



Georgia Cotton

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2008 Georgia and US Acres Planted. (Shurley) In March, Georgia farmers said they intended to plant 1.05 million acres of cotton—a little more than last year. USDA’s June 30 estimate of acres actually planted, however, is only 900,000 acres (Table 1). This is 13% less than last year, 36% below 2006, and the lowest cotton acres in the state since 1994. Loss of acres over the past 2 years has been due to high prices and competition from corn, soybeans, and peanuts. Cotton remains the state’s number one row crop in acres but could loose the top spot in farm income to peanuts depending on yields and prices.

Table 1. Georgia Acres Planted to Major Row Crops¹

	2006	2007	2008	
			Intentions ²	Actual ³
Corn	280	510	370	370
Cotton	1,400	1,030	1,050	900
Grain Sorghum	40	65	55	45
Peanuts	580	530	650	650
Soybeans	155	285	410	420
Wheat	230	360	480	480
TOTAL	2,685	2,780	3,015	2,865

1/ All numbers are 1,000 acres

2/ *Prospective Plantings*, USDA, March 31, 2008.

3/ *Acreage*, USDA, June 30, 2008.

Georgia peanut acres are expected to increase 23% this year to 650,000 acres. Acreage was down in 2006 and 2007 but rebounded this year due to expected higher prices and favorable net returns compared to other crops. After a big increase in 2007, Georgia’s corn acres are down 27% this year. Despite high corn prices, farmers chose to reduce acres– most likely on risky non-irrigated land. Non-irrigated corn did poorly in 2007.

In contrast, Georgia soybean acres increased 47% this year-- the largest acreage in the state since 1994. Wheat acres are up by 120,000 acres. Typically, this should signal an increase in double-crop acres of soybeans, cotton, and grain sorghum. USDA estimates that 61% of the state's soybeans are double-crop. This is actually down from 77% last year but when considering the large increase in soybean acres, double-crop soybeans are estimated at 256,000 acres this year compared to 219,000 last year.

US cotton acres planted are expected to drop almost 15% from 2007 (Table 2). The June 30 acreage estimate of 9.25 million acres was actually *higher* than many analysts expected. Therefore, the cotton market has since reacted downward.

US cotton acreage has declined 34% since 2006 due to high-priced corn and soybeans. While we have experienced this here in Georgia, the shift is even much more dramatic in traditionally very large cotton-producing states like Louisiana (down 54%), Mississippi (down 70%), California (down 49%), Tennessee (down 57%), and North Carolina (down 54%).

World demand for cotton (and US exports) remains good but volatile. Competition from other crops and the resulting reduction in cotton acres should keep cotton prices well supported. Prices have weakened recently but longer term into 2009 points to higher prices provided that corn and soybeans continue to attract acres.

Table 2. US Cotton Acres Planted ¹

	2006	2007	2008	
			Intentions ²	Actual ³
Alabama	575	400	300	310
Arizona	197	172.5	141	141
Arkansas	1,170	860	650	700
California	560	455	280	285
Florida	103	85	72	72
Georgia	1,400	1,030	1,050	900
Kansas	115	47	45	45
Louisiana	635	335	280	290
Mississippi	1,230	660	420	370
Missouri	500	380	300	300
New Mexico	63	47.7	31.6	38
North Carolina	870	500	420	400
Oklahoma	320	175	190	190
South Carolina	300	180	120	120
Tennessee	700	515	310	300
Texas	6,431	4,925	4,720	4,720
Virginia	105	60	60	65
TOTAL US	15,274	10,827.2	9,389.6	9,246

1/ All numbers are 1,000 acres

2/ *Prospective Plantings*, USDA, March 31, 2008.

3/ *Acreage*, USDA, June 30, 2008.

Cotton Disease Update July 2008 (Kemerait). Foliar diseases and bolls rots of cotton are quite common in Georgia. Boll rots can be caused by a number of fungal pathogens and some bacteria that take advantage of the humid environment within the canopy of leaves and damage to the bolls caused by insects. Boll rot can be managed by reducing the humidity and increasing airflow in the canopy. Fungicides are not typically an effective management tool to reduce boll rot.

Foliar diseases of cotton often manifest themselves as spots on the leaves and occasionally as spots on the bracts and bolls as well. Foliar diseases in Georgia are caused by fungi such as *Ascochyta*, *Cercospora*, *Alternaria*, and *Stemphylium*. Aereolate mildew, caused by *Ramularia*, produces a white growth of spores on the underside of the cotton leaves that looks very much like powdery mildew. In severe instances, aereolate mildew can lead to premature defoliation later in the season. *Ascochyta* wet weather blight can be a problem for cotton producers if severe damage occurs early in the season. Otherwise foliar diseases of cotton have been historically considered of cosmetic importance only, with the exception of *Stemphylium* leaf spot.

Stemphylium leaf spot can appear quite suddenly in a field and defoliate large areas of a field within days after first detected. This rapid defoliate can result in premature boll opening and significant losses in a field. Although the disease is caused by a fungal pathogen, the underlying problem is a nutrient deficiency, often potassium, which predisposes the foliage to the pathogen. Although there may be sufficient potassium in the soil, during periods of drought there may be insufficient water uptake by the cotton crop needed to carry enough potassium to the leaves.

Currently there is one fungicide, pyraclostrobin (Headline) labeled for the control of foliar diseases and boll rots in cotton. Headline, 6.0 fl oz/A, can be applied to the cotton crop two weeks after first bloom and again three or more weeks later if needed. Use of Headline has reduced the premature defoliation caused by foliar diseases in some field trials. Data from the University of Georgia has shown that Headline can be very effective in the management of aereolate mildew and *Ascochyta* blight; however it is not clear what effect, if any the fungicide treatment will have on yield.

Growers who have had concerns about foliar diseases of cotton in the past may want to consider using Headline on some portion of their acreage to determine if it has benefit for them. Our main recommendation is to use the fungicide before disease becomes widespread in a field; perhaps alternating bands of treated and untreated cotton. It is not known if Headline or any other fungicide will be of benefit where *Stemphylium* leaf spot is a problem; however we hope to get more data on this year.

Stink Bugs and Tobacco Budworm Populations Up (Roberts). Stink bug populations have been high in corn; more corn than normal has been treated for stink bugs. As corn begins to dry down, stink bugs will be looking for more suitable plant hosts. Will they migrate to cotton? Or will they migrate to some other plant hosts? No one really knows, and that is why growers hire insect scouts. However, we should all be aware that stink bug populations in the farmscape are significantly higher than the last two years. Stink bug numbers during June appeared similar to what we observed during June of 2005 which was a disappointing year for producers who failed

to adequately manage stink bugs. As cotton begins to bloom, scouts should begin making stink bug assessments.

Tobacco budworm (TBW) populations have been unusually high in peanuts during the past month. During the past week, we have seen high numbers of TBW moths in cotton fields. Pheromone traps in Tifton have also been capturing high numbers of TBW this week. Some of these TBW moths likely completed a generation in peanuts, but TBW also develops on many other plant hosts (we would expect that TBW populations were unusually high on those plant hosts as well). Since TBW and corn earworm (CEW) complete development on many plant hosts and 2-gene Bt cottons (Bollgard II and WideStrike) have a high dose for TBW and CEW, a natural refuge or production of moths on non-cotton plants serve resistance management purposes for the 2-gene Bt cottons. The majority of cotton planted in Georgia is Bt cotton which should provide very good control of TBW. On non-Bt cotton, growers will need to be very timely with insecticide applications. TBW is resistant to the pyrethroid insecticides and alternative insecticides should be used.

Foliar Fertilizer Guidelines for 2008 (Harris). With fertilizer prices at an all-time high, growers may have cut back on preplant and sidedress fertilizer and plan to rely more on foliar fertilization than ever before. The following is the standard guidelines for foliar feeding cotton as found in the UGA Cotton production Guide. In addition:

- 1) Foliar feeding N, K and B is most effective during the first four weeks of bloom
- 2) Do not apply fertilizer to soil after the third week of bloom (switch to foliar)
- 3) Do not apply foliar fertilizers to cotton that is wilted by noon (drought stressed)
- 4) Do not apply foliar fertilizers after the eighth week of bloom
- 5) Foliar fertilizer packages containing multiple fertilizer nutrients at low rates is discouraged due to economics

Foliar Fertilization (From the UGA Cotton Production Guide)

Foliar fertilization of cotton should be used to supplement a good soil-applied fertilizer program. The most likely nutrients needed for foliar applications are N, B, and K. Foliar N applications can be made as part of an overall N management strategy or as determined by petiole testing. Urea is the most reliable, economical, and proven foliar N material. The standard recommendation is for 4.5 lb N/A as urea in 5 gal or more of water (5gal/A assumes aerial application). Both liquid and granular urea can be used. Applying all the recommended K to soil preplant or at-planting should provide sufficient K for Georgia cotton in most cases. Again, due to recent K problems, foliar K applications should be considered on deep sands (more than 18 inches to subsoil clay), low K soils, high Mg soils, high-yielding or short season varieties, or any fields where K deficiencies have been a problem in the past. Potassium nitrate is the most common material used for foliar K applications. The standard recommendation is for 4.4 lb K₂O/A in 5 gal or more of water. Again, 5 gal/A assumes aerial application and both liquid and granular KNO₃ can be used.

Glyphosate-Resistant Palmer amaranth Already Larger than the Cotton? (*Culpepper*)

It is evident that many growers have extremely large pigweeds in their cotton crop. For those growers not using residual based programs, this result is expected. Unfortunately, there are also growers using sound residual programs that are also facing this late-season pigweed challenge. Most of these failures are in dryland fields where residual herbicides were not activated in a timely manner or in conservation tillage fields where the residual herbicides did not reach the soil. Regardless, each of these growers face some very difficult management challenges for the rest of 2008. Management options include herbicides, cultivation, and/or hand weeding.

Herbicide options are very limited and will likely only control pigweeds four inches or less in the row and six to eight inches in the row middle when using hooded applications. The most effective herbicide treatment for directed and hooded applications include the following:

1. Diuron (Direx, others) or Layby Pro + MSMA:
 - * Diuron rate: 1.6 to 2.4 pt/A, see label for use on your soils, cotton must be 12 in tall.
 - * Layby Pro rate: 2 pt/A, cotton must be at least 16 inches tall.
 - * MSMA rate: 2.5 pt of a 6.6 lb ai per gal or 2.67 pt of a 6.0 lb ai per gal.
 - * Add Crop Oil when applying Diuron or Layby Pro + MSMA alone.
 - * The addition of **Valor** to this mixture will improve control. If adding Valor to this mixture one **MUST USE SURFACTANT and NOT CROP OIL!!! Never apply Valor with a crop oil at layby.**
 - * The addition of Aim or ET to diuron or Layby Pro + MSMA will likely improve control.
 - * Valor, Aim, and ET should only be applied to cotton that is at least 16 inches tall having 3 inches of a “barky” stem. Spray should not contact higher than 2 inches up on the cotton.
 - * Apply in approximately 15 gallon of water per acre.

2. Paraquat (38 fl oz of Gramoxone Inteon) + diuron (1.6 to 2.4 pt) + Crop Oil.
 - ***HOODED APPLICATION ONLY!!!!!!**
 - *See label for use of diuron on your soil.
 - *Spray or even spray drift **can not contact any part of the cotton or very, very serious injury will occur.**
 - *Of course, this application will not control weeds in the cotton row.
 - *Apply in 15 to 20 gallon of water per acre.

Cultivation can be used to control small pigweeds in the row middle. Although most growers remember the days of cultivation, it is critical to remove the root from the soil while trying to avoid cultivating within 72 hours of a rainfall as the plant would re-root itself. It is also worth mentioning that the cultivation process will stimulate a new flush of weeds that will have to be managed in the next couple of weeks. Also, of course, cultivation does not provide control in the row where yield loss is the greatest.

Hand Weeding Palmer amaranth can be very successful but is more complicated than once thought. Growers who hire crews with machetes or hoes will likely spend a ton of money with minimal results. If a Palmer amaranth plant is “cut” off above ground it will re-grow and likely be very green and aggressively growing at time of defoliation and harvest, not to mention seed production will still be enormous. Palmer plant roots must be removed from the soil; however, the roots can not be in contact with the soil as moisture on ground or rainfall that occurs within 72 hours will facilitate plant re-growth. Thus, the only effective way to actually hand weed Palmer amaranth is to pull the plant, including the roots, from the soil and either set the roots on top of the cotton or carry if from the field.

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