*What to Watch in the 2006 Season. D. Monks

*Hail Damage on Cotton. W. Birdsong

*2006 Cotton Scout Schools. R. Smith and B. Freeman

*Pre-emergence Herbicides Used “Non-Traditionally” For Cotton Weed Management. M. Patterson

*Alternatives to the High Cost of Nitrogen Fertilizers. C. Mitchell

*Commodity Crop Market Update, May 2006. B. Goodman

*2006 Cotton Calendar. D. Monks

*What to Watch in the 2006 Season. D. Monks

It has been a difficult start to this year’s season with wet conditions in northern counties and very dry conditions in central and southern counties. I had several reports during April of planting delays due to drought conditions and poor soil moisture. Our central and southeastern counties were running 2.5 to 4 inches of rainfall behind for the month of April alone. The results of this have been later plantings and very slow early growth in the fields that I have visited in central AL. Coupled with very wet and cold conditions for this time of the year, insect and disease pressure has also been present. We have experienced higher than normal thrips pressure and grasshoppers have been working on the tender seedlings due to a lack of wild food sources. Warmer weather will likely come soon but the conditions as of today (May 15, 2006) have cotton in cold, wet soil trying to survive.

Everyone knows well what the cost of planting cotton is today. Assuming that the seed count is 250,000 seeds/bag and that the bag costs in the neighborhood of $500 (with maximum seed treatments and technology fees), the price comes out to somewhere around 5 cents per seed (not counting the tech fee cap). Everything we use for our production needs to provide added benefits. Some of the questions that we need to pay special attention to this season are: 1) How does the new ‘Avicta’ seed treatment compare to Temik, Cruiser, and Gaucho Grande on a production scale? 2) How do the Flex varieties stack up against our current standards? 3) How do we utilize existing and
older technology to avoid the spread of herbicide resistance and preserve the Roundup Ready technology? 4) How can the newest technologies like precision ag make our operations more profitable?

We appreciate the support that we receive from the Alabama Cotton Commission, Cotton Incorporated, and the state’s cotton producers for our educational and research programs and hope to continue to work to make the cotton industry more profitable and sustainable.

---

**Hail Damage on Cotton. W. Birdsong**

Every year there are storm systems in the spring that bring an unwelcome by-product associated with the much needed rainfall and that is hail. Hail can certainly destroy many crops and severely damage others. Before you consider replanting or considering your cotton a lost cause, I would carefully evaluate the number of viable seedlings that survive this occurrence.

Usually, hail storms that bring extensive crop damage occurs when the cotton is small or a young seedling. First you should check the terminal bud or “growing point” of the cotton. If this has been left intact then the damage is minimal, although your field may appear to be a total loss. The cotton plant will likely recover and grow more foliage and soon your field will not even look the same.

If there are plants that have the terminal broken off and the young seedling has not produced at least one node, then cotton will likely not recover and replanting is the only option. If the young seedlings have produced at least one node, there is a good chance that the cotton will not die and therefore form a new terminal and continue to grow. In many cases this may lead to some of it being referred to as “crazy cotton”, if two or more growing points emerge. Usually “crazy cotton” will have diminished yield potential.

In many cases, hail damaged cotton is not a disaster and the cotton at these early life stages will recover and produce normal yields. The one thing that I would evaluate and determine is how many viable plants there will be per foot. If the hail diminishes this stand to less than 1.7 plants per foot, I would consider “inter-seeding” or replanting the cotton. Inter-seeding gives you the benefit of keeping your current stand of cotton and dropping a few more seed in the row to benefit yield potential.

Seeding rate studies here at the Wiregrass Research and Extension Center have shown a yield increase on average of 170 lbs of lint when stand population increases from 1.7 plants per foot to 3.33 plants per foot.

Hopefully, you will not experience any hail damage this year but do carefully evaluate the situation before making any hasty decisions and remember the replant options that many seed companies have if using their products. Do not forget that you must use
Monsanto brand of Roundup to get a technology refund. One point to remember, the technology “cap” is at 2.9 seed per foot for South Alabama and you can receive a technology refund if you plant more than this seeding rate but you still must use the Monsanto brand of Roundup.

If you need help assessing your fields, please call on the Extension System to help you with your decision.

*Alternatives to the High Cost of Nitrogen Fertilizers. C. Mitchell*

The modern, 21st Century, Alabama cotton farmer has few alternatives to the increasingly high cost of fertilizers. It’s kind of like alternatives to gasoline. There are some, but our society has become addicted to cheap fuel and it will be a major lifestyle change to adopt these alternatives. Since World War II, modern Alabama agriculture has also become addicted to relatively cheap, inorganic fertilizers. We have often used increasing rates of fertilizer nutrients to substitute for intensive management e.g., managing winter legumes as a source of N. No one really knows at what price or when fertilizer prices will stabilize but we are almost certain that they will continue to rise in the near future. So, what alternative does an Alabama cotton farmer have?

1) Avoid ammonium nitrate (34-0-0). This is absolutely the most expensive source of N. It is good and effective but at over $0.50 per pound of N, it really adds to the cost of production. Alternatives are liquid UAN solutions e.g., 32-0-0, 30-0-0, or 28-0-0+ S (~$0.40 per pound N). These are a mixture of urea and ammonium nitrate. The urea component is subject to ammonia volatilization losses if the solution is sprayed on dead vegetation such as in a no till situation. There are ways to minimize potential volatilization losses. It can be injected into the soil, cultivated into the soil, irrigated into the soil, applied within a day or two of rainfall, or applied through an irrigation system (fertigation). A chemical additive, Agrotain®, suppresses the urease enzyme which is responsible for volatilization losses. However, this adds additional cost to the nitrogen solution.

Dry urea (46-0-0, ~$0.36 per pound N) can be handled like ammonium nitrate but is highly susceptible to ammonia volatilization losses when (1) temperatures are high e.g., above 90°F, (2) applied to soil surfaces containing a lot of plant residue, (3) applied to alkaline soils (pH> 7.0), and/or (4) soil surface is dry and no rain is forecast for several days. Again, losses can be minimized by following the suggestions for UAN nitrogen solutions lists above. The cost of using Agrotain® with dry urea must be weighed against the cost of applying a little extra urea to account for potential volatilization losses.

2) Poultry litter (~ 3-3-2). Alabama produces enough poultry litter to fertilize every acre of cotton in the State. However, only a few cotton producers are taking advantage of this resource. Most who use poultry litter apply it at or before planting. A ton of litter will contain around 60-60-40 pounds total N-P₂O₅-K₂O. Most assume that around 2/3 of the
total N will be available to this year’s crop so a ton will supply around 40 pounds of available N. Most growers apply around 2 tons per acre (~80 pounds available N) and supplement the N with a side-dress application of ammonium nitrate, urea, or UAN liquid N. Auburn University’s standard N recommendation for cotton is 90 pounds total N per acre (± 30 pounds N).

3) Legume N. It’s too late for the 2006 crop but some cotton producers may want to plan ahead for 2007 and use the time-honored and proven technique of growing your own N in the form of winter annual legumes. Long-term research on the “Old Rotation” experiment at Auburn (circa 1896) indicates that a good winter annual legume can fix 100 to 150 pounds N per acre, more than enough N to produce 2+ bales per acre. However, growing a legume in a conservation tillage system requires timely planting and lots of management but it can be done, and it will definitely reduce fertilizer N use. Legumes are an excellent choice where soil test P and K levels have been built up to “high” from past poultry litter or fertilizer applications. Some legumes which have been tried include crimson clover, hairy vetch, common vetch, and lupins.

Just like there is no easy, cheap and quick solution to the high cost of gasoline, there is no easy, quick, and cheap solution to the high cost of fertilizers. Both situations are related to dwindling supplies and high demand for fossil fuels.

---

*Cotton Scout Schools. R. Smith and B. Freeman*

The 2006 cotton scout school dates have been set as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1</td>
<td>Autauga County Extension Office</td>
<td>8:30 a.m.-12:30 p.m.</td>
</tr>
<tr>
<td>June 6</td>
<td>Wiregrass Research &amp; Ext. Ctr. Headland, AL</td>
<td>8:30 a.m.-2:00 p.m.</td>
</tr>
<tr>
<td>June 13</td>
<td>Tenn. Valley Res. &amp; Ext. Ctr. Belle Mina, AL</td>
<td>8:30 a.m.-2:00 p.m.</td>
</tr>
</tbody>
</table>

Anyone is invited;
There is no pre-registration or sign-up;
There is no charge or registration fee;
For questions call Leisha at 334-844-6391.

A toll-free “800” entomology hot-line (1-800-458-3738) will again be available this season with a weekly update of insect conditions. Information on insects and their control will be highlighted on this toll-free line.
Pre-emergence (before crop emergence) herbicides have been around for a long time. These products have traditionally been applied to the soil surface immediately after planting. Diuron (Karmex, etc.) has been used in cotton since the early 1950’s. Several other pre-emergence herbicides have been used in cotton for well over 30 years. These products still work and most of them are still available. Fluometuron (Cotoran, etc.) was once used on greater than 80 percent of the cotton grown in Alabama. We have reduced our reliance on these products due to the development of significant post-emergence weed control options. Obviously, the greatest of these post-emergence options is Roundup Ready technology.

Over 90+ percent of our cotton crop in Alabama and the Southeastern U.S. is grown in a RR variety. Is there a place for these older pre-emergence herbicides in our current system? I think the answer is YES. Recent developments in herbicide resistant weeds lead me to believe that these older products will become more valuable in the coming years. Part of the reason for this is the fact that many agricultural chemical companies are not investing in traditional herbicide discovery programs like they did in previous years. Since new herbicides for cotton would take several years to bring to market, the pressure from RR technology discourages companies from making large investments in new herbicide discoveries.

How will or should these older, soil-applied pre-emergence herbicides be used, keeping in mind that economic pressures are forcing farmers to cover more acres quicker than ever before? First, we should be thinking of using these products in a different time frame than the traditional, behind the planter method. Some treatments can be applied with drop nozzles between the cotton rows without risk of significant crop injury. Fluometuron can be mixed with glyphosate, MSMA, or Staple and applied as an early post-emergence directed treatment to 3 to 4 leaf Roundup Ready cotton. Because fluometuron does not cause significant foliar injury to cotton, these treatments can be applied more liberally than other pre-emergence herbicides like prometryn (Caparol, etc.) or diuron that do have significant foliar activity and should be directed to the base of cotton that is at least 10 inches tall.

Metolachlor (Dual Magnum, etc.) has pre-emergence activity on a number of annual grasses, pigweed, and yellow nutsedge. Most soils in the Southeastern U.S. are too sandy to allow the pre-emergence use of metolachlor behind the planter. Stand loss will usually result from using metolachlor pre-emergence. However, adding Dual Magnum to glyphosate (sold as Sequence by Syngenta) and applying this mixture over-the-top of RR cotton in the 2 to 4 leaf stage will provide foliar weed control while still providing pre-emergence activity. Prometryn plus Envoke (sold in mix under the trade name Suprend) can be post-directed to cotton that is 8 to 10 inches tall and provides foliar as well as significant pre-emergence activity after application. Likewise, diuron or fluometuron plus Envoke can be post-directed to cotton that is 8 to 10 inches. Some other herbicides that have significant soil-residual activity include linuron (sold as Linex and as Layby...
Pro in combination with diuron), and Valor. These products can severely injure cotton if not applied properly. Cotton a minimum of 16 inches tall is needed for Linex or Valor applications. Glyphosate or MSMA is usually included in mixture with these materials for broad-spectrum foliar weed control.

Let me say that no pre-emergence herbicide will provide significant residual activity unless rainfall or overhead sprinkler irrigation is received within a 7 to 10 day window after application. Generally, in RR cotton, an early (1-2 leaf) application of glyphosate should be applied prior to the Layby Pro or Valor mixtures mentioned above. This will hopefully kill the small emerged grasses and broadleaf weeds before the residuals are applied.

---

*Commodity Crop Market Update, May 2006.  B. Goodman*

The cotton market has been in a slump the last few weeks, and it hasn’t been because of too much production or not enough consumption. In fact, there is plenty of consumption, world demand is strong and the experts expect that China by itself will use over 46 million bales of the 05/06 crop and about 50 the next year. There isn’t a surge in production expected either. World stocks are forecast to fall about 10 million bales over the next 2 years. The fundamentals of the cotton market are looking pretty bullish to me. The problem - low prices - in the cotton market has been a product of technical trading. About half the business done on the futures market is transacted between people who sell cotton they don’t have to others who buy cotton they don’t want. These speculators don’t care which way the market goes, so long as it goes somewhere. Lately, they have been pushing it down. I expect they will push it up before long. Don’t be in a hurry to price your 06 crop just yet.

In the soybean market, it is the fundamentals that are causing the low prices. But that could all change. Although supplies of beans are currently termed “burdensome”, with a short crop and our current high demand we could see a significant revision in those fundamentals this year. On the other hand, the corn market is going great guns. I had a call the other day from a farmer who asked about marketing corn and I asked him how many times during his career he thought he would get a chance to sell $3 corn. The answer is “not many”. I think right now is a good time to market corn. If you want to wait, at least set a floor. Decide today that if the price of corn goes below some number, you choose it, you will sell your corn. Don’t get into the mindset that “I could have gotten $2.80 last week, so it must still be worth $2.80 and I won’t take less”. You could end up taking less than $1.80. This is the kind of situation where it is important to have and stick to a marketing plan.

In general, the dollar is weak, and trade is good. All these factors push crop prices higher. Interest rates are rising, which is bad for business, and energy costs are high which traditionally might be considered a negative. However, in my opinion, we are entering the “biofuels era” where higher oil prices might mean higher crop prices, not lower.
**Practical advice for crop marketing in 2006:**

Hang in there on the cotton. Booming trade and poor crop weather in the US are positive factors, it is too early to lock in much of the crop. All the fundamentals point higher. Delay pricing soybeans. Watch the market, if you get a shot at $6.40 locally I would take it for sure. Futures are running $6.30 right now, so we are talking about a 40-50 cent increase. Later in the year, I might settle for less. You might have to settle for a lot less so pay attention.

The corn market is looking good right now and may be peaking. We have had a tremendous run-up. In my opinion, given that it is not my money we are dealing with, I think you should lock in all the corn you feel comfortable selling, and the crop is looking good in Alabama, so far as I can tell.

---

**2006 Cotton Calendar. D. Monks**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Contact Person*</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1</td>
<td>Cotton Scout School, Autaugaville Ag Ctr</td>
<td>Ron Smith, L. Kuykendall</td>
</tr>
<tr>
<td>June 6</td>
<td>Cotton Scout School, Headland (WGREC)</td>
<td>Ron Smith, W. Birdsong</td>
</tr>
<tr>
<td>June 13</td>
<td>Cotton Scout School, TVS, Belle Mina</td>
<td>B. Freeman, R. Smith</td>
</tr>
<tr>
<td>July 19</td>
<td>Precision Ag Farm Tour, Pickens Co.</td>
<td>Pickens County Ext. Office**</td>
</tr>
<tr>
<td>August 3-6</td>
<td>ALFA Commodity Tours, Huntsville</td>
<td>ALFA</td>
</tr>
<tr>
<td>August (TBD)</td>
<td>East Alabama Cotton Tour</td>
<td>Jeff Clary, L. Kuykendall</td>
</tr>
</tbody>
</table>

*For more information on this year’s cotton scout schools, call Leisha at 334-844-6391.

**For more information on the Precision Ag Farm Tour, call the Pickens County Ext. Office at: (205) 367-8148.

There are two websites that you may be interested in visiting:
Alabama cotton information: [www.alabamacotton.com](http://www.alabamacotton.com)

*Reference Number: PSK-5-06, D. Monks and C. Burmester, editors

---

Use pesticides **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label.
The pesticide rates in this publication are recommended only if they are registered with the Environmental Protection Agency and the Alabama Department of Agriculture and Industries. If a registration is changed or cancelled, the rate listed here is no longer recommended. Before you apply any pesticide, fungicide or herbicide, check with your county Extension agent for the latest information.

Trade names are used only to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.

For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

Issued in furtherance of Cooperative Extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, and other related acts, in cooperation with the U.S. Department of Agriculture. The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) 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.

© 2004 by the Alabama Cooperative Extension System. All rights reserved.