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Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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ELECTOR - A NEW INSECTICIDE FOR HORN FLIES AND LICE:

ELANCO company has introduced on the market an new insecticide - ELECTOR™ for control of horn flies and cattle lice. Elector is based on a new class of active substance, spinosad. Spinosad is a natural product produced by a soil actinomycete (bacterium) *Saccharopolyspora spinosa*. Spinosad is absorbed by contact, affects insect nervous system and results in rapid (within minutes) paralysis and death. Elector is non-irritating to people and animals and no protective equipment is required. This product is also effective against horn flies resistant to other classes of insecticides.

Elector is available in pour-on and dilutable spray (on animal and premise) formulation for beef and dairy (lactating and non-lactating) cattle. This product is on the market in 1-liter (around \$34) and 5-liter bottles (around \$170). Recommended application dosage is 4 ml per 110 lbs body weight (pour-on), 10 ounces to 5 gallons water (on-animal spray), 20 ounces to 5 gallons water (premise spray).

Ludek Zurek

Kansas Department of Agriculture: FOR IMMEDIATE RELEASE

April 13, 2004

Contact: Lisa Taylor (785) 296-2653

Herbicide applicators reminded of sensitivity of certain Kansas crops

TOPEKA - The Kansas Department of Agriculture today reminded herbicide applicators that certain Kansas crops are sensitive to drift from hormonal-type herbicides and that extra care should be used when making applications near where those crops are grown.

"The number of acres devoted to sensitive and organic crops grows each year," said Gary Meyer, manager of the pesticide and fertilizer program. "With that expansion comes increased concern that these sensitive crops will be damaged by herbicide drift."

The most common herbicide-sensitive crops in Kansas are cotton, grapes, tomatoes, and fruit and nut trees. Exposure to even minute concentrations of some of the more commonly used hormone-type herbicides can result in crop failure. Organic growers stand to lose their USDA certified organic status if any type of pesticide, including insecticides and fungicides, are detected in their crops.

"We're launching a campaign to educate growers and herbicide applicators of the sensitivity of these crops," Meyer said. "Our goal is to reduce opportunities for damage to sensitive crops from drift."

One element of the agency's campaign is an online registry where growers can make their sensitive crop locations known. Applicators can use it to identify how close they are to a sensitive crop and where they need to exercise the greatest caution to avoid drift. The registry includes county maps that show sensitive crop sites, as well as links to K-State Extension publications that offer tips for reducing drift.

"Drift is a violation of the product label that could result in an applicator being assessed a monetary penalty and a loss of his or her certification," Meyer said. "We'd rather be proactive rather than punitive. We want to help growers protect their sensitive crops, and that means enlisting the help of applicators."

To be eligible for listing on the website, a crop must be grown for commercial purposes and represent a legitimate source of income for the grower; be known for its propensity to be economically damaged by herbicides that volatilize readily; or, if organic, be produced under an organic certification program.

Growers who want to list a crop location on the website can access a request form at www.accesskansas.org/kda/Pest&Fert/sensitivecrops.htm <http://www.accesskansas.org/kda/Pest&Fert/sensitivecrops.htm> .

Applicators can use the same web address to access sensitive crop location information.

Sharon M. Dobesh

Alfalfa Weevil:

Results from treating for weevil larvae -- In the picture below: to the left of the stem, are the larvae in found in 10 sweeps from the untreated portion of the field. To the right of alfalfa stem, are the larvae collected in

10 sweeps from the treated portion of the field. Plots were treated on 04/06/04. 30% light-colored 1st instar larvae which means eggs are still hatching. Treatments within the last two weeks seem to be controlling weevils well. Growers should still be checking fields.



Alfalfa Weevil

Picture - Courtesy of Carl Garten, Saline County Extension Agent

Jeff Whitworth

Asparagus Beetles:

“Peek-a-boo, I-see-you” — a game that we have all played at one time or another. In lieu of a toddler, step into your asparagus patch and play the game with the common **asparagus beetle**. It is almost comical — spot a beetle, sneak up on it, and invariably it will slip around to the opposite side of the stem. Twist the stem/fern around, and it will again retreat to the opposite side.

The asparagus beetle (Figure 1) is beautifully colored and patterned. Their wing covers are bluish black, and bordered by reddish-orange margins. Each wing possesses 3 yellowish to cream-colored square spots. The prothorax (area just behind the head) is reddish-orange.



Figure 1

Asparagus beetle

Asparagus beetles overwinter beneath debris in and around gardens/asparagus beds. Initiation of their seasonal activities coincide with the appearance of the first asparagus spears poking through the ground. Asparagus beetles are present throughout the growing season. Then in response to cooler temperatures in late fall, beetles seek refuge in protected sites where they overwinter.

The asparagus beetle life cycle is temperature regulated and spans a period of 3 to 7 weeks. After mating (Figure 2), eggs are deposited “on end” in straight rows (Figures 3 and 4). Within a week, small larvae (Figure 5) emerge and immediately begin feeding. Larvae develop rapidly. Mature plump soft-bodied “wrinkly” larvae are dull grey with black head capsules and legs, and up to 1/3-inch long (Figure 6). Larvae next burrow into the ground where they become transformed into pupae. Following a 1-2 week pupation period, newly emerged beetles immediately begin another generation. In Kansas, asparagus beetles produce (certainly) 2 to (possibly) 3 generations per year.



Figure 2
Beetles mating



Figure 3
Eggs on leaf



Figure 4
Eggs on stem



Figure 5
Small larva



Figure 6
Mature larva

Two types of damage are attributable to asparagus beetles. Decreased marketability of produce may be a result of the presence of eggs deposited on spears (Figure 7) and/or visible feeding damage (Figure 8). Also, asparagus beetle larvae produce an inky black fluid (Figure 9) which causes stains on spears. For home use, spears that might not be considered “market quality” are still usable. Eggs can be removed with washing/rubbing and rinsing in water. And despite some gnaw marks, spears are completely edible.



Figure 7
Eggs on spear



Figure 8
Chewing damage



Figure 9
Inky black stain

Upon completion of the season's asparagus production, continued feeding on asparagus ferns by uncontrolled populations of asparagus beetle and their larvae (Figure 10) reduce the photosynthetic capabilities of plants thus decreasing the replenishment of root reserves necessary for the next season's asparagus production.



Figure 10
Foliar feeding

During the production period, a couple of approaches can be used to counter asparagus beetle activities. Spears should be harvested regularly and cut cleanly and deeply to deprive beetles access to egg-laying sites. Also, insecticides can be used to protect spears from egg-laying beetles. Control of asparagus beetles is also important when establishing new asparagus plantings. By protecting/conserving all foliar growth, plants can maximize/realize their full photosynthetic capabilities in helping to feed and build root reserves. Active ingredients registered for use against asparagus beetles include carbaryl, malathion, permethrin, horticultural oils (against the larval stages) and rotenone, all of which are marketed as insecticidal products produced by various manufacturers.

A couple of cultural practices may help to reduce asparagus beetle numbers. Volunteer plants can be eliminated thus depriving beetles of a food source. Or several plants can be allowed to grow and attract beetles. Those plants can then be sprayed to eliminate concentrations of beetles and their larvae.

Another beetle associated with asparagus is the **spotted asparagus beetle**. It is decidedly different in appearance (Figure 11), life cycle and importance as an asparagus pest. Their initial appearance is later than that of the common asparagus beetle, and eggs are not laid before the asparagus berries have formed — a time well after asparagus production is completed and plants have been allowed to “fern out”. Spotted

asparagus beetle larvae bore into Figure 11 the berries and feed on the berry pulp. Larvae feed on Spotted asparagus beetle a number of berries in the course of their development. After pupating in the soil, a second generation is produced in late summer.



Figure 11

Spotted asparagus beetle on right

European Pine Sawfly:

It has been 3 weeks since March 26 and the initiation of European pine sawflies feeding activities (see Newsletter #5). While the small larvae have been actively feeding, the damage (to this point) has been minimal. However, with the current warmer weather, their feeding rates are increasing, and their ever-increasing size means that serious feeding damage is imminent. Whereas locating EPS may have been due to their small size, they are more easily detectable because. Merely inspect pines for “whitened” terminals (Figures 12 and 13).



Figure 12

Damaged terminal



Figure 13

Damaged terminal

You will not find larvae on damaged terminals. Rather look to adjacent “green needles”. You Figure 5 should see clusters of larger larvae beginning to Larvae consume entire needles.



Figure 14
Larvae

Now is the time to apply an insecticidal treatment to eliminate EPS larvae. The synthetic active ingredients acephate, bifenthrin, carbaryl, esfenvalerate and permethrin are contained in insecticidal products marketed by various manufacturers. "Natural" products include azadirachtin and spinosid. Horticultural oils are also very effective against European pine sawfly larvae.

Bob Bauernfeind

Weekly Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples have been submitted to the Insect Diagnostic Laboratory so far in April:

- 4-1-2004, Ellsworth County: Antlike Long-horned Beetles in home.
- 4-1-2004, Rooks County: False Wireworm in wheat field.
- 4-2-2004, Harvey County: Carpet Beetles in home.
- 4-2-2004, Osage County: Ground Beetle larva in garage.
- 4-2-2004, Sherman County: Seedbugs in home and yard (see below).
- 4-6-2004, Barton County: Winged Yellow Ants in home and on trees.
- 4-9-2004, Phillips County: Varied Carpet Beetle.
- 4-9-2004, Reno County: March Flies swarming in yard.
- 4-12-2004, Cheyenne County: Clover Mites in yard and home.
- 4-12-2004, Harvey County: Aphids on cedar.
- 4-12-2004, Jefferson County: Noctuid Moths in fruit trees.
- 4-13-2004, Riley County: Pink Spotted Ladybeetles in yard.
- 4-13-2004, Lyon County: Euonymus Scale in plants.
- 4-14-2004, Butler County: Varied Carpet Beetles in home.

This installment of the weekly report is also the first of what I call the "Weekly Critter Pix" that features images and information on one of the week's submissions. This week's contribution is the 4-2-2004 sample from Sherman County:



Seedbug

This is the Seedbug *Uhleriola floralis* (Uhler) (Order Hemiptera, family Lygaeidae), a mainly western species distributed from California, Arizona, Utah, Montana, the Dakotas, Colorado, Iowa, Nebraska, Wyoming, Illinois, and, of course, Kansas. Host plants are unknown but there are records of associations with grasses. They apparently over winter as adults. I wish to acknowledge and thank Dr. Richard Packauskas (Fort Hays State University, Hays, KS) and Dr. Jane O'Donnell (University of Connecticut, Storrs, CT) for assistance in the identification of this insect.

If there are any questions regarding these samples or about the identification of any arthropod please contact the Insect Diagnostician at 785-532-4739 or bbrown@oznet.ksu.edu.

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Sincerely,

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