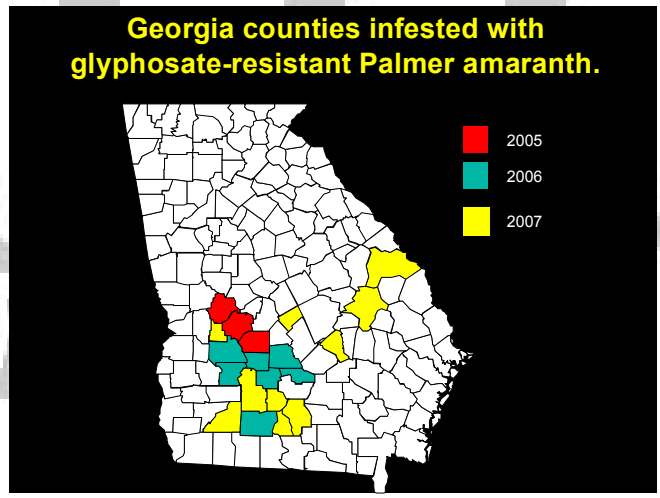
The University of Georgia
Cooperative Extension
College of Agricultural and Environmental Sciences

Georgia Cotton

May 12, 2008 www.ugacotton.com

Glyphosate-Resistant Palmer Amaranth Update (*Culpepper*). During 2007, Palmer amaranth was sampled from eleven Georgia counties to determine the spread of glyphosate-resistant Palmer amaranth throughout Georgia. After screening these Palmer amaranth populations for resistance, ten of the eleven counties were confirmed to contain glyphosate-resistant populations. Since 2005, we have now confirmed glyphosate-resistant Palmer amaranth to be present in 20 of our Georgia counties. There is a great likelihood that this pest is present in many other counties as well. Thus, growers who think they have resistance in non-confirmed areas should manage suspect fields as if they are resistant. We will again attempt to sample a dozen or more counties that have not already been confirmed with resistance this fall. For those who think they have a resistance issue, contact your local county Extension agent for assistance. Recommended management programs are available at the local county Extension office or at www.gaweed.com.



What Does Reflex Injury Look Like in Cotton? *(Culpepper)* Because of glyphosate-resistant Palmer amaranth, the use of residual at plant herbicides has greatly increased. Residual at plant herbicides are essential if we are to survive glyphosate-resistant Palmer amaranth. Unfortunately, with the use of these herbicides comes the occasional cotton injury. Most growers are familiar with injury from residual herbicides but their may be less experience with

identifying Reflex injury. Figure 1 notes typical Reflex injury on cotton. Injury of this nature is usually transient and cotton should grow normally. However, more significant injury can occur when heavy rains cause soil treated with Reflex to splash on newly emerging cotton (Figure 2). Again, the cotton should recover when a favorable environment returns but growth may be slow for a short period of time. In very severe infestations, there are the occasional plants where stems are "burnt" into which may lead to plant death (Figure 3).

Figure 1: Typical Reflex injury.

Figure 2: Occasional Reflex injury.

Figure 3: Occasional severe Reflex injury.

Above: Reflex injury on cotton cotyledons caused by water splash.

Right-Top: Soil containing Reflex splashed on the stem of cotton.

Right: Stem lesion caused from the Reflex contained in the soil

Early Season Insect Management: Thrips are the most predictable insect pest of cotton in Georgia. These small insects feed on the underside of cotyledons on newly emerged cotton or on unfurled leaves in the terminal bud. Damage on cotyledons may be recognized by silvering on the underside of cotyledons; true leaves damaged by thrips are crinkled and misshapen. Excessive thrips injury results in stunted plants, delayed maturity, reduced yield potential, and in severe cases stand loss. The use of a preventive insecticide at planting (such as Temik, Cruiser, or Gaucho Grande) for control of early season thrips has provided a consistent yield response in UGA field trials. If a preventive insecticide is not used at planting, multiple well timed foliar sprays will likely be needed to prevent economic damage from thrips. Seedlings should be monitored for thrips and damage even if a preventive insecticide was used at planting. Supplemental foliar sprays may be needed if conditions are not conducive for plant uptake of the

preventive insecticide or if unusually heavy thrips infestations occur. Economic damage from seedling thrips is unlikely once seedlings attain 5 true leaves and are growing rapidly.

The established threshold for thrips in Georgia is 2-3 thrips per plant. However, we must remember that thrips must feed on the plant to ingest the systemic insecticide. In some situations (periods of heavy thrips migration into cotton) we may observe 2-3 thrips adults per plant when scouting yet the preventive insecticide is still providing control. The presence of immature thrips (crème colored and wingless) is an indicator that the preventive insecticide is failing and that a supplemental foliar spray may be needed. The use of a hand lens will aid in identifying immature thrips. Consideration should also be given to the developmental stage of the seedling and overall plant growth. Seedlings are most vulnerable to thrips in terms of yield loss during early developmental stages (1-2 leaf); as seedlings develop (i.e. 4-5 leaf) they become more tolerant to thrips injury. Low seedling vigor or slow seedling growth from cool temperatures or other plant stresses magnifies the negative impact of thrips. Since thrips are feeding on unfurled leaves in the terminal, pay close attention to newly expanding leaves for injury symptoms. Newly expanding leaves may also continue to show some damage following a foliar application. Yield response to a thrips insecticide application at the 5-leaf stage is unlikely unless high numbers of thrips are present and/or plants are growing slowly. Automatic applications of a foliar thrips insecticide with over the top herbicides at the 5-leaf stage should be avoided. In addition to the added expense of the insecticide, potentially an early season spray could encourage outbreaks of other pests such as aphids or spider mites. Scouts should be observant for aphids, beet armyworms, cutworms, grasshoppers, and false chinch bugs which are sporadic and occasional pests of seedling cotton.

COTTON SCOUT SCHOOLS

June 2, 2008	Tifton Campus Conference Center	Tifton GA
June 24, 2008	Southeast Research and Education Center	Midville GA

COTTON SCOUT SCHOOL
June 2, 2008
Tifton Campus Conference Center
Tifton, Georgia

9:00 WELCOME
9:05 COTTON GROWTH AND DEVELOPMENT
9:30 INSECT SCOUTING PROCEDURES
9:40 LARVAL INSECT PESTS
10:10 - 10:20 BREAK
10:25 BUG PESTS
10:55 NATURAL CONTROLS
11:15 SAFETY
11:35 FIELD TRIP
12:30 ADJOURN - Have a safe trip home

COTTON SCOUT SCHOOL
June 24, 2008
Southeast Research and Education Center
Midville, Georgia

9:00 WELCOME
9:05 COTTON GROWTH AND DEVELOPMENT
9:30 INSECT SCOUTING PROCEDURES
9:40 LARVAL INSECT PESTS
10:10 - 10:20 BREAK
10:25 BUG PESTS
10:55 NATURAL CONTROLS
11:15 SAFETY
11:35 FIELD TRIP
12:30 ADJOURN - Have a safe trip home

SCOUT SCHOOL PROGRAM PARTICIPANTS

Glen Harris - Extension Agronomist
Phillip Roberts - Extension Entomologist
John Ruberson – Research Entomologist
Mike Toews – Research Entomologist
Roosevelt McWilliams - Burke County Extension
Anthony Black - SEREC Superintendent

Contributions by:
Stanley Culpepper, Extension Agronomist – Weed Science
Phillip Roberts, Extension Entomologist

Your local County Extension Agent is a source of more information on these subjects.
Edited by: A. Stanley Culpepper, Extension Agronomist-Weed Science