

KENTUCKY PEST NEWS

ENTOMOLOGY • PLANT PATHOLOGY • WEED SCIENCE

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Nov. 5-7 Kentucky Turfgrass Council Conference
Categories 3 (Turf and Ornamental), 10 (Demo and Research), 18 (Golf Course), 19 (Interiorscape), 20 (Sports Turf) Holiday Inn University Plaza, Bowling Green, KY. Credit hours are listed

Nov. 5 Cats 3, 10, 12, 18, 19, 20 **4 Hrs**

Initial training and testing

Nov. 6 Cats 3, 10, 12, 18, 19, 20 **3 Hrs**

Nov. 6 (Sports Turf Session) 10, 12, 20 **1 Hr**

Nov. 7 (Golf Turf Session) 10, 12, 18 **1 Hr**

Nov. 7 (Turf & Landscape Session) 3, 10, 12 **1 Hr**

SOYBEANS

NEW? SOYBEAN PEST FOR KENTUCKY – SOYBEAN STEM BORER

by Doug Johnson

Although not technically new, the soybean stem borer has been reported from the Green River area of western Kentucky. This pest was seen in the late 70's as a sporadic problem and has been seen over the last several years as a pest in west Tennessee. It appears that this year it has caused considerable damage in some fields in Webster Co. Two of these locations are variety trials. The people running these trials

indicate that they think they have the same problem in Hopkins and Union counties, as well as some sites in the Purchase area. We were able to collect some data on incidence and will report that in a future issue of KPN.

What are we going to see now? Look for lodged beans, plants will often be broken off smoothly near the soil line. The two opposing surfaces of the break (upper face of root end and lower face of stem end) will be smooth and often closed over (can't see a tunnel). However, if you split the stalk you will find the borer in the root end, and a tunnel packed with frass in the upper end. Either of these is diagnostic of the pest.

If the pest is present, you will find a legless larva with a small brown head. The worm is elongate with accordion-like ridges. Fully grown larvae are yellow to creamy white and ½ to 5/8" long. All the larvae I have seen this fall have been yellow.

The soybean stem borer, *Dectes texanus texanus* LeCont. (Coleoptera: Cerambycidae) is generally considered a southern pest. However, it has become a common pest in Kansas. Kansas is on a similar latitude with Kentucky, but also, has some major differences. One of these is the production of sunflowers (another host). I expect that some of the work done by KSU will be useful to us.

The soybean stem borer adult is a pale grey beetle about 3/8" long. Its antennae are longer than the

body (hence the name long-horned beetles). Adult females chew small cavities in the petioles of soybean plants and deposits single eggs into each one. When the eggs hatch, the larvae feed inside the petiole causing the leaf to wilt, turn black then drop. After leaving the petiole the larva tunnels into the main stem. During the summer, it will tunnel up and down in the main stem. Later in the summer the larva tunnels downward and is at the base of the plant in September. Once at the base, it forms an overwintering cell and girdles the stem above this site.

This is a difficult insect to control. It is unpredictable in both time and space. It can certainly be an important pest but usually is not, and is almost impossible to control even when its presence is known. The main stalk tunneling can cause some yield loss, but it is the lodging of the plants before harvest that is of greatest concern.

Through the winter I will be looking at literature from other areas to try and piece together a likely situation for Kentucky. We will be looking for this insect next season and will develop some experiments and observations to help us understand how soybean stem borer works in our area.

Pictures of this pest and its damage can be seen at the Kansas State University site:

www.oznet.ksu.edu/entomology/extension/insectinfo/sbsb/sbsb2.html

Keep your eye on this space for more info.

WHEAT

HESSIAN FLY IN KENTUCKY WHEAT by Doug Johnson

Reports are surfacing from more southern states that indicate large Hessian Fly populations. These have all been on early planted wheat. We have some cover crop wheat already planted in west Kentucky and that would certainly be susceptible to Hessian fly infestation. In fact, if you have already planted wheat near where your production wheat is to be planted, you may want to watch for a spring infestation.

At last check by the USDA, Kentucky had Biotype "H". This biotype is/was known to break all resistance available. You should still use high quality varieties with good stand ability. However, **planting date** remains the most important factor for avoiding Hessian Fly problems.

At present we are at or near the Hessian fly free dates for most of Kentucky's wheat growing area. This date varies from October 10 in the more northern counties to October 15 in the southern tier of counties. See Entfact - 101 "The Hessian Fly in Kentucky", ENT- 47, "Insecticide Recommendations for Small Grains (Wheat, Barley & Oats)" and IPM-4, "KY Integrated Crop Management Guide: Small Grains" for further information on this and other pests of Wheat and small grains. These publications can be found on the IPM (<http://www.uky.edu/Agriculture/IPM/ipm.htm>) and Entomology (<http://www.uky.edu/Agriculture/Entomology/enthp.htm>) web pages. Publications are also available from your county Extension office.

The current rain pattern may delay most wheat planting until after these dates. However, remember these dates are only a guide. Killing frost is the most important factor, and that can be delayed by a mild,(warm) fall. If you can delay planting until after the "Fly Free Date", you will also benefit from reduced aphid populations and reduced risk to infestation from fall armyworm.

PASTURES

CHECK FALL SEEDINGS FOR DAMAGE By Lee Townsend

Fall armyworms and green June beetle grubs have surfaced in a few fall-planted pastures. Fall armyworms can devour large areas of seedling grasses. Masses of eggs are laid on the foliage so there tend to be "hot spots" in fields that gradually expand as the caterpillars eat. Green June beetle grubs move regularly to the surface and down deep into the soil. They can uproot or plow up seedlings as they churn around on the surface. These insects may be in relatively localized areas of a field rather than throughout it.

FRUIT CROPS

PIERCE'S DISEASE FOUND ON GRAPES IN SOUTHERN INDIANA by John Hartman

Grape growers and Extension Agents are urged to continue to be alert for Pierce's disease symptoms on grapes in Kentucky vineyards. There are now

confirmed reports that this disease has been found on a few grapevines in an Indiana vineyard. The vineyard is located in the southern part of the state along the Ohio River. Thus, it should not be surprising that this disease, which was first found in Kentucky last year, might be present in additional vineyards here. On most varieties, symptoms appear as well-defined brown scorching of the leaf margins with a narrow yellow zone between the brown tissue and the green leaf tissue remaining at the leaf center. Growers or agents observing these symptoms on grape are urged to have grape leaves with symptoms sent to our plant disease diagnostic laboratory in Lexington to be tested for presence of the causal bacterium, *Xylella fastidiosa*.

VEGETABLES

NEW FUNGICIDE, CABRIO, LABELED ON MANY VEGETABLES

by William Nesmith

Another broad-spectrum, strobilurin-class fungicide has been labeled for use on a large number of vegetable crops. The fungicide is named Cabrio EG and is marketed by BASF. Cabrio EG is a dispersible granule, containing 20% pyraclostrobin.

The worker re-entry interval (REI) is 12 hours for all vegetable crops, which is different for some other crops on the label. The pre-harvest interval (PHI) varies by crop but ranges from 0 to 7 days with vegetable crops.

Cabrio EG is labeled for field use, only. Both greenhouse and transplant uses of this product are clearly prohibited by the label, because of fungicide-resistance management concerns. Other resistance management restrictions include: do not make more than four (4) applications of Cabrio or other strobilurin (QoI-such as Quadris and Flint) fungicides per season; do not make more than two (2) sequential applications of Cabrio before alternating to a labeled non-strobilurin (non-QoI) fungicide with a different mode of action.

Below is a summary list of the commercial vegetable groups and target diseases listed on the label:

• **Bulb Vegetables Group** : (Onions, Garlic, Leek, and Shallot) for controlling Alternaria purple blotch, Powdery mildew, and Downy mildew.

• **Cucurbit Vegetables Group**: (Chayote, Citron, Cantaloupe, Cucumber, Gourds, Melon, Squash,

Pumpkin, and Watermelon) for controlling Downy mildew, Alternaria blight, Anthracnose, Cercospora leaf spot, Gummy stem blight/black rot, Microdochium blight (*Plectosporium*), Powdery mildew, and Target leaf spot (*Corynespora*).

• **Fruiting Vegetables Group**: (Tomato, Bell pepper, Chili pepper, Ground Cherry, Eggplant, and Tomatillo) for controlling Anthracnose, Early blight, Powdery mildew, Septoria leaf spot, and Late blight

• **Root Vegetables Subgroup**: (Carrot, Radish, Garden beet, Edible burdock, Celeriac, Chervil, Chicory, Ginseng, Horseradish, Parsley, Parsnip, Oriental radish, Rutabaga, Black salsify, Spanish salsify, Skirret, and Turnip) for controlling Alternaria leaf spot, Cercospora leaf spot, Powdery mildew, and White rust (*Albugo* spp.).

SHADE TREES & ORNAMENTALS

ASH “FLAGGING” AND BOTRYOSPHAERIA CANKER

by John Hartman

Ash trees in many Kentucky landscapes show symptoms of dieback of individual twigs and branches. In recent weeks, affected shoots have exhibited brown, dead leaves on the ends of otherwise healthy-appearing branches (“flagging” symptom). The disease has been diagnosed as Botryosphaeria canker, caused by *Botryosphaeria dothidea*, one of several canker-causing fungi that can attack ash trees. *Botryosphaeria* is an opportunistic fungus that attacks trees and shrubs wounded or weakened by environmental stress, particularly drought. Botryosphaeria canker occurs on many different woody plant hosts. For more details on this disease and its effects on woody landscape plants, review Kentucky Pest News, volume 966, September 9, 2002.

Disease management. Most healthy, vigorous ash trees plants are resistant to Botryosphaeria canker. Environmental stress, however, can readily predispose trees to attack. Healthy trees and shrubs can resist infection and will slow or prevent spread of the disease throughout the branch. Since drought stress predisposes trees to canker development, watering trees during times of drought is particularly important. On small trees, branches with symptoms of canker should be promptly pruned during dry weather at least 6 to 8 inches below affected tissue. When pruning, remove the branch from the tree by

properly cutting it just outside the branch collar, not flush to the trunk or limb.

TWIG GIRDLER DAMAGE IS EVIDENT **by Ric Bessin**

With the storms and winds we have had the past couple of weeks, the damage caused by twig girdler is evident. The adult twig girdler girdles small branches about the thickness of one's finger such that they are weakened and fall off the tree. If you suspect that twig girdler has caused this damage, inspect the small branches on the ground. Twig girdler will neatly cut around the outside of the twig resulting in a nice, clean break. This insect is actively cutting during September. Secondary branching may occur around these sites and the number of bearing twigs reduced. This insect is particularly common near timberland containing hickory or persimmon.

The twig girdler is a grayish brown beetle, 1/2 to 5/8 inch long, with a broad gray band over the wing covers. Its head is reddish brown and bears a pair of long antennae, which extend beyond the abdomen on the male. The larva is a white legless grub about 3/4 inch when mature. The insect overwinters as a partially grown larva in a twig either in the tree or on the ground. It develops rapidly in the spring, feeding on the dead wood in the twig. Following pupation, the adult emerges in August or September. The female girdles the twig and deposits her eggs in the severed portion, the larva is unable to develop on healthy wood. Eggs hatch and larvae feed, but remain small until the following spring. Infestations may be reduced by removing girdled twigs in the fall and winter and burning them. Girdled twigs from surrounding hickory and persimmon trees need to be destroyed as well.

HOUSEHOLD

HOW TO PEST-PROOF YOUR HOME **by Mike Potter**

According to a statewide poll of Kentucky householders, 93% expressed concern over finding insects inside their home. More than half indicated that a *single* cockroach, cricket, or spider would prompt them to use a can of bug spray or call an exterminator. What many people do not realize, is that most pests discovered indoors have crawled, slithered, or flown in from outdoors.

One of the best ways to limit unwanted intrusions by insects, rodents, birds, squirrels, raccoons and other pests is to deny them entry—a procedure known as *pest proofing*. Many pests seek refuge in homes and buildings in response to changes in weather, such as extended periods of rain or drought, or the onset of cool autumn temperatures. Taking steps to deny their entry before they end up inside can greatly reduce the chance of future sightings.

Outlined below are six tips for pest proofing one's home or business. Steps 1-3 will also conserve energy and increase the comfort level during winter and summer. Equipment and materials can be purchased at most hardware or home improvement stores.

1. *Install door sweeps or thresholds at the base of all exterior entry doors.* Lay on the floor and check for light visible under doors. Gaps of 1/16" or less will permit entry of insects and spiders; 1/4"-wide gaps (the diameter of a pencil) are large enough for entry of mice; 1/2" gaps are adequate for rats. Pay particular attention to the bottom corners as this is often where rodents and insects enter. Garage doors should be fitted with a bottom seal constructed of rubber (vinyl seals poorly in cold weather). Gaps under sliding glass doors can be sealed by lining the bottom track with 1/2 to 3/4 inch-wide foam weatherstripping. Apply sealant (see #3 below) along bottom outside edge and sides of door thresholds to exclude ants and other small insects.

2. *Seal utility openings* where pipes and wires enter the foundation and siding, such as around outdoor faucets, receptacles, gas meters, clothes dryer vents, and telephone/cable TV wires. These are common entry points for ants, spiders, yellowjackets, rodents and other pests. Holes can be plugged with mortar, caulk, urethane expandable foam, copper mesh (like the material in pot scrubbers), or other suitable sealant.

3. *Seal cracks around windows, doors, fascia boards, etc.* Use a good quality silicone or acrylic latex caulk/sealant. Although somewhat less flexible than pure silicone, latex-type caulks clean up easily with water and are paintable. Caulks that dry clear are often easier to use than pigmented caulks since they don't show mistakes. Buy a good caulking gun. Features to look for include a back-off trigger to halt the flow of caulk when desired, a built-in "slicer" for cutting the tip off of new caulking tubes, and a nail for puncturing the seal within. Hardware stores sell guns with these features for less than \$10.00. Prior to sealing, cracks should be cleaned and any peeling caulk removed to aid adhesion. For a professional

look, smooth the bead of caulk with a damp rag or a moistened finger after application. A key area to caulk on the inside of basements is along the top of the foundation wall, where the wooden sill plate is attached to the concrete foundation. Ants, spiders, and other pests often enter through the resulting crack.

4. *Repair gaps and tears in window and door screens.* Doing so will help reduce entry of flies, gnats, mosquitoes and midges during summer, and cluster flies, lady beetles, and other overwintering pests in autumn. Certain insects such as hackberry psyllids are small enough to fit through standard mesh window screen. The only way to deny entry of these tiny insects is to keep windows closed during periods of adult fall emergence.

5. *Install 1/4-inch wire mesh (hardware cloth) over attic, roof, and crawl space vents* in order to prevent entry of birds, bats, squirrels, rodents, and other wildlife. Be sure to wear gloves when cutting and installing hardware cloth, as the wire edges are razor sharp. Backing the wire mesh (from the inside) with screening will further help to prevent insects such as ladybugs, paper wasps and yellowjackets. If not already present, invest in a chimney cap to exclude birds, squirrels, raccoons and other nuisance wildlife. Raccoons, in particular, are a serious problem throughout Kentucky. Many chimneys become home to a family of raccoons which, in turn, are often infested with fleas.

6. *Consider applying an exterior (barrier) insecticide treatment.* While sealing is the more permanent way to exclude pests originating from outdoors, comprehensive pest-proofing is laborious and sometimes impractical. For clients requiring an alternative, pest proofing can be supplemented by an exterior treatment with an insecticide. Homeowners will get the most for their efforts by applying longer-lasting liquid formulations containing pyrethroids (e.g., Bayer Advanced Home/Garden™ Multi-Insect Killer, Spectracide Triazicide™, Ortho Home Defense System™). Such products are sold at hardware/lawn and garden shops. For better coverage, it's often best to purchase these products as concentrates, so that they can be diluted and applied with a pump up sprayer, hose end sprayer, etc. Treat at the base of all exterior doors, garage and crawl space entrances, around foundation vents and utility openings, and up underneath siding. It may also be useful to treat around the outside perimeter of the foundation in a 2 to 6-foot-wide band along the ground, and 2-3 feet up the foundation wall.

Clients who choose not to tackle these activities may want to hire a professional pest control firm. Many firms now offer pest proofing services. For the occasional bug that wanders in from outdoors, a vacuum cleaner or broom is often all that's needed.

INSECT TRAP COUNTS

UKREC, Princeton, KY -- September 20-27

Corn earworm	1
European corn borer	0
Southwestern corn borer	4
Fall Armyworm	13

NOTE: Trade names are used to simplify the information presented in this newsletter. No endorsement by the Cooperative Extension Service is intended, nor is criticism implied of similar products that are not named.