



# KENTUCKY PEST NEWS

ENTOMOLOGY • PLANT PATHOLOGY • WEED SCIENCE

On line at - <http://www.uky.edu/Agriculture/kpn/kpnhome.htm>

Number 897

September 11, 2000

## CORN

- **Southwestern corn borer continues to spread!**
- **Diplodia ear rot outbreaks**
- **Severe lodging of lower stalks in some fields**

## ALFALFA

- **Threecornered alfalfahopper**

## SHADE TREES & ORNAMENTALS

- **Rose rosette disease, a problem for cultivated roses**

- **Yellow beetles on flowers**

## HOUSEHOLD

- **The yellowjackets are coming**

## DIAGNOSTIC LAB-HIGHLIGHTS

## INSECT TRAP COUNTS

## CORN

### **SOUTHWESTERN CORN BORER CONTINUES TO SPREAD!**

by Ric Bessin

European and southwestern corn borer levels are high and producers need to manage their corn very carefully until harvest. The southwestern corn borer continues to spread eastward across the state. This season it has become a serious new problem in Hardin and Larue counties with some fields reaching 25% infested stalks this fall. This is important for corn producers as southwestern corn borer is more destructive than European corn borer. In addition to southwestern corn borer infestations, many producers have been alarmed and surprised by the level of European corn borer infestations in much of their corn.

Generally, fields that were planted in April are less prone to late season corn borer infestation than later-planted fields. But that does not mean that they escape infestation. I have seen many fields that were planted in April that have serious corn borer levels this fall. Some of these fields may have significant losses if harvest is delayed or if they experience high winds. However, May-planted corn is generally worse. The message is that although much of the corn in Kentucky was planted early or on time, corn borer levels have been high and producers need to watch all

fields carefully to avoid harvest losses.

Many producers have indicated that they are trying to let their corn dry down in the field as much as possible because propane costs have nearly doubled over last year. However, the longer they wait before shelling their corn the greater the chances of stalk breakage and harvest losses. Southwestern corn borer has begun to girdle some stalks at their base and the number will increase towards the end of this month. While propane prices are high and it is expensive to dry corn, producers also need to evaluate the level of corn borer infestation on a field to field basis. Heavily infested fields should be harvested as soon as appropriate.

Keep in mind that all stalk lodging is not necessarily caused by corn borers. There has been significant levels of stalk rots as well. Some of these may be associated with insect damage and others may not.

### **DIPLODIA EAR ROT OUTBREAKS**

by Paul Vincelli

Diplodia ear rot of corn has been diagnosed in a number of locations. This disease causes ears to exhibit a white moldy growth between kernels. The moldy growth usually progresses from the base of the ear upward, although occasional ears with tip infections can be found. Often it is possible to recognize infected plants before shucking the ear



because the ear leaf is often prematurely dried, and the diseased ears often droop more than healthy ears.

Usually the worst outbreaks are in continuous corn fields under conservation tillage, since the fungus survives in infested corn residue. However, I observed a moderately severe case recently in a field that was in soybeans last year and was plowed this spring. Residue levels in the corn field itself were very low, and the fungus could not be detected there. However, I could readily find the fungus in half of the corn residue pieces recovered from a neighboring soybean field located to the west of the corn field. These observations suggest that the fungus had blown in on wind-driven rainsplash from the neighboring soybean field.

Producers should check corn fields for damage from *Diplodia* ear rot. Fields showing more than 2-3% ears with the disease should be rotated away from corn. Other practices that can help control the disease include tillage, selection of hybrids with some degree of partial resistance, and bush-hogging or otherwise breaking up corn residue this fall prior to harvest, which speeds decomposition.

More information is available in the UK Extension publication PPA-43, "Ear Rot of Corn Caused by *Stenocarpella maydis*."

### **SEVERE LODGING OF LOWER STALKS IN SOME FIELDS** by Paul Vincelli

Several cases of lower stalk lodging have been seen in corn in the Green River Area. The worst field is 90% lodged, with a number of fields showing areas with over 50% lodging. Corn producers are advised to check the lodging potential of their fields. A simple way to do this is to walk through the field and, keeping your hands at chest height, push stalks 8-10 inches from vertical. If 10-15% of the stalks lodge, schedule the field for early harvest before a strong wind results in severe lodging.

Lab analyses of our findings from the fields I visited with county Extension agents are still pending. However, field observations showed that the majority of the stalks in all fields examined were weakened by factors other than insect damage. Evidence of stalk rot diseases was present, yet that evidence did not appear to be very consistent in the field inspections. It is unclear at this time whether the majority of the

stalks were weakened from physiological stress or from infectious stalk rots (such as *Fusarium* stalk rot, *Gibberella* stalk rot, or anthracnose stalk rot). However, since physiological stalk weakening can often predispose plants to infectious stalk rots, all cases of lodging ought to be evaluated for stress factors, regardless of whether infectious stalk rots are found in our analyses.

The weather conditions reported this growing season set the stage for stalk weakening. Conditions favorable for high yields create a large ear that requires large amount of photosynthate. The overly cloudy weather during grain fill provides for reduced photosynthesis, so a high-yielding corn plant will draw reserves from the stalk, leading to stalk weakening. Factors that might then enhance this problem further include: excessive plant population, excessive N in relation to potash, high N levels early in the season followed by N loss through leaching or denitrification, inadequate levels of potash, low stalk strength ratings of hybrids planted, and severe leaf disease. Producers should evaluate these factors to see if there are ways to reduce the risk of lodging in future years.

## **ALFALFA**

### **THREECORNERED ALFALFA HOPPER** By Lee Townsend

Individual wilted and yellowing alfalfa stems scattered randomly across a field can be the result of feeding or egg-laying by threecornered alfalfa hoppers. These insects can girdle stems when they lay eggs in them. Nymphs and adults weaken the lower stem by piercing it with their needle-like mouthparts and extracting plant sap. As a result, lodging and breaking usually occur weeks after attack.

The adult stage of these green, wedge-shaped insects is a strong flier and moves frequently within and among fields. The damage is limited to scattered plants and control is not necessary.

## **SHADE TREES & ORNAMENTALS**

## **ROSE ROSETTE DISEASE, A PROBLEM FOR CULTIVATED ROSES**

by John Hartman

Each year, specimens of garden roses with canes having excessive thorns and abnormal shoot development are observed in the Plant Disease Diagnostic Laboratory. Whether plants come from a small backyard rose bed or from the enormous rose collection open to the public at the U.K. Arboretum (over 500 different rose cultivars, many of them of historic interest), such symptoms should be a concern to the grower. Affected roses are suffering from a disease called rose rosette.

Rose rosette disease may be found affecting roses (genus *Rosa*) throughout Kentucky. Its main host is multiflora rose (*R. multiflora*), a thorny plant originally introduced into the United States from the Orient. Although originally promoted as a conservation plant and "living fence," multiflora rose is now usually considered a noxious weed. Thus, because rose rosette disease kills multiflora rose, it is considered helpful in the attempt to manage this weed. The cause has not been fully characterized, but symptoms and spread resemble those of a virus-like or phytoplasma-like pathogen. In nature, it is spread by a tiny eriophyid mite (*Phyllocoptes fructiphylus*), but it can also be transmitted by grafting. Research at Iowa State University suggests that rose rosette can be augmented in the field so that stands of multiflora rose become decimated over time.

Symptoms. This lethal disease of multiflora rose also affects cultivated roses. Earliest symptoms include increased growth of shoots with red coloration and distortion and dwarfing of leaves. Affected shoots appear to be more succulent than normal and they develop a proliferation of thorns. This abnormal overabundance of thorns is a useful field symptom for diagnosis, because the new shoots of many roses are naturally reddish colored. Affected shoots are not winter-hardy and will produce few blooms or flowers may be deformed. Infected plants produce fewer roots than normal. The disease progresses to the rest of the plant until all the new growth is affected and the plant declines or is killed in winter. Roses may succumb in just one season, or symptoms may continue for another season or two.

Disease management. Infected plants must be removed and destroyed so that the pathogen is not spread to healthy plants nearby. Care must be taken

to avoid scattering disease-carrying mites to the other plants. Early detection is essential. Rose rosette disease is normally systemic in the plant, but at the first indication of infection on a shoot, it might help to clip off the affected shoot in hopes that the rest of the plant is still unaffected. Multiflora rose could be a reservoir for the disease so they should be removed from the neighborhood of cultivated roses. Over a three-year interval, research done at Iowa State University suggests that the disease can spread from multiflora rose to cultivated roses up to 100 meters, but not 150 or 300 meters from infected plants. Hopefully, if multiflora roses are absent from more than a length-of-football-field distance in all directions from the rose bed, the garden roses should be safe from infection. Nevertheless, in Kentucky, examples of rose rosette disease have been observed in rose beds where multiflora rose was thought to be absent from the neighborhood, or at least not within a few hundred meters of the affected garden. In these cases, perhaps the grower has not been able to make an exhaustive search for the source of inoculum. Rose rosette could be found in nursery stock, so growers will want to purchase new roses from reliable sources.

## **YELLOW BEETLES ON FLOWERS**

By Lee Townsend

Soldier beetles, also known as leatherwings, get their name from their soft, clothlike wing covers. These elongate beetles are about 1/2" long. Common on flowers at this time is the Pennsylvania leatherwing, that has yellow wings with a large black spot on each. Soldier beetles resemble lightning bugs but do not have light-producing organs.

The adults are also predators, eating caterpillars, eggs, aphids, and other soft-bodied insects. They will alternatively eat nectar and pollen if no insects are around. They do not damage plant foliage. Adults are often found on flowers such as goldenrod, where they lie in wait for prey, feed on pollen and mate.

Adult females lay their eggs in clusters in the soil. The larvae are velvety black. Most larvae are carnivorous, feeding on insects in the soil. Larvae overwinter in damp soil and debris or loose bark. The larvae can be accidental invaders in the fall, entering houses and garages.

## **HOUSEHOLD**

## THE YELLOWJACKETS ARE COMING

By Mike Potter

If you haven't already begun receiving calls about yellowjackets, you will shortly. During late-summer and fall, yellowjacket colonies are nearing maturity and huge numbers of workers are out foraging for food for the developing queens. With insect prey (their usual diet) becoming scarce, yellowjackets scavenge widely for other sources of nutrition. They're particularly fond of sweets, e.g., fruit, soft drinks, ice cream, beer, but will also feed on meats, potato salad, and just about anything we eat. The persistent foraging of yellowjackets at picnics and other outdoor activities prompts many calls from homeowners and businesses, wanting to know what can be done to alleviate the problem. Here are their options:

1. **Sanitation** - The best way to reduce the threat of foraging yellowjackets is to minimize attractive food sources. People eating outdoors should keep food and beverages covered until ready to be eaten. Spills and leftovers should be cleaned up promptly. Trash cans should be equipped with tight-fitting, preferably, self-closing lids. Similar sanitation recommendations should be made to commercial establishments, including ice cream parlors, outdoor cafes, and produce stands. Whenever possible, trash cans and dumpsters should be located away from serving tables, doors, and other high-traffic areas. Trash cans should be equipped with a plastic liner and emptied and cleaned frequently.

Maintaining high levels of sanitation throughout the summer will make areas less attractive to yellowjackets later in the fall. This strategy is especially useful for parks and other outdoor recreation areas. Apples and other fallen tree fruits should be raked up and discarded.

2. **Avoidance** - Combined with sanitation, avoidance is the best advice in most situations. Yellowjackets foraging away from their nests are seldom aggressive and usually will not sting unless provoked. People should resist the temptation to "swat" at the wasps; most stings occur when foragers are slapped or trapped against skin. *Be extremely careful when drinking from beverage cans into which a foraging yellowjacket may have crawled. Swelling resulting from a wasp sting inside the mouth can be life threatening.* Avoidance may also be the best advice if a yellowjacket, hornet, or bumble bee nest is located in a tree or other out-of-the-way

location. Yellowjacket colonies die off on their own in late autumn with the onset of cold weather. Abandoned nests are not reused and soon disintegrate.

3. **Repellents** - Standard mosquito repellents will not deter yellowjacket foraging, or reduce the chances of being stung. A dilute solution of ammonia and water (approximately 6 oz of ammonia per gallon of water), sprayed in and around trash cans and sponged onto outdoor eating tables will help to mask food odors and minimize attraction to these areas. Use household ammonia, not Clorox (bleach).

4. **Traps** - Yellowjacket traps of varying designs are sold at many lawn and garden shops. When properly baited and maintained, these traps (much like Japanese beetle traps) often attract and capture large numbers of yellowjackets. Unfortunately, the nests often contain thousands of foraging individuals and trapping a few hundred seldom results in a noticeable reduction in activity. If traps are used, position them around the periphery of the area you wish to protect; otherwise, you may attract more wasps than are trapped.

5. **Insecticides** - Elimination of yellowjackets is best accomplished by locating and destroying the nests. *However, with foraging yellowjackets this is often impractical since the nest, or nests, may be located several hundred yards away.* People still should inspect the area around their homes for nests. The best time to do this is during the daytime, when yellowjackets are entering and exiting the nest opening.

If the nest entrance can be located — typically underground in an abandoned rodent burrow, beneath rocks or landscape timbers, or in a stone wall or wall of a building — it often can be eliminated by applying an aerosol-type wasp and hornet spray into the nest opening. Dust formulations (such as Sevin, Drione or DeltaDust) also are effective, provided that a hand-held duster is used to puff the insecticide into the nest opening. A dry, empty liquid detergent bottle filled no more than halfway with dust and shaken before dispensing works fairly well in lieu of a commercial duster. A few pebbles or marbles added to the bottom of the bottle prevents the dust from caking. Dusts tend to be more effective than aerosols when the nest, itself, is located some distance from the entrance hole, as often occurs when yellowjackets construct nests in wall voids or deep within abandoned animal burrows.

Treatment should be performed at night, when most of the yellowjackets are in the nest and less active. Pinpoint the nest opening during the daytime, so you will remember where to direct your treatment after dark. Approach the nest slowly and do not shine the beam of your flashlight directly into the nest entrance as this may startle the wasps; instead, cast the beam to the side to illuminate the nest indirectly. If possible, place the light on the ground rather than in your hand. As with hornets, yellowjackets are extremely aggressive when the nest is disturbed. It's often prudent to refer homeowners to a professional pest control firm, particularly when access to the nest is difficult.

Wasp, hornet and yellowjacket stings can be life-threatening to persons who are allergic to the venom. People who experience extensive swelling, hives, dizziness, difficulty breathing or swallowing, wheezing, or similar symptoms of allergic reaction should seek medical attention immediately. Itching, pain and localized swelling can be reduced with antihistamines and an ice pack.

## DIAGNOSTIC LAB HIGHLIGHTS

by **Julie Beale and Paul Bachi**

Recent samples of soybean have been diagnosed with frogeye leaf spot, downy mildew, stem canker, charcoal rot, soybean cyst nematode, and sudden death syndrome.

Most other recent samples have been ornamentals. We have seen chrysanthemum with bacterial leaf spot (*Pseudomonas*); impatiens with bacterial leaf spot (*Pseudomonas*) and *Rhizoctonia* root rot; pansy with black root rot; marigold with *Alternaria* leaf spot; petunia with *Pythium* root rot; poinsettia with scab and *Botrytis* stem blight; hydrangea with *Cercospora* leaf spot; pachysandra with *Volutella* blight; mulberry with *Nectria* canker; and oak and London plane tree with bacterial scorch.

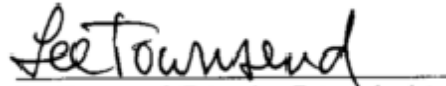
Vegetable samples have included okra with *Verticillium* wilt and stinkbug damage; pepper with anthracnose; pumpkin with *Phytophthora* fruit rot; and tomato with sour rot (*Geotrichum*).

## INSECT TRAP COUNTS

### UKREC, Princeton, KY

**August 26-September 1, 2000**

Fall armyworm .....	10
Corn earworm .....	169
European corn borer .....	24
Southwestern corn borer .....	203



Lee Townsend, Extension Entomologist

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.

Cooperative Extension Service  
U.S. Department of Agriculture  
University of Kentucky  
College of Agriculture  
Lexington, Kentucky 40546

An Equal Opportunity Employer

PSRT STD  
POSTAGE & FEES PAID  
USDA  
PERMIT NUMBER G268

Official Business  
Penalty for Private Use, \$300