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KENTUCKY PEST NEWS

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ARMYWORMS

ARMYWORM FLIGHT UNDERWAY
by Doug Johnson

Armyworm (aka True armyworm) flight has begun in Kentucky. The early numbers of moths captured are certainly nothing out of the ordinary, but it is too early in the season to see any trend in the flight pattern. Individuals interested particularly in pasture / hay and in small grains should begin checking the flight graphs for this insect. You may find these by going to the IPM home page at: http://www.uky.edu/Ag/IPM/ipm.htm Look on the lower portion of the page for the insect in which you are interested. These graphs are updated weekly and each new point represents the number of moths caught in a particular trap / location during the previous week. UK -IPM has trap lines located on the UK-REC, Princeton, Caldwell Co. KY and on the UK Spindletop farm near Lexington, Fayette Co. KY. The Spindletop location is relatively new, and as such we have only one year of historic data associated with the site. Individuals located in warmer locations will be a little ahead of our traps, while those in cooler locations will be a bit behind.

This data will not tell you when or if to apply a control, but it can certainly indicate whether or not your crops are at an elevated risk when compared to other years, with which you have experience.

TOBACCO

BLUE MOLD UPDATE
by Kenny Seebold

As of April 7, 2008, active blue mold has been confirmed in western Cuba (Pinar del Rio) and north-central Florida. Conditions were favorable April 5th and 6th for transport of inoculum from the two known sources into GA and the Carolinas. The threat to production areas in KY is low at this time, according to the North American Plant Disease Forecast Center (www.ces.ncsu.edu/depts/pp/bluemold).

For up-to-date reports on the status of blue mold and other tobacco disease information, check the KY Blue Mold Warning System online at www.uky.edu/Agriculture/kpn/kyblue/kyblue.htm.

CONTROLLING PYTHIUM ROOT ROT IN THE FLOAT SYSTEM
by Kenny Seebold

Cool and overcast weather has delayed, to some extent, production of tobacco transplants around Kentucky. Still, we're approaching the time when warm daytime temperatures will occur – a welcome event for our producers – and the risk of disease in transplant facilities will increase. Pythium root rot (PRR) is the most common and important disease that we encounter in the float system,

so let's take a closer look at the disease and the most practical options for its management.

The first symptoms of Pythium root rot tend to be yellowing and stunting of transplants in a well-defined area or areas of a float bay. Damping-off, or seedling death, can occur in severe cases. During the outbreak, seedlings wilt and root systems decay to some degree. Roots and sometimes lower stems of plants affected by Pythium root rot take on a darkened, necrotic appearance; roots may have a slimy appearance. Infected roots will eventually slough off and some re-growth may be observed; however, new growth likely will become infected.

Water temperatures greater than 72 °F favor development and spread of PRR in float systems. Several species of *Pythium*, a fungus-like organism, are known to cause root rots on tobacco seedlings. *Pythium* species (spp.) require water, abundant in the float system, for reproduction and movement. Initial infections likely result from germination of resting structures (oospores) of *Pythium* spp., and production of zoosporangia. Swimming spores (zoospores) are liberated from zoosporangia, and find their way to tobacco roots. Zoospores encyst after encountering susceptible tissue and enter the root system to establish an infection. Many cycles of zoospore production and infection are possible after initial infections occur.

The most common ways for *Pythium* spp. to be introduced into float systems are contaminated water, infested soil, or recycled (and contaminated) Styrofoam trays. *Pythium* spp. are found widely in our soils and surface water and can be carried on shoes or implements. *Pythium* spp. can persist in the tissue of roots that have penetrated Styrofoam float trays, providing a source of inoculum when the trays are used the following season.

Sanitation is an important part in the management of Pythium root rot in the float system (refer to KPN No. 1151 for more details). Never use pond or surface water to fill float beds, since water from these sources is likely contaminated with *Pythium* and other plant pathogens such as *Phytophthora* or *Fusarium*. Make sure that shoes and tools are cleaned before bringing them into a transplant facility.

Terramaster 4EC is labeled for use in float systems and is very effective against PRR when used correctly. Detailed information on this fungicide can be found in the product label, or refer to ID-160 (2008 KY Tobacco Production Guide) or PPFS-AG-T-8 (2008 Fungicide Guide for Burley and Dark Tobacco). For preventive use, apply 0.7-1 fl oz of product per 100 gallons of float water beginning 2-3 weeks after seeding, or when roots first enter the water. A second treatment of 0.7-1 fl oz per 100 gallons of water can be made 3 weeks after the first, and a final application of 0.8 fl oz can be made two weeks after the second treatment (if needed). Do not apply Terramaster later than 8 weeks after seeding; make sure that the product is mixed thoroughly in float bays to minimize the risk of plant injury. "Rescue" applications of Terramaster (see label for rates) in systems with active PRR will halt further development of disease and symptomatic seedlings will likely recover. However, the higher rates of Terramaster used in rescue treatments increase the risk of plant injury AND recuperating plants may still harbor *Pythium* and increase their susceptibility to black shank and Fusarium wilt. For these reasons, preventive use of Terramaster is recommended over curative applications of the product. Before using Terramaster, or any pesticide, refer to the label for specific instructions and safety information. Quality tobacco transplants are one of the most important parts of a successful growing season. Through careful management it is possible to achieve excellent control of PRR, good transplant quality, and a healthy bottom line!

FRUIT CROP

GRAPE FLEA BEETLE

by Ric Bessin

Grape flea beetle is the first of the grape pest to emerge in the vineyard. Growers should monitor for them as the first buds begin to swell. Adult flea beetles overwinter in protected areas around vineyards, and start feeding on interior of primary buds and opening grape leaves in early spring. These are often the first insect pests to begin attacking grapes. Damaged buds will not develop into primary canes which can reduce yields. The grape flea beetle is about ¼ inch in length and a dark, metallic blue in color. It is this injury to the developing buds that can cause economic losses in some years. Once the buds are 1/2 inch long, only slight injury is caused. The beetles feed on the developing tissue in the buds before it has a chance to expand, so a small amount of feeding can result in a large amount of resulting tissue loss. In some situations, entire buds can be hollowed out.

Damage is often restricted to vineyard borders, particularly near wooded areas. When grape flea beetle is a problem, it occurs early in the season, just when the buds begin to swell. Scheduled sprays for grape berry moth and other insect pests occur later in the season are of little benefit as they do not coincide with early flea beetle activity. When flea beetles are common and injury to the small buds is observed, a spray timed at bud swell will provide control.

EARLY SEASON APPLE DISEASE CONTROL
by John Hartman

Most Kentucky apples are showing significant green in the form of green shoot and leaf tips, and green clusters of flower buds in the fruiting spurs. These green tissues are all susceptible to infections by the apple scab fungus (*Venturia inaequalis*) if the exposed leaves and flower buds are wet long enough. Last week, almost all locations in Kentucky received some rain, and it was especially prevalent in the eastern half of the state. Some weather stations reported prolonged rains, sometimes over a period of two or three days which certainly provided sufficient plant surface moisture for primary infections. Scab fungus spores were likely available to initiate these primary infections.

Unsprayed apples were very likely infected last week and these primary infections can lead to secondary infections and season-long scab problems. During these early weeks of the growing season, continued fungicide applications will be needed so that as new green tissue emerges there is adequate protection. With more rain in the forecast, Kentucky apple growers will want to be sure to maintain good spray coverage to control primary scab infections. A combination of a protectant and an eradicant fungicide provide the best defense against apple scab infections.

For best advice on fungicide selection and application timing for scab management, commercial growers should be consulting U.K. Cooperative Extension Publication ID-92, Kentucky Commercial Tree Fruit Spray Guide 2008, available at County Extension Offices statewide. Backyard growers should use the recently revised ID-21, Disease and Insect Control Programs for Home Grown Fruit in Kentucky Including Organic Alternatives.

Fire blight, a bacterial disease caused by *Erwinia amylovora*, was severe last year in many Kentucky orchards and backyard apple and pear trees. Fruit growers should consider taking extra measures for fire blight management if the disease was serious last year. By now, last year's fire blight strikes should have been pruned out and fixed copper bactericide should have been applied to the dormant apples and pears. These sprays serve to reduce epiphytic (tree surface) populations of *E. amylovora* in the orchard. At this late date, use of copper sulfate would be unwise. Even alternatives like fixed copper such as copper hydroxide (Kocide) or copper oxychloride sulfate (C-O-C-S), if applied after half-inch green, can cause fruit russetting.

Pears are blooming now or are very near bloom. This is the stage where primary infections by *Erwinia amylovora*, cause of fire blight, most often occur. Growers will want to have streptomycin ready for application to the orchard should warm weather (average above 60 F) prevail and some rain showers develop. Fire blight-infected pears can become a source of disease for apples as they are growing and blooming nearby, so it is important for growers to manage pear fire blight when pears are growing near the apple orchard.

WHEAT

SUCTION TRAP COUNTS – WHERE ARE THE APHIDS?
by Doug Johnson

January thru March 2008 has been a slow period for cereal aphids compared to the same time frame in 2007. In 2008, one or more oat bird-cherry aphids (OBCA) were captured on three of the 13 sample dates, with a peak count of 10 on March 28, and a total 12 aphids captured on all sample dates. In 2007 during this same time frame OBCA were taken in six of 13 sample dates with a peak count of 88 on March 30, and a total of 112 aphids captured on all sample dates. These numbers are from samples are taken weekly from the suction trap at the UK-REC in Princeton, Caldwell Co. KY. 2008 samples from the suction trap on UK's Spindletop Farm in Lexington, Fayette, yielded even fewer aphids, only two aphids were captured one each of two sample dates. The Spindletop suction trap was not in operation for this period in 2007.

These numbers may only be used as an index and only for aphid movement by flight. It certainly does not tell the complete story but is beginning to give us a glimpse of the activity of these serious vectors of the yellow dwarf viruses. The two suctions traps are supported by the KY Small Grain Growers, and Kentucky Soybean Growers associations and the UK-IPM program.

Our lack of trap captures from the spring should indicate less movement of the Barley yellows virus complex than we saw last spring, which was pretty meager. However, FALL infection still remains the number one risk factor. Fall infection is most often linked to planting date. Wheat planted before the Hessian fly free date (Oct 15 for west central KY) is more likely to have problems with Barley yellow dwarf than are crops plated after this date.

FOLIAR FUNGICIDES FOR WHEAT DISEASE CONTROL
by Don Hershman

2008 Management of Small Grain Diseases (NCERA-184) Fungicide Efficacy for Control of Wheat Diseases

Each year, the North Central Regional Committee on Management of Small Grain Diseases revises and disseminates a fungicide efficacy table. Efficacy ratings for each fungicide listed in the following table were determined by field testing fungicides over several years and locations by the members of the committee. Efficacy is based on proper application timing to achieve optimum effectiveness of the fungicide as determined by labeled instructions and overall level of disease in the field at the time of application. Differences in efficacy among fungicide products were determined by direct comparisons among products in field tests and are based on a single application of the labeled rate as listed in the table.

Efficacy of Fungicides for Wheat Disease Control Based on Appropriate Application Timing.

	Product	Fungicide(s)	Rate/A (fl. oz)	Powdery mildew	Stagonospora leaf/glume blotch	Septoria leaf blotch	Tan spot	Stripe rust	Leaf rust	Head scab
Strobilurin	Headline 2.09 EC	Pyraclostrobin 23.6%	6.0 to 9.0	G[1]	VG	VG	E	E[2]	E	NR
	Quadris 2.08 SC	Azoxystrobin 22.9%	6.2 to 10.8	F(G)[3]	VG	VG	E	E[2]	E	NR
Triazole	Proline 480 SC	Prothioconazole 41%	5.0 (5.7 Scab)	--[4]	VG	VG	VG	--	VG	G(VG)[3]
	PropiMax 3.6 EC	Propiconazole 41.8%	4.0	VG	VG	VG	VG	VG	VG	F
	Tilt 3.6 EC	Propiconazole 41.8%	4.0	VG	VG	VG	VG	VG	VG	F
Premix	Quilt 200SC	Azoxystrobin 7.0% Propiconazole 11.7%	14.0	VG	VG	VG	VG	VG	VG	NR
	Stratego 250 EC	Propiconazole 11.4% Trifloxystrobin 11.4%	10.0	G	VG	VG	VG	VG	G	NR
Section 18 triazole[5]	Folicur 3.6 F	Tebuconazole 38.7%	4.0	G	VG	VG	VG	E	E	G

Efficacy of Fungicides for Wheat Disease Control Based on Appropriate Application Timing.

[1] Efficacy categories: NR=Not Recommended; F=Fair; G=Good; VG=Very Good; E=Excellent

[2] Efficacy may be significantly reduced if solo strobilurin products are applied after infection of has occurred

[3] (G) indicates greater efficacy at higher application rates

[4] Insufficent data to make statement about efficacy of this product

[5] Folicur is not currently labeled for use on wheat in the U.S. However, there are indications that Folicur (and other tebuconazole fungicides) may receive a section 3 label soon. Folicur, thus, has been included in this table in case a section 3 label is granted by EPA in time for the KY use season in wheat.

This information is provided only as a guide. It is the responsibility of the pesticide applicator by law to read and follow all current label directions. No endorsement is intended for products listed, nor is criticism meant for products not listed. Members of NCR-184 assume no liability resulting from the use of these products.

VEGETABLES

COOL, WET WEATHER FAVORS SLUGS
by Ric Bessin

Different weather patterns favor different types of pests. With the prolonged cool, wet weather, we would expect that slugs and their damage might be more commonly on early planted crops. If the weather turned and became dry and hot, the potential for slug damage would drop very quickly, or at least there activity would be restricted to overnight periods.

Slugs are common during these periods for cool wet weather because they have a high moisture requirement. With overcast skies and wet soils, slugs can stay active during the day feeding on the lower leaves of young plants with their rasping mouthparts. They tend to leave strips of damaged tissue between the veins of leaves. They also leave slivery trials behind to evidence there nightly travels.

During periods of favorable weather for slugs, they can be very difficult to control. Slug baits can be used with care in some crops, but these tend to be prohibitively expensive, cannot come in contact with crops, and often need to be reapplied during the same weather that favors the slugs. Home gardeners need to consider modifying the habitat around gardens to make it less hospitable for slugs. This would include removing objects that slugs can hide under to escape the sun and heat of the day (boards, tires, etc). Excessive mulch can also provide a moist habitat for slugs, so the depth of mulch can be reduced to discourage slugs.

Finally, slugs traps have been shown to capture slugs in backyard garden type situations. The traps are made from empty tuna or cat food cans that have been buried up to the lip in the soil. Stale beer is poured into the traps to partially fill the cans, this is the attractant for the slugs. A trial demonstrated that slugs prefer non-alcoholic beer over others. A cover is held about an inch over the traps to keep the traps from being washed out during rainy periods. Beer needs to be replenished on a periodic basis.

TURF

WET SEASON CREATURES
by Lee Townsend

Crane fly larvae are the immature stages of fragile flies with long legs that sometimes are mistaken for mosquitoes. Their gray larvae resemble cutworms but there is no distinct head and no legs at all. Several pairs of fleshy lobes can be seen at the end of the abdomen. They develop in wet, shaded areas where they feed on decaying organic matter such as accumulations of wet leaves or heavy thatch. They are most commonly seen during spring and fall rainy periods when they are driven out of low area by excessive rain and can be caught on surfaces such as sidewalks and driveways. Neither crane fly larvae nor adults are harmful. However, large numbers of larvae in an area are indicative of chronic wet areas or a build of organic matter that may lead to other problems.

Fungus gnat larvae are found in the same type of situations that are favorable for crane fly larvae, moist, decaying organic matter. These legless larvae have a shiny black heads and a white to clear bodies. Groups of them may form into a column and crawl across the ground like a snake. In fact, lots of non-biting gnats will be swarming during the next few weeks. A curiosity and occasional nuisance but no cause for alarm.

Burrowing crayfish are rarely seen above ground during the day. They dig tunnels from 1 to 5 feet deep or to the water table so that they can stay moist even during droughts and dry periods. These omnivorous scavengers create "chimneys" made of mud balls that are excavated and rise above the tunnel. Because crayfishes breathe with gills, they must always maintain some degree of contact with water. There are no pesticides registered for crayfish control.

Earthworms will be leaving castings on the soil surface and may push up small mounds of soil. Their activity is particularly noticeable in areas with thin stands of turf where the soil is not held by a thick root system. As with crayfish, no pesticides are registered for earthworm control.

SHADE TREES & ORNAMENTALS

EASTERN TENT CATERPILLAR STATUS
by Lee Townsend

Eastern tent caterpillar egg hatch should be about over in central Kentucky with small larvae beginning to feed on expanding leaves. Larvae will be in the ¼″ to 3/8″ range in a few days. It will be difficult to determine what population level is present until their tents reach the size of a baseball. During the past few years, populations have been low except for some local hot spots. The egg stage is hardy so significant winter mortality is unlikely.

HOUSEHOLD

PROTECT YOUR HOME FROM TERMITES
by Mike Potter

The entomology department receives many calls from clients wanting to know what can be done to protect their home from termites. Oftentimes they also wonder if a certain practice or condition is likely to cause termite problems. Homeowners can reduce the risk of infestation by following these guidelines.

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 building. Wood siding, porch steps, door and window frames and similar wood items should be at least six inches above ground level. Eliminating wood-to-ground contact may require re-grading or pulling soil or mulch back from the foundation, cutting the bottom of siding, or supporting steps or posts on a concrete base. Contrary to popular belief, wood that has been pressure treated is not immune to termite attack. Termites will enter pressure-treated wood through cut ends and cracks and 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 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. Vents should be kept free of leaves, dirt and debris, and should not be obstructed by vegetation. Moisture and humidity in crawl spaces can be further reduced by installing 4-6 ml polyethylene sheeting over about 75 percent of the soil surface. The soil cover will act as a vapor barrier to reduce evaporation from the soil and condensation of moisture on joists and subflooring. Vents and vapor barriers are installed by pest control companies.

4. ***Do not 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, ivy, and other dense plant material touching the house should also be avoided. Where practical, dead stumps and tree roots around and beneath the building should be removed, along with old form boards and grade stakes left in place after the building was constructed.

5. ***Use mulch sparingly, especially if you already have termites or other conducive conditions.*** Many people use landscape mulch for its aesthetic and plant health benefits. Excessive or improper usage, however, can contribute to termite problems. Termites are attracted to mulch primarily because of its moisture-retaining properties and the insulation it affords against temperature extremes. The mulch itself is of poor nutritional value to termites and a non-preferred source of food. Since the moisture retaining properties of mulch are more of an attractant than the wood itself, it males little difference what type of mulch is used (cypress, pine bark, eucalyptus, etc.). Contrary to popular belief, crushed stone or pea gravel are comparable to wood mulch in terms of attraction, since they also retain moisture in the underlying soil. Where mulch is used, it should be applied sparingly (2-3 inches is usually adequate), and should never be allowed to contact wood siding or framing of doors or windows. There is no truth to the rumor circulated last year on the internet that mulch is likely to spread Formosan termites from New Orleans to Kentucky *(for more on this subject, see KPN 3/6/06).*

6. ***Consider treatment by a professional pest control firm***. Buildings have many natural openings through which termites can enter, most of which are hidden. While the above measures will help make a house less attractive to termites, the best way to prevent infestation is to treat the adjoining soil with a termiticide. There are two general categories of termite treatment, liquids and baits. The purpose of a liquid treatment is to make the ground around the foundation repellent and/or toxic to termites so that they will not infest the structure. While most of the liquid termiticide products are *repellent,* three newer materials, Termidor® (fipronil), Premise® (imidacloprid), and Phantom® (chlorfenapyr) are *non-repellent* to termites foraging in the soil. Consequently, termites tunneling into the treated zone are killed. In Kentucky, these products are proving very reliable in their ability to control termites in the initial attempt. Baits can also be installed to eliminate termites foraging around structures (see newly revised Entfacts 604: *Termite Control: Answers for Homeowners*, and 639: *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 warranty by paying the annual renewal fee. Should termites re-infest the building, (which can happen even if the ini-

tial 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 on foundation walls, piers, sills, joists, etc.
- Winged "swarmer" termites, or their shed wings, in windowsills and along edges of floors.
- Damaged wood hollowed out along the grain, lined with bits of mud or soil.

Detecting hidden infestations requires a trained eye. Many 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.

VARIED CARPET BEETLES COMMON AT WINDOWS
by Lee Townsend

The varied carpet beetle is about 1/10 inch long and black with an irregular pattern of white, brown, and yellow scales on its wing covers. It feeds on nectar and pollen from flowers. These beetles are attracted to sunlight and are common at windows.

The hairy, worm-like larvae prefer dark, protected places where they feed on a variety of products including woolens, carpets, furs, hides, feathers, horns, bones, hair, silk, fish meal, rye or corn meal, red pepper, and cereals. They also feed on accumulations of dead insects in wall voids and attics and may be associated with buildings that have had problems with infestations of cluster flies or boxelder bugs.

Carpet beetles are very difficult to control because of they find food in obscure places and can occur throughout a building. The best weapon is the vacuum cleaner. Rooms should be cleaned often enough to remove hair, lint, dead insects and other carpet beetle food. This is especially important in households that have pets indoors. Close attention should be given to carpets (especially under furniture), rugs, draperies, upholstered furniture, closets (especially where woolens and furs are stored), heat radiators and registers and associated duct work, corners, cracks, baseboards and moldings, and other hard-to-reach areas. Open containers of dried foodstuff and pet food should be regularly inspected for signs of carpet beetles and discarded if contaminated.

Cleaning is always the best strategy; however, areas or articles that cannot be dry cleaned or laundered can be sprayed with an insecticide. Find a product that lists carpet beetles on its label and closely follow the directions. Apply insecticides as spot treatments and limit sprays to edges of floor coverings, under rugs and furniture, floors and walls of closets, shelving where susceptible fabrics are stored, cracks and crevices, and in other lint-accumulating areas. Be sure not to spray clothing and bedding.

PESTICIDE NEWS & VIEWS

SHORTAGE OF DITHANE IN 2008
by Kenny Seebold

Early this year, it was rumored that Dithane DF (mancozeb), a fungicide labeled for use on many crops including fruits, vegetables, and tobacco, might be in short supply this year. Well, the rumor is apparently true. Representatives of Dow AgroSciences have confirmed that the supply of Dithane will be low in 2008 due to an unplanned shutdown of the company's manufacturing facility in France. Calls to major distributors of agricultural chemicals in Kentucky (Miles, UAP, and Southern States) revealed that they will have difficulty in obtaining additional stocks of Dithane this season. Miles' distribution company had about 30 12-lb. bags in their warehouse, but UAP (Lexington) and Southern States (Louisville) had none in stock. We contacted a number of farm supply stores around KY, and learned that some had a limited supply in stock while others had none.

In the short term, producers of tobacco transplants may be hardest hit by the Dithane shortage. The use of Dithane on tobacco is permitted through a 24c (special local need) registration, and it is the only effective, labeled fungicide for diseases like blue mold and target spot on tobacco transplants. Given our recent weather and the threat of blue mold from down south, I've recommended that growers consider applying Dithane on a regular basis to ward off potential problems with blue mold and target spot. With Dithane in short supply, it's going to be difficult for us if blue mold appears during the transplant production cycle. The impact will be felt after tobacco has been set as well, since Dithane is the recommended tank-mix partner for Acrobat for control of blue mold; however, after setting, the availability of Actigard and Quadris should help offset the limited availability of Dithane.

In the longer term, vegetable producers have a number of fungicide options that can used in place of Dithane. Manzate and Penncozeb have the same active ingredient as Dithane, and should be available during the growing season. Chlorothalonil (Bravo, etc) can also be used as an effective alternative to Dithane in most vegetables, but not tobacco. Refer to ID-36, the *2008-2009 Vegetable Production Guide for Commercial Growers, for more information*.

Producers who plan to use Dithane should try now to find the fungicide at their local farm supply store; however, they may need check in neighboring communities to find this fungicide. We are also working with other manufacturers of mancozeb to obtain additional 24c registrations on tobacco for Manzate (marketed by DuPont) and Penncozeb (United Phosphorus). However, it is un-

certain at the moment if these registrations will be approved quickly enough to handle problems during production of tobacco transplants.

DIAGNOSTIC LAB-HIGHLIGHTS

by Julie Beale and Paul Bachi

Ornamental samples received in the PDDL over the past two weeks have included powdery mildew on euonymus; Papaya Mosaic Virus on portulaca, Pythium root rot on snapdragon; Rhizoctonia web blight and Pythium root rot on petunia. On greenhouse ornamentals we continue to see non-infectious problems, such as oedema, nutritional deficiencies, and genetics problems. On fruit samples we have seen black knot on plum; black root rot complex on strawberry; and Rhizoctonia root rot on grape.

INSECT TRAP COUNTS

March 14-21
►***Princeton, KY***
Armyworm..... 7
Black cutworm..... 1
►***Lexington, KY***
Armyworm..... 0
Black cutworm..... 0

March 21-28
►***Princeton, KY***
Armyworm.....25
Black cutworm.....1
►***Lexington, KY***
Armyworm.....3
Black cutworm.....3

March 28-April 4
►***Princeton, KY***
Armyworm.....45
Black cutworm.....0
►***Lexington, KY***
Armyworm.....13
Black cutworm.....1

Graphs of current insect trap counts are available on the IPM web site at -http://www.uky.edu/Ag/IPM/ipm.htm.

Lee Townsend

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.

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