



# KENTUCKY PEST NEWS

ENTOMOLOGY • PLANT PATHOLOGY • AGRONOMY

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## TOBACCO

### CURRENT BLUE MOLD STATUS

By William Nesmith

Blue mold remains active in southern Georgia although the weather of last week was less conducive to development and spread than that of the previous several weeks. Recall from the report last week where Georgia's Extension Service reported that blue mold was common in greenhouses and plant beds all over southern Georgia and that infected transplants had been set to the field in several communities. This strong blue mold activity continues to present an early and significant threat.

Southern transplants have been moving into Kentucky for several weeks, which is expected to continue at least through the middle of May. To my knowledge, all the plants shipped to Kentucky from the southeastern USA have been produced in southern or central Florida, well away from the outbreaks in commercial tobacco in southern Georgia and northern Florida. Plant Pathologists working in these areas have reported no blue mold

activity in or near any of the commercial transplant production systems shipping plants to the north. However, let us all appreciate that the southern produced transplants are traveling through southern Georgia, which could be exposing these plants to blue mold.

Transplants are also being shipped into Kentucky from neighboring tobacco-producing states, as well as some northern states outside the tobacco production areas.

Should blue mold appear or be suspected in any transplant production system, regardless of the transplant source, please get samples to either the Plant Disease Diagnostic Laboratories in Lexington or Princeton. Since Kentucky producers are also shipping transplants to other states, we must promptly report any activity in Kentucky for the benefit of all tobacco growers in the nation.

We need to continue to urge all Kentucky transplant producers to keep their plants sprayed on a 5 to 7-day schedule with Dithane DF or Ferbam. The importance of this preventive approach was addressed this week by Dr. Paul Bertrand, Extension Plant Pathologist stationed at Tifton,

Georgia. He reported that Georgia growers who did not use preventive fungicide spray programs during transplant production were the ones most seriously affected by blue mold. Whereas, some large transplant producers who have been spraying preventively with Dithane DF and had successfully kept blue mold out of their operations.

## **WHEAT**

### **POWDERY MILDEW MANAGEMENT**

**By Don Hershman**

A small percentage of wheat fields in Kentucky are currently developing serious problems with powdery mildew. If left unchecked, many affected fields will likely lose substantial yield. Impacted growers are generally aware that affected fields need a fungicide now in order to stop the powdery mildew before serious damage is done. However, they also recognize that if either Tilt or Quadris is applied now, that late-season disease control may be compromised. In my opinion, the best option is to search out older stocks of Bayleton which still have wheat on the label. I am told by Bayer that older product is not very hard to find and that it is legal to apply to wheat as long as wheat is on the label. Bayleton applied at 1 oz a. i./ A will stop powdery mildew in its tracks and is a very economical treatment. Once you take care of the early powdery mildew problem, then you can reevaluate the crop and your late-season disease control needs as the season progresses.

If mildew development is at threshold and Bayleton cannot be found, then you will have little choice but to apply Tilt or Quadris. From all the data I have seen, Tilt is the superior mildew product on wheat and it will be less expensive than Quadris. If you do apply Tilt now, you must recognize that the crop will essentially be unprotected late in the season. This means a serious leaf rust or leaf/glume blotch problem could negate any value of the earlier fungicide treatment. If the crop yield potential is extremely high and disease begins to develop during crop head emergence, you will have the option of applying a protective spray of mancozeb (e.g., Dithane). This second treatment will add a significant input cost, but in many situations the treatment cost:benefit ratio may be favorable. You could also legally apply Quadris up to crop flowering for protection against late-season diseases, but the cost of applying Tilt followed by Quadris will rarely, if ever, be economical.

In the future, most powdery mildew problems can be dealt with at planting by avoiding susceptible and highly susceptible varieties or by treating seed of susceptible varieties with the fungicide Baytan. I have seen a lot of data to show that Baytan usually suppresses powdery mildew through the boot stage of wheat development. Of course, the most economical disease control option is to plant one or more mildew-resistant wheat varieties. This will probably be the last year that any old Bayleton with wheat on its label will be available. Thus, next year, plan on taking a pro-active stance by planting a mildew resistant variety in fields with a history of powdery mildew development.

## **CORN**

### **SPRING CORN PESTS**

**By Ric Bessin**

While it is true that we have had a very mild winter, I would not expect that this will result in an across the board up surge in pest problems. There are some insect problems that are common following mild winters, especially flea beetles. If the weather remains mild, growers will need to monitor carefully for flea beetles and corn producers may need to use Stewart's Wilt resistant corn this spring.

Some of our most serious pests do not even pass the winter in Kentucky. Black cutworm and fall armyworm cannot tolerate even mild winters. These insects annually migrate to Kentucky each spring with weather fronts moving up from the Gulf. So our winter weather in Kentucky has little effect on these insect pests.

Winter weather has little effect on many insect pests that are well adapted to pass the winter in Kentucky. For example, with European corn borer, winter weather conditions have less to do with the magnitude of the problems we will see with this insect compared with to spring weather condition during moth emergence, mating and egg laying. High winds and heavy rain in the spring during moth emergence can greatly reduce egg laying. While some insects may be favored by the winter we have had, many of the natural enemies that help to reduce pest numbers also benefit from mild temperatures.

Many insects spend the winter in protected locations, such as in the soil. Just a few inches of soil

provides these insects with substantial insulation from fluctuating winter temperatures. Snow cover is also a very good insulator for insects that pass remain places that have only limited protection from the winter cold. Insects that are adapted to pass the winter in our state have resistant overwintering stages. Our spring Southwestern corn borer survey indicated that we may have substantial overwintering survival and the potential for problems this fall.

The only sure bet for predicting pest numbers in the spring is monitoring fields and the use of pheromone traps. So far, we haven't found a good substitute for regular field scouting.

## **EARLY FIELD PREP PAYS WITH BLACK CUTWORM**

**By Ric Bessin**

The black cutworm is arguably our most serious insect pest of corn in Kentucky. Seemingly overnight, these insects appear to invade fields and vindictively cut off tender seedlings. Often they move down the row, cutting off several plants, not even bothering to consume the plants. It may appear that their purpose is only to destroy a good stand of corn!

But there are a few facts to consider. Young cutworms don't cut plants, they climb seedlings and feed on leaves. This has little if any lasting effect on the plant or yields at the end of the season. The larger larvae, 4<sup>th</sup> through 7<sup>th</sup> instars, cause nearly all of the cutting. It takes time for cutworm larvae to get to the 'cutting' stage. In fact, cutworms that are large enough to cut two, three, and four leaf plants are in the fields before the corn is ever planted.

Beginning in early spring, female black cutworm moths are carried on prevailing winds from the gulf states into Kentucky. Many of the eggs from these early moth flights are laid on winter annual weeds such as chickweed, henbit, and yellow rocket. This spring we have recorded high levels of black cutworm moth activity over the last two weeks. When weeds are chemically or mechanically killed at planting, hungry cutworm larvae attack corn seedlings as they emerge. One important, but commonly overlooked, cutworm management practice is the early preparation of fields 10 to 14 days prior to planting. This can be with tillage or through the use of a burndown herbicide. Preparing fields *prior* to planting aids in reducing cutworm

numbers by removing their weedy for the 21 or so days before the corn seedlings emerge. While this practice cannot be used in all situations, it can be effective in reducing cutworm levels in many fields.

## **MINIMIZING RISK OF CORN INJURY FROM GROWTH REGULATOR HERBICIDES**

**By James R. Martin**

Corn is prone to injury from growth regulator herbicides during the period of seed germination. Products containing 2,4-D can cause abnormal shoot and root growth and should not be used during the period from 7 to 14 days prior to planting until 3 to 5 days after planting and before corn emerges. Products containing dicamba (e.g. Banvel, Clarity, or Marksman) may injure corn if seed is planted less than 1.5 inches below the surface; therefore, for shallow plantings, delay applying dicamba products until corn plants have emerged.

## **VEGETABLES**

### **QUADRIS LABEL EXPANDED SIGNIFICANTLY ON VEGETABLES**

**By William Nesmith**

A new supplemental label was recently issued on Quadris Flowable Fungicide which significantly increases options for this fungicide to be used on vegetables. The major additions can be summarized as follows:

- \* The REI (Restricted Entry Interval) is 4 hours.
- \* Application to harvest interval has been reduced from 7 days to the day of harvest on tomatoes.
- \* Several vegetable crops have been added to the label including: potatoes and a wide range of cucurbits (cantaloupe, cucumber, gourd, honey dew and muskmelon, watermelon, pumpkin, squash and zucchini).
- \* Several cereal and row crops were also added, but Quadris **IS NOT LABELED ON TOBACCO.**

A more complete article addressing these changes related to vegetables will appear in the Spring issue of "NewHarvest", the commercial vegetable grower newsletter. Don Hershman addressed the small grain implications of this supplemental label in the March 29 issue of Kentucky Pest News.

## SHADE TREES AND ORNAMENTALS

### COOL SEASON SPIDER MITES

By Mike Potter

Most people don't think about spider mites infesting landscape plants until later in the summer. While this is true for twospotted spider mites and European red mites which thrive under hot, dry conditions, the *spruce spider mite* and *southern red mite* prefer cooler temperatures and are most active in the spring and fall.

*Spruce Spider Mite*- This mite feeds on more than 40 species of conifers. Most often attacked are spruce, pine, juniper, fir, arborvitae, hemlock, taxus and false cypress. Prolonged feeding causes yellowing, browning, and premature needle drop, often originating from the canopy interior. Heavy attacks can cause branch dieback or death of the entire plant.

Spruce spider mites overwinter in the egg stage attached to the base of needles or on the bark. Eggs hatch in early spring, and mature in 2 to 4 weeks. Damaging populations may be reached in April and May, before warm summer temperatures slow their activity. Populations rebound in the fall with the return of cooler weather, and feeding may continue into December or beyond if winter temperatures remain mild. Damage inflicted by mite infestations present now (during spring) often go unnoticed until the heat and dryness of June and July.

*Southern Red Mite*- This is the most common and destructive spider mite on broad-leaved evergreens, especially Japanese and American hollies, azaleas, viburnum, roses and rhododendron. Feeding on the undersides of leaves causes stippling, browning, occasional distortion, and premature leaf drop. Southern red mites overwinter in the egg stage on the undersides of leaves. Like the spruce spider mite, its numbers are greatest during cooler periods of the spring and fall.

Diagnosing Infestations- Spider mite populations can increase rapidly and cause extensive damage in a very short time. Therefore timely inspection of susceptible landscape plants is key. *An efficient way to sample vegetation for mites is to hold a sheet of white paper under a branch and tap the foliage sharply. If mites are present, they will be dislodged and appear as slow-moving specs on the paper.* Spider mites are tiny – about the size of the period at the end of this

sentence. A 10 - 20 power hand lens is helpful for clearly seeing the mites which will appear yellow, green, orange, purple, black or nearly transparent.

Mite-infested foliage has a stippled or flecked appearance where the mites have fed. Also visible may be webbing, pale-colored cast "skins" shed by developing mites, and spherical, often translucent eggs. When scouting for spider mites, pay particular attention to plants having a history of mite problems. Spider mites often re-infest the same plants year after year.

Controlling Infestations- Spider mites are one of the more difficult landscape pests to control. When buying new plants, it pays to inspect the lower leaf surfaces for evidence of mites. Spraying plants with a strong stream of water from a garden hose will dislodge some mites off leaf surfaces. The approach is generally more effective on smaller plants with non-dense foliage and low mite populations. If used, water sprays should be directed upward against the lower leaf surfaces and the technique will need to be repeated on regular intervals. Low populations of spider mites will sometimes be held in check by naturally occurring predatory mites which feed on both eggs and active stages.

Elimination of moderate to heavy infestations usually requires the use of specific pesticides known as *miticides*. Effective homeowner products are limited to such options as horticultural oils and insecticidal soaps. Nursery and landscape professionals may also want to consider using Hexygon, Joust, Morestan, Pentac, Scimitar or Talstar. Always read and follow the directions accompanying the product. Some miticides (e.g., oils) may harm or discolor certain types of landscape plants.

Good spray coverage is essential. Thoroughly wet the foliage and try to contact as many mites as possible, paying particular attention to leaf under surfaces where most mites are living. *In most cases, two or more applications at 5-10 day intervals will be needed for satisfactory control.* Spider mite eggs which have not yet hatched are unaffected by most miticides; the same is true of larvae and nymphs that are molting. During molting, spider mites remain inactive beneath the former skin, which serves as a barrier against insecticides. The quiescent mites also do not feed, rendering products that kill by ingestion temporarily ineffective. Consequently, if only one application is made, some of the mites will survive and the

infestation will persist.

## **ORNAMENTAL PEST ALERT**

**by Mike Potter**

Honeylocust plant bug - Eggs have hatched and the young nymphs are feeding on the expanding leaves of honeylocust. Feeding by the small, pale green insects causes distortion, stunting and discoloration of the foliage. Leaf damage persists throughout the season. Nymphs transform into adults by mid-May, and lay eggs in woody tissues. Winter is passed in the egg stage.

Damage from honeylocust plant bug rarely endangers tree health, but can be a concern in terms of cosmetics. Early activity is often overlooked and infestations are not recognized until symptoms appear. *By this time, control efforts are no longer effective.* Nurseries who want to avoid cosmetic damage should examine expanding leaflets for the small, green nymphs and treat while the insects are still active. Insecticidal soap, 2% horticultural oil, or conventional insecticides (e.g., Sevin, Dursban, Tempo, Talstar, Scimitar) are effective. Check the foliage 7 to 10 days after the first treatment to determine whether or not another application is needed. There is only one generation each year.

Hawthorn Lace Bug - Egg hatch has begun and nymphs are feeding on the undersides of hawthorn leaves. Lace bugs suck plant sap and cell contents, producing yellowish stippling on the upper leaf surface. In addition, dark, shiny spots of excrement are excreted on the leaf undersurface. The injury, in addition to being unsightly, can reduce plant vigor. Lace bugs may have two or more generations each year, each requiring about 30 days. Insecticides such as Orthene, malathion, Dursban, and synthetic pyrethroids (e.g., Tempo, Talstar, Scimitar) may be used for control. Thorough coverage of leaf undersides is important.

## **ROOT AND STEM ROTS OF FLOWERING ANNUALS IN LANDSCAPE BEDS**

**By John Hartman**

Annuals and herbaceous perennials transplanted into flower beds add color to many Kentucky landscapes. Unfortunately, when these plants fail to make good growth or die in the landscape, time and money are wasted and the anticipation of colorful splendor is lost. Last summer, beds of petunias, impatiens, vinca, geranium, begonia, and

many other bedding plants just simply died out due to one or more root and stem rot diseases. Most parts of Kentucky had excess rainfall in late spring and early summer last year, just after flower beds were established, thus contributing to loss of plants in the beds. Several root and stem rot pathogens, including *Rhizoctonia*, *Phytophthora*, and *Pythium* were often involved, but sometimes abiotic influences made the disease problems worse. Although root rot fungi can be carried from the greenhouse to the landscape, some already living in the bed soil can attack healthy transplants.

Root rots and their effects. Root rot is a general or localized root decay, whether from infectious or non-infectious causes or from natural aging. Root rot begins when cortical cells (outer tissue of the root cylinder) become non-functional or die. As cell death continues, the root becomes discolored brown to black and appears decayed. The cortical cells readily slough off from the rest of the root, the central vascular cylinder (stele). Root branching and growth is curtailed, because dead root tips generate no new roots. In some cases, the root rotting pathogens continue to invade crown and stem tissues, causing crown rots. Significant root rot can occur on some landscape plants without obvious symptoms on the plant's above-ground portion. When an environmental stress is imposed on such plants, they may quickly die from the infection not previously noticed.

Rhizoctonia root and stem rot. Warm, humid weather and warm soils favor this disease which causes affected plants to turn yellow, wilt, and die in the landscape. Plant roots and crowns are infected and decayed by the fungus *Rhizoctonia solani*, a common soil-inhabiting pathogen. There is little that can be done for infected and decayed petunias or other plants. Before planting, be sure that organic matter in the bed is completely decomposed. If a particular bed had problems last year, try a different species of flower to transplant this year.

Phytophthora root rot. This disease is favored by wet soils because the fungus has a swimming stage that aids in dissemination of the disease and because roots submerged in water often attract the fungus and are unable to ward off its advances. Dr. Austin Hagan of Auburn University reported in *B&C Tests* in 1997 that *Phytophthora parasitica* may affect some flowering plants, and not others. Disease responses for a species where several cultivars of the same plant were tested are probably

the most reliable. For example, all four Vinca cultivars tested, and one of Blue Daisy were all killed by the fungus. Five impatiens cultivars were each partly killed; survival ranged from 44-81%. One cultivar each of Ageratum, Begonia, Celosia, Scabiosa, Thyme, Sweet Basil, Zinnia and two Coneflower cultivars were tested and had 81-94% survival. Four cultivars of Salvia had 94-100% survival, and one cultivar each of Celosia, Petunia, Verbena, two cultivars of Marigold and four cultivars of Geranium all had 100% survival.

*Activity of phytophthora parasitica* is favored by warm soil temperatures (above 77 F). Phytophthora root rot often progresses to the lower stems and there it can girdle the plants. Avoid over-watering annual beds.

Pythium root rot. This disease is also caused by water mold fungi. One of them, *Pythium ultimum*, is favored by cool soil temperatures (below 68 F), and by high soil soluble salts such as excess fertilization or leftover winter de-icing salts. Although extra water application will aid in leaching out salts, it must be done in advance of planting, because excess water favors Pythium diseases.

Abiotic causes of root rot. Root rot may also occur when roots are injured by non-infectious factors such as flooding, drought, freezing, excess heat, excess fertilizer and soluble salts, and toxic chemicals in the soil. When roots are injured, non-pathogenic fungi and bacteria often invade these tissues and lead to a pathogenic root rot syndrome. Thus, when making a diagnosis of the problem, be sure that growing conditions that could have adverse results are known.

## **BARK BEETLES TAKE BITE FROM LANDSCAPE EVERGREENS**

**By Lee Townsend**

Several samples of bark beetle damage have come in recently. The approximately pencil-lead diameter holes mark the emergence holes of small dark beetles whose larvae can tunnel extensively beneath the bark. Stresses during the previous growing season(s) are often major contributing factors to these infestations. Unfortunately, there is no effective solution.

*Dendroctonus* borers are the most aggressive borers in pines and attack and develop in all species of yellow pine, eastern white pine, and spruces. They initially attack the mid and lower trunk but the infestation spreads up and down the tree over time.

Females create S-shaped galleries and deposit eggs along the way. The larvae tunnel at right angles to the main gallery. Eventually, they move into the corky outer bark and eventually produce pupation chambers. They emerge through exit holes in the bark after transforming into the adult stage. Several overlapping generations are produced each year; this complicates the effective timing of preventive bark sprays.

Ips beetles, or engraver beetles, normally attack trees struck by lightning, or recently felled trees. However, when large numbers are present, they can attack and kill young, healthy pines and the tops of older trees. Problems in the home landscape tend to involve weakened or stressed trees that have been recently transplanted into unfavorable sites.

Engraver beetle galleries radiate in all directions but eventually tend to run parallel to the grain. They frequently appear as a "Y" or "I". Females lay eggs along the sides of the galleries and the legless, grub-like larvae tunnel into the phloem. Mature larvae pupate in expanded areas or cells in the inner bark. There can be several generations each year.

### **Cultural Controls**

- Proper watering and fertilization will promote tree health and generally reduce the chances of successful borer attack. Vigorously growing trees tend to be able to fight off borer attack.
- Examine plantings regularly and prune dead or damaged limbs as feasible.
- Protect trees from physical injury as much as possible. Any injury that causes pitch flow can result in attack by borers.
- Plant white pines with hardwoods or under a hardwood canopy to reduce attack by *Dendroctonus*.
- Plant only on medium soils, there should be no hard pan within three feet of the soil surface. This will allow root growth and promote general tree health.
- Remove and destroy trees killed by borers. Select replacement species carefully to avoid a repeat of the problem.
- Consider site selection and avoid putting replacement trees back into poor sites that will stress trees.

- In many cases, it is best to remove and destroy heavily damaged trees because they are unlikely to recover and will serve as a source of borers to attack other trees.

## HOUSEHOLD

### IS YOUR HOME ATTRACTING TERMITES?

By Mike Potter

The entomology department receives many calls from people wanting to know what can be done to protect their home from termites -- or if a certain practice or condition is likely to cause termite problems. Homeowners can reduce the risk of termite attack by following these suggestions.

**1. Eliminate wood contact with the ground.** Many termite infestations result from structural wood being in direct contact with the soil. Earth-to-wood contact provides termites with easy access to food, moisture, and shelter, as well as direct, hidden entry into the structure. Wood siding, porch steps, latticework, door or window frames, posts and similar wood items should be at least six inches above ground level. Eliminating wood-to-ground contact may require regrading or pulling soil or mulch back from the foundation, cutting the bottom off of siding, or supporting steps or posts on a concrete base. Posts or stairs embedded in concrete are also vulnerable to termites since they usually extend all the way through the concrete to the soil. Wood that has been pressure treated is not immune to termite attack; termites will enter pressure-treated wood through cut ends and cracks, and will also build tunnels over the surface.

**2. Don't let moisture accumulate near the foundation.** Termites are attracted to moisture and are more likely to "zero in" on a structure if the soil next to the foundation is consistently moist. Water should be diverted away from the foundation with properly functioning gutters, down spouts and splash blocks. Leaking faucets, water pipes and air conditioning units should be repaired, and the ground next to the foundation should be graded (sloped) so that surface water drains away from the building. Homes with poor drainage may need to have tiles or drains installed. Lawn sprinklers and irrigation systems should be adjusted to minimize water puddling near the foundation.

**3. Reduce humidity in crawl spaces.** Most building codes call for 1 square foot of vent opening per 150 square feet of crawlspace area. For crawlspaces

equipped with a polyethylene vapor barrier (see below), the total vent area often can be reduced to 1 square foot per 300 to 500 square feet of crawl space area. One vent should be within 3 feet of each exterior corner of the building. Shrubs, vines and other vegetation should not be allowed to grow over the vents since this will inhibit cross-ventilation. Moisture and humidity in the crawl space can further be reduced by installing 4-6 ml polyethylene sheeting over about 75 percent of the soil surface .

**4. Never store wood or paper against the foundation or inside the crawl space.** Firewood, lumber, cardboard boxes, newspapers, and other cellulose materials attract termites and provide a convenient source of food. When stacked against the foundation they offer a hidden path of entry into the structure and allow termites to bypass any termiticide soil barrier that is present. Vines, trellises, and other dense plant material touching the house should also be avoided. Dead stumps and tree roots around and beneath the building should be removed, where practical, along with old form boards and grade stakes left in place after the building was constructed.

**5. Use decorative wood chips and mulch sparingly, especially if you have other termite conducive conditions.** Any cellulose-containing materials, including mulch, can attract termites. Termites are especially drawn by the moisture-holding properties of the mulch. Where mulch is used, it should never be allowed to contact wood siding or framing of doors or windows. Crushed stone or pea gravel, though often less cosmetically appealing, is less attractive to termites. These materials will also reduce problems with other pests such as millipedes, pillbugs, earwigs and crickets.

**6. Consider having the structure treated by a professional pest control firm.** While the measures outlined above will make a house less attractive to termites, the best way to prevent infestation is to treat the soil around and beneath the building with a termiticide. Buildings have many natural openings through which termites can enter, most of which are hidden. Soil treatment makes the ground around the foundation repellent and/or toxic to termites so that they will not penetrate through the treated layer. Baits may also be installed to eliminate termites foraging in the vicinity of the structure (See 3/29/99 KPN article, *Termite Baits: an Update*, and ENT-65, *Termite Baits: A Guide for Homeowners*).

Preventively treating a home for termites is a reasonable investment, especially if the structure has no prior history of treatment. If the building was previously treated by a pest control firm, it's a good idea to maintain the service agreement by paying the annual renewal fee. Should termites re-infest the building (which can happen even if the initial treatment was performed correctly), the company will return and retreat the affected area at no additional charge.

Whether or not a person chooses to have their home treated, they should know the signs of termite infestation:

- pencil-wide mud foraging tubes extending over the surfaces of foundation walls, piers, sills, joists, etc.
- presence of winged “swarmer” termites, or their shed wings in window sills and along the edges of floors.
- damaged wood hollowed out along the grain and lined with bits of mud or soil.

Detecting hidden infestations requires a trained eye. Most pest control firms perform termite inspections free of charge and will alert the homeowner to any conditions they uncover that are conducive to termite attack.

### DIAGNOSTIC LAB - HIGHLIGHTS

By Julie Beale

At this point in the season, most disease samples in the diagnostic labs are ornamentals--both from the greenhouse and landscape. However, we have seen a few disease problems on agronomic crops, including downy mildew on wheat, barley yellow dwarf virus on rye, Sclerotinia crown and stem rot on fall-seeded alfalfa, and Pythium root rot on tobacco seedlings. The vast majority of tobacco samples thus far have been high incidences of spiral root.

On ornamentals we have seen Colletotrichum leaf spot of ivy; Rhizoctonia root rot on balloon flower, geranium and vinca; Phoma canker/dieback, Phytophthora stem blight and Alternaria leaf spot, all on vinca; yellow patch (Rhizoctonia cerealis) on bentgrass and annual bluegrass; anthracnose on damaged fescue (home lawn); brown spot needle blight (Mycosphaerella) and Cylindrocladium root

rot on pine; Cytospora canker, Rhizosphaera needle cast and Botrytis blight on spruce; and Pestalotia leaf spot moving in on sunscalded tissues on rhododendron.

We have also received samples of cabbage and tomato transplants developing nutrient deficiency symptoms from being grown under low temperatures.

### INSECT TRAP COUNTS

April 2-9

#### UKREC - Princeton, KY

Black Cutworm . . . . .	7
True Armyworm . . . . .	147

#### Tennessee - Black Cutworm

4/5/99 - Obion County . . . . .	20
4/7/99 - Carroll County . . . . .	9
4/7/99 - Lauderdale County . . . . .	6

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Lee Townsend, Extension Entomologist