



Alabama A&M and Auburn Universities



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News Letter June 2009

UPCOMING MEETINGS

Paving the Way to Profits: Steve Groff is nationally and internationally known for his knowledge and experience on cover crops, their benefits and cultural practices and in reducing tillage. He is the **“key note” speaker at the National No-Till Conference in Iowa** this upcoming January 2010. He is from Pennsylvania where on his 200 acre farm by the use of cover crops has greatly increased his yields and conservation practices. His own soil has not seen a plow in over 20 years. He will be in Alabama on June 12, 2009. We will have two meetings on June 12th for growers to meet and hear from Steve Groff. Steve Groff is looking forward to learning from growers experience in this area and he will also share with us some of his wealth of experience in cover crops. His main topic will be the “Tillage Radish” which is probably the main cover crop craze topic around the world.

Place: Creek Family Restaurant at the intersection of Interstate 65 and highway 21 near Atmore.
Time: 7:30 a.m. This meeting is sponsored by Bob Jones and United Bank.

Place: The Alabama Cooperative Extension System Auditorium in Monroeville. This is located on Agricultural Drive just off of Highway 21 North, and is just past Al. Southern Community College.
Time: 12 noon. This dinner is also sponsored by Bob Jones with United Bank.

Small Grain Harvest and Storage: Dr. Kathy Flanders, AU Grain Entomologist and Richard Petcher **Wheat and Oat Harvest** is well under way. There are between 30 and 40,000 acres to be harvested in Southwest Alabama. The crop looks good even for having such a wet winter and now dry April and then wet early May. Successfully storing the grain this past year has been a challenge for many. The most likely problem according to Dr. Kathy Flanders, AU Grain Crop Entomologist is that our insects have become resistant to **Malathion**, which used to give residual control of many insects in grain bins. Many growers, I think would agree. The 2009 Stored Grain IPM Guide would be helpful. The web site is: <http://www.aces.edu/pubs/docs/A/ANR-0500-A/VOL1-2009/stgrain.pdf>

ALABAMA A&M AND AUBURN UNIVERSITIES, AND TUSKEGEE UNIVERSITY, COUNTY GOVERNING BODIES AND USDA COOPERATING

The Alabama Cooperative Extension System offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability

A goal for our growers is to not rely on fumigants to control insects in stored grain.

This is possible as growers take the right steps in storing their grain.

A few very important steps to successful Grain Storage are:

- (1) Clean and spray equipment before using it to harvest and handle your grain. Clean and treat empty grain bins with a residual insecticide. Treat the bins inside and outside and treat the pad for a five foot area around the bin. It is important to spray the entire surface of the bin, as far up as can be reached with the spray. There are many residual insecticides to choose from. Tempo 20 WF and Tempo SC Ultra are a good choice to start with. The Tempo SC Ultra is a little easier to handle than the Tempo 20 WP.
- (2) Wheat should be at 12 % moisture if storing for up to six months and 11 % if storing for 6 to 12 months. Corn should be at 13 % moisture to be stored 6-12 months. Soybeans should be 12 % to be stored 6-12 months.
- (3) Treat the entire grain mass as it is loaded into the bin. For wheat a good treatment is Storicide II. Another good choice is Pyronyl Crop Spray in combo with Diacon II. For corn Actellic 5 EC alone, or Pyronyl Crop Spray in combo with Diacon II is a good choice. Storicide II is not labeled for corn.
- (4) Level off the grain at the top of the bin.
- (5) Bins should be checked twice a month for mold and insects until temperatures drop. And then check, once a month. A grain bin probe is very helpful for this. A good one is around \$300. Many growers have improvised probes. Inexpensive probe traps placed in five evenly spaced locations in the top layer of grain to monitor insects can be used also. The important thing is to use the probes or traps to check for insects below the surface of the grain. By the time you see insects on the top of the grain, your infestation level is already very high.
- (5) Start aerating the bins when night temperatures cool down below 70 degrees F or so. It takes at least twelve hours of continuous aeration to force enough air through a bin to cool the grain to ambient temperature. With less powerful aeration fans it could take as long as 48 hours. When the night temperatures cool to less than 60 degrees F, aerate again until the grain temperature finally reaches 60 degrees F or lower. Insects are cold blooded and stored grain insects stop growing when it is below this temperature.

If insect levels get too high it may be necessary to use a grain fumigant. When using a fumigant it is extremely important to have bins air tight before and while treating. There are many trade names for the most practical EPA approved fumigant, aluminum phosphide to choose from. Extreme caution should be used when applying the fumigant. See ANR-1154, Fumigating Agricultural Commodities with Phosphine, for more information. The web site is <http://www.aces.edu/pubs/docs/A/ANR-1154/ANR-1154.pdf>.

Again this is a very short version on storing grain. There are many more products to choose from that are possibly equally as good, but difficult to list in a short article.

Wheat Straw: to Burn, Bail or leave on the Field?

Last year at this time Dr. Glen Harris, UGA Soil Scientist conducted a study on the value of wheat straw from its nutrient value to the next crop. This study concluded that wheat straw at last year's fertilizer price was worth \$62 in nutrient value if left on the field. At present, the prices of Nitrogen and Phosphorus have come down a bit. The price of Potash has remained the same and Potash is the major nutrient in the straw. This could be important information for growers in deciding whether to bail or burn or leave your straw on the field.

Stink bugs on Corn

As of today May 20, 2009 the stink bug numbers seem to be increasing. 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 2009 Corn IPM Guide would be helpful. The web site is: <http://www.aces.edu/pubs/docs/A/ANR-0500-A/VOL1-2009/corn.pdf>

Corn and Nitrogen: How much did I loose?

Dr. Eric Larson, MS Grain Specialist has an excellent news letter for those serious about wheat and corn production I highly recommend you subscribe. His May 14 news letter topic was regarding nitrogen loss resulting from saturated soils and fertility suggestions.

To add your address to the Corn and/or Wheat email list, please send a request to: elarson@pss.msstate.edu

Corn fungicides 2009 by Bob Kemeriat, UGA Extension Pathologist

Some field corn in the state is approaching tasseling growth stages. Growers want to know if the wet weather, coupled with the early reproductive growth stages mandates application of a fungicide.

1. The most important disease for corn growers in Georgia is southern corn rust. Southern corn rust does not over-winter in Georgia and must be reintroduced each season. Though the disease does favor extended periods of leaf wetness, if the spores are not here yet, then we will not have southern rust. With funding from the Georgia Corn Commission, we have developed southern rust sentinel plots around the state and as of today (26 May 2009) we have not found rust in our plots.
2. Last year, northern corn leaf blight was a problem in many fields and the spores of this fungal pathogen will over-winter in Georgia. The current weather conditions could lead to spread of this disease.
3. To date, we have not seen any rust or leaf blights in the state; however we have seen much herbicide drift injury.
4. Fungicide recommendations: Based upon recommendations from chemical companies, many growers are interested in automatically spraying their corn crop at first-tassel for both disease control and plant health benefits. My recommendation is to watch the fields and only begin spraying when there is a documented threat of southern rust (based upon sentinel plots, etc) or perhaps when northern corn leaf blight appears. I do not recommend spraying corn simply for the hope of a plant health benefit and corn growers cannot afford to spray more than necessary. In many years, I do not believe a fungicide is needed at all; it remains to be seen what 2009 will bring. Bottom line recommendation: If growers want to spray at first tassel, that is their choice and there is always the chance of plant-health benefits. My recommendation is to watch the corn crop and apply fungicides when disease threat is real.
5. Choice of fungicides: Growers who spray at first tassel should consider using a strobilurin fungicide. Although it is more expensive, a strobilurin fungicide will have a longer protective window than a triazole. Where disease is already present, grower should consider using a strobilurin/triazole mix.
6. Folicur (tebuconazole) is now labeled for use on corn. Though I have not used it before, I would expect it to be effective for growers against rust and leaf blight diseases and it is labeled for such.

Cotton

For those of you interested in further information on PhytoGen Cotton and DowAgriScience Products you may wish to call **Al Wright at (334) 726-0249**. In the May On The Farm News Letter, I had listed Wright's old cell phone number that is no longer in service.

Reflex 2 EC on Cotton: by Dr. Mike Patterson

Reflex 2 EC herbicide is to be included in the 2009 Cotton IPM Weed Recommendations. Reflex 2 EC from Syngenta is currently labeled for preemergence application on coarse textured soils (sand loam, loamy sand, sandy clay loam) in Alabama at the rates of 1 to 1.5 pints broadcast per acre. I believe it will soon be allowed on the fine textured soils of the Tennessee Valley in no-till situations where there is a good residue on the soil surface. Reflex is one of the herbicides we are using to combat glyphosate-resistant palmer pigweed in south Alabama and also has good nutsedge activity.

Cotton Thrips Management and Foliar Sprays by: Phillip Roberts, UGA Cotton Entomologist

Thrips are predictable insect pests of cotton and most cotton is treated with a preventive systemic insecticide at planting for thrips control. Preventive treatments will provide acceptable thrips control in many fields, however some will need a supplemental treatment with a foliar insecticide such as Orthene, Bidrin, or Dimethoate. Treatment for thrips is rarely necessary after plants have 5 true leaves and are growing vigorously. The threshold for thrips is when 2-3 thrips per plant are counted; especially when immature (wingless) thrips are observed.

Cotton seedlings are most vulnerable to thrips injury during early stages of development (1-2 leaf), especially when cool temperatures or other stress factors slow seedling development. As seedlings develop they become more tolerant to feeding and once they attain the 5 leaf stage and are growing rapidly, supplemental treatment with a foliar insecticide rarely provides an economic return. Automatic applications for thrips should be avoided. Addition of a thrips insecticide with glyphosate at the 5 leaf stage will rarely provide an economic return and may increase the risk of other pests such as spider mites and aphids.

When scouting for thrips, look closely for wingless or immature thrips. The presence of immature thrips suggests that the preventive insecticide is no longer providing control. Thrips eggs hatch in about 3-4 days and immature thrips will feed for about 6-7 days and then pupate in the soil. The threshold for thrips is 2-3 per plant. When observing seedlings for thrips injury, pay close attention to newly expanding leaves. Malformed, crinkled leaves are indicative of thrips injury. Excessive thrips injury will stunt plant growth and delay maturity. Severe infestations of thrips may actually reduce stands.

Cotton Research and Extension Report: The 2008 Cotton Research and Extension Report, has been posted on the UGA Cotton website, <http://ugacotton.com>. The publication includes summaries of various cotton research and extension trials.

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 particularly the Florunner cultivar. The Georgia Green and the York are the only small seeded peanuts presently being planted. Fifty 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.
6. It is expected that the cost of gypsum in 2009 and 2010 will be greatly reduced. If this is the case you may want to apply gypsum to every field in peanut production.

Dual Magnum vs. Generics: A Summary of UGA Research by Dr. Eric Prostko, UGA Weed Scientist

A frequent question is concerning the performance of generic formulations of metolachlor in comparison to the brand name sold as Dual Magnum. First of all, it is important to remember that the Dual Magnum formulation and generic formulations are not exactly the same. Dual Magnum contains about 88% of the *S*-isomer and 12% of the *R*-isomer of metolachlor. The generic formulations contain a 50:50 ratio of the *R* and *S*-isomers. The *S*-isomer is a much more active isomer. A complete listing of the various formulations of metolachlor can be found on **page 39** of the 2009 Georgia Pest Management Handbook. Over the past few years, UGA weed scientists have had the opportunity to compare the generic formulations of metolachlor to Dual Magnum. An abbreviated summary of this research is as follows:

- UGA Weed Science Research (10 data sets)
 - 43 individual rating dates (average of 3-4 replications/date)
 - Palmer amaranth and tropical spiderwort data
 - Dual Magnum better than Generics (14/43 = **32.6%**)
 - Generics better than Dual Magnum (1/43 = **2.3%**)
 - Dual Magnum = Generics (28/43 = **65.1%**)

Thus, this data can be used to address the following question:

Question: Do the generic formulations of metolachlor provide weed control equivalent to Dual Magnum?

Answer: According to UGA research, the generic formulations of metolachlor provided equivalent weed control **65%** of the time. Dual Magnum provided better weed control **33%** of the time. Generic formulations provided better weed control **2%** of the time.

Use of ELAST (dodine) for Leaf Spot Control in 2009: by Dr. Bob Kemerait, UGA Pathologist

Although not a new fungicide, Elast (dodine) received a new label for use on peanuts last year. ELAST is a "protectant" fungicide (meaning it is only effective if used prior to infection) for management of leaf spot diseases. Currently, ELAST is used at 15.0 fl oz/A for leaf spot control and when tank-mixed with tebuconazole, 12.8 fl oz/A. Peanut growers may consider using ELAST in 2009 primarily because it is one of the least expensive options this season.

From trials conducted at the University of Georgia over the past three years, ELAST has provided leaf spot control comparable to chlorothalonil when used preventatively. However, because ELAST is a new product and we still have much to learn, growers should exercise some caution if considering use of this product on large acreages in 2009. Reasons for this include: We have 30+ years of data on chlorothalonil,

only 3 years on ELAST. We understand when to use and when to be cautious with chlorothalonil under many different situations. We do not have the breadth of knowledge on ELAST and there could be some unforeseen issues in 2009.

1. We have a bulk of data on tank-mixing chlorothalonil with other products such as herbicides and insecticides. We don't have any information on tank-mix compatibility of ELAST with insecticides or herbicides.
2. Chlorothalonil has been assessed on many peanut varieties; this is not the case with ELAST. Though unlikely, there could be slight differences in efficacy or possible phytotoxicity when ELAST is used on different varieties.
3. Current field trials on ELAST have all been done in small plots; we do not have large plot data as of yet. And of course, we have not looked at ELAST under a wide-range of environmental conditions.
4. We do not have any peanut rust data for ELAST from Georgia.
5. Finally, though ELAST (dodine) is at lower risk for development of fungicide resistance than some others, resistance has developed to this chemistry for plant disease (not peanut thus far). Therefore, there is slightly increased risk for resistance issues with ELAST than with chlorothalonil.

ELAST is a welcome new leaf spot product for peanut producers and will likely be tried across the state in 2009. We will certainly have a greater amount of experience with ELAST after the coming season.

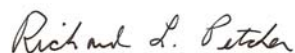
PEANUT IPM SCOUT SCHOOL ON JULY 16, 2009 (Thursday)

Event: A Peanut Integrated Pest Management Scout School is going to be held on July 16, 2009 at the Gulf Coast Research Extension Center. The event will start at 6:00 pm and end at 7:00 pm. We will gather at the peanut entomology research plots located along State Hwy 104 (south side). This is a free event for all peanut producers, field scouts, dealers and crop consultants.

Why should you come? If you are interested in knowing more about how to maximize peanut yields by reducing insect damage to your crop, then this is an event for you. If you want to know more about insect scouting techniques and want to see latest monitoring equipment, then you should definitely attend this event! Bring your friends along and see for yourself the latest peanut research efforts and learn about the new peanut IPM program.

Who to contact? Please contact Richard Petcher (251-202-1009) or Ayanava "Dr. A" Majumdar (251-331-8416, email: azm0024@auburn.edu) for more information about this event. Hope to see you at the event.

Again, I hope this information is helpful to you.



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