



# KENTUCKY PEST NEWS

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## CORRECTION

### VEGETABLE ARTICLE IN OCTOBER 1, 2001 KENTUCKY PEST NEWS

The last paragraph of the article titled: KENTUCKY VEGETABLE GROWERS AND DEALERS NEED TO RESPECT THE RESISTANCE MANAGEMENT GUIDELINES FOR USING THE QOI/STROBILURIN-LIKE FUNGICIDES should read: \* Do not use them on crops for which they are not labeled or in a stage of crop production for which they are not labeled.

## PESTICIDE NEWS

### HOW TO BECOME A CERTIFIED COMMERCIAL OR NONCOMMERCIAL PESTICIDE APPLICATOR IN KENTUCKY by Lee Townsend and Ken Franks, Jr. Ag Branch Manager, Division of Pesticide Regulation, Ky Dept of Agriculture

Anyone who applies pesticides as a part of their business services, or as part of their job responsibilities, must be **certified and licensed**. This process involves two agencies. Licensing, certification testing, and record keeping are handled by the Division of Pesticide Regulation, Kentucky Department of Agriculture (KDA) in Frankfort. Pesticide education programs to support initial and continuing

pesticide certification are conducted by the University of Kentucky College of Agriculture Cooperative Extension Service or other organizations.

### What is the difference between licensing and certification?

Pesticide applicators must be both certified and licensed as either **commercial or noncommercial applicators**. This is accomplished by passing a test for the appropriate category (See list in this publication). All licenses are valid for one calendar year. They expire on December 31 and must be renewed annually. Fees for licenses vary according to the type and are paid to the Kentucky State Treasurer.

Currently, certification is valid for five years. You can keep your certification in effect by attending two approved training meetings during that time. If your certification expires, you must take the test again. (Note: The certification period may change to 3 years and require 12 hours of training during that time period).

### How do I know if I need to be licensed and certified as a commercial or noncommercial pesticide applicator?

The type of license and certification you need depends on what you do.

You are a **commercial operator** if own or manage a business that is engaged in applying pesticides to the land or property of others. In most cases, the operator certification / licensing test consists of 75 multiple choice

questions that come from the Applying Pesticides Correctly manual, the law book, and the category training manual. **\$25** annual license fee.

Commercial operators also must be registered with the KDA as a **pesticide dealers**. All dealer registrations expire on December 31. Registered dealers also must provide evidence to the KDA of a **surety bond or liability insurance** of not less than **\$1,000,000**. **\$50** annual registration fee.

You are a **pesticide applicator** if you work for or are supervised by a pesticide operator to apply pesticides. In most cases, the applicator certification / licensing test consists of 50 multiple choice questions that come from the Applying Pesticides Correctly manual, the law book, and the category training manual. **\$10** annual license fee.

You are a **noncommercial applicator** if you work for a golf course, municipality, public utility, or other governmental agency. There is no fee for this license. There is currently a \$25.00 certification fee.

**Dealer Trainees** Pesticide Dealers must register any person who is not licensed and certified to apply pesticides during the training process. The fee for registering a trainee is \$5.00. A registration form may be obtained by contacting the Division of Pesticide Regulation. Trainee registration is good for 90 days only and cannot be renewed.

#### **Are there any other fees and requirements?**

**Pesticide sales agents** sell or make recommendation of general use pesticides to the final user, or sell restricted use pesticides to the final user.

How do I know what category of certification that I need? Kentucky currently has 21 major categories of commercial applicators. A revised list will appear in the next issue of this newsletter. Most common categories are

**1 Agricultural Pest Control** includes persons using or supervising the use of pesticides in production of agricultural crops including but not limited to tobacco, peanuts, cotton, feed grains, soybeans and forage, vegetables, small fruits, tree fruits and nuts, as well as on grasslands and noncrop agricultural lands; the use of pesticides on animals, including but not limited to beef cattle, swine, sheep, horses, goats, poultry, and livestock; and to places on or in which animals are confined.

**3 Ornamental and Turf Lawn Care** includes persons using pesticides or fertilizer for insect, weed, and/or disease control in residential and commercial landscapes and lawns. It includes the control of pests that do not normally invade structures, such as bagworms, grubs, and moles.

**12 Pesticide Sales Agents** (was the Pesticide Dealer category) are persons who sell or distribute restricted use pesticides; or persons who make recommendations for the use and application of pesticides to the final user

## **BEWARE OF TELEPHONE SALES OF PESTICIDES**

**by Lee Townsend**

Darrell Simpson, Muhlenberg County Agriculture Agent reported that an area farmer was contacted by telephone this week by a sales person from Southern Chemical. The sales agent did not give a name but preceded to tell the farmer that he was selling a brush killer that would last for six years. There was no name given for the product but the cost was \$100.

Usually, the offer is too good to be true. You are very likely to get a great price per gallon only to find out that the formulation has much less active ingredient than you thought. These dealers should be registered with the Kentucky Department of Agriculture and be willing to tell the active ingredient and its concentration. You should see a label and other information before buying. The best tactic is to buy from your local dealer.

## **TOBACCO**

### **BLUE MOLD OOSPORES NOT FOUND IN KENTUCKY'S TOBACCO**

**by William Nesmith**

The trade agreement between the United States and China that allows US-grown flue-cured and burley tobacco to be imported into China requires a federal certification that oospores of the blue mold pathogen were not found during the growing season. In fulfillment of that requirement, a field survey was taken in Kentucky this summer during the active blue mold epidemic. Samples of tobacco blue mold from all 80 Kentucky counties reporting the disease were submitted to a USDA-APHIS-PPQ laboratory for assay. That laboratory notified the Commonwealth recently that all samples were negative for blue mold oospores.

## **FORAGE CROPS**

### **KEEPING AN EYE OUT FOR FAILURES OF APHANOMYCES-RESISTANT ALFALFA**

**by Paul Vincelli**

About five years ago, we concluded a multi-year investigation into the causes of failures in alfalfa establishment with a new recommendation: to use alfalfa varieties with resistance to *Aphanomyces* root rot. Specifically, we recommend either varieties with an R or HR rating ("resistance" and "high resistance", respectively), especially for spring seedings. While this recommendation will not address all causes of stand failures, it does solve an important problem for our alfalfa producers when an extended period of wet weather follows sowing. Information on the resistance of alfalfa varieties is readily available in a leaflet published by the Certified Alfalfa Seed Council (see <http://www.alfalfa.org/>).

Unfortunately, the *Aphanomyces* story gets more complex. Like the black shank fungus, there are **racess** of *Aphanomyces*

*euteiches*. In plant pathology, pathogen races are distinguished from one another based on the fact that they attack different host varieties. For example, Race 0 of the black shank fungus cannot cause disease on tobacco varieties with the L8 resistance gene; however, Race 1 can. Thus, a producer whose field is infested with Race 0 only can use L8 hybrids to control black shank. If the field has Race 1, however, use of the L8 hybrid won't help; it is fully susceptible to Race 1.

Recent work is showing that the practical significance of this new race of *A. euteiches*—called Race 2—is substantial. Researchers at the University of Wisconsin have published research that allows several important conclusions, as follows. Over the years, their research has included samples from numerous states, including Kentucky. Their most recent test included extensive testing of a soil collected from a very typical alfalfa field in Harrison County, KY.

**1. Race 2 of *A. euteiches* is widespread.** This race can be found from North Carolina and Kentucky on northward to Wisconsin and Minnesota. In their most recent paper, Drs. Dean Malvick and Craig Grau found Race 2 in 15 of 16 fields they tested. Work we have done independently and in collaboration with the Wisconsin researchers indicates that Race 2 is present from Harrison County to as far west as Caldwell County. My suspicion is that it is present anywhere in the state that *A. euteiches* occurs, which is probably every county except the Eastern Kentucky coal region.

**2. Race 2 is often present at potentially damaging levels of inoculum.** In their most recent paper, Malvick and Grau found that in 6 of 16 fields, every isolate of *A. euteiches* obtained from the soil was Race 2. It is also interesting that over 50% of the isolates of *A. euteiches* collected from a field with no recent history of alfalfa production were Race 2. Our limited work in Kentucky indicates that damaging levels of Race 2 are present in at least some fields here.

### **Implications and Recommendations**

Unfortunately for producers, almost all of the current generation of *Aphanomyces*-resistant alfalfa varieties are resistant only to Race 1, not Race 2. This means that almost all of the varieties available to producers can experience outbreaks of *Aphanomyces* root rot under disease-conducive conditions, in sites where Race 2 is present at damaging levels.

My suggestion is for producers, Extension agents, and agricultural professionals to be aware of the possibility of typical symptoms of *Aphanomyces* root rot in new seedlings of alfalfa varieties reported to be *Aphanomyces*-resistant. In these cases, samples should promptly be provided to one of the UK Plant Diagnostic Labs for testing.

Information on the race reaction of *Aphanomyces*-resistant alfalfa varieties is not presented in the leaflet distributed by the Certified Alfalfa Seed Council. This information must come directly from the seed company or their representative. Varieties represented to me as having substantial levels of resistance to Race 2 include DeKalb's "DK 141" (HR level), Golden Harvest's "GH757" (HR level), Wyffels Hybrid's

"Passport" (R level), and Midwest Seed Genetics' "Plantinum" (HR level). Of these, only DK 141 has been tested in Kentucky. Clearly, options for selecting a Race 2-resistant variety are very limited at this time.

## **NEW RECOMMENDATIONS FOR PERENNIAL RYEGRASS SEEDINGS FOR KENTUCKY HORSE FARMS**

**by Jimmy C. Henning, Garry D. Lacefield, Paul Vincelli, Christopher L. Schardl, Lowell P. Bush and Christina D. Moon**

### **Current Situation**

Farm visits this spring have revealed that a few pastures had perennial ryegrass as a minor component of the pasture (5% or less). Subsequent tests on samples of this perennial ryegrass revealed most plants were infected with a fungal endophyte which is similar in life cycle to the endophyte of tall fescue.

These farms seeded varieties thought to be endophyte free, but these seedlots were not tested for the endophyte. In the past, ryegrass has not been routinely tested for the presence of the endophyte. This finding (infected perennial ryegrass from varieties thought to be endophyte free) in horse pastures is a minor concern, but one that farm managers, farm advisors and the seed industry can address.

Infected perennial ryegrass is not thought to be related to the Mare Reproductive Loss Syndrome of 2001 because its occurrence did not correlate with occurrence of foal loss.

To put this issue in perspective, the number of fields where perennial ryegrass was found was low, and the percent of the pasture that was perennial ryegrass was much lower than tall fescue. And tall fescue is a much greater problem for horses than perennial ryegrass.

### **Ryegrass Endophyte Biology and Symptoms:**

The endophyte of perennial ryegrass is a fungus (*Neotyphodium lolii*) that completes its life cycle within the plant. It is spread only by seed. This plant-endophyte relationship is similar to that in tall fescue but is not the same.

The presence of the fungus in perennial ryegrass may cause the production of either one or both of two classes of alkaloids: lolitrem and ergot-types. Just because a perennial ryegrass plant is infected does not mean that it contains alkaloids. In an Australian study, 10 to 17% of infected plants produced significant amounts of ergovaline (an ergot-type alkaloid), while 0 to 28% produced significant levels of lolitrem B.

Lolitrem potentially affect all horses (stallions, geldings, mares, etc.) while the ergot-type alkaloids found in perennial ryegrass mainly affect mares in late gestation.

### *Problems in New Zealand and Australia.*

Infected perennial ryegrass is known to cause 'ryegrass staggers' in horses in New Zealand and Australia. Ryegrass staggers is a nerve and muscle disorder that causes horses to tremble. They are unable to move and may fall down. It is not

usually fatal and affected horses normally recover when offered non-toxic feed.

#### *Problems in the United States.*

Cattle grazing infected perennial ryegrass have experienced ryegrass staggers in the Pacific Northwest. However, there have been no documented cases of ryegrass staggers in horses in the United States.

#### *Reproductive problems.*

In at least two cases (in South America), pasture produced from endophyte-infected perennial ryegrass seed produced symptoms similar to that of infected tall fescue. (This perennial ryegrass was a New Zealand variety.)

#### **Kentucky Recommendations**

Any perennial ryegrass seeded into horse pasture or used for the establishment of new horse pasture should be low endophyte, which means less than 5% infected seed. The best way to judge if a bag of seed is low endophyte is to look for a green tag that indicates the level of endophyte infection present in the seed. Seedlots to be used for horse pastures should contain 5% or less infected seed.

If you have perennial ryegrass present in pastures now, you do not need to kill it or to be overly concerned. Perennial ryegrass will die out on its own in a short time (2 to 3 years) if seedheads are kept clipped, and it usually comprises a very small part of the pastures where it is found.

If you have seeded significant acreage to a perennial ryegrass and want to get it tested for endophyte content, apply the same methodology used for tall fescue found in PPA-30 (Sampling for the Tall Fescue Endophyte in Pasture or Hay Stands).

You can get more information on identifying perennial ryegrass and how to sample for the endophyte by contacting your local county extension office or by visiting the following URL's on the UK College of Agriculture Web Site:

AGR-175, Forage Identification and Use, Ryegrass:

[www.ca.uky.edu/agc/pubs/agr/agr175/ryep.htm](http://www.ca.uky.edu/agc/pubs/agr/agr175/ryep.htm)

PPA-30, Sampling for the Tall Fescue Endophyte in Pasture or Hay Stands:

[www.ca.uky.edu/agc/pubs/ppa/ppa30/ppa30.htm](http://www.ca.uky.edu/agc/pubs/ppa/ppa30/ppa30.htm)

#### **Summary**

Perennial ryegrass, found as a small percentage of a few pastures during farm visits this spring, was found to be endophyte infected. This perennial ryegrass was not correlated to the Mare Reproductive Loss Syndrome. This endophyte is similar to the tall fescue endophyte and can cause horse problems. The likelihood of problems from perennial ryegrass is very low due to its small proportion in pastures. The perennial ryegrass presently in pastures does not constitute a major concern to horse owners and farm managers. Perennial ryegrass is still a valid component of future horse pasture seedings and renovations, but any seed used should be low endophyte (5% or less) or endophyte free. This information will be on a green tag issued by the Oregon Department of Agriculture.

## **VEGETABLES**

### **CUCUMBER BEETLE CONTROL AND IMPACT ON BACTERIAL WILT IN CANTALOUPE:2001 STUDY**

**by Ric Bessin**

Striped and spotted cucumber beetles can cause serious losses in cucumbers, and cantaloupes in Kentucky. While the adults feed mainly on foliage, stems, pollen and flowers, their feeding on melon rinds late in the season that may reduce market quality. Cucumber beetles are a major concern to muskmelon and cucumber growers because they vector the bacterium that causes a disease, bacterial wilt of cucurbits. This disease can severely limit cucumber and cantaloupe production if not managed effectively. While larvae of these insects feed on roots and stems and can cause some damage, this damage is minimal compared to the potential losses due to bacterial wilt.

Commercial melon producers must control these beetles particularly on young plants. Two species of cucumber beetle, the striped and the spotted, are effective vectors for this bacterial disease. Until the early 1990's, growers were able to use Furadan 15G at planting to provide systemic control of the beetles and reduce the incidence of the disease. However, that insecticide was canceled on cucurbits due to environmental issues. Currently, producers rely on foliar insecticides applied on 7 to 10 day interval to keep beetle numbers to a minimum. In 2000, a single-year study at UK indicated that a single application of the systemic insecticide Admire, when applied at 20 fluid ounces per acre as a post-transplant drench, provided comparable cucumber beetle control to five weekly foliar applications of Pounce. This past year, Drs. Bill Nesmith, Brent Rowell, John Strang, and myself looked at the protection provided by different rates of Admire 2F applied as a post-transplant drench to 'Athena' melons.

Admire 2F was applied at three rates. The rates of 24 fluid ounces per acre, corresponded to the maximum allowable labeled rate, 16 fluid ounces per acre, corresponding to the minimum labeled rate, and 8 ounces per acre, half of the minimum labeled rate, and an untreated control were compared in this study. All of the Admire treatments were applied directly to the soil at the base of the plants in 1/3 ounce of water immediately after transplanting. The post-transplant drench was selected to minimize exposure of laborers to insecticide residues while trying to maximize rapid uptake of the insecticide for control of cucumber beetles. The Admire was intentionally not mixed in with the transplant water because that type of application is prohibited. The application methods used in this study are labeled for commercial use, and thus legal.

During the course of this study, of the two species of cucumber beetles, the striped was far more numerous than the spotted and comprised more than 95% of the cucumber beetles observed. Generally, numbers of cucumber beetles were very high in early June and their numbers declined through late July. Yellow sticky card monitoring revealed differences in the number of cucumber beetles among treatments. During all of the sampling periods, many more

striped cucumber beetles were captured in untreated plots than in any of the Admire treated plots. There was no significant difference in the number of cucumber beetles captured on yellow sticky cards among the different rates of Admire. All of the Admire treatments reduced the numbers of the cucumbers beetles on the plants through June 9. No significant differences were detected in the numbers of these beetles found on the plants between the different rates of Admire.

This farm has a long history of serious bacterial wilt. A high level of bacterial wilt incidence was observed in this study with over 70 percent of the untreated plants infected by the end of the study. The incidence of bacterial wilt among Admire rates was not different until July 9 when the 8 ounce rate showed more disease.

Significantly higher yields came from the plots using the labeled rates of Admire. The plot with the below labeled rate of Admire had significantly less melon yield. This study indicates that a single application of the systemic insecticide Admire, when applied at the full labeled rate of 16 to 24 fluid ounces per acre as a post-transplant drench, provided effective cucumber beetle control for four to six weeks. These data are consistent with our standing recommendations that cucumber beetle control is critical to bacterial wilt control. It must be pointed out that there are other alternative methods of application listed for cucurbits on Admire label, but those other methods were not evaluated here and the levels of cucumber beetle control, bacterial wilt infection, and melon yields may not be similar to that obtained with this application method.

Cucumber beetle numbers and the potential threat from bacterial wilt can be highly variable from year to year, and among farms in Kentucky. Although in this study, only one insecticide treatment was applied, in a commercial field, producers would be advised to continue to monitor beetle numbers throughout the season and use foliar treatments as necessary if numbers began to rise. As was reported last year, weekly foliar treatments of recommended insecticides for cucumber beetle control (See ID-36) can be highly effective. In some instances, a combination of a systemic insecticide at planting followed by foliar sprays of a different insecticide may be necessary to maintain effective control and even the most economical strategy.

Number of plants collapsed due to bacterial wilt in 'Athena' melons.

Date	24 fl. oz. Admire	16 fl. oz. Admire	8 fl. oz. Admire	Untreated
June 9	0.0 b	0.0 b	0.0 b	4.5 a
June 18	0.0 b	0.0 b	0.5 b	10.5 a
June 25	0.0 b	0.3 b	1.5 b	18.5 a
July 9	0.3 c	2.8 c	8.3 b	28.3 a
July 17	0.8 c	3.5 c	10.3 b	29.0 a

Numbers and weight of marketable fruit

Treatment	24 fl. oz. Admire	16 fl. oz. Admire	8 fl. oz. Admire	Untreated
Number of Fruits	84.3 a	76.0 a	51.8 b	11.3 c
Weight of Fruits	447.1 a	398.9 a	256.9 b	56.0 c

## FRUIT

### LADY BEETLES AND APPLES

by Ric Bessin

It has been a common occurrence to find the new multicolored Asian lady beetle feeding inside of cracks in apples this fall. There may be as many as several dozen in a single apple and they do appear to be enlarging the cracks. However, at this point it looks like they are probably feeding on apples that cracked or were damaged by other causes. I have seen evidence that these beetles were able to attack sound fruit.

## HOUSEHOLD

### ASIAN LADY BEETLE SEASON

By Mike Potter and Lee Townsend

As expected, the phones began ringing this week with complaints of lady beetles congregating on the sides of homes and infesting buildings. This phenomenon has become an all-too-common fall event throughout Kentucky and much of the United States. The culprit is the Asian lady beetle, *Harmonia axyridis*, in search of protected places to overwinter. In Kentucky, movement into buildings typically begins in mid to late-October, continuing through mid-November. There are no magic solutions for this insect.

What is the best defense against these insects?

Detailed information on this challenging problem is contained in ENT-64, *Asian Lady Beetle Infestation of Structures*. Key points include:

1. Lady beetle flights are heaviest on warm sunny days, when temperatures climb above 60 degrees F. They tend to congregate initially on the sunnier, southwest sides of buildings in mid-afternoon. Structures that are shaded and not brightly illuminated by afternoon sun are less likely to attract the beetles.

2. Once the beetles have alighted, they attempt to enter cracks and other dark openings in search of hibernation sites. These locations may be anywhere on the structure, but especially beneath exterior siding, around window and door frames, soffits, fascia boards, and through weep holes and attic or crawl space vents. Sealing exterior cracks and openings with caulk, screening, weatherstripping, etc., is the most effective long-term, prevention against beetle entry. (See KPN 10/1/01 or ENTFACT-641 *How to Pest-Proof Your Home*.)

3. Once the beetles are indoors, the best way to remove them is with a vacuum cleaner. Insecticides tend to be less effective and may stain or leave unwanted residues on walls, counter tops, and other exposed surfaces.

4. While sealing exterior openings is the more permanent way to deny entry, pest-proofing is time-consuming and impractical for many clients. If a household or business continues to be troubled by lady beetles, owners may want to enlist the services of a professional pest control firm. Some companies offer pest proofing services and many offer insecticide treatment of the building exterior, which helps to prevent pest entry. Fast-acting, “professional strength” synthetic pyrethroid formulations (e.g., Demand, Suspend, Talstar, Optem, Demon, Tempo) tend to be most effective, and can be applied around eaves, attic vents, windows, doors, underneath siding, and other likely points of pest entry.

Homeowners insistent upon applying exterior treatments themselves will usually get the most for their efforts using over-the-counter versions of these products such as Bayer Advanced Home/Garden™ Multi-Insect Killer, Spectracide Bug Stop™, or Ortho Home Defense System™. Purchasing the concentrated formulations of these products (which can be diluted) will enable the homeowner to mix up and apply larger volumes of material with a pump-up or hose-end sprayer. In order to have any benefit, exterior treatments must be applied *before* the beetles enter buildings to overwinter.

5. Finally, customers should be reminded that lady beetles play an important role in nature and that their entry into buildings is a sporadic and short-term event. Lady beetles do not injure humans, nor can they breed or reproduce indoors like fleas or cockroaches, i.e., they constitute a nuisance only by their presence.

#### **Why aren't insecticides a good way to handle these beetles indoors?**

Insecticide foggers or sprays are generally not recommended for eliminating lady beetles indoors. They need to be sprayed directly, or they must crawl over treated surfaces to be killed. These applications create pesticide residues on walls, counter tops, and other exposed surfaces. A vacuum cleaner is more sanitary and effective. Attempting to kill overwintering lady beetles in wall voids is difficult and rarely justified. Large numbers of dead insects in these areas also may attract carpet beetles and other pests of food and fiber.

Limited use of indoor insecticides may be warranted, but only in specific locations for immediate relief of heavy infestations. Aerosol-type foggers containing synergized pyrethrins might be used in attics or outbuildings, for example, but these provide negligible control of beetles that have not yet emerged from cracks, wall voids, and other protected locations. Large numbers of beetles accumulating in enclosed ceiling light fixtures would suggest the attic as a possible treatment area, but, as mentioned, insecticides are not generally recommended for treating occupied areas.

#### **Why are there so many?**

The multicolored Asian lady beetle has plenty of food, a short generation time, and no major factors to keep it in check. A life cycle (egg, larva, pupa, and adult) takes about 25 days during the summer. This allows large, even explosive, populations of lady beetles as we have seen in recent years. The huge numbers probably result from the massive

abundance of prey (predominantly aphids and scales), apparent lack of competition from native lady beetles, and apparent lack of natural enemies. As if that isn't enough, these beetles can live as long as 2 to 3 years under optimal conditions, something we seem to have. Scientists predict that multicolored Asian lady beetle populations will become more balanced when its prey numbers decrease and *Harmonia* itself falls prey to native natural enemies.

#### **What These Lady Beetles Do—And Don't Do**

! They do not have mouthparts that allow them to bite like mosquitoes. Their mouthparts are very small and pointed structures so they can only “pinch” the skin. There may be some short term itching or irritation as a temporary consequence.

! They do not damage structures. The lady beetles do not chew or bore holes in walls or eat carpet or furniture. They do not lay their eggs in homes.

! They do move toward lighter colors: white, gray, or yellow. Light-colored houses, especially on hillsides in forested areas, seem to serve as “homing beacons.”

! They do not infest stored foods or fabrics. Lady beetle mouthparts are adapted for feeding on soft-bodied insects, not food or fibers.

! They do produce a foul odor and leave a stain if crushed. The dust produced from an accumulation of dead multicolored Asian lady beetles behind wall voids may trigger allergies or asthma in people.

! Once the lady beetles enter the walls of a building through cracks and crevices, they may or may not proceed to the interior of the building. Most stay in the wall spaces. Those that get inside can remain active throughout the winter.

#### **Lady Beetle Traps**

There are lady beetle traps for sale as indoor collecting devices but they have very limited practicality. They are not recommended for control by the UK College of Agriculture. One essentially is a cardboard box with a sticky inner covering that captures beetles which wander inside it. Although sold with a pheromone, there is no indication that the beetles respond to it. Studies in North Carolina failed to find a chemical attractant. If there are a lot of beetles in a building, some will wander in the trap and be caught.

USDA-ARS researchers have developed a light trap that is used indoors to collect beetles that already have entered a structure. It is basically a black light, vanes, and a bucket. The trap is placed in a dark room. Flying beetles drawn to the light hit one of the vertical vanes and fall into the bucket. The bucket must be emptied periodically. The effectiveness of this trap remains to be seen. It can be built according to the design available on the USDA-ARS Web site at [www.ars.usda.gov/is/pr/2000/001030.trap.pdf](http://www.ars.usda.gov/is/pr/2000/001030.trap.pdf). The design is not patented.

Commercial black light lady beetle traps are available with retail prices from almost \$100 to \$125. The traps are designed to be placed in the corner of a room or against a wall so that the attracting black light radiates outward toward the center of the room. Both traps are effective only at night in the absence of competing light sources but can be used during

daytime if the room is completely dark and unlighted by windows or other light sources. They may draw in beetles in the room where the trap is located but are extremely unlikely to lure in beetles from other parts of the house or building.

The vacuum cleaner remains the most effective tool for reducing beetle numbers in a house or building.

## **FLOATING WHITE WAXY STRANDS CAUSE STIR- PROBABLY FROM WOOLLY APHIDS BUT THERE ARE OTHER “FLOATERS” NOW, TOO**

**By Lee Townsend**

Floating ropes of a white waxy material filled the air around Henderson, Owensboro, and Evansville, IN. Samples sent from Owensboro were waxy filaments of a woolly aphid, such as the woolly alder aphid.

This insect is common on silver maple and alder. These sap feeders produce large amounts of honey dew. This clear sticky substance soon covers the foliage and branches, as well as cars and buildings underneath or adjacent to the infested tree. Often foliage becomes black from the sooty mold that grows on the honeydew. Heavy infestations may result in the ground being littered with the white, waxy threads under silver maple.

Throughout early summer, look for white, wool-like waxy filaments on branches and stems of host trees along with conspicuous curled leaves. The presence of honeydew, ants feeding on honeydew, or development of sooty mold are commonly associated with aphid infestations.

The insect overwinters on maple bark in the egg stage or on alder in tightly-clustered, wool-covered aphid colonies. Newly-emerged aphids settle on the midvein of new maple leaves. These aphids reproduce asexually, producing very large colonies. The winged generation that develops flies to alder in July. Several generations may develop on alder, accompanied by production of large amounts of white waxy material. Some of the migrants fly back to the trunk and branches of maples, where they mate and produce eggs, one per aphid. Others remain on the alder in the adult stage.

The insect is usually of little significance, although the amount of white waxy material that accumulates may be troublesome and some of the infested leaves drop prematurely. The associated honeydew and sooty mold may also be annoying.

Ballooning of arthropods also can produce “floaters” in the air. “Ballooning” is a means of aerial dispersal that can be used by several spider species. These floating silk strands (often 2 feet or greater in length), sometimes called “gossamers” are an ethereal sight on a sunny fall afternoon but they can cause concern at a time when anything out of the ordinary is seen in the air.

Ballooning spiders will move to the tops of vegetation or other high spots, stand on their “tiptoes”, and release silk from the spinnerets at the end of their abdomen. When long enough, the silk will be captured by a breeze and the spider will be lifted into the air for a flight that can reach several hundred feet in the air and carry the 8-legged aeronaut

several miles. Large numbers of spiders can be afloat at the same time, filling the air with silken strands that waft and twist gently in the breeze. They can catch on tree limbs, fences, or any other objects.

Ballooning activity occurs on warm days following cold nights. This sudden rise in temperature creates updrafts that provide ideal conditions for liftoff. This pattern has occurred over the Commonwealth and floating strands can be seen most anywhere.

Several families of spiders that are common in Kentucky are known to use silk to disperse. Some of the more common groups are wolf spiders, line weaving spiders, dwarf spiders, jumping spiders, and crab spiders. This mode of transport can be used by young spiderlings or adult males and females. It may be possible to find the spider on the silk.

## **DIAGNOSTIC LAB HIGHLIGHTS**

**by Julie Beale and Paul Bachi**

Diagnostic lab samples for the two weeks of October 1 through October 15 have included charcoal rot, frogeye leaf spot, Diaporthe pod and stem blight, and acid soil problems on soybean; Pierce’s disease and black rot on grape; bitter rot and fireblight (rootstock infection) on apple; powdery mildew on zinnia; black root rot, Pythium root rot, magnesium deficiency, iron deficiency, and general nutritional problems from high soil pH on pansy; Rhizoctonia root rot on chrysanthemum; Pythium root rot on poinsettia; rust on daylily (third location in KY); anthracnose on bentgrass; Septoria leaf spot on willow; bacterial leaf scorch on oak; pine wilt nematode on pine; Pythium and Rhizoctonia root rots on viburnum; Cytospora canker on hemlock; black mold (*Aspergillus niger*) on onion; Microdochium (Plectosporium) blight on pumpkin; scurf on sweet potato; and Cercospora leaf spot on turnip.

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.