



KENTUCKY PEST NEWS

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ANNOUNCEMENT

ARMYWORM REVERTING TO NORMAL LEVELS?

by **Doug Johnson**

Capture of "true" armyworm moths in a pheromone baited trap on the REC in Princeton continues to drop. Last Friday (08 Jun) we reported 126 moths per trap week, which was a drop from the 2nd generation peak of 220 (which occurred on 01 Jun). Counts continues to drop with this weeks count of 79 moths per trap week (15 June). This pretty well assures us that the peak of 2nd generation moth flight was indeed the week of 01 Jun.

Last week using year 2000 temperatures we predicted that you should be seeing worm pressure this week (09-10 Jun) if problems were going to develop, and they would be disappearing about 28-29 Jun. We now have 2001 temperatures through 14 Jun. Substituting these for the 2000 estimates our model predicts peak egg hatch on 11-12 Jun. Adding in 2000 temperatures for the future dates we would calculate peak worm disappearance at

29-30 Jun.

Though there is certainly considerable variation in our ability to predict when worms will be present, if you are going to see a problem with the 2nd generation you should be seeing the evidence by now. It certainly appears that the armyworm as reverted to its "normal" activity level.

The armyworm is still here and will be all summer but probably poses little problem for our field crops. My guess is that the predators, parasitoids and pathogens that usually keep this armyworm under control have caught up with the population. Certainly producers should continue to watch their crops for this and other insect pests; AND remember we still have fall armyworm yet to go!

TOBACCO

CURRENT BLUE MOLD STATUS

By **William Nesmith**

Active blue mold was confirmed again over the weekend in Clark and Mason counties of Kentucky, and Brown County, Ohio. These counties have all

been placed under a blue mold warning. Observation reports from the sites support that these new reports involve only new outbreaks, but I hope to get into the northern outbreaks on Monday to determine if that is the case. I urge all grower in central and northern Kentucky, and southern Ohio to reassess the situation, because some secondary spread probably did occur from the late May episode in central Kentucky. Consequently, I am expanding the areas under a blue mold watch to include: all tobacco production in southern Ohio, and in Kentucky to include the Bluegrass, Licking River, and Northeast Kentucky Extension Areas. These are the areas initially placed under the watch, which also included parts of the Ft Harrod Area but I have not include it at this time, because the evidence on the ground does not support my earlier concerns for Ft. Harrod based on agent reports from the area. With the cool temperatures experienced this past weekend, expect blue mold to go systemic in plants already infected.

Much of the state's tobacco has a poor root system and is not growing well, so it may be difficult to recognize blue mold even if it is present in some crops. By the way, growers need to keep the black shank-fungicide controls in place, especially the cultivation and layby applications of Ridomil Gold or Ultra Flourish. Some of the strains of blue mold involved will also be sensitive to those fungicides. So far, all reported cases of blue mold in Kentucky and Ohio have come from locations that had not been treated with mefenoxam.

Spray programs should be in place in all areas under either a watch or warning. Statewide, keep transplants protected with fungicides plus destroy them once transplanting is over, or if the plants become unacceptable to transplant.

For more current information on blue mold and its control, see our website at:
<http://www.uky.edu/Agriculture/kpn/kyblue/kyblue.htm>

TOMATO SPOTTED WILT VIRUS COMPLEX OF TOBACCO by William Nesmith

Tomato spotted wilt virus (TSWV) has been recently diagnosed on several samples of burley and dark tobacco, tomatoes, and peppers. Greatest activity is occurring mainly west of a north-south

line from Breckinridge County to Laurel County, Kentucky. However, we are also finding a few cases in central Kentucky. Very low levels of the disease are present in many fields, less than one or two percent of the plants in a field being infected and below the levels of serious economic damage, but some cases have involved greater than 15% incidence, with an occasional planting exceeding 30% incidence.

Generally, if the tobacco plant is infected, and showing symptoms prior to layby stage, it will be killed or severely stunted. Fortunately, we seldom experience high levels of infection in Kentucky's tobacco (unlike the flue-cured production area) and there is little or no secondary spread (from one infected tobacco plant in the field to another in the field) in our tobacco fields, but primary spread may occur over a period of several weeks giving the impression of secondary spread.

Field reports again this year indicate there is a strong edge effect to the distribution pattern, and that most of the problem is with early-set crops. This is consistent with what we have seen in past years, which suggest the source vectors are coming from vegetation surrounding the edge of the fields. Some of our fields are so small that they are dominated by edge effects, especially the long narrow fields of less than 20 rows. But, the disease can also be transplant-borne.

This disease was first reported from Kentucky in 1986, when low level infections were scattered about 30,000 acres of tobacco, tomatoes, and peppers in south central Kentucky. Since then, it has occurred every year, and caused greater problems for the vegetable growers than the tobacco growers. Actual losses in tobacco from TSWV have been minimal to the state as a whole, but a few individual growers have experienced significant losses.

Spread of the virus is through thrips. The virus is spread by the thrips in a persistent fashion, which means that once the vector has acquired the virus, it can transmit for a long time. The juvenile thrips (nymphs) acquire the virus while feeding on infected plants, but these juveniles cannot spread it to healthy plants. Instead, only the adult stage can transmit the virus, which it can do for the remainder of its life. This causes a delay of 3-18 days between the acquisition of the virus by the

nymphs and the time adults transmit the virus. Because the thrips move about the field in short flights, the distribution of infected plants from inoculations by the same insect usually leaves a clustered-pattern, where disease plants fit into small groups of 3-10 nearby plants. Such a random-clustered pattern with a strong edge effect in the field would suggest infection occurred after the plants were set, while a totally random pattern usually would suggest the transplants were infected prior to transplanting. With containerized transplants, we can see a strong tray-effect to the distribution, several plants clustered in the same row while adjacent rows are free of infection or with a very different rate of infection. Sometimes, a transplant source pattern is evident, also.

A wide range of symptoms are present on tobacco, which overlap with those caused by Tobacco Ringspot Virus, Tobacco Streak Virus, and Fusarium Wilt, so diagnosis requires special diagnostic tests in the lab. Moreover, TSWV-infected plants are weak and often infected by opportunistic fungi, such as Rhizoctonia, Pythium, Fusarium, and even Phytophthora (black shank). Initial symptoms of necrotic spots along the veins and concentric or zonate spots on the leaf, followed by obvious yellowing, stunting and wilt, are the most prevalent symptoms noticed in Kentucky. In time, necrotic lesions become very obvious on the stem and sometimes within the pith. TSWV symptoms in young plants are highly variable but often include darkened areas (which may appear wrinkled or sunken), decay, or brittleness. These symptoms are sometimes confused with soreshin, and the soreshin fungus will often move in to finish off the plants. Leaves often have necrotic (dead) spots, especially evident near major leaf veins. Symptoms usually appear first in the bud or on young leaves, which are often distorted. The vascular system is often stained brown, but not as extensive as with Fusarium wilt. The affected leaves often become distorted and may pucker due to unequal growth on one side. The apical bud droops or bends to one side and is followed by wilting of most of the foliage on that side of the plant, but unlike with Streak Virus, the bud does not recover. Many plants will not die; instead, they sucker and produce a very stunted and bushy growth with many spots on small unmarketable leaves. If soreshin or black shank are active at the site, TSWV-infected plants often are killed by these other diseases. Black shank resistant plants infected with

TSWV act like susceptible plants!

Control of TSWV has been difficult in areas of the world where it is prevalent. The variables involved in Kentucky outbreaks of this disease, as well as many of those elsewhere in the U.S., are still not well understood. Several laboratories have taken on the task of unraveling this mystery. Evidence obtained from field observations over the past several years in Kentucky and research done in other states, suggests that annual broadleaf weeds in and around field borders are currently thought to be the main reservoirs for the virus-infected thrips. Also, most infections appear to result from heavy influx of virus-carrying thrips from outside the field, but setting of infected transplants is also involved in some cases. Planting date is an important but inconsistent factor in TSWV incidence and loss. In most seasons, early planted tobacco has experienced the highest incidences, but in some years, other planting times have been hit hard also. So, adjusting setting times for fields with a history of the disease may be justified. We have seen very little evidence to support secondary spread (from tobacco to tobacco) within the planting, although the possibility certainly exists if the thrips are able to complete their life cycle in an infected field. The issue is further complicated in that plants infected by the virus at different times, may all show symptoms at the same time, based on one of our studies. Several labs are studying TSWV management and they may provide new tools within a few years.

At this point, it is unclear as to whether attempts to control thrips within the field planting will significantly reduce disease activity in Kentucky's tobacco fields. We see no benefit from rescue insecticide options. However, we suggest normal insect control programs be maintained, especially in transplant production. Roguing out infected plants should be considered where the plants were introduced from other states to minimize the risk of the virus becoming established locally, but we have seen no benefits to the current crop. If the disease is found in transplant operations, destroy the infected plants as soon as possible. Do not grow tobacco and ornamentals in the same operation. Do not grow peppers adjacent to tobacco, especially if the peppers are carrying TSWV.

CORN

EUROPEAN CORN BORER SECOND BROOD
by Ric Bessin

The degree day model with the UK Ag Weather Center indicates that the second flight of European corn borer will begin sometime next week in much of the state. Keep in mind that this is just the beginning of the second flight and numbers will be increasing over the next few weeks. The model indicates that the earliest of the corn borer eggs will be hatching in early July. Several commercial producers are using pheromone traps in their fields and can use numbers of captured moths to determine the need to spray for corn borers, other producers will need to protect their pepper plants during this period of corn borer activity. First generation numbers have been high in some areas,

low in others. It pays to monitor for this insect.

SOYBEANS

EASTERN BLACK NIGHTSHADE IN SOYBEANS
by James R. Martin

Managing eastern black nightshade is a full-season job in soybeans. Monitoring fields and applying postemergence herbicides in a timely manner is important at this time of season. Information on some of the postemergence that help in manage black nightshade in soybeans is indicated below:

Postemergence Herbicide	Rate	Nightshade Max stage/size	Soybean Stage
Cobra	12.5 oz/A	6 LF	Do not apply within 45 days of harvest or after R6.
Extreme <i>(RR soybeans)</i>	3 pt/A	12"	Before bloom and prior to 85 days of harvest.
Flexstar	1 pt/A 1.5 pt/A	4 LF 6 LF	Before bloom.
Pursuit 70 DG	1.4 oz/A	3"	Before bloom and prior to 85 days of harvest.
Raptor	5 oz/A	5"	Before bloom and prior to 85 days of harvest.
Reflex	1 pt/A	4LF	Before bloom
Roundup UltraMAX <i>(RR soybeans)</i>	20 oz/A 26oz/A 40 oz/A	3" 6" 12"	Cracking through flowering.
Stellar	5 oz/A 7 oz/A	3 LF 4 LF	Do not apply within 60 days of harvest.
Ultra Blazer	1.5 pt/A	2"	Prior to 50 days of harvest.

Although Eastern lack nightshade often grows as an annual; there are a few isolated cases where it

believed to have overwintered and exist as a perennial in Kentucky. The problem with these

situations is that regrowth from the perennial roots occurs following an application of postemergence herbicides. It is not clear at this point what options will help in managing the black nightshade plants with perennial roots. A sequential spray program in Roundup Ready soybeans has been considered by some growers, but will be expensive.

In addition to using herbicides, cultural practices such as planting soybeans in narrow rows (≤ 15 ") and harvesting early will help limit harvesting problems associated with eastern black nightshade. Research has shown that shading from the soybean canopy helps limit berry production, but this benefit diminishes after soybeans senescence.

FRUIT CROPS

GRAPE BLACK ROT DISEASE IS ACTIVE NOW

by John Hartman

Kentucky grape growers face several major fungal diseases, many favored by our moderate to hot, humid weather. Black rot is the most common and problematic of these diseases. Wet periods in late May and early June were very favorable for infections and new infections will continue to occur just about any time there is more rain. Symptoms of the leaf spot phase of black rot are now appearing statewide. As the fruits begin to enlarge and mature, there will be fruit spotting and decay on them as well.

Black rot disease was first recorded on this continent in 1804 - in Kentucky. The pathogen, *Guignardia bidwellii*, infects leaves, and then fruits, generating the typical hard, black, shriveled mummies which produce crop losses ranging from 5 to 80%. Leaf petioles, pedicels, and shoots can also become infected. Management of black rot requires an integrated approach involving cultural practices and chemical controls.

Change the environment to reduce disease.

- Plant grapes in sites with good air circulation and sun exposure.
- Use training systems that allow good air movement through the canopy.
- Remove leaves from around grape clusters before bunch closing. Although this measure is designed mainly to reduce losses caused by Botrytis bunch rot disease, it might also be

helpful for control of black rot by providing for quicker drying of the fruits.

- Use irrigation practices which do not leave the foliage wet for long periods.
- Avoid excessive vegetation by judicious use of nitrogen fertilizer.

Increase grape resistance.

- Choose cultivars that resist diseases. Although most grape varieties are susceptible to black rot, a few such as Cascade, Cayuga White, Chancellor, Chelois, Cynthiana/Norton, DeChaunac, Elvira, Ives, Vidal 256, and Vignoles are less susceptible.

Reduce the fungal inoculum.

- Use pathogen-free propagation materials when planting or replanting.
- Remove and destroy diseased and dead wood during pruning.
- Remove and destroy mummies from the vines and from the ground during the dormant season.
- Prune out the ends of infected shoots.
- Use fungicides as needed.

Fungicides for disease control. Leaf wetness requirements for black rot infections have been worked out. Fungicide sprays can be timed to coincide only with actual infection periods. However, even chemical controls need to be integrated because there are other fungal diseases in addition to black rot that need managing. Grape growers need to know the characteristics of the several available fungicides and what affect they might have on other important grape diseases such as powdery mildew, Phomopsis cane and leaf spot, downy mildew, bitter rot, and Botrytis bunch rot. Examples of fungicides follow:

- Sterol Inhibitors; (Bayleton, Elite, Nova, Procure, Rubigan). These fungicides provide good to excellent control of black rot and powdery mildew, but not Botrytis, Phomopsis, bitter rot and downy mildew.
- Strobilurins; (Abound, Flint, Sovran). These fungicides provide excellent control of black rot and powdery mildew, moderate control of downy mildew and Botrytis, fair control of Phomopsis, but no control of bitter rot.
- Mancozeb; (Dithane, Manzate, Penncozeb). These materials are effective for Phomopsis, downy mildew, and black rot but not powdery

mildew and Botrytis. Mancozeb has a very long (66 days) preharvest interval.

- **Ziram**; (Ziram). Ziram is effective for black rot, moderately effective for Phomopsis and downy mildew, but not effective for powdery mildew, Botrytis, and bitter rot.
- **Ferbam**; (Carbamate). Ferbam best controls black rot, is moderately effective against bitter rot, but is relatively weak for the other four diseases.
- **Captan**; (Captan). Captan is weak against black rot, effective against Phomopsis and downy mildew, moderate against bitter rot, weak against Botrytis, and ineffective against powdery mildew.
- **Benomyl**; (Benlate). This fungicide is weak against black rot, effective for powdery mildew, moderately effective for Botrytis, Phomopsis, and bitter rot, and ineffective for downy mildew.
- **Cyprodinil, Fenhexamid, Iprodione**; (Vangard, Elevate, Rovral). These chemicals provide excellent control of Botrytis, but little else.
- **Copper**; (many fixed copper and lime products). Downy mildew is controlled well, and powdery mildew moderately well, but other diseases are only weakly controlled.
- **Sulfur**; (various wettable and dust formulations). Sulfur works well only for powdery mildew.
- **Metalaxyl**; (Ridomil MZ-58, Ridomil/Copper). These mixtures are excellent for downy mildew and will provide control of other diseases due to the mancozeb or copper in the mix.
- **Horticultural Oil**; (JMS Stylet Oil). This specialized oil is effective against powdery mildew.

More complete information about varietal susceptibility and timing and materials for grape disease control can be found in ID-94 *Kentucky Commercial Small Fruit & Grape Spray Guide*, available at County Extension Offices.

VEGETABLES

THRIPS

by Ric Bessin

There have been a large number of reports of thrips in vegetable and field crops this spring. While the most serious problem associated with thrips is their ability to transmit and spread plant viruses, most notably, Tomato Spotted Wilt Virus. But in they can cause direct damage to vegetable crops in some

instances. Tomato and pepper producers need to be monitoring for thrips and for signs that they may be damaging the quality of the fruit. Thrips feed in the bud and flowers or the plants and often damage the rapidly expanding cells in these tissues. This results in scarred and misshapen fruit at maturity. A listing of thrips insecticides can be found in ID-36, and labelled insecticides that include pyrethroid or SpinTor insecticides will help to reduce thrips populations. Because thrips tend to be in protected areas of the plant, spray equipment and gallonage need to be adequate to provide thorough coverage.

LAWN & TURF

JAPANESE BEETLES AND MASKED CHAFERS ARE FLYING By Mike Potter

Adult Japanese beetles and masked chafers have begun to emerge. As is usually the case, it's difficult to predict how serious a problem the beetles and grubs will be this year.

Japanese Beetle Adults - Detailed information on this pest can be found in *ENT-5, 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 *ENT-5* lists species and cultivars of trees and shrubs that are less likely to be attacked by beetles.

Hand Picking and Exclusion- Removing beetles by hand may suffice for smaller plants and when beetle numbers are relatively low. Volatile odors released from beetle-damaged leaves attract more beetles. Thus, 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, reemay, or other fine netting during peak beetle activity (usually late June to mid-July).

Insecticides- Various insecticides including Sevin, Tempo (= Bayer Advanced Lawn & Garden Multi-

Insect Killer), Scimitar, Talstar, malathion, and Orthene are labeled for control of adult Japanese beetles. Sevin is very effective and is the product of choice for many homeowners. Foliage and flowers should be thoroughly treated. The application may need to be repeated at 7-10 day intervals to prevent reinfestation during the adult flight period, or after heavy rains. Follow label directions and avoid spraying under windy conditions. Insecticidal soaps may kill beetles that are hit by the spray, but they provide no residual protection. Botanical insecticides such as neem or pyrethrum are not very effective.

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 a small percentage (generally < 10%) 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 a problem truly exists, 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, or green June beetles buzz-bombing the turf by day in search of mates and egg-laying sites. Masked chafer and May beetle adults are also attracted to porch and street lights at night. Heavy infestations of adult Japanese beetles feeding in the area might also foretell subsequent problems with grubs of that species.

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 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: curative and preventive. Each approach has its own merits and limitations. With **preventive control**, the insecticide is applied as insurance, *before* a potential grub problem develops. Consequently, they are most suited for high-risk sites with a history of grub problems, or where heavy beetle activity is noted.

Preventive control requires the use of insecticides with long residual activity in soil. Both Merit® (sold to homeowners as Bayer Advanced™ Season-Long Grub Control) and Mach 2® have sufficient soil persistence to be applied any time from late-May to mid-July and still control young grubs hatching from eggs in late July or 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. This is an effective strategy when damaging grub populations are known to be 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 too early may degrade before the eggs have hatched, whereas if the product is applied late, the grubs will be harder to kill and severe damage to turf may have already occurred. Presently, granular Dylox is the fastest-acting, most effective insecticide for curative grub control. Diazinon is also an option for homeowners. Products containing chlorpyrifos (e.g., Dursban) are not very effective against grubs. ***There is little benefit in applying any of these short-lived, curative-type products for white grubs in June or July.***

For a complete list of insecticides available for curative and preventive grub control, see *Entfact-441, Insecticides for control of white grubs in Kentucky turfgrass*.

PYTHIUM COTTONY BLIGHT **by Paul Vincelli**

A period of several days of hot, muggy weather allowed activity of Pythium cottony blight to develop late last week in susceptible turf swards receiving heavy and repeated irrigation and/or rainfall. The disease was found on creeping bentgrass, perennial ryegrass, and tall fescue. Although recent sunny, dry weather may arrest the disease, heavy irrigation or a return to hot, muggy conditions could allow new disease activity.

When the disease is active, look for dense, white, cottony mycelium on diseased tissues during early morning hours when the dew is still present. (Be aware that, on perennial ryegrass, very dense, cottony mycelium can also be produced by Rhizoctonia brown patch under certain conditions, so on that grass, have suspect cases confirmed by a diagnostic lab.) Diseased leaves have an olive-green, watersoaked appearance (the same color as frost-damaged plant tissue), and appear matted. As this tissue dries, it turns tan. Affected areas may follow drainage channels or mowing patterns.

The fungi that cause the disease are sometimes referred to as “water molds”. Thus, the disease is favored by soil conditions that are frequently near

saturation: heavy, repeated irrigation or rainfall. High nitrogen also favors the disease by enhancing plant succulence. New seedlings are at greatest risk, since seedlings are succulent and easily infected by *Pythium*.

In tall fescue, a recently published study in Kansas showed that the combination of Heritage sprayed at a typical lawn-care spray interval (35 days) with daily irrigation promoted Pythium activity. In contrast, Pythium activity was not significant in plots irrigated daily without Heritage, or in plots sprayed with Heritage and irrigated on alternate days. Although Heritage provides about 10-14 days of protection against Pythium, a 35-day spray interval allows substantial Pythium activity to occur between sprays, and one reasonable explanation for the Kansas State results is that Heritage disrupted populations of naturally occurring antagonistic microorganisms of Pythium in the soil. The fungicide Prostar has also been shown to enhance Pythium activity in one research study, probably for the same reason.

As far as forecasting the disease, the best system is probably a variant of the one developed by Bill Shane when he was at Ohio State. Pythium cottony blight is favored by daytime highs of at least 82 F, nighttime lows of at least 68 F, and at least nine hours of wet leaves or high humidity (relative humidity above 90%). Several days of such weather provides a rough guideline as to disease activity, but understand that site management factors play a major role in determining how high the disease risk is, and therefore how important it is that a fungicide be applied.

Fungicides containing mefenoxam (Subdue), metalaxyl (Proturf Pythium Control), propamocarb (Banol), or fosetyl-Al (Aliette Signature, Prodigy) are the most effective choices against the disease.

PESTICIDE NEWS & VIEWS

ACTARA LABELED FOR SOME FRUITS AND VEGETABLES **by Ric Bessin**

Syngenta has recently obtained EPA registration for their new insecticide, Actara. This is a General Use insecticide that contains 25 % thiamethoxam and is formulated as a water dispersible granule. Thiamethoxam is a neonicotinoid insecticide with a

mode of action similar to imadaclorid (Admire and Provado). Insecticides in this group are somewhat selective and often control sucking insects and some beetles. With thiomethoxam, there is an important label advisory regarding the potential for and prevention of surface water runoff.

Among the fruits and vegetables, Actara has been registered for use on cucurbits (0 day preharvest interval, PHI) for aphid and flea beetle control, fruit vegetables (0 day PHI) for aphids, flea beetle, stink bug, whitefly, and Colorado potato beetle control, tuberous vegetables (14 day PHI) for leafhopper and Colorado potato beetle control, and pome fruits (14 to 35 day rate-dependent PHI) for control of aphids, leafhoppers, plum curculio, pear psylla, and leaf miners.

DIAGNOSTIC LAB-HIGHLIGHTS
by Julie Beale and Paul Bachi

Plenty of samples are arriving in the Diagnostic Labs--typical for mid-June. Among those diagnosed last week were herbicide injury, acid soil problems and zinc deficiency on corn; herbicide injury, nitrogen deficiency and Rhizoctonia root and stem rot on soybean; black root rot, black shank, systemic blue mold, cold injury, manganese toxicity and many cases of tomato spotted wilt virus (mostly in western KY) on tobacco.

On fruits and vegetables, we have seen black rot on grape; bacterial leaf spot on peach; Rhizoctonia root and stem rot on bean, okra, pea and pepper; bacterial wilt on cucumber and cantaloupe; bacterial spot on pepper; tomato spotted wilt virus on pepper and tomato; as well as bacterial spot/speck, bacterial canker, early blight, Septoria leaf spot, and root knot nematode on tomato.

On ornamentals, we have seen Pythium root rot on lirioppe, chrysanthemum and snapdragon, as well as Rhizoctonia root rot on snapdragon; take-all, dollar spot and red thread on turfgrass; rose rosette and black spot on rose; Phytophthora root rot on rhododendron; Pseudonectria canker/dieback on boxwood; eastern gall rust on pine; and Verticillium wilt on redbud and catalpa.

INSECT TRAP COUNTS

UKREC, Princeton, KY, June 8 - 15, 2001

Black cutworm	0
True armyworm	59
Fall armyworm	2
Beet armyworm	0
Corn earworm	12
European corn borer	0
Southwestern corn borer	70

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.

