



# KENTUCKY PEST NEWS

ENTOMOLOGY • PLANT PATHOLOGY • AGRONOMY

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## ALFALFA

### SELECT HERBICIDE APPROVED FOR GRASS CONTROL IN ALFALFA

By J.D. Green

The EPA has recently approved the use of Select 2EC herbicide for use in alfalfa. Select is a postemergence herbicide that provides control of several annual and perennial type of grasses such as crabgrass, foxtails, goosegrass, and johnsongrass. It may be applied to seedling or established alfalfa grown for hay, silage, green chop, or direct grazing. Select is not recommended for grass control in mixed stands of alfalfa since desirable grasses interseeded with alfalfa will be killed or severely injured.

In general, grasses should be small and actively growing at time of application. The use rate on seedling alfalfa is 6 to 8 fl. oz. of product per

acre and a minimum of 8 oz per acre for established alfalfa. A Crop Oil Concentrate at 1% v/v is recommended as an additive. There is a 15 day waiting period between application and harvest of alfalfa for hay, forage, or grazing. This period will be longer if tank mixed with other herbicide products such as 2,4-DB.

Select has also been approved for use on tomatoes and dry beans.

### POTATO LEAFHOPPERS ACTIVE

By Lee Townsend

Potato leafhoppers were caught in Fayette county alfalfa last week. Their feeding causes the wedge-shaped yellow tip known as "hopperburn". No problems should develop before the first cutting in established fields but fall- or spring-seeded stands are at risk because of the longer growing period until the first

harvest. The potential for damage is greatest in spring-seeded fields so they should be watched most closely. The small size and rapid movement of these light green insects makes a sweep net the only good means for checking fields.

See Entfact 115, *Potato Leafhoppers*, and ENT-17, *Insecticide Recommendations for Alfalfa, Clover, and Pastures*, for more information.

## **CORN**

### **ARMYWORMS IN CORN**

**By Ric Bessin**

Will 1998 be the year of the armyworm? Well, pheromone trap catch counts indicate that it could be. Trap counts have been running in the triple digits over the last few weeks, so producers should be watching their corn fields carefully. Initial signs of damage include feeding on the leaf margins of young seedlings. Armyworms usually hide during the day, especially on bright sunny days.

There are a few things to consider before deciding whether or not to treat for armyworms with an insecticide. First, what sizes are the armyworms? If they are longer than about 1-1/4 inch they have completed most of their feeding. Controlling larvae of this size is not profitable because the damage is already done. Control actions in corn are recommended when armyworms average between 1/2 and 3/4 inches and the entire field averages 35% infested plants or 50% or more defoliation is seen on damaged plants.

Preventive treatments for armyworms are not justified, although it may appear as if they are very effective. Some fields in Kentucky that have significant armyworm infestations will require treatment, but the likelihood that a particular field will have an outbreak is very small. These usually are no-till fields planted into grassy cover crops. Keep in mind that majority of fields will have some armyworms in most years, but the chance of encountering a infestation that economically justifies the cost of treatment is small on a field-by-field basis.

Only rescue treatments are recommended for armyworms in corn. Spot treatments can usually provide effective control of field-margin infestations. For more information on armyworms in corn, see ENTFACT 109, *Armyworms in Corn*.

## **SMALL GRAINS- WHEAT**

### **APHID POPULATIONS: STILL GOING STRONG, BUT WHERE IS THE BYD?**

**By Doug Johnson**

I have received several calls about aphids on wheat heads. This is no surprise to anyone involved in wheat production. We have had a banner aphid spring. All of the samples I have seen are English grain aphids with a few bird cherry-oat aphids still remaining. This is not unusual and treatment thresholds have not changed. If you find an average of 50 or more aphids per head during the filling stage, you should consider an insecticide application. In the main, you are protecting 'test weight'. In truth, the application may not pay for itself but this is probably one case where the treatment approach is a good one.

The lack of BYD is interesting. I have talked with several entomologist from further south and they also note a light BYD year. I find this particularly interesting considering the mild winter, mild spring and the VERY LARGE populations of bird cherry-oat aphids throughout the spring. There is some BYD around and we may see some more symptoms yet, but they are very late and all the bad cases I have seen have been on early planted fields.

### **STORING SMALL GRAINS**

**by Doug Johnson**

It is not too early to think about storing your upcoming small grain harvest. Because small grains are stored through the summer, they are among the most problematic of our storage efforts. One of the common problems is having no place ready to put the harvest. This often results from planing to sell small grains for

cash at harvest but having to change tactics because of some unforeseen consideration.

First and foremost, store clean, dry grain in clean, dry bins. If at all possible avoid putting new grain in with grain left-over from previous years. If you must do this, treat the old grain and bins before adding the new grain. With grain storage PREVENTION is always easier and more economical than controlling an infestation at a later date.

## **WHEAT DISEASE ALERT**

**By Don Hershman**

The crop in west and south-central Kentucky ranges from just before flowering to just past flowering, into very early grain development. Crops in more northern parts of the state are heading to very early flowering.

The disease situation is at a crossroads. In western Kentucky, speckled leaf blotch, caused by *Septoria tritici*, is at the highest levels I have seen during my 14 years in the state. Normally I don't worry too much about this disease because warm weather, which usually exists after head emergence, tends to shut it down. However, this year has been cool and wet - ideal conditions for speckled leaf blotch - and the disease has been moving onto the upper leaves in many fields. In addition to speckled leaf blotch, I am also seeing some *Stagonospora nodorum* leaf blotch and tan spot. Leaf blotch, in particular, is almost always a concern because the causal fungus is very widespread and can be fairly aggressive during warm, wet weather. In addition, most common wheat varieties are susceptible to leaf blotch as well as the head phase of *S. nodorum* infection, glume blotch. At present, levels of leaf blotch are low, and I attribute this to the cool weather - just the opposite of the speckled leaf blotch situation. In my view, however, *S. nodorum* is poised to make a move as soon as temperatures warm into the 70's and low 80s.

Many fields, statewide, have a significant powdery mildew infestation in the lower canopy. I think the rain as helped to keep some mildew development in check. Powdery

mildew likes cool temperatures and high humidity, dew and light rain, but spores of the mildew fungus can be washed off plant surfaces, and we have had many episodes of hard rain in April and so far in May. Leaf rust is fairly common in west Kentucky, but levels, so far, are not increasing greatly because of the cool temperatures. However, like leaf blotch, leaf rust could flare up quickly if we get some warm, wet weather. Bottom line - if ever there was a year to use foliar fungicides in high yield potential crops in Kentucky, THIS IS THE ONE! I think the probability is quite high that many fields in the state will lose at least 5-10 bu/A to one or more of the diseases discussed above. Fortunately, much of this yield loss can be avoided by applying Tilt pre-flowering, according to the current 24C label. Many growers have already sprayed their wheat, but those who have yet to spray (and still have fields pre-flowering and are legal to spray) may have a tough time getting a spray rig into their fields because of all the rain we have had. Those farmers may consider aerial application of Tilt. If so, heed these words of caution: do not cut down spray volume below 5 gal/A when attempting to apply a foliar fungicide aerially. Yes, an experienced aerial applicator can get decent coverage of a crop, but this can only be achieved if sufficient spray volume is used. Tilt is a systemic fungicide, but it still must be applied uniformly to a crop in order to get the desired disease control results. Whether you are applying a fungicide by ground or air, always leave a non-sprayed strip so that you can see (and measure for yield if the area is large enough) how much the field benefitted by applying a fungicide.

My biggest concern (and question) at the moment is our head scab potential. Our last big epidemic was in 1991. April and May in that year had numerous periods where temperatures were in the upper 70's and 80's and rain events were frequent. We all know the end result that year. So far, we have had more rain events this year than we had in 1991, so many wheat fields have been exposed to wet conditions during flowering. This is a red flag as far as scab infection goes. The big difference between this spring and the spring of 1991 has

been the significantly lower temperatures this year. If we escape a serious head scab epidemic this spring, it will likely be due to the low to moderate temperatures during late April and so far in May. Of course the head scab potential in fields just now heading and flowering, is still to be determined by near future weather patterns.

Realizing that the weather may be conducive to a head scab problem, many growers have asked me if Tilt applied prior to flowering will be of any benefit in controlling head scab. My response has been, probably not. There is some evidence that Tilt may suppress head scab to a small extent. In fact, the recently-approved 24c label for Tilt in Indiana lists head scab suppression as a possible benefit. However, I have seen no data to suggest that Tilt will provide a level of control which is acceptable to growers. Suppression is a statistically significant, but small, reduction in a disease level. Control, on the other hand, represents a significant and large reduction in disease, usually in the 90%+ control range. The data I have seen, thus far, on head scab suppression typically has not translated into significant yield protection. Having said this, I must tell you that Kentucky is part of a national uniform fungicide test where we are evaluating different foliar fungicide treatments for any possible value in controlling head scab. This means I am not completely shutting the door to the possibility that foliar fungicides may help you to manage head scab in the future. But what I am saying, is that currently available fungicides (along with their label restrictions and directions) do not appear to provide acceptable levels of head scab control.

Finally, amidst all of this doom and gloom there is some good news: we appear to have dodged the barley yellow dwarf virus state-wide. I have seen no fields with a significant BYD problem, regardless of whether or not they had been sprayed with an insecticide (to control the aphid vector of BYDV). This observation has been confirmed by Doug Johnson, the UK Entomology Specialist, who has wheat responsibilities.

## **TOBACCO**

### **CURRENT BLUE MOLD STATUS**

**By William Nesmith**

Active blue mold has been confirmed in transplant production systems in five western Kentucky counties: Calloway, Daviess, Logan, Todd and Simpson. Most of this activity is connected directly to prefinished plants from Florida, but the activity in Calloway Co. is either from a different source or resulting from secondary spread from Florida plants. The amount of secondary spread confirmed to date has been low and usually close to the initial source of infested plants placed in the community. However, I suspect blue mold is much more widespread than has been confirmed, but at low levels within those sites. All isolates tested to date have been highly resistant to metalaxyl, but highly sensitive to dimethomorph (a component in Acrobat MZ).

Blue mold has also been confirmed on two fronts in Tennessee: On the west, from Cheatham County east to Macon County, and on the far east, in Sevier and Blount counties. The disease also remains very active in the southeastern US, Georgia and Florida. Kentucky's weather has been highly favorable for blue mold development and spread during the past several weeks, so there may be much more activity at low levels than has been recognized to date. I urge County Extension Agents to help scout for the disease, especially those west of a line from Monroe County north to Jefferson County.

A major unknown at this time relates to the adaptability of the strain(s) of blue mold introduced with Florida-plants to Kentucky's environment. Although the disease has destroyed some greenhouses and float systems, secondary spread has been much slower than expected. This may negatively impact our credibility among some growers. We do not understand why spread has not been more rapid considering recent weather events, but I urge growers NOT to relax controls, yet, especially in transplant production systems. It

is possible that we are dealing with an imported strain that is well suited for the greenhouse, but is less fit for spread long distances via wind. But, it may be that the level of inoculum is low and quickly becomes diluted in the large volume of air, thus able to produce only a few initial lesions when it lands a few miles away. Whatever be the case, count your blessings, and keep up the control efforts.

A blue mold watch remains in effect for transplant production statewide, so control programs should remain in place. A blue mold warning remains in place for the five counties with confirmed blue mold. Both field and transplant production should be receiving regular fungicide sprays in counties with warnings. Also, fields planted using transplants from operations that may have been exposed to blue mold should be receiving regular fungicide sprays, regardless of the county.

Kentucky's tobacco industry should remain very alert to the movement of blue mold on transplants. That includes plants arriving from any area where blue mold exists: western Kentucky, western Tennessee, Florida and Georgia.

## **ACROBAT MZ USE IN FLOAT-BED SYSTEMS**

**By William Nesmith**

Some confusion exists about using Acrobat MZ in float systems. This article is an attempt to clarify the situation.

The Supplemental labeling for Acrobat MZ approved on April 29 for use in Kentucky clearly authorizes applications to float bed systems. This is covered on page 4 of the label in the "Directions for Use in Tobacco Transplant Production Systems." On May 7, 1998, the Kentucky Department of Agriculture released a statement affirming that float-beds were labeled sites.

Some of the confusion resulted from the

restrictions that float beds water should not be contaminated with run-off. During their review of the emergency applications, EPA considered the level of fungicide that enters the water in properly constructed float systems being sprayed at labeled rates with a "fine spray mist" applied to the point of runoff. Had EPA concluded that unacceptable levels of fungicide would have entered the water using this approach, float systems use would have been prohibited, because 90% of Kentucky's applications to transplants would have been in float systems.

Contamination of float water is a major concern if the label is not followed, however. The following practices should be avoided in making applications to float systems to avoid contamination of the float water:

- Do not apply Acrobat MZ as a drench, rather use it as labeled as a fine spray not to exceed 6 gallons of spray solution per 1000 sq. ft. Many of the spray systems in use apply a coarse spray with larger volumes of water and are in fact "drenching the material".
- Do not spray over open bays of water or open areas of water within bays that contain plants. Have the trays tightly compacted during applications of Ferbam, Dithane or Acrobat MZ fungicides.
- Do not make more than 4 applications to any float-production system.
- Do not add the Acrobat MZ directly to float water. Not only will such application result in contamination of the float water to levels above acceptable limits, but phytotoxicity should be expected. Furthermore, such an approach increases the potential of developing resistance to dimethomorph.

It is my understanding that the Kentucky Department of Agriculture will consider direct contamination of the float water to be a serious violation of the label. Commissioner Smith emphasized in his latest release that farmers should refrain from spraying Acrobat MZ over open bays of water or to pour it directly into water in float systems

## **TOBACCO FLEA BEETLE CONTROL OPTIONS**

**by Lee Townsend**

Favorable survival conditions for overwintering adult flea beetles sets the stage for significant numbers on newly set transplants. Heavy feeding by these small insects can stress transplants and keep them from getting off to a good start. Either one of two setting-time applications, Admire or Orthene, provides excellent protection.

Admire 2 F can be used as a transplant water treatment or as a foliar spray / drench on plants in float trays for tobacco flea beetle control, as well as long term control of tobacco aphids. A treatment rate of 1 fl. oz. of product per 1,000 plants, is the same in either application method.

UK field trials have shown the transplant water application to work as well against tobacco aphids as the tray drench method. Treatment cost per acre at \$4.50 per ounce of product would be \$34.20 for a population of 7,600 plants per acre.

As a Flowable formulation, Admire 2 F will form a suspension in the tank. With agitation the tiny particles will be mixed pretty evenly in the water. However, they have a tendency to settle to the bottom of the barrel over time. Stir the transplant water frequently to keep the particles suspended.

Adjust the rate when refilling the tank. Partially refilling the tank with water and adding a full rate of the insecticide will gradually increase the concentration of the material as you continue to set.

With either transplant water treatment, calibration of the transplanter is very important in delivering the correct amount of insecticide. Under-treatment can mean a reduced level or duration of control. Exceeding the labeled rate increases the control cost without providing any additional return. In fact, a precaution on the Orthene label states that some phytotoxicity may occur if more than one pound of the product is used per acre.

## **LIVESTOCK**

### **CYDECTIN POUR-ON**

Cydectin (moxidectin) Pour-On is a 0.5% oil-based solution that contains 5 mg of active ingredient per milliliter. This broad spectrum product controls a variety of internal and external parasites. In addition to controlling cattle grubs, it is active against scab and chorioptic mange mites, biting and sucking lice, and horn flies. There is a zero day slaughter interval. (Fort Dodge Animal Health)

### **HORSE FLY AND DEER FLY CONTROL DIFFICULT**

**By Lee Townsend**

Horse flies and deer flies are blood feeders that use sharp blade-like mouth parts to slash the skin. They then feed on pools of blood that well up at the site. These flies inflict painful bites and can make life miserable for horses and cattle but control is difficult. In addition, some can serve as disease vectors.

The larval stages of these flies live in moist, shaded areas in the soil. Areas along creeks, ponds, and wetlands provide excellent breeding sites which are too diffuse and environmentally sensitive to treat with insecticides. Adults spend only a small amount of time on animals so they may not receive a lethal dose of any insecticide that is applied.

Frequent applications of pyrethrins or pyrethroid insecticides (2 to 4 day intervals) during the peak of the season may provide some reduction in attack by these strong fliers. These flies prefer sunny areas so allowing animals access to shade or barns can give them a means of escaping attack.

## **FRUIT**

### **APPLE INSECT UPDATE**

**By Ric Bessin**

With night time temperatures in the low 60's and upper 50's, insect activity has increased in apple orchards. Both codling moth and plum curculio are active now and growers should take action against these pests. Plum curculio is laying eggs NOW and

needs to be controlled now if growers have not used an insecticide for this insect in their first or second cover sprays. Plum curculio can cause serious losses to commercial orchards in just a matter of several days.

While codling moths are showing up in pheromone traps, spraying for them now is not recommended. Growers should record the date when the fifth moth is captured in pheromone traps, this is the biofix date. Starting on the biofix date, growers should accumulate the number of degree days (base 50) until 250 degree days are reached. The 250 degree days corresponds with 3% egg hatch and is the best time to apply an insecticide for control of this insect. For more information on either of these insects, see ENTFACT 202, *Plum Curculio*, or ENTFACT 203, *Codling Moth*.

### **CEDAR-APPLE RUST SYMPTOMS ARE APPEARING ON APPLE LEAVES**

**By John Hartman**

Leaves of cedar-apple rust susceptible apples such as Britegold, Golden Delicious, Gold Rush, Jonafree, Prima, and Sir Prize are showing first disease symptoms. Look for tiny yellow-orange spots appearing on the top sides of the leaves.

During the coming weeks, the spots will enlarge and become more orange, and black dots (pycnia) which produce receptive hyphae and special spores called spermatia will appear in them. Following cross fertilization of the receptive hyphae by compatible spermatia, larger orange spots called aecia will develop on the lower leaf surface just opposite the infections now being seen. In early summer, the infected leaf area will be swollen and aecia will appear as conspicuous tiny orange-yellow aecial cups with white walls. With summer weather favorable for infection, aeciospores will be carried by air currents to susceptible cedars and junipers nearby to continue the cycle leading to the

spectacular orange galls we observed on cedars just a few weeks ago.

## **HOUSEHOLD**

### **BIRDS, BUGS AND BUILDINGS**

**by Mike Potter**

Despite their role in nature, birds may become pests when they nest or roost around structures. In the coming weeks, clients will be calling with a host of

questions stemming from birds building nests on their premises.

**Significance as Pests** - Pigeons, starlings and sparrows cause millions of dollars in damage by defacing buildings, sidewalks and cars with their droppings. Gutters, downspouts and air vents may become stopped up by nesting materials, and the feathers, filth, and carcasses can lead to secondary pest problems by attracting carpet beetles, mealworms and other scavenger insects.

Birds nesting around buildings may also pose a health hazard to people and farm animals. Mites, lice and bedbugs can invade living areas and bite humans after the nestlings leave or a bird dies. Birds can also transmit salmonellosis (food poisoning), and cryptococcosis and histoplasmosis – systemic fungal infections acquired by inhaling airborne spores which grow in bird droppings.

*Controlling bird mites*- These bloodsucking ectoparasites normally live on the birds or in their nests, but will sometimes migrate into buildings when a bird dies or abandons the area. This has been a common occurrence in recent weeks, probably because heavy rains have flooded out nests built in eaves and gutters and killed nestlings. Occupants become aware of the problem when they are attacked by mites searching for an alternate food source. The bites cause moderate to intense itching and irritation. Bird mites are tiny but usually can be seen with the naked eye. They are about the size of the period at the end of this sentence.

The first step in controlling bird mites is to remove the birds and their nests. Often, the nests will be found in the attic, around the eaves and rafters, or in the gutters or chimney. Gloves should be used when handling dead birds, and a respirator should be worn when removing nest materials to avoid inhaling fungal spores and other potential disease-producing organisms associated with the droppings.

After nests are removed, the location should be sprayed or dusted with a residual insecticide such as those labeled for flea control. (Permethrin and carbaryl are examples of effective active ingredients.) Space treatments with non-residual aerosol insecticides containing synergized pyrethrins, allethrin, tetramethrin, etc., can be used in conjunction with residual sprays or dusts. A vacuum cleaner or cloth moistened with alcohol or dilute ammonia solution can be used to eliminate

mites crawling on walls, floors and other indoor surfaces. Bird mites can survive several days without a host. Unless corrective measures are taken, the occupants will probably continue to be bitten.

**Bird Management** - *The most effective way to avoid problems with pest birds around buildings is to deny them nesting and roosting sites.* The best time to do this is before nests are well established. Vents and other small openings should be sealed with 1/4-inch hardware cloth or similar exclusion materials. Attic vents may need to be screened or netted on the exterior to prevent sparrows from nesting between the louvers. Nesting or roosting on ledges, eaves, window sills and other surfaces can be deterred by installing tightly strung, parallel strands of wire just above the surface of the ledge. Roosting can also be discouraged by changing the angle of the ledge to 45 degrees or more with sheet metal or wood boards. "Porcupine" wires (Nixalite(R), Cat Claw(R)), coils (Bird Barrier(TM)), repellent gels, or netting are effective, provided they are correctly installed. Homeowners can purchase bird exclusion materials at hardware or farm supply stores, or may want to call a professional pest control firm.

Before installation, remove nests and droppings to avoid problems with scavenger insects and potential disease pathogens. Gloves and a respirator (dust masks are insufficient) should be worn to avoid inhaling fungal and bacterial spores. Lightly moistening droppings and nesting materials with water before removal reduces the tendency for spores to become airborne.

Fake owls, snakes, balloons, and other visual repellents usually fail because birds soon become acclimated to these objects and ignore them. If these devices are tried, reposition them periodically or vary the pattern. Repeated disruption of nest building activities, such as with loud sounds or the spray from a water hose, can be effective but require persistence. Such efforts should ideally begin before the birds have formed a strong attachment to the site. If frightening efforts are to be successful, they must continue for several days, and may need to be repeated if the birds decide to rebuild. Toxic baits or shooting of birds should be avoided and in many areas is illegal. Large or complicated bird jobs may require the expertise of a professional pest control or nuisance wildlife firm.

Finally, any leftover bird seed from winter feeding should be stored in tight-fitting containers. Unsealed bags of seed left in the garage or basement

are prime targets for meal moths, mice and other pests.

## **ORNAMENTALS AND SHADE TREES**

### **CONIFER NEEDLE PROBLEMS**

**By John Hartman**

Spruce, susceptible to *Rhizosphaera* needle cast disease, is showing needle yellowing symptoms. The infected needles will soon turn a purplish brown and drop off in summer. Use a hand lens to look for tiny black dots lined up in rows on any surface of infected needles. These black dots are fungal fruiting structures emerging from the needle stomata.

As mentioned last month in *Kentucky Pest News*, pine needle cast disease symptoms are expected to appear due to infections last year during wet, rainy spring weather. Needles infected with *Cyclaneusma* needle cast are already turning brown and falling, but needles with brown spot needle blight disease may only be showing brown needle bands now, with defoliation to come later. *Lophodermium* needle cast disease, which also produces symptoms in spring is sometimes found in Kentucky. Infections for this disease occur primarily in the late summer or fall, a time which is usually drier and less favorable for infections. Because weather late last summer was generally dry, tree owners are probably not seeing this disease to a great extent this spring.

### **GALLS COMMON ON OAKS AND MAPLES**

**By Lee Townsend**

Galls are irregular plant growths which are stimulated by the reaction between plant hormones and powerful growth regulating chemicals produced by some insects or mites. Many species of gall makers attack oaks; most are tiny wasps.

Galls may occur on leaves, branches, bark, flowers, buds, acorns, or roots. Leaf and twig galls are most noticeable. The inhabitant gains its nutrients from the inner gall tissue. Galls also provide some protection from natural enemies and insecticide sprays. Important details of the life cycles of many gall makers are not known so specific recommendations to time control measures most effectively are not available.

Gall makers must attack at a particular time in the year to be successful. Otherwise, they may not be able to stimulate the plant to produce the tissue



which forms the gall. Generally, initiation of leaf galls occurs around "bud break" or as new leaves begin to unfold in the spring.

Once the symptom or gall appears, the causative arthropod is protected within the structure. This means that remedial actions, other than pruning in some cases, are not effective. Preventive action is necessary to attempt to reduce the infestation the following season and these may be of limited value. Fortunately, most galls, especially those on leaves and leaf structures, do not harm the health of the tree.

**CALICO SCALES - LARGE AND DISTINCTIVE**  
**By Lee Townsend**

Several specimens of calico scale have come in already this spring. These colorful, globular scales (about 1/4" in diameter) are dark brown with splotches of white. They can be found on all stone fruits and their ornamental cultivars. Flip over a scale now and you will see hundreds of small eggs. These will hatch soon and the tiny crawlers will move off to settle and feed on leaves during the summer. They will move back to twigs just before leaf drop in the fall.

Calico scales produce a large amount of liquid waste, called "honey dew". This liquid will fall onto leaves and branches and support the growth of sooty mold. The mold growth can be intense enough to interfere with photosynthesis.

**DIGANOSTIC LAB - HIGHLIGHTS**  
**By Julie Beale and Paul Bachi**

On **wheat, barley yellow dwarf virus, wheat spindle streak virus and bacterial streak** were diagnosed. On **alfalfa lepto leaf spot** was diagnosed. On **tobacco**, we are seeing a number of disease problems, including **Sclerotinia collar rot, blackleg bacterial rot, Rhizoctonia stem rot, target spot, Pythium root rot, and blue mold** (two more counties). We are also seeing non-infectious problems such as **temporary phosphorus deficiency, fertilizer burn and high alkalinity.**

On ornamentals we are beginning to see a lot of **anthracnose on shade trees** (particularly **ash and sycamore**). We also diagnosed **leaf/flower gall of azalea** and **rust of hollyhock**. Needle diseases, such as **Rhizosphaera needle cast** on spruce and **brown spot** on pine, are common this year. Infections were heavy during our rainy spring last year and symptoms from those infections are

beginning to be apparent. On fruits we have seen **rust on blackberry** and **frogeye leaf spot on apple**; and on vegetables we have seen **Sclerotinia on pepper** and **Pythium root rot on tomato**.

**INSECT TRAP COUNTS**

**May 1- 8**  
**Princeton**

Black Cutworm. . . . .	3
True Armyworm . . . . .	.89
European Corn Borer. . . . .	1

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**Lee Townsend, Extension Entomologist**