

May 12, 2004

***COTTON PEST MANAGEMENT NEWSLETTER #1***

**COTTON SITUATION:** The Georgia Weekly Weather and Crops Report for the week ending May 9<sup>th</sup> listed the crop as 33 percent planted. Dry soil conditions . in many parts of the state which have delayed planting somewhat. Recently, the Boll Weevil Eradication Program released a report of intended cotton acres for Georgia at 1.39 million acres as of May 7, 2004.

**INSECT SITUATION:** Thrips populations are high and foliar insecticides are being applied in some areas. Grasshoppers and damage have been observed in some fields. Low populations of beet armyworms have also been observed. Growers and scouts should be reminded to monitor stands at a minimum of once per week from emergence to first square.

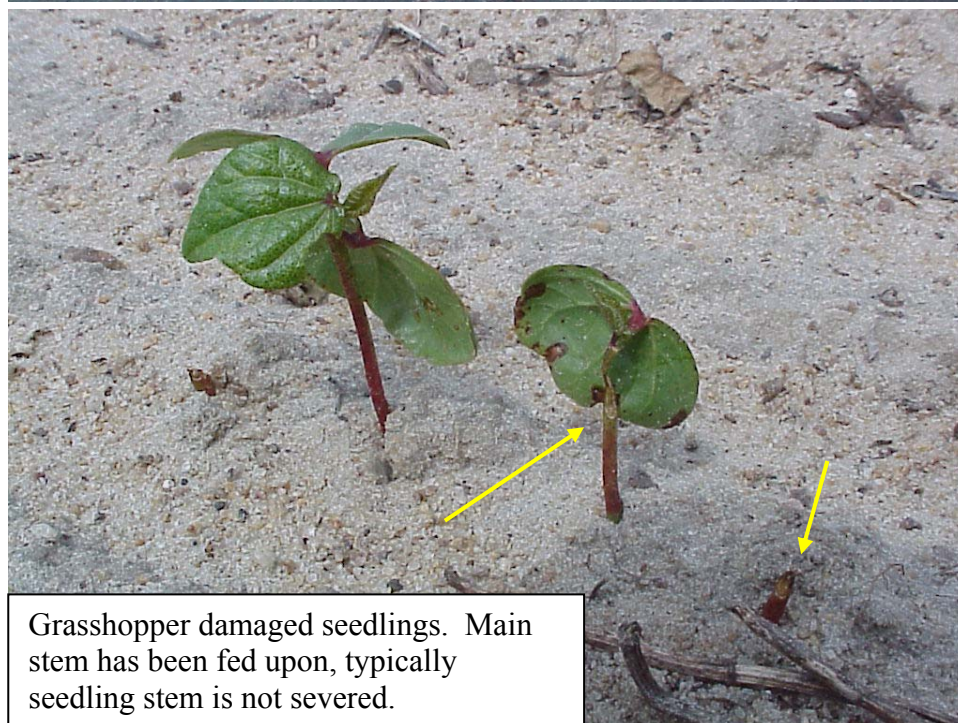
**Grasshoppers:** Grasshopper infestations are sporadic and unpredictable, but significant populations and economic damage have been observed in some reduced tillage fields. Grasshoppers overwinter in egg cases laid in the soil and emerge during April and May. Survival of overwintering eggs is generally greater during dry winters (which we experienced during the winter of 2003-2004). Almost all economic infestations occur in reduced tillage fields. Conventional tillage practices may destroy or damage overwintering eggs and inhibit nymph emergence from the soil upon hatching.

Grasshopper damage may include feeding on cotyledons, true leaves, or leaf petioles, but more importantly, **feeding on the main stem** of young seedlings. Feeding of the stem appears similar to cutworm damage, but grasshoppers often will not completely cut or feed through the main stem. When the stem is only partially fed upon, it is weakened and plants will often tip over and eventually die as they develop. If cut plants are observed, be sure to also look for cutworms (which feed at night) under cover crop residues and in the soil near seedlings. Damage from grasshoppers has also been observed on emerging cotton prior to the cotyledons emerging (i.e. in the crook stage). Grasshoppers will feed on the main stem causing it to break, leaving the cotyledons in the soil.

Unfortunately, we do not have a workable threshold based on actual grasshopper populations due to the unpredictability of their feeding on cotton. We have observed fields with high populations (multiple grasshoppers observed when a step is taken) and little if any cotton injury. However, in some fields we have observed light to moderate infestations and significant damage to seedlings.

**Decision to treat grasshoppers should be based on stand counts and the presence of damaged seedlings.** If the stand is threatened, treat with a labeled insecticide. Several insecticides are labeled for grasshopper control. Immature or wingless grasshoppers are relatively easy to control, however winged adults tend to be more difficult to control. Higher rates of insecticides should be used if winged adults are present. In field demonstrations conducted in Cook county the last two years, high rates of pyrethroids have provided good control of both adults and immatures. Dimilin, which is an insect growth regulator with long residual, provided good control of immatures in a field demo in Cook county last year and Crisp county this year. The residual activity of Dimilin is beneficial if

additional grasshoppers emerge from eggs in the soil following treatment. Dimilin has no activity on adults and control of immatures may not be observed for 5-7 days. If cotton has emerged and damage is occurring, a contact insecticide such as a pyrethroid should be used. If emergence is still occurring, consider a tank-mix of a pyrethroid and 1-2 ozs/acre of Dimilin. Observations suggest that grasshoppers are a recurring problem in certain fields year after year. If grasshoppers are present at the time of planting, be sure to monitor stands beginning at emergence.



Grasshopper damaged seedlings. Main stem has been fed upon, typically seedling stem is not severed.

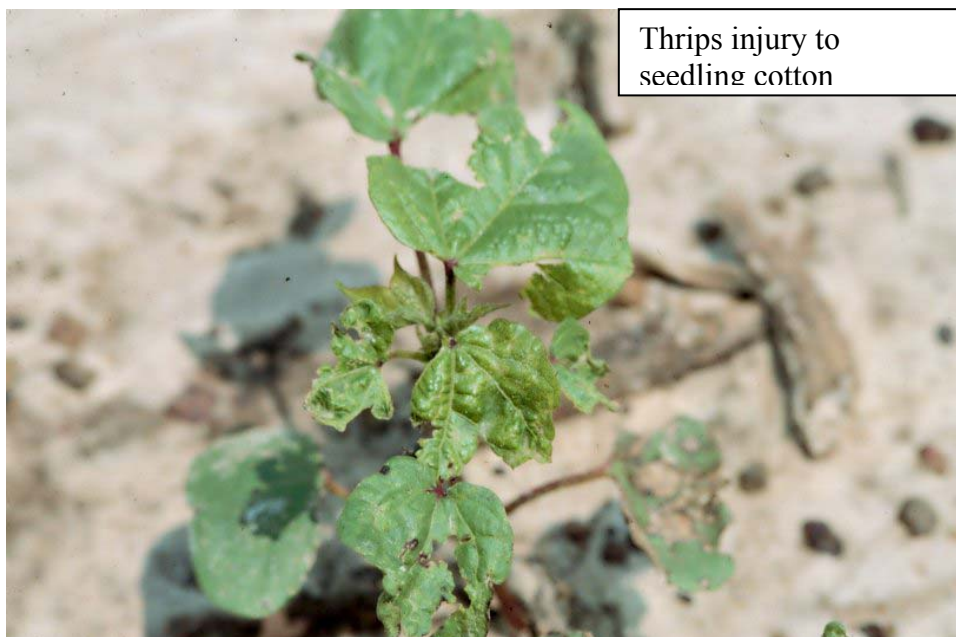


Cotton seedling which has tipped over at grasshopper feeding site.



Immature (wingless) grasshopper on the left and an adult on the right.

**Thrips:** Thrips populations are relatively high and some injury is present in most fields. Dry soil conditions are compounding thrips problems due to difficulty in plant uptake of preventive systemic insecticides used at planting. Typical symptoms of thrips injury include crinkling and cupping of expanding true leaves, stunting of plants, and in severe situations reduced yield potential, loss of apical dominance, and stand loss. On cotyledon cotton, cotyledons will often have a silvery appearance if heavily infested. Foliar sprays are recommended when thrips number 2-3 per plant, especially if immature thrips are observed which is indicative that the preventive insecticide used at planting is failing. Immature thrips are wingless and creme colored, whereas adult thrips vary in color from brownish black to yellowish brown and have two pairs of fringed wings. A hand lens will aid in distinguishing adults and immatures. The likelihood of thrips injury is significantly reduced once seedlings attain the 5 leaf stage and are growing rapidly. Damage resulting from thrips injury on younger seedlings is more pronounced (i.e. damage on 1-2 leaf cotton will reduce yield more than similar damage on 4-5 leaf cotton). Foliar treatments recommended for thrips control include the systemic insecticides Bidrin, dimethoate, and Orthene. Following treatment with a foliar insecticide, it is likely the next 1-2 expanding true leaves will continue to exhibit damage symptoms since thrips had been feeding in the terminal bud.



Thrips injury to seedling cotton

**Scout Schools:** The annual cotton scout school will be held in Tifton on Monday June 14, 2004. As in years prior, pre-registration and a \$7.00 registration fee is required. Additional cotton scout schools are also planned at other locations. The dates, location, and contact for each are listed below.

May 22, 2004	Terrell Co. Ext. Office, Dawson- <i>Will Duffie</i> (229/995-2165)
June 14, 2004	RDC, Tifton- <i>Debbie Rutland</i> (229/386-3424), pre-registration required
June 15, 2004	Jeff Davis Co., Hazelhurst- <i>Tim Varnedore</i> (912/375-6648)
June 22, 2004	SE GA Res.& Ed. Center, Midville- <i>Richard McDaniel</i> (706/554-2119)

**INSECT UPDATES:** Check the **Cotton Insect Hotline (1-800-851-2847)** for updates on current insect conditions. The Cotton Pest Management Newsletter is also posted on the UGA Cotton Homepage at: <http://www.griffin.peachnet.edu/caes/cotton/>

Sincerely,

Phillip Roberts  
Extension Entomologist