NC STATE UNIVERSITY College of Agriculture & Life Sciences | NC Cooperative Extension Service

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.

In This Week's Issue . . .

See current and archived issues of the *North Carolina Pest News* on the World Wide Web at:
http://ipm.ncsu.edu/current_ipm/pest_news.html

ANNOUNCEMENTS AND GENERAL INFORMATION

Welcome to the 2008 North Carolina Pest News

Welcome to the first issue of *North Carolina Pest News* for 2008. North Carolina Pest News is a newsletter published in electronic form by the Departments of Entomology and Plant Pathology at North Carolina State University, and contains up-to-date information on the status of disease and insect pests in North Carolina from Extension specialists in the two departments. Steve Toth, Extension Entomologist and State IPM Coordinator, is the editor of the newsletter.

From now until the middle of September, new issues of *North Carolina Pest News* will be available every Monday morning at 8:00 a.m. via electronic mail to county Extension agents, University specialists, and others. By Monday afternoon, the newsletter will be available on the World Wide Web at the following location: http://ipm.ncsu.edu/current_ipm/pest_news.html.

We hope that *North Carolina Pest News* will meet your individual needs for information on the occurrence of diseases and insect pests in North Carolina. Please direct any suggestions or comments to Steve Toth (Steve_Toth@ncsu.edu).

Farewell to Tom Creswell

After 20 years of service to the Plant Disease and Insect Clinic at North Carolina State University, Tom Creswell is moving on. Dr. Creswell's service to the Department of Plant Pathology and his contributions to *North Carolina Pest News* are appreciated and will be missed.

FIELD AND FORAGE CROPS

From: Steve Koenning, Extension Soybean Plant Pathologist, and Jim Dunphy, Extension Soybean Crop Scientist

Current Status of Soybean Rust in North America

As of April 8, 2008, soybean rust is viable in parts of Florida, southern Alabama (Mobile area on kudzu), and Louisiana. Rust was found overwintering fairly far north in Mississippi on kudzu, but this site is now under water. Rust is active in Mexico on volunteer soybean growing in corn at this time on a limited acreage, but no soybean rust has been found on **jicama** (yam bean, a crop grown in Mexico on as much as 100,000 acres) because their rainy season has not started yet. Planting of sentinel plots in Florida is nearly complete, and many have been planted in

Mississippi. Sentinel plot planting in Mississippi is currently on hold because many fields are under water and many if not all of their sentinel plots may have to be replanted.

Soybean Rust Summary for North Carolina: Reflections on 2005-2007

Soybean rust has been detected in North Carolina every year since 2005. Rust was found in 17, 44, and 6 counties in 2005, 2006, and 2007 respectively. For the most part it has not required fungicide sprays. Only in 2006 was it recommended that fungicides be sprayed in the southeastern counties on late planted late maturity soybean. Yield increases in these areas were on the order of 4 to 5 bushels per acre.

Soybean rust generally moves from south to north from Florida to Georgia and finally to North Carolina and Virginia. Much of this movement is by local spread which is relatively slow. Tropical systems that moved through the state from the south have resulted in either delivery of spores or provided an environment conducive for rust to develop. In 2005 this was Ophelia and in 2006 tropical storm Ernesto coincided with development of rust in North Carolina. There was some concern in 2007 when a tropical storm moved through in June which could have brought spores from Florida. This did not happen because Florida and South Georgia were extremely dry and if there was any spore production in Florida prior to this time it was very minor. You have to have spores for a transport event (movement from one location to another).

In general we will likely need a wet spring and a summer with lots of "gray days" to have an epidemic that requires fungicide sprays over large areas of the state. This can be expected about one year in five to one year in ten in North Carolina. We will continue to maintain a network of communication with county Extension agents, CCAs, and consultants to provide warnings about the need to spray for rust. Sentinel plots will be planted in the next 30 days in most locations. In addition, have a Teletip phone number, **1-800-662-7301** (the same number as for the cotton insect update), with a message updated as necessary.

Soybean Rust Prospects for 2008

The potential for soybean rust to negatively affect North Carolina soybean production in 2008 appears greater than in the three previous years (2005-2007) "**at this time**." I emphasize "**at this time**," since my crystal ball is no better than most, and this is mostly speculation for April 2008. Factors that may make soybean rust more of a problem in 2008 are as follows:

1. It seems that the La Nina effect that was at least partially responsible for the 2007 drought is breaking up, thus the chances for at least average rainfall or greater are improved.

2. Projected soybean plantings for 2008 to the south of us, Georgia and Alabama may well double in 2008. Increased wheat plantings this year make it likely that more soybeans will be planted double crop to the south of us this year. This of course is partially dependent on soybean seed supply.

3. Some crop protection specialists are concerned that fungicide supply in 2008 may be limited because of increased use on the small grains this spring. There are reports that some wheat growers are already planning on two fungicide applications on wheat this spring (2008).

4. The large North Carolina wheat crop is likely to mean increased double-cropped soybean in 2008 which may be at greater risk to soybean rust. This again depends on the supply of seed.

Obviously, this is only speculation on our part. The transport of rust to North Carolina is dependent on numerous environmental factors, including weather to the south of us and environment during the growing season. Still greater vigilance seems warranted at this time.

Resources for Soybean Rust in 2008

There are more resources for information on Asiatic soybean rust available this year than in many years in the past. Some sources for more detailed information are available on the web at:

USDA soybean rust web site:
http://www.sbrusa.net/cgi-bin/sbr/public.cgi

North Carolina Agricultural Chemicals Manual soybean disease control recommendations:
http://ipm.ncsu.edu/agchem/6-9.pdf

FRUIT AND VEGETABLES

From: Gerald Holmes, Kelly Ivors and Frank Louws, Extension Plant Pathologists

New Fungicides for Vegetables in 2008

Three new fungicides were recently labeled for use on a variety of vegetable crops: Presidio, Revus and Revus Top. Presidio's active ingredient is fluopicolide and is marketed by Valent. Revus and Revus Top are Syngenta products, both containing the active ingredient mandipropamid. Revus Top is a premix of mandipropamid and difenoconazole for broader spectrum activity. What each of these products has in common is their activity against the water molds or oomycete plant pathogens (e.g., causal agents of downy mildew, late blight and Phytophthora blight). These diseases are difficult to control and new products with good efficacy are badly needed. Presidio and Revus performed better than any of the current standards against downy mildew in 2007 performance trials in North Carolina, and are consistently ranked as some of the best products against Phytophthora blight of cucurbits and peppers. Revus Top also performed quite well against early and late blight on tomatoes, and is one of the few products with a low PHI that controls both diseases during harvest.

Presidio is labeled for use on cucurbits for control of downy mildew and Phytophthora blight. It should be applied at 3 to 4 fluid ounces per acre and no later than 2 days prior to harvest (PHI). It has a 12-hour re-entry interval (REI). No more than 2 sequential applications of Presidio

should be made and each application should be tank mixed with another labeled fungicide with a different mode of action for resistance management. Presidio is in fungicide group 43 by itself, so no problem here . . . for now. No more than 4 applications (or 12 fluid ounces) should be made per acre per season. One potential downside to the Presidio label is a rotational restriction which states that all crops other that those on the label (i.e., cucurbits, fruiting vegetables, leafy vegetables, tuberous and corm vegetables) require an 18-month rotational interval. For example, if Presidio is used on peppers and the next crop is cucumber, sweetpotato or lettuce, no rotational interval is required. However, if Presidio is used on peppers and the next crop is soybean, tobacco or cotton, an 18-month rotational interval must be observed. According to Valent representatives, this rotational restriction will be lifted as they obtain the necessary data over the next year and submit to EPA.

Revus is in fungicide group 40 and is labeled for use on brassica, leafy and bulb vegetables, cucurbits, grapes and peppers for control of downy mildew and Phytophthora blight. It should be applied at 8 fluid ounces per acre and no later than 1 day prior to harvest (PHI). It has a 12-hour re-entry interval (REI). No more than 2 sequential applications of Revus should be made and no more than 4 applications (or 32 fluid ounces) can be applied per acre per season. Revus is not labeled for use during transplant production.

Because Revus Top is a premix of mandipropamid and difenoconazole (fungicide groups 40 and 3), it has a broader spectrum activity. It is labeled for use only on tomato and potato for controlling leaf spots (i.e. anthracnose, early blight, Septoria) and late blight. It should be applied at 5.5 to 7.0 fluid ounces per acre and no later than 1 day prior to harvest (PHI). It has a 12-hour re-entry interval (REI). No more than 2 sequential applications of Revus should be made and no more than 4 applications (28 fluid ounces) can be applied per acre per season. Revus Top is not labeled for use during transplant production.

ORNAMENTALS AND TURF

From: Steve Bambara, Extension Entomologist

Bee Stuff

Lots of native bee activity and pollination is taking place. Some ground nesting bees are still active in turf. Bumblebees are starting to nest and forage. Orchard Mason bees are nesting. Carpenter bees are cranking up. Carpenter bees (Fig. 1) do not have fuzzy abdomens and live in drilled galleries in wood. They are not prone to sting, and the white-faced males are all buzz and no sting. I'll mention more about them soon. See *Residential, Structural and Community Pests Insect Note No. 4* at http://www.ces.ncsu.edu/depts/ent/notes/Urban/carpenterbees.htm.

Fig. 1. Carpenter bee on a flower. Image by J. K. Barnes, University of Arkansas.

Fig. 2. Pupal skin from emerged leafminer fly. Image by Steve Bambara.

Boxwood Leafminers

Boxwood leafminer adults are, or will be, emerging (Fig. 2) and laying eggs in the tender new leaves of boxwood. Orthene foliar spray has been the old standard treatment. Cygon is no longer available. The new standard is a pyrethroid spray or Merit soil drench. Tristar as a foliar treatment is a possibility for nursery use. See *Ornamentals and Turf Insect Note No. 16* on the web at http://www.ces.ncsu.edu/depts/ent/notes/O&T/shrubs/ort016e/ort016e.htm.

Extra! Extra! Read All About It . . . Paper Wasps

Mated, overwintering paper wasps are swarming now. They are breaking up winter hibernation and each female is looking for a place to start a new nest. If you are using boxes (Fig. 3) to attract nesting paper wasps to your landscape to reduce caterpillar populations, the boxes need to be up **NOW**. See *Ornamentals and Turf Insect Notes Nos. 144 and 121* for more information on paper wasps and their use in controlling caterpillars in the landscape at:

http://www.ces.ncsu.edu/depts/ent/notes/Other/note144/note144.html

http://www.ces.ncsu.edu/depts/ent/notes/Other/note121/note121.html

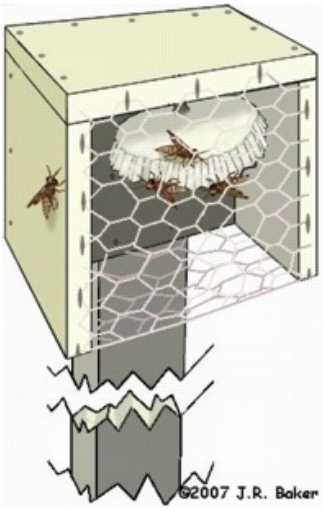

Fig. 3. Homemade nesting shelter for paper wasps. Image by James R. Baker.

Tent Caterpillars

Tent caterpillars are in full swing. This cool, wet spring has many plants and insects delayed weeks past where they were, compared to last year. These hairy caterpillars can make a cherry tree look a little ugly, but most trees seem to recover and re-foliate. Unless trees are taller than 15 feet or you have dozens to deal with, a long stick or pole can be used to destroy the web masses

quite effectively. Resist the temptation to burn them out! See *Ornamentals and Turf Insect Note No. 62* at http://www.ces.ncsu.edu/depts/ent/notes/O&T/trees/note61/note61.html.

Spring Tales of Springtails

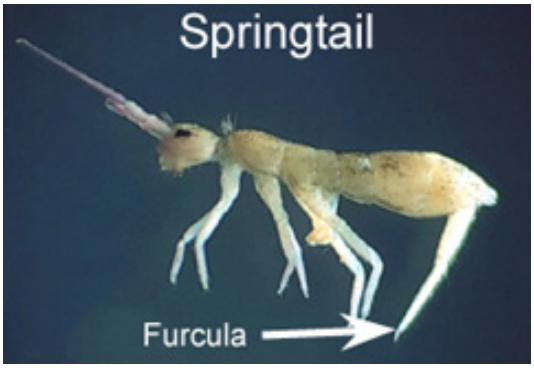

Fig. 4. Springtail. Image by John Meyer, North Carolina State University.

Cool, wet weather may be good for fungi and springtails (Collembola). These tiny insects are called springtails (Fig. 4) because they have a unique structure which allows them to jump for considerable distance considering their size, a little like fleas. Springtails are very common and abundant native insects, but they are seldom observed because of their small size and the fact that most of them live in concealed habitats. Most species live in the soil or in leaf mold under bark and decaying logs, etc. They are frequently noticed when large numbers cover sidewalks or carports. Springtails are generally harmless. No control measures seem appropriate or necessary. Their numbers will likely decline. See *Ornamentals and Turf Insect Note No. 123* at http://www.ces.ncsu.edu/depts/ent/notes/O&T/lawn/note123/note123.html.

Aphids Here and There

Aphids are appearing in the landscape on various plants. These soft-bodied, fragile little insects are most often found on the tender growing tips of plants. Pansies and iris are among the first spring plants to show aphids, but I've also detected honeydew dropping from certain hardwood trees upon unsuspecting windshields parked beneath. Insecticidal soap is a good management product, but if there are not too many consider just wiping them off. Unless numbers are severe, there will be little damage of any consequence. However, on iris, later in the season tiny yellow spots may occur long after the aphids have disappeared. Aphid populations are mostly seasonal on any one plant, but aphids can be found somewhere throughout the growing season. Their presence is inconsequential on many plants.

Cankerworms Everywhere?

Only the Charlotte area seems to be affected by the fall cankerworm onslaught on an almost yearly basis. These "inch-worm" caterpillars occur across the state, but the population is quite explosive in parts of the Queen City for some undetermined reason. Clearly conditions are good for them and the natural controls may be a little out of balance. Citizens can band their trees in the fall to prohibit female moths from crawling up the trunks to lay eggs. This year the City of Charlotte is conducting an aerial spray of regions using an insect growth regulator. For more information, see the Mecklenburg County Cooperative Extension site on the web at http://www.ces.ncsu.edu/mecklenburg/depts/hort/john/insects/cankerworm/.

Periodical Cicadas Return

Just in time for the first issue of *North Carolina Pest News*, we have multiple reports of periodical cicada mud tubes (Figs. 5 and 6) showing up under trees in Buncombe County. If you had Brood XIV 6,205 days ago (17 years) and have not planted a housing development or roller derby rink on your property, you may expect them again this spring. There is a good chance that the recent rains have helped them dig to the surface. They are a short-term phenomenon to be experienced and enjoyed. "Dig out" your best cicada cookie recipe and earplugs. For more information, see *Ornamentals and Turf Insect Note No. 17* and periodical cicada website at:

http://www.ces.ncsu.edu/depts/ent/notes/O&T/shrubs/note17/note17.html

http://insects.ummz.lsa.umich.edu/fauna/Michigan_Cicadas/Periodical/Index.html

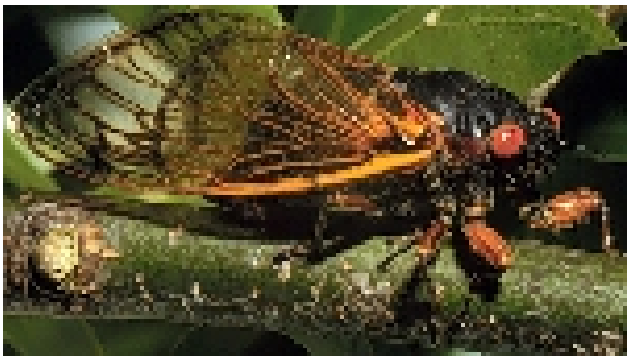

Fig. 5. Periodical cicada. Image by James R. Baker.

Fig. 6. Cicada chimneys. Image by Amanda Stone.

Leaf Beetles on Coreopsis

A newly introduced leaf beetle, *Phaedon desotonis* (Fig. 7), is being reported this spring in Wayne County. It is found in many southeastern states and it is an occasional pest of asters, but most notably Coreopsis. Overwintering adults lay eggs that hatch in the early spring. Adults are small, metallic beetles (3 to 4 mm in size). Populations become inactive with the hot temperatures of summer. Heavily infested plants can be stripped clean of their foliage. See the following pest alert from the Florida Department of Agriculture and Consumer Services for more information on this insect pest: http://www.doacs.state.fl.us/pi/enpp/ento/phaedon_desotonis.html.

Fig. 7. *Phaedon desotonis*. Image from the University of Florida.

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.