Emerald Ash Borer (EAB) FAQs For Kentuckians
Lee Townsend Extension Entomologist and Lynne Rieske-Kinney, Forest Entomologist, Univ. of KY

Is the emerald ash borer an immediate threat to Kentucky?
Yes, especially in northern Kentucky. The closest confirmed finding is about 5 miles north of the Ohio River in the Cincinnati area (Hamilton Co. Ohio). The area is under quarantine and a survey will determine the extent of the infestation. Also, infested trees have been found around Indianapolis, IN (Hamilton and Marion counties) and those areas are quarantined. Unfortunately, this easily transportable insect could pop up anywhere in the Commonwealth.

How do infestations spread?
An EAB adult can fly at least 1/2 mile from the tree in which it developed so there is natural spread each year. Unfortunately, infestations expand further and more rapidly when people move infested ash nursery stock, logs, or firewood long distances into uninfested areas. Firewood has been a major means of transporting EAB, especially by hunters and campers.

What does a quarantine accomplish?
A quarantine is a legal action taken to prevent movement of any living stage of a pest (egg, larva, pupa, or adult). It includes entire ash trees, limbs, branches, stumps, and importantly, firewood. Movement of ash logs and lumber with bark is prohibited, along with hardwood wood chips and bark chips larger than 1 inch in two dimensions. Because it is difficult to identify cut and split wood, all hardwood firewood with bark is included along with other specified objects or means of moving the insect.

What trees do the EAB attack?
All species of ash (Fraxinus) in landscapes, forests, and woodlots in eastern North America are susceptible. EAB may prefer to lay eggs on stressed trees but healthy ones also can be infested. Size does not appear to be a constraint either, larval galleries have been found in trees or branches as small as 1 inch in diameter.

What does the EAB do to ash trees?
As they feed under the bark, EAB larvae destroy the tree’s water and nutrient conducting tissue reducing water and nutrient flow to the canopy and causing thinning of the canopy of trees above infested portions of the trunk and major branches. D-shaped exit holes caused by emerald ash borer adults

What is the EAB easy to recognize?
The adult is a distinctive dark metallic green about 1/2 long and about 1/8 inch wide but the insect may not be seen unless it is very abundant in an area. However, it emerges from ash trees in June through a distinct D-shaped hole in the bark. The larval stage is most likely to be found tunneling under bark and fortunately, it can be distinguished from native ash borers.

What makes an EAB infestation “official”?
An exit hole or larval gallery
in wood is not enough to make a positive identification so the first identification of an EAB in a county must be based on a life stage of the insect—usually a larva or an adult. Larvae collected from ash wood should be preserved in alcohol so that they are in good shape for examination. The specimen is sent to an APHIS entomologist for confirmation before the insect is considered to be officially present.

**What will happen if an identification is confirmed?**

The county will be placed under a quarantine to prevent movement of infested articles and a survey will begin to determine the extent of the infestation. A management plan will be developed after the extent of the infestation and the density of ash in the area has been determined.

**What steps are being taken in Kentucky to deal with the EAB?**

Surveying and monitoring programs have been implemented in Kentucky for early detection of EAB. Trap trees have been established in high risk urban areas and along corridors. Movement of firewood from infested area has been banned. A vigorous educational program has been implemented to inform the media and to raise public awareness.

**Do insects other than the EAB live in ash?**

Yes, the larvae of several beetles and moths can be found in forest and landscape ash throughout the state. The redheaded ash borer (a round-headed wood borer) and the ash borer (a caterpillar) are most common. Do not hesitate to bring any specimens from ash to your county extension office for identification. Private individuals are often the first to notice a new organism in an area and the EAB is too important to overlook.

**Should I begin to use insecticides to protect my ash trees from the EAB?**

Treatment is an individual decision based on specific conditions. However, insecticide applications generally are not recommended if your county is not under an EAB quarantine. If there is no quarantine for your county, identify ash trees on your property and keep them as healthy as possible through proper fertilization and watering. Watch trees closely for signs of EAB infestations. Stay informed about the situation in your area.

**Are insecticide applications worthwhile if your area becomes quarantined?**

Treatments for EAB are expensive and products currently available must be applied every year. In addition, no products are 100% effective and trees in poor health are not likely to benefit from treatments. Treatments may be worthwhile to protect very valuable trees or to keep individual trees alive until non-susceptible replacement trees are large enough to provide satisfactory shade. If many nearby trees become heavily infested, control probably will be much less effective.

**What is the life cycle of this borer?**

The EAB can have a one-or two-year life cycle, development time decreases and the number of borer larvae per tree increases. In Michigan adults begin emerging in mid to late May with peak emergence in late June. Females usually begin laying eggs about 2 weeks after emergence. Eggs hatch in 1-2 weeks, and the tiny larvae bore through the bark and into the cambium—the area between the bark and wood where nutrient levels are high. The larvae feed under the bark for several weeks, usually from late July or early August through October. The larvae typically pass through four stages, eventually reaching a size of roughly 1 to 2.5 inches long. Most EAB larvae spend the winter in small chambers in the outer bark or in the outer inch of wood. Pupation occurs in spring and the new generation of adults emerges in May or early June, to begin the cycle again.

**Who do I call to get more information on the EAB or to report an infested tree?**

An Emerald Ash Borer Hotline 866-322-4512 has been established by the Animal and Plant Health Inspection Service (APHIS), US Department of Agriculture. Collected information will be passed to the appropriate office for follow-up. You also can contact your local UK Cooperative Extension office or the Office of the State Entomologist (859) 257-5838.

**Web Sites:**

-Information for Kentuckians pest.ca.uky.edu/EXT/EAB/welcome.html
-General EAB information and national status www.emeraldashborer.info

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**Gypsy Moth Trapping Results**

The "Slow the Spread" gypsy moth project area consisted of all Boyd, Greenup, Carter, and Lewis Counties and parts of Mason, Fleming and Elliot Counties. 935 gypsy moth traps in this area and as of August 30, 32 moths have been caught. The area outside of the slow the spread area is called the detection area and this area is trapped in cooperation with the USDA. 5,695 traps were placed in 111 counties across Kentucky. As of August 3, there have been 123 gypsy moths caught. The following list tells the county and how many moths were captured in that county. Boone-4; Bracken-3; Campbell-33; Carroll-1; Carter-1; Floyd-9; Franklin-6; Grant-1; Harrison-2; Henry-1; Johnson-11; Lawrence-22; Martin-13; Oldham-1; Owen-3; Pike-8; Robertson-2; Shelby-2. Most of these captures are single captures which is not cause for alarm. There is one area in Campbell county that we are monitoring closely. To date, gypsy moth is NOT established in Kentucky.
Sticky Traps: A Useful Tool for Pest-Scouting Programs

Dr. Claudio Pasian & Dr. Richard Lindquist, Ohio State University

A very useful, often overlooked tool for early detection and management of pest populations in greenhouses are the so called "yellow sticky cards." While all greenhouse growers know of their existence, some still do not use them because they do not know how to handle the information these traps provide. The following fact sheet starts out with general information that will help growers take advantage of this easy to use tool. Next, the fact sheet gives an example of data collected from the cards, what it means, and how to understand it. We encourage owners/managers to use this information when training workers to become scouts.

Sticky traps will catch pests and beneficials. Certain sticky traps will attract and catch pest insects such as winged aphids, whiteflies, thrips, leafminers, fungus gnats, and shore flies. Beneficial insects such as the whitefly parasitoid, Encarsia formosa, will also be caught at times. There will be many other species as well, but most of them are of no concern to greenhouse growers. The primary task is to recognize the problem insects.

Sticky trap color. Traps that reflect certain wavelengths of yellow or blue are most often used. White or red traps are also effective for some insects. Most studies show that blue traps are better at capturing western flower thrips and shore flies, so if these insects are the only problems, go ahead and use blue traps. However, we suggest that yellow traps be used in a monitoring program that will include whiteflies and fungus gnats.

Number of traps needed. The number of traps needed depends on the main target pest. For example, for western flower thrips, you can get a fairly good idea of activity with one trap per 10,000 square feet. However, for a reasonably accurate picture of whitefly activity, you may need one trap per 1,000 square feet. For leafminers, the number of traps required is somewhere in between the above figures. You need to determine your main pest(s) and then check with your county or state extension specialist.

Mode of sticky trap deployment. The basic suggestion has been to hang or place traps vertically, at or slightly below the tops of crops. This works well for most species, but horizontal traps will be more effective in trapping silverleaf whiteflies early in a poinsettia crop. Also, fungus gnat and shore fly trapping is much more effective on horizontal traps—at least until the crop canopy fills in. These traps may be placed face up on bench or potting mix surfaces. Hang or place vertical traps facing the same direction(s), such as east-west. Place traps where they will be most efficient. For western flower thrips, place traps facing all four directions among the most favored plants for thrips infestation, not the most virus-susceptible crop. Place traps around crop perimeters as well as within the crop. In addition to traps, certain petunia cultivars will detect thrips and other insects. In order to get a "snapshot" of pest activity, you must include traps as part of the monitoring program. If you want a picture of population trends, examine traps weekly. If you want to see a "snapshot" of pest activity at the moment, place traps in the greenhouse for a few hours once or twice each week. The important matter is to be consistent. Be careful about deploying traps just prior to using some pyrethroid insecticides. These insecticides can cause an increase in insect activity, leading to misleading conclusions about insecticide effectiveness and pest populations. Insect count can be facilitated by using sticky traps with a background grid. The grid becomes especially useful when there are

Sticky traps as a control method. Traps can control some pests or at least slow the rate of increase of pests such as whiteflies, if you have sufficient trap surface area in the crop and begin before pest numbers get out of hand. Some growers use strips of sticky yellow tape, from 4 to 12 inches wide, strung among plants to accomplish this. There is very little information of a scientific nature here, except for some studies on greenhouse whiteflies on greenhouse tomatoes in Canada. A number of growers have observed whitefly numbers were lowered by using yellow tape. Always use sticky traps combined with other techniques. Do not rely on this method alone.

No silver bullets. Sticky traps alone cannot adequately detect all of the most serious pests. Traps will only capture winged aphids, which often do not appear until numbers are very high. Whiteflies start out in scattered areas within a crop, and traps may not be placed in these areas. The numbers of thrips caught on traps may not be related to numbers on plants. Further, the thrips on the traps may not be related to numbers on the plant. For western flower thrips, place traps facing all four directions among the most favored plants for thrips infestation, not the most virus-susceptible crop. Place traps around crop perimeters as well as within the crop. In addition to traps, certain petunia cultivars will detect thrips and other insects. In order to get a "snapshot" of pest activity, you must include traps as part of the monitoring program. If you want a picture of population trends, examine traps weekly. If you want to see a "snapshot" of pest activity at the moment, place traps in the greenhouse for a few hours once or twice each week. The important matter is to be consistent. Be careful about deploying traps just prior to using some pyrethroid insecticides. These insecticides can cause an increase in insect activity, leading to misleading conclusions about insecticide effectiveness and pest populations. Insect count can be facilitated by using sticky traps with a background grid. The grid becomes especially useful when there are

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many insects on the card.

**Counting the Pests.** Depending on your objectives, you can count all of the pests on each trap, those on a one-inch vertical strip on each trap, or place pest numbers in categories, depending on estimated numbers. For example, categories could be none, few, some, too many. You will have to establish these levels depending on the pest crop and season. The numbers of western flower thrips that can be tolerated will be higher if INSV is not a problem. *Do what you can accomplish consistently.*

**Insect counts (a hypothetical example).** Periodically (once a week would be ideal), the sticky cards should be inspected and the stuck insect-pests counted. Numbers should be written down in forms such as the one shown in Table 1. This form is used to collect information from one card.

<table>
<thead>
<tr>
<th>Date placed</th>
<th>Date of count</th>
<th>Spray</th>
<th>Aphids</th>
<th>Fungus gnats</th>
<th>Shore-flies</th>
<th>Thrips</th>
<th>Whiteflies</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1-98</td>
<td>1-1-98</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&quot;</td>
<td>1-7-98</td>
<td></td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&quot;</td>
<td>1-15-98</td>
<td>X</td>
<td>0</td>
<td>32</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&quot;</td>
<td>1-23-98</td>
<td></td>
<td>0</td>
<td>32</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1-25-98</td>
<td>1-30-98</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

In this hypothetical example, we are dealing with card "1" located in section "A-1." The card was placed on the date of 1-1-98. On that date, all numbers are zero because the first observation takes place when the card is first placed. One week later, the scout counted 2 fungus gnats and 3 thrips. The other two cards in section A-1 gave similar results: nothing to worry about. On 1-15-98, the scout detects 32 fungus gnats and 4 thrips. The scout considered that the fungus gnat level was too high and ordered a control treatment in section A-1 (the treatment is indicated in Table 1 by a check mark). The 1-23-98 inspection indicated that there were 32 fungus gnats and 6 thrips. The lack of increase in the number of fungus gnats on the card may be interpreted as a successful treatment. The number of thrips grew slightly because the product used has no effect on this pest. That day, the scout decided to replace that card because it was too complicated to count 38 insects (32 + 6) in addition to other nonpest insects. The scout changed the card on 1-25-98. The following inspection yielded only two thrips. The scout concluded that the fungus gnat problem had been controlled and the thrips population was low and did not warrant treatment.

Having a form or table for each card has a disadvantage: the scout has to carry around a lot of forms during each inspection. The advantage is that trends are seen immediately without having to plot the results. An alternative form is shown in Table 2. Insect counts presented in Table 1 (sticky card 1 in section A-1) are shown in Table 2 along with insect counts from the other two cards in that section. Note that trends are not clearly visible in this form.
In order to be successful, the scouting program should be the responsibility of one employee. The best formula for failure is when the owner or head grower takes this responsibility on his/her own: there is always something more urgent to do...

Table 2. Insect counts for the three cards located in section "A-1." Observations were made during a one-month period.

<table>
<thead>
<tr>
<th>Section</th>
<th>Card #</th>
<th>Date placed</th>
<th>Date of count</th>
<th>Number of insects present on card</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aphids</td>
</tr>
<tr>
<td>A-1</td>
<td>1</td>
<td>1-1-98</td>
<td>1-7-98</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>2</td>
<td>&quot;</td>
<td>&quot;</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>3</td>
<td>&quot;</td>
<td>&quot;</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>1</td>
<td>&quot;</td>
<td>1-15-98</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>2</td>
<td>&quot;</td>
<td>&quot;</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>3</td>
<td>&quot;</td>
<td>&quot;</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>1</td>
<td>&quot;</td>
<td>1-23-98</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>2</td>
<td>&quot;</td>
<td>&quot;</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>3</td>
<td>&quot;</td>
<td>&quot;</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>1</td>
<td>1-25-98</td>
<td>1-30-98</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>2</td>
<td>&quot;</td>
<td>&quot;</td>
<td>0</td>
</tr>
<tr>
<td>A-1</td>
<td>3</td>
<td>&quot;</td>
<td>&quot;</td>
<td>0</td>
</tr>
</tbody>
</table>

These two forms are just examples that should allow growers to start their scouting process. They are not meant to be THE insect count forms. Each scout should redesign the forms according to his/her preferences.

What Is The CAPS Program?

Janet Lensing, PhD  Nursery Inspector, University of Kentucky

CAPS (the Cooperative Agricultural Pest Survey) is a cooperative effort between the University of Kentucky and state and federal agencies to conduct surveillance, detection, and monitoring of exotic plant pests. These pests include plant diseases, insects, weeds, nematodes, and other invertebrates. The CAPS survey data collected each year are entered into the NAPIS (National Agricultural Pest Information System) database and used to determine pest distribution and population levels, the life-stages of specific target insects, first occurrences, and other pest-related phenomena of local interest.

We at the Office of the State Entomologist at UK cooperate extensively with USDA-APHIS officials in the state to conduct many surveys each year to safeguard the plants in Kentucky. Many nurseries in the state have been included in at least one of the CAPS surveys conducted every year: the survey for the fungal disease Sudden Oak Death (see the update in this newsletter). One of the largest CAPS surveys conducted each year is the survey for Gypsy Moth which involves setting 8000 or more gypsy moth traps across Kentucky. Wood-Boring and Bark Beetles are targets of CAPS surveys at barge ports while pine stands in the state are surveyed for Pine Shoot Beetle and Siricid Woodwasps. One CAPS pest currently of great concern is the Emerald Ash Borer. Some surveys have already been conducted for this pest with more intensive surveys planned for later this year.

For more information on the CAPS program in Kentucky, visit our website at http://www.ca.uky.edu/caps/.

What Is The CAPS Program?
Bacterial Leaf Scorch Affected By Drought

John Hartman, Extension Plant Pathologist, University of Kentucky

Leaf scorch symptoms caused by bacterial leaf scorch disease have been visible in Kentucky Urban Forests for nearly the past month. The extent of disease incidence within different oak trees may include a single scorched leaf, one or a few twigs or branches affected, or trees with 90% scorched leaves. Each summer, symptoms typically appear first on chronically-infected oaks, some of which are already declining from many years of leaf scorch disease. Red and sugar maples are also showing symptoms now.

This summer has been one of extreme drought and most of the trees in central Kentucky, as well as those in other regions statewide are showing stress related to the dry weather. In many urban neighborhoods where pin oaks have predominated, the simultaneous occurrence of bacterial leaf scorch (Xylella fastidiosa) and drought shows diseased pin oaks at their worst.

Symptoms of bacterial leaf scorch, this chronic and eventually fatal disease, are most noticeable in the late summer and fall, and the disease is often overlooked at other times of the year when disease symptoms are not readily noticed. In late summer, leaves of healthy trees are still green. They stand in obvious contrast to the browning and falling foliage of diseased trees. Some recently infected trees have some limbs with green foliage and others with brown foliage. Infected trees are gradually debilitated however, as over the years, twigs, branches, and limbs begin to die.

Many of our urban pin oaks are showing branch dieback typical of trees that have been infected for 5 or more years. Unfortunately for the trees, the disease is made worse by the drought, so they look worse than usual this year. Bacterial leaf scorch disease does not spread rapidly - indeed some of the pin oaks in many neighborhoods appear to be uninfected, as yet. There is no cure for bacterial leaf scorch, so one should expect diseased trees to be gradually lost over the years. In the meantime, newly infected trees can be made to look somewhat presentable for a few more years if the dead wood is pruned out.

The best remedy for bacterial leaf scorch is tree replacement. To maintain species diversity, avoid planting all the same species in each neighborhood. Choose trees that do well in Kentucky such as those listed in the three U.K. Cooperative Extension Service publications Small Trees for Urban Spaces in Kentucky, Medium-Sized Trees for Kentucky Landscapes, and Large Trees, the Giants of Kentucky’s Landscape, which are available at County Extension Offices. When replanting, it is not necessary to use large transplants. Often, smaller nursery stock becomes established more quickly than larger nursery stock so that ten years later, their relative sizes might not be much different. In all cases, during the several years following tree planting, make provisions for watering the trees regularly, applying mulch periodically, and pruning trees correctly so that good, strong, branch structure is established when the trees are young. During dry seasons such as this one, all trees, not just the newly planted ones will need regular watering.

Fall Webworm Tents

Lee Townsend, Extension Entomologist University of Kentucky

The light gray silk tents of fall webworm caterpillars, recently hatched from masses of 400 or so eggs, are visible at the ends of tree branches. These caterpillars are covered with long white to yellow-tan hairs. They feed on over 100 species of deciduous trees, black cherry, walnut, hickory and mulberry are favorites. Fall webworm larvae incorporate the leaves they are eating into their tent. The tent is expanded to include more leaves as needed. They can be numerous enough to completely defoliate trees but this is not common. Usually, little real damage is done to trees but the ugly webs detract from their aesthetic value. Accessible nests can be pruned out and discarded. Bt insecticides are effective on small larvae if chemical control is necessary and the sprayer can reach foliage around the nest. There are two generations in Kentucky each year- from mid-June to early July and again in August.

Sudden Oak Death Survey Update

Janet Lensing, PhD Nursery Inspector, University of Kentucky

Sudden oak death, Phytophthora ramorum, is a pathogen causing oak mortality in areas of California and Oregon. This disease may be moved long distances through infected nursery stock since several common ornamental plants are susceptible to infection. The primary nursery plants of concern are lilac, viburnum, rhododendron, mountain laurel, piers, and camellia. Symptoms include leaf lesions, leaf spots and tip blight, death of leaf buds, and stem cankers or dieback.

As in previous years, we conducted a nursery survey this summer in conjunction with the USDA to ensure that this pathogen does not become established in Kentucky. In addition to extensively sampling 20 nurseries for this disease, we have been taking samples of symptomatic leaves during regular nursery inspections.

We have taken samples from 37 nurseries so far this season. In total, 141 samples have been taken and tested for sudden oak death using laboratory tests. All samples have tested negative for this disease.
Lace Bugs on Ornamental Plants

Eileen A. Buss & Jay Cee Turner, University of Florida

At least 17 species of lace bugs (Heteroptera: Tingidae) are pests of trees and shrubs in the eastern United States (Table 1). Most lace bug species have a limited host range and may attack only a handful of plant species. Plants that are commonly attacked include azalea, hawthorn, lantana, oak, pyracantha and sycamore.

Biology and Behavior

Lace bugs are small insects, 1/4 to 1/8 inch long, broad, flattened and somewhat rectangular in shape. Their bodies are usually brown or black, but their wings are partially transparent and lace-like. Immature lace bugs or nymphs are blackish in color, wingless, and have many small spines projecting from their body. Females lay eggs on the lower leaf surface along the midrib or lateral veins and cover them with a brownish substance. These dark varnish- or molasses-like spots are obvious when plants are heavily infested. Most species have five nymphal instars before becoming adults. Each generation, from egg to adult, takes about 30 - 45 days. There may be three to five generations each year.

Lace bugs damage plants by inserting their piercing-sucking mouthparts into the underside of leaves and withdrawing chlorophyll and other plant fluids. Females generally cause more damage than males. The upper surface of lightly-infested leaves has a white-dotted, or stippled appearance. Heavy infestations cause leaves to brown and drop prematurely, which reduces growth or kills the plant.

Detecting Infestations

Examine your plants weekly during the spring, summer, and fall. Turn a few leaves over and look for lace bugs with a 10 to 15 power hand lens or shake an infested branch over a white sheet of paper. The insects will fall off and may be more easily identified than on the foliage. The brown spots and stippling may remain on leaves even after pest populations have been reduced.

Cultural Control

Several non-chemical means of reducing lace bug problems exist. One option is to thoroughly spray infested plants with a high-pressure stream of water. However, this approach may only knock the insects off the plants, rather than kill them. Establish plants according to their growth patterns, keep them healthy, and well-watered. For example, azaleas, which are understory shrubs, tolerate less lace bug damage when planted in full sun and suffering from drought-stress.

Choose varieties or species of plants that are resistant to lace bugs or better tolerate damage.

Biological Control

Very few beneficial insects specialize on lace bugs. However, generalist predators, such as green lacewings, may attack lace bug nymphs and adults. Lace bugs may also be infected by diseases.

Chemical Control

If more than 15% of the foliage is damaged, then an insecticide application is suggested (Table 2). Insecticidal soaps (e.g., Safer Soap, M-pede) are often a first line of defense against soft-bodied insects. In general, spray plants to run-off or until leaves (top and bottom) are thoroughly wet (check the label for application instructions). Continue to inspect the plants periodically and apply an insecticide if plants become re-infested. Soil treatments are relatively slow in action, but effective for up to 5 or 6 weeks. Systemic insecticides are absorbed more rapidly by plants when they are worked into the soil and watered.
Phytosanitary Certificates
Carl Harper, Senior Nursery Inspector
University of Kentucky

Shipping plants out of the United States? If so, then you will probably need a Federal Phytosanitary Certificate. This certificate is used to certify that the plants or plant products being exported have been inspected according to appropriate procedures, and they are considered to be free from quarantine pests, practically free from other injurious pests, and conform with the current phytosanitary regulations of the importing country. As with most things there is a cost to run this program and the fees are going up. The proposed rule for export program user fees has been submitted and once cleared, the proposed rule will be published in the Federal Register and take effect October 1, 2007.

The proposed user fee costs per certificate are as follows:

- **PPQ Form 577**, Federal Phytosanitary Certificate (FPC)
  - $98.00 for commodities valued at more than $1,250.00.
  - $56.00 for commodities valued at $1,250.00 or less. The importer must provide an invoice at the time of certification, in order to receive the reduced fee.

- **PPQ Form 578**, Export Certificate Processed Plant Product
  - $98.00 regardless of value of shipment.

- **PPQ Form 579**, Federal Phytosanitary Certificate for Reexport (FPC-R)
  - $98.00 for commodities valued at more than $1,250.00.
  - $56.00 for commodities valued at $1,250.00 or less. The importer must provide an invoice at the time of certification, in order to receive the reduced fee.

- **Reissue of any certificate (577, 578, 579)**
  - $20.00 will be charged for export certificates that must be reissued because of an error caused by the exporter or by requested changes to information about a shipment.

  - There is no charge for export certificates that must be reissued because of an error caused by the issuing office.

Last Newsletter for 2007

This will be the last newsletter that we will publish this year. The first edition for next year will be in April. As always, if you have any suggestions and or input that you would like to make, please feel free to do so.