

GAINES COUNTY IPM NEWSLETTER

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General Situation

Dry conditions prevail in a majority of the county. Far western Gaines County received some rain during the last week and we have received some reports of hail from this area. Cotton stages range from cotyledon to 6 true leaves, with some plants starting to put on squares. A majority of the peanuts are looking good and we have seen a few blooms in some fields.

Root-Knot Nematode



Root-knot nematodes are already taking their toll in some fields. We have observed stunting associated with severe nematode populations in some fields. The stunting is occurring in fields that did not have a nematicide applied at planting and in fields that had a nematicide applied at-planting. Presence of root-knot nematodes can be confirmed by digging up plant roots and examining the roots for galls (See *Figure 1*). Root-knot nematode galls are formed when juvenile nematodes penetrate cotton roots and pierce the vascular cells. Their feeding causes cells to enlarge and the knots or galls become apparent. This impairs root function by inhibiting the uptake of water and nutrients.

Figure 1. Cotton root with numerous root-knot nematode galls

Management options vary depending on the level of nematode infestations. Crop rotation to a non-host is the best method in managing root-knot nematodes. Other options include seed treatments or Temik 15G applied in-furrow at planting followed by foliar application of Vydate C-LV. Planting partially resistant varieties is one of the most effective management options.

Beet Armyworm

We have observed some Beet Armyworm damage in the non-Bt cotton fields that we are scouting. However, larval survival is low, with one larva surviving in some cases but in most cases no larvae are surviving. Therefore, an insecticide application was not justified in these fields. Below are some pictures of beet armyworm feeding. One classic characteristic is the "window pane". Young larvae will chew the green layer from the leaves, which causes a "window paned" appearance.



Figure 2. Beet armyworm feeding on cotyledon leaves that caused the "Window Paned" appearance



Figure 3. Beet armyworm feeding on the underside of the cotyledon leaves

Thrips



Figure 4. Curling of the leaves caused by heavy thrips feeding

We have reached treatable levels in some fields and are starting to see leaf and terminal damage. However, a majority of the fields have low thrips pressure or are growing fast enough to out run developing thrips populations.

Monitoring your fields closely will allow you to detect when seed treatments or at planting insecticides have worn out. If you start picking up immature thrips, then your at planting insecticides or seed treatments have likely run out. Treatments may be justified when you are averaging one thrips per leaf. Timing is the most important component of foliar applications. If considerable damage occurs prior to treatment, then you may have missed your opportunity to have the most effect. Once you reach 5 true leaves, then treatments are probably unjustified because there is enough leaf mass and you are likely safe from economic damage.

Rhizobium Nodulation in Peanuts

We have observed a few fields with low nodulation levels. Below is a chart that can be used to rate your nodulation levels at 5 to 6 weeks after planting. If early nodulation is good, you can expect it to continue to increase toward peak nodulation (usually August), but if early nodulation is poor it probably isn't going to improve. Minimal or nonexistent *Rhizobium* nodulation points toward the need for supplemental N to achieve desired yields.

Table 1. Early season Rhizobium nodulation rating for peanuts.

Nodules per Plant	Early Season Nodulation Rating	Management Consideration
More than 20	Excellent	This field will likely have excellent late-season nodulation. Therefore, a response from supplemental (mid-season) nitrogen is doubtful.
16 to 20	Very Good	Late-Season nodulation should also be strong. Therefore, you should reduce your mid-season nitrogen application.
11 to 15	Good	Will produce a good crop but may consider some reduction in your mid-season nitrogen application.
6 to 10	Fair	We would like to see higher nodulation than this. Therefore, a mid-season nitrogen application is a good bet.
Less than 5	Poor	These nodules may be from Rhizobium that are not specific for peanuts. A mid-season nitrogen application is essential. Try to determine why the nodulation was poor in this field.

Meeting Announcement

Texas AgriLife Extension Service in Terry County is holding a series of meetings titled "**Management of Insects and Diseases in Peanuts.**" The first meeting will be **Tuesday June 15 from 9 to 11 at Birdsong Peanuts (1564 CR 474) in Brownfield.** Speakers include Dr. Jason Woodward and Scott Russell. 2 IPM CEUs will be offered. There will be a tour of the shelling plant after the meeting. For further information please contact Chris Bishop, County Extension Agent - Ag in Terry County at 806-637-4060.

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Information for this newsletter was obtained from the following publications:

- *Compendium of Cotton Diseases*, Second Edition. APS Press, 2001. Kirkpatrick, T.L. and C.S. Rothrock, ed.
- *Texas Peanut Production Guide*. Texas AgriLife Extension Service.

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