

KENTUCKY PEST NEWS

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TOBACCO

CURRENT BLUE MOLD STATUS REPORT by William C. Nesmith

This has been a difficult report to prepare due to the weather events of the past five days. Many thanks and appreciation to Tobacco Specialists in the southeastern states and the Plant Disease Forecast Center at NC State University for assistance in helping us review the blue mold developments, forecast analysis of weather events of the past week, and a look forward into the first couple of days of this week. The bottom line is that most areas of Kentucky probably were NOT exposed to viable inoculum from these events. Therefore, it is unlikely that economically damaging levels of blue mold could develop in field plantings within Kentucky during the next week; thus preventive sprays are not being recommended for most situations. But, growers need to remain informed about the current status of blue mold and to remain capable of making immediate spray applications should watches or warnings be issued.

Late last week a highly unsettled and slow moving (drifting) weather pattern became established over the southeastern USA. This system had our attention, because it provided the moisture to drive new blue mold development in the southeast with the winds routed to Kentucky, plus cloud cover along the wind routes to protect the spores. But our best estimate is that viable spore deposition did not occur in most of Kentucky. There was

not sufficient driving winds to rapidly carry the spores from the southeastern states into our region. Instead, local wind patterns kept most of the spores near the sources, and those that made it out should have been washed out prior to reaching Kentucky. On June 23, some viable spores may have reached southeastern Kentucky.

Also, conditions were not conducive for major blue mold development last week in most of Kentucky, even if the spores arrived, due to stressed plants, limited leaf moisture, and high temperatures at night. The risk of infection was higher in southeastern Kentucky than the remainder of the state due to more leaf moisture and closer proximity to spores showers.

This extended weather pattern will keep blue mold active in the southeast, east Tennessee, and eastern Pennsylvania, plus it will increase plant susceptibility here due to the lower light intensity, especially if night temperatures drop into the 60's for six hours or more and moisture is present. Spore deposition and infection risk are highest early this week for northeast Tennessee and the bordering counties of northwest North Carolina and extreme southwest Virginia. Long range transport from these sources is not expected in the next couple days. However, trajectory analysis will be important, which can be accessed through our website, located at <http://www.uky.edu/Agriculture/kpn/kyblue/kyblue.htm>

Currently, in Kentucky, we need to remain focused on preventing build up in abandoned transplant sites - both burley and dark. Either destroy the plants or keep them protected with fungicides. Burley crops in southeastern and southern Kentucky and anywhere the crop is being irrigated,

should be scouted twice weekly for evidence of blue mold. If activity is found, promptly report it, and immediately start fungicide programs in the field. See issue 948 of Kentucky Pest News (April 22, 2002) for the foliar fungicide options labeled in Kentucky for use in the field.

By the way, we have received several questions concerning the status of labeling Quadris for blue mold control of tobacco. Please be aware that Quadris is NOT labeled for use on tobacco, moreover, it is not expected to be labeled for use in this year's crop, based on recent communication directly from the manufacturer. Yes, it is true that considerable research has been conducted with it on tobacco and there is serious interest in labeling it on tobacco, someday.

But, we have had other fungicides make it to this point for use on tobacco, only to fail critical additional tests. The materials currently labeled (Actigard 50 W, Acrobat MZ, Acrobat 50 W, and Dithane DF Rainshield) have passed all required tests and will control blue mold.

NO RESCUE TREATMENTS FOR WIREWORMS

By Lee Townsend

Wireworms are not the problem they were many years ago in tobacco but every year a few infestations show up. With new products coming along, it is always worth asking about rescue treatments. As with most soil insects, there is not a way to control them after they have attacked transplants.

Preventive application is the only way to deal with wireworms. Even then, application method and timing are crucial to success. The best control tends to result from a broadcast spray applied about two weeks before setting and incorporated thoroughly into the top 2 to 3 inches. Even incorporation mixes the insecticide in the area where wireworms will encounter it and the 2 week period before the crop is set gives the product a chance to work.

Usually, the infestation is spotty in the field and neighboring plants will compensate for missing individuals with no loss of yield at harvest.

CORN

EUROPEAN CORN BORER MOTH FLIGHT **by Ric Bessin**

The moths from the first generation European corn borer are beginning to take to the air throughout the state. As much of the corn was planted late this year, many fields escaped first generation infestations. But those same fields

may be more attractive to second and third generation egg laying late in the season. Particularly with late planted fields, those planted after May 15, growers will need to scout those fields carefully, identify the most heavily infested fields and schedule those for the earliest practical harvest. The added cost to dry the grain needs to be compared to the potential for ear drop and stalk breakage that contribute to harvest losses. Pepper growers will need to begin monitoring for European corn borer and managing them as necessary.

Southwestern corn borer second generation flight is still several weeks away. We have observed that these moths are two to three weeks behind those of European corn borer. Fortunately for Kentucky, our European corn borer activity has been light to moderate, and the southwestern corn borer activity has been moderate as well. But these is the potential for rapid buildup for the second and third generations and much of the corn will stay vulnerable to attack later in the season due the planting delays this spring.

SOYBEANS

JAPANESE BEETLE ON SOYBEAN **by Doug Johnson**

Japanese beetle have hit western Kentucky with a vengeance. A number of producers have commented on how many beetles are currently present in their crops. These large populations are likely to continue for a few years. However, as our natural predators begin to recognize the beetles as a food source their populations will decline. Japanese beetle will likely never go away, but they will not always be as numerous as they are in the first several years after they have expanded into a new area.

In full season beans, the plants should have quite a bit of foliage on before the beetles emerge. Since Japanese beetles are foliage feeders, it is quite easy to detect and estimate damage to the plants. If you are watching your field you should know well ahead of time if a problem is going to occur. Treat the Japanese beetle just as you would any other foliage feeder. Remember soybeans are very tough plants, they will compensate for a great deal of damage before suffering any yield loss.

In double crop beans a question has arisen about controlling the beetles in the mature wheat in order to protect the newly emerging soybeans. This is not a good idea for the following reasons:

- With the exception of malathion (7 day harvest restriction) most insecticides would require too great a wait between insecticide application and harvest. Generally from two weeks to a month.
- Japanese beetle can move a great distance. Killing what is

in the field ahead of time will not prevent more beetles from being attracted into the newly emerging beans.

- Given any decent growing conditions, the soybean plants are very likely to outgrow the ability of the beetles to damage them. At the very early stages (seed leaves to 1st trifoliolate) treat the Japanese beetle much like you would the bean leaf beetle.

If you still have not seen these insects they are pretty easy to identify. They generally show up in early to mid-June and stay around through August. However, because they have only one generation per year, their populations will be largest in the early part of the season and taper off through time. They are metallic green and bronze beetles about ½ inch long. There is a row of white tufts on the side of the body below the bronze wing covers. If there are enough beetles around to harm the crop you will have NO trouble finding them!

Adults are leaf feeders. They begin feeding at the top of the plant and work downward. They will chew the leaf tissue between the veins. This type of damage gives the leaves a brown lacy appearance. Infestations may start with beetles feeding on weeds, especially smartweed, then moving to soybeans.

Scouting is usually very simple. If there is any real danger of damage you will see lots of Japanese beetles. That does not mean wait to scout until you see the beetles in the hundreds or thousands, but it does mean that you should be able to find them well in advance of any economic damage.

To determine if the infestation is important you will need to estimate the amount of defoliation the beetles have caused. You can find procedures for estimating defoliation in the Soybean IPM manual (IPM-3). If you don't have a copy you can download one from the IPM Web site at:

<http://www.uky.edu/Agriculture/IPM/ipm.htm> Look under "Manuals and Fact Sheets"

Also, in IPM-3 and in the Soybean insecticide recommendations (ENT-13) you can find Economic Threshold tables (Table 2.) based on defoliation. This table may be used to determine if enough defoliation has occurred to warrant an insecticidal control. Generally, control should be considered if 30% or more defoliation before bloom, 20% or more defoliation from bloom to pod fill, or 30% or more defoliation from pod fill until harvest **OR** if defoliation exceeds the economic injury levels listed in Table 2.

Japanese beetle have a notorious reputation in fruit, vegetable and ornamental crops. However, they should be relatively easy to manage in soybeans. Just make sure you

do not ignore the situation.

LIVESTOCK

DEALING WITH HOUSE FLIES

By Lee Townsend

Large numbers of house flies means that there are at least a few good breeding sites around. These need to be addressed but the often the first steps are directed at the adults, just to get some relief. Knocking down large numbers of adult house flies generally means application of residual sprays such as cyfluthrin (Countdown), lambda-cyhalothrin (Grenade) or permethrin (Atroban, Ectiban, Permethrin, etc.) to fly resting sites. House flies rest on sunny surfaces during the day and tend to come inside buildings or under eaves at night. Fly specks indicate where flies spend time and show where treatments should be applied. These surfaces should be wet to the point of runoff, but not enough to form puddles. Residual sprays should not be allowed to contaminate feed or water. Sunlight, high temperatures and rain cause residual sprays to break down or wash away, so treatment may have to be repeated at two- or three-week intervals.

Space sprays are insecticides with excellent fly knockdown properties, but they have little residual value; the spray must contact the fly to be effective. These sprays are applied in and around swine, cattle or other livestock rearing facilities with mist blowers, hydraulic sprays, or foggers. Space sprays have no residual value so applications at two- or three-day intervals are needed.

Insecticide baits can be used to aid in house-fly control. The baits should be distributed along walls, window sills or other areas where flies congregate inside buildings, and in areas outside where flies congregate. Make sure the baits are inaccessible to animals or children. Liquid baits can be applied to burlap bags, papers or other removable surfaces, or sprayed on walls or ceilings where flies rest. Baits by themselves seldom achieve fly control, but should be used in conjunction with residual or space sprays.

Pest strips and sticky traps can be used inside buildings (usually around doorways). The label on the no-pest strip indicates use restrictions and number needed for area of space. There also are timed release mechanisms available commercially which release pyrethrins at certain intervals.

Before using any insecticide, read and fully understand the label. Follow mixing directions, precautions, restrictions and storage instructions to ensure safe use of the insecticide. Some products are not for use on animals.

All of these tactics can provide temporary help but reduction or elimination of breeding sites is the foundation of house fly control. Flies get noticed and are the obvious target of control

programs but the real key is to get the maggots. Maggots can be found in spilled feed, or along most any areas where hay, manure, feed and water collect and stay for some time. Treatment of obvious breeding sites with Rabon or Ravap will kill maggots and lower fly numbers, as well.

Once the fly problem is reduced, take the time to tackle and eliminate or reduce the breeding sites. Chemical control alone cannot overcome the breeding capacity of the house fly. See ENT 11 (beef) or ENT 12 (dairy) for fly control options.

FRUIT

BLACKBERRY ROSETTE (DOUBLE BLOSSOM) IS APPEARING

by John Hartman

Rosette disease, caused by the fungus *Cercospora rubi*, is appearing on blackberries in the field and is the subject of recent diagnoses in the plant disease diagnostic laboratory. Blackberry growers should be looking for flowers with distorted petals, giving the appearance of a double flower (hence double blossom). Unopened flower buds may be abnormally large and coarse and frequently somewhat redder. Flower petals and sepals may enlarge and become leaf-like. The fungus produces a whitish spore mass that can cover the surface of infected flower pistils and stamens. In addition, shoots may appear abnormal with leafy proliferation (rosette) or witches broom. Several witches brooms may be formed on one cane. The foliage of witches brooms may be paler green than normal and eventually turn a bronze color. Berries do not develop from infected branches and other parts of the cane may produce only small, poor quality fruit. Thus, this loss of yield and quality should concern growers.

When the disease is established, the buds of new canes become infected from fungal spores produced on infected distorted flowers of old canes. Blackberries can become infected from spores produced on wild blackberries nearby and carried to the blackberry planting by wind or insects. After infection in summer, new canes may remain symptomless until the next year. The fungus overwinters in infected buds. Blackberry nursery stock can harbor the causal fungus in rooted plants, but not in root pieces, which are commonly sold for blackberry propagation. Dr. Terry Jones, Horticultural Specialist at the Robinson Station at Quicksand, demonstrated this some years ago by successfully growing disease-free blackberries from root pieces taken from infected plants while at the same time observing disease development on the same plant source transplanted as rooted plants.

Control. Select a site isolated from wild blackberries or other brambles. In many parts of Kentucky, this may be difficult. Use disease-free nursery stock, roots only. If the disease is not already severe, infected rosettes and blossom clusters should be removed and destroyed before they produce spores. Old canes should be removed and destroyed immediately after harvest. Remove and destroy wild blackberries and other brambles near the planting.

If the disease is serious, more drastic action may be needed. The fungicide Benlate can be used up to 5 times in a season beginning at first bloom and extending through harvest. This fungicide will no longer be available after this year. It is hoped that other fungicides will emerge as substitutes for Benlate before next year. Some growers control this disease by harvesting blackberries in alternate years and destroying the above-ground parts of both the new and old canes in spring every other year. Splitting the planting into two fields allows harvest every year with biennial cropping on each half.

VEGETABLES

SQUASH BUG ACTIVE

by Ric Bessin

Squash bug adults are active in winter and summer squashes. These inch-long sucking bugs damage cucurbit plants by removal a large amounts of plant sap. With transplants and small plants that have small, restricted root systems, squash bugs can remove sap to the extent that the plants wilt and may even die. Later in the summer on larger plants, squash bugs remove the sap from leaves and stems and can cause leaf yellowing and necrosis.

Squash bugs are commonly found on the undersides of leaves where they lay their eggs. With plasticulture fields, squash bugs are often at the base of the plants beneath the plastic. The protection they get under the plastic may make control with foliar sprays more difficult.

During the coming weeks, squash bug will lay eggs on the undersides of leaves. Upon hatching, squash bug nymphs resemble aphids. As they get older, they take on a greyish appearance as they develop a waxy coat. Generally, they younger nymphs are much easier to control than the larger nymphs. In addition, treatments targeting the young nymphs will facilitate superior coverage as the plant canopy is smaller.

Currently, we use a treatment threshold of one squash bug egg mass per plant as the decision guideline for treatment. When fields reach this leaves, growers should wait until egg hatch before treating for the nymphs, as the insecticides used for squash bugs do not control the egg stage.

LAWN & TURF

SPRING DEAD SPOT SUSCEPTIBILITY OF SELECTED BERMUDAGRASS VARIETIES IN KENTUCKY

by Paul Vincelli

Spring dead spot (SDS) is the most serious disease problem on bermudagrass in Kentucky and other areas of the transition zone. It is caused by several root-infecting fungi; cooperative work with Dr. Ned Tisserat of Kansas State University has established that both *Ophiosphaerella herpotricha* and *O. korrae* are found in Kentucky. These fungi infect and colonize the roots of bermudagrass, and by doing so, lower the cold tolerance of the grass. Thus, the infected grass is killed during cold periods in winter. During spring green-up, dead patches which are usually roughly circular occur where the disease was active. When the disease is severe, these patches blend together, but if SDS is involved, the circular pattern is always evident in the areas of the sward that have low to moderate damage. This circular pattern of affected turf is what helps distinguish this disease from winterkill, which occurs over wider areas and without clear “patchiness”. Because the affected turf is dead, even low levels of the disease—such as 3-5% of the turf with symptoms—can have a dramatic affect on overall aesthetic quality of the turf.

All varieties of bermudagrass (*Cynodon dactylon*) are susceptible, but several are less susceptible than the worst varieties. Use of varieties with partial resistance is recommended, because our current management recommendations will only reduce—but not prevent—disease activity. We had a severe outbreak of SDS in a variety trial maintained at the UK Turf Research Center, for which data collected from that trial are presented in Table 1. Because SDS developed from natural inoculum, and because it is by nature a variable disease, the level of statistical variation is high. However, some inferences are possible, at least when comparing extremes.

Vegetative Cultivars

Of the vegetative cultivars, two are recommended for Kentucky: Quickstand and Midlawn. Of these, Midlawn consistently scores well relative to SDS. Midlawn is a hybrid between common bermudagrass and African bermudagrass; the latter species contributes genes for resistance to SDS. While for many years, SDS was not observed in Quickstand, it seems to be becoming a serious problem in many swards. We do not know if this is the result of a shift in pathogen population to a species more aggressive on this cultivar, a reduction in natural biological control, or some other mechanism. Tifsport, one of the newest cultivars, had the highest level of SDS among the vegetative cultivars. Certain varieties with low SDS

ratings are otherwise not suited to Kentucky conditions, such as Cardinal.

Seeded Cultivars

One of the observations from the test is that the seeded cultivars are, as a whole, considerably more susceptible to SDS than are the vegetative cultivars. Of the seeded bermudagrasses included in this test, Riviera is the recommended variety, partly because of its partial resistance to SDS (Table 1). Unfortunately, the availability of Riviera seed is very limited. (Yukon, also known as OKS 91-11, is also a suitable variety for Kentucky, but the quality of this variety is not as high as that of Riviera, and it was not included in the current test.) Seed of the cultivar Princess is available in Kentucky, but it is worth noting that the level of SDS observed in this cultivar was numerically quite high and not statistically different from the worst cultivar. Mirage has been available for many years, but our data show that its susceptibility to SDS is a serious handicap. Seed of Savannah and Sahara are also available in Kentucky; our SDS data for Sahara would support not using that variety.

Acknowledgment

Thanks to Dr. A. J. Powell, UK Turf Agronomist, for reviewing a previous draft of the article.

Table 1. Damage from spring dead spot in selected bermudagrass varieties on 3 May 02 (1997 NTEP trial)

Seeded cultivar	% SDS*
Savannah	20.0 abc
PST-r69c	36.7 abc
Princess	35.0 abc
SW1-7	38.3 abc
SW1-11	21.7 abc
Jackpot	51.7 a
Sundevil	41.7 abc
J-540	35.0 abc
J-1224	21.7 abc
Shangri La	28.3 abc
Mirage	41.7 ab
Pyramid	21.7 abc
Majestic	40.0 ab
Riviera (OKS 95-1)	11.7 c

Blue Muda	23.3 abc
Blackjack	15.0 bc
Sahara	30.0 abc
Arizona Common	35.0 abc
Panama	16.0 bc
Vegetative cultivar	% SDS*
MiniVerde	21.7 a
Shanghai	8.3 abc
CN2-9	7.3 abc
OKC 18-4	4.7bc
OKC 19-9	2.3 c
Cardinal	1.0 c
Tifsport (Tift 94)	25.0 a
Midlawn	1.7 c
Tiftway (=419)	10.7 abc
Tifgreen	14.0 abc
Quickstand	15.3 abc
Vamont	9.0 abc
Greg Norman	15.7 abc

*Seeded cultures were analyzed separately from vegetable cultures, as these were separate tests. Means within the same column followed by the same letter are not significantly different, Waller-Duncan k-ratio t-test ($k=100$, $P=0.05$). Arithmetic means are presented with statistical groupings based on arcsine-square root transformed statistics.

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 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. Products containing chlorpyrifos (e.g., Dursban) or diazinon are less effective and no longer available for purchase. **There is little benefit in applying a short-lived, curative-type product 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.*

DIAGNOSTIC LAB HIGHLIGHTS

by Julie Beale and Paul Bachi

Field crop samples diagnosed this past week included herbicide injury on corn; black shank, soreshin, target spot, Pythium root rot, Fusarium wilt, tomato spotted wilt virus, chemical injury, early flowering, and manganese toxicity on tobacco.

On fruit and vegetable samples, we saw cases of double blossom on blackberry; Botryosphaeria dieback on blueberry; black rot and anthracnose on grape; fire blight on apple and pear; angular leaf spot on cantaloupe; bacterial wilt on cucumber; bacterial blight on pea; bacterial spot and Pythium root rot on pepper; Septoria leaf spot, bacterial canker, Alternaria canker, Rhizoctonia stem rot blossom end rot, and catfacing on tomato.

On ornamentals, we saw Heterosporium leaf spot on iris; black root rot, Pythium root rot, and Botrytis blight on petunia; Phytophthora blight on vinca; brown patch on tall fescue turf; take-all patch on bentgrass; anthracnose on ash; powdery mildew on dogwood; cedar-quince rust on hawthorn; Botrytis blight, black spot and rosette disease on rose; Amphiporthe canker on sumac; and numerous cases of transplant shock and stress-related symptoms on various woody ornamentals.

INSECT TRAP COUNTS

UKREC, Princeton, KY - June 14-21

Black Cutworm	1
True armyworm	9
Corn earworm	11
European corn borer	1
Southwestern corn borer	1

Fall Armyworm 0

NOTE: Trade names are used to simplify the information presented in this newslett. No endorsement by the Cooperative Extension Service is intended, nor is criticism implied of similar products that are not named.