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KENTUCKY PEST NEWS

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WATCH FOR:

GREEN CLOVERWORMS and GRASSHOPPERS in soybeans; FALL ARMYWORM on late corn; HORNWORMS on tobacco; time for preventive sprays for NUT WEEVILS; FOREIGN GRAIN BEETLES in homes; WHITE GRUB INJURY to turf; BLISTER BEETLES feeding on potatoes and tomatoes; SPIDER MITES on landscape plants.

TOBACCO

DISEASE UPDATE
by Kenny Seebold

Several new cases of blue mold were reported in KY between July 27 and August 3; the counties affected were Allen, Clark, Monroe, and Fayette. As of August 6, five counties in KY are believed to have active blue mold. The disease is also present in MA, NC, PA, TN, and VA.

Although we've had intermittent periods of blue-mold favorable weather over the past 10 days, our forecast through August 12 predicts daytime temperatures in the mid-to-upper 90's and few chances of precipitation. These conditions will not favor development or spread of blue mold in our area, so the risk to tobacco in KY is fairly low at this time. Growers should continue to scout their crops for the presence of blue mold, however, and be prepared to make applications of fungicides if disease-favorable conditions prevail and if the tobacco has not been topped. Please see ID-160, the 2007 KY Tobacco Production Guide, for recommended disease-control products.

Please be on the lookout for blue mold and let me know if the disease is found in your area. You can visit the Kentucky Tobacco Disease Information page for regular updates on blue mold and other diseases (http://www.uky.edu/Ag/kpn/kyblue/kyblue.htm).

CORN

EVALUATE CORN FOR BORERS NOW
By Ric Bessin

Corn borer numbers have been variable this year with much of the state only lightly infested. In part this is due to the dry weather early which allowed producers to get most of the corn planted relatively early. In the past, the worst corn borer problems, both European and southwestern, have been with late planted corn. Moth trapping records from Princeton Kentucky this summer have indicated a small moth flight in that area. Traps in other parts of the state have revealed similar moth numbers.

Now is the time to begin evaluating corn fields for late-season European and southwestern corn borers. These late season larvae feed primarily in the ear zone of the plant and below, but may be found in leaf axils over the entire plant. Leaf axils, leaf sheaths, and ear shanks should be examined for live larvae or the sawdust like frass that signals their damage. Ear shank tunneling or stalk tunneling below the ear may lead to increased harvest losses this fall. Severity of the infestations vary from field to field on a farm, so fields should be scouted individually.

Identification of heavily-infested fields and their early harvest (where possible) is an effective strategy to harvest reduce losses due to broken or lodged plants and ear drop. It may be most profitable to harvest heavily infested fields early and dry the grain rather than risk harvest losses due to dropped ears and broken stalks. Heavily infested fields are also at more risk to stalk rots which increase harvest losses.

Special attention should be given to late planted fields in the western half of the state, particularly near the Ohio River, as southwestern corn borer remains a problem in that area. In September, southwestern corn borer larvae that prepare to overwinter move to the base of the stalk. They make a chamber in the stalk below ground, then girdle the base of the stalk. For this reason, fields that are heavily infested with southwestern corn borer should be identified and harvested as early as appropriate. Late planted fields are most likely to be attacked by these late season infestations. Fields planted in early to mid May in western Kentucky should be considered late plantings. Fortunately, many growers switch to Bt corn for corn borer control with their late plantings.

FORAGES

STRAW ITCH MITE
by Lee Townsend

During some years, straw itch mites can make life miserable for people handling hay. The mites are virtually impossible to find because of their size and the fact that they quickly drop off after biting. Diagnosis often is based on symptoms and location of the lesions.

The straw itch mite (about 1/125 inch long) feeds on caterpillars, beetle larvae, and other small arthropods in hay fields or stored grain. Most reported outbreaks affect people who harvest or handle grains or hay. Mites are physically transferred to the skin during handling or may be picked up from infested straw used for mulching or decoration. Several cases were reported in 2004, there has been one suspected case this year in Kentucky. The mites probably are present in most fields every year with occasional population explosions when conditions are very favorable.

Proteins, injected as the mites pierce the skin with their needle-like mouthparts, can cause moderate to severe skin reactions and itching that can last for 10 to 14 days. The itching typically is noticed from 2 to 12 hours after exposure, by then the mites often gone. Skin reactions can include dozens to hundreds of small, solid, raised areas that may have white tops (pustules). They occur most often on the neck, back, abdomen, and around the waist. In contrast, chigger bites are commonly found on the legs. The lesions disappear in a few days, with or without therapy. Severe reactions in some individuals can include fever and vomiting and may require hospitalization. Oral antihistamines and topical anti-itch creams have been reported to be useful in alleviating the discomfort caused by the bites. In most cases the bites clear in a about a week. Persons with prolonged discomfort should see a physician.

People working with hay / straw) should wash frequently and thoroughly with soap and water. Remove clothing and launder each day, the mites may be able to live for several days. There is no evidence that the bites transmit disease, nor that there is a person to person transmission of the mite.

SHADE TREES & ORNAMENTALS

DECAYING TREES CAN BECOME HAZARDS
by John Hartman

Last week, the issue of wounding and tree wood decay was addressed in this newsletter. Decay in living trees can weaken their structure and create a situation where injury to people or damage to property could result from falling limbs, trunk breakage, or tree toppling. A tree normally would not present a hazard in the landscape unless there is a potential target for it to fall on. After all, a falling tree in the middle of a forest is not the hazard that a similar tree would be in a school playground. County Extension Agents, arborists, landscapers, and grounds maintenance personnel should recognize how tree decay disease can create a real hazard in the landscape.

Trees that represent a hazard can often be recognized by evidence or indicators of decay disease or tree structural weaknesses. Some of these will be listed here. An actual evaluation of hazard trees is best done by a professional certified arborist. Knowing that some of these indicators are present should give the tree owner reason to contact a certified arborist.

Visible external evidence. The following is a partial list of tree hazard indicators which, if present, are cause for concern and a stimulus to look more closely at the problem to determine if a hazard really exists.

- Tree branch and foliage appearance (indicating a root or lower trunk problem): diminished size, frequency, and health of buds; decreased annual twig growth; reduced canopies; unsatisfactory size, density, and color of foliage; epicormic growth; deadwood and dieback in the crown.
- Tree structure: poor crown balance; multiple branch attachments; narrow crotch angles between trunks or between branches and trunk, especially with included bark; long slender non-tapering branches; abnormal crooks in branches; and leaning trees.
- Tree diseases and defects: canker diseases; trunk and branch cracks, splits, and bulges; dead bark; bark texture changes; weeping wounds; cavities and hollows; topped trees; branch stubs; flush cuts; dead wood and broken, hanging branches; root decay; deep stem fluting; lack of basal flare; and girdling roots.

- Biological indicators: fruiting bodies of decay fungi on buttress roots, trunk, or limbs; fungal mycelial mats or fans; fungal rhizomorphs; insect emergence holes; insect frass; bird or mammal nesting holes; and bee colonies inside the tree.
- Site factors: nearby building construction; trenching through the root zone; changes in water drainage patterns; soil compaction; clearing of a densely wooded site leaving remaining trees exposed to wind; soil erosion; changes in grade such as cuts and fills; extremely light soils providing poor root anchorage.

Buried evidence. Less accessible, but very important to tree hazard determination is the partially buried area at the base of the trunk which includes the buttress or flare roots. The root flare area may need to be carefully excavated to reveal decay, fungal mycelium and rhizomorphs, dead bark, injuries, cracks, and other tree defects. For a tree to be safe and healthy, it is necessary for most of the lower trunk and buttress roots to be free from injury and disease.

Evidence inside the tree. Decay of the wood inside the tree can often be foretold by visual evidence such as fungal fruiting bodies, hollows, and cracks. Nevertheless, to survive, grow, and have healthy foliage, trees need only intact bark and a few outer rings of the wood, so a badly decayed tree might not always appear to be a hazard. Therefore, it is important to determine just how much decay is present to determine if the disease has progressed to the point of making the tree hazardous. The presence of decay and a cavity is not necessarily an indication that tree removal is necessary provided that the healthy shell of the trunk surrounding the decayed center is sufficiently thick.

Arborists have tools that can be used to determine what is inside the tree or inside the buttress roots so that a more accurate picture of the tree strength can be obtained. Some of these tools include:

- A mallet, used skillfully can help detect a cavity, but it does not tell how much decay is present.
- The sound impulse hammer (e.g., Metriguard hammer) or ultrasonic instruments such as the Silvatest and Arborsonic detectors use sound velocity patterns to reveal tree defects.
- An increment borer facilitates sampling for study of the annual growth rate of the tree (dendrochronology) and for determining the extent of internal wood decay.
- A portable electric drill with a long narrow twist drill bit can be used to determine interior decay and hollow conditions by noting changes in sawdust color, texture, and odor and changes in resistance to penetration at various depths.
- A more precise variation of the drill method is provided by the Resistograph F500 decay detection device. A thin, about 1/16 inch diameter probe rotating at high speed is inserted into the tree and penetrates up to a depth of almost 20 inches at constant speed. The changes in power demands on the electric motor resulting from passing through sound wood and decayed wood are printed out on a recording device at the same scale as the distance traversed.
- Other detectors employing the concept of wood penetration such as the Densitomat-400, the Decay Detecting Drill (DDD 200), and the Resistograph 1410 operate on the same principle as the Resistograph F500 and also provide a graphic record of the results of drilling.
- Electrical resistance measurements inside the tree will show a difference between decayed and healthy wood. The Shigometer is used to detect internal discoloration and decay in the tree and also to provide a relative measure of its vitality.
- New non-invasive technology such as thermograpy (measuring a tree's radiant heat), ultrasonic tomography (using sound sensors outside the tree with computer analysis of data), echography (radar), and computed tomography (like the CAT scan used in medicine) are being tried experimentally to detect decay in trees.

As tree decay detection technology advances, it may be possible someday to accurately map out the extent of decay inside the tree. If future technology brings computer-aided 3-dimensional models and species-specific tree strength formulas, it should make hazard tree evaluation even more precise.

HOUSEHOLD

FOREIGN GRAIN BEETLES – NEW HOUSE BEETLES
by Mike Potter

Foreign grain beetles are very small (about 1/16-inch long), brownish, and are often mistaken for flour beetles or other stored product insects. The key characteristic to look for in identifying this beetle is the presence of a slight projection or knob on each front corner of the shield-like segment directly behind the head(see picture – yellow arrow). A microscope or good quality hand lens is necessary to see this character (See Entomology Entfact-610, Foreign Grain Beetle).

Foreign grain beetles are frequently a problem in new construction (less than 5 years old). They are one of a group of beetles called "fungus beetles" that feed on molds and fungi growing on poorly seasoned lumber or wet plaster and wall board. If they are found infesting flour, grain, or other stored products, the products are generally moldy or in poor condition. When new homes

are built, damp wood is often covered with molds or mildew which attracts the beetles. The beetles are also attracted to accumulations of sawdust trapped behind walls during construction. Eggs are laid on this food material and the larvae develop on the surface fungi. The adult beetles usually become a problem in late summer when they move out of wall voids and are attracted to windows and lights. In older homes, foreign grain beetles can also be associated with plumbing leaks, condensation problems, or poor ventilation.

There is no fast or easy way to get rid of foreign grain beetles. Control is difficult because the breeding source of the beetles is concealed within the walls. The ultimate solution is time and patience. Most new homes dry out naturally within the first few years and the fungi and molds disappear along with the beetles. Drying time can be enhanced by increasing ventilation, e.g., by use of fans and air conditioning. A vacuum cleaner can be used to remove beetles emerging from hidden locations. Pest control companies may be able to provide limited relief by locating the infested wall areas or source of dampness (usually in the rooms where the beetles are most abundant), and injecting residual aerosols or dusts into cracks and crevices beneath baseboards and into the wall voids.

If the homeowner can tolerate the emergence of the adult beetles during August-September, the problem will usually resolve itself. Most newly-built houses cease to have problems after a few summers, and the beetles usually will not be evident during the rest of the year. Some comfort can be taken in the fact that foreign grain beetles are only a nuisance by their presence. They do not bite or damage wood, fabric or stored foods in a sound condition.

DIAGNOSTIC LAB-HIGHLIGHTS

by Julie Beale and Paul Bachi

Agronomic samples over the past week included potassium deficiency, Phytophthora root/stem rot, and brown spot on soybean; black shank, blue mold, target spot, soreshin and frenching on tobacco.

On fruit and vegetable samples we have diagnosed Phytophthora collar rot on blueberry; Alternaria leaf blight on melon; Microdochium blight and vine borer injury on pumpkin; anthracnose on watermelon; Septoria leaf spot and tobacco mosaic virus on tomato.

On ornamentals, we have seen Septoria leaf spot on rudbeckia; white smut on gaillardia; and Verticillium wilt on magnolia. Many landscape trees and shrubs are also showing symptoms of stress from drought conditions and transplant shock.

TRAP COUNTS

UKREC, Princeton KY

Kentucky — Tennessee

July 27-August 3, 2007

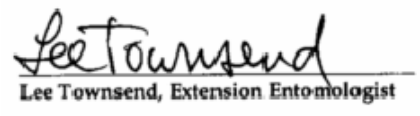
►***Princeton, KY***

Black cutworm	0
True armyworm	0
Corn earworm	56
European corn borer	0
Southwestern corn borer	43
Fall armyworm	4

►***Lexington, KY***

Black cutworm	5
True armyworm	151
Corn earworm	115
European corn borer	13
Southwestern corn borer	0
Fall armyworm	4

This season insect trap counts will be provided for locations in Kentucky and Tennessee.
View trap counts for past seasons and the entire 2007 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/
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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