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KENTUCKY PEST NEWS

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ANNOUNCEMENT

UK CROP & WEED MANAGEMENT FIELD SCHOOL

The Field School will be held June 21, 2007 at the UK Spindletop Research Farm on Ironworks Pike in Fayette County. It is approved by the KDA for 4 general hours and 1 Category Specific hour for Categories 1A, 10, 12, or 14. This program is also approved for 6 hours of credit for Certified Crop Advisors (3 hrs Pest Management, 3 hrs Crop Management). Contact Dr. JD Green at jdgreen@uky.edu or 859-257-4898 for more information.

ARMYWORM ROUNDUP FOR FIRST GENERATION AND WHAT IS NEXT?
by Doug Johnson, Extension Entomologist

The first generation of armyworm in Kentucky has come and mostly gone. There was some damage in western Kentucky on corn and soybeans, mainly planted into dieing wheat. I also had a report of a large infestation in southern Illinois in wheat, and some pasture was sprayed in central Kentucky. The problems were not as bad has they might have been, but the populations were not quite as large as the 2001 and 2006 versions. Hopefully, the early warning of larger than average moth flights and the timing predictions help some folks make solid decision on: if some control is needed and if so what and when. Certainly that is our goal.

In the central Kentucky area there may still be some armyworm activity. Conversely, as the peak flight in Lexington was 11 May the temperature model predicts the peak of caterpillar activity on 24-25 May. Certainly this means that any populations that are around are declining. Though not impossible, it is unlikely that damage will occur in areas that populations are not already noticeable.

I have been asked by a number of people about additional generations this year. There will be additional generations this year, as in every year. If you look at the graphic on the IPM web page you will see that the line representing the 2006 population shows a very distinct 2nd generation, and then small numbers of moths are caught for the remainder of the summer. Second and later generation armyworms generally do not cause us a problem with our crops. This is largely because their populations are smaller and the crops are larger (corn) or no longer around (wheat).

Remember; do not confuse the armyworm with the fall armyworm. These are two completely different insects. Fall armyworm is generally a pest of late planted corn and grain sorghum, and can be quite devastating. Corn and grain sorghum planted during recommended planting dates is rarely infested.

TOBACCO

BLUE MOLD FOUND ON TOBACCO TRANSPLANTS
by Kenny Seebold

Blue mold was found June 1 on tobacco seedlings in a greenhouse in Fayette County. Active sporulation was observed in a small portion of the transplant facility, and was apparently in an early stage of development. At the

moment, the source of the blue mold outbreak has not been determined.

Measures were taken to contain the outbreak and limit spread of disease. The entire greenhouse was sealed to avoid the further release of blue mold into the outside environment and to permit heat to destroy infected plants and those that were potentially infected. All plants with sporulating lesions were placed in clear plastic bags that were sealed and left inside the greenhouse as an additional precaution.

It is advisable at this point to scout transplant facilities for blue mold and to make sure that any tobacco in float beds (outdoor and greenhouse) be treated with Dithane DF protect against the disease. This is especially important for tobacco being grown in and around Fayette County, but would also be a good measure of insurance for the rest of the region. The recommended rate of Dithane DF is 0.5 lb/100 gal of finished spray (or 1 teaspoon of product per gallon). Since Dithane is a protectant, it needs to be in place prior to the arrival of inoculum for best effect, and this means preventive applications are the key for success. Apply as a fine spray to achieve thorough coverage. The risk at this time to plants in the field is low due to the prevailing hot and dry weather. However, if we enter a period of cool and rainy conditions, plants should be treated with Dithane DF (1.5-2 lb/A) + Acrobat 50 WP (2-8 oz/A), Quadris (6-12 fl oz/A), or Actigard (0.5 oz/A). Plants need to be at least 18-in tall before receiving an application of Actigard, and the material should be applied 3-5 days before infection for the product to work effectively. If active blue mold is found prior to the initiation of a spray program, use Dithane + Acrobat or Quadris; Actigard can be applied after the blue mold has been brought under control.

Please let me know if you find blue mold or suspect it in your area. I will continue to send out emails to keep you posted on the situation, and 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

LESSER CORN STALK BORER AND DRY WEATHER
by Ric Bessin

An uncommon pest of corn in Kentucky is the lesser corn stalk borer, it was last recorded in 1999 during a very dry period early in the season in late planted corn. The weather to this point this year has been similar ... dry. The damage initially appeared as a deadheart of the small seedlings that is typical of wireworm injury. The first two leaves of the corn emerged properly, but the 3rd and 4th leaves were wilted. Evidence of tunneling into the crown of the plant was apparent when the soil was removed from around the base of the plant. To that point, it appeared to be caused by wireworms. But near the damage to the crown there was silken webbing forming a small tube. Wireworms don't produce webbing.

Small 3/8 inch long larvae were found tunneling into the stem of the plant. The lesser corn stalk borer is recognized by having alternate bands of purple and green encircling its body. The larvae were either found inside the silken tube or in the ground around the base of the plant. When disturbed, the larva wiggles violently.

The lesser corn stalk borer attacks corn, soybeans, peanuts, other beans and Johnson grass. It attacks the plants from emergence on. Injury is more common under dry conditions and with sandy soils. Rescue treatments are not effective with this insect. How susceptible is Bt corn to this pest? In the field I looked at in 1999, there was YieldGard and standard corn. From each Bt corn plot, 100 consecutive plants were examined for lesser cornstalk borer damage and 100 plants from an adjacent non-corn row. The results; Bt-corn 1.67% deadhearts, standard sweet corn 13.67% deadhearts.

COMMON STALK BORER
by Ric Bessin

There have been a few reports of common stalk borer this week. This borer insect is a pest of many different plants and in the later spring and early summer will begin to move to corn and tobacco. Damage to corn caused by the common stalk borer is characterized by wilting and/or dying of the upper leaves or by ragged irregular holes chewed in the newly unrolled leaves. The characteristic "dead heart" is caused by the insect boring into the stalk at the soil level and tunneling upward. It may also climb up the plant and tunnel downward into the whorl, creating the ragged holes. A considerable amount of "frass", or sawdust-like borer feces, can be seen in the whorl or coming out of the borer's entry hole in the stalk. Corn plants from 2 to 24 inches tall may be attacked. In conventional corn, damage is usually confined to weedy border rows along fences, grass waterways and contour strips, while weedy no-till fields may have damage throughout.

Unrolling the whorl or damaged plants will usually reveal the larva. Small larvae are cream colored with a dark brown or purple band around the body. Several dark lengthwise stripes may be present. Full grown larvae (pictured at left) may lack the dark stripes and band, making them harder to identify. Common stalk borer lar-

vae are usually very active when handled.

Currently, no effective rescue insecticide treatment is available to control stalk borers once they have entered the plants. In-furrow applications of systemic insecticides at planting have not been effective in controlling stalk borers. Spraying weeds with a herbicide/insecticide combination has also not been effective. These last two failures are probably due to the fact that borers emerge from grasses over a period of several weeks, while insecticides lose their effectiveness the longer they are exposed to the elements. Bt hybrids (YieldGard) with the Cry1Ab gene provide suppression of this pest.

The degree of common stalk borer infestations in no-till corn is directly linked to the amount of grass present the year before. Therefore, stalk borer management in no-till corn should begin with good weed management. In conventional corn, infestations may be alleviated by killing grasses and weeds along field margins etc., before the adult moths begin their egg laying in the late summer or fall. This may be done by mowing using herbicides. However, these practices should not be done when borers are active (between planting and early July), as this will only cause them to move into nearby crops. Another word of caution on this tactic is that grasshoppers may be driven into nearby crops as well.

SOYBEANS

SOYBEAN APHID IN 2007
by Doug Johnson, Extension Entomologist

2007, is predicted to be a year of large soybean aphid populations. Populations of this aphid pest, first discovered in the United States in 2000, have settled into a biennial cycle. It appears that this cycle is due to the rise and fall of natural enemy populations.

Last fall (2006) Drs. David Voegtlin of the Illinois Natural History Survey and Bob O'Neill of Purdue University, searched areas of buckthorn (the over-wintering host) known to serve as over-wintering locations for the aphid. They found massive numbers of aphids and over-wintering eggs. Given those observations, they expected to see heavy spring infestations. Visiting those locations again this spring they found that this was clearly not the case. It appears that the very cold weather in early April decimated the aphid population. What they found was a minute fraction of what was expected, given the abundance of eggs. Eggs hatched during the last week of March and either the early buckthorn leaves died with the freeze leaving the very young aphids without food and/or the aphids were killed directly by the cold.

Even though there were far fewer aphids than there could have been, they did find abundant aphid colonies. They think the aphid numbers are high enough on buckthorn to produce high populations this summer, at least in some areas. Colonies are certainly as abundant as seen in any previous spring. It is difficult to imagine how many aphids there might have been without the huge population loss due to the early April freeze.

It does appear that the 2007 soybean aphid season is underway. Though no aphids have yet been seen or captured in Kentucky, (this is normal) they have made their appearance in states to the north of us. The aphid suction trap network coordinated by Dr. Voegtlin

(See: http://www.ncpmc.org/traps/)

has detected aphids in Michigan. In previous years, soybean aphids have not been detected by the traps before the first week in July. UK-IPM, with the support of the Kentucky Soybean and Kentucky Small Grain Growers Associations, currently operates two aphid suction traps. One is located on the UK-Research and Education Center in Princeton, the other is on Spindletop Research farm in Lexington, Kentucky. In addition to the aphids caught in the aphid suction traps, aphid colonies have been found on soybeans in Indiana, Michigan, Minnesota and Wisconsin. See below excerpts from pest news letters from three of the states.

Excerpt From - May 31, 2007 Michigan IPM newsletter
Insect update
Christina DiFonzo, Entomology
Soybean aphids are here
We have found soybean aphid in at least three locations in Michigan: Berrien County, MSU campus and the Bean and Beat Farm in Saginaw County. Infestation levels at all locations are less than one percent.
Aphids have been confirmed in east-central Minnesota. Reports are reminiscent of the heavy, early infestation that occurred in southeast Michigan in 2005. In Minnesota, aphids are reported on V1 beans, with 25 percent infestation in some fields.

Excerpt From - Wisconsin Crop Manager newsletter, 5/31/07

Soybean aphids have been detected on V1 soybeans. The first report of the season at UW-Madison came from Dr. Dave Hogg, Entomology Department, last Thursday May 24th from the West Madison Agricultural Research Station.

Comparing the number of soybean aphids found at these over-wintering locations spring 2007, to the number of

soybean aphid eggs they found at the same sites fall 2006, there was evidence of significant winter kill, presumably associated with the sub-freezing temperatures in early April (e.g., after soybean aphids had begun emerging late March, near buckthorn bud-break). However, relative to other years of the buckthorn soybean aphid over-wintering survey route, spring 2007 aphid numbers were relatively high. For example, in 2006, sampling the transect they found only 2 soybean aphid colonies total. In 2005, roughly 50% of the sites had colonies. In spring 2007, although soybean aphid numbers were lower than expected from very high fall 2006, egg deposition and soybean aphids were located at 8 of 9 sample locations.

Soybean aphid scouting should begin mid to late June, by late vegetative stage of soybean growth and continue on a weekly basis or near-weekly basis until R5. Regular articles in Wisconsin Crop Manager will feature soybean aphid scouting, threshold and treatment decision support information and 2007 resources

Excerpt from Purdue Pest & Crop Newletter: Soybean Aphid Season Has Begun - (*Christian Krupke, John Obermeyer, and Larry Bledsoe*)
Many of you may recall our proclamations of soybean aphid plague for 2007. We will soon see if our predictions will hold true - last week (May 23) we started finding aphids on V1 and V2 soybeans in northern Indiana, typically one of our hotspot areas. Researchers in Minnesota have reported finding the aphid in early-planted beans there as well. This is the earliest documented report of aphids in Indiana soybeans, beating the previous record of May 31, which was recorded in our last outbreak year, 2005. What this means for soybean pest managers is a beginning to the scouting season in early planted beans. Aphid numbers are low right now (<20/plant), but this is already more aphids than we saw at any time in 2006, so stay tuned.

What does this mean for Kentucky? That is hard to say. Certainly the risk is higher in years with higher populations than when they are lower. Additionally, aphids appear to be active earlier this year than in any of the previous years. That cannot help things either. Moreover, the only year in which soybean aphid populations in Kentucky approached thresholds (2003) was in an "up" year of the aphids' biennial cycle.

Conversely, Kentucky is a long way from Michigan, Minnesota and Wisconsin, not only in miles, but in climate and soybean culture. Perhaps the most important climate factor Kentucky has in its' favor (relative to preventing soybean aphid outbreaks) is hot summer temperatures. Will we have the pest? Yes, we will have the soybean aphid. Soybean aphid has been found in Kentucky every year since it was discovered in the US. Also, observational information suggests that if we have economically important populations, the problem may well be in the soybean production area generally bordered by Interstates I-65 and I-75. This is largely based on the assumption that summer temperatures in this area are quite a bit cooler than in far west Kentucky.

We have had soybean aphids in Kentucky every year since they were discovered in the United States. The real question is whether or not the population size will be important. We can only watch as we wait to see what develops. If you are in the business of making pesticide recommendations for control of this pest, I suggest that you look at the Minnesota Speed Scouting method of scouting. You can find a link to this procedure in the UK-IPM web pages at:

http://www.uky.edu/Ag/IPM/ipm.htm

"Click" on the soybean aphid icon at the bottom of the page. Then look under the 2005 articles for Minnesota Speed Scouting.

Insecticide recommendations can be found in our 2007 Insect Management Recommendations for Field Crops and Livestock at: http://www.uky.edu/Ag/PAT/recs/rechome.htm .

LAWN & TURF

JAPANESE BEETLE AND MASKED CHAFER ALERT
by Mike Potter and Dan Potter

Adult Japanese beetles and masked chafers have begun to emerge. As is usually the case, it is difficult to predict how serious a problem the grubs of these pests will be this year. Both Japanese beetles and masked chafers lay eggs in moist soil under turf. If the dry weather continues it could result in substantial egg mortality. Upon hatching the grubs then feed on turfgrass roots.

Japanese Beetles (Adults) - Detailed information on this pest can be found in *Entfact-451, Japanese Beetles in the Urban Landscape.* Options for protecting landscape plants from foliage feeding adults are as follows:

Plant Selection- The best way to avoid perennial battles with adult Japanese beetles is to select plant material that is less preferred. Publication *Entfact-451* lists species and cultivars of trees and shrubs that are less likely to be attacked by beetles.

Hand Picking and Exclusion- For smaller plants, it may be

practical simply to remove the beetles by hand. Volatile odors released from beetle-damaged leaves attract more beetles. By not allowing Japanese beetles to accumulate, plants will be less attractive to other beetles. One of the easiest ways to remove beetles from small plants is to shake them off early in the morning when the insects are sluggish. The beetles may be killed by shaking them into a bucket of soapy water. Highly valued plants such as roses can be protected by covering them with cheesecloth or other fine netting during peak beetle activity (usually late June to mid-July).

Insecticides- Many insecticides are labeled for use against adult Japanese beetles. Examples include pyrethorid products such as bifenthrin (TalstarOne, Onyx), cyfluthrin (Tempo, Bayer Advanced Lawn & Garden Multi-Insect Killer), deltamethrin (Deltagard), lambda cyhalothrin (Scimitar, Spectracide Triazicide), and permethrin. Carbaryl (Sevin and other brands) also is effective. The pyrethroid products (note that all pyrethroid active ingredients end with "thrin") generally provide 2-3 weeks protection of plant foliage while carbaryl affords 1-2 weeks protection. Foliage and flowers should be thoroughly treated. The application may need to be repeated to prevent re-infestation during the adult flight period. Follow label directions and avoid spraying under windy conditions. For those seeking a botanical alternative, Neem (e.g., Azatrol, Neem-Away from Gardens Alive), or Pyola (pyrethrins in canola oil) provide about 3-4 days deterrence of Japanese beetle feeding. Insecticidal soap, extracts of garlic, hot pepper, or orange peels, and companion planting, however, are generally ineffective.

White Grubs - There is no reliable way to predict whether any given year will be a bad one for white grubs – the immature, turf-feeding stages of Japanese beetles, masked chafers, and certain other beetles. Moreover, since grub infestations tend to be localized and sporadic, only small percentages (< 10 percent) of Kentucky lawns require treatment, even in bad years for grubs.

Indicators of Infestation- White grubs and their resultant damage are not usually evident until August or September. Although sampling the turf is the only way to confirm that grubs are present, certain factors may indicate an increased risk of infestation later in the season. If your turf has a history of serious grub problems, there is a greater chance that adult beetles will return and re-infest the same areas. Sites with large numbers of adult beetles in June and July are more likely to have grubs in late summer. Early warning signs include swarms of brown, ½-inch long masked chafer beetles skimming over the turf at dusk, large numbers of adult Japanese beetles in the landscape, or green June beetles buzz-bombing the turf by day in search of mates and egg-laying sites. Masked chafer adults are also attracted to porch and streetlights at night.

Rainfall and soil moisture are critical factors affecting the extent of grub damage during a season. Frequent irrigation in June and July may attract egg-laying female beetles to the turf, especially if surrounding areas are dry. High soil moisture also increases egg survival. If lawns are irrigated during periods of dryness in June and July, be especially alert for signs of grubs later in the summer. Conversely, adequate soil moisture in August and September (when grubs are actively feeding) can help to hide root injury. Irrigated turf can sometimes tolerate 20 or more grubs per square foot before showing signs of injury.

Treatment Strategies - Two different strategies are available for controlling white grubs with insecticides: preventive and curative. Each approach has its own merits and limitations. With **preventive control**, the insecticide is applied as insurance, *before* a potential grub problem develops. Consequently, preventive control is best suited for high-risk sites with a history of grub problems, or turf sites where heavy beetle activity is noted.

Preventive control requires the use of insecticides with long residual activity in soil. Look for products containing the active ingredient imidacloprid (e.g. Merit®, Bayer Advanced™ Season-Long Grub Control, Scott's GrubEx), halofenozide (e.g. Mach 2®), clothianidin (Arena®), or thiamethoxam (Meridian®). Those ingredients have sufficient soil persistence to apply anytime from early June to mid-July and still control young grubs hatching from eggs from mid-July to early August. The optimum treatment period for these products is mid-June to mid-July.

Preventive treatments afford greater flexibility in application timing, and are easier to schedule and implement than are curative treatments. They often afford greater peace of mind to golf superintendents and lawn service companies because potential damage is avoided or minimized. The main drawback of preventive grub control is that the decision to treat must be made before knowing the extent of infestation. Grub outbreaks tend to be localized and sporadic and only a small percentage of lawns require treatment in a given year. Thus, preventive control often results in areas being treated unnecessarily. Good record keeping and observation will help in pinpointing grub-prone areas, which are the most logical candidates for preventive applications.

With **curative control**, treatment is applied in late summer – typically August or September – after the eggs have hatched and grubs are present. Ideally, the decision to

treat is based on site inspection and sampling or past history of infestation. Since white grub infestations tend to be localized, the entire lawn often will not need to be treated. Grub "hot spots," which can be confirmed by sampling, are most likely to be full sun, south or west-facing slopes, lawns seeded with Kentucky bluegrass, lawns that were heavily irrigated during June and July, and turf areas that were damaged by grubs in previous years.

Proper timing of curative grub treatments can be tricky. Insecticides applied before early August may degrade before the eggs have hatched, whereas if the product is applied in late August or September, the grubs will be large and harder to kill and severe damage to turf may have already occurred. Granular formulations containing the active ingredient trichlorfon (e.g. Dylox, Bayer Advanced 24-hour Grub Control) are the fastest-acting, most effective insecticides for curative grub control. Carbaryl (Sevin) can also be used. *There is little benefit in applying a short-lived, curative-type product for white grubs in June or July.*

SHADE TREES & ORNAMENTALS

DRY WEATHER CAN INCREASE SOME WOODY PLANT DISEASES
by John Hartman

Last week, the U.K. Agricultural Weather Center issued a statement that the state of Kentucky was experiencing a moderate drought. Indeed the month of May was declared the 11th driest May on record. A brief glance at unirrigated landscape trees, shrubs, and lawns confirms that. Although scattered showers in some areas of Kentucky brought temporary relief last week, the overall condition is dry. Watering restrictions are in force in some areas. Unfortunately, drought has been accompanied by higher-than-normal temperatures for much of the spring. 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 drought-stricken trees and shrubs turn yellow or brown and drop 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, 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* sp. (cherry, peach, etc.), 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 later this season or next, following the dry weather. In addition, the current dry weather is placing stress on woody plants with black root rot or Phytophthora root rot infections. These plants with impaired root systems are now beginning to die back.

Thus, it is important to continue watering woody landscape plants, so long as local watering restrictions allow it. Hopefully, the rain showers slated for this first week in June will prevent the drought effects from getting worse. On the positive side, dry spring weather has moderated many of the early season foliar diseases such as anthracnose which were dependent on wet weather.

TRANSMISSION OF DIPLODIA TIP BLIGHT ON SCOTS PINE CHRISTMAS TREES
By Amy Bateman, Plant Pathology Grad Student

Every summer Scots pine Christmas trees are sheared, not only to create a dense conical, Christmas tree shape, but also to encourage the development of new buds for next year's growth. It was thought that the shearing process could be a problem if theS trees have Diplodia Tip Blight because the shearing blades could possibly pick up *Diplodia pinea* spores and/or fungal pieces which could then be transmitted to other uninfected tips, thus spreading the disease not only within a tree, but from tree to tree throughout a farm.

In 2005 and 2006, samples were collected from the shear-

ing tools used by two Christmas tree farms in central Kentucky while the growers sheared their trees. Prior to sample collection, trees were grouped together according to their disease level so that the first tree sheared was either diseased (had symptomatic tips) or healthy (no symptomatic tips) with the following trees in that group either healthy, or of a lower disease level then the first tree. Samples were collected at different points within shearing that group to see if 1) *D. pinea* could be acquired on the tools and 2) to see if inoculum levels on the tools changed as more trees were sheared. Samples of fungal spores or pieces were collected from shearing tools using tape that was briefly pressed against the blades, and which could then be brought back to the lab for further analysis. These tape-press samples were then covered in nutrient media so that any fungal spores or pieces could grow and then be identified. If indeed *D. pinea* was being picked up and possibly transmitted to other trees on shearing tools, we also wanted to test the efficacy of household Lysol® Disinfectant Spray on killing any *D. pinea* on the tools. To test this, for a sub-group of trees, Lysol® was sprayed on the tools after shearing the first tree in each group and samples were collected from the tools after the spray had dried.

We were surprised to see that very few *D. pinea* colonies grew from the tape-press samples, indicating that a very small amount of *D. pinea* was actually on the tools. Overall, the general trend was that the tools picked up more *D. pinea* after shearing a diseased tree than after shearing a healthy tree, however, there was no correlation between the percentage of diseased tips on a tree and the amount of *D. pinea* picked up on the tools. There was also no correlation between the amount of *D. pinea* picked up by the tools in 2005 and the amount of disease that developed in 2006; some trees' disease percentages increased, while others decreased, and surprisingly, some trees that had diseased tips in 2005 had no diseased tips in 2006. Lysol® application to the shearing blades did not decrease the amount of *D. pinea* that was picked up and survived on the tools. In lab studies, Lysol® can inhibit spore germination, so it is believed that a major reason why it is not effective in the field is that the contact time on the tools is too short because the Lysol® evaporates too quickly.

D. pinea is known to be an aggressive wound invader, and as shown in greenhouse trials on other pine species, will cause shoot dieback within weeks. In the case of shearing in these Christmas tree farms, this was never seen. After shearing, no new symptoms developed on the trees nor did the shoots that were just sheared die. A main factor in this is that there may not be enough *D. pinea* picked up on the tools, and even less transferred onto the fresh wounds created by the shearing tools. This leads us to believe that although we cannot completely rule out the possibility of shearing transmitting *D. pinea*, shearing is not the main mode of Diplodia Tip Blight disease spread on Christmas tree farms.

DIAGNOSTIC LAB-HIGHLIGHTS

by Julie Beale and Paul Bachi

Agronomic samples over the past week included magnesium and zinc deficiencies, and thrips injury on corn; and black shank, Pythium root rot, chemical injury and transplant shock on tobacco.

On fruit and vegetable samples we have diagnosed Mycosphaerella leaf spot on strawberry; anthracnose and chemical injury on grape; black rot (Xanthomonas) on cabbage; tomato spotted wilt virus, Pythium root rot, chemical injury and sunscald on tomato.

On ornamentals we have seen thrips injury and black root rot on impatiens; Phytophthora root rot, black root rot, and Botrytis blight on petunia; Pythium root rot on portulaca; black root rot on holly; Pythium root rot and problems from low pH (possible manganese toxicity) on containerized boxwood; and anthracnose on elm.

INSECT TRAP COUNTS

UKREC, Princeton KY

Kentucky — Tennessee

May 25-June 1, 2007

►***Jackson, TN***

Black cutworm	-
True armyworm	-
Corn earworm	-
European corn borer	-
Southwestern corn borer	-

►***Milan, TN***

Black cutworm	-
True armyworm	-
Corn earworm	-
European corn borer	-
Southwestern corn borer	-

►***Princeton, KY***

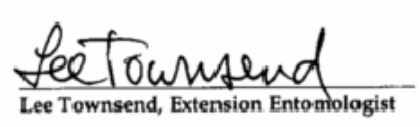
Black cutworm	15
True armyworm	0
Corn earworm	17
European corn borer	0
Southwestern corn borer	15

►***Lexington, KY***

Black cutworm	59
True armyworm	87
Corn earworm	0
European corn borer	6
Southwestern corn borer	0

This season insect trap counts will be provided for loca-

tions 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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