



KENTUCKY PEST NEWS

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Number 916

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TOBACCO

- Current blue mold status
- Early season tobacco insects

CORN

- Application timing may affect honeyvine milkweed control in corn

SMALL GRAINS

- Armyworm pressure continues

PASTURES

- Armyworms in pastures

VEGETABLES

- Insensitivity of Quadris to certain gummy stem blight strains - a wake-up call!

SHADE TREES & ORNAMENTALS

- Leaf blight and stem canker can destroy pachysandra beds
- Calico scale alert!

DIAGNOSTIC LAB - HIGHLIGHTS

INSECT TRAP COUNTS

TOBACCO

CURRENT BLUE MOLD STATUS

by William Nesmith

As of May 13, we have received no reports of active blue mold in Kentucky or neighboring states. I urge continued scouting for it, however, and be especially watchful for it in crops that involve southern transplants. Conditions in the field are not conducive for general development of blue mold, while those in most transplant production systems are favorable to ideal, should spores arrive. All known sources in other states appear to be weak and of low risk of supplying spores to Kentucky until a major change develops in our weather patterns.

Active Sources: Dr. Tom Melton, NC State University, reported that blue mold is present in flue cured production within a 20 mile area of eastern North Carolina in the counties of Franklin, Nash, and Wake. Other active sources include: northern Florida (Alachua and Columbia Counties),

and the wild tobacco in Texas.

Controls: Because they are needed for other diseases as well, preventive fungicide spray programs should remain in place at all tobacco transplant production sites - greenhouses, float beds, plant beds, and distribution/holding sites. Remember that Ferbam can be used on small seedlings, while Dithane may cause injury if applied to plants with leaves smaller than dime-size. See issue 908 of Kentucky Pest News (March 12, 2001) for more specifics on chemical options for disease control in tobacco transplant production.

Fungicide applications for blue mold control are not warranted in the field at this time. However, growers should be incorporating cultural controls. See issue 910, April 2, 2001, Ky Pest News for those guidelines and the fungicide options. Also, see issue 913, April 23, 2001, Ky Pest News for information on Actigard for blue mold prevention.

EARLY SEASON TOBACCO INSECTS

By Lee Townsend

Cutworm and armyworm activity in a wide range of crops is a warning signal for tobacco farmers to be watchful of these insects.

Cutworms generally are present in tobacco fields at transplant, having been happily feeding on weeds when the food on the plate was changed abruptly to tobacco transplants. Orthene, as a transplant water application, has provided very good preventive cutworm control. You can see some injury but this approach should be 70% to 80% effective. The pocket of treated soil around the base of the plant apparently gives a good buffer to keep cutworms away from the plant. This approach also will control tobacco flea beetles a common early season pest.

Armyworms can be anticipated in no-till tobacco into killed sod. The sprays listed for budworm / hornworm control on tobacco should provide good control of this insect.

CORN

APPLICATION TIMING MAY AFFECT HONEYVINE MILKWEED CONTROL IN CORN

by James R. Martin

Honeyvine milkweed, like many perennial vines, is difficult to control with the postemergence herbicides commonly used in corn. Many of the postemergence herbicides used for controlling this weed in corn are capable of providing 60 to 75% suppression of the top growth of plants. Granted this is not perfect, but it may be effective enough to minimize the interference of vines being wrapped around corn plants during the harvesting process.

As a general rule honeyvine milkweed grows slowly during the early part of the season. The fact that temperatures have been 3 to 7 degrees F warmer during the last month may be beneficial for controlling this problem weed by enhancing emergence and growth of vines.

Results from a study in Meade County last season indicated that honeyvine milkweed control tended to be slightly better when Distinct or Lightning treatments were applied to plants having 8 leaves with an average height of 12" compared with those applied to plants having 4 leaves with an average

height of 3" (See Table1). By limiting the amount of honeyvine milkweed growth resulted in fewer corn plants being wrapped with vines near harvest time.

Delaying postemergence sprays allows time for honeyvine milkweed plants to develop more foliage; consequently more weed biomass for herbicide uptake. This approach may be beneficial for treating honeyvine milkweed since its growth habit does not lend itself to interception of sprays compared with plants that tend have an upright growth habit with several leaves. With delayed applications, the use of drop nozzles can help direct spray onto the weeds and limit amount of material getting into the whorl of corn. Always consult with the herbicide label to be sure applications are made before the maximum growth stage or height of the crop.

The relative response of honeyvine milkweed to many of the postemergence herbicides used in corn is indicated on page 35 of AGR-6 "Weed Control Recommendations for Kentucky Farm Crops - 2001".

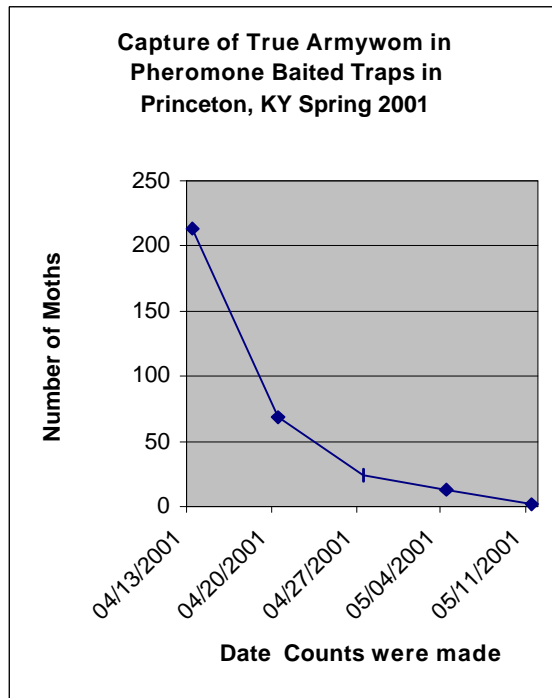
Table 1. Honeyvine Milkweed Control and Corn Plants Wrapped with Vines Following Postemergence Treatments (Meade Co 8/3/00).				
Herbicide ¹		Milkweed Stage	Control (%) ²	Corn Plants with Vines (%) ²
Distinct	6oz/A	4 leaf	60 a	13 ab
	4 oz/A	8 leaf	65 a	5 b
Lightning	1.28 oz/A	4 leaf	65 a	6 ab
	1.28 oz/A	8 leaf	75 a	2 b
Non-treated Check		-----	0 b	18 a
¹ Adjuvants were included according to label directions. ² Means with the same letter within a column are not statistically different.				

SMALL GRAINS

ARMYWORM PRESSURE CONTINUES by Doug Johnson

Armyworms continue to be present in Kentucky

small grain fields. However, the most reports and the largest populations appear to be in grass



pastures and hay fields. Populations will remain in Kentucky through the summer but populations size will decline through time. Additionally, the crops especially small grains and corn will move into less vulnerable stages as they continue to grow.

Armyworm will probably continue to be present in some numbers through grain maturity. However, they will become less of a problem as the wheat matures. Also, populations will decline through this time period. You can keep up (in a general sense) with armyworm populations by checking the weekly catch data that appears at the end of each KPN issue. The figure included in this article shows you the weekly armyworm moth captured this year the UK-REC in Princeton, KY. Since the large moth flights of mid April trap captures have continually decreased. It also appears that the large “worm” infestation occurs about three weeks after the moth flight. This will of course vary with the temperature patterns.

Though armyworm will remain as a threat until the wheat reaches maturity, their leaf feeding damage will become less and less of a concern. However, you should monitor the crop especially in areas what have large populations to insure that the few

worms that are present do not begin to “clip” the wheat head off. This is a rare but possible problem and will require treatment if it occurs.

Insecticidal control of a well standing crop is pretty easy. You can find recommendations in ENT-47, which you can obtain from your County Extension office or on our website at: <http://www.uky.edu/Agriculture/PAT/recs/rechome.htm>

PASTURES

ARMYWORMS IN PASTURES By Lee Townsend

Armyworm infestations in pastures are a serious problem in some areas of the state, ranging well above the 1 worm per square foot treatment guideline that is generally suggested.

What are the control alternatives? Insecticide alternatives for armyworm control in pastures and hay fields are limited to Bt products, malathion (Cythion) and carbaryl (Sevin). When there is a range of rates, use the high rates for heavy infestations of medium- sized (½") or larger armyworms. The larvae tend to feed at night or during overcast periods and hide under surface litter or in soil cracks during the day. Use at least 20 gallons of water per acre to deliver the treatment. This will increase contact and should enhance control.

Is anything else being done? Alternatives are being explored but residue tolerances on grasses are a hold up in getting labels.

How long will armyworms be there? The larvae feed for 3 to 4 weeks, then drop to the ground and pupate in earthen cells 2 to 3 inches below the surface. This will end the feeding. Full grown larvae are about 1 1/3" long. In outbreak situations, natural enemies begin to appear. Check armyworms for cream to white elongate fly eggs laid just behind the head of the larva. The maggots of this fly will kill the armyworm.

VEGETABLES

INSENSITIVITY OF QUADRIS

TO CERTAIN GUMMY STEM BLIGHT STRAINS - A WAKE-UP CALL!

by William Nesmith

The bulk of this article was written by Dr. Anthony Keinath, Research and Extension Vegetable Pathologist, Clemson University and published in their vegetable newsletter. His message is also appropriate for Kentucky's vegetable industry. I have made a few modifications to Dr. Keinath's article, to assist our grower's understanding of the issues involved.

The fungicide azoxystrobin (Quadris®) was registered on cucuribts in 1999. Since then, it has been used widely in the eastern United States to control gummy stem blight, powdery mildew, and downy mildew. Within the past two months, Syngenta personnel have found several collections of *Didymella bryoniae*, the fungus that causes gummy stem blight, that were not sensitive to azoxystrobin in the laboratory. These isolates were collected from areas of Delaware, Maryland, and Georgia with intense cucurbit production where azoxystrobin did not control the disease at satisfactory levels. The company has recommended that azoxystrobin no longer be used in these counties where insensitive (resistant) strains have been confirmed.

Insensitivity to azoxystrobin is a serious problem for cucurbit growers in affected counties and a potentially serious problem for all cucurbit growers. Because strobilurins are "reduced-risk" fungicides according to the EPA that are safe for handlers, consumers, and the environment, they are being promoted as replacements for older fungicides. Furthermore, all strobilurin fungicides affect fungi in the same way, thus, insensitivity to one strobilurin very likely means insensitivity to all strobilurins (Quadris, Flint, Sovran, and Cabrio, the latter two not yet registered). This means that strobilurin fungicides, the only new, broad-spectrum fungicide class registered on cucurbits in the past two years, may already be of limited use against gummy stem blight. Consequently, caution is prudent.

What can growers in unaffected areas do? Growers must follow a strict 1:1 rotation pattern: one application of Quadris (or Flint, another strobilurin), followed by a different fungicide before applying Quadris (or Flint) again. The choice of a

rotation partner depends on the target diseases. For gummy stem blight, use chlorothalonil, mancozeb, or maneb. See ID-36 - "Vegetable Production Guidelines for Commercial Growers" for rotation partners to control other diseases. Also, no more than four applications of Quadris or Flint may be made per crop each season. As a further precaution, Quadris should not be applied after there is more than 20% of the vine cover affected with gummy stem blight or mildews, which normally happens late in the season.

The strobilurins are a valuable group of fungicides for Kentucky's expanding vegetable industry. We must learn to use them wisely, otherwise, we will lose them due to resistance. Furthermore, I urge those marketing strobilurin fungicides to know and understand the labels, and to recommend use only within the guidelines of the label.

SHADE TREES & ORNAMENTALS

LEAF BLIGHT AND STEM CANKER CAN DESTROY PACHYSANDRA BEDS

by John Hartman

Patches of dead plants are often a very visible feature of landscape beds planted with pachysandra. Pachysandra, or Japanese Spurge is commonly used for beds of leafy ground cover in the landscape because it tolerates shady locations and is sometimes used where turfgrass will not survive. The most devastating disease of Pachysandra is leaf blight and stem canker, caused by the fungus *Volutella pachysandricola*. This disease kills plants and can destroy large areas in a bed.

Infected leaves first develop tan or brown blotches with dark brown margins, which expand, often with concentric lighter and darker zones. Stem and stolon cankers can become numerous, and plants start to wilt and die. Cankers appear as water soaked diseased areas, turn brown, shrivel and often girdle the stem. Infections often begin in damaged or senescent plant parts and spread into healthy plant parts. *V. pachysandricola* is an opportunistic fungus which invades wounds and after infection, is capable of girdling stems within 2 weeks. Under warm, humid conditions in late spring and summer, the fungus produces pink fruiting structures containing masses of fungal spores on the surfaces of cankers and on the lower surfaces of infected leaves.

Volutella blight of pachysandra is often associated with plant stresses such as recent transplanting, exposure to direct sunlight, shearing, scale insects, and previous winter damage. Normally this disease does little damage to vigorous plants, so providing good growing conditions is the most important control measure. Some pachysandra beds have been aided by thinning of the plants to reduce dampness and humidity in the bed. Severely diseased plants should be lifted out and destroyed. Fungicides such as chlorothalonil or mancozeb can be used for control if needed.

CALICO SCALE ALERT!

By Mike Potter

For the second successive year, calico scales are prevalent on several landscape plants, including honeylocust, hawthorn, hackberry, dogwood and flowering crabapple. Infestations are so heavy, in some cases, that entire twigs and stems are covered by the scales and the trees are in decline.

Mature calico scales, *Eulecanium cerasorum*, are large, black and white globular-looking insects about the size of a pencil eraser. They have a soft, leathery body and when crushed ooze a gummy, wax-like fluid. The immobile, adult female is the life stage now being observed, attached to twigs and stems. Some people are mistaking them for ladybird beetles which are roughly the same size. Like other scale insects, the calico scale feeds by sucking plant juices. Heavy infestations can cause premature leaf drop, branch dieback and, coupled with other stresses, eventual tree death.

The mature females will be dying soon. Underneath each of them, however, are thousands of eggs which soon will be hatching into crawlers. The crawler stage prefers to suck plant juices from the leaves (further stressing the plant) and also excretes copious amounts of honeydew. The sticky honeydew and resultant sooty mold are cosmetically unappealing and can stain patios and car finishes, and attract wasps and other nuisance pests. Another reason to take action against the crawlers is that they can become wind borne, spreading the infestation to other trees nearby.

Management

It is too late to impact the mature females, which will be dying off soon anyway. However, *the*

underlying eggs are due to hatch any day, probably this week or next. Observant tree managers can monitor the status of egg hatch and crawler emergence by flicking off the adult scales and observing the eggs, which look like a mass of fine flour. The yellowish, newly-hatched crawlers are tiny but their movement will be visible to the naked eye.

Insecticide applications, timed to coincide with emergence of young crawlers, will break the cycle of development and help alleviate further plant stress. Conventional insecticides labeled for crawler control include Dursban, Malathion, Orthene, and especially synthetic pyrethroids such as Talstar, Scimitar, and Tempo(= Bayer Advanced Lawn & Garden Multi Insect Killer). Decent control of crawlers can also be achieved with 2% horticultural oil or insecticidal soaps. Thorough coverage of infested twigs, branches and adjoining leaves is important, and since the hatching period often lasts about a month, a second application probably should be made 2 to 3 weeks after the first.

Calico scales overwinter on the bark as mid-sized nymphs. To further reduce the likelihood of problems occurring next year, it probably would be wise to follow up with a dormant oil application in fall or winter to trees that were heavily infested with calico scales this year.

DIAGNOSTIC LAB HIGHLIGHTS **by Julie Beale and Paul Bachi**

Field and forage crop samples seen in the Diagnostic Lab last week included cold injury and temporary phosphorus deficiency on corn; wheat streak mosaic virus on wheat; and acid soil problems on alfalfa. On tobacco transplants, we have seen cold injury, temporary phosphorus deficiency, herbicide and fungicide injuries, Pythium root rot, Rhizoctonia damping-off, blackleg (Erwinia), and target spot.

On fruits and vegetables, we have seen numerous cases of fireblight on apple and fruit pear (as well as on ornamental pear); cold injury on apple; plum pockets on plum; and drought stress on blackberry; as well as magnesium deficiency on tomato.

On ornamentals, we have seen southern blight on ajuga; cold injury on geranium; powdery mildew on rose; anthracnose on ash; petiole borer on maple; and (as mentioned above) extensive fireblight on

crabapple, apple and pear.

INSECT TRAP COUNTS

Princeton, May 4-11, 2001

Black Cutworm	4
True armyworm	1
Corn earworm	2
European corn borer	0
Southwestern corn bore	0

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.