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CROP SITUATION. (Brown) The first official cotton production estimate was released August 11 based on data collected through August 1. From 1.4 million acres planted in Georgia, USDA predicts a harvest of 1.75 million bales from 1.33 million acres for an average yield of 632 lb/A. Recent showers have sporadically covered the state, but the heat and drought of June and July have taken a serious toll, particularly in central and southwest Georgia. While there are pockets of good cotton, there are acres that will not recover. Rains have brought relief to late-planted cotton and to growers managing irrigation, but August showers have also contributed to the initiation of boll rot in cotton beginning to open. Overall, harvest will come QUICKLY. Crop maturity is advancing rapidly as a result of persisting high temperatures.

The following is a prediction admittedly jaded by recent travels across troubled areas where much of the non-irrigated crop is terrible and seemingly beyond recovery. It would not be surprising for crop abandonment to reach 200,000 acres or more with actual production falling below 1.5 million bales and 550 lb/A.

HARD DECISIONS ON TERMINATING AND HARVESTING A BELOW AVERAGE CROP OR GAMBLING ON A LATE CROP. (Brown) Drought and heat have severely affected the 2006 crop. Both irrigated and dry land fields are popping open as the crop swiftly progresses toward maturity. Recent showers have not only revived the appearance of the crop (the foliage has perked up) but also re-started the reproductive cycle in some fields. In these same fields there is

open cotton and a new crop of squares, blooms, and young bolls. While the appearance is improved, unfortunately, the final outcome may not be different.

It is rare if not almost impossible to harvest both a “top” and a “bottom” crop. It is an EITHER / OR choice. Waiting for a second crop to materialize, mature, and open, leads to loss and degradation of most bottom bolls. For a late top crop to mature requires sustained favorable conditions, which means frequent rainfall, moderate temperatures, and probably a late frost.

How can a grower choose which crop to take? This is sometimes a difficult decision, but here are a few guiding principles.

- For yield estimates, a count of 10 to 12 bolls/ft approximates 500 lb/A. Bolls size and weight have likely been reduced by stress, so the larger number should probably be used for the 2006 crop until proved otherwise.
- The last effective bloom date for south Georgia is around September 5 to 10. A “normal” crop requires a minimal bloom period of 3 to 4 weeks, suggesting that a crop must be actively fruiting (blooms plus squares) at least by mid August to have reasonable prospects, given historical temperatures in September through November.
- There is a significant cost of harvesting cotton, and at some level, the cost of picking exceed returns. See the associated article by Don Shurley.
- Crop value is likely to be reduced by deductions associated with short staple and high micronaire. Of course, this is a prediction that will be adjusted as the crop is harvested and graded.

From these principles, here are some easy decisions.

(1) If the expected yield from mature bolls is estimated at 400 lb/A or so, prudence suggests that a grower proceed with defoliation and harvest. Second growth juvenile foliage may require extra consideration – the use of thidiazuron (Dropp, etc.) or ppo-inhibiting products such as Aim, ET, or Resource. Keep in mind that the ppo harvest aids will NOT prevent subsequent regrowth, so follow-up, quick harvest is paramount. There are many fields that will average slightly below a bale to the acre. As the bottom boll(s) opens, the remaining few bolls are often sufficiently mature for application of harvest aids. Maturity determinations such as counts of nodes above cracked boll (NACB) equal to 5 or 6 and the sharp knife / darkened seed coat method provide confirmation of this.

(2) If the mature boll crop is obviously minimal (i.e. 1 or 2 bolls per plant) and there is a resurging crop of squares with a few blooms, there is little to risk in waiting and seeing what happens. Let it go. The few bolls present do not constitute an economical yield, and thus there is nothing to lose. Sustained favorable conditions provide an outside possibility of a late crop.

The not-so-easy decisions are those in-between situations. Determination of how the crop is “weighing” and the severity of quality deductions are important factors in the decision process. The former can be estimated through hand picking and/or trial machine harvest in representative fields. Matching harvested weight with boll counts can sharpen yield estimates. Data from the USDA Classing Office in Macon can be referenced on a weekly basis to obtain general trends, but realize that the earliest samples are often typically below average in quality.

ECONOMICS, CROP INSURANCE, AND DECISIONS ON THE COTTON CROP. (Shurley) USDA currently estimates that 70,000 acres (5%) of the Georgia cotton crop will not be harvested (1.4 million planted and 1.33 million acres to be harvested). Opinions vary on whether this is high, low, or about right. The state average yield is currently estimated at 632 lbs/acre—down from 849 lbs/acre last year. Recent rains may have been temporarily beneficial (provided much needed moisture to the non-irrigated crop and welcome relief from pumping costs for the irrigated crop) but some of the state's non-irrigated crop may be beyond help.

The yield situation and outlook can vary greatly from farm to farm and even field to field on a farm. Yield potentials may be so low, that some farmers are considering abandoning and not harvesting the crop. Some acres have already been abandoned and plowed up. The decision on what to do is not easy and should not be approached casually. For producers facing this decision, factors that must be taken into account include:

- Current assessment of yield
- Final/actual yield
- Costs saved if the crop is abandoned
- Cost incurred if the crop is abandoned
- Costs incurred if the crop is continued and harvested
- Crop insurance coverage
- Price of cotton

When a producer decides to abandon or not harvest the crop, he/she is essentially saying “I would rather receive a crop insurance indemnity rather than make the crop”. Before abandoning the crop, the producer should first and foremost contact their crop insurance provider/agent. The insurance provider will then assign an adjuster to work the loss. The adjuster will follow approved RMA (USDA Risk Management Agency) procedure to determine the yield potential of the crop.

Producers should not abandon and destroy the crop and/or decide to not harvest the crop without first giving an adjuster the opportunity to access the crop. Based on the adjuster's appraisal, the producer can then, and only then, make the best economic decision on what to do with the crop.

While there is no firm policy, FCIC (Federal Crop Insurance Corporation) generally operates under the assumption that blooms set by the first week of September will be able to mature and contribute to yield. Prior to this time, however, the adjusters appraised yield will be based on stand establishment rather than boll count (which may not be the best early test of yield).

If the producer agrees with (is willing to accept) the appraised yield, the crop may be “released” (meaning the crop may be put to another use—abandoned, destroyed, grazed, etc.) and the claim is settled. If the producer feels the appraised yield is too high or if the potential of the crop cannot be determined, the producer can either (a) continue with production or (b) can leave representative strips which must be managed and will be used for a later appraisal. If choosing to leave representative strips, the crop is not released and the claim is still open until a final yield is determined.

It is profitable to abandon/not harvest the crop only if the net return from abandonment is greater than the net return of continuing production.

If abandoning the crop, the net return will be the crop insurance indemnity paid, plus any fees saved (such as BWEP and seed technology fees, if applicable), minus the costs of abandoning and destroying the crop, minus the costs of maintaining representative strips, if applicable.

If continuing production, the net return would be the crop income received, plus crop insurance indemnity, minus the costs of continuing production and harvest of the crop.

The economics of the decision hinge largely on the amount of covered loss, the fees saved and costs of continued production, and the value of actual production if continued and harvested. Fees saved and costs of continued production, and thus the decision and economics to abandon the crop or not, depend in part on the time at which the decision must be made.

For example, the lower the appraised yield and the higher the fees and costs to be saved by abandonment, the more likely it will be that abandonment will be the most profitable alternative. Depending on the time of the decision (at what point in the growing season), the lower the costs and fees to be saved, the lower the appraised yield will have to be.

The main factors in whether to abandon the crop or not are:

- the level of crop insurance coverage and appraised yield
- fees that could be saved (particularly seed technology fees as they tend to be expensive)
- the final/actual yield if the crop is produced
- the time of the season (this will determine amount of costs remaining if production is continued)
- harvest costs

As the production season progresses, more and more costs become “sunk” (thus irrelevant to the decision) and fees may not be refundable. Thus, there comes a “point of no return” at which it may be best to continue production. The yield at which the net return from production would equal the net return from abandonment can be called the “Threshold Yield”. At this now rather late point in the season, the Threshold Yield may be lower than you might think.

Another factor to consider would be Countercyclical payments (CCP). The maximum CCP on cotton is 13.73 cents per pound when the US average market price (MYA) is equal to or less than the loan rate (52 cents per pound). When the MYA increases above 52 cents, the CCP will decline. One “hedge” against the decline in CCP is to have cotton production to sell at the higher price (to offset the decline in CCP). If production is abandoned, there is no market commodity to sell and thus no protection against a possible decline in the CCP.

A more detailed analysis and Excel spreadsheets have been developed and available to assist county agents and producers with these decisions. These materials are available through the Department of Agricultural and Applied Economics Extension web page <http://www.ces.uga.edu/Agriculture/agecon/agecon.html> or the University of Georgia Cotton page at www.ugacotton.com.

PALMER AMARANTH TROUBLING YOU? (*Culpepper*). Recently, we have had a tremendous number of grower calls regarding Palmer amaranth problems in cotton. This season has been quite challenging for the cotton crop; however, Palmer amaranth has continued to strut its stuff growing 2 inches per day in moist conditions and growing a ½ inch per day in drought conditions. Problems with this pest will increase rapidly as glyphosate resistance becomes more common.

During 2005 when glyphosate-resistant Palmer amaranth was confirmed in central Georgia, we had hoped to isolate and then eliminate the problem. Unfortunately, we have now confirmed this resistant pest in nearly 50 fields located throughout Macon, Taylor, and Dooly counties and are currently confirming resistance in other counties, even in South Georgia.

Managing non-glyphosate-resistant Palmer amaranth can be problematic but for growers fighting glyphosate-resistant Palmer amaranth, management is a nightmare. It is imperative that ALL growers who do not have this glyphosate-resistant pest take ALL preventative measures possible in an effort to delay its infestation.

How bad could this become? Well, I was curious what inputs would be required to completely control a mixture of resistant and sensitive Palmer amaranth in a grower's cotton field. So, a grower in central Georgia provided us with such an opportunity in a 70 acre dry land cotton field. This specific grower's field contained a ratio of 75% glyphosate-sensitive and 25% glyphosate-resistant Palmer amaranth. As of today, we have \$48 in herbicides (not including application cost) plus an additional 204 hours of hand weeding, and it is only mid August.

This fall we will release our most effective recommendations for managing Palmer amaranth for the 2007 crop, but for now it is essential that growers realize how devastating this pest will become and prevent possible resistant infestations from going to seed (yes, that means hand removal of the plants including roots and then carrying them from the field.....and no don't spray Staple and/or Envoke overtop of this huge pigweed). Remember, each female Palmer amaranth can easily produce 500,000 seed per plant so they need to go! Contact your local Extension Agent if you are concerned about glyphosate-resistant Palmer amaranth infesting your field if your field is outside of Macon, Dooly, and Taylor counties. If Extension agents have legitimate concerns of glyphosate resistance in these fields then we will try our best to test them through a greenhouse screening program. Of course, we are limited on space and labor but will do all that we can.

DEFOLIATION GUIDELINES (*Jost and Brown*) The 2006 Cotton Defoliation Guidelines are now available and posted on the UGA Cotton Web Page at www.ugacotton.com. There are several new products available this year, each is discussed below.

FirstPick will replace CottonQuik in the market place. According to DuPont representatives, the newer formulation of FirstPick addresses the corrosive issues encountered with CottonQuik. The use rates of FirstPick are identical to the old CottonQuik. MFX is a 2 lb/gal ethephon material. UGA Extension has had limited experience with MFX and no experience with FirstPick. Both should be used with caution until we become more familiar with their characteristics. Setup 6SL, marketed by MANA is a new 6 lb/gal ethephon formulation.

Resource is a new defoliant from Valent containing the active ingredient flumiclorac. This defoliant has a similar mode of action as that of Aim and ET. Use rates range from 4 to 8 oz/A and a Crop Oil Concentrate should be added. UGA Extension has limited experience with product.

Adios is a water based formulation of thidiazuron and diuron, the same active ingredients in Ginstar. The use rates of Adios and Ginstar are identical. The primary difference between the two products is that Adios is a water based formulation, while Ginstar is an EC. While preliminary data gathered in 2005 indicates that Adios performed similarly to Ginstar, UGA Extension has looked at this product for one year only.

Finally, Gramoxone Inteon (2 lb/gal paraquat) and Firststorm (3 lb/gal paraquat) are also new in the harvest-aid market for 2006.

A defoliation cost calculator will again be available on the ChemNut web site at www.chemnut.com.

INSECT SCOUTING PAYS (*Roberts*) Insect pests populations vary significantly by location. This occurs to a degree each year but may be more pronounced this year than during recent years. Some fields have not required treatment (based on thorough scouting) to date whereas others may have required treatment with insecticide multiple times. A good scout can help growers make good decisions when and if individual fields require treatment. During periods of heavy insect pressure, insect sprays can be properly timed so as to achieve the best control for an insecticide input (i.e. receive more bang for the buck) thus increasing efficiency. During periods of low insect pressure, sprays will not be needed thus providing cost savings.

Stink bug populations are low to moderate in most areas, especially when compared to the 2005 season. We have received numerous questions as to why the stink bug numbers are low. Unfortunately, we do not have a definitive answer and reasons for the low populations are speculative. One plausible explanation is that suitable host plants (due to a dry spring and summer) were not available in large numbers for stink bug populations to build. Very high infestations of stink bugs were present during 2003 and 2005; both of these years had rainfall patterns conducive to both wild host plant and crop plant growth. Caterpillar pests such as corn earworm, tobacco budworm, fall armyworm, and beet armyworm are also erratic at this time.

Heavy pressure was observed in several locations during July, but numbers are generally low to moderate at this time. Scouts should remain vigilant in pest monitoring procedures until the crop is relatively safe from insect attack.

Determining when to terminate insect controls can be challenging in some fields but a few basic considerations will assist with this decision. When evaluating a field a grower must first identify the last boll population which will significantly contribute to yield. Once the last boll population is determined the boll development or approximate boll age should be estimated. Depending on insect pest, bolls are relatively safe from attack at varying stages of boll development.

The table below lists selected insect pests and accumulated DD60s past white bloom (and approximate boll age in days) which bolls need to be protected. It is assumed that the field is relatively insect pest free when the decision to terminate insecticide applications is made.

Insect Pest(s)	DD60s past white bloom	Approx. Boll Age (days)
Plant Bugs	300	15
Corn Earworm Tobacco Budworm	350	18-20 bolls fully sized
Stink Bugs	450	25
Fall Armyworm	bolls mature	bolls mature
Foliage Feeders soybean looper beet armyworm southern armyworm	bolls mature	bolls mature
Sucking Insects whiteflies aphids	harvest (honeydew accumulation on lint)	harvest (honeydew accumulation on lint)

GROWERS SHOULD PLAN NOW FOR NEMATODE MANAGEMENT IN 2007 (*Kemerait*) As bolls continue to develop in Georgia's cotton fields and the crop begins to approach harvest, symptoms of damage from nematodes become increasingly obvious. Damage from nematodes is often apparent as stunted plants and premature cutout. Where damage is the result of the southern root-knot nematode, growers who carefully dig stunted plants from the ground will likely find the roots covered with characteristic galls.

Growers can get an early start on nematode management in 2007 by noting and documenting where damage occurs in a field. Growers who are not sure if the stunting, premature cutout, etc., is really the result of nematodes can submit soil samples and root samples from the problem areas to a diagnostic lab for confirmation. (Note: growers should also submit samples from "healthy" areas for comparison.)

By noting the location and severity of nematode damage in a field at this time, growers can have a better idea where to treat with nematicides in 2007, or perhaps the grower may decide to rotate away from cotton to a non-host crop in that field next season.

As of 2006, growers have the option of using nematicides such as Telone II, Temik 15G, Avicta Complete Pak, and Vydate C-LV for the management of this pest. Although each of these products can be used to manage nematodes in a field, some are more powerful (and more expensive) than others. Therefore, growers who make the effort to study and evaluate the true threat of nematodes in a field, as evident at the end of the season, can make a better decision on the best nematicide to use next year. After all, growers need not only consider the up-front cost of the nematicide, but also the value of the crop that can be produced with effective management of nematodes.

GEORGIA QUALITY COTTON AWARD (*Jost*) The Georgia Quality Cotton Awards will again be given in 2006. Nomination forms will be delivered to all University of Georgia County Agents who will serve as the primary nominators. Forms can also be downloaded from the UGA Cotton Web Page at www.ugacotton.com. The fact that the Georgia crop has faced its share of challenges this year adds even more importance to this award. It is imperative that we continue to show that quality cotton can and is produced in this state.

MONSANTO ACQUIRES D&PL. (*Brown*) On August 15, 2006, Monsanto announced an agreement to acquire Delta and Pine Land Company (D&PL) for \$1.5 billion. Monsanto is the leading transgenic technology provider in cotton and D&PL is a leader in cotton cultivar development. The announcement indicates that Monsanto will probably divest its Stoneville cottonseed business to comply with antitrust issues. Merging of these organizations will no doubt require significant time. Even more intricate will be dealing with the various legal and contractual matters, including the arrangements D&PL has with other technology providers such as DuPont and Syngenta. These decisions will have weighty effects upon cotton producers around the world.

MIDVILLE FIELD DAY (*Jost*) The what is becoming “annual” field day at the Southeast Research and Education Center in Midville will be held on Thursday, August 24, 2006, beginning at 9:00 am, a sponsored lunch will be provided.

Topics of discussion at this field day are to include plant growth regulators, replant decisions, new insecticides, and nematode control options. There will also be a discussion of the “systems” variety trial in which select varieties from all available technology systems are grown according to the technology package they possess. Depending on crop maturity, various defoliation treatments will be available for viewing.

Other stops will include pre-plant tillage options and foliar fungicide programs in peanuts. After lunch there will be a demonstration of GPS-guided equipment. Please RSVP to 912-681-5639 by August 22, if you plan to attend so that appropriate arrangements can be made

COFFEE COUNTY FIELD DAY (McGriff and Jost) On October 26 beginning at 10 am there will be a Cotton Field Day in Coffee County. During this field day a discussion of a large-plot “systems” trial will be held. Plans include a discussion of inputs to the 20 varieties from the 10 different technology packages currently available to producers. Yield, fiber quality, and net returns from these 20 varieties will be available.

Another stop will be made at a large-plot nematicide trial.

Your local County Extension Agent is a source of more information on these subjects.

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