

GAINES COUNTY IPM NEWSLETTER

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Gaines County Peanut Tour

The Gaines County Peanut Tour will be held on July 27, 2010 beginning at the Gaines County Extension Office located at 101 S. Main, Courthouse, Rm. B-6 in Seminole. Registration will begin at 8:45 a.m. with the tour departing at 9:15 a.m.

The Program will conclude at 1:00 p.m. at the Gaines County Party House located at the Gaines County Park. Individuals with pesticide applicators licenses will be awarded three (3) general Continuing Education Units (CEU's) for attending this program. For more information contact Terry Millican with the Texas AgriLife Extension at (432) 758-4006 x 238 or Manda Cattaneo at (432)788-0800.

Individuals with disabilities who require an auxiliary aid, service or accommodations in order to participate in an Extension sponsored activity are encouraged to contact the Gaines County Extension Office at (432) 758-4006 x 238.

General Situation

Cotton and Peanut fields are looking good. Several cotton fields are blooming. Nodes Above White Flower (NAWF) is ranging from 8 to 10 NAWF in several fields. This indicates that there is potential for a good yield, as long as Mother Nature cooperates with us and the plants are able to maintain and mature out the high fruit load.

We are picking up populations of bollworms and aphids in the cotton fields we are scouting. Verticillium wilt is becoming very prevalent in fields that are known to have a history of Verticillium wilt. We are also picking up a little cotton rust and bacterial blight.

Peanuts are pegging and forming pods. A majority of the peanut fields have several pegs and again this is indicating a good yield potential. However, these fields will use a lot of water to fill out all of the pods.

We are closely monitoring our scouting fields for Rhizoctonia and Phythium pod rot. A majority of the infected pegs/pods that we have taken into the lab have come back as Rhizoctonia. A very small percentage has come back as Phythium.

Bollworms

Bollworm populations have reached treatable levels in half of the non-Bt fields that we are scouting. On Friday we were finding 1 to 3 day old worms and damaged squares in the mid to upper canopy.

Moths usually lay single eggs on the tops of young, tender terminal leaves in the upper third of the plant. Eggs are pearly white to cream color and about

half the size of a pinhead. Eggs hatch in 3 to 4 days, turning light brown before hatching. Young worms usually feed for a day or two on tender leaves, leaf buds and small squares in the terminal before moving down the plant to attach larger squares and bolls. When small worms are in the upper third of the plant, they are most vulnerable to insecticides. Sometimes moths deposit eggs on squares, bolls, stems, and in lower parts of the plant. This may occur when cotton plants are stressed and making little new growth, or during periods of high temperature and low humidity. Detection of eggs and control of small worms are more difficult when eggs are deposited in these locations.

Cotton fields should be scouted carefully every 3 to 5 days. Eggs and newly hatched worms are usually found in the plant terminals and indicate possible outbreaks. Natural mortality agents such as weather and predators frequently control these pests before any damage occurs. Once worms have grown to larger than 1/2 inch long, natural and insecticidal control are less effective. Insecticides applied to control 1/2 inch long worms are only moderately effective.

Conventional insecticides often kill beneficial insects and spiders, thus opening the door for secondary pests. Avoid making conventional insecticide treatments on the basis of egg numbers or first signs of crop damage.

The entire plant should be search for bollworm larvae and injury. A proper sample includes squares, white blooms, pink blooms, bloom tags, and bolls. Count the number of eggs, worms, and key predators. Predators and parasites are very important in reducing the numbers of eggs and larvae.

Table 1. Bollworms Action Threshold

Cotton Stage	Worm size	Cotton Type	
		Non-Bt	BT
Before Bloom	All	30% damaged squares and worms are present	
After boll formation	¼ inch or less	10,000 worms/acre	Do not Treat
	Larger than ¼ inch	5,000 worms/acre	5,000 worms/acre with 5-15% damaged fruit

Verticillium Wilt

Over the past week, Verticillium wilt has become very evident in some cotton fields. There are no fungicides that can be applied to reduce Verticillium wilt incidence. Be sure to make a note of which fields have Verticillium wilt, so that you can plant a tolerant cotton variety in the future.

Cotton Aphids

Cotton aphid populations are starting to build in some fields. Most of the reports that I have received are from eastern Gaines County. We are mainly seeing them in fields that have a skippy stand. Aphids are usually found on the underside of leaves, on stems, in terminals, and sometimes on fruit. Heavy and prolonged infestation can cause leaves to curl downward, older leaves to turn yellow and shed, squares and small bolls to shed and bolls to be reduced in size, resulting in incomplete fiber development.

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Natural control by unfavorable weather, predators, parasites, and pathogens can be effective in holding populations below damaging levels. Sometimes aphid numbers increase to moderate or heavy levels and then decline for no apparent reason.

Fields should be scouted twice a week for developing aphid populations and beneficials. If you find a high population of aphids, be sure to also make note of the number of beneficials present. Then come back in 3 to 4 days and determine if the aphid populations and beneficial populations are increasing or decreasing. This will help you to determine if the field needs to be treated or if the natural enemies will be able to reduce your aphid populations below treatable levels.

Dr. David Kerns applied an aphid insecticide trial in eastern Gaines County this past Thursday (July 15). A fairly high population of ladybird beetles were present when the insecticide was applied. Below are the preliminary results.

Table 2. Percent reduction in **aphid** populations from July 15 to July 19

Treated Plots	~90% reduction
Untreated Plots	~61% reduction

Table 3. Percent change in **ladybird** beetle populations from July 15 to July 19

Treated Plots	~63% reduction
Untreated Plots	~54% increase

PGR Applications based on Height to Node Ratio

Several fields have plants that are hip high but I would caution growers in making PGR applications. We are starting to see some signs of wilting during the heat of the day. Even though the plants are tall, their growth may have already started to slow down due to moisture stress and heat stress.

Height to Node Ratio is average internode length and can be determined by dividing the height of the plant in inches by the number of nodes - SO. Nodes measure plant age and height is a measure of plant vigor. Early season plant vigor is reflected in the relative spacing of nodes on the plant; a node develops approximately each 45-55 heat units (DD-60's). This approximation is accurate enough in early season to approximate the age of an emerged plant by counting nodes. Plant height, or spacing between nodes, is a measure of how rapidly the plant is growing.

Within reason, node development is insensitive to environmental stress and accurately measures plant age. The section of stem between each node (internode) is insensitive to plant age, and very sensitive to environmental conditions. This makes internode length a reliable indicator of plant growth and vigor. By evaluating the node-internode relationship, the amount of stress, and the approximate time period of stress can be determined. In order to utilize this information, a method of assigning numbers to this relationship is needed. This number is called the height/node ratio.

When the developing plant is stressed the height/node ratio will be low. Plant height is measured from the plant's cotyledon leaves (or scars) to the top of

the plant. Cotyledon leaves are the leaves that appear at emergence of the plant. They are the only leaves on the stem that are exactly opposite each other.

As a general rule, height/node ratio prior to early bloom should be in the 0.8 (dryland) to 1.5 (irrigated) range. After mid bloom, the height/node ratio will start decreasing due to increasing fruit load stresses placed on the plant. This is normal and expected. If this ratio remains high, or increases, after mid bloom, this indicates the plant is experiencing excessive vegetative growth due to lack of fruit set or excessive nitrogen fertilization. This cotton will normally benefit from an application of plant growth regulator such as Pix.

Information for this newsletter was obtained from the following publications:

- **Managing Cotton Insects in the High Plains, Rolling Plains, and Trans Pecos Areas of Texas**

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