is a formulation of metconazole. Metconazole is a triazole and is in the same chemical class as tebuconazole, Provost, Proline, Tilt, Propimax and Eminent. Quash is sold by Valent and is labeled for use of foliar diseases and soil borne diseases of peanut.

**Use of Quash:** The recommendation from Valent for use of Quash will be a block program beginning at 60 days after planting at 2.5 fl oz/A for a total of four applications. This 4-block strategy will be for both the control of leaf spot diseases and soil borne diseases like white mold.

In recent discussions between plant pathologists with the University of Georgia and representatives from Valent, it seems prudent to tank-mix Quash (2.5 fl oz/A) with chlorothalonil (1.0 pt/A) to bolster the power to manage leaf spot. (Quash, or metconazole, is in the same class as tebuconazole and is likely to benefit from the chlorothalonil mix for increased control of leaf spot.) Although researchers at the University of Georgia have collected some data with regards to the efficacy of Quash in the management of diseases of peanut, much more data will be collected in the future. It is currently our belief that a 4-block program of Quash (2.5 fl oz/A) + 1.0 pt/A chlorothalonil will offer similar disease control as 7.2 fl oz/A tebuconazole + chlorothalonil (1.0 pt/A).

## **“Planting Tips for those who are a Little Bit Rusty on Grain Sorghum Production”**

Grain sorghum because of its drought tolerance capabilities is one of the most versatile crops that can be grown in South Alabama. In the U.S. grain sorghum is grown primarily for livestock feed. However, it is a staple source of food for people in many other countries. There are only 15,000 acres of grain sorghum in all of Alabama. The reason for this is that there is a very limited market.

When feeding or selling treat grain sorghum as being 90 % the value of corn.

From time to time growers may find a market, or may decide to grow grain sorghum for some of its other benefits to their farm. It is a well known fact that dove, turkey, quail and deer love grain sorghum. Grain sorghum is also a rather inexpensive crop to produce. It is an excellent soil builder adding from 5 to 10 tons of organic matter back to the soil. It is also an excellent rotation crop for both nematode and weed control. Grain sorghum yields are improving. During the 80's the expected yield was around 60-70 bushels per acre. In 2008 several growers in South Al averaged 125 bushels per acre. Some growers in Florida call themselves the 250 bushel club. They grew the first crop of grain sorghum of 125 bushels, replanted and made another 125 bushels on the same piece of ground.

Grain sorghum can be planted over a wide range of planting dates. Planting date is from April 15 to July 15. Delay planting until the morning soil temperature is 65 degrees at the 2 inch depth. Planting early may help take advantage of early season rains and also help avoid late season insects.

Variety selection is important. Several varieties well adapted for our area are DeKalb 5400, DK 5403 and Pioneer 83G66.

Seeding depth is important. Seed should be 0.75 to 1 inch deep and never more than 1.5 inches deep. Seeding rate is 80,000 plants per acre irrigated and 50,000 plants per acre dry land. That is typically 4-7 lb. per acre depending on the seed size.

Row spacing on dry land production does not make much of a difference. Under maximized conditions row spacing of 10 inches favored the highest yields. When planting late, narrow row planting is a benefit.

Grain sorghum is very sensitive to acid soil. The soil pH should be at least 5.8 or above. Grain sorghum is much like corn in that it responds to starter fertilizer and then should be side dressed with additional Nitrogen by the plants sixth leaf stage which is typically 20 days after planting. Be sure to side dress before rapid plant growth takes off which is around day 30. Total N for dry land should be 100-120 pounds of N and Phosphorus and Potash according to soil sample. On poor land the totals of N-120, P-120 and K-120 pounds per acre are recommended.

There are several insect pests of grain sorghum. The major early season pests are chinch bugs, cutworms, white grubs and wireworms. The sorghum midge attacks the bloom and the corn earworms, fall armyworms, sorghum webworms and stink bugs attack the grain itself. For current insecticide recommendations look for in:

<http://pest.ca.uky.edu/EXT/Recs/ENT24-Sorghum.pdf>

And on the worldwide web at: [www.cdms.net/manuf/default.asp](http://www.cdms.net/manuf/default.asp)

Grain sorghum is more sensitive to herbicides than corn. Grain sorghum is almost always included in crop rotation schedules. So look up the replanting labels for grain sorghum before planting. Atrazine is the basis of most weed control programs in Alabama. The chloroacetamide herbicides such as Dual II Magnum, Outlook and Lasso give added control of weeds and some grasses. The grain sorghum seed must be concept treated seed in order for these chloroacetamide herbicides to be used.

Grain sorghum challenges a combine operator's skills more than any other grain grown in Alabama. The harvest equipment must be well maintained and the operator alert to prevent harvest losses. Fine-tuning a combine for harvest can easily provide \$25-50 or more income per acre. Twenty per cent grain moisture is a good recommendation for starting to cut if heads are uniformly ripe. Field loss and kernel damage are normally lowest at this grain moisture level. Try to complete harvest before 14 % moisture is reached. All of the above can only be done if you are able to dry your grain. Discounts for moisture begin above 14 %. Applying a harvest desiccant such as sodium chlorate may be helpful in making combining easier, however, it will not speed grain maturing or drying. This should be done 7-10 days before harvest. Grain sorghum should be 12 % moisture for storage.

An excellent source of information is the Grain Sorghum Handbook University of Arkansas 2004

[http://www.uaex.edu/Other\\_Areas/publications/html/MP-297.asp](http://www.uaex.edu/Other_Areas/publications/html/MP-297.asp)

## **Paving the Way for Profits Sunn Hemp a New Cover Crop for Alabama**

Some of you may remember the report on the "On Farm Sunn Hemp Experiment" conducted by Russell Hendrix in Fruitdale. This experiment documented years of research conducted by scientists around the world. Sunn hemp is indeed an excellent soil building summer cover crop.

In **Hendrix's experiment** the sunn hemp was planted on August 10, 2009. A good fit for sunn hemp in South Alabama would be to plant sunn hemp following a corn crop. This is why it was planted on August 10<sup>th</sup>. On October 6, 2009 sixty days after planting the sunn hemp was sampled and air dried for 10 days in order to calculate the amount of organic matter and nitrogen the sunn hemp would replenish the soil. Hendrix's sunn hemp in 60 days was 6 feet tall and produced 7,840 pounds (3.92 tons) of organic matter and 118 pounds of Nitrogen.

**Sunn hemp is a good source of Nitrogen.** It is a tropical legume so as it grows it produces Nitrogen. Then when the crop dies it releases Nitrogen back into the soil for the next crop. Over the summer sunn hemp in favorable conditions may grow ten to twelve feet tall and release 200 pounds of Nitrogen back into the soil.

**Sunn hemp is resistant to and suppresses the root-knot and Reiniform nematodes.** This is another major reason for growing this crop. Root-knot and reiniform nematodes are a major pest in South Alabama agriculture.

**Cultural Practices:** He recommended seeding rate is 25 pounds per acre. Seed costs are around \$2.25 per pound so growers might experiment with lower rates, even 15 pound per acre. Seed can be broadcast and covered about ½ to 1 inch deep or drilled in.

**Sunn hemp will grow on poor soil** with a pH of from 5 to 7.5. It will grow on sandy or clay soils, just not too hard packed clay. The soil does need to be fairly well drained. It will need zero Nitrogen, but will grow better if ample Phosphorus and Potash are in or added to the soil.

**Sunn hemp is fairly drought tolerant**, but will grow better if it receives ample moisture. Sunn hemp may be planted any time after there is no danger of frost in the spring and will die again at first frost in the fall.

**The plant grows very fast** and in about 60 days will be 6 feet tall or taller. This is a **good time to mow** the sunn hemp about 10-12 inches high and let it ratoon or regrow again. If allowed to get too tall and old the stems will become tough and fibrous and will not decompose rapidly. If the plants are too tough they will also cause problems the following year when you are trying to prepare your soil and plant.

A **good rotation** in South Alabama would be corn, Sunn hemp and then wheat. This would allow the sunn hemp to rebuild the soil and supply the Nitrogen for the following wheat crop. A few growers are planting sunn hemp on fallow land to rebuild their soil. Over the summer the sunn hemp should provide around 200 pounds of Nitrogen for the next crop. One grower has already planted the sunn hemp for a summer pasture for goats. While another grower has planted sunn hemp for his deer plots.

**Seed supply** here in the U.S. is limited. The seed supplier for Alabama is **Tucker Farm Center** (251-267-3104) in Frisco City. Sunn hemp is also excellent forage for **deer and goats**.

If you need assistance through your county office, contact:

**Jim G. Todd**, County Extension Coordinator  
Mobile County Extension Office  
Jon Archer Agriculture Center  
1070 Schillinger Road, North  
Mobile, AL 36608  
(251) 574-8445 / Fax: (251) 574-3245  
Cell (251) 584-0342 / SL#7\*121  
E-mail: [toddjim@auburn.edu](mailto:toddjim@auburn.edu)

**Susan F. Wingard**, County Extension Coordinator  
Baldwin County Extension Office  
302 A Byrne Street  
Bay Minette, AL 36507  
(251) 937-7176 / Fax: (251) 937-7285  
E-mail: [wingasf@aces.edu](mailto:wingasf@aces.edu)

Again, I hope this information has been helpful to you.

Sincerely,



Richard L. Petcher, Regional Extension Agronomist for SWAL  
Washington County Extension Office  
P.O. Box 280; Chatom, AL 36518  
(251) 847-2295 / Cell (251) 202-1009 / SL# 7\*145  
E-mail: [petchrl@auburn.edu](mailto:petchrl@auburn.edu)

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