

# North Carolina Pest News

Departments of Entomology and Plant Pathology



Stephen J. Toth, Jr., editor  
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## CAUTION !

The information and recommendations in this newsletter are applicable to North Carolina and may not apply in other areas.

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[http://ipm.ncsu.edu/current\\_ipm/pest\\_news.html](http://ipm.ncsu.edu/current_ipm/pest_news.html)

## FIELD AND FORAGE CROPS

From: Jack S. Bacheler, Extension Entomologist

### Thrips on Cotton

In a note to agents and consultants last Friday (May 25), we highlighted how much thrips levels and damage had picked up since last week's cotton insect update. Things have only gone downhill over much of the state since then, and will not likely improve much until we get significant rainfall. However, much of our cotton, though somewhat behind developmentally, is "growing off" reasonably well under the circumstances. In our at-planting insecticide test near Rocky Mount, the untreated checks were running over 100 immature thrips and 12 to 16 adult thrips per 5 seedlings on May 29. These are not exceptionally high numbers for this location, but enough to cause considerable damage to unprotected seedlings. Even at three-plus weeks after planting, all of the seed treatments were beginning to show signs of significant damage on the new leaves and in the bud area. Reports of poor control 3 to 5 days following a foliar insecticide behind Temik, or more commonly a seed treatment, are common across the state.

As we mentioned last Friday, prolonged dry conditions also favor increases of hard to control (and difficult to identify) western flower thrips. It would appear that western flower thrips are probably involved in **SOME** of the lack of control problems encountered by producers. Unfortunately, the first sign of western flower thrips damage to cotton seedlings is often their virtually complete survival following a foliar application of normally-successful insecticide rates. About the best one can hope for in limiting damage from western flower thrips is a high rate of Orthene or Monitor at approximately 0.5 pound of active ingredient per acre. Even these high rates may be disappointing against this species, but don't expect alternatives such as Bidrin, Vydate, dimethoate, metasystox or the pyrethroids to save the day. All of the above materials can "flair" (increase their levels due to the spray) cotton aphids and spider mites. Last year we observed greater survival of westerns following the seed treatments (e.g., Gaucho Grande, Cruiser, Avicta and Aeris) than with Temik. For example, in a 2006 test near Rocky Mount at 4 weeks after planting, Temik 15G alone at 5 pounds of product per acre had about half as many western flower thrips as a seed treatment plus Orthene applied a week earlier. In this same test, both of these treatments controlled over 96 percent of the tobacco thrips present compared with the untreated control. Tobacco thrips are most often far and away our most common thrips species on cotton. Even this year, western flower thrips are not the primary damaging thrips species in most cotton fields, even though this spring their levels may be higher than average.

Remember that the three week duration of seed treatment activity seems to be about the limit for thrips control under all kinds of weather. For cotton planted less than 3 weeks ago, watch that three week window and treat accordingly. Until we get much needed rainfall, thrips control will likely continue to be a headache until cotton reaches the 5 true leaf stage.

Even though we need to treat thrips when needed to avoid significant seedling damage, increased chances of subsequent spider mite and/or cotton aphid outbreaks are likely following these treatments, with a few mite outbreaks already being reported beginning last week. This is not a trivial matter, particularly with spider mites. Mites are very expensive and difficult to control and are far more likely following a foliar application for thrips, especially under dry conditions. If 2 to 4 true leaf cotton has some damage (primarily crinkled leaves and stunted growth) and 1 or 2 immature thrips but is growing well you might want to hold off on that foliar spray. Five true

leaf cotton should be safe from significant damage. Also on the positive side, adult migrating thrips levels often drop significantly near the end of the first week in June here. That occurrence would be most welcome this year. Significant rainfall may also help to lessen the odds of spider mites and cotton aphids becoming a problem.

From: Rick L. Brandenburg, Extension Entomologist

### **Thrips on Peanuts**

The hot, dry weather has slowed the uptake of at-plant insecticides and in some cases reduced their effectiveness. The big question for growers is whether to spray with a foliar insecticide to knock the thrips back, with the fear of flaring spider mites. It's a tough call. If your prayers for rain are answered, it all becomes a non issue. This is a decision to be considered on a field by field basis. If you are in an area where spider mites have not been a problem in past years, then the decision is easier. If the peanut plant is just sitting there with thrips "eating it up," then an insecticide spray may be of great value. If you are in an area where mites have been a problem in past years you recognize that the past month's weather has set the stage for big problems. You have to answer the question of whether or not you'll have any peanuts for the mites to feed on in June if you don't treat for thrips now. I think you have to look at the situation you have now. Basing today's decision totally on what may happen tomorrow would be a mistake. Hopefully, we will get into a wetter weather pattern and spider mites won't become a serious problem this year.

## **FRUIT AND VEGETABLES**

From: Gerald J. Holmes, Extension Plant Pathologist

### **Powdery Mildew Rampant on Athena Cantaloupe in Northern Florida and Southern Georgia**

Over this past week, I have received news that powdery mildew is present at very high levels on cantaloupe cv. Athena in northern Florida and southern Georgia. While powdery mildew on cucurbits is not unusual, seeing it this early and this severe on cantaloupe is cause for concern. Without doubt, the dry weather has provided ideal conditions for spread of the pathogen. Unlike most foliar diseases, powdery mildew thrives in dry conditions.

Growers in North Carolina should take note of this and be prepared for powdery mildew this season. Fortunately, a new fungicide called Quintec (by Dow AgroSciences) received its label for use on melons and watermelon earlier this year. We have evaluated Quintec for control of powdery mildew on squash for several years and it has performed extremely well. It performs similarly on cantaloupe.

Quintec cannot be applied more than four times per season and no more than two times consecutively. It should be rotated with another effective fungicide with a different mode of action. There are two choices here, a strobilurin (Flint, Quadris or Pristine) or a DMI\* fungicide

(Nova or Procure). All of these rotation partners have been losing efficacy over the past several years and there are reports of control failures using Pristine this year in Georgia. Given this information, Nova or Procure may be preferred. For product efficacy ratings, please go to Table 3-18 in the *2007 Vegetable Crop Handbook for the Southeastern U.S.* ([http://www.aces.edu/dept/com\\_veg/2007\\_SEVG5.pdf](http://www.aces.edu/dept/com_veg/2007_SEVG5.pdf)) or Table 6-20 in the *North Carolina Agricultural Chemicals Manual* (<http://ipm.ncsu.edu/agchem/6-20.pdf>).

Growers should scout cucurbits (especially cantaloupe and watermelon) for powdery mildew and begin applications immediately if symptoms are present. Look for white powdery spots on leaves that are in shaded areas of the canopy (Fig 1). If the disease is found nearby but not on your farm, you should begin treatments immediately and reapply on a 7-day interval.

\* DMI = demethylation inhibitor



**Fig 1.** Powdery mildew (caused by *Podosphaera xanthii*) on cantaloupe leaf. Note the white, powdery spots which can occur on both sides of the leaf. The disease will generally first be detected on leaves in shaded areas of the canopy and become more obvious as it progresses. Image by Gerald J. Holmes.

## ORNAMENTALS AND TURF

From: Stephen B. Bambara, Extension Entomologist

### Early Bagworm Treatment

If you had problems with bagworms (Fig. 2) last season, now is the time to inspect for the tiny bags and treat, if necessary. They should be large enough to see by now without having done damage. Practice your observational skills. Early treatment avoids defoliation and is more effective against early instar caterpillars. This is especially true if you use *Bacillus thuringiensis*

(*B.t.*) products. If you only have a few bagworms, handpicking them always works well. For more information on bagworms, see *Ornamental and Turf Insect Note No. 81* on the web at <http://www.ces.ncsu.edu/depts/ent/notes/O&T/trees/ort081e/ort081e.htm>.



**Fig. 2. Bagworms.** Image from Stephen B. Bambara.

### **Twospotted Spider Mites Looming**

Now that hot temperatures are becoming a regular event, warm season spider mites (Figs. 3 and 4) will be showing up for the summer. Twospotted spider mites are the most common. They like a number of herbaceous plants in the landscape. Insecticidal soaps and horticultural oils are great products for the home landscape. You can avoid phytotoxic effects by spraying a plant that is well watered and while it is not in direct sunlight. Be sure to spray the undersides of the leaves, too. Sprays will likely need to be repeated at intervals during the summer. Severe infestation can cause leaves to crumple and curl. Professionals have additional miticide choices. There may also be cultural and biological control options in greenhouse operations. For additional information on twospotted spider mites, see *Ornamental and Turf Insect Note No. 25* on the web at <http://www.ces.ncsu.edu/depts/ent/notes/O&T/flowers/note25/note25.html>.



**Fig. 3. Twospotted spider mite (left) and predatory mite (right).** Image from University of California IPM.



**Fig. 4. Spider mite damage on cotton.** Image from the Cotton Insect Corner web site (<http://ipm.ncsu.edu/cotton/insectcorner/>).

## Rachel Carson's Birthday

Last week (May 27) commemorated Rachel Carson's (<http://www.chatham.edu/rci/40th.html>) 100th birthday. Last week was also when I viewed a new TV commercial promoting a common turf product to kill grubs and other lawn insects. The incongruence struck me. The product is a good and effective one, but it mentions nothing about responsible use. Do we conclude that everyone who wants a nice lawn needs this product?

One does not achieve a great landscape by preventively killing as many insects as possible and without knowing if pests are present or causing a problem. In turf, for example, it may take 10 to 15 Japanese beetle grubs per square foot of turf before noticeable damage to turf occurs. This almost never occurs in the home lawns that I see in North Carolina.

People don't take chemo-therapy because they might have or might get cancer. A lawn with a few grubs can still be green and healthy. It is not responsible to take medicine without a reason and it is not responsible to use pesticides without a reason. Adding unneeded poisons to a site can make a problem worse and can create off-site problems that may not be obvious. Always use and recommend the least harmful solution to an insect problem first.

## Scentsless Plant Bug on Hibiscus

The scentless plant bug *Niesthrea louisianica* (Fig. 5) is associated with hibiscus and rose-of-Sharon. It feeds on flower buds and seeds. Eggs are laid in masses and are deposited on the undersides of leaves. It may have more than one generation per year in North Carolina. Wingless nymphs are red. They are usually not damaging enough or common enough to be considered a real economic pest. They usually do not cause noticeable injury. A more famous scentless plant bug is the boxelder bug (see *Ornamental and Turf Insect Note No. 40* on the web at <http://www.ces.ncsu.edu/depts/ent/notes/O&T/houseplants/ort040e/ort040e.htm>), which does no damage to boxelder but is somewhat of a nuisance because it congregates on tree trunks and in homes in the fall. If *Niesthrea louisianica* becomes abundant enough to cause concern, a pesticide can be applied for control on flower buds, spent blooms and undersides of leaves (if eggs are noticed). Avoid spraying open blooms to prevent killing bees. Hand removal of the insects is also effective, if practical. Insecticidal soap may work for young nymphs. Several other insecticides are labeled for plant bug control on ornamental plants. Any of the following insecticides should give adequate control: pyrethrins, Sevin or most common lawn and garden insecticides. Landscapers may also use Tempo, Talstar One or Mavrik.



Fig. 5. *Niesthrea louisianica*. Image by James R. Baker.

## Ambrosia Beetles Still Active?

The Catawba County Extension Center sent pictures of ambrosia beetles (Fig. 6) taken last week and earlier on fig and ornamental persimmon. Perhaps the unusual spring temperature fluctuations affected beetle activity. Preventive bark sprays are the only treatment against these beetles that mostly attack small diameter trees of certain groups with smooth bark. Many trees grow out and survive. For additional information, see *Ornamental and Turf Insect Note No. 111* (<http://www.ces.ncsu.edu/depts/ent/notes/O&T/trees/note111/note111.html>) and *Insect Note No. 122* (<http://www.ces.ncsu.edu/depts/ent/notes/O&T/trees/note122/note122.html>).



Fig. 6. Ambrosia beetles. Image by Fred Miller.

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*Recommendations for the use of chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by North Carolina State University, North Carolina A&T State University or North Carolina Cooperative Extension nor discrimination against similar products or services not mentioned. Individuals who use chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage regulations and examine a current product label before applying any chemical. For assistance, contact an agent of North Carolina Cooperative Extension.*

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