



# KENTUCKY PEST NEWS

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### CURRENT BLUE MOLD STATUS

by William Nesmith

Based on the lack of reports from County Extension Offices, blue mold is apparently not active (or at least not active enough to be causing much damage) in most areas of Kentucky. The exception is southeastern Kentucky, where County Extension Agents are still reporting that very strong activity continues in some fields of late planted tobacco where rains have been timely. Several agents indicated that the disease was very active in the upper portions of the plant in drought-stressed crops that had suddenly started growing following a good rain and cool nights.

Although high temperatures were experienced late last week, night temperatures were cool all week and through the weekend. The cooler temperatures experienced last week and those expected most of this week are highly favorable for blue mold development in areas where it has remained active and the plants are growing well. Systemic vein strikes in the upper leaves followed by distortion of the leaves are possible on fast growing crops. Little long range movement of spores has been occurring recently, so the new threats should be mainly confined to communities with active disease on rapidly growing crops that have had moisture.

Fungicide sprays are still needed in such crops, especially on late-set crops located in foggy locations.

### PROMPT DESTRUCTION OF ROOTS AND STALKS IS AN IMPORTANT TOOL IN BLACK SHANK CONTROL

by William Nesmith

I have long taught that prompt destruction of the roots and stalks is an important tool in disease prevention. I am now seeing evidence that more and more growers are following this advice, but we still have a long way to go and many none-believers.

At a recent field day in Henry County, I reminded growers in attendance of the importance of this tool in the management of black shank. One grower commented, "I just do not see how that could have anything to do with controlling black shank."

Folks, here is the biology and some data from Kentucky supporting this. The black shank fungus will continue to colonize the root systems of tobacco stalks as long as the roots continue to grow and soil temperatures remain above about 50 F (another 2 to 3 months). In contrast, killing the entire root systems quickly after harvest, prevents this late season buildup of the pathogen, and forces the pathogen into its survival phases early. As a result

of this longer period without a host, there is a greater decline in pathogen populations between seasons.

In a Powell County Black Shank Study several years ago, we used a shovel to detach ("pop" the grower called it) the root systems out of the ground the day the crop was removed from the field in one treatment vs leaving the roots systems in place. All root systems were left in the field near where they had been growing. About a week later, the grower lightly disked the field and seeded his cover crop, his normal practice for decades. We monitored the levels of the black shank fungus in the soil at harvest and at monthly intervals using a seedling bioassay until November, then again the next spring prior to transplanting. The fungus population increased during September and October then declined in November where the roots were left in place, while it started declining immediately in the plots where the root systems had been detached. In the spring assay, the level of detectable fungus in the detached-root plots was about half that detected in the other plots. We also saw significantly lower disease incidence, especially for the first 6 weeks, in the crop planted the following year.

## **POOR HORNWORM CONTROL?**

**By Lee Townsend**

Tobacco hornworms have a tremendous appetite for the crop and can do a lot of damage in a short time. Usually, hornworm control is relatively straightforward. There are several products to use and all have long reputation for good results (Dipel and other Bt products, Golden Leaf/Thiodan, Orthene, and now Tracer). Complaints of poor control this season have been few but widely spread out. Registered products reportedly have been used at labeled rates with sufficient water to provide good coverage. There is no apparent explanation for lack of control.

Here are some factors that can serve to **increase** the potential for hornworm infestations.

✓ Late topping - hornworm moths are drawn to tobacco flowers at dusk to feed on nectar. This may keep them in the field longer with more eggs being laid. Topping removes one of the biggest attractions for them and should lower the infestation level.

✓ Early or late transplant dates - Any fields that stand out, especially flowering when the moths are

active, will be attractive and at greater risk. At least one of the problem fields this season was set late.

✓ Effective sucker control - Sucker growth can be a site for egg laying and also mean more hornworms in the field.

Tobacco hornworms are on the upper half, and often the upper third, of the plant. They usually hang on the underside of the leaf, so contact kill is rare. The stomach poison aspect of the insecticide comes into play as the hornworms feeds on leaf tissue and ingests the residue on the upper surface. Control might be reduced if leaves block the spray deposits on worm-infested plants. Small hornworms only eat a dime to quarter-sized hole so it may take some time for them to get to a treated area of the leaf. It can take some time for them to get to a treated area.

Give products 3 to 4 days to work. It can take that long for hornworms to reach treated leaf tissue, especially if spray coverage is somewhat uneven. Use sufficient spray volume to provide good leaf coverage. Continue to check fields for hornworms.

## **SOYBEANS**

### **SOYBEAN PODWORMS IN SOYBEAN: IT'S THEIR TIME OF YEAR**

**by Doug Johnson**

It is the time of year when soybean podworms can cause us a great deal of trouble. This insect, also known as the corn earworm, feeds directly on plant yield and is, therefore, more dangerous than most of the soybean pests in KY.

Several factors contribute to podworm problems. Corn, the preferred host, is beginning to mature and is no longer attractive to moths. These moths must look for other hosts on which to deposit their eggs. Second, podworm populations in soybean always do better in fields that have not developed a complete canopy. This is usually only a problem for double crop beans, however in this dry year there are many fields that are not as lush with vegetation as they should be. Fortunately, moth capture of this pest is not particularly high this year but they are consistent. The critter is around. The only real question is whether or not economically important populations will develop.

Fields should be scouted beginning with late bloom.

Pay special attention to those that have not produced a closed canopy. Use the shake cloth method for counting. Place the cloth on the ground between two rows and vigorously shake two row feet of plants one each side, over the cloth. Count the number of soybean podworms on the cloth. It is very important to look closely for this insect. Driving by or even walking over the field may not reveal their presence. They generally do not feed on the vegetative plant parts so you must look at the pods for damage.

The action threshold for this pest is only two worms per row foot which is smaller number than other soybean feeding worms.

Adults are buff to light green moths with a wingspan of about 1/2". You can use pheromone baited traps to capture these moths. This will tell you whether or not and when they are present in your area. If you keep some records, over the years you can determine relatively speaking how large or small populations are in good and bad years. Eggs are spherical, white to pink and about 1/30" in diameter. They are laid singly usually around flower clusters. Larvae (worms) are very small when young up to about 1-1/2" in length when grown. They are usually tan to pale green with several dark stripes down the back. However, color may be quite variable, with some individuals almost black.

Generally control of this insect is quite good. You will find insecticides labeled for use on this pest in ENT- 13, *Insecticide Recommendations for Insect Pests of Soybean*.

## **SHADE TREES & ORNAMENTALS**

### **DRY WEATHER CAN INITIATE LONG-TERM LANDSCAPE PROBLEMS by John Hartman**

A brief glance at unirrigated landscape trees, shrubs, and lawns as well as at farm crops confirms that we are experiencing a very dry period in most of Kentucky. Although rainfall in some parts of eastern Kentucky brought temporary relief last week, the over-all situation remains grave. Watering restrictions are in force in most areas. Unfortunately, drought has been accompanied by higher-than-normal temperatures for much of the summer. In the landscape, seedlings and recently transplanted trees and shrubs have been at greatest risk because they lack extensive root systems.

Most of us are familiar with wilting and leaf scorch symptoms associated with dry weather. Leaves of drought-stressed plants close their stomata which reduces their rate of photosynthesis. Depending on species, they may not recover their former photosynthesis capacities, even when irrigated following drought. Reduction in photosynthesis may not kill a tree, but it means fewer carbohydrates are made and stored for future use. In addition, leaves of many trees and shrubs are beginning to turn yellow or brown and are dropping to the ground. Some species increase their production of leaf abscission chemicals in response to drought. Fewer leaves means less water loss.

Diseases such as bacterial leaf scorch may show enhanced symptoms during times of drought. In addition, there are some diseases of landscape trees and shrubs that normally do not appear until after the drought has occurred. Drought-related predisposition to attack by opportunistic pathogens can occur even when drought stress symptoms are not obvious. The role of water stress in encouraging opportunistic plant pathogens is unclear. It is possible that the stress condition interferes with the plant's defense against such pathogens, or possibly, the reduced carbohydrate reserves leaves the plant little energy to fight invasion by pathogens.

Certain fungi such as *Hypoxylon*, an oak pathogen (discussed in more detail two weeks ago in this newsletter), and *Armillaria*, which attacks many woody plants are influenced by drought stress. Similar relationships to drought may exist with other fungi such as *Thyronectria*, cause of honey locust canker, *Cytospora* or *Valsa*, causes of cankers on prunus, poplar, willow, maple, spruce and other conifers, *Sphaeropsis*, cause of pine tip blight, and *Botryosphaeria*, cause of cankers of many woody plants. Symptoms of these cankers may not appear until the season following the dry weather.

Thus, it is important to continue watering woody landscape plants, so long as local watering restrictions allow it. Further information on this subject is available in U.K. Extension Publication ID-89, *How Dry Seasons Affect Landscape Plants*.

## HOUSEHOLD

### CRICKET WARS

By Mike Potter

*“Hundreds of black, 1/2-inch long bugs are hopping out of my grass, flower beds, and onto my patio . When I open the garage door in the morning, a bunch more jump inside. What are these critters and how do I get rid of them? Several homeowners have called with this complaint in recent weeks. The culprits are field crickets.*

Warm, humid conditions often produce outbreaks of field crickets during late summer in Kentucky. Infestations are especially common in thatchy lawns and around buildings that are heavily mulched, landscaped or overgrown. Crickets lay their eggs in moist soil; consequently, homeowners who irrigated regularly during July appear to be having the worst problems. Immatures (nymphs) pass through several stages or instars, and there may be 1 to 3 generations per year.

**Management** -- Field crickets are primarily a nuisance pest; they do not bite, transmit diseases or infest foodstuffs. Since they are dependent upon moisture, they typically do not survive indoors more than a few days. One option is to do nothing other than vacuum or sweep up those that manage to get inside. Removing excess mulch (a 2 to 3-inch layer is plenty for landscaping), weeds and debris close to the foundation will make the area less attractive to crickets. Installing tight-fitting door sweeps, sealing cracks, and performing other forms of exclusion (see *Entfact-641 How to Pest-Proof Your Home*) will further limit the entry of crickets, spiders, ground beetles and other unwanted pests.

For clients demanding immediate relief, pest proofing can be supplemented with exterior insecticide treatment. Homeowners will get the most for their efforts by applying longer-lasting liquid formulations containing synthetic pyrethroids (e.g., Spectracide Bug Stop™, Ortho Home Defense System™) or microencapsulated, slow-release Dursban, sold at hardware/lawn and garden shops. Apply with a pump up sprayer, hose end sprayer, etc. treating along the bottom of exterior doors, up underneath siding, and 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. Pay

particular attention to the crack where grass meets the foundation. Homeowners or businesses who choose not to tackle these activities may wish to hire a professional pest control firm. Field cricket problems subside with the onset of cooler weather.

### DIAGNOSTIC LAB - HIGHLIGHTS

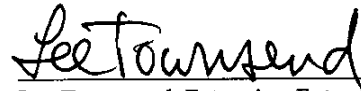
by Julie Beale

Diagnostic samples last week included: Rhizoctonia stem canker on alfalfa; charcoal rot and frog-eye leaf spot on soybean; black shank, soreshin and target spot on tobacco; Phomopsis gall on rose; Pythium root rot on chrysanthemum; powdery mildew on pecan; walnut wilt on pepper; and bacterial wilt and Fusarium stem and root rot on pumpkin.

### INSECT TRAP COUNTS

UKREC, Princeton, KY, August 6-13

European corn borer	15
Corn earworm	18
Southwestern corn borer	305
Fall armyworm	2

  
Lee Townsend, Extension Entomologist

