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COMING IN THE NEXT ISSUE 2006 PEST MANAGEMENT SURVEY

In the next issue of Kentucky Pest News we will announce the start of the 2006 Kentucky Pest Management Survey. You will be contacted either by e-mail or by letter asking you to participate in this survey. If you are receiving an electronic copy of this, you will receive e-mail information and may wish to take the survey by visiting a web site. If you are receiving Kentucky Pest News by U.S. postal service, you will receive information and a survey in the mail. The survey consists of 39 questions related to production and safety practices you use or recommend as a part of farming or as a part of your business.

Using a random drawing, one lucky person completing the survey will receive a Tubby Smith autographed UK basketball. If you wish to be included in the random drawing to receive the basketball, just enter your e-mail address at the end of the electronic survey or if you mail a survey to us, include a first name and a telephone number so that we can notify you should you win. E-mail address and telephone numbers will be confidential and will be used only to select a winner for the basketball. Your answers will be used to evaluate the Kentucky IPM program and to plan future IPM trainings, projects and activities. These projects will benefit Kentuckians and agriculture producers by providing training on procedures that can help reduce pesticide use and exposure.

Your answers and contact information will be confidential. Only one person will view e-mail addresses or telephone numbers supplied to us. This information will be removed from your survey as quickly as possible. Once removed, it will not be possible to connect your information and your survey responses. Contact information will be stored separately and destroyed upon completion of the project. You will receive a post card or e-mail as a reminder asking you to participate in this survey. Since we are not keeping records of who participates in the survey, the reminder will be sent to everyone on the mailing list. This survey will involve research. By completing a survey and submitting your answers, you are giving consent for your answers to be part of this research project. This survey will be voluntary and you may skip any question or stop taking the survey at any time. This survey will take 30 minutes or less to complete. If you would like to participate in this survey but do not wish to complete an online form, you can request a copy be mailed to you. To request a mailed copy of this survey or if you have questions about the survey or the research you can contact Patty Lucas, P.O. Box 469, Princeton, KY 42445 or telephone at (270) 365-7541 extension 218 or e-mail at plucas@uky.edu.

So, help us evaluate farming practices in Kentucky and watch for details in the next newsletter.

TOBACCO

UPDATE ON BLUE MOLD
by Kenny Seebold

The week of June 26 saw the largest number of new cases of blue mold to date. Nine counties (Clark, Fayette, Garrard, Harrison, Jessamine, Nicholas, Pulaski, Russell, Scott, and Woodford) reported the disease during this time frame. We also received unconfirmed reports from Breckinridge and Montgomery Counties. Outside KY, blue mold has been found in VA and TN for the first time this year. It is very likely that the cool and wet weather we experienced across the region from June 22-24 created the conditions that led to the large-scale outbreaks.

Previously, the heaviest concentration of active blue mold...
was found in eastern KY. It is clear from the surge in new reports between June 26 and July 1 that the disease has become established in central KY as well. Thus far, blue mold has had little impact in western KY, with only a single report of blue mold in Warren Co. during the week of June 19. Weather conditions should be less-than-favorable for development and spread of the disease across the region during the week of July 3 and we should see a drop in the number of new cases of blue mold in the coming week. To be safe, though, growers should scout their plantings for symptoms of blue mold and continue preventive applications of fungicides. Any tobacco that remains in greenhouses or outdoor float beds should be destroyed if it will not be set – tobacco in these types of environments is very susceptible to blue mold and could serve as a hidden source of inoculum should it become infected.

See [www.ca.uky.edu/agcollege/plantpathology/ext_files/PPF5html/ppf5ag8.pdf](http://www.ca.uky.edu/agcollege/plantpathology/ext_files/PPF5html/ppf5ag8.pdf) for list of fungicides labeled for tobacco, or refer to Kentucky Pest News No. 1095. Visit the Kentucky Tobacco Disease Information page for regular updates on blue mold and other diseases [http://www.uky.edu/Ag/kpn/kblue/kblue.htm](http://www.uky.edu/Ag/kpn/kblue/kblue.htm). Please contact me if you find or suspect blue mold in your area.

FORAGE CROPS

GRAY LEAF SPOT IN GERMAN FOXTAIL MILLET
by Paul Vincelli

A case of gray leaf spot was diagnosed last week on German foxtail millet in Western Kentucky. This is a disease that shows up often on German foxtail millet being grown under warm, humid conditions. The disease is confined to the leaves, where small, brown leaf spots develop. These leaf spots tend to be more numerous towards the leaf tip than lower parts of the leaf blade. As the spots expand, they develop a gray center. The spores of the fungus that causes the disease are spread by wind currents. Gray leaf spot will continue to develop in these crops if weather continues to be favorable. When severe disease develops (one third or more of green leaf tissue is dead or highly diseased), cut the crop for hay before continued loss of quality occurs.

SOYBEANS

SOYBEAN APHID PRESENT IN KENTUCKY
by Doug Johnson

During the week of 25 June - 01 July 2006, no confirmed soybean aphid were observed in KY sentinel plots, or UK Insect Identification Labs, nor were any soybean aphids collected in the KY aphid suction trap. However, suspected soybean aphids were collected from a field in Fayette Co. KY. These aphids are currently in colony for observation. If adults are produced they will be submitted for species conformation. However, at this point I am very sure they are soybean aphids. They look typical, there are several on the leaves, and they appear to be growing. Numbers per plant were low, but this is not just the occasional scattered aphid. If these prove to be soybean aphid their presence will be important for understanding their biology and distribution. However, their numbers are too rare to be of concern in production crops at present.

WHITE MARGINED BURROWING BUGS ARE PLENTIFUL!
by Doug Johnson

We have received many calls about very large numbers of the white margined burrowing bug. This insect is also called the burrowing beetle; however, it is not a beetle, but more closely related to the stink bug group. It is often also called the Negro bug, which is a different but closely related species.

This photo courtesy of Dr. Scott Stewart of UT, shows pretty well what the adult insect looks like. Notice the very thin white lines along the outside edges of the wings on each side of the bug.

This insect is about ¼” long and shiny black, with piercing-sucking mouthparts. There is a small but distinct white line down each side at the edge of the wing covers. The juveniles are small with a reddish or orangeish abdomen and no wings, but are shaped much like the adults. You can see many photos of these insects at: [http://bugguide.net/node/view/6980/bgpage](http://bugguide.net/node/view/6980/bgpage)

This insect is being seen in very large numbers in several settings and/or crops. However, this insect is not known to be a pest of any of our crops.

Checking on information from Tennessee, and Virginia, these insects feed mostly on weed species. Our colleague, Dr. Ames Herbert, at VPI & SU stated in the Virginia Soybean Update, 2000 Newsletter (Virginia Agricultural Experiment Station):

“Unlike most burrowing bug species (some of which can be agricultural pests in crops grown in sandy soils), the white
the GFM strains are similar to those that favor the perennial ryegrass. Even though strains that attack one grass don't attack the other, there may be some correlation in other ways. For example, perhaps conditions that favor overwintering by the GFM strains are similar to those that favor the perennial ryegrass strains. This seems possible given the mild winter we experienced, which probably allowed significant overwintering of *P. oryzae* in Kentucky. Or maybe an outbreak of gray leaf spot in GFM signals early season weather conditions necessary for an epidemic to develop in perennial ryegrass. Or maybe there is no connection. Maybe past associations were coincidence. I can’t rule that out.

Nevertheless, based on the appearance of the disease on GFM, I would have my guard up as August approaches. I would make it a point to monitor sites of perennial ryegrass where the disease has shown up in the past, and be prepared to treat with fungicides as needed. Information on fungicide efficacy is available in the Extension publication available at [http://www.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-OR-T-3.pdf](http://www.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-OR-T-3.pdf).

**SHADE TREES & ORNAMENTALS**

**LANDSCAPE PLANT HEALTH CARE OBSERVATIONS**
by John Hartman

Last week, the Kentucky Arborists Association organized one of its periodic Plant Health Care Workshops for arborists and landscape professionals. The workshop took place on the U.K. campus and involved classroom instruction followed by examination of tree and shrub problems out-of-doors. Some of the current woody landscape plant disease problems observed and discussed at the workshop are listed below.

- Actinopelte fungus leaf spot of oak
- Bacterial leaf scorch of many shade trees and new injection technology
- Crabapple powdery mildew
- Dogwood anthracnose, caused by *Discula destructiva*
- Elm wood galleries related to bark beetle vectors of Dutch elm disease
- Fire blight of flowering pear
- Ganoderma lucidum mushrooms, a sign of root and butt rot disease
- Herbicide exposure deforming dogwood foliage
- Iron deficiency chlorosis of willow oaks related to high soil pH
- Juniper tip blights caused by *Phomopsis* and *Kabatiina*
- Kabatiella apocrypta, cause of maple anthracnose leaf spots
- Leaf scorch of trees related to abiotic stresses
- Manganese deficiency chlorosis in maples related to high soil pH
- Nematode-caused wilt of pine
- Oak leaf blister
- Phyllosticta leaf spot, or purple-eye spot of maple
- Quince-cedar rust (*Gymnosporangium clavipes*)
- Rust diseases of cedar involving hawthorns and crabapples
- Sycamore anthracnose leaf blight and twig cankers
- Tip blight of pine, caused by *Diplodia pinae*
• Unusual non-pathogenic genetic leaf chlorosis and variegation
• Venturia inaequalis, cause of crabapple scab and associated defoliation in progress
• White pine decline associated with planting site soils with high pH and high clay content
• Xylaria root rot fungal fruiting bodies, or “dead man’s fingers”
• Yellow-twig dogwood with Botryosphaeria canker
• Zones of internal wood discoloration associated with tree injections

HOUSEHOLD

MOSQUITO OPTIONS FOR HOMEOWNERS by Mike Potter

Mosquito season is in full swing in Kentucky. Although the risks of contracting West Nile Virus are slight, mosquitoes are a perennial nuisance for which there is no easy solution. As summer continues, there will be an abundance of misinformation about what works and what doesn’t. The following measures can afford some relief.

Eliminate Breeding Sites – Mosquitoes need quiet, non-flowing water for their development. Eliminating sources of standing water, such as swamps and ditches, may require community-wide effort. Nonetheless, homeowners can take steps to prevent mosquitoes from breeding on their property:

1. Dispose of old tires, buckets, aluminum cans, plastic sheeting or other refuse that can hold water. Empty accumulated water from trashcans, boats, wheelbarrows, pet dishes, and flowerpot bottoms, and if possible turn them over when not in use.

2. Clean debris from rain gutters and unclog obstructed down spouts. Clogged or damaged rain gutters are one of the most overlooked mosquito breeding sites around homes.

3. Change water in birdbaths and wading pools at least weekly, and keep swimming pools clean, chlorinated or covered when not in use. Ornamental pools can be aerated or stocked with mosquito-eating fish. Aeration and water movement helps because mosquitoes prefer quiet, non-flowing water for egg laying and development.

4. Fill or drain ditches, swampy areas, and other soil depressions and remove, drain or fill tree holes and stumps with mortar to prevent water accumulation. Eliminate standing water and seepage around animal watering troughs, cisterns, and septic tanks. Be sure cistern screens are intact and access covers fit tightly.

Larval Control - Use of a mosquito larvicide can be beneficial when it is impractical to eliminate a breeding site. Larvicides are insecticides used to control immature mosquitoes before they have a chance to develop into biting adults. Most larvicides sold to homeowners contain either the ingredient methoprene, or the bacterium Bacillus thuringiensis israelensis (Bti). Neither active ingredient is harmful to fish, waterfowl, pets or humans when used according to label directions. Many products and formulations containing methoprene (Altosid®) and Bti (Bactimos®, Vectobac®) are used by mosquito abatement agencies and other professionals. Homeowners can purchase the methoprene-based larvicide, PreStrike™, in hardware stores. PreStrike is formulated as a granule and comes in a shaker bottle. Various products containing the mosquito-specific bacterium, Bti, are also sold to homeowners. Mosquito Dunks® and Quick Kill® Mosquito Granules, for example, can be found at hardware and discount stores.

Adult Control - Adult mosquitoes prefer to rest in moist, shady areas such as dense vegetation during the daytime. Consequently, homeowners should remove tall weeds and overgrown vegetation from their yards. To further reduce intolerable levels of biting adult mosquitoes, residual insecticides can be applied to shrubs, hedges and other shaded areas, such as under decks and along foundations. Recent research by University of Kentucky entomologists indicates that such treatments effectively suppress nuisance, biting mosquitoes for about a month. Residual mosquito sprays are often best applied by professional pest control firms. Homeowners opting to try this themselves should use lawn and garden insecticides containing permethrin (e.g., Ortho Mosquito B Gone, Spectracide Mosquito Stop), cyfluthrin (Bayer Advanced Powerforce Mosquito Killer), bifenthrin (e.g., Ortho Home Defense Max), or lambda cyhalothrin (Spectracide Triazicide). For homeowners, a hose-end sprayer is usually most effective for making such applications.

Exclusion - Mosquitoes can be kept out of homes by securely screening windows, doors and porches. The occasional mosquito found indoors can be eliminated with a fly swatter. Aerosol-type insecticides labeled for mosquitoes, gnats, and other flying insects seldom provide much relief at the dosages applied by householders.

Topically-Applied Repellents - Repellents will help prevent bites when spending time outdoors. Traditionally, the most effective mosquito repellents contained the active ingredient diethyltoluamide (DEET) ranging from 5% to 40%. Higher percentages of DEET in the ingredients provide longer protection. Low -percentage formulations (10% or less) are suitable for shorter periods outdoors (e.g., 1 to 2 hrs), and are recommended for use with young children. Earlier this year, two new mosquito repellents were registered by the U.S. Environmental Protection Agency and recommended as alternatives to DEET by the Centers for Disease Control and Prevention. Picaridin (7% Cutter Advanced) and Lemon eucalyptus oil (30% Repel Lemon Eucalyptus) provide relief for about 2 to 4 hrs. Unlike DEET-based repellents, Picaridin is essentially odorless and Lemon eucalyptus oil has a lemon scent. For many people, the new products will also have
a more pleasing feel on the skin. Both repellents should be appearing on store shelves soon. Always read and follow directions on the container.

Other Control Possibilities - Many consumer products claim to attract, repel, capture or kill mosquitoes. Most of these devices do not appreciably reduce mosquito abundance or incidence of bites, or else their claims are unproven. Electrocuring devices or "bug zappers" using ultraviolet light as an attractant are generally ineffective in reducing outdoor populations of mosquitoes and their biting activity. Studies indicate that mosquitoes make up only a tiny percentage of the insects captured in such traps. The majority are moths, beetles and other harmless night flying insects. Other types of mosquito traps utilize carbon dioxide, warmth, light, and various chemicals (e.g. octenol) as attractants and claim to capture tremendous numbers of adult mosquitoes. Such devices can be quite expensive. Performance claims to the contrary, such traps seldom have been shown to reduce populations of biting mosquitoes on one's property, or the frequency of bites. In some situations, they could even attract more mosquitoes into the area they were meant to protect.

Advertisements for portable electronic devices using high frequency, ultrasonic sound routinely appear in magazines, claiming to keep mosquitoes and other pests at bay. Some supposedly repel mosquitoes by mimicking the wing beat frequency of a hungry dragonfly. Scientific studies have repeatedly shown these devices to be of negligible benefit in deterring mosquitoes and reducing bites. Save your money, as these devices seldom if ever provide any appreciable measure of protection.

Citronella oil does have mosquito-repelling properties and the scented candles can provide some protection. For maximum effect, use multiple candles placed close (within a few feet) of where people are sitting. A single candle located at the center or edge of a picnic blanket probably will not provide much benefit other than atmosphere. Mosquito-repellent plants, garlic, and other oft-advertised botanical products generally are ineffective.

Bats and certain types of birds (e.g. purple martins) are often cited as effective natural agents for managing outdoor mosquitoes. Conservation groups and nature magazines often suggest building bat and birdhouses on one's property to promote nesting and to protect against mosquitoes. Although insectivorous bats and birds do eat mosquitoes, they make up only a very small portion of their natural diet. Much like the mechanical "bug zappers," bats and birds capture all manner of other flying insects also. Efforts to colonize and conserve these animals should not be done with the primary intent of diminishing biting mosquitoes.

When it comes to managing mosquitoes, a good rule of thumb is if the approach or device sounds too good to be true — it probably is.

INSECTICIDE NEWS & VIEWS

DOW ACTS ON SPINOSAD RESISTANCE IN GEORGIA
by Ric Bessin

This news comes from the IR-4 headquarters:

"Dow AgroSciences has voluntarily cancelled the use of its insecticide, spinosad, on collards and other leafy brassica crops in Georgia as a safeguard against growing diamondback moth (Plutella xylostella) resistance. A program to educate growers on preventing resistance has been running for several years, but the problem has not abated, largely due to misuse and overuse of spinosad by a small minority of growers, the company says. Growers can continue to use existing stocks until depleted and newly labeled products will be on the market within a few months, Dow AgroSciences says. Other uses of the product are not affected by the action. Spinosad is sold as Spintor 2SC Naturalyte for organic crops."

DIAGNOSTIC LAB-HIGHLIGHTS
by Julie Beale and Paul Bachi

Agronomic samples received in the PDDL this past week included gray leaf spot (Pyricularia) on millet; Leptothria stem blight on grape; cedar-apple rust on apple; anthracnose on bean; bacterial wilt on cucumber and melon; Alternaria leaf blight on melon; bacterial spot on pepper; tomato spotted wilt virus, Septoria leaf spot, Fusarium wilt, brown spot, manganese toxicity, temporary phosphorus deficiency, Pythium root rot, soreshin, and transplant shock on tobacco.

On fruit and vegetable samples, we diagnosed cane blight (Leptosphaeria) and double blossom on blackberry; Pestalotia stem blight on grape; cedar-apple rust on apple; anthracnose on bean; bacterial wilt on cucumber and melon; Alternaria leaf blight on melon; bacterial spot on pepper; tomato spotted wilt virus, Septoria leaf spot, Fusarium wilt and early blight on tomato.

Ornamental and turf samples included Pythium root rot and Rhizoctonia/stem root rot on petunia; southern blight on celosia; Rhizoctonia root rot and Phytophthora aerial blight on vinca; black spot and rosette on rose; Botryosphaeria canker on birch; Alternaria leaf spot on hibiscus; cedar-quince rust on hawthorn; bacterial blight on lilac; Phyllosticta leaf spot and leaf hopper burn on maple; Actinopenate leaf spot on oak; Rhizosphaera needlecast on spruce; basal anthracnose on bentgrass and bluegrass, as well as brown patch on bluegrass.
INSECT TRAP COUNTS
UKREC, Princeton KY

June 23-30, 2006
Black cutworm.......................................................... 4
True Armyworm..........................................................131
European Corn Borer ..................................................0
Southwestern Corn Borer ..............................................4
Corn Earworm..............................................................18
Fall Armyworm...........................................................0

View UKREC trap counts for the entire 2006 season at –
http://www.uky.edu/Ag/IPMPrinceton/Counts/2006trapsfp.htm
View trap counts for Fulton County, Kentucky at -
http://ces.ca.uky.edu/fulton/anr/Insect%20Trap%20Counts.htm

For information on trap counts in southern Illinois visit
the Hines Report at –
http://www.ipm.uiuc.edu/pubs/hines_report/comments.html
The Hines Report is posted weekly by Ron Hines, Senior Research Specialist, at the
University of Illinois Dixon Springs Agricultural Center.

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