

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

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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Grasshoppers - Comments from Barton County.

Rick Snell, Barton County Extension Agent, sent us this note about the severity of grasshoppers in his county:

Just wanted to let you know of a case here where the grasshoppers moved out of an alfalfa field that had just been cut and then went into an adjoining corn field. This was exceptional dryland on a creek bottom, probably 9 feet tall. The hoppers not only ate all the leaves in two-days time, but also chewed off all the silks on the pollinating corn. They even chewed into some of the stalks. It looked like a bad hail storm on half of the field, about 40 acres, until he had it sprayed with Capture. He was almost too late. I have never seen grasshopper damage this bad, sounds like the locust plagues of the dirty 30's. Better move your broomsticks indoors.



Two-striped grasshopper

Grasshoppers and Fall Planted Crops

Localized concern still exists. Encourage growers planning to plant alfalfa to scout border areas and field margins for grasshoppers about 10 days prior to planting alfalfa or wheat. Infestations are generally declining by wheat planting time, but this varies with the season and location. Infestations of 7 to 10/sq.yd. in border areas may signal a need for corrective action. Three or more/sq.yd. can destroy seedlings of either alfalfa or wheat. For non-crop border treatment, Asana and Orthene are labeled. Some malathion and Sevin formulations are also labeled for this purpose. A variety of additional insecticides can be used for treating infested fields of alfalfa or wheat.

Cotton Insects

Though dry weather is a greater concern, recent questions about fleahoppers and bollworms prompted us to jot down a few notes on these. We are probably past the time of serious concern about fleahoppers, but bollworms remains as a possible problem.

Fleahoppers

If small squares are turning brown and dropping to the ground, the problem could be physiological or it might be due to fleahoppers. In prebloom, if more than 20% of the small squares are being lost, look by examining the plants for fleahoppers. This is a small 1/8-inch long, yellowish-green insect. It has an elongated, oval-shaped appearance and somewhat flattened over the top as is typical for most bugs. On the adults, a few dark spots are visible near the rear of the upper surface of back.

Thresholds in Oklahoma during the first 3 weeks of squaring call for treatment at levels of 40 fleahoppers/100 terminals. This represents a fairly significant level of infestation - more than what I observed in limited observations in the cotton plots at the Sandyland Experiment Field at St John.



Fleahopper on a leaf as seen from a distance.



Adult fleahopper, closeup.

Sampling can also be done with a drop cloth or sweep net. With a drop cloth placed between the rows, the threshold usually ranges between 1 bug/ft. of row to 1 bug/3 ft. of row. With a sweep net, the threshold ranges between 1 to 1.5 bugs/10 sweeps. A number of insecticides are labeled. Examples of some products commonly available in Kansas include dimethoate, Lorsban, and various carbaryl (Sevin) formulations. Because of our short growing season, treatment during August is not as likely to be economical. Treatment during this time could also potentially unleash a bollworm problem. There is a bit more discussion about this under the bollworm topic. For an example of insecticide performance click on the following link:

http://lubbock.tamu.edu/ipm/AgWeb/r_and_d/1998/Roy%20Parker/Fleahopper/Fleahopper.html

Bollworms

The bollworm (corn earworm on other crops) is a serious pest in the southern cotton growing areas. In Kansas infestations are sometimes observed, although in general it has been limited - even during periods when high infestations have developed in grain sorghum. However, the potential for economic damage exists, and growers should watch

for developing infestations during the period of fruiting and boll development. The adult is a medium-sized



Eggs on a square

Larvae attacking a boll.

Bollworm Pictures courtesy of Extension Entomology, Texas A&M.

cream colored moth, frequently seen during the day during periods of heavy infestations. Moths lay eggs singly, mostly on the young terminal leaves and sometimes on leaves and squares within the canopy. Eggs are pinhead sized and white to cream colored and they hatch within 2 or 3 days during warm weather. Young larvae are difficult to find until they are about 3-4 days old. At this stage, they are about a quarter-inch in length, often brownish-colored with some scattered hairs noticeable. The full-grown larva is about 1 1/2 inches long with a light-colored head capsule. The predominant body color may range from pink or green to various shades of tan to dark brown. A series dark stripes run lengthwise on the body. Larvae begin feeding on leaf tissue and small squares, then gradually move down the plant and damage the larger squares and bolls.

Management is based on scouting for the presence of eggs or small larvae. Treatment is generally recommended when 5 to 10 eggs or small larvae per 100 terminals are found prior to bloom or when 5 small worms per 100 plants are present during the period of late July and August. Preventative treatment that might be applied during the prebloom period is generally discouraged since this can destroy many beneficial forms that ordinarily help keep bollworms and other pest species under control. For additional information see OSU publication # 7162:

<http://www.ento.okstate.edu/factshts.htm>

Corn Earworm in Sorghum

Watch for earworm activity in sorghum fields currently in bloom. During some years, this is our most damaging sorghum insect.



Corn earworm larva

Look for small to large worms in the heads where they are feeding on the developing grain. If you are seeing small worms that are noticeably hairy, they could be sorghum webworms --see description below.

Sample by using a large white bucket (5 gal. size works well). Walk down the row, sample 5 plants or. Shake heads into the bucket by beating each head against the inside bucket surface. Repeat in 4 or 5 different places with each field.

Expect 9 to 10% losses with 2 larvae per head or 13 to 14% losses with 3 larvae per head. Two larvae per head will usually justify treatment in fields with 80-bushel yield potential. A heavier infestation is needed to justify treatment where yield potential is in the 40 to 60 bushel range. About 75% of the damage is done by larvae in the 5th and 6th instars (from 0.75 inches to about 1.5 inches in length). In control studies Warrior, Baythroid, Asana and Lannate have performed well. Lorsban may not be as effective, particularly at the lowest label rate. Tracer is a relatively new product with good worm activity. For additional information see:

http://www.oznet.ksu.edu/entomology/extension/KIN/KIN_2001/KIN01-6.pdf

Watch Also for Sorghum Webworm

The sorghum webworm also attacks the developing grain in the heads of late-planted sorghum, mostly in the southeastern and south central areas of Kansas. Larvae are yellowish to brownish, somewhat flattened in appearance,



Sorghum webworm

and marked with four longitudinal dark-colored stripes on the upper side of the body. Long hairs are noticeable on most body segments. Young larvae feed on developing florets. Older larvae feed upon the developing kernels. Some work suggests that each larva may consume up to a dozen kernels per day. Ordinarily growers will be watching heads for signs of corn earworm feeding. If webworms are present, they should be detected where the corn earworm sampling procedure is used. Scout later maturing fields from bloom to soft dough. Consider treatment where infestations average about 5 or more worms per head. Insecticides for this purpose include Sevin, Lorsban, parathion (this is ethyl not the methyl formulation), Lannate Warrior and Baythroid. Follow all label directions and precautions and note the special restrictions that pertain to use of ethyl parathion.

Corn Earworm on Soybeans

Corn earworms can damage soybeans by feeding on the pods in the southeastern areas from August to September. Control measures should be considered when an average of one small worm per foot is detected.

Soybean aphid Active --But Kansas Surveys remain negative

Since its discovery in Wisconsin in 2000, the soybean aphid has continued to spread through the upper midwest and in parts of Canada.. Recently, heavy infestations were reported in central Iowa. A few weeks ago it crossed the Missouri River and began infesting soybeans in some sections of northeastern



Nebraska. It appeared in northeastern Missouri in 2000, and by the end of 2001, it and spread across the state, almost to Kansas City. So far, there has been no positive record of it in Kansas, but this could be just a matter of time. Last week, Marlin Rice said it was not uncommon to find small areas in fields with thousands of aphids per plant. Iowa suggests control when 1) plants have reached the bloom stage or later, 2) aphid populations are heavy and cover the upper trifoliate leaf on a majority of plants, 3) lower leaves are not yet covered with aphid honeydew or turning black from sooty mold, 4) infested plants do not yet appear stunted, and 5) a majority of aphids are not winged or developing wings.

Sincerely,

H. Leroy Brooks
Extension Specialist
Insecticides (Pesticidal Safety)