## Number 1103
### July 31, 2006

<table>
<thead>
<tr>
<th>WATCH FOR</th>
<th>SHADE TREES &amp; ORNAMENTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANNOUNCEMENT</td>
<td>Dog day cicadas can make a racket</td>
</tr>
<tr>
<td>CORN</td>
<td>Foreign grain beetle alert</td>
</tr>
</tbody>
</table>

### FRUIT CROPS
- Prepare NOW for corn storage
- Managing green June beetle at harvest
- Fabraea leaf spot of pears

### LAWN & TURF
- Yard wasps common in late summer and early fall
- Walnut caterpillars stripping some trees
- Occurrence of fungicide-resistant dollar spot in Ohio golf courses

### HOUSEHOLD
- Foreign grain beetle alert

### DIAGNOSTIC LAB-HIGHLIGHTS
- INSECT TRAP COUNTS

---

### WATCH FOR:
- Early signs of WHITE GRUB damage in turf; FOREIGN GRAIN BEETLE emergence, especially in new homes.

### ANNOUNCEMENT

#### Basketball Give Away
There is still time for a chance to win the Tubby Smith autographed UK basketball. You have until August 30. The UK autographed basketball will be given away on August 31. If you wish to be included in the random drawing to receive the basketball, complete a 2006 Pest Management Survey and enter your e-mail address at the end of the web survey or a telephone number if you are completing a hard copy. You can complete a survey on line at [http://ces.ca.uky.edu/kyipm/opening.htm](http://ces.ca.uky.edu/kyipm/opening.htm). If you have lost or thrown out the survey you received through the postal service, you can complete a survey on line at [http://ces.ca.uky.edu/kyipm/opening.htm](http://ces.ca.uky.edu/kyipm/opening.htm) or you can request a copy be mailed to you. To request a mailed copy of this survey or if you have questions about this survey or the research, you can contact Patty Lucas, P. O. Box 469, Princeton, KY 42445 or telephone at (270) 365-7541 extension 218 or e-mail at plucas@uky.edu.

E-mail addresses and telephone numbers provided will be confidential, will be used only to select a winner for the basketball and will be removed from your answers.

**If you have already completed a survey, thank you!**

### CORN

**PREPARE NOW FOR CORN STORAGE**
by Doug Johnson

Corn harvest may seem a long way off but it’s not. As we move toward the end of July, our corn crop is far along and some producers will likely be harvesting by mid-August. That’s just three weeks away.

Producers and consultants work long hard hours in the production of a crop which is scattered over many acres. However, after harvest much of it will end up in a single location on the farm. The yield of a whole year’s time, effort, and expense will be concentrated in single relatively small location. It may seem like money in the bank but the vault has a few holes!

Corn is not the easiest commodity to store; that would probably be soybeans. However, neither is it the most risky, that would certainly be wheat. Producers have a significant number of good management practices they can employ to protect their investment but the time to start is now.

- **At least two weeks ahead of binning:**

Never put new grain in with old grain! Thoroughly clean IN and AROUND your bins. Use shovels, brooms, vacuum cleaners, compressed air and / or compressed water to remove all the old grain dust, trash, and grain from your bins AND from ALL of your harvesting, handling, and transporting equipment. While not impossible, it is highly unlikely that a problem bin will result from grain
that becomes infested in the field. Infestation is much more likely from a hand full or bucket full of last year’s grain (or wheat earlier this year). You are not likely to get everything when you clean but the more you remove from in and around your equipment, handling and storage, the smaller the starting population of insects will be.

If you have perforated flooring or air ducts in the base of your bin, consider fumigation in these areas. If possible, have a licensed commercial fumigator do this job. This person will have the knowledge and equipment necessary to do a good job. You can do it your self (depending upon state law) but it is dangerous. Additionally, if not done correctly it’s just a waste of your time, effort and expense.

Treat the interior of your bins with an approved insecticide. Several products are available, you can find Kentucky’s recommendations at: http://www.uky.edu/Ag/PAT/recs/rechome.htm

These are our field crops recommendations. The stored grain section is at the end of each commodity.

• At Binning:

Store clean, dry grain. This can be a major key to reducing your risk of insect infestation. Removing broken & damaged grain along with chaff, trash and dust is very important. Many of our most common insect pests cannot feed on whole, sound kernels. But they’re living on these broken bits and chaff can allow them to heat and create unwanted moisture in the grain.

• During Storage:

Check your grain often. Sometimes just sticking your head inside the hatch can tell you a lot. Something as simple as a small leak will produce spoiled grain which will cause further and progressive problems.

Use insect traps. These grain “probe” traps are very inexpensive and easy to use. Routine use can tell you about changes in the insect activity in your bins before it becomes a real problem.

Cool your grain as much and as soon as possible. Yes, I know it is August but grain often comes in from the field at between 90-100°F. Any reduction in temperature is a help. And in our area, August nights will often be in the low 70’s and sometimes into the 60’s. Grain temperature management is probably the least used and most powerful management tool available for preventing pests problems in the bins. You can purchase simple controllers for relatively modest investment that will turn your fans on and off for you. This is a great asset when you are busy doing those other farm chores.

With stored grain preventing a problem is almost always easier, safer and more cost effective than correcting a problem after it has occurred. Damage can be prevented but it can not be returned to its original state. If you can only remember one thing then: Put Clean Dry Grain in Clean Dry Bins!

FRUIT CROPS

MANAGING GREEN JUNE BEETLE AT HARVEST
by Ric Bessin

One of the more difficult types of pest problems to control is that of direct pests (those that attack the part of the plant one plans on selling) just before or at harvest. Green June beetle is one of those pests that is not attracted to developing fruits, but will begin to arrive and cause damage in the final few days before the first fruits are harvested. During these final few days, two important changes occur with the fruit that makes them attractive to green June beetle, the fruits begin to soften and the sugar content increases. Green June beetle is a common problem with many sweet crops including peaches, blackberries, grapes, early apples, and even sweet corn. Once green June beetle breaks into the flesh of these ripening fruits, Japanese beetle and other insects contribute to the problem.

What makes this problem particularly difficult is that controlling green June beetle with insecticides is problematic as products that might work well are not permitted because of the Pre Harvest Interval (PHI) waiting periods are too long. Growers are restricted to products with very short PHI that don’t work as well to control the beetles. Growers that have consistent problems each year could anticipate green June and apply sprays on the final day that would allow the required PHI, but pest problems are not always that predictable and the effectiveness of the sprays would be minimal by spraying that far in advance of the pest arriving.

So growers have to consider their limited options. First they can use insecticides that have short PHI intervals but reduced efficacies. They are a few choices here that provide very limited relief. An alternative when the plantings are small is to use row-cover barriers over the plants. A final alternative is to use a repellent to drive the beetles out of the planting temporarily. This was demonstrated in peaches at the UK REC center last year using a neem based spray. Neem acts as a repellent and is effective for 1 to 3 days, but can be reapplied as necessary. Neem has zero days to harvest and is approved for organic production.

FABRAEA LEAF SPOT OF PEARS
by John Hartman

Fabrea leaf spot, caused by the fungus Fabreae maculata,
has been appearing on pear specimens appearing in the Plant Disease Diagnostic Laboratory and has been the subject of inquiries from agents and growers. Also called pear leaf blight, the disease is appearing on Asian and domestic pears in Kentucky. The fungus affects many other members of the rose family including hawthorn, serviceberry, cotoneaster, pyracantha, and even apple. Bosc pears are thought to be highly susceptible to this disease.

Symptoms. Lesions first appear on young leaves as tiny reddish to purple spots. As the spots enlarge, infected leaves develop circular dark brown spots with purplish margins. Spotted leaves turn yellow and drop from the tree, which is the symptom being observed now. Trees that defoliate prematurely are likely to set fewer fruit buds for next year. Fruit spots resembling leaf spots may also form; severely infected fruit may become cracked. The fungus may also form small cankers on the bark of twigs, but the cankers rarely enlarge to become a problem on the branches.

Disease progress. The fungus overwinters in diseased leaf litter and in twig cankers. During wet periods in spring, spores are spread by splashing rain to nearby pear foliage to initiate primary infections during the weeks after petal fall (May and June in most years). Unlike apple scab, which primarily infects very young leaves, pear leaf spot can also attack mature leaves. Fabraea leaf spot is favored by warm, wet, humid summer weather and under the right weather conditions, the disease can develop very rapidly.

Disease management. A combination of cultural practices and chemical applications are effective in managing this disease.

- Rake up and destroy fallen infected leaves. High disease levels this year increase chances for more disease next year.
- Avoid overhead irrigation in the orchard.
- Apply fungicides in spring beginning at petal fall and continue into the summer. The fungicides listed in U.K. Cooperative Extension publication ID-92, 2006 Commercial Tree Fruit Spray Guide for pear scab should be helpful for pear leaf blight.

LAWN & TURF

YARD WASPS COMMON IN LATE SUMMER AND EARLY FALL
by Lee Townsend

Cicada killers, velvet ants, and Scolia wasps are among the wasps in lawns now. While these insects are intent on carrying out their daily chores and tend to disregard humans, they can cause painful stings if disturbed.

The cicada killer wasp is about 1.5 inches long with a black body marked with yellow. The head and thorax are rusty red and the wings are yellow-brown. Each of these solitary wasps digs an individual burrow in sandy or well-drained soil. The 0.5 inch wide opening to the tunnel is surrounded by a U-shaped collar of soil that is kicked out during excavation. The wasps live for about 2 months and are active until about mid-September. The burrows may be treated with Sevin (or other insecticides labeled for application to turf) if they are in high use areas or pose a serious nuisance. Otherwise, these large wasps capture cicadas and cause no real harm. More information is available in Entfact 004 http://www.uky.edu/Ag/Entomology/entfacts/misc/ef004.htm.

Velvet ants are striking insects clothed in red and black or orange and black “hairs”. Females are wingless, males have two pairs of black wings. The females have very long stingers, the potency of the punch they pack is alluded to in one of their common names – “cow killer wasps”. Picking one up can provide a memorable experience. These wasps, seen walking determinedly across the lawn, do not have a home, so there is no place to treat. They pose no threat unless handled or stepped on by bare feet. www.uky.edu/Ag/Entomology/entfacts/trees/ef442.htm

The Scolia wasp has a black head, thorax and wings. The front half of the abdomen is black, the back half is dark orange with two distinct yellow bars. Female wasps cruise just over the turf and occasionally enter the soil in search of white grubs, which serve as food for the wasp larva. These wasps can be very abundant in turf where white grubs are numerous; however, the wasps are not aggressive, and in fact, may not sting at all.

These distinctive insects can common in some Kentucky lawns. While their bright warning coloration accentuates their ability to sting, they are not aggressive and control efforts rarely are warranted.

WALNUT CATERPILLARS STRIPPING SOME TREES
by Lee Townsend

Walnut caterpillars are black and covered with white hairs. There is a single white line along each side and a thin, broken white line down the center of the back. These caterpillars feed on black and English walnut, butternut, pecan and several hickory species. Eggs are laid in masses of 100 to 800 so large numbers of larvae can be found stripping entire branches. By now many of the caterpillars are full grown (about 2” long). Trees usually can withstand 2 or 3 years of heavy defoliation before showing adverse effects.
OCCURRENCE OF FUNGICIDE-RESISTANT DOLLAR SPOT IN OHIO GOLF COURSES
by Paul Vincelli

Researchers at The Ohio State University recently published a study in which they surveyed 55 golf courses for resistance to fungicides in the dollar spot fungus (Sclerotinia homoeocarpa). Their results are consistent with my own limited data and my general observations for Kentucky, so I am providing a summary of the results. The full bibliographic citation for this work is: Jo, Y.-K., Niver, A. L., Rimelspach, J. W., and Boehm, M. J. 2006. Fungicide sensitivity of Sclerotinia homoeocarpa from golf courses in Ohio. Plant Disease 90:807-813.

Summary of Research
Thiophanate-methyl. Thiophanate-methyl is the active ingredient in a wide range of commercial fungicides, including Cleary 3336 Plus®, Fungo®, Proturf Systemic Fungicide®, SysTec 1998®, Cavalier®, Absorb® TM®, T-Storm®, and Tee-Off®. Thirty four of the 55 golf courses surveyed in Ohio had resistant strains of S. homoeocarpa. These resistant strains were highly resistant to the fungicide. In other words, they would be completely uncontrolled at the full labeled rate. Spraying the product on these courses would be like spraying water as far as the fungus is concerned. Thiophanate-methyl resistance tends not to have what biologists call a “fitness cost”. In other words, once resistant strains develop, they are as vigorous and well-adapted to causing disease as sensitive strains. Thus, the resistance tends to persist indefinitely on the site.

Propiconazole. Propiconazole, the active ingredient in Banner MAXX®, Propiconazole Pro®, and Spectator®, was selected as a representative of the DMI class of fungicides. The DMI class includes the active ingredients propiconazole, triadimefon, myclobutanil, and fenarimol. Resistance to propiconazole was found on 18 of 55 golf courses. These resistant strains exhibited quantitative resistance. In other words, they were substantially less sensitive than wild-type strains of S. homoeocarpa, but moderate doses of fungicide in Petri dishes could still suppress their growth.

Iprodione. Iprodione, the active ingredient in Chipco 26GT®, Proturf Fungicide X®, and Iprodione Pro®, was selected as a representative of the dicarboximide class. The dicarboximide class includes iprodione and vinclozolin. Resistance to iprodione was found on only one course, and the level of resistance of that strain was only slightly above that of wild-type strains. Furthermore, resistance to the dicarboximides tends to confer a significant fitness cost, so that the resistant strain doesn’t pose as much of a threat to cause disease as compared to a strain resistant to thiophanate-methyl.

Multiple resistance. It should be noted that some strains of S. homoeocarpa exhibited resistance to more than one fungicide, something that has been documented in other states where a careful study of fungicide resistance in dollar spot has been conducted.

Management implications
Resistance to thiophanate-methyl seems rather common in the region, and the fungicide is ineffective where the resistance occurs. If superintendents see a breakdown of dollar spot control when using this fungicide, it is probably a wise idea to cut that active ingredient out of one’s dollar spot spray program. It is fine to use it against other diseases; just don’t count on it for control of dollar spot.

As far as DMI fungicides are concerned, if resistance occurs on your course, what you would expect to see is that the DMI fungicides will control dollar spot, but typically higher rates (staying within label requirements) and shorter spray intervals will be necessary. The overall scientific literature suggests that there may sometimes be a slight fitness cost to this resistance. Therefore, if a superintendent can eliminate the use of DMI fungicides for several growing seasons during periods when dollar spot is active, this might help reduce the frequency of resistant strains, allowing one to return to using a DMI fungicide once or twice a season against dollar spot. However, eliminating the use of DMI’s is much easier said than done, since the dollar spot spray season is so long and there are so many other diseases for which DMI’s might be needed. Furthermore, there is no guarantee that a moratorium on the use of DMI fungicides for a couple of seasons will reduce the frequency of resistance on a given course, because the fitness cost is not as predictable or substantial as it is with thiophanate-methyl. The main thing I can suggest is that, if you see what looks like a deterioration in your ability to control dollar spot with DMI fungicides, consider the possibility that resistance is present and look to cultural practices and other fungicides as the foundation for your control.

Resistance to dicarboximides seems to present almost no practical significance at this stage. Resistant strains are infrequent; they are not as fit as the wild type; and the dicarboximide fungicides commonly still seem to be effective for controlling dollar spot on these sites. In fact, I consider vinclozolin to be a great alternative to sites that have experienced dollar spot with resistance to the other fungicides discussed here. Furthermore, I commonly recommend vinclozolin as a routine component of a spray program against dollar spot as a way to reduce dependence on DMI fungicides or thiophanate-methyl, because the less one uses a fungicide with a risk for resistance, the longer it is likely to take for resistant strains to evolve.
FOREIGN GRAIN BEETLE ALERT
by Mike Potter

“I keep seeing tiny, brown beetles crawling along windows, walls, and floors of my new home. I spray the ones I see, but they keep coming back. What kind of bugs are these and how do I get rid of them?” These are the questions typically asked by clients who have foreign grain beetles, especially when the calls come in late summer (August-September).

Foreign grain beetles are very small (about 1/16-inch long), brownish, and are often mistaken for flour beetles or other stored product insects. The key characteristic to look for in identifying this beetle is the presence of a slight projection or knob on each front corner of the shield-like segment directly behind the head. A microscope or good quality hand lens is necessary to see this character (See Entomology Entfact-610, Foreign Grain Beetle).

Foreign grain beetles are frequently a problem in new construction (less than 5 years old). They are one of a group of beetles called “fungus beetles” that feed on molds and fungi growing on poorly seasoned lumber or wet plaster and wall board. If they are found infesting flour, grain, or other stored products, the products are generally moldy or in poor condition. When new homes are built, damp wood is often covered with molds or mildew which attracts the beetles. The beetles are also attracted to accumulations of sawdust trapped behind walls during construction. Eggs are laid on this food material and the larvae develop on the surface fungi. The adult beetles usually become a problem in late summer when they move out of wall voids and are attracted to windows and lights. In older homes, foreign grain beetles can also be associated with plumbing leaks, condensation problems, or poor ventilation.

There is no fast or easy way to get rid of foreign grain beetles. Control is difficult because the breeding source of the beetles is concealed within the walls. The ultimate solution is time and patience. Most new homes dry out naturally within the first few years and the fungi and molds disappear along with the beetles. Drying time can be enhanced by increasing ventilation, e.g., by use of fans and air conditioning. A vacuum cleaner can be used to remove beetles emerging from hidden locations. Pest control companies may be able to provide limited relief by locating the infested wall areas or source of dampness (usually in the rooms where the beetles are most abundant), and injecting residual aerosols or dusts into cracks and crevices beneath baseboards and into the wall voids.

If the homeowner can tolerate the emergence of the adult beetles during August-September, the problem will usually resolve itself. Most newly-built houses cease to have problems after a few summers, and the beetles usually will not be evident during the rest of the year. Some comfort can be taken in the fact that foreign grain beetles are only a nuisance by their presence. They do not bite or damage wood, fabric or stored foods in a sound condition.

DIAGNOSTIC LAB-HIGHLIGHTS
by Sara Long, Julie Beale and Paul Bachi

Agronomic samples received in the PDDL this past week included gray leaf spot (Cercospora) on corn; Diaporthe stem canker, potassium deficiency, downy mildew, and Rhizoctonia stem and root rot on soybean; and black shank, blue mold, tomato spotted wilt virus, tobacco ringspot virus, soreshin (Rhizoctonia), angular leaf spot, manganese toxicity, and frogeye leaf spot on tobacco.

On fruit and vegetable samples, we diagnosed powdery mildew and Phomopsis blight on grape; brown rot and scab on peach; anthracnose and double blossom on blackberry; cedar/ apple rust on apple; Alternaria blight on cucumber; anthracnose on watermelon and cantaloupe; bean yellow mosaic virus, and anthracnose on bean; bacterial spot on pepper; scab and Fusarium wilt on potato; early blight, southern blight, Septoria leaf spot, and Fusarium wilt on tomato; powdery mildew on zucchini; and Fusarium root rot on sweet corn.

Ornamental and turf samples included Pythium, Rhizoctonia and black root rots on petunia; Rhizoctonia root rot on coreopsis; Pythium root rot on chrysanthemum and...
mondo grass; Rhizosphaera needle cast on spruce; Botryosphaeria canker on cherry, hydrangea and wiegela; Septoria leaf spot on popular and kerria; Cercospora leaf spot on honeylocust and maple; Verticillium wilt on barberry, Cotinus and yellowwood; bacterial leaf scorch and Phyllosticta leaf spot on maple; Volutella canker on boxwood; and Phytophthora root rot on hydrangea.

On turf samples we diagnosed basal anthracnose and Pythium root rot on bentgrass; dollar spot, Cercospora leaf spot and Drechslera leaf spot on perennial ryegrass; and brown patch on fescue.

INSECT TRAP COUNTS
UKREC, Princeton KY

July 21-28, 2006
Black cutworm .................................................................0
True Armyworm ..............................................................31
European Corn Borer .......................................................0
Southwestern Corn Borer ..................................................107
Corn Earworm .................................................................24
Fall Armyworm ...............................................................0

View UKREC trap counts for the entire 2006 season at - http://www.uky.edu/Ag/IPMPrinceton/Counts/2006trapsfp.htm
View trap counts for Fulton County, Kentucky at - http://ces.ca.uky.edu/fulton/anr/Insect%20Trap%20Counts.htm

For information on trap counts in southern Illinois visit the Hines Report at - http://www.ipm.uiuc.edu/pubs/hines_report/comments.html
The Hines Report is posted weekly by Ron Hines, Senior Research Specialist, at the University of Illinois Dixon Springs Agricultural Center.

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.