http://www.oznet.ksu.edu/entomology/extension/extensio.htm

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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Western Bean Cutworm

The spread of the western bean cutworm into the central corn-belt has lead to renewed interest in this pest including the development of a pheromone trap monitoring network http://www.ent.iastate.edu/trap/westernbeancutworm/ . In traps in the Garden City area we are collecting a few moths and have found a few eggs, but have also found stinkbug eggs that could be confused with western bean cutworm eggs, if one was not careful to examine the egg masses carefully.

With the western bean cutworm the dome-shaped eggs, are laid in flat, irregularly shaped masses usually ranging from 15 to 50 eggs per mass. When first laid, eggs are white with a thin, red ring around the top. Eggs darken with age, first to brown and then to purple or black just before hatch. On close inspection the eggs have noticeable ridges radiating down the sides of the eggs. Stinkbug eggs are also laid in irregularly shaped masses of several eggs per mass and are white in color when first laid, however the eggs are more barrel shaped and don't have the ridges. Some species have a row of spins around the perimeter of the top of the eggs.

Fig. 1 Western bean cutworm eggs (field view, close-up from top, close-up from side)

Fig. 2 Stinkbug eggs (field view, close-up from top, close-up from side

Field scouting should begin at the first sign of tasseling and continue until the silks turn brown. Scouts should look for round white eggs in groups of 5 to 200 on the upper surface of the upper leaves. The eggs gradually become darker in coloration, with hatching occurring in five to seven days. Newly hatched larvae are pale with light-brown stripes running lengthwise down the back. An average of eight plants with eggs or small larvae per 100 plants (when corn is 95 percent tasseled) is required to justify control measures (note with higher corn prices and good yield potential, this threshold could probably be lowered slightly).

Control will be reduced if applications are delayed until all silks have emerged or if larvae have already entered the ear tips. Typically, scouting should be most in tense between July 18 and 30 in southwest Kansas and about a week later in northwest Kansas. (Refer to page 12 for information on hybrids that are resistant to this pest.)

Chemicals labeled to control western bean cutworm can be found on our web site at: http://www.entomology.ksu.edu/DesktopDefault.aspx?tabindex=259&tabid=600 . Keep in mind that the new Bt corn with Herculex I and Herculex XTRA (Containing the event TC 1507 with Cry1F) provide protection against larvae of the western bean cutworm.

Phil Sloderbeck

Grasshoppers

Grasshopper nymphs are abundant in some areas and may justify control to protect crops. Field margins should be sprayed early in the season while grasshoppers are small when populations reach or exceed approximately 20 per square yard. Applying sprays before they move into the field greatly reduces the area that must be sprayed and the amount of insecticide needed.

Noncrop Area Treatments include:

Acephate (Orthene 75S, Address 75WSP)

0.25 lb. a.i./acre (0.33 lb. of 75 percent S or WSP) in 10 to 20 gallons by ground, or in 1 to 5 gallons by air. Use as a noncrop treatment on ditch banks, roadsides, and field borders. Do not feed or graze treated forage.

Carbaryl (Sevin 4F, 80S, XLR)

0.5 to 1.5 lb. a.i./acre. Noncropland (CRP acreage, set-aside acreage, wasteland, rights-of-way, hedgerows, ditchbanks, and roadsides) PHI is 14 days for grazing or harvest of forage for hay. (Label lists control of grasshoppers on multiple sites, which would include noncropland because that site is listed on the label.) Also labeled for use on rangeland at 0.5 to 1.5 a.i./acre where harvesting or grazing is allowed the same day as treatment.

Diflubenzuron (Dimilin 2L)

0.03125 lb. a.i./acre (2 fl. oz. per acre) to manage these insects in breeding areas before they move into crop land. Treat early instars (majority in the 2nd to 3rd nymphal stages). For use on field border, fence rows, roadsides, farmsteads, ditchbanks, wasteland, and CRP land.

Esfenvalerate (Asana)

0.015 to 0.03 lb. a.i./acre (2.9 to 5.8 fl.oz. per acre of Asana XL). This label is for noncrop use on land adjacent to tilled area to control migrating insects. Repeat as needed, but do not exceed 0.5 lb. a.i./acre per year. Do not feed the treated vegetation. Do not spray ditch banks or areas adjacent to water.

Gamma-cyhalothrin (Proaxis) Restricted Use

0.01 to 0.015 lb. a.i./acre (2.56 to 3.84 fl. oz./acre). Spray non-cropland adjacent to agricultural areas to control migratory insects that may threaten crops. Use highest labeled rates for dense/tall foliage, high insect populations and/or larger insects. Do not graze livestock in treated area. REI is 24 hr.

Lambda-cyhalothrin (numerous products)

0.02 to 0.03 lb. a.i./acre (2.56 to 3.84 fl.oz./acre). Spray non-cropland adjacent to agricultural areas to control migratory insects that may threaten crops. Use highest labeled rates for dense/tall foliage, high insect populations and/or larger insects. Do not graze livestock in treated area. REI is 24 hours.

More information on which chemicals are labeled for various crops can be found on our web site http://www.entomology.ksu.edu/DesktopDefault.aspx?tabid=379 - by selecting a crop and then looking for information on grasshoppers on that crop.

Phil Sloderbeck

Whitelined Sphinx Moth Larvae

In parts of western Kansas whitelined sphinx moth larvae are being reported feeding on purslane and other weeds. A real good discussion of these larvae with lots of pictures can be found in the June 7, 2004 issue of the Kansas Insect Newsletter Vol. No. 14. http://www.oznet.ksu.edu/entomology/extension/KIN/KIN_2004/kin-14/04ksnew.14.htm#Huge_Worms_%20Everywhere . These worms are normally not a problem as long as their feeding is confined to weeds. However, a few years ago, we did see some injury to seedling crops planted into fields where these larvae were present. Burn-down herbicides applied just before planting eliminated their normal food source and the larvae moved over to feed on newly emerging crops. That year we had reports of soybeans, sunflowers, sorghum, and corn receiving some damage from these insects. Larvae also occasionally damage nearby crops when populations are abundant and they consume all of their preferred host plants before they have completed development. Thus, this might be a pest to watch for on any recently planted crops.

Phil Sloderbeck

Hessian Fly

Please remember, as wheat is harvested, that we need to gather as much information as possible relative to Hessian fly infestations. Thus, if you or any of your growers have known infestations of Hessian flies please e-mail me (jwhitwor@ksu.edu) with the county, number of fields, percent infestation and estimation of losses. This doesn't have to be too scientific. Just as good an estimation as possible, but we would really appreciate any information we can get.

Jeff Whitworth

Alfalfa

The potato leafhoppers are not going away. Please be vigilant about checking your fields and consult the KSU Alfalfa Insect Management Guides if you have any questions regarding treatment thresholds and insecticide choices. http://www.entomology.ksu.edu/DesktopDefault.aspx?tabindex=181&tabid=514

Jeff Whitworth

Squash Bugs ……..

Now is the time of year that gardeners need to get a head start on squash bugs ---- nip-the-in-the-bud, so to speak. Many squash plants are well established. When plants begin to vine and fill out, squash bug activities probably are under way. Daily scouting will help to determine the presence of squash bugs. Especially during the early hours, squash bugs can be seen on leaves "sunning themselves".

Squash Plant

"Vining" Squash

While some egg masses can be located via cursory observations of upper leaf surfaces, more will be located by inspecting lower leaf surfaces which are the preferred for egg laying

Lower leaf surface for egg laying

Squash bug eggs

Mating squash bugs

By marking egg-ladened leaves, a gardener can monitor and determine the time of egg hatch. This is important because newly emerged nymphs are especially susceptible to insecticide treatments which are better begun sooner than later after squash bug populations are in runaway-mode. Treatment effectiveness diminishes as softer-bodied squash bug nymphs progress through to the adult stages which possess a thicker, more hardened exoskeleton.

Newly-emerged nymph

The most important factor in applying insecticide applications is achieving thorough coverage. Merely applying a light mist-like spray to upper surfaces of upper leaves will do little to directly contact squash bugs which prefer lower leaf surfaces of upper **AND l**ower leaves as well as feeding on newly formed fruits which tend to be hidden under foliar growth. Also remember that squash bugs have a continual presence throughout the growing season, and thus repeated insecticide treatments are required to keep population levels to acceptable, non-damaging levels.

Dense protective cover

As usual, homeowners need to visit with personnel familiar with insecticidal products at their respective retail outlets when selecting an insecticide with which to control squash

bugs. Various active ingredients are listed in the June 2005 Extension Publication MF-2508 – Squash Bugs and Squash Vine Borers. Hard copies of this publication can be obtained through local County Extension Offices. The electronic version can be accessed (as well as downloaded) at: http://www.entomology.ksu.edu/

Click: Extension
Click: Publications
Search: Squash bugs

Bob Bauernfeind

Black beetles attracted to lights ……

Reports are filtering in regarding "black beetles" attracted to lighted areas especially around malls, convenience stores and downtown business areas. These beetles are "ground beetles" ---- a generic term applied to about 3,100 different species found in the United States and Canada. **Most** ground beetles (and their larval stages) have predacious feeding habits and are therefore regarded as beneficial. However when they occur in great numbers and congregate near buildings and dwellings, many may slip through the smallest cracks and crevices to gain access to indoor environs. Thus they constitute a nuisance. A premise insecticide treatment may somewhat reduce numbers to an acceptable level.

The two current most commonly recognized ground beetles have no common name. *Harpalus pensylvanica* is the smaller of the two (measuring 5/8 – inch in length) and is a predator, whereas the larger *Harpalus caliginosus* (nearly an inch long) feeds on seeds and is therefore of questionable value as biological control agents.

Two types of Black Beetles

Other than the annoyance of their presence, ground beetles pose no indoor threat. They do not bite, transmit diseases, feed on fabrics or infest stored food products. A vacuum can be used to collect the uninvited guests.

Bob Bauernfeind

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,

Robert J. Bauernfeind
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