



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



Georgia Cotton

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2005 BWEP ACREAGE. (*Brown*) Georgia growers reported to the Boll Weevil Eradication Program their planting intentions for 2005 at 1,350,274 acres. Actual acreage will be certified in a few more weeks, and, historically, the latter number is typically about 9 percent below the initial estimate. Attached is the 2005 BWEP map.

LOW PLANT POPULATIONS WARRANT MORE INTENSE WEED CONTROL. (*Brown*) In the mid-1990s in anticipation of the introduction of transgenic cotton, seeding rate experiments were initiated to address the question, "How low can we go?" Producers have learned what these studies demonstrated: rates of 2.5 to 3.0 seed/ft are adequate in most situations.

These studies also examined the interaction of plant population and weed management. Data indicate that lower plant populations require more intense weed control. In these experiments seeding rates ranged from 1 to 6 seed/ft, and rates as low as 2 seed/ft resulted in final populations of 1.3 to 1.9 seed/ft; 3 seed/ft resulted in an average of 2.2 plants/ft. The breaking point was between 2 and 3 seed/ft, with rates of 1 and 2 seed/ft requiring more weed control inputs (residual and layby herbicides) than higher seeding rates.

This lesson should not be forgotten! Practically, seeding rates are truly about "as low as we can go." As effective as glyphosate treatments have proven to be, we still need residual herbicides. Even more so as stands approach and fall below 2 plants/ft. The list of residual and layby herbicides is long, and many of these products are quite economical. Use them!

ENVOKE/STAPLE MIXTURES LABELED FOR GEORGIA COTTON. (*Culpepper*). Recently, I have received many, many questions on whether or not growers can mix Staple and Envoke and apply overtop of cotton. Thus, I thought it was worthwhile to include this article again this season in the cotton newsletter.

A section 2(ee) label for Georgia now allows cotton growers to apply Envoke at 0.1 to 0.15 oz of product per acre in mixture with Staple at 0.6 to 0.9 oz of product per acre for the control of smallflower morningglory.

Georgia research, for many years, has shown that 0.1 oz/A of Envoke plus 0.6 oz/A of Staple is an effective combination to control many broadleaf weeds and will provide postemergence and residual control (if Staple herbicide reaches soil and is activated) of smallflower morningglory. These lower use rates are adequate except in salvage situations where rates may be increased according to the label.

This mixture can be applied over-the-top or directed to cotton that has reached a minimum of 5 true leaves.

This application should be made in a minimum of 10 gallons of water per acre and a non-ionic surfactant at 0.25% v/v should always be included.

As is the case with Envoke or Staple applied alone, topical applications of Envoke plus Staple can occasionally result in yellowing of leaves and shortening of cotton internodes. Avoid treating stressed cotton such as the following: wet or cool growing conditions or cotton injured from thrips, wind, or sandblasting.

GLYPHOSATE VS. GLYPHOSATE PLUS STAPLE VS. GLYPHOSATE PLUS DUAL MAGNUM.

(*Culpepper*). Early postemergence weed control options in Roundup Ready (RR) cotton are generally limited to three practical labeled choices: glyphosate alone, glyphosate plus Staple, or glyphosate plus metolachlor (Dual Magnum, other products are also labeled). Choosing between these three options is usually a field by field decision considering weed infestations and cost of herbicide treatments.

Glyphosate applied alone controls most weeds very effectively. Those weeds that are most commonly missed by glyphosate applied alone include morningglories greater than 3 inches, hemp sesbania, dayflower species, tropical spiderwort, and florida pusley. However, the most common complaint with glyphosate applications usually involves the weeds that germinate and emerge as soon as the sprayer leaves the field. Thus, for most Georgia cotton fields we strongly encourage the addition of Staple or Dual with the glyphosate to assist in season long weed control.

Staple plus glyphosate improves control of emerged morningglory (except tall), hemp sesbania, dayflower species, and tropical spiderwort compared to glyphosate alone. In addition, residual activity from Staple, if activated by rainfall or irrigation, provides good control of pigweeds,

morningglories, redweed, poinsettia, Florida beggarweed, and bristly starbur. Mixing Staple with glyphosate occasionally causes temporary leaf yellowing, bronzing, and/or leaf crinkling when applied over-the-top of RR cotton. Research in GA and across the Southeast indicates this injury is transient and cotton recovers quickly as long as the application is made to RR cotton between the 1 and 4-leaf stage of growth.

Dual mixed with glyphosate (Sequence is available as a pre-mix) does not improve postemergence control of weeds compared to glyphosate applied alone but provides residual weed control if activated by rainfall or irrigation. Weeds that are sensitive to Dual Magnum include most annual grasses (only suppression of Texas panicum), pigweed species, tropical spiderwort, Florida pusley, and yellow nutsedge. Mixing Dual with glyphosate and applying over-the-top of RR cotton often causes pin-point necrotic speckles on leaves present at time of the application. Again, research indicates this injury is transient and cotton recovers quickly as long as the application is made to RR cotton between the 1 and 4-leaf stage of growth.

The advantages of mixing Staple or Dual Magnum with glyphosate often go unnoticed when herbicide applications are made in a timely fashion. However, for those growers who are 7 to 10 days late with directed applications, one of these tank mix partners may be of great benefit by reducing weed size at time of the directed application.

Do not apply Dual Magnum plus Staple ovetop of cotton as SEVERE injury will occur. Also, it would be warranted to separate any Dual and Staple application by 5 days.

THINGS TO REMEMBER WHEN APPLYING STAPLE OR DUAL PLUS GLYPHOSATE:

1. Avoid dew on plants.
2. Avoid extremely humid and hot conditions.
3. Do not apply to “thrippy” or other stressed cotton.
4. Do not apply Staple mixtures when soils are saturated.
5. Several days of cloudy conditions can potentially impact leaf cuticle thickness thereby enhancing the potential for injury from these mixtures.
6. We recommend using a loaded glyphosate (adjuvant already included) when mixing with Staple or Dual and adding NO additional adjuvant.
7. Mixing Staple or Dual with glyphosate will aid in resistance management for those weeds sensitive to Staple or Dual.

NEMATODE MANAGEMENT ONCE THE FURROW IS CLOSED (*Kemerait*) It happens early in the season every year, and 2005 has been no exception. A grower plants his cotton in a nematode “honey hole” without using Telone II or a nematicide rate of Temik 15G and ends up wishing that he had. There are several typical reasons why the grower made this decision. Frequently the grower did not realize that he had a problem with nematodes. At other times, he didn’t think that he could afford the extra cost of Telone or higher rates of Temik. Still others simply prefer the convenience of a seed treatment for thrips control or worry that Temik will interfere with a growth promoter product.

Whatever the reason, the end result for growers who do not treat for nematodes when they should is the same, weaker growth and lower yields. For growers whose nematode problem is not too bad and where growing conditions are excellent during the season, the loss in yield due to failure to treat at the beginning of the season may be relatively small. However, where growers have large populations of parasitic nematodes coupled with stress during the growing season, losses can be devastating within a field.

In the worst-case scenarios, growers may find that stands of cotton are already severely damaged by nematodes very early in the season. This is exactly what happened in mid-May in Grady County where southern root-knot nematodes had already caused considerable damage to the root systems of the young cotton plants.

The question becomes, “Short of replanting and using the necessary nematicide the second time around, is there anything that a grower can do to make the problem disappear?” The short answer is “No. Growers who are not able to practice effective crop rotation and fail to treat for nematodes at planting or before cannot rescue the crop with a later treatment.”

That being said, there are a few strategies that the grower can use to help to improve the yield potential of his crop. These include the following:

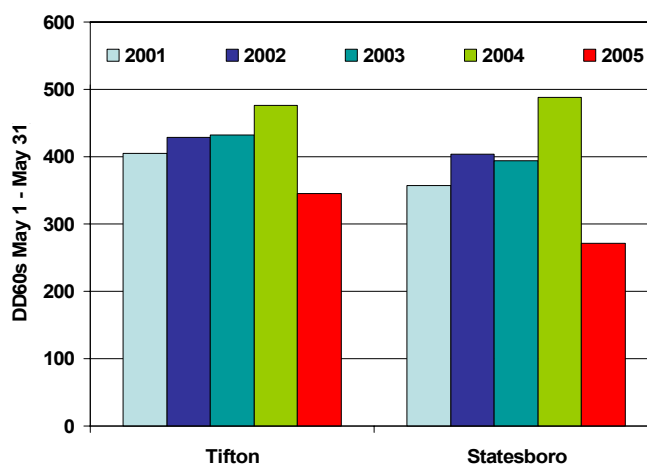
1. Manage your crop to reduce stress on the plant. Parasitic nematodes are “stress pathogens”. They typically do not kill the plant, but cripple its growth and development by causing extensive damage to the root system. Growers can offset some of the results of a compromised root system by a) insuring adequate irrigation, and b) by insuring proper soil fertility during the growing season.
2. Consider post-plant applications of Temik 15G or Vydate CLV as a desperate measure. Growers should note that neither side-dress applications of Temik 15G nor foliar applications of Vydate CLV are recommended by Bayer CropScience or Dupont without EALIER applications of either Temik or Telone. Also, the UGA Extension Service does not recommend such applications without earlier applications of Telone or Temik. We do not have data from replicated studies demonstrating that they are effective. Nonetheless, growers who have been forced to make unplanned side-dress applications of Temik 15G (5-7 lb/A) prior to pin-head square or the 8th true leaf growth stage, or who have applied one or more foliar applications of Vydate CLV (17 fl oz/A) while the cotton is still small, have reported some success with the results.

Based on this, I offer the following guidance:

1. If you need to treat for nematodes, do so before the seed furrow is closed and you will help to minimize future problems in the season with your crop.
2. If you leave the nematicide out and discover too late that you really needed it, do your best to “baby” the crop for the rest of the season.
3. If damage and stand loss are too severe, replanting with a nematicide may be needed; however this is a VERY risky choice!
4. You may decide to side-dress with Temik 15G or apply Vydate CLV. In doing so, you must recognize that a) the results will never equal what the potential of the crop would have been with more timely treatments, and b) these “rescue” treatments may do little or nothing for you, despite positive reports from other growers.

THRIPS DAMAGE (Roberts): Thrips populations have been variable, ranging from relatively light to heavy depending on location and planting date. Slow plant growth during early May resulted in varying levels of thrips damage on much of the April and early May plantings. When heavy migration of adults occurs and seedlings are not growing, some damage will occur since thrips must feed on the plant to ingest a toxic dose of the systemic insecticide used at planting. Migrating adults will feed (and then die) on the same unfurled leaf for several days which will ultimately exhibit damage when the leaf expands. Seedlings are susceptible to thrips injury up to the 5 leaf stage, once plants reach the 5 leaf stage and are growing vigorously treatment is rarely necessary. Smaller plants, 1-2 leaf stage, are more sensitive to thrips injury in terms of yield loss compared with larger plants, 3-5 leaf stage. Growers should only make foliar applications for thrips when needed, automatic applications of thrips insecticides tank-mixed with glyphosate products should be discouraged. Treatment is recommended when 2-3 thrips are found per plant, especially if wingless or immature thrips are observed. The presence of immature thrips suggests the at-plant insecticide is failing. When foliar applications are made the next 1-2 leaves will also exhibit some damage since thrips were feeding on unfurled leaves. Foliar sprays could potentially flare aphids or spider mites. There are reports from the Mid-South and North Alabama of treatable spider mite infestations.

WHAT'S WITH THE WEATHER? (Jost) As mentioned in the previous section we are seeing more thrips problems that we have in the past several years and we are also seeing some relatively slow cotton growth. If you have been outside it really is no mystery as to what is going on. Prior to this week, especially on the eastern side of the state it has been cool and dry. In order for cotton to grow it needs to be warm with good soil moisture. Many folks were planning their first mepiquat application on about 45 days after planting on DP555BR. In a normal year this would be about right corresponding to first square. However cotton develops in response to heat as well as time. Below is a chart comparing heat unit accumulation during the month of May for the past 5 years. While the latest rains were welcome a true warming trend will do a lot for getting the cotton up and growing.



COTTON SCOUTING SCHOOLS (*Roberts*): Three scout schools will be conducted during mid-late June. Dates of the training and the extension contact for additional information are listed below.

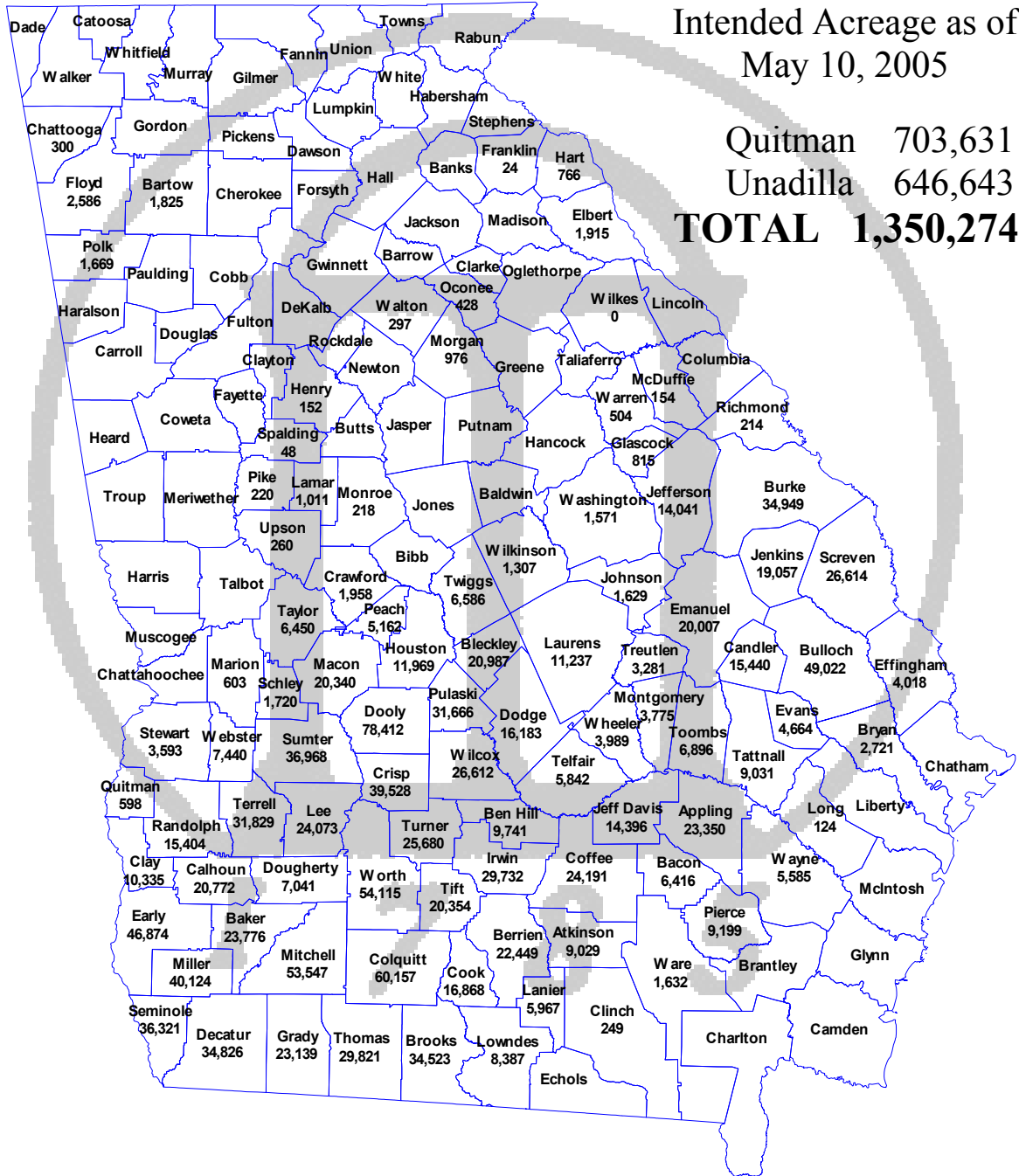
June 18, 2005 Terrell Co. Ext. Office, Dawson - *Will Duffie* (229/995-2165)
June 21, 2005 Jeff Davis Co., Hazelhurst - *Tim Varnedore* (912/375-6648)
June 28, 2005 SE GA Res. & Ed. Center, Midville - *Roosevelt McWilliams* (706/554-2119)

GEORGIA QUALITY COTTON AWARD (*Jost*) later this month entry forms will be sent to all gins in Georgia soliciting nominations for the first Georgia Quality Cotton Award. Each gin will be allowed to nominate a grower within each of three acreage categories. Entry forms will also require that various information concerning the production of the crop be disclosed. In order for this entry form to be complete it must be verified by the county agent from which county the majority of the cotton is grown. Look for these packets over the next several weeks. While filling out entry forms may be a tedious process, they will be well worth the effort. The primary goals of this award are to recognize farmers and gins producing high quality cotton, identify associated management practices, and publicize improved quality in Georgia cotton. This award is sponsored by Bayer CropScience who will provide prizes for the producer, ginner, and certifying county agent.

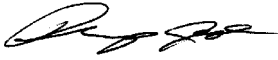
2004 COTTON RESEARCH AND EXTENSION REPORT (*Jost*) The 2004 edition of the Cotton Research and Extension Report is at the printers and will be available in hard copy form soon. It will also be available on the UGA Cotton Web Page (ugacotton.com) this week.

GEORGIA

2005 INTENDED ACREAGE



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