



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



Georgia Cotton

May 7, 2007

www.ugacotton.com

Crop Progress through Early May	1
Glyphosate-Resistant Palmer amaranth -- Location Update	1
Dry Weather and Management of Early Season Insects	2
Monsanto Alliance with BASF and Pending Acquisition of D&PL	3
Scout Schools	3

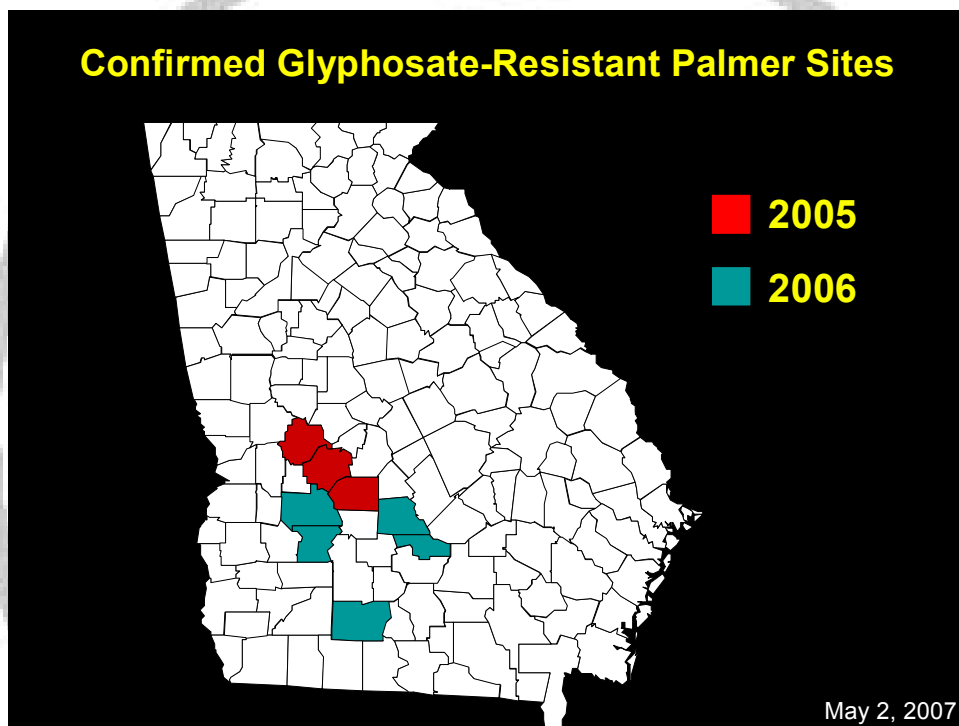
Crop Progress through Early May. (*Brown*) It is worse than DRY in much of the cotton-growing regions of Georgia. Moisture deficits are increasing daily such that planting activities have ceased on many farms. Official statistics indicate that as of May 5 only 11 percent of the expected 2007 cotton acreage has been planted, compared to 39 percent in 2006 and 31 percent over the recent five years. Dry weather has complicated weed management and thrips control. Drought and the unexpected Easter freeze have made for a truly difficult start for crop production this spring.

Glyphosate-Resistant Palmer amaranth -- Location Update. (*Culpepper*). An intensive screening process in Georgia over the past two years has shown that problems with glyphosate-resistant Palmer amaranth are much more widespread than initially thought. During 2005, 99 fields were sampled at random (meaning without intent to purposely locate or avoid fields with pigweed control difficulties) from Macon, Taylor, and Dooly counties and then checked for resistance. Of these fields, 48 percent were infested with glyphosate-resistant Palmer amaranth.

In 2006, 27 randomly chosen fields were sampled from Crisp, Sumter, and Lee counties. Screening revealed glyphosate-resistance in Palmer amaranth in five of nine fields from Sumter County and five of seven fields from Lee County. Samples from Crisp County are currently being evaluated. Also in 2006, UGA Extension agents collected pigweed from suspected “problem” fields, one in Ben Hill County, one in Colquitt County, two in Wilcox County, and six in Turner County. Samples from Ben Hill, Wilcox, and Colquitt counties contained resistant Palmer amaranth, while collections from Turner County are still being studied.

Obviously, the on-going drought creates nightmares not only for stand establishment but also for weed control. It is nearly impossible to control glyphosate-resistant Palmer amaranth in cotton without effective soil-applied residual herbicides. In other words, residual herbicides are critical

to the success of the control of glyphosate-resistant pigweed, and the effectiveness of residual herbicides is severely reduced under drought conditions. Residual herbicides require timely activation (“watering in”) with rainfall or irrigation to (1) move them into the zone of weed seed germination and (2) make them available in soil solution for plant uptake. Drought stress also reduces the effectiveness of postemergence herbicides, and for pigweed, post options are very, very limited. Together, these factors -- primarily, the loss of residual control measures and secondarily, the diminished performance of post herbicides -- are likely to result in wide spread control failures with glyphosate-resistant Palmer amaranth if the drought continues, regardless of cultivar or herbicide technology. See the previous newsletter or go to www.gaweed.com for our latest weed management recommendations.



Dry Weather and Management of Early Season Insects. (Roberts) Thrips are the most consistent insect pest of Georgia cotton -- if you plant cotton in Georgia it WILL be infested with thrips. Many of the host plants infested by thrips (weeds on field borders and roadsides) are declining due to the severity of the drought. Thrips will be looking for more suitable host plants which are lush and green, and we anticipate higher than normal populations on seedling cotton.

The use of a preventive insecticide at planting for control of thrips provides a consistent yield response. However, seedlings should be monitored as foliar insecticides may still be needed. Thrips insecticides used at planting are systemic; absorbed in the soil solution, taken up by the plant roots, and translocated throughout the plant. In situations where soil moisture levels drop below the insecticide treated zone, thrips control appears to be reduced due to reduced uptake of the systemic insecticide. Experience is lacking on how extremely dry conditions will affect the uptake and performance of seed treatments used for thrips control. Foliar treatments for thrips are recommended when 2 to 3 thrips are found per plant. The presence of immature (wingless

and crème colored) thrips suggests the preventive thrips insecticide is failing. Treatment of thrips is rarely necessary after plants have 5 true leaves and are growing rapidly.

False chinch bugs and grasshoppers are two insect pests normally associated with droughty conditions. These pests are typically isolated and sporadic, but tend to be associated with reduced tillage. False chinch bugs are true bugs and will feed on cotton seedlings with their needle-like mouthparts. In many situations, little if any effect is observed on plants due to false chinch bugs. However, severe infestations of false chinch bugs (many per plant) on seedling cotton can cause stunting and potentially cause stand loss. In most field situations, severe infestations of false chinch bugs are associated with primrose or wild radish infestations which were not burned down in a timely manner.

Grasshoppers survive the winter as eggs in the soil. A dry winter and spring favors egg survival and subsequent emergence of immature grasshoppers. We typically observe emergence of immature grasshoppers during April and May. Both immature (wingless) and adult (winged) grasshoppers may damage cotton. Grasshoppers feed on foliage, but will also feed on the main stem of cotton seedlings. Stem feeding injury will appear similar to cutworm damage and is much more detrimental than foliage feeding. In many situations grasshoppers will only partially chew through the stem, resulting in seedling death or a plant with a weakened stem. Treatment is recommended when grasshoppers threaten a stand. Immature grasshoppers are relatively easy to control with low rates of labelled insecticides. However adults are much more difficult to control and high rates should be used.

Historically, spider mites have not been a common pest in Georgia. However, spider mites tend to be a more widespread problem during hot, dry conditions. During 2006, light to moderate infestations of spider mites were common in southwest Georgia. Spider mites can be difficult and expensive to control. Insecticides for other pest should only be used on an as-needed basis to minimize the risk of flaring spider mites.

Monsanto Alliance with BASF and Pending Acquisition of D&PL. (*Brown*) In March, Monsanto and BASF announced a long term partnership for discovery, development, and global commercialization of biotechnology traits in corn, cotton, soybeans, and canola. The agreement enhances the flow of genes, information, and breeding technology targeting specific yield advancement and stress tolerance. It harnesses the germplasm as well as the regulatory and business skills of Monsanto in delivering products from the collective R&D efforts. Bigger... better...faster.

Announcement of the Monsanto purchase of D&PL is long overdue. Predictions of an “imminent” decision have been made since late February. The lack of a public pronouncement from the U.S. Department of Justice suggests there have been behind-the-scenes negotiations on the deal, but the consensus is (1) the purchase will be approved by mid-May and (2) attached to the deal will be stipulations not specified earlier. We all wait.

Scout Schools: Locations and dates for scheduled Cotton Scout Schools are as follows.

Tifton	June 4, 2006	Contact: Debbie Rutland	(229) 386-3424
Midville	June 14, 2006	Contact: Will Duffie	(706) 554-2119

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

Edited by: **Steve M. Brown**, Extension Agronomist-Cotton

Contributions by:

Steve M. Brown, Extension Agronomist – Cotton

Stanley Culpepper, Extension Weed Scientist

Phillip Roberts, Extension Entomologist - Cotton

Putting knowledge to work

COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES, COLLEGE OF FAMILY AND CONSUMER SCIENCES, WARNELL SCHOOL OF FOREST RESOURCES, COLLEGE OF VETERINARY SCIENCES

The University of Georgia and Fort Valley State University, the U. S. Department of Agriculture and counties of the state cooperating, The Cooperative Extension Service offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, sex or disability. An equal opportunity/affirmative action organization committed to a diverse work force.

1 7 8 5