Some yellowing of cotton has been seen in northern Alabama. Although originally thought to be a nitrogen deficiency, plant tissue samples have indicated that it could be a marginal sulfur deficiency. This is very unusual for these northern Alabama soils and seems to be associated with reniform nematode damage.

In 2000 I applied additional ammonia nitrate to a severely stunted reniform damaged cotton area. To my surprise the cotton quickly turned a pale yellow color. I finally determined that I had induced a sulfur deficiency by causing an imbalance between nitrogen and sulfur. The nematodes were limiting root growth restricting the cotton plants from obtaining sulfur from the subsoil.

With rainfall and nematodes limiting root growth this year I am seeing small areas that are showing similar sulfur deficiency symptoms in fields that have received side-dressed nitrogen. I suspect these will be the areas with the highest reniform nematode levels.

In northern Alabama we have no experience in trying to correct this kind of deficiency. In most cases I believe the roots will finally reach down and pick up enough sulfur to correct the problem. As we learn more about this I will keep you informed.

We are having similar problems in south Alabama due to the continued rainfall that has fallen. There seems to be two situations that are occurring. The first situation is cotton that is growing very rapidly and is in need of growth regulation with mepiquat chloride and weed control with herbicide treatments. The soil has been so wet that ground operations have been delayed. The second situation involves cotton that has been surviving in saturated soils and is not growing. Typically the root systems on these plants are dark and reduced due to soil borne diseases and may have small, white feeder roots growing just below the soil surface. These roots are the plant’s effort to find unsaturated conditions in which to grow.

Bill Gazaway and Kathy McLean (Auburn University plant pathologists) have also found high levels of reniform nematodes in some central Alabama fields. Another problem is that these situations are occurring in the same fields, making management decisions a nightmare.

Fertilizer application, directed herbicide treatments, and growth regulation are all in question at this point. We have similar problems that were described for north Alabama in
that nitrogen and sulfur levels are now in question. Some of the producers that I have spoken with in the past week are applying fertilizer with both nutrients in the mix. In fields with small cotton that is several weeks old and behind in development, growth will not really begin until the soil drains and begins to dry. We have a real problem with the root systems in many fields that will get better only if we see drier conditions. Drought later this summer will be devastating due to the limited root system.

*North Alabama Update. C. Burmester*

The north Alabama cotton crop is as variable as I have seen in many years. Some cotton has begun to bloom but other cotton is at the four-leaf stage. A big problem is that this may be in the same field. This variability has made weed control very difficult and will complicate insect, PGR, and defoliation applications.

Cotton fields made good improvement the last week of June with warmer and drier conditions in most areas. Aphids have been a problem in some fields and plant bugs have been moving into the older cotton. Spider mites have also been increasing. Cotton damage from reniform nematodes is again being seen in many fields. The reniform nematode damage is often seen in spots with areas of tall and short cotton along the same row. Cotton stunted by the nematodes and also in low wet areas is struggling to grow because the root system is unable to expand.

Another growing problem is the amount of horseweed in many fields. The glyphosate resistant horseweed has spread across the entire Tennessee Valley in one year. Although directed or hooded sprays have taken them out between the rows, many remain in the drill. We will probably still be seeing these weeds at harvest.

At this writing rainfall from tropical storm Bill is again bringing rainfall to north Alabama. After this system moves through, much of the older cotton should be looked at closely to determine plant bug levels and the need for mepiquat chloride treatment to control vegetative growth. Maturity of the younger cotton will also be a concern in some fields. Generally in north Alabama, cotton needs to begin squaring by the 10th of July to allow sufficient time for boll set in August.

*Cotton Insects at Mid-Season. R. Smith*

The cotton insect situation in July will likely consist of aphids, plant bugs, and the bollworm/budworm complex. Many fields will incur stress from aphid populations before the naturally occurring fungus occurs. Control with Trimax, Intruder, or Centric may be warranted, especially if plant bugs are numerous and causing square damage or loss. Remember, we monitor plant bugs post-bloom by the percent “dirty” bloom and the presence of adult and/or immature plant bugs in blooms or on the plants. The worm activity may begin the first week of July in the southern counties. If so, it will likely be the budworm species. However, if the egg laying continues for 10-14 days it may shift to the bollworm species before the activity ends. If damaging numbers occur on conventional cotton we must select the appropriate chemistry for the species present (new chemistry for budworms and pyrethroids for bollworms.)
*Cotton Lay-by Herbicides and Other Topics. M. Patterson*

Hopefully your cotton is ready for a lay-by herbicide application by the time you get this addition of the Picksack. Lay-by is the term for the last herbicide application applied to the crop before harvest. This treatment should kill every emerged weed growing in the rows and between rows and if needed provide some residual control to keep future-germinating weeds and grasses from becoming a problem later. Sometimes it’s hard to get all the above without either crop injury, less than optimum weed control, or loss of residual activity if rainfall does not follow the treatment within a reasonable time (5 to 10 days). Because so much of our cotton in Alabama is Roundup Ready (>90%), many of the lay-by treatments will probably go out mixed with glyphosate (Roundup, Touchdown, etc.). This is not a bad idea, since glyphosate works on a lot of tough weeds and can be mixed with a variety of other herbicides to provide residual control. Mixtures of glyphosate with prometryn (Caparol, etc.), fluometuron (Cotoran, etc.), linuron (Lorox, etc.), or diuron (Karmex, etc.) can be used to obtain burn-down as well as residual control. The residual or half-life of these materials is variable and the one you should use might depend on how late in the season they are sprayed. Half-life of these materials is prometryn (30 days), fluometuron (45 days), linuron (60 days), and diuron (90 days). If spraying in July, then you may want to stay away from diuron since it can carry over to a small grain planted following cotton. Other materials can be mixed with glyphosate that do not provide much residual control but help with special weed problems like morning glory. Aim, Harvade, Cobra, and Goal are all effective on larger morningglories but provide very little residual control. MSMA is a good tank-mix partner for all the lay-by herbicides mentioned above. MSMA does not provide residual control, but heats up most mixes and has a different mode of action than glyphosate. Paraquat (Gramoxone or Boa) can be used to provide the contact kill when mixed with residual herbicides at lay-by, but this material must be applied under a hood and all spray kept off the cotton stalk and foliage. Spraying over-the-top now should be done with Staple (up to 60 days prior to harvest), or a postemergence grass herbicide like Assure, Fusilade, Poast, or Select.

Generic herbicides are being used in many cases now. I have heard of some growers even buying through the Internet. Generally these herbicides work well although some may not have a surfactant added. I have had horrible generic formulations in the past that did not mix well in the tank and needed so much agitation that you couldn’t stop for lunch without fear of never getting the mix in solution again. Although name brand herbicides often cost a few dollars more, the company usually has sales and service representatives on the ground in case you have a problem. Often, the name brand material is more concentrated than the generic and it is hard to figure the per acre cost of different products. If the name brand is only a couple of dollars per acre more than a generic, it may be worth this for having help when you need it.

* Cotton Market Outlook. B. Goodman*

The latest figures from USDA are out and they seem to explain some of the strength we
have been seeing in the cotton market lately. In short, production is lower, world consumption and US exports are up. In the latest report, USDA estimated that the US would ship overseas 11.4 million bales out of last year’s crop. It was a big deal to have a nearly half a million bale increase in this estimate come so close to the end of the year, but exports have been running at a record setting pace lately. Apparently there seems to be a record demand for US cotton as foreign consumption continues to exceed production. Also, estimates for exports of the 2003 crop were raised to 11.5 million bales, and estimates for our ending stocks for last years crop were reduced to 5.9 million bales. Just a few months ago we were worried that we would end up with nearly 10 million bales on hand in a couple of years, now the tables have turned. USDA forecasts that this year (for the 2003 crop) ending stocks will fall even more to 4.5 million bales. That would be a 24 percent drop in ending stocks in a single year, and I think it would have to trigger a big price move. World ending stocks are also expected to fall, by 9 percent, to around 33 million bales.

Also figuring in the market are current US crop conditions. We have had some tough weather this spring, and overall the US crop is only rated mostly average. A pretty large piece of it is rated "poor" and the crop condition reports reflect that it is a little bit behind average so far. These reports will become more important to the market as the season progresses. The big merchants all make their own estimates, but these USDA reports are also watched pretty closely.

In a nutshell, it still looks to me like we might see some better prices later on this year. I would probably hold back a little. Market cotton if it fits in your plan on any of these market or weather rallies, but don't get too aggressive in selling just yet. There appears to me to be a lot of upside potential yet. It is time to start watching the market closely. I believe it will be worth your while to do so.

*2003 Cotton Calendar. D. Monks*

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<tr>
<th>Date</th>
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<tr>
<td>July 16-18</td>
<td>Southern Seedsmen/Crop Management Annual Conference, Huntsville</td>
<td>Charles Mitchell</td>
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<tr>
<td>July 31</td>
<td>TN Valley Research/Ext. Field Day</td>
<td>Chet Norris</td>
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<tr>
<td>July 31-Aug 3</td>
<td>ALFA Commodity Conf., Mobile</td>
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<td>Aug 8</td>
<td>East Alabama Cotton Tour</td>
<td>Jeff Clary</td>
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If you are interested in weekly updates for the state’s cotton crop, the state agricultural
statistics reporting service has a website update at:
www.nass.usda.gov/weather/cpcurr/al-crop-weather
Our website also has other cotton information including DD60 accumulation at:
www.acesag.auburn.edu/dept/cotton
*Reference Number: PSK-7-03, D. Monks and C. Burmester, editors