

WHAT'S HAPPENING

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Prevent Mosquito Bites!

By Karen M. Vail

In Knoxville, we have had rain, ranging from a trace amount to 1.17 inches, on 18 of 26 days in May. Mosquitoes need water to survive. Larvae and pupae must be in water to complete development and eggs are usually laid on or near water. Larvae feed on the microorganisms growing on the organic matter in the water. Surrounding states and some Tennessee counties are reporting large populations of mosquitoes. If you haven't already been bitten by *Culex* or other *Aedes* species of mosquitoes, you'll need to know that I saw my first Asian tiger mosquito, *Aedes albopictus*, last weekend. The Asian tiger mosquito is one of the most common mosquitoes found around homes in Tennessee. It's time to use repellent when outdoors and to reduce mosquito larval sites to help prevent mosquito bites.

Listed below are recommendations from the CDC (Center for Disease Control and Prevention) on how to protect yourself from mosquito bites (<http://www.cdc.gov/ncidod/dvbid/westnile/qa/prevention.htm>)

Apply insect repellent to exposed skin. Generally, the more active ingredient a repellent contains the longer it can protect you from mosquito bites. A higher percentage of active ingredient in a repellent does not mean that your protection is better—just that it will last longer. For more on insect repellent active ingredients see <http://www.cdc.gov/ncidod/dvbid/westnile/RepellentUpdates.htm>. Choose a repellent that provides protection for the amount of time that you will be outdoors.

- *Repellents may irritate the eyes and mouth, so avoid applying repellent to the hands of children.*
- *Whenever you use an insecticide or insect repellent, be sure to read and follow the manufacturer's DIRECTIONS FOR USE, as printed on the product.*

Inside this issue:

Prevent Mosquito Bites!	1-2	Odorous House Ants: The Most Common Structure-Invading Ant in TN!	5-6
Carbofuran	2	Black Rot of Grapes	7
No Tobacco Blue Mold Reported in the U. S. for 2009	3	Emerald Ash Borer Found In Kentucky	8
Implementation of Risk Mitigation Measures for Soil Fumigant Pesticides	3	New Products & Label Changes In Tennessee	9
Stored Grain	4	Plant and Pest Diagnostic Highlights	10
		Other Pest Management Newsletters	11

Prevent Mosquito Bites!-Cont'd

- *For detailed information about using repellents, see the [Insect Repellent Use and Safety \(http://www.cdc.gov/ncidod/dvbid/westnile/qa/insect_repellent.htm\)](http://www.cdc.gov/ncidod/dvbid/westnile/qa/insect_repellent.htm) questions.*
- *Spray clothing with repellents containing permethrin or another EPA-registered repellent since mosquitoes may bite through thin clothing. Do not apply repellents containing permethrin directly to exposed skin. Do not apply repellent to skin under your clothing.*
- *When weather permits, wear long-sleeved shirts and long pants whenever you are outdoors.*
- *Place mosquito netting over infant carriers when you are outdoors with infants.*
- *Consider staying indoors at dawn, dusk, and in the early evening, which are peak mosquito biting times.*
- *Install or repair window and door screens so that mosquitoes cannot get indoors.*

Help reduce the number of mosquitoes in areas outdoors where you work or play, by draining sources of standing water. In this way, you reduce the number of places mosquitoes can lay their eggs and breed.

- *At least once or twice a week, empty water from flower pots, pet food and water dishes, birdbaths, swimming pool covers, buckets, barrels, and cans.*
- *Check for clogged rain gutters and clean them out.*
- *Remove discarded tires, and other items that could collect water.*
- *Be sure to check for containers or trash in places that may be hard to see, such as under bushes or under your home.*

Note: Vitamin B and "ultrasonic" devices are NOT effective in preventing mosquito bites.

Carbofuran (Furadan)

By Gene Burgess

EPA is revoking all tolerances for carbofuran. The Agency has determined that the risk from aggregate exposure from the use of carbofuran does not meet the safety standard of section 408(b) (2) of the Federal Food, Drug, and Cosmetic Act.

This final rule is effective August 13, 2009.

No Tobacco Blue Mold Reported in the U.S. for 2009

By Darrell Hensley

A number of weather systems have impacted the southeastern United States during the past two months. The weather from mid-March through mid-April was particularly active. The impacts were rather divided however much rain fell over the mainland areas of the Southeast, while the eastern Gulf of Mexico / Florida peninsula region remained quite dry. Unsettled weather has recently returned to the Florida / eastern Gulf region just this past week.

There were a number of transport events from western Cuba that could have impacted the northern Florida / southern Georgia tobacco growing areas. Several occurred through March and April. Conditions were generally unfavorable for survivable spore transport; they became more favorable for deposition and infection as the events coincided with unsettled weather in the northern Florida / southern Georgia region. Most risk predictions were in the Low category. One episode had risk in the "Weakly Moderate" category, and one was in the "Moderate" range. As no disease reports have been received, apparently none of these events produced an outbreak in the U.S. growing areas. Growers in the United States are encouraged to continue monitoring their tobacco plants for signs of disease.

Implementation of Risk Mitigation Measures for Soil Fumigant Pesticides

By Darrell Hensley

The Environmental Protection Agency (EPA) is requiring important new safety measures for soil fumigant pesticides to increase protections for agricultural workers and bystanders – people who live, work, or otherwise spend time near fields that are fumigated. These measures are included in Amended Reregistration Eligibility Decisions (REDs) for the soil fumigants:

- chloropicrin
- dazomet
- metam sodium/potassium (including methyl isothiocyanate or MITC)
- methyl bromide

On EPA's website you will find information concerning a suite of complementary measures in EPA's multifaceted regulatory approach to minimize risks of these pesticides. Taken together, these measures are expected to directly reduce exposures and risks, improve safety and reduce the potential for accidents, foster compliance and reduce misuse, and enhance enforcement, while maintaining important benefits.

Source: http://www.epa.gov/oppsrrd1/reregistration/soil_fumigants/index.htm.

Stored Grain

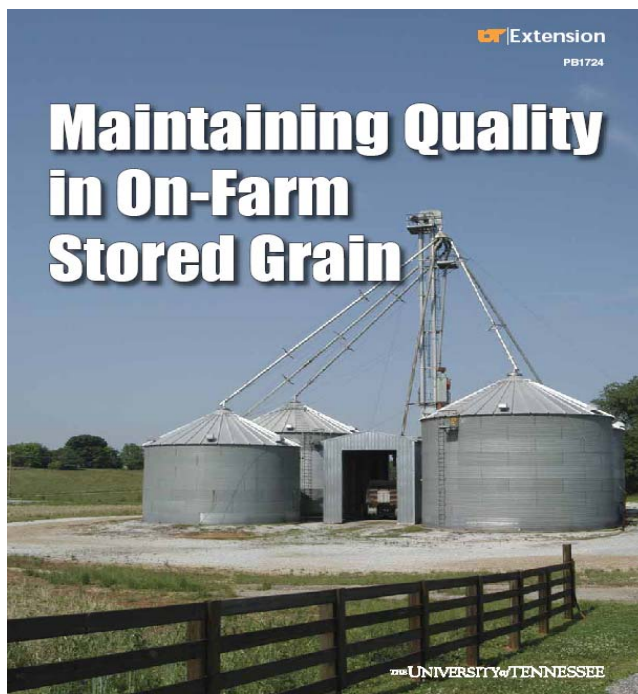
By Russ Patrick

An agent called me the other day concerning insects in a brewer's mash that was being fed to cattle. He said the farmer had found some weevils present, and he went on to say the farmer also had some corn piles near the mash. I told him the mash would not be attractive to the weevils and they were probably coming from the corn. Weevils lay their eggs inside whole kernal corn not crushed material. He said the farmer wanted to fumigate the mash. I told him this would be unnecessary as well as a dangerous situation, because the mash has a much higher moisture content. If

you put phostoxin tablets in high moisture areas you get a fantastic explosion (BOOM) and occassionally fire. Phostoxin should never come in contact with water or high moisture areas. The farmer decided to pull the corn away from the mash and spray it with an insecticide. I told the agent that Pyrenone Crop Spray would provide adequate weevil control.



Checking for temperature and moisture using a grain probe



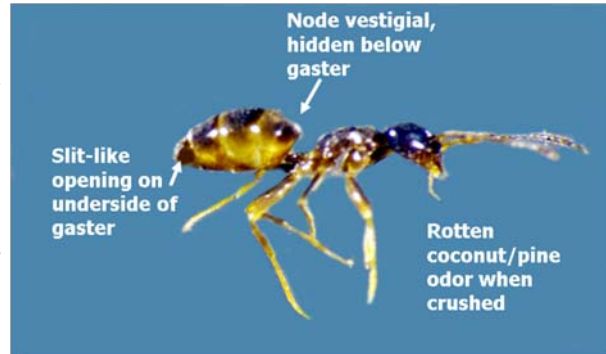
Drying Stored Grain

Wheat will become ready for harvest in a couple of weeks or so depending how mature the heads are. We plan to continue our efforts with the farmers who want to bag and use metal bins for grain storage. We recommend the grain to be treated with Storcide II and Pyrenone and/or Diacon II. These products can be mixed. Remember when you seal storage bags it is permanent and you will not be able to do anything else except monitor moisture, temperature and insect activity. You will not be able to aerate or treat the grain once it is bagged. Make certain individuals working with stored grain do not bag high moisture grain or they will be asking for trouble. When you put the grain in the metal bins turn on the fans and keep it as cool as you can. Dry cool grain is not as attractive to insects.

Odorous House Ants: The Most Common Structure-Invading Ant in TN!

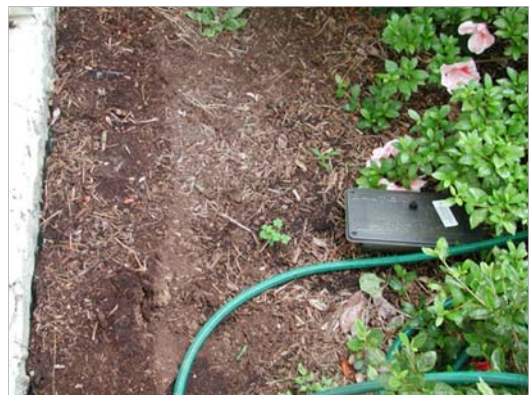
By Karen Vail

The odorous house ant (OHA) is one ant species that can be driven indoors by rain or changes in temperature. OHA has been ranked as the number two pest ant in the U.S. and is probably the most common structure-invading ant in Tennessee. This small black ant, about 1/8 inch long, is easily distinguished from other dark ants by its one-segmented waist with a very flat, barely noticeable node or bump hidden by the abdomen. There is another way to distinguish this ant. Crush an ant between the fingers and if it smells of a “disagreeable, rotten-coconut like” odor possibly mixed with pine, then it’s the odorous house ant. (Argentine ants can be easily confused with OHA, but Argentine ants have an obvious bump on the waist.)



OHA nests are shallow and often found in shady, moist areas such as in or under mulch, pine straw, leaves, stones and logs. If given the opportunity, small nests may exist indoors too and are often located near a moisture, food and/or heat source. In many cases, a connection is maintained with the outdoor colony as evidenced by the movement of dyed food from the indoor nest to outdoor ants. Thus management efforts can often be conducted on the outside of the structure and still affect the indoor ants. More information on OHA and other ants can be found in PB1629, Managing Structure-Invading Ants (<http://www.utextension.utk.edu/publications/pests/default.asp>).

If these indoor ant populations do not recede with the rain or weather change, they are best managed by a pest management professional (PMP) because PMPs have access to baits and slower-acting, nonrepellent insecticides that are generally unavailable to the homeowner. We have been conducting odorous house ant management research since 1998. To date, some of our most successful results for reducing indoor and outdoor odorous house ant populations around homes were obtained with a slower-acting, nonrepellent spray of 0.06% fipronil (Termidor SC), applied to the outdoor foundation base 1 foot up and out, the outdoor entry points and outdoor trails combined with a bait in the landscape or another slower-acting spray to the interior.



Baits or sprays that have performed well in combination with an outdoor Termidor treatment include the following:

- a 1.3% borax experimental liquid bait (now registered as PT381B Advance Liquid Ant Bait) applied in stations in the landscape near the structure where ants were active; OR
- a 0.5% chlorfenapyr (Phantom) spray applied to interior cracks and crevices with an NPD sprayer where ants were seen or were likely to enter; OR
- a 5.4% borax experimental gel bait (now registered as PT388B Advance Ant Gel Bait) applied crack and crevice on the outside of the structure or on landscape elements near the structure where ants were active; OR
- an interior pyrethroid spray (Suspend SC containing deltamethrin) and/or dust (DeltaDust containing deltamethrin) applied to a crack and crevice where ants were seen. The interior pyrethroid applications by themselves did not satisfactorily control the OHA found inside or outside.

Other effective treatments for odorous house ant infestations included the following:



- Optigard Ant Gel Bait applied in cracks and crevices and stations reduced indoor and outdoor OHA populations. Optigard gel in stations provided longer control than crack and crevice applications, but this could be due to other factors such as the station's use later in the season.
- Advion Mole Cricket Bait (MCB) applied to the perimeter alone or in combination with the Advion Ant Bait Arena effectively reduced outside OHA numbers for 6 weeks. Advion MCB required more than 4 weeks to reduce indoor population to less than 10, but reductions remained so to the end of the study (week 9).

Other insight gleaned from our research includes the following:

- Termidor applied alone at label rates did not eliminate OHA indoors very quickly from all houses, so it should be applied in combination with an exterior bait or with an interior Phantom spray to kill OHA indoors and out!
- Do not apply Termidor to the perimeter if a small number (<100) of OHA are present. Wait until numbers increase.
- When heavy rains occurred, baits in stations provide longer control than sprays (other than Termidor) applied at low volumes, such as 1.5 gallons/1000 sq. ft.
- Bifenthrin (pyrethroid) applied, without a bait in the system, to the exterior foundation at more than 1.5 gal/1000 sq. ft and to areas greater than 1 ft up & out (i.e., 5 gal./1000 sq. ft, 2.5 ft. up and 7.5 ft. out from foundation) effectively controlled OHA outside, but not inside.
- Gel baits can be difficult for ants to manipulate and results are often inconsistent. Gel baits may work better when applied in a station. An experimental bait worked in an outdoor station, but failed when applied outdoors as a crack and crevice treatment. An experimental gel bait worked outdoors, but failed indoors.
- We can never emphasize enough the importance of communications, i.e., ants foraging to a bait should not be disturbed!

Black Rot of Grapes

By Darrell Hensley

Weather this year is perfect for development of many of the common diseases. If you've had grape disease problems in past seasons, chances are that you may have encountered black rot. Black rot is the number one disease which affects bunch grapes in home vineyards and frequently destroys an entire fruit crop within a few days.

Now's the time to really concentrate on a control program to take care of black rot. There's another plus for keeping this disease in check, since other diseases which affect bunch grapes will be less troublesome when recommended practices for black rot control are carried out.

Black rot is caused by a fungus (*Guignardia bidwellii*) which invades all parts of the grape vine, causing symptoms on stems, tendrils, leaves and fruit. Leaf infections appear as tiny, reddish-brown spots on the upper surface usually in early June, however we have had some reports now. The spots increase in size and eventually blight the entire leaf.

Infections begin to appear on the fruit when the grapes are about one-half grown. At first a small white spot forms on the surface of a grape berry. This spot enlarges rapidly until the entire grape is rotten. Affected grapes soon turn black, shrivel, and dry up. Within a few days most of the grapes within a cluster are infected and soon rot.

How do you handle black rot?

Sanitation is critical in the control of black rot. Destroy mummies, remove diseased tendrils from the wires, and when pruning, if possible, leave only fruiting canes without lesions. If only a few leaf lesions appear in the spring, remove these infected leaves because the disease spreads rapidly after a few infections become established. Plant grapes in sunny open areas that allow good air movement. When grapes are exposed to light and good air circulation, they are less likely to have black rot. Good weed control also enables plants to dry more quickly.

Make sure you're spraying vines with a recommended fungicide every ten to fourteen days. Fungicides which do a good job of controlling black rot include captan, maneb Topsin-M, Bordeaux mixture and several others. Regardless of the fungicide selected, it's important to apply using the recommended rate and at the timing interval recommended on the fungicide label.

Another factor which influences control of black rot deals with fungicide coverage. Obtaining coverage of the foliage and grape clusters with spray material is the most important part of the entire spray program. The large leather-like grape leaves are difficult to move around with spray material. Consequently, many bunches of grapes are not adequately covered. To control black rot, every grape cluster must be completely covered with fungicide each time the vines are sprayed.

Emerald Ash Borer Found in Kentucky

By Frank Hale & Beth Long

It was announced on May 22 by officials with the office of the State Entomologist in the University of Kentucky Entomology Department that the first two confirmed occurrences of emerald ash borer had been found in the state. Officials investigating reports of dying ash trees found the infested trees in a private woodlot in Shelby County and a residential landscape in Jessamine County.

The approximately ½ inch long metallic-green adult beetles should be active now. They lay their eggs on the bark of ash trees and the resulting larvae chew through the bark and feed in the living cambial region. Their S-shaped feeding galleries get progressively wider as the larvae develop throughout the summer. They complete their feeding in the autumn and overwinter in shallow chambers excavated in the bark or outer sapwood. Pupation begins in April. This feeding damage causes trees to lose 30% to 50% of their canopy after 2 years and this girdling kills most trees within 3-4 years of infestation.

This invasive pest has also previously been found in a county in the Boothill of Missouri (not far from Lake County, Tennessee) so it is definitely getting closer to Tennessee. Since these beetles can be moved in firewood, officials are urging Kentuckians to not transport firewood, even within Kentucky. Buy any firewood that you need for camping locally and do not bring extra wood home with you. Do not buy wood from outside of the state.

In Tennessee and elsewhere, be on the lookout for dying ash trees in the landscape and forests. Symptoms to look for include canopy dieback, sprouts growing from roots or the trunk, loose bark and vertical cracks, D-shaped (3-4 mm in diameter) exit holes in the trunk, and increased woodpecker damage. For more information see:

<http://www.emeraldashborer.info/> While at this web site, be sure to download the new publication entitled "Insecticide Options for Protecting Ash Trees from Emerald Ash Borer." The Kentucky EAB page is <http://pest.ca.uky.edu/EXT/EAB/welcome.html>

Plant and Pest Diagnostic Highlights

By Bruce Kauffman

We received 79 samples from May 13 to May 22, 2009, including 46 samples via the UT Diagnostic Web site.

FRUITS & VEGETABLES : Shot hole disease of peach; possible frog-eye leaf spot of apple; bacterial leaf spot of plum and peach; inadequate drainage and/or unsuitable variety of red raspberry for the location; possible magnesium deficiency of tomato; winter damage and/or fungal cane blight of blackberry; cercospora leaf spot of turnip; tobacco mosaic virus or thrips damage to bell pepper; possible iron chlorosis of Winesap apple; winter dieback of Noble muscadine; possible spider mites of tomato.

INSECTS, CRUSTACEANS & MITES : Eastern tent caterpillar egg mass on peach; plant bug on grape; asparagus beetles on asparagus; possible aphid feeding on burning bush; oak lecanium scales on willow oak; moth flies around strawberries; flea beetles on an evergreen shrub; aphid feeding on herbs; cutworm feeding on leaves of dogwood seedlings; wasp-caused leaf galls (possibly *Andricus* sp.) on pin oak; harlequin bug and yellowmargined leaf beetle feeding on greens; pear blister mites on leaves of fruiting pear; possible flatheaded apple tree borer on redbud; jumping oak wasp gall of white oak leaves.

Insects and other pests around the home : Possible Allegheny mound ants; small fruit flies; one of the ground beetles; springtails; small hive beetles; brown recluse spider; possible mason bee; varied carpet beetles; odorous house ant; clover mites.

ORNAMENTALS & TREES : Cedar apple rust, frog-eye leaf spot and woodpecker damage of crabapple; woodpecker and/or sapsucker damage of holly; normal leaf drop and genetic growth differences of southern magnolia; root decline due to over watering of cryptomeria; xylaria stem and root rot of Bradford pear; anthracnose leaf blight of ash, red oak, southern red oak, Shumard oak and white oak; iron chlorosis of willow oak and pin oak spider; wood decay fungus on dead maple limb; possible seiridium canker or botryosphaeria canker and/or root rot of Leyland cypress; pecan scab on pecan seedling leaves; verticillium wilt of maple; winter damage and/or 2007 drought injury to Japanese holly; leaf wilting due to possible discoloration anthracnose, borers and/or root decline of dogwood; entomosporium leaf spot of photinia; 2007 winter and freeze damage of Japanese maple; possible fusarium basal canker of tulip poplar; sprout formation on willow trunk due to high water table; nitrogen and potassium deficiency, light and/or watering changes causing leaf drop of Ficus 'Alii'; light to moderate pythium root rot of dogwood seedlings; phytophthora root rot of juniper and lilac; possible cercospora blight of juniper; pestalotia needle and branch blight and root establishment problem on arborvitae; mechanical breakage of limbs and root establishment problem of Leyland cypress; possible root decline and botryosphaeria canker of Bradford pear; spot anthracnose of dogwood; possible root establishment problem of Foster holly due to overly wet site; botryosphaeria canker of crabapple; phytophthora stem rot of 'Wave' petunia; possible root disease of Knockout rose; weather-related plant stress and dieback of dogwood.

TURF & FORAGES : Possible winter injury or fungal disease of bermudagrass; rhizoctonia large patch fungal disease of hybrid bermudagrass; winter injury and/or herbicide damage of bermudagrass; dollar spot of A1- A4 bentgrass.

OTHER UT NEWSLETTERS WITH PEST MANAGEMENT INFORMATION

Fruit Pest News

<http://web.utk.edu/~extepp/fpn/fpn.htm>

Tennessee Crop and Pest Management Newsletter

http://www.utextension.utk.edu/fieldCrops/cotton/cotton_insects/ipmnewsletters.htm

Ornamental Pest and Disease Update

<http://soilplantandpest.utk.edu/publications/ornamentalnwsltr.html>

School IPM Newsletter

<http://schoolipm.utk.edu>

Tennessee Soybean Rust Hotline - 877-875-2326

USDA Soybean Rust Web Site

<http://www.sbrusa.net>

Pesticide Safety Education Program, PSEP

<http://PSEP.utk.edu>

IPM & Pest Management

<http://eppserver.ag.utk.edu/Extension/TN-PMIN/FYI/FYI.html>

Entomology and Plant Pathology Web Site

<http://eppserver.ag.utk.edu>

This and other "What's Happening" issues can be found at

<http://eppserver.ag.utk.edu/Whats/whatshap.htm>

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.

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