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Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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Wheat Head Armyworm:

The wheat head armyworm caused quite a stir this week as damage grain was reported at elevators through out Northwest Kansas. As the combines started to roll in this part of Kansas elevators started noticing kernels of grain with holes chewed in them triggering concerns about IDK or insect damaged kernels. In some cases elevators were reporting significant damage in every truckload and some cases reporting enough damage to classify the grain as sample grade. It is still too early to evaluate the full extent of this problem. There is a chance that some of these early reports were from test cuttings around the edges of fields. This could exacerbate the problem since the wheat head armyworm tends to concentrate along field margins according to the literature. There is also a chance the moth flight in anyone area was timed to coincide with when the earlier maturing wheat was at a certain stage and later maturing and thus later harvested wheat may have less damage.



Wheathead Armyworm



Damaged Head



Damaged Grain

While in many cases the larvae are normally gone by the time the wheat is actually harvested, there were some reports of larvae being found on trucks and combines as they move through the field. This was probably related to some of the late maturing tillers that were common in some fields which were still providing the larvae with a suitable food source.

According to an article by Frank Peairs at Colorado State University, little is known about the life history of this insect. It spends the winter as a pupa in the soil. Moths emerge to lay eggs in the spring, and larvae can be found in wheat in June. First generation larvae feed on the heads of wheat at night and hide near the base of the plant during the day. Damage to grain is similar in appearance to that caused by weevils in stored grain. Pupation occurs again in the soil, and a second moth flight occurs in late August. Colorado State University light trap catches indicate that two generations per year occur in Colorado.

According to a 1911 Iowa State publication, the host range of this pest appears to be mainly grasses, such as, timothy, foxtails, big blue stem, barnyard grass, wheat grass and crops, such as, wheat, rye, barley, oats, Indian corn, sweet corn and sorghum. But the article tends to indicate that the preference was for seed heads of grassy plants.

Since the larvae will not survive in storage and since the wheat is ready to harvest there is really not much that can be done at this time. Any insecticides that could be applied to wheat would require a several day pre-harvest interval that would delay harvest, which is never a good idea at this time of year. In addition by the time the wheat reaches maturity

most of the larvae should be nearly full grown and most of the damage has already been done.

Not sure that we know specifically why the problems were so bad this year, but it is probably related to the weather. Evidently the long mild spring that we have had was ideal for the larvae of this insect to survive.

Another question that seems to be on every ones mind is whether these larvae will pose a threat to other crops by migrating out of the fields. I am not aware of this being a major concern like it is with the true armyworm, but with the types of numbers that are being reported it would be prudent to watch nearby fields for a few days after harvest just to be safe. Grass type plants like corn and sorghum would be the most likely crops to be damaged by migrating larvae. Luckily most of the larvae are nearly fully grown by the time the wheat is harvested and should be ready to pupate soon.

Will these larvae be a problem next year? Again can't say anything for sure, but unless we have very similar weather conditions, I would not anticipate serious problems again next year. This insect is present most years, but seldom causes much concern.

Phil Sloderbeck

Potato Leafhoppers:

Second and subsequent cuttings of alfalfa may be susceptible to attack by potato leafhoppers. These are relatively small, lime-green, torpedo or wedge-shaped insects with large white eyes. They are quite active as the adults will quickly hop or fly short distances when disturbed. Nymphs are similar in color and shape with distinctive eyes but no wings. They also are quite active and characteristically more sideways or jump when disturbed. Feeding by these insects may cause yellowing or reddening of the foliage or severe plant stunting. Leafhopper damage starts as a wedge-shaped yellowing at the tip of the leaves (commonly called "hopper burn").

Potato leafhoppers have piercing-sucking mouthparts. Feeding removes fluids and nutrients from the plants. As leaves turn yellow, crude protein is reduced making it less valuable for livestock. Continued feeding results in stunted plants, reducing yields, and allows for weed growth. If potato leafhopper populations are present over several cuttings, alfalfa winter survival and future yield potential will be affected.

We probably don't pay as much attention to scouting and managing this pest as it deserves. Often, slow regrowth is attributed to hot, dry weather when in fact, potato leafhoppers may be the culprit or a contributor. Scouting should be conducted with the second cutting and continue to the fall. Treatments should be applied before enough feeding has caused yellowing. One application is usually sufficient when applied to the stubble.

Guidelines for treatment thresholds are as follows:

Potato Leafhopper Thresholds

Avg. Stem Length (in.)*	Avg. No. of Leafhoppers/sweep**
up to 3	0.2
3-6	0.5
8-10	1.0
12-14	2.0

*Stem length = average plant height of plants from the sampled area

** Leafhoppers per sweep = average number of leafhoppers per sweep from at least 20 pendulum sweeps from at least five representative areas per field.

Alfalfa varieties Konza and Riley have potato leafhopper resistance and are recommended for new plantings.

Please refer to the Alfalfa Insect Management Recommendation (2003) for insecticides labeled for use against potato leafhoppers.

Jeff Whitworth

Dectes Soybean Stem Borer:

Collections from Scandia Experiment Station on 6-20-03 were 50% adults and 50% pupae.

Jeff Whitworth

Sensitive Crops Website:

The Kansas Department of Agriculture (KDA) has created a ‘Sensitive Crops’ Website which is currently accepting grower registrations of sensitive crop sites throughout Kansas. Some Examples of sensitive crops would be: grapes, organic crops, cotton, or any production plants or crops that would be sensitive to spray drift—to the point of economic damage and/or destroying the crop. There are four requirements that must be met to register as a sensitive crop site, they are:

- 1) The crop is grown for commercial purposes and represents a legitimate source of income for the grower.
- 2) The crop—grapes, cotton or tomatoes—is known for its propensity to be economically damaged by herbicides that volatilize readily.
- 3) If it is an organic crop, it must be produced under an organic certification program.
- 4) The grower requests that KDA publicize the location on the KDA website.

This sensitive crops website was created as a tool to benefit both growers and pesticide applicators. Once growers have registered, pesticide applicators, both private and commercial, will have a resource for checking on sensitive crop sites growing in their regions. However, according to Gary Boutz at KDA “We need to get more people/places listed so that applicators will find it worth their time to check it” [the website]. There are currently 15 registrants listed at the website. Most are organic, fruit, or nut producers.

For more information or to register a crop site, go to the Kansas Department of Agriculture Pesticide and Fertilizer Programs website:

<http://www.accesskansas.org/kda/Pest&Fert/sensitivecrops.htm>

Sharon Dobesh

Recertification Credit Hours for Kansas Commercial Applicator Recertification:

June 20, 2003 the Environmental Protection Agency (EPA) approved the Kansas Recertification Credit Hour program for recertification of Kansas commercial applicators. This program should provide flexibility and somewhat customized recertification for commercial applicators, especially those in the specialized categories for which we, in Extension, have limited training personnel. Training will still be required to cover 'core material' and 'pest management' materials.

Depending on the recertification category or sub-category each applicator will need to accrue 4, 6, or 8 hours of credit for each category they are certified for before the expiration of current certification. Applicators whose certification expires on December 31, 2005 must meet the new credit requirements in order to recertify for 2006-2008 or retest. This also means the new requirements will impact anyone who entered certification or recertified during 2003.

The Kansas Department of Agriculture (KDA) Pesticide and Fertilizer Program encourages all commercial applicators to look ahead at the various meetings and training programs they plan to attend. If materials covered in the meeting agenda appear to qualify for Recertification Credits, recommend to the meeting sponsor to apply for Recertification Credit Hours. Topics that cover "Core credits" include aspects of pesticide safety, labels, environmental concerns, or laws and regulations. Specialized pest control, pertaining to the use of pesticides for specific categories or subcategories, may qualify for the specific "Pest management credits".

The program sponsors will need to have their programs pre-approved for Recertification Credit Hours and will also be responsible for identifying which categories the training would apply to. More details on applying for Recertification Credit Hours is available on the KDA Pesticide and Fertilizer Program website, <http://www.accesskansas.org/kda/Pest&Fert/Pest-mainpage.htm> or by calling the Pesticide and Fertilizer Program at 785-296-3786.

Sharon Dobesh

The following samples were submitted to the Insect Diagnostic Laboratory for the week of June 16 through June 20, 2003:

6-16-2003, Leavenworth County: Gall Midge Galls on Walnut.
6-16-2003, Sheridan County: Springtails on yard, home grain bin.
6-16-2003, Morton County: Borer damage, canker on Cottonwood.
6-16-2003, Leavenworth County: Euonymus Scale on plant.
6-16-2003, McPherson County: Oak Leaf Gall, Poplar Petiolegall Aphids
6-17-2003, Barber County: March Flies on sidewalks.
6-17-2003, Johnson County: Springtails in home.
6-17-2003, Ellsworth County: Buffalograss Sod Webworm, Carpet Beetles.
6-18-2003, Riley County: Ground Beetle off person.
6-19-2003, Ford County: Ground Beetle Larvae, Weevil Pupa in Alfalfa.
6-19-2003, Graham County: Ladybird Beetle Larva on cedar.
6-19-2003, Leavenworth County: Short-snout Weevil in home.
6-19-2003, Barton County: Spider Beetles under/in home.
6-20-2003, Riley County: Various Beetles from stored grain.
6-20-2003, Saline County: Underwing Moth Caterpillar on Hickory.
6-20-2003, Sheridan County: Springtails in puddle in yard.
6-20-2003, Sedgwick County: Possible San Jose Scale, etc. on trees.

If there are any questions regarding these samples or the identification of any arthropod please get in touch with the Insect Diagnostician (Bobby Brown) at 785-532-6154, or bbrown@oznet.ksu.edu .

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Sincerely,

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