

KENTUCKY PEST NEWS

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WATCH FOR

Pantry pests- DRUGSTORE BEETLES, FLOUR BEETLES, INDIAN MEALMOTHS; HOLLY LEAFMINER damage can be seen on holly leaves.

Integrated Pest Management Program. The symposium is available at <http://www.plantmanagementnetwork.org/pub/cm/symposium/organics/>.

.ANNOUNCEMENT

PUBLICATION FROM SYMPOSIUM ON ORGANIC AGRICULTURE

by Paul Vincelli

A symposium entitled *Organic Agriculture: Innovations in Organic Marketing, Technology, and Research*, was held in October of last year. The proceedings of that were recently published in an online journal called *Crop Management*, published in the Plant Management Network.

A total of 18 presentations across six themes are presented in the proceedings, including

- 1.) challenges remaining in the organic sector
- 2.) producer options and obstacles
- 3.) market growth
- 4.) the training of farmers and other agricultural professionals
- 5.) measuring and communicating the benefits of organic farming, and
- 6) research.

The symposium was sponsored by the United States Department of Agriculture, in conjunction with other organizations in both the public and private sectors.

UK Extension specialists, agents, and all other college employees have access to the Plant Management Network (<http://www.plantmanagementnetwork.org/>), thanks to a college-wide subscription provided by the Kentucky

CORN

CONTINUOUS CORN, IS ROOTWORM REALLY A THREAT?

by Ric Bessin

Corn prices and soybean prices remain volatile and soybean rust is now a concern in our state. Many are considering having more corn follow corn than they have in the past. But a question that growers should ask themselves is, how will this impact insect pest management for 2007? As always, crop rotations and planting dates will, in part, be a major determining factor for certain insect pest problems this year.

Corn growers that have been growing corn continually on the same ground should watch for western or northern corn rootworms. Throughout the state, the spotted western corn rootworm is much more common than the spotless northern. Typically crop rotation is the most effective means of controlling these pests. Eggs laid in last summer's corn fields will hatch in late spring and the larvae will feed on the root systems of corn plants. Generally, keeping a field in corn a second year only increases the potential for rootworms slightly. This is not a reason to switch to higher priced seed and other inputs without assessing rootworm risk in each field. But each year a given field is kept in continuous corn, the risk of economic losses to corn rootworms slowly increases.

So how do you decide if you need to control corn rootworms in your corn this year? You are advised to use a

rootworm seed treatment (Cruiser Extreme Pak Rootworm, Poncho 1250, or Prescribe), a soil insecticide at planting, or plant Bt-rootworm corn (YieldGard Rootworm, Herculex RW) if you are growing continuous corn *and* you noticed an average at least of one beetle per plant last summer. In fields where something other than corn was grown last year, no control is needed for rootworms. When experimenting with new technologies or input, it is always good to leave a test strip through the field to compare the value of the new input against.

If a soil treatment will be used, planters will need to be calibrated next spring. During calibration, the equipment should be examined and repaired as necessary. There are liquid and dry insecticide alternatives that are very effective against corn rootworms. Bt-corn hybrids that protect against corn borers only will not provide any control of corn rootworms, be sure to use the proper type of Bt corn to match the protection needed. Seed treatments can be convenient in that no calibration is need and several pests can be managed.

LIVESTOCK

ROTATION PLAN FOR CATTLE INSECTICIDE EAR TAGS

by Lee Townsend

Plastic ear tags containing an insecticide have been a popular means of pasture fly (especially horn fly) control for about two decades. Tags are inserted in late spring or early summer and the fly control program travels with the animal. The insecticide in the tag is deposited on the animal as it grooms and scratches, keeping insecticide protection in place for 12 to 15 weeks after application.

Using tags containing the same class of active ingredient for several consecutive seasons can select for populations of the horn fly that are resistant to a whole class of related insecticides. This shows up in the form of a shorter than normal period of fly control but lab testing would be needed to confirm resistance.

To cloud the issue more, other things could cause reduced fly control. Some examples: 1)The 12 to 15 week “fly control clock” starts when tags are inserted. Hanging them too early in the spring can mean protection “runs out” before fly season is over. 2) Horn flies moving in from untreated nearby herds can keep pressure high and make control seem less effective. 3) Above normal rainfall can keep manure wetter longer and more suitable for horn fly breeding than during hot, dry summers when manure dries quickly and may less hospitable for horn fly maggots.

Here are some ways to get the most out of your ear tag-based pasture fly control program in 2007.

1) Rotate insecticide classes annually. Check the active ingredient in the tag to be sure you know what you are using and record the choice each year. The Insecticide Recommendations for Beef (ENT 11) lists the tags by insecticide class. This makes it easier to establish a rotation.

2) Apply tags after horn fly numbers reach about 100 per side per animal. This will keep them from being applied too early. It takes more than 100 flies per side to have an impact on weight gain.

3) Supplement fly control with dust bags, oilers, sprays, or pour-ons, if needed.

Staying on a pro-active program will keep resistance problems at bay.

SHADE TREES & ORNAMENTALS

REPLANTING THE URBAN FOREST FOLLOWING BACTERIAL LEAF SCORCH by John Hartman

During recent years, bacterial leaf scorch, caused by *Xylella fastidiosa*, has been involved in the demise of large numbers of trees along streets and in landscapes throughout Kentucky. Especially hard hit have been the mature pin oaks lining many urban streets. County Extension agents advising homeowners and institutions that have lost large street and yard trees to bacterial leaf scorch often ask for advice on trees to plant as replacements. Fall is a good time to plant landscape trees to replace those lost to disease. The lists presented here are updated from information provided for Kentucky Pest News over the past several years.

Landscape trees in the U.S. that are known to be susceptible to bacterial leaf scorch.

Dogwood. Flowering dogwood, *Cornus florida*; oriental dogwood**, *Cornus kousa*.

Elm. American elm*, *Ulmus americana*.

Gingko. Maidenhair tree**, *Ginkgo biloba*.

Hackberry. Common hackberry*, *Celtis occidentalis*.

Maple. Box elder*, *Acer negundo*; red maple*, *A. rubrum*, silver maple*, *A. saccharinum*; sugar maple*, *A. saccharum*.

Mulberry. White mulberry*, *Morus alba*.

Oak. Black oak, *Quercus velutina*; bluejack oak, *Q. incana*; bur oak*, *Q. macrocarpa*; chestnut oak, *Q. prinus*; English oak**, *Q. robur*; laurel oak, *Q. laurifolia*; live oak, *Q. virginiana*; northern red oak*, *Q. rubra*; pin oak*, *Q. palustris*; post oak, *Q. stellata*; scarlet oak*, *Q. coccinea*; shingle oak*, *Q. imbricaria*; shumard oak, *Q. shumardii*; southern red

oak, *Q. falcata*; swamp chestnut oak**, *Q. michauxii*; swamp white oak, *Q. bicolor*; turkey oak, *Q. laevis*; water oak, *Q. nigra*; white oak*, *Q. alba*; willow oak*, *Q. phellos*. Sweetgum. American sweetgum*, *Liquidambar styraciflua*. Sycamore. American sycamore*, *Platanus occidentalis*; London plane*, *P. x acerifolia*.

* Bacterial leaf scorch is present in Kentucky on these trees.

** Bacterial leaf scorch is present in Kentucky, but not in other states on these trees (based on preliminary evidence).

Where bacterial leaf scorch has been a problem, avoid species that are susceptible to this disease. To prevent catastrophic tree losses due to diseases or insects, the diversity of the urban forest should be increased by not planting the same kinds of trees that are already present in high numbers in neighborhoods, cities and towns.

The following is a list of trees that mature to a large size. These trees are not known to be susceptible to bacterial leaf scorch and thus might make suitable replacements for trees lost along streets, in parks and in yards. Some may have other drawbacks. Readers are urged to learn more about the habits of these trees and, if they are to be used as street trees, to ascertain whether or not they are permitted by the local municipal arborist or tree authorities. One good source of information, with illustrations, is a CD, "Large Trees for Kentucky Landscapes," written and developed by Robert Geneve and Christy Cassidy of the U.K. Horticulture Department.

Large trees not yet affected by bacterial leaf scorch.

Alder. European black alder, *Alnus glutinosa*, and cultivars.

Ash. Blue Ash, *Fraxinus quadrangulata*; white ash, *F. americana*, and cultivars; green ash, *F. pennsylvanica*, and cultivars. Ash might not be a good choice due to the impending invasion of the emerald ash borer.

Beech. European beech, *Fagus sylvatica*, and cultivars.

Black gum. Tupelo, *Nyssa sylvatica*.

Buckeye. Yellow buckeye, *Aesculus flava*.

Catalpa. Northern catalpa, *Catalpa speciosa*.

Cork tree. Amur cork tree, *Phellodendron amurense*, and fruitless male cultivars.

Elm. Lacebark, or Chinese elm, *U. parvifolia*. Although bacterial leaf scorch is a serious problem of American elm, its effect on Chinese elm is not known.

Hackberry. Sugar hackberry, *Celtis laevigata*; with the disease present on common hackberry, sugar hackberry may be a risky choice.

Hickory. Shagbark hickory, *Carya ovata*; shellbark hickory, *C. laciniosa*; and pignut hickory, *C. glabra*.

Katsura. Katsuratree, *Cercidophyllum japonicum*.

Kentucky Coffeetree. *Gymnocladus dioicus*, and fruitless

male cultivars.

Linden. American linden, *Tilia americana*; littleleaf linden, *T. cordata*.

Magnolia. Cucumbertree, *Magnolia acuminata*.

Maple. Black maple, *Acer saccharum* subsp. *nigrum*. Although the disease has not been detected on black maple, the fact that it occurs on four other maples in Kentucky makes this a risky choice.

Oak. Chinkapin oak, *Q. muehlenbergii*; and sawtooth oak, *Q. acutissima* have not been seen with bacterial leaf scorch. However, the fact that it occurs on most other oaks makes these risky choices.

Osage-Orange. Hedge-apple, *Maclura pomifera*, and fruitless male cultivars.

Sassafras. Common sassafras, *Sassafras albidum*.

Tulip poplar. Tuliptree, *Liriodendron tulipifera*.

Zelkova. Japanese zelkova, *Zelkova serrata*, and cultivars.

HOUSEHOLD

FIREWOOD PESTS

by Mike Potter

This is the season when many homeowners begin to burn firewood. Firewood is a source of warmth and comfort, but can also be a way for pests to enter homes. Most pests living in firewood pose no harm to people, furniture, or to the structure. Nonetheless, homeowners often become concerned when insects emerge from wood that is brought indoors, and crawl or fly about the house.

Several types of pests dwell within firewood. Termites, wood boring beetles, and carpenter ants often tunnel and feed within the logs, but upon emergence, usually will not infest structural wood or furniture inside the home. Other kinds of pests hide or overwinter beneath the bark. Examples include centipedes, ground beetles, sowbugs, pillbugs, spiders, scorpions and wood cockroaches. Typically, these pests emerge within a few days or weeks of the wood being brought indoors. For the most part, they are harmless other than by their presence.

Preventing Firewood Pests

Control of firewood pests is best accomplished by management of the firewood itself. Spraying/dousing the wood with insecticides is not necessary, effective, nor recommended, and could produce harmful vapors when the wood is burned. A better plan is to:

1. Store firewood outdoors, only bringing in what you plan to burn immediately or within a few hours. Storing firewood for extended periods inside the home, garage or basement allows pests in the wood to emerge within the structure. Firewood stacked indoors can also become a harborage

for rodents.

2. *Position the woodpile away from the house and off the ground.* Firewood stacked against the side of a building impedes ventilation and encourages moisture problems. Storing the wood in this manner also provides a direct, hidden avenue for termites and carpenter ants into the structure. Stacking firewood off the ground (e.g., on poles suspended between concrete blocks) increases air circulation and drying.

3. *Burn older wood first.* This shortens the time during which pest infestations can become established.

4. *Shake or knock logs together to dislodge any pests clinging to loose bark.* Don't forget to check bottoms of log carriers, since pests often crawl into these when the logs are transported into the home. The occasional insect emerging from firewood can easily be eliminated using a broom or a vacuum.

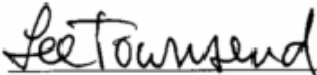
DIAGNOSTIC LAB-HIGHLIGHTS

by Julie Beale and Paul Bachi

Recent agronomic, fruit and vegetable samples in the

PDDL have included Asian soybean rust on soybean; charcoal rot on corn; anthracnose and *Rhizoctonia* root and crown rot on alfalfa; *Pythium* crown rot on red clover; and *Pythium* root rot and *Mycosphaerella* leaf spot on strawberry.

On ornamental and turf samples, we have seen *Pythium* root rot on poinsettia; bacterial leaf scorch on oak; black root rot on holly; *Botryosphaeria* canker on white pine; *Rhizoctonia* crown and root rot on aster; *Botrytis* gray mold on pansy; *Cladosporium* leaf blotch on peony; powdery mildew on rosemary; *Septoria* leaf spot on dogwood; anthracnose on maple; *Fusarium* wilt on mimosa; *Cercospora* leaf spot on hydrangea; and *Pythium* blight on bentgrass.


Lee Townsend, Extension Entomologist

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.