GEORGIA COTTON

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Crop Situation. (*Brown*) What a difference water makes! While there are troubled spots, the 2001 Georgia crop overall is in much better shape than in recent seasons. Georgia Ag Statistics reported the condition of our crop as of June 25 as follows: 1 percent very poor, 6 percent poor, 32 percent fair, 48 percent good, and 13 percent excellent. Based on farmer planting intentions to the Boll Weevil Eradication Program, we expect that acreage will approach 1.5 million.

Weather extremes and depressed cotton prices have created challenges in some areas. Scattered problem fields include those with poor stands, those with heavy thrips or aphid damage, those in which the growers were tardy with herbicide and fertilizer applications, and those where it is too wet or too dry.

Management-induced problems have occurred in some fields because of grower interests in cutting costs. With prices in the low 40s, there is every incentive to reduce costs but some are doing so with a serious loss in production. Low prices dictate that every input be carefully scrutinized and wisely implemented. Timeliness is critical in maximizing the return for almost any input.

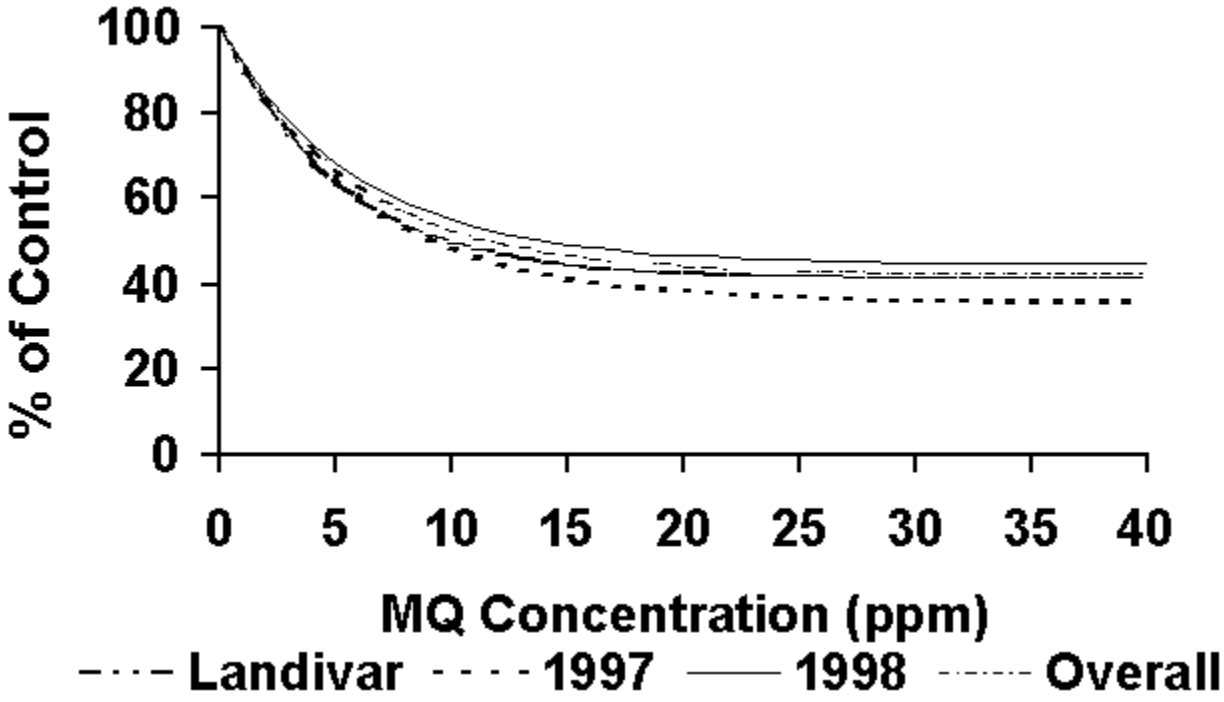
Mepiquat Chloride Usage. (*Jost*) With the recent rains, the cotton crop is off to a much better start than in the past several years. This raises the issue of the use of plant growth regulators, especially those containing mepiquat chloride (Pix, Pix Plus, Mepex, Topit, and Mepichlor).

The benefits attributed to mepiquat chloride (MQ) vary from controlling plant height to increasing boll size, increasing yield, and enhancing earliness. However, the only thing that MQ does with any kind of consistency is control plant height, with all other effects being very inconsistent. Therefore, recommendations of MQ use should be made with this in mind.

Something else that we know about MQ is that the plant response to this chemical is in direct relationship to its concentration in the plant. As the concentration of MQ increases, the effect increases. The following graph shows the response of cotton plant height to varying

concentrations of MQ in the plant. This data was provided by Shelley Underbrink, formerly of Texas A&M University.

This graph basically shows that to achieve optimum height control, the concentration of MQ should be somewhere between 10 and 15 ppm. A concentration less than this provides less height control and a concentration greater than this has no added benefit.



Achieving the optimum concentration of MQ in the plant requires a lower rate when the plant is small and a higher rate when the plant is large. Therefore, in fields with a history of rank growth, it might be a good idea to get a head start on reducing late season plant height early. A 4 to 8 oz/A application at match-head square may do better at controlling height than a 16 oz/A application at early-bloom when the plants are much larger. Beginning MQ applications early are especially useful in an irrigated environment. During my time at Texas A&M we found that adequate plant height control could be controlled under irrigated, heavily nitrogen-fertilized conditions with an 8oz/A application at match-head square followed by another 8 oz/A at first bloom.

It is also important to remember that MQ reduces growth subsequent to application. All the MQ in the world will not shrink a plant that is already rank. In addition, the best plant growth regulator for controlling excessive vegetative growth in cotton is a heavy boll load.

Replacing Bladex -- The Total Package. (*Culpepper*). The absence of cyanazine (Bladex, Cy-Pro) from the cotton market has caused confusion when choosing alternative mid post-directed or layby herbicides. Bladex plus MSMA was unique in that it offered growers three areas of weed control including 1) good postemergence weed control of a broad spectrum of weeds, 2) excellent cotton tolerance when applied precisely, and 3) several weeks of residual weed control allowing cotton canopy closure with little to no concern of carryover to following crops.

Cotton growers are fortunate in that there are several very effective Bladex alternatives including dimethipin (Harvade), diuron (Direx, Karmex), fluometuron (Cotoran), glyphosate (Roundup, others), prometryn (Caparol, Cotton-Pro), lactofen (Cobra), and oxyfluorfen (Goal). Each of these products can be an effective alternative in specific situations.

When considering A) postemergence weed control, B) residual weed control, and C) crop tolerance the most likely replacement herbicides are prometryn or diuron. Research over the last three years has shown that prometryn plus MSMA, diuron plus MSMA, and Bladex plus MSMA similarly control most of Georgia's more common weed species. Although cyanazine treatments often appear to control weeds more quickly, the end result when using prometryn and diuron are usually comparable.

Cotton is tolerant to cyanazine, prometryn, and diuron when these herbicides are applied precisely; in fact, our research suggests that prometryn and diuron are often safer on cotton when compared to Bladex. However, application method and rate of application will determine cotton response to these herbicides.

When considering the aforementioned areas of weed control, residual weed control is the most troubling aspect: prometryn and diuron, in most situations, actually offer longer residual weed control than that by Bladex; this characteristic may be beneficial for some growers, but may be of concern to others who rotate to a sensitive crop in the winter or following spring. Since rotational restrictions with prometryn and diuron are often more limiting than restrictions with Bladex, be sure to read and follow all label recommendations.

Fusarium Wilt and Georgia's Cotton: A Future Issue? (*Kemerait*) First Call: It is nearing the end of June and I received my first request this season to trouble-shoot for Fusarium wilt in an eastern county. Although the symptoms may turn out to be some other problem, it is very possible that this report is Fusarium wilt. This disease can affect cotton at any time during the season and it occurred in the same field last summer. Most agents and growers are not concerned about Fusarium wilt since it has not affected them. However, there has been recent speculation from Georgia and other states that this disease is becoming more common, but to what extent is not clear. (I might add that the perception of an increase in Fusarium wilt is not universally accepted either within the research community or the seed industry.) Also, the debate over Fusarium wilt will become more intense in the future as seeds are brought in from other parts of the world, namely Australia.

The Disease: Space does not permit a complete discussion of Fusarium wilt, but here are a few basics about the pathogen. Fusarium wilt is favored by hot weather and is found most often in

fields with sandy soils where pH values are neutral to slightly acidic (5-6.5). Symptoms, which include vascular discoloration, foliar damage, and wilt, can occur at any time during the season. Seedlings may be killed by the disease when the field has very high populations of the pathogen or when the pathogen has been carried on the seed. However, cotton appears to be most susceptible at flowering, when the physiology of the crop changes from vegetative to reproductive growth, and during periods of stress.

Fusarium wilt is caused by a soilborne fungus, *Fusarium oxysporum* f. sp. *vasinfectum* (*Fov*). Prior to 1992, there were at least six known races of this pathogen, and two, race 1 and race 2, appear to have originated in the United States. Since 1992, two unique races have been "discovered" in Australia, where the disease was not observed until 1993. After it infects the cotton, *Fov* colonizes the plant's vascular system and restricts vascular flow. The pathogen has a limited ability to exist as a saprophyte in the soil, but can survive for years as either a resistant chlamydospore or after infecting some weed species. **Once the pathogen is established in a field through introduction and poor rotation, it is almost impossible to completely eradicate.** The strains of *Fov* that our growers currently encounter, races 1 and 2, are found in association with root knot nematodes. In fact, Fusarium wilt is often a complex between the fungus and these nematodes which stress the plants and create wounds on the roots that can be exploited by the fungus. Although Fusarium wilt may occur independently of root knot nematodes, any practices that reduce populations of nematodes will also reduce the severity of the disease.

Spread: Fusarium wilt is spread to new fields by the movement of contaminated soil and contaminated seed. **Cotton seed that is produced from infected plants is a potential source of spread since the pathogen can be seed borne.** Concern over the introduction of Australian seed is based on the facts that Fusarium wilt is a major concern to cotton production in that country, the *Fov* races from Australia are very virulent (appear less dependent on nematode interactions), and the races are not yet found in the US. Therefore, any seed that is produced in Australia for use in the US must be carefully screened to insure that the pathogen is accidentally brought to this country. It is important to note that there have not been any reports to date (of which I am aware) where Fusarium wilt has been introduced to the US on seed imported from Australia; however seed producers must continue to be aware of and act on this problem.

Control: The best measures to control Fusarium wilt include sanitation (keeping fields free of the pathogen by cleaning equipment and boots when leaving infested fields), good crop rotation, effective nematode control, and resistant varieties, though varietal differences are not currently understood. Growers should be encouraged to watch for this disease and to report suspected cases of Fusarium wilt to the county agent.

Alternatives For Cotton In CCC Loan. *(Shurley)* Marketing the 2000 cotton crop has been difficult and painful. With few exceptions, the market has offered no opportunities to sell the crop at profitable prices. Producers who held cotton rather than selling at harvest or who did not fix price at harvest have lost considerable money.

One marketing tool available to growers was to store the cotton under CCC loan. Growers received the county loan rate (between 52 and 53 cents per pound for base quality for most Georgia counties). Once in the loan, the grower then has 3 alternatives– the cotton can be redeemed (the cotton sold and the loan repaid), the grower may sell any equity in the cotton to a merchant (and the merchant continue to hold the cotton in loan), or the cotton may be forfeited to CCC as full repayment of the loan and accrued interest. CCC loans for cotton are 10 months and the cotton may not be forfeited until the end of the loan period.

USDA/Farm Service Agency reports show that 8.84 million bales of the 2000 crop were placed in loan. As of June 19, 2.0 million bales remain under loan. As of May 22, state figures showed approximately 168,000 bales of Georgia cotton remained under loan.

In general, the producer must pay the loan amount, all accrued CCC interest charges, and storage charges. However, the loan is repaid at the loan plus charges or the AWP (Adjusted World Price) whichever is lower. CCC waives or pays all charges above the AWP. Currently, the AWP is approximately 34 cents per pound. However, the producer is responsible for all warehouse charges accrued outside the loan period.

If Redeemed. The producer price received by redeeming the loan cotton can be approximated using the following table.

	Cents/Lb	Comment
A. Nearby Futures Price	42.00	As of 6/28, merchants are pricing off October.
B. Basis	-4.25	Basis for base quality as of 6/28.
C. Cash Opportunity	37.75	A - B
D. Loan Amount	52.00	Approximate national average - will vary by county and quality.
E. Loan Repayment	34.00	Lesser of loan plus charges or AWP - will also vary by location.
F. Loan Gain	18.00	D - E
G. Payable Charges	2.50	Receiving, loadout, compression, and storage prior to loan.
H. Net Producer Price	53.25	C + F - G

If Equity Sale. Rather than redeem the cotton from loan, alternatively the producer can "sell equity" to a merchant who then will assume the risk of the market and make the decision of when and if to redeem the cotton. The producer retains "beneficial interest" in the cotton but in exchange for a payment, the producer is essentially giving the merchant the authority to call the shots. The equity in loan cotton, if any, can be approximated from the table just shown:

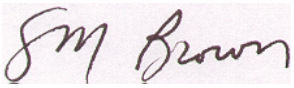
I. Loan Equity	1.25	H - D

Producers who have sold equity in loan cotton should be aware that if the cotton is later forfeited to CCC by the merchant they may be liable for some charges. This will depend on the conditions

of the equity contract. With cotton prices very low and perhaps headed lower, there is risk that cotton could be forfeited rather than redeemed.

Forfeit Cotton To Loan. The maturity date for a cotton loan is the end of the 10th month after the loan was made. For example, if the cotton was placed in loan in December, the maturity date is September 30. If forfeited, payable charges are only warehouse receiving, compression if applicable, and accrued storage charges prior to the loan period. CCC interest is waived and CCC assumes responsibility for storage and loadout charges.
Obviously, producers should take whatever route is most beneficial to them and would bring the highest total net price. The net price from loan forfeit in essence represents the worst case scenario. If redemption or equity sale would net more money, then producers should go in that direction. However, if prices continue to trend lower, and depending on how much and if the AWP also moves lower, loan forfeiture may become more feasible. Producers may also be put into forfeiture if already exceeding their payment limit on LDP's and loan gains. Producers should also be aware that loans cannot be forfeited until the end of the 10 month period.

Prepared by:



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