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Departments of Entomology and Plant Pathology

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CAUTION !

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

Stephen J. Toth, Jr., Editor

Dept. of Entomology, North Carolina State University, Box 7613, Raleigh, NC 27695

(919) 513-8189 Phone
(919) 513-1114 Fax
steve_toth@ncsu.edu

In This Week's Issue . . .

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FIELD AND FORAGE CROPS

From: Jack Bacheler, Extension Entomologist

General Pest Situation in Cotton

This past week, we have received no insect reports out of the ordinary. Calls from consultants, agents and producers been limited to scattered reports of cotton aphids and plants bugs and/or their associated low square retention. With our present Arizona-like conditions I would certainly expect that spider mite levels in some areas of the state could reach economic levels, particularly in areas that have gone more than token rainfall. However mite build-ups on cotton in dry weather are not always a foregone conclusion in North Carolina. In some areas down east where rainfall patterns have been kinder, several consultants have stated that the only thing that stands in the way of an excellent crop of early-planted corn is a hurricane. Thankfully, both our cotton and soybean crops have a long way to go and can compensate from our current and past moisture deficits – assuming we get better rainfall patterns. If our expected lower temperatures and far greater odds of significant rainfall materialize during the coming week beginning on July 9, this change can't come soon enough for many.

Cotton Aphid Troubleshooting

With most cotton fields typically harboring at least low populations of cotton aphids, and because the female cotton aphids can give live birth to offspring that themselves can produce young with six to seven days, if conditions are favorable aphid build-ups can occur both rapidly and throughout large areas of a field. Two steps are helpful in assessing both the degree of an outbreak and its potential economic impact. The first step is relatively easy if one is willing to walk fields. Moderate to high levels of cotton aphids are easy to spot. The wilted down plant canopy, sometimes chlorotic leaves, the shiny honeydew, the white cast skins of the nymphs and finally the aphids themselves are easy to recognize. The next step in judging the severity of an infestation can vary from easy to difficult and that involves the degree of present and/or expected biological control and its type. In my experience, ladybird beetle adults and larvae that prey on all aphid stages can be helpful in reducing cotton aphid levels. However, they're often too few and too late when "faced" with a large, building aphid population. In the upper Southeast the round tan to brownish aphid mummifying parasitoids can be very effective in reducing cotton aphids to sub-economic levels, even if initially the observed mummy levels make up less than 10 or 20% or so of the over aphid/mummy mix. The most effective control agent in the upper southeast is the fungal pathogen *Zeogygites fresenii*. This fungus, typically more common beginning in mid to late July, can eliminate cotton aphids across large areas. In most cases, we only observe the grey fuzzy secondary fungal hyphae emerging from aphid carcasses that had been infected by the primary pathogen a least a week earlier. The use of a hand lens can make early recognition easier. Finding the fuzzy aphid carcasses often means that the primary pathogenic fungus will reduce the aphid outbreak dramatically and a foliar spray for even significant infestations can be avoided. However we also see situations in which this fungal pathogen never quite "comes through", so additional scouting assessments are recommended to confirm the effectiveness of this fungus in controlling the aphid infestation.

Cotton aphid infestation. Image by Jack Bacheler.

Cotton aphid mummies. Note wasp at left. Image anonymous.

Cotton aphid fungus and cast skins (white objects). Image by Jack Bacheler.

Close-up of mummified aphid carcass. Image by Jack Bacheler.

Bollworm Moth Flight Coming

With our major bollworm moth flight perhaps 2 weeks away as of July 5 in our southern counties, and with essentially all of our cotton planted to Bollgard II and WideStrike varieties, caterpillar scouting can be kept on the back burner for now. Present scouting attention should focus on plant bugs, green and brown stink bug damage to bolls, spider mites and cotton aphids. The *2012 Cotton Information Booklet* (http://ipm.ncsu.edu/cotton/insectcorner/PDF/Cotton%20Insects%202012a.pdf), also available on line at our *Cotton Insect Corner* web page, provides information about recommended scouting procedures and the appropriate thresholds for the above and other cotton pests.

Stink Bugs in Cotton

Although none of us is hoping for plagues of bugs and caterpillars in the coming weeks, we expect insect pest levels to increase during the coming month. Be particularly vigilant about inspecting the lint and inner boll wall surface of quarter-sized bolls for plant bug and particularly stink bug damage through at least week 6 of the bloom period. Producers should be reminded that either using the *Stink Bug Decision Aid Field Card* (http://ipm.ncsu.edu/cotton/insectcorner/PDF/AG_730_WPrint-NC.pdf) and/or its associated information can greatly streamline the boll damage assessment process and result in a significantly higher level of need-based treatments. Stink bugs presently appear to be at higher levels in 2012 than has been the case during the past few years. However, the attractiveness and susceptibility of cotton plants during the next five to six weeks will determine this year's damage potential. Generally, the more rain during the first 5 or 6 weeks of the bloom period, the greater potential stink bug damage to bolls.

Scouting-based Sprays for Mites and Cotton Aphids

Although we recommend spraying for spider mites and/or cotton aphids when present throughout most of a cotton field at damaging levels (making "drive-by scouting" tempting), contrary to the views of some these situations are not best assessed from the cab of a pickup.

Upcoming Cotton/Soybean Combination Insect Scouting Schools (Kudzu Bug will be Covered)

July 18: Bertie County at the Cashie Convention Center (*note location change*), Windsor, North Carolina beginning at 9:00 a.m. Indoor and outdoor components and lunch provided. Contact Richard Rhodes (richard_rhodes@ncsu.edu or 252-794-5317) for details.

July 20: Perquimans, Gates, and Chowan Scouting School. Contact Tim Smith (tasmith4@ncsu.edu or 252-482-6585) for details.

July 24: Northampton County. County Extension Office, 9495 Highway 305, Jackson, North Carolina, beginning at 9:30 a.m. Contact Craig Ellision (craig_ellison@ncsu.edu or 252-534-2831) for details

July 24: Halifax County. County Extension Center, 359 Ferrell Lane, Halifax, North Carolina beginning at 2:00 p.m. Contact Arthur Whitehead (arthur_whitehead@ncsu.edu or 252-583-5161) for details.

July 26: Wilson, Nash and Edgecombe area scouting school, Elm City, North Carolina, at the American Legion VFW Building, beginning at 4:00 p.m. Contact Norman Harrell (norman_harrell@ncsu.edu or 252-237-0111) for details.

Dr. Dominic Reisig has posted several additional field days and tours in the coming months (http://www.nccrops.com/2012/06/01/upcoming-scouting-schools-and-field-days/).

Save the Date: Cotton Field Day

This year's Cotton Field Day will be held at the Upper Coastal Plain Research Station near Rocky Mount on September 12, beginning at 12:30 p.m. with registration and exhibits, including field tours and concluding with a BBQ supper. More information will be forthcoming.

From: Dominic Reisig, Extension Entomologist

Guide to Assessing Percent Defoliation in Soybeans

Treatment thresholds (defined as a point for which you can treat before economic damage is incurred) for foliage feeding insects in soybeans are relatively easy. The threshold for foliage feeding pests is 30% foliage loss throughout the canopy during the vegetative stages up to two weeks prior to flowering and 15% foliage loss throughout the canopy two weeks prior to flowering through the reproductive stages up to R6-R7. After this point, foliage loss is likely negligible.

One difficulty in accessing this threshold comes from assessing the foliage loss throughout the canopy. Foliage feeding insects rarely feed evenly in the upper and lower parts of the plants. One of the greatest difficulties also comes from our natural inclination to over-assess the percent of tissue defoliated as illustrated. Use this as a guide when applying the threshold.

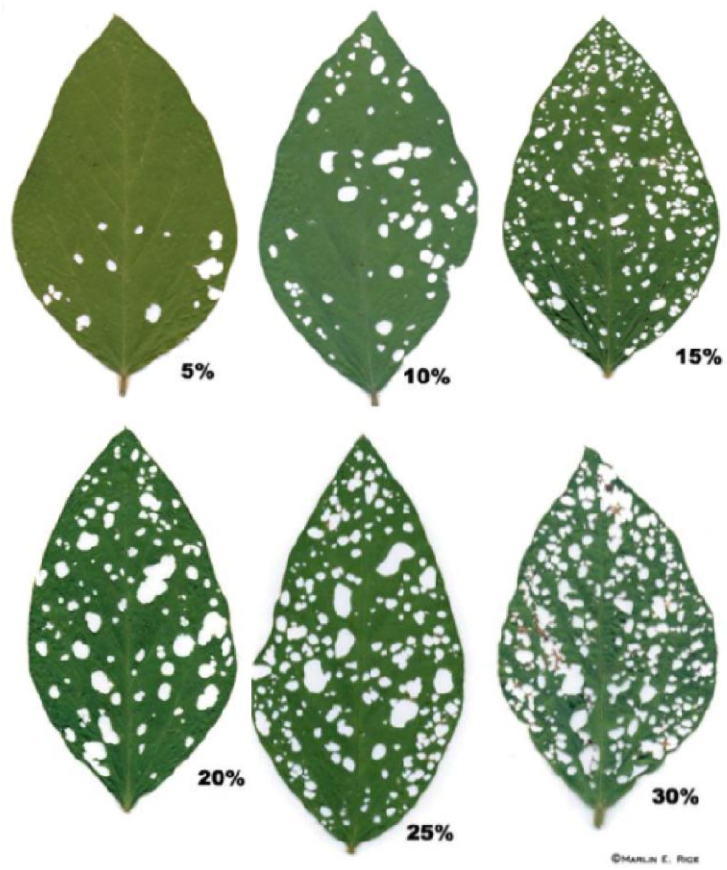

Image from Iowa State University Extension.

Lodged Soybeans? Threecornered Alfalfa Hopper May Be the Culprit

Reports have been coming in across the Coastal Plains and Blacklands concerning lodged soybeans. Most of these can be traced to threecornered alfalfa hopper injury that occurred in the weeks prior. Threecornered alfalfa hopper injury is not often visible until later in the season, as plants get some size and people begin to notice some lodging. With the strong summer windstorms, plants have been given a push and this lodging has been apparent earlier than usual.

Threecornered alfalfa hopper injury typically occurs as a girdle around the stem above the soil line. This likely occurred when the plant was small (under 10 inches). These insects will continue to feed as the plants grow, but will feed on and injure petioles on the main stem. This can block the vascular tissue of the beans, causing indirect yield loss. More often, loss is direct when plants lodge during harvest. The breaking point from the lodge is often a distinct and clean break that occurs at the feeding site (a few inches above the soil line).

Threecornered alfalfa hopper injury. Note the calloused tissue, a plant response to the piercing sucking feeding of this insect. Image from David Adams, University of Georgia, http://bugwood.org.

Because the lodged plants we are seeing now resulted from earlier injury, scouting is really important. If the plants are too big or the insects are no longer present, you'll be wasting a revenge spray. Plant growth stage is also important since vegetative soybeans can compensate for injury. For example, if 10% of the stand has lodged and the beans are early in the vegetative stages, it is likely that adjacent plants will compensate for yield. To see if the insect is still present, use a sweep net and treat only if you find at least one threecornered alfalfa hopper per sweep (swoosh of the net). Pyrethroids work well, with bifenthrin and pyrethroid/neonicotinoid mixes working a bit better.

From: Hannah Burrack, Extension Entomologist

Tobacco Budworm Treatments in the Midseason

This time of year I get a lot of questions about "difficult to control" tobacco budworms. My first question is always: "How close to topping is the grower?" If plants are flowering, there is absolutely no need to treat tobacco budworm infestations. If a grower is within two weeks or less of topping, there is no reason to treat tobacco budworms. Why? Because tobacco budworm larvae preferentially feed on flowers and developing seed pods when present, not on leaves. Even if there is some leaf feeding, these leaves will likely be removed during topping.

Bottom line, if you are topping or near topping, don't treat for tobacco budworm.

If your tobacco looks like this, don't treat for tobacco budworm! Photo: Hannah J. Burrack.

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

Alert: Soybean Rust on July 6, 2012

"Conditions have been quite favorable for spread of soybean rust in Georgia; we now have confirmed soybean rust on kudzu in Decatur, Miller, Baker, Brooks, and Lowndes Counties; soybeans in Decatur and Colquitt Counties. Most soybean acreage along Georgia Coastal Plain will be sprayed with fungicides at bloom-early pod set for rust and anthracnose and insecticides added for kudzu bug."

Weather has not been conducive to build up of rust with the high temperatures in North Carolina, thus it may be premature for North Carolina soybean producers to spray soybean for rust. Be prepared, however, and remember that applications for southern rust of corn may compete with fungicide/insecticide applications on soybean in terms of the numbers of aerial applicators and amount of fungicide available.

The current status of southern rust, Asiatic soybean rust and various other spreading pests in the U.S. can found at http://www.ipmpipe.org/ or http://sba.ipmpipe.org.

More information is available at http://www.ces.ncsu.edu/depts/pp/notes/Corn/corn002.html.

Domark 230ME is not listed in the *North Carolina Agricultural Chemicals Manual* for corn at this time but is labelled at a rate of 4 to 6 ounces per acre.

When deciding to spray a fungicide, consider these factors in decision making:

1. When will the corn reach maturity – early maturing corn may escape infection and you might want to concentrate on the late maturing hybrids.

2. Strobilurins provide excellent control of rust in general but their residual activity is short compared to the triazoles. Additionally, strobilurins have limited systemic movement in plants compared to triazoles such as Tilt, Folicur, Domark, Caramba and Proline, and are thus more forgiving of less than perfect application.

3. Application costs may actually greater than fungicide costs in many instances, so consider using the higher fungicide rate which will provide more residual protection and increase the likelihood that you can get by with one application.

Vigilance is the key word for 2012! Most sentinel plots have been planted and we will have about 14 this year. Storms following a track similar to Beryl's could bring rust to North Carolina later in the year.

Resources for Soybean Rust in 2012

Some sources for more detailed information on Asiatic soybean rust and southern corn rust are listed below:

North Carolina Agricultural Chemical Manual: http://ipm.ncsu.edu/agchem/agchem.html

Soybean Rust Management in Mid-Atlantic Region: http://cipm.ncsu.edu/ent/SSDW/RustBulletin08.pdf

FRUIT AND VEGETABLES

From: Kelly Ivors, Extension Plant Pathologist

Late Blight Confirmed on Tomatoes in Western North Carolina

During this 2012 season, late blight on tomatoes isn't late. It was already confirmed in commercial potato and tomato fields on the North Carolina coast weeks ago; however, we weren't sure when we would see it in western North Carolina, where a substantial amount of tomatoes are grown commercially

in the mountains. On July 5, 2012 we confirmed late blight from foliar samples collected on July 3 in a conventional field of tomatoes in Mills River, North Carolina (Henderson County).

Without proper preventative measures and the right weather conditions, some diseases like late blight can completely defoliate and destroy a crop within two to three weeks. Due to moderate temperatures, frequent rainfall, and heavy morning dew during the growing season, late blight on tomatoes, caused by *Phytophthora infestans*, can be severe in the mountains of North Carolina, as well as in late plantings in the piedmont. Despite intensive efforts for over 150 years to control *P. infestans*, it remains one of the world's most costly plant pathogens, concerning either direct loss and/or in the need for intensive use of costly fungicides. The recent spread of aggressive, Ridomil-resistant strains of this pathogen on tomatoes in North Carolina has further aggravated the problem, making the pathogen much harder to control.

The pathogen attacks all aboveground parts of the tomato plant. The first symptoms of late blight on tomato leaves are irregularly shaped, water-soaked lesions; these lesions are typically found on the younger, more succulent leaves in the top portion of the plant canopy. During humid conditions, white cottony growth may be visible on the underside of affected leaves. As the disease progresses, lesions enlarge causing leaves to brown, shrivel and die. Late blight can also attack tomato fruit in all stages of development. Rotted fruit are typically firm with greasy spots that eventually become leathery and chocolate brown in color; these spots can enlarge to the point of encompassing the entire fruit.

The first symptoms of late blight on tomato leaves are irregularly shaped, water-soaked lesions.

During humid conditions, white cottony growth of *P. infestans* may be visible on the underside of affected leaves.

***P. infestans* can cause leaves to turn brown, shrivel and die.**

Infected fruit are typically firm with spots that eventually become leathery and chocolate brown in color.

Causal Organism

Late blight of tomato is caused by the fungus-like organism *Phytophthora infestans*. The pathogen is best known for causing the devastating Irish potato famine of the 1840's, which killed over a million people, and caused another million to leave the country. Besides tomatoes, *P. infestans* can only infect a few other closely related plants including potato, petunia and related solanaceous weeds such as hairy nightshade. The pathogen is favored by cool, wet weather; clouds protect the spores from exposure to UV radiation by the sun, and wet conditions allow the spores to infect when they land on leaves. Nights in the 50's and days in the 80's accompanied by rain, fog or heavy dew are ideal for late blight infection. Under these conditions, lesions may appear on leaves within 3 to 5 days of infection, followed by white cottony growth soon thereafter. This white cottony growth is a sign of rampant spore (sporangia) production. Although spores may also be produced on tomato fruit, they are more commonly produced on leaves. Sporangia can be spread readily by irrigation, equipment, wind and rain and can be blown into neighboring fields within 5 to 10 miles or more, thus beginning another cycle of disease.

Lemon-shaped sporangia of *P. infestans* attached to sporangiophores.

Disease Management

Host resistance

Plant resistance is not currently an integral component in late blight management for commercial production of fresh market tomatoes. However, new breeding lines resistant to some strains of *P. infestans* have recently been developed at the Mountain Horticultural Research and Extension Center in Fletcher, North Carolina by tomato breeder Dr. Randy Gardner. A new campari-type (small fruited) variety called 'Mountain Magic' that has resistance to some strains of *P. infestans*, in addition to early blight, which should be available to growers in the following years.

Chemical

There are several diseases that attack tomato leaves and fruit in this region. Therefore it is necessary to use a combination of different products in a spray program to optimize management of these diverse pathogens, including strobilurins, mancozeb and chlorothalonil. One consideration is that different products have different preharvest intervals (PHI). A product with a PHI greater than 1 day such as mancozeb (PHI = 5 days) cannot be used when harvests are done 2 or more times per week. Another important consideration is fungicide resistance management. For example, pathogens may develop insensitivity (resistance) to the strobilurins (i.e., Amistar, Cabrio, Quadris or Tanos) if these products are used too frequently.

The application of fungicides plays a significant role in the control of late blight of fresh market tomatoes; however mefenoxam resistant strains of the pathogen have been identified throughout the Southeast. Fungicides containing mefenoxam are recommended only when weather favors disease development and resistant populations have not been identified in the area that season- usually this means mefenoxam can **ONLY** be applied for the first application when it is first found in a county. Resistance development to this active ingredient can be very rapid; use of this product after pathogen establishment in the area is not warranted or recommended.

Commercial growers in western North Carolina should apply protectant products since controlling late blight preventatively is better than after infection. Before late blight infection occurs, mancozeb products such as Dithane, Manzate and Penncozeb work well early in the season before harvest (5-day PHI); chlorothalonil products (Bravo, Equus) work best during fruit growth (0-day PHI). In addition, several other chemistries such as cyazofamid (Ranman), fluopicolide tank mixed with a protectant (Presidio + chlorothalonil) and mandipropamid (Revus TOP) work well against this pathogen as foliar sprays.

Table 3-55 of the *Southeastern Vegetable Crop Handbook* provides efficacy ratings against this disease. If you do not have a hard copy of the handbook, it can be found at:
http://www.thegrower.com/south-east-vegetable-guide/.

In addition, the North Carolina State University tomato spray program web site can provide advice on spray schedules and rates. The late blight products come into the spray program at week 9 (http://www.ces.ncsu.edu/fletcher/programs/plantpath/).

Relative Effectiveness of Various Chemicals for Tomato Foliar Disease Control.

TABLE 3-55. RELATIVE EFFECTIVENESS OF VARIOUS CHEMICALS FOR TOMATO FOLIAR DISEASE CONTROL

K. IVORS, G. Vallad and F. J. LOUWS, Plant Pathology Extension

Pesticide	Fungicide Group[1]	Preharvest Interval (Days)	Relative Control Rating (— = ineffective; +++++ = very effective; ? = activity unknown)										
			Bacterial Canker	Bacterial Speck	Bacterial Spot	Botrytis Graymold	Buckeye Rot	Crystulariella Leaf Spot	Early Blight	Late Blight	Powdery Mildew	Septoria Leaf Spot	Target Spot
Strobilurins : azoxystrobin [2] (Amistar, Quadris)	11	1	—	—	—	—	?	?	+++++ [R]	+++	+++++	++++	++
femoxadone/cymoxanil (Tanos)	11 + 27	3	—	—	—	—	+	—	+++	+++	?	+++	+++
pyraclostrobin (Cabrio)	11	0	—	—	—	—	?	?	+++++	+++	+++++	++++	++
bacteriophage [3] (AgriPhage)	NA	0	—	+	+	—	—	—	—	—	—	—	-
acibenzolar-S-methyl [9] (Actigard)	21	14	?	+++	+++	—	—	—	—	—	—	—	++
boscalid (Endura)	7	0	—	—	—	+++	—	?	++++	—	?	?	+++
chlorothalonil (Bravo, Equus, Echo)	M	0	—	—	—	++	+	—	++	++++	+	++++	++
chlorothalonil + ProPhyt [2] (Catamaran)	M + 33	1	—	—	—	++	+	—	++	++++	+	++++	++
cyazofamid (Ranman)	21	0	—	—	—	—	—	—	++	+++	—	—	-
cymoxanil (Curzate)	27	3	—	—	—	—	+?	—	—	++++	—	?	-
(Tanos, see femoxadone/cymoxanil above)	11 + 27	3	—	—	—	—	+	—	+++	++++	?	+++	++++
dimethomorph (Acrobat, Forum)	40	4	—	—	—	—	+++	—	—	+++	—	—	-
fenamidone (Reason)	11	14	—	—	—	—	++	—	+++	+++	?	+	++++
fixed copper [4]	M	0	+++	+++	+++	—	+	—	++	+++	+	+++	—
fluopicolide (Presidio)	43	2	—	—	—	—	+	—	—	++++	—	—	—
mancozeb (Dithane M-45, DF, Manzate 200, Penncozeb, Manex II)	M	5	—	—	—	—	+	—	++++	+++	—	+++	—
mancozeb + fixed copper (ManKocide)	M + M	5	+++	+++	++	—	+	—	+++	+++	+	+++	+
mancozeb + zoxamide (Gavel)	M + 22	3	—	—	—	—	+	—	+++	++	—	++	-
mandipropamid + difenoconazole (Revus Top)	40 + 3	1	—	—	—	—	+	—	+++	++++	—	?	++++
mefenoxam [8] + chlorothalonil (Ridomil Gold Bravo, Flouronil)	4 + M	14	—	—	—	+	+++++	—	+	+++++	—	++	++
mefenoxam + copper (Ridomil Gold/Copper)	4 + M	14	++	++	++	—	+++++	—	++	+++++[R]	+	++	++++
mefenoxam + mancozeb (Ridomil Gold MZ)	4 + M	5	—		—	—	+++++	—	+++	+++++[R]	—	++	—
myclobutanil (Rally)	3	1	—	—	—	—	—	++++	—	—	++++	—	+?
propamocarb (Previcur Flex)	28	5	—	—	—	—	+	—	—	+++	—	—	+
pyrimethalnil (Scala)	9	1	—	—	—	++	—	—	++	—	?	?	+++
streptomycin [5] (Agri-Mycin, Streptrol)	25	0	+++	+++	+++	—	—	—	—	—	—	—	-
sulfur [6]	M	0	—	—	—	—	—	—	—	—	+++	—	-
zinc dimethyldithiocarbamate [10] (Ziram)	M	7	—	—	—	—	—	—	++	?	?	++	?

[1] Key to Fungicide Groups: 1: methyl benzimidazole carbamates; 2: dicarboxamides; 3: demethylation inhibitors; 4: phenylamides; 7: carboxamides, 9: anilonopyrimidines; 11: quinone outside inhibitors; 12: phenylpyrroles; 15: cinnamic acids; 21: quinone inside inhibitors; 22: benzamides; 25: glucopyranosyl antibiotic; 27: cyanoacetamide- oximes; 28: carbamates; 33: phosphonates; 40: carboxylic acid amines; 43: acylpicolides; M: multi-site activity; NA: not applicable

[2] Contact control only; not systemic.

[3] Biological control product consisting of a virus that attacks pathogenic bacteria.

[4] Fixed coppers include: Basicop, Champ, Champion, Citcop, Copper-Count-N, Kocide, Nu-Cop, Super Cu, Tenn-Cop, Top Cop with Sulfur, and Tri-basic copper sulfate.

[5] Streptomycin may only be used on transplants; not registered for field use.

[6] Sulfur may be phytotoxic; follow label carefully.

[7] Curative activity; not systemic.

[8] Curative activity; systemic.

[9] Systemic activated resistance.

[10] Do not use on cherry tomatoes.

[R] Resistance to this pesticide has been detected in the pathogen population. In the case of mefenoxam, Phytophthora (late blight) resistant strains predominate.

RESIDENCES, STRUCTURES AND COMMUNITIES

From: Mike Waldvogel, Extension Entomology

The Buzz on Bee and Wasp Activity

In last week's *North Carolina Pest News*, Steven Frank mentioned that leafcutter bees were active. Aside from noticing notched leaves on their plants, you may get calls from people reporting that something is boring into siding, posts, logs, etc. on their homes or may be cleaning out old carpenter bee galleries. As noted in the information in *North Carolina Pest News*, the bees will bore into plant stems as well as into soft rotting wood and so people may find debris somewhat similar to that kicked out by carpenter ants and carpenter bees. So, when callers ask about what they can spray to stop the activity, point out that the fact that the bees prefer rotting wood (over sound wood) should be a signal to the homeowner that the solution is not pesticides but it's all about needed repairs to the area where the wood is decaying because that can also be a 'welcome mat' to far more destructive insects such as carpenter ant and subterranean termites. Rotting (and moist) wood can create conditions that allow termites to sustain themselves entirely in the wood and without contact with the soil (which may or may not have a termiticide treatment).

Another bee that may also garner attention by homeowners is the giant resin bee which is among the larger-bodied bees in North America. They have a cylindrical body ranging from one-half to nearly one inch in length. Females tend to be larger than the males. The head and abdomen of the giant resin bee are black while they have dense yellowish-brown hairs cover the thorax. Their wings are dark, but still transparent. Rather than excavate their own homes, they prefer "pre-owned" nests and will take advantage of holes/galleries almost anywhere. Many of the calls we get are from people thinking that the next generation of carpenter bees are out because they see debris being pushed out of existing galleries (or what they mistakenly think are new ones). Pesticides are not likely to impact too much on the giant resin bee activity because they are hunting for existing galleries rather than chewing into wood. So, this is another situation where we remind people about the importance of patching over those carpenter bee holes.

Both of these bees are solitary in their behavior and so they do not form colonies as we see with the social bees (such as honey bees). As a result, the likelihood of a stinging incident is minimal because they are preoccupied with nest building and there are no workers bees that take up the tasks of nesting building, provisioning, and defending. That fact usually doesn't put people at ease if they are allergic to bee/wasp stings but it's still important to point out that while pesticides are seen as an easy solution to the bee activity, it's not going to make a difference with either of these bees particularly if the activity is in wood far out of reach where you might be attempting to apply pesticides overhead and potentially exposing yourself to drifting particles.

On a related note – the dry weather has a lot of insects out hunting for water and that includes honey bees yellow jackets. One of our counties reported a problem recently where bees were collecting water generated from a misting system on a piece of play equipment. I was at a local state park on Sunday morning where they were putting up signs next to a water fountain warning people about yellow jackets in the area. There was a regular water fountain and another with a bucket where people could let their dog or horse get a drink. Bees and wasps are more likely to drink from droplets on wet surfaces whether that's rain drops on leaves, small puddles of water splashed from water spigot, or drops of soda on the

lid of a beverage can. So, you may get calls from people who sees swarms of these insects around the grass that is still wet from watering, or where there is a slow drip from their hose bib (if they're watering their lawn and garden) or from the condensate line on an HVAC system (or even from a window AC unit). The site of hundreds of yellow jackets or honey bees "swarming" over an area can send a lot of people into a panic and in search of a pesticide to spray. The insects are more interested in getting a drink then they are stinging you (unless you try to start stomping on them). My advice is to let the insects get their drink and head home.

INSECT TRAP DATA

From: Alan A. Harper, Lenoir County

Light Trap Data from Lenoir County

June

	Number of Adult Insects						
Date	HW	CEW	ECB	AW	AWC	GSB	BSB	TBW
June 22	0	2	0	0	0	0	0	0
June 23	0	0	0	1	0	0	0	0
June 24	0	3	1	0	1	0	0	0
June 25	0	4	0	0	2	0	0	0
June 26	0	2	0	0	2	0	0	0
June 27	0	1	0	0	0	0	0	1
June 28	0	0	0	0	0	0	0	0
June 29	0	2	0	0	0	0	0	0
June 30	0	1	0	0	1	0	0	0
July 1	0	2	0	1	1	0	0	0
July 2	0	2	0	1	1	0	0	0
July 3	0	1	0	0	0	0	0	0
July 4	1	0	1	2	1	0	0	0
July 5	---------- Light unplugged ----------							
July 6	---------- Light unplugged ----------							

Abbreviations: HW = hornworms; CEW = corn earworms; ECB = European corn borers; AW = true armyworms; AWC = armyworm complex; GSB = green stink bugs; BSB = brown stink bugs; TBW = tobacco budworms