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Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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Bagworms – 2006 .....

While there have been no “first-of-the-year reports” of emerging bagworms, egg hatch is imminent given the rule-of-thumb that initial activities generally begin by mid-May. Activities usually are reported from in southern Kansas before being observed in northern sections of the state.


Bagworms


1-week old bagworms

Most people associate bagworms with “evergreens” such as eastern red cedar and juniper. However, it is important to note that bagworms have a wide host range including broadleaved plants/trees/shrubs. People with bagworm concerns can monitor the bagworm activities on their property. It requires patience and a steady eye to detect the small bags which, a week after the newly emerged larvae began their construction, will be the size of a pencil lead landscape plantings. It is a moot point as to the exact date that activities begin because initiation of insecticidal sprays are not targeted against the first few “new bagworms” that appear. Rather, because egg hatch occurs over a 4-5 week period, insecticide treatments are best withheld until the middle-to-the-end of the emergence period to ensure that the greatest portion of the population is present and exposed. More information will be presented in upcoming newsletters.

Considerations for controlling wood-boring insects .....

The ragged-leafed appearance of deciduous trees and shrubs caused by a variety of foliage feeding insects can be dismissed as but transitory aesthetically unacceptable situation which disappears with rapid replenishment of “new foliage” which restores “normal healthy appearance”. On the other hand, damage caused by wood boring insects cannot be casually dismissed because the destroyed cambial cells and established woody tissues are irreplaceable. **TREES DO SUFFER BECAUSE OF BORER DAMAGE!**

People expect a simple response to their question, “How do I control borers?”. People fail to realize that there is no “pat” response. Rather, before an answer can be provided, certain concepts need to be understood, and other questions asked. First, when considering transplant stock, inspect trees and shrubs for any indication of ongoing or former borer activities such as the presence borer exit holes and cracked/ damaged bark.


"Borer" exit holes


Cracks in bark caused by "borers"

Proper site preparation and planting techniques and bracing will facilitate more rapid establishment of roots for water and nutrient uptake and anchorage. Providing adequate soil moisture will ensure “a liquid surge” within vascular elements, thus preventing the establishment of small larvae by drowning/sapping-them-out. Trunk wraps are a deterrent to against egg-laying by wood boring insects.

With newly transplanted stock as well as already-established trees and shrubs, the first response to the (repeated) question, “How do I control borers?” is, “What type of borers are you trying to control? What tree/shrub species?” The selection of an insecticide as well as the type and timing of applications is dependent on the borer species in question because different borers have different lifestyles and habits. The bronze birch borer will be discussed next week.

Bob Bauernfeind

NEW BAIT FOR HOUSE FLIES: ELECTOR BAIT:

This year, the Environmental Protection Agency (EPA) has approved the new bait, **Elector® Bait**, for controlling house flies in dairy, beef, poultry and other livestock operations. It can also be used indoors, but only in areas where animals cannot come into contact with or ingest the granules. This bait is in a yellow, granular formulation and it is attractive to house flies (not stable flies and other blood-feeding flies).

Elector Bait is the first bait from the new spinosyn class, it has a delayed mode of action that kills house flies after they have eaten and left the bait area which keeps the bait clean and available for good performance (this means you will not see many dead flies close around the bait).

The following bait application methods are available: a) scatter bait, b) station/tray bait, c) hang-board/card bait; d) paint-on bait; e) spray-on bait.

Elector Bait is ready to use, and available in both 5-pound and 40-pound containers. Elector Bait can be purchased through animal-health suppliers, feed stores and veterinarians. For more information about Elector Bait, go to the Elanco website: www.elanco.com .

(Elector pour-on that has the same active ingredient, spinosyn, for controlling horn flies and cattle lice has been on the market for a few years).

Ludek Zurek, Medical Entomologist

Beware, hairy structures under oak leaves not caused by itch mites!!

Midwestern homeowners that have had to deal with the oak itch mites for the last two years are quite frustrated and with good reason: There are no proven methods for controlling them; or for reducing their impact on attacked humans. These mites are not active and biting so far this year and spraying trees to try to eradicate them before they become active may be futile. We have received several reports that homeowners who have experienced problems caused by the itch mites previously may fall victim to their own eagerness for controlling this problem. Although the mites are probably not active so far this year, we expect them to reappear, probably in late July, early August.

The mites, which cause itchy, painful bites that sometimes take long periods of time to heal, develop within marginal leaf roll galls and smooth vein pocket galls in oak trees, mainly pin oaks. The galls are cavities formed by a tree in response to chemicals injected with the saliva of tiny larvae of midges. Subsequently, the mites invade the galls where they feed on the midge larvae. Currently there is no recommended method for controlling these itch mites. However, entomologists and horticulturists at both University of Nebraska-Lincoln and K-State are currently conducting research evaluating insecticide formulations aimed at controlling the midge larvae within the galls, and if successful, this will control the mites. We plan to disseminate results and recommendations as soon as these studies are completed.

Homeowners see the hairy structures on the underside of pin oak leaves, where leaf veins split into two, and believe those are itch mite-infested galls. As a result, they are requesting information from garden centers and other horticultural services on how to treat trees with these galls to control the itch mites.

So far, however, there is no evidence to show that treating trees that have galls will control the mites. There is a concern that homeowners and/or tree service personnel will treat the trees by some method, which could be expensive and not tested and proven, and still not have controlled the problem. If mites are present, they probably would be protected within the galls.

Dr. Alberto B. Broce

Wheat streak mosaic virus epidemic in southwest Kansas:

Wheat farmers in southwestern Kansas have had a tough year with a droughty winter and many patches of freeze damage from a series of late cold spells that came after much of the wheat had begun to emerge from dormancy. In addition many fields have suffered from heavy wheat streak infections. Periods of high temperature this past week have resulted in some additional fields turning yellow prematurely even though seed fill is not complete. In many cases, the yellowing is largely confined to the flag leaf, a sign of late infection by wheat streak mosaic virus (WSMV). Late infections are less injurious to yield than those occurring earlier in the fall, but this is just one more stress for the wheat on top of many others. Although nothing can be done for this year's crop, the extent of the problem is a strong indication that there is plenty of inoculum out there to infest the 2007 crop if proper management is not undertaken.

WSMV is vectored by a tiny mite, the wheat curl mite (Figs. 1 & 2). You will need a hand lens to see these mites – look for them on the upper leaf surfaces around the leaf axils. The outbreak of WSMV is associated with exceptionally high populations of these mites, likely resulting from good overwintering survival. Unlike aphids, biological control is of little consequence to mite populations and their abundance appears largely determined by a confluence of weather conditions. These mites have a lifespan of about two weeks and require a live wheat plant to persist, meaning that volunteer wheat serves as a critical reservoir for persistence of both the virus and its vector. The mites acquire the WSMV by feeding on infected plants and then dispersing on wind currents to other wheat plants. They can also have a direct impact on grain fill when they occur in large numbers feeding in the wheat heads.

Control of volunteer wheat at least two weeks prior to planting in the fall is strongly advised to minimize the early infections that are most damaging to yield. Later planting dates also reduce the length of time available for mites to infest wheat. The good news is, this year will mark the release of a new wheat variety 'RonL' that is the first commercial cultivar developed to express significant resistance to WSMV.

Wheat curl mite

Closeup of wheat curl mite

J.P. Michaud - Hays, KS

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Sincerely,

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