

Kansas Insect Newsletter

For Agribusinesses, Consultants,
Applicators and Extension Personnel

K-State Research and Extension
Manhattan, KS 66506-4027

Extension Entomology
Tel. 785-532-5891

W. Waters Hall
FAX: 785-532-6258



<http://www.oznet.ksu.edu/entomology/extension/newslet.htm>

May 1, 2000 No. 5

GREENBUGS:

Reports of continued intensive spray activity prompted us to revisit many of the fields last week in northwest Kansas that we had sampled just about a month ago. We examined the wheat in 32 fields a circular area from Beloit to Goodland and south through Tribune, then east to Claflin. Reports towards the end of last week had indicated intensive spraying around the Tribune area. Part of our purpose was to try to get some idea of the degree to which infestations might be moving northward. Our conclusion based on fields we saw is that the greenbug problem is pretty much past. There have been heavy infestations in parts of the western two tiers of counties mostly south of I-70. Infestations around Goodland have been mostly lower than areas southward and Dana Belshe (Sherman Co. Ext.) believes infestations have been lower north of I-70, at least in Sherman County.

In parts of Wallace, Greeley and Wichita counties, levels of a thousand plus greenbugs per foot of row have not been uncommon in some fields. In some, there are now large brown areas resulting from heavy greenbug infestations. Those who waited until brown spots appeared in fields, probably waited too long to see benefit from treatment. Some of these were in trouble at the end of February. Traveling eastward, it was hard to find greenbugs in fields examined from Scott City to Chaflin.



APHIDS ATTACKING CANOLA:

We are starting to get some hands-on-experience with pest problems on this crop under Kansas conditions. As growers discovered last year and to some extent this spring as well, the army cutworm is fond of Canola. If you've observed army cutworms in wheat, you may have noticed that they prefer to feed on the mustards over the wheat. That problem has past, and recently aphids have

taken over.

These aphids, probably like greenbugs, apparently overwintered successfully in low numbers then exploded as warmer weather arrived. Aphids congregate on the stems and branches and may cover the entire top of the plants. In Canola literature, they talk about individual or small groups of plants as being typically infested. Canadian sources suggest that significant damage may be rare once pod formation has been completed. They also suggest that damage to the small pods and top of the heads may not contribute a great deal to overall yield reduction.

Locally, on the KSU Agronomy Farm, aphids numbers have been heavy. At present at this site, parasites have taken over. Mummies on plants are numerous and live aphids are becoming scarce. These pests (aphids and army cutworms) are annoying although not necessarily difficult to deal with. Persons interested in experimenting with this crop shouldn't feel discouraged just because we are talking about insect problems associated with Canola. Of course, one of the main problems we have on a minor crop like this is getting label clearance for chemicals to use in pest control.

Fortunately, there are some things we can work with on Canola in aphid control. North Dakota makes the following recommendations for aphids:

- 1) Capture, 2EC at .03 lbs. a.i./acre (2.1 to 2.6 fl. oz. of product per acre.) Pyrethroids are generally not the best aphidicides, but Capture probably does better than most (see Dr. Wilde's results below).
- 2) Methyl Parathion at 0.5 lbs. a.i./acre (one pint of 4#EC). This entry appears on the Declare label by Griffin of Valdosta, GA. and maybe others.
- 3) Paraspray (6-3 ethyl, methyl combination at ½ pint product per acre.) Note: this formulation consists mostly of ethyl parathion is therefore subject to all the use restrictions involved with ethyl parathion usage. You can escape these problems by

using methyl parathion with about the same level of efficacy and it is somewhat safer to use as well.

4) Thiodan 3EC. For aphids use 1 quart of product per acre. Note: these are North Dakota recommendations we are listing for information purposes only. In reviewing our Thiodan 3EC FMC label we fail to find any reference to it's use on Canola for rape. The North Dakota entry could be a state and local needs registration.

Here are some experimental control results that Dr. Wilde obtained on Canola. Treatments were applied broadcast by a hand sprayer at 25 gpa and 30# psi. Treatments were applied on April 21, 2000 and evaluated three days later.

Test 1: Aphid Control on Canola

| <u>Treatment</u> | <u>Rate # a.i./acre</u> | <u># of Live Aphids/Head</u> |
|------------------|-----------------------------|----------------------------------|
| Capture 2EC | .03 | 0.63 |
| E. Parathion 8E | 0.5 | 2.63 |
| Dimethoate 4E | 0.33 | 0.75 |
| Lorsban 4E | 0.5 | 0.25 |
| Fury 1.5 | 0.024 | 1.75 |
| Warrior 1EC | 1.9 fl.oz.* | 2.13 |
| Untreated | N/A | 81.25 |

* This is product/acre

Test 2

| | | |
|-----------------|-----|------|
| Capture 2EC | 0.3 | 4.1 |
| E. Parathion 8E | 0.5 | 5.3 |
| Untreated | N/A | 20.5 |

Note: These are experimental products. Capture is labelled as are some parathion formulations.



PEA AND BLUE ALFALFA APHIDS:

Scattered heavy infestations of what are generally described as Pea Aphids are being reported from several locations. In several instances, it seems as if fields that are escaping serious alfalfa weevil damage are hosting large populations of aphids. In many instances, treatment is not recommended unless the plants are showing signs of stress or growth is less than anticipated given other environmental conditions. Beneficials, particularly lady beetles are becoming very common in most of these fields.

PEA APHID:

These large green aphids are about 3/16 of an inch long and 1/16 of an inch wide at maturity. Pea aphids have a dark band encircling the base of each antennal segment. Evaluating relative plant vigor is often the key to determining the need to treat for this insect. Heavily infested plants may turn yellow and wilt. Particularly watch fields that seem to be growing more slowly than expected. Host plant resistance can reduce aphid damage. As with alfalfa weevils, early cutting may solve the problem where heavy infestations develop close to cutting time. On 10-inch tall alfalfa, treatment generally is not needed until nearly 50 aphids/stem are present. On 20-inch tall alfalfa, twice as many aphids/ stem would be required before treatment is justified.

Products recommended for pea aphid control in our recommendations include: Malathion at 1 to 1.25 lb. a.i./acre; PHI 0 days; Methyl Parathion at 0.25 lb. a.i./acre; PHI 15 days; Permethrin (Ambush 2E, Pounce 3.2 EC) at 0.05 to 0.2 lb. a.i./acre; Control may not be adequate under heavy aphid infestations. PHI 0 to 14 days depending on rate. Chlorpyrifos (Lorsban 4E) 0.5 to 1 lb. a.i./acre; PHI 14 to 21 days depending on rate; Dimethoate at 0.25 to 0.5 lb. a.i./acre; PHI 10 days; Cyfluthrin (Baythroid 2) at 0.025 to 0.044 lb.

RUSSIAN WHEAT APHID:

In fields inspected in Sheridan, Logan, Wallace, Sherman, Greeley, Wichita, Scott and Lane counties, it wasn't unusual to see some signs of Russian wheat aphid, but these tended to be older symptoms still visible from earlier infestation. Fresh signs were hard to find. Further east toward Hays, Russell and Great Bend, there is a chance one may see more symptoms. In one field in Rooks County near Plainville we estimated 15 to 25% tillers exhibited signs of Russian wheat aphid infestation though aphid numbers at present appeared relatively low. Would a field with infestation like this justify treatment? Normally yes, but treatment recommendations are based on the assumption that aphid populations are on the increase. Since populations appear to be slowing or declining, you would probably want to revisit fields like this before making a decision.

a.i./acre is labeled, but adequate control may not be achieved under heavy aphid infestations. PHI 7 days; Lambda-cyhalothrin (Warrior T) at 0.02 to 0.03 lb. a.i./acre; PHI 1 day for forage and 7 days for hay.

BLUE ALFALFA APHID:

The blue alfalfa aphid resembles the pea aphid, but does not have dark bands encircling the base of each antennal segment. Only relatively recently was it recognized as a separate species. Light infestations have been recorded from most counties of Kansas, but serious damage thus far has not been observed. Heavy infestations that seem to be pea aphids, particularly on pea aphid resistant varieties, should be identified by an entomologist. Stunting of plant growth is evident at lower infestation densities than with pea aphid feeding. For instance, only 20 blue alfalfa aphids per stem on 10-inch tall alfalfa or 50 blue alfalfa aphids on 20-inch tall alfalfa may be cause for alarm.

Blue alfalfa aphid products listed in our recommendations include: Chlorpyrifos (Lorsban 4E) at 0.5 to 1.0 lb. a.i./acre; PHI 14 to 21 days; Permethrin (Pounce 3.2EC, Ambush 2E) at 0.05 to 0.2 lb. a.i./acre. Control may not be adequate under heavy aphid infestations. PHI 0 to 14 days; Cyfluthrin (Baythroid 2) at 0.025 to 0.044 lb. a.i./acre is labeled, but adequate control may not be achieved under heavy aphid infestations. PHI 7 days. Other insecticides listed under 'pea aphids' may be considered unless labels contain a statement prohibiting use against blue alfalfa aphids.

BLACK CUTWORM--POST-EMERGENCE MANAGEMENT IN FIELD CORN:

Black cutworm damage is usually restricted to the first two weeks following planting. The appearance of scattered areas of transparent or notched leaves indicates small larvae are present. Frequently, however, this subtle damage goes

unnoticed. Larger larvae cause plants to appear severed (cut) and wilted. Early reductions in plant stand will result if the growing point has been killed. Cool temperatures intensify and prolong damage by slowing the rate of corn development relative to that of cutworm development. Corn varieties that maintain yield potential over a range of plant densities should have more tolerance to cutworm damage.

Cutworm problems may occur statewide, but usually develop to more serious levels in eastern Kansas. Problems in Kansas are much less frequent than in corn production areas to the east. The following conditions often are associated with cutworm problems: early spring weed cover prior to planting (which often is associated with late wet springs), nearby permanent vegetation, corn following soybeans and reduced tillage. However, if all attractive conditions are available and an adequate egg-laying moth flight does not develop, cutworm problems will be non-existent. This is a major reason that rescue treatments rather than preventative treatments are recommended in Kansas. See publication MF-1105, Black cutworm in Kansas, for more information. K-State research indicates that losses from combinations of root pruning and loss of all above ground foliage during early vegetative growth (possibly by cutworms, hail, or frost) are less than might be expected. In other words, management of rootworms does not necessarily differ if the field also experienced defoliation stress.

Cutworm susceptible fields should be scouted frequently for damage from the start of plant emergence until the corn is 6 to 8 inches high. The application of a rescue insecticide treatment may be justified if 3 to 5 percent of plants (two-leaf stage) are being cut and the majority of the worms are 1/2 inch or less in length. Each cutworm has the potential to cut from four to six plants at the two-leaf stage of corn development. Action should be taken at lower levels of stand loss under cool conditions

and smaller plant developmental stages. On the other hand, warm conditions and larger plants reduce the damage potential per cutworm. Control attempts when the majority of the cutworms are $\frac{3}{4}$ to 1 inch in length may give poor results. The following chemicals will usually provide acceptable control of smaller larvae if environmental conditions are favorable for their action. The alternative is to wait at least two weeks to give the worms a chance to mature and pupate, then replant where necessary.

Sprays: Sprays are usually most effective if the surface is moist to wet at the time of application. Rotary hoeing either immediately before or after application may enhance the kill if some moisture is present in the top 1 inch of soil or if a light crust is present. Products in our recommendation guide include: Chlorpyrifos (Lorsban 4E) at 1 to 1.5 lb. a.i./acre (2 to 3 pt); Permethrin (Pounce 3.2 EC, Ambush 2E) at 0.1 to 0.2 lb. a.i./acre; Esfenvalerate (Asana XL 0.66) at 0.03 to 0.05 lb. a.i. (5.8 to 9.6 fl. oz./acre); Lambda-cyhalothrin (Warrior T) at 0.015 to 0.025 lb. a.i./acre (1.92 to 3.20 fl.oz./acre).

CORN FLEA BEETLE:

Very small, shiny, jumping beetles that strip the upper surface from seedling corn leaves. More injury is likely to occur on two- to four-leaf stage corn when cold temperatures slow corn growth. Carefully assess the amount of injury before applying control methods. Often, the amount of injury is overestimated. Frequently, satisfactory results can be obtained by spot treatment or border treatment. Remember, if the growing point has not been killed, and the stress eliminated by favorable growing conditions, the corn should come back with little effect on yield being detectable. Treatments are seldom warranted if populations on two-leaf corn remain below four to five beetles per plant.

lower thresholds recently, we are not sure just why, especially under conditions that would not seem to be all that unfavorable. An interesting study about flea beetles was conducted by Dr. Wilde did some years ago. He artificially infested corn seedlings in the laboratory at levels that was damaging? He saw some leaf destruction, but none of the plants exhibited greater than 25 - 50% leaf tissue loss. In the field, simulated damage (up to 100% leaf removal on plants at one week after emergence) produced no significant difference in yield. Don't take this to say you can't have flea beetle injury in the field. You can, but it is closely tied with growing conditions. Under ideal conditions plants can outgrow a lot of flea beetle injury. Under stress conditions, this is not necessarily true. Keep this in mind when trying to evaluate flea beetle problems.

Products listed in our recommendations for flea beetle control in field corn include: Carbaryl (Sevin) at 1.5 lb. a.i./acre; Chlorpyrifos (Lorsban 4E) at 1 to 1.5 lb. a.i./acre; Microencapsulated Methyl Parathion (Penncap-M) at 0.5 to 0.75 lb. a.i./acre (2 to 3 pt. of product per acre); Esfenvalerate (Asana XL 0.66) at 0.03 to 0.05 lb. a.i./acre (5.8 to 9.6 fl.oz./acre); Permethrin (Pounce 3.2EC, Ambush 2E) at 0.1 to 0.2 lb. a.i./acre; Lambda-cyhalothrin (Warrior T) at 0.02 to 0.03 lb. of a.i./acre (2.56 to 3.84 fl.oz./acre)

Randall A. Higgins
Extension State Leader

H. Leroy Brooks
Extension Specialist
Insecticides (Pesticidal
Safety)

We've heard some rumors of people treating at