The University of Georgia
Cooperative Extension
College of Agricultural and Environmental Sciences

Georgia Cotton

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US and Georgia Cotton Acres and Trends	**1**
Disease and Nematode Management Considerations for Cotton in 2008	**3**
What is an Insect Scout Worth	**5**
Length of Weed Control Offered by the Yellow Herbicide	**7**
Understanding the Proper Method for Applying Valor for Cotton Burndown	**7**
University of Georgia Palmer amaranth Management Recommendations	**7**

US and Georgia Cotton Acres and Trends. ***(Shurley)*** USDA released its 2008 *Prospective Plantings* report on March 31. The report shows what farmers say they *intend* to plant based on a survey and conditions in early March. Intentions may change based on changes in market prices, costs, and weather conditions during the planting season. USDA's first estimate of *actual* acreage planted will be released on June 30.

Farmers intend to plant 9.39 million acres—down 13.3% from 2007 and 38.5% below 2006. Acreage continues to decline in response to high prices for corn and soybeans and differences in cost especially fertilizers and fuel. Large percent decreases in acreage continue to be seen especially in the Mid-South (especially Arkansas, Mississippi, and Tennessee) and California.

Georgia farmers intend to plant slightly more acres than last year. This is somewhat of a surprise given the competition from corn, soybeans, and peanuts. Peanut and soybean intentions are up, corn intentions are down. Wheat acres are up. Larger than expected cotton acres, if realized, could be due to a large (larger than expected) drop in corn acres and large increase in double-cropped cotton.

Comparison of Cotton Acres Planted, 2006-2008.

	2006	2007	2008 [1]	% Change From 2007
Alabama	575	400	300	-25.0
Arizona	197	172.5	141	-18.3
Arkansas	1,170	860	650	-24.4
California	560	455	280	-38.5
Florida	103	85	72	-15.3
Georgia	1,400	1,030	1,050	+1.9
Kansas	115	47	45	-4.3
Louisiana	635	335	280	-16.4
Mississippi	1,230	660	420	-36.4
Missouri	500	380	300	-21.1
New Mexico	63	50.8	31.6	-37.8
N. Carolina	870	500	420	-16.0
Oklahoma	320	175	190	+8.6
S. Carolina	300	180	120	-33.3
Tennessee	700	515	310	-39.8
Texas	6,431	4,925	4,720	-4.2
Virginia	105	60	60	0.0
US	**15,274**	**10,830.3**	**9,389.6**	**-13.3**

1/ USDA Prospective Plantings, 03/31/08. All numbers are 1,000 acres.

US and Georgia Crop Acres Planted, 2006-2008

	United States [1]				Georgia [1]			
	2006	2007	2008 [2]	Change [3]	2006	2007	2008 [2]	Change [3]
Corn	78,327	93,600	86,014	-8.1%	280	510	370	-27.5%
Cotton	15,274	10,830	9,390	-13.3%	1,400	1,030	1,050	1.9%
Grain Sorghum	6,522	7,718	7,415	-3.9%	40	65	55	-15.4%
Peanuts	1,243	1,230	1,430	16.3%	580	530	650	22.6%
Soybeans	75,522	63,631	74,793	17.5%	155	285	410	43.9%
Tobacco [4]	339	356	350.9	-1.4%	17	18.5	16	-13.5%
Wheat	57,344	60,433	63,803	5.6%	230	360	480	33.3%

1/ All numbers are 1,000 acres.

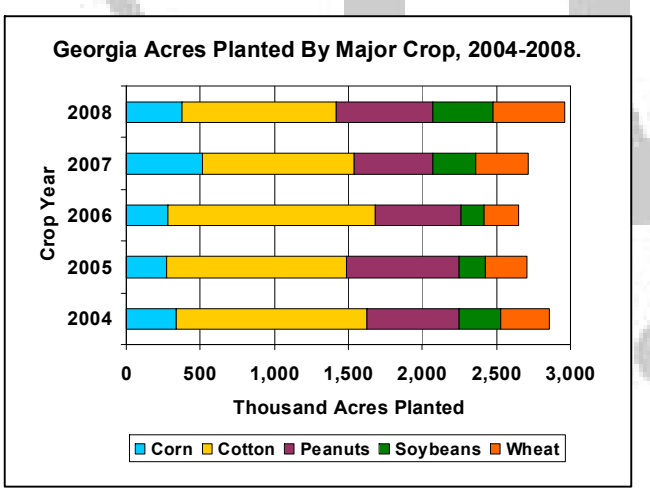
2/ Prospective Plantings, USDA, March 31, 2008.

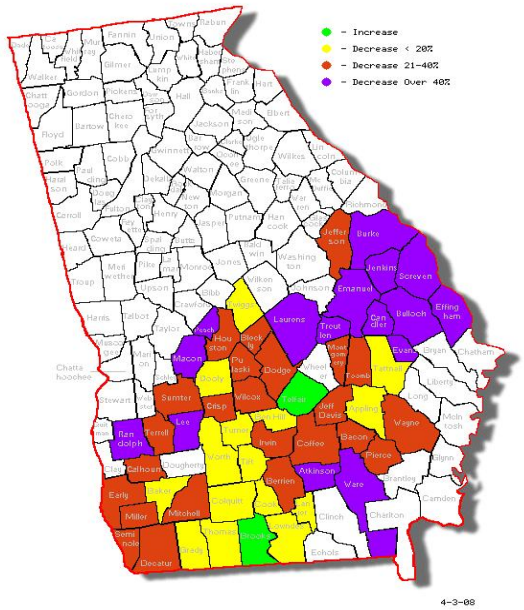
3/ 2008 vs. 2007

4/ Thousand acres harvested

If intentions are realized, 50% of all US cotton acres would be planted in one state—Texas. Further, 61.5% of acreage would be planted in 2 states—Texas and Georgia. Texas has always been a major factor in cotton production due to large acreage and erratic weather that have an impact on planting, emergence, yield, and acreage abandonment. With one-half the crop planted in Texas, the market will be especially sensitive to weather and price rallies are a possibility.

Georgia cotton peaked at 1.5 million acres planted in 1995 and again in 2000. Acres declined in 2003 through 2005 as peanut acreage increased but rebounded to 1.4 million in 2006. Cotton acres then declined last year in 2007 due to high prices for corn and soybeans. Intentions are for cotton acres to be about the same as last year but actual plantings for 2008 will depend on weather (planting conditions) and prices. The expected large drop in corn acres could bid corn prices even higher and shift some last minute intended cotton and soybean acres into corn.





Georgia's cotton acreage declined 26% in 2007. Overall, US acreage declined 29%. The following map shows the percentage change in acreage from 2006 to 2007 by county. Acreage for 2006 is

USDA-NASS data. Acreage for 2007 is from BWEP acreage enrollment. NASS data was not available for each cotton-producing county. Largest declines in acreage tended to be in the east and central parts of the state. The decline tended to be somewhat less in the south-central and southwest parts of the state. Two counties had an increase in acreage in 2007.

A comparison has not yet been made for other crops by county. However, the counties with the higher reduction in cotton acreage in 2007 seem to be those traditionally higher in corn and soybean acres and/or with a higher percentage of irrigated acreage.

Disease and Nematode Management Considerations for Cotton in 2008. (*Kemerait*) When compared to many other crops, cotton is unique in that most of the disease and nematode management decisions for the season are completed as the seed is covered in the furrow. Sure, growers may decide to use Temik 15G or Vydate C-LV for additional nematode control a little later in the season or some may consider use of a foliar fungicide such as Headline after first-bloom for control of foliar diseases. However, applications of fungicides and nematicides that have the greatest potential impact on the crop occur prior to or at the time of planting.

***Seedling Disease*:** Losses to seedling diseases are a common occurrence to many cotton growers in Georgia. Most of the seedling disease of cotton in our state seems to be the result of the pathogen *Rhizoctonia solani*. This type of seedling disease is called "soreshin". Another pathogen, *Pythium* sp., also causes some disease as well resulting in a root-rot of the seedlings. Although seedling diseases are not uncommon, the severity of these diseases rarely reaches levels where growers must consider replanting the crop or suffer significant yield losses if: 1) the seed is planted in conditions favorable for vigorous germination and growth and 2) the seed has been treated with a commercial "base" fungicide treatment.

Cotton growers have the opportunity to invest in additional in-furrow fungicides and additional fungicide seed treatments for the control of seedling disease. Although the use of in-furrow fungicides in cotton production in Georgia seems to have declined over the past 10 years, interest in use of additional fungicides, such as Trilex and Dynasty CST, has increased. Additional fungicide seed treatments offer the grower a convenient, easy to use option to increase the level of protection against disease. The most important question for growers is, "Is the extra protection provided by an additional seed treatment or in-furrow fungicide worth the cost of the treatment?".

Cotton pathologists from the Cotton Belt generally agree that most cotton growers in most seasons are unlikely to see any additional yield benefit when using additional fungicide seed treatments when planting seed already treated with a commercial "base" treatment. In research studies where researchers try to create seedling disease by planting in poorly rotated fields under cool and wet conditions, we still struggle to document a yield advantage using additional fungicide treatments. However, when researchers create the absolute "worst case scenario" by planting under cool and wet conditions AND adding the Rizoctonia fungus to the soil as we plant, there can be significant stand and yield benefits with additional treatments.

Here are the current recommendations for cotton growers considering the use of an additional fungicide to protect against seedling disease:

1. Cotton growers should always try to plant seed with a high cold germination value and under conditions that favor rapid germination and vigorous growth. Fungicides will not increase the germination of the seed, but may help to protect the seedlings that grow slowly.
2. Cotton growers should avoid planting their seed just ahead of an approaching storm that could drop cold rainfall. Irregardless of fungicide treatments, the cold water can severely hamper the germination of the seed and development of the seedling.
3. In our soils and given the typical temperatures of our soils at the time cotton in planted, it is unlikely, based upon research data, that most growers will benefit from any additional fungicide treatments. I am aware that there are many testimonials available from crop consultants and other professionals regarding the positive benefits of the use of additional fungicide seed treatments. It has simply been difficult for researchers to back these reports up based upon our data.
4. Additional seed treatments, such as Dynasty CST and Trilex systems CAN provide benefit to growers as 1) an additional insurance policy against disease if the "worst case" develops and 2) to offer further protection against seedling disease where the seeding rate in the field is dropped to reduce seeding costs.

Nematodes: Successfully managing nematodes in the cotton crop requires that growers practice good crop rotation (which is often difficult with the southern root-knot nematode) and use an appropriate nematicide in fields where the pests have reached damaging levels.

The 2008 season is an exciting one for cotton growers for many reasons, one of which being the availability of a number of nematicides for use in their fields. It is critical that growers consider a number of factors when choosing the right nematicide for the right field in order to achieve the desired results. Use of the wrong nematicide in a field will either result in unnecessary expense or inadequate protection, or both.

In deciding on the appropriate nematicide to use in a field, growers should consider the following questions:

1. Based upon soil samples analyzed for nematodes (preferably taken in the fall), how high (or low) are the plant-parasitic nematode populations in my field? How does this level compare to the economic threshold levels that I can learn about from my county agent?
2. What has been the recent crop rotation history in my field, especially in 2007? Was my previous crop cotton or one that is also susceptible to the same nematodes, or was it a crop such as peanut that is not susceptible?
3. Is my field irrigated or non-irrigated? That is, given a shortage of rainfall, can I use irrigation to take some of the stress off of the crop? (Nematode damage and yield loss is most obvious in times of stress.)
4. What are the prevalent soil types in the field? (Southern root-knot nematodes are more of a problem in lighter, sandier soils than in heavier soils.)
5. How much damage from nematodes (stunting, poor growth, premature cutout, etc.) have I observed in the field in the past?

Today, growers can choose between a fumigant (Telone II), a granular insecticide/nematicide (Temik 15G), a foliar applied insecticide/nematicide (Vydate C-LV), and seed treatments nematicides (AVICTA Complete Cotton, AERIS Seed-Applied System) and the harpin-protein product N-Hibit which is reported to reduce the build-up of nematodes in a field.

Telone II offers the greatest potential for successful management of nematodes in a field with high populations of plant parasitic nematodes if it is applied effectively. Growers who choose to use Temik 15G, AVICTA Complete Cotton, or AERIS Seed-Applied System rather than Telone II in fields with very damaging populations of nematodes potentially sacrifice hundreds of pounds of lint in yield. NOTE: Telone II currently has a 24C label in Georgia to be applied (with caution) at time of planting if so desired by the grower.

AVICTA Complete Cotton and AERIS Seed-Applied System offer the grower the convenience of a seed treatment in the fight against nematodes on cotton. Researchers at the University of Georgia have had the opportunity to assess AVICTA Complete Cotton in many trials; we have fewer data regarding AERIS Seed-Applied System. Growers who select one of these seed treatments should carefully consider the fields in which they are to be used. Nematicide seed treatments may be appropriate where nematode populations are at lower levels; however they will not provide adequate protection at higher populations of nematodes.

Temik 15G (5 lb/A) typically provides a cotton crop adequate protection from nematodes at low-to-moderate populations. In field studies conducted at the University of Georgia, Temik 15G provided better early season control of the southern root-knot nematode than did AVICTA Complete Cotton or AERIS Seed-Applied System. Temik 15G also provided higher profit and lint yields versus products that provided only control of thrips (Cruiser and Gaucho Grande) than did AVICTA or AERIS over a broad range of nematode levels.

From our research trials, there is no doubt that there are situations where AVICTA Complete Cotton produced yields greater than Temik 15G. However, in head-to-head comparisons, Temik 15G has a 2-to-1 advantage over AVICTA in terms of both winning trials and average yield advantage.

In summary, many growers can benefit to use of an appropriate nematicide in their fields. Growers should carefully select the best product for their field, considering needed efficacy, cost, and perceived convenience. Growers should balance the value of convenience versus the cost of a convenient product in the wrong field.

What is an Insect Scout Worth? (*Roberts*) The current economic environment of agriculture requires producers to scrutinize all inputs in an attempt to become more efficient. Profit maximization requires the highest possible return from each input. From an insect management perspective, achieving such returns begins with proper insect scouting. Insect management decisions are only as good as the information on which they are based and the timeliness of which needed actions are carried out. Producers must have information on insect species and populations infesting fields to make "Good Decisions" relative to insect pest management.

Dramatic changes in insect management have occurred in Georgia during the past 20 years. During the 1980s (prior to initiation of the Boll Weevil Eradication Program), it was not uncommon for producers to treat fields 15 to 20 times for insect pests. During recent years, the annual number of insecticide applications has ranged from 2 to 3 (Figure 1). Elimination of the boll weevil, increased use and knowledge of biological controls and IPM in general, widespread adoption of Bt transgenic cottons, advancement of insecticide technologies, and low insect pressure during some years have all contributed to this reduction in insecticide use. However, producers must stay vigilant with their insect management program. Insect pests still possess the potential to significantly reduce yields and profit potential and insect scouting is a MUST.

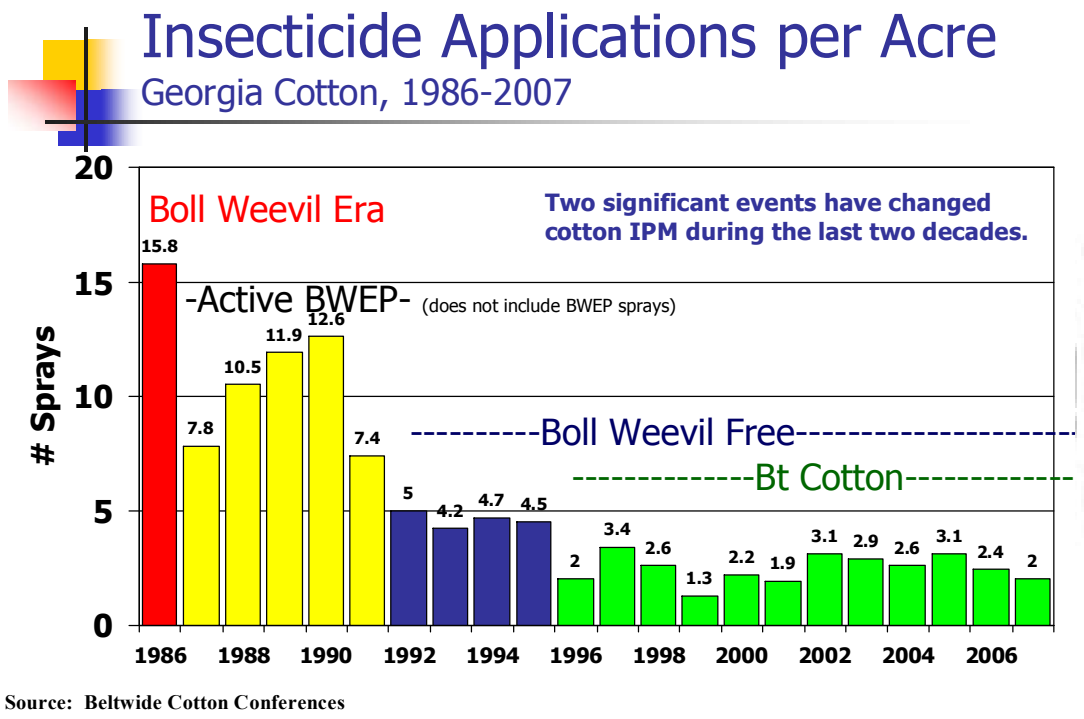


Figure 1. Average number of insecticide applications applied to Georgia cotton, 1986-2007.

What is the value of an insect scout? In our opinion, hiring a well-trained scout or consultant is a good investment. Although the average number of insecticide applications has been significantly reduced, insecticides will be needed at some point in most fields to maximize profits. Scouting allows producers to select the correct insecticide and rate and properly time applications when needed based on what insects are in the field. Economic or action thresholds have been established for commonly occurring insect pest in Georgia cotton and should serve as a starting point when making insect pest management decisions.

Cotton insect scouting schools are annually held at various locations in Georgia. These programs offer basic information on cotton insects and scouting procedures and will serve as a review for experienced scouts and producers and as an introduction to cotton insect monitoring for new scouts. The first Cotton Scout School will be held on June 2, 2008 in Tifton at the Tifton Campus Conference Center. Additional information for the Tifton Cotton Scout School and others will be forthcoming in future newsletters.

Length of Weed Control Offered by the Yellow Herbicide. (*Culpepper and Grey*) The typical half-life (time period which is required for degradation or breakdown of half the amount of product sprayed) of yellow herbicides ranges from 42 to 45 days. This can be slightly increased if the product is incorporated into the soil and will be greatly reduced if the product sits on the soil surface without incorporation. Degradation of the yellow herbicide through sunlight is relatively minor; however, losses through volatilization and anaerobic conditions can be much more severe. Volatilization can be managed in many situations by incorporation through mechanical practices or by rainfall/irrigation. However, breakdown of these herbicides from anaerobic conditions are more complicated and less manageable. Anaerobic conditions essentially occur when the herbicide sits under standing water. Some data suggest in these anaerobic conditions, breakdown can occur as quickly as 7 days.

Understanding the Proper Methods When Applying Valor for Cotton Burndown (*Culpepper*). Valor (up to 2 oz of product per acre) can be applied for cotton burndown as long as the Valor is applied at least two weeks before planting AND a strip-till operation is run AFTER SPRAYING THE VALOR BUT BEFORE PLANTING. The strip-till operation must incorporate the soil in the seed bed to a depth of 1-2 inches prior to planting. Growers not following these recommendations may observe serious cotton injury.

In no-till production or in a situation where a grower conducts the strip-tillage operation first and then makes a Valor application a waiting period of 30 days and at least one inch of rainfall prior to planting is in order.

The strip-tillage operation is used to reduce the activity of Valor in the seedbed, thereby reducing the potential for cotton injury. By reducing the activity of Valor in the seedbed, growers with glyphosate-resistant Palmer amaranth would need to apply a banded application of another effective pigweed herbicide in the row after planting to prevent glyphosate-resistant Palmer amaranth emergence. Numerous preemergence herbicides with good residual Palmer amaranth control are available; however, we would strongly encourage growers NOT use Reflex preemergence after using a Valor burndown application for resistant management.

University of Georgia Palmer amaranth Management Recommendations (*Culpepper*). Over 1200 laminated handouts on the management of glyphosate-resistant Palmer amaranth in cotton have been distributed to growers this winter. Individuals who did not receive this information can obtain a laminated handout through their local county Extension office or by going to the weed science web site at www.ga.weed.com. Approximately half way down the page there will be a link to these recommendations which can be printed easily.

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

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