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## October 20, 2017 No 28

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Cross-Striped Cabbageworm  
Fall armyworms, Armyworms, and Army Cutworms in Wheat  
Soybean Stem Borers  
Insect Diagnostic Laboratory Report

### Cross-Striped Cabbageworm

We have received inquiries regarding caterpillars feeding, and completely devouring cole crops, including: collards, Brussel sprouts, kohlrabi, turnip, and kale (Figures 1 through 3).

Figure 1. Cross-Striped Cabbageworms Feeding (Author--Raymond Cloyd, KSU, Department of Entomology)



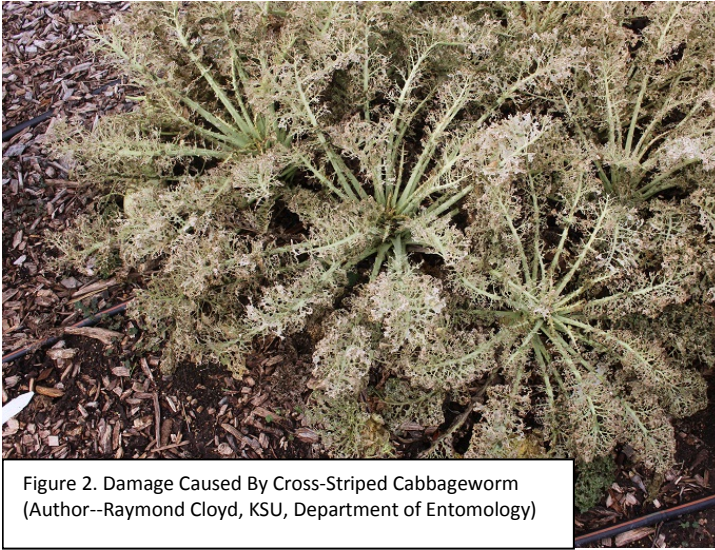


Figure 2. Damage Caused By Cross-Striped Cabbageworm  
(Author--Raymond Cloyd, KSU, Department of Entomology)

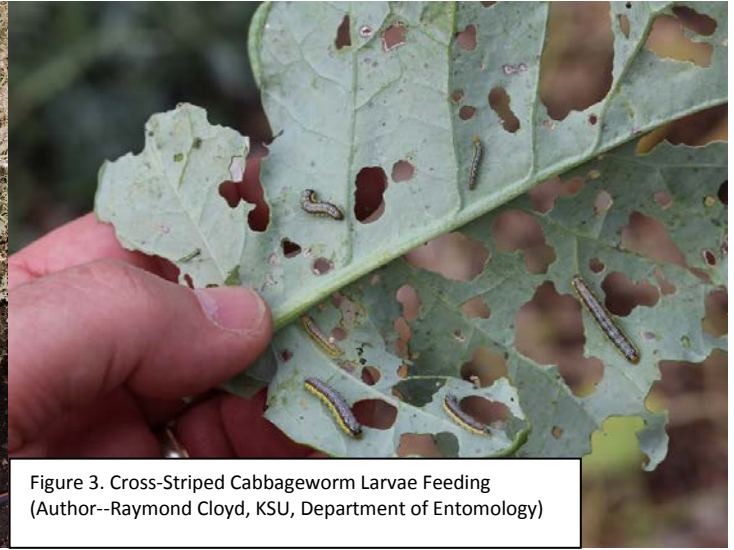


Figure 3. Cross-Striped Cabbageworm Larvae Feeding  
(Author--Raymond Cloyd, KSU, Department of Entomology)

These are the cross-striped cabbageworm (*Evergestis rimosalis*). The caterpillars have black and white striping on the back, two dots on each abdominal segment, and yellow lines that extend the length of the body on both sides (Figures 4 and 5).



Figure 4. Cross-Striped Cabbageworm (Author--Raymond Cloyd, KSU, Department of Entomology)



Figure 5. Cross-Striped Cabbageworm (Author--Scott Eckert, Harvey County Extension, Newton, KS)

They are not a common insect pest but this year they have been a problem on many cole crops. The cross-striped cabbageworm may be found feeding along with the imported cabbageworm (*Artogeia rapae*) (Figure 6).



There is really no justification for applying an insecticide once plants have been heavily-damaged. Therefore, the best option is to hand-pick cross-striped cabbageworm caterpillars and place into a container of soapy water.

Raymond Cloyd

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## Fall armyworms, Armyworms, and Army Cutworms in Wheat

Where wheat has emerged, fields need to be checked for fall armyworms, armyworms, and army cutworms. If you see worms on your wheat this fall, the first thing to do is to determine which worm is present. Proper identification is important because they have different feeding and overwintering patterns.

We have been hearing about and seeing a mixture of both armyworms and fall armyworms on wheat and other host plants this fall. These small worms start by causing small “windowpanes” in wheat or alfalfa. No army cutworm infestations have been verified yet on wheat.



Flocks of birds in wheat or alfalfa fields in fall or early spring are often indicative of a “worm” infestation as the birds are feeding on the larvae. Fields with 25-30% of the plants showing “windowpane” feeding need to be monitored frequently as these larvae consume more as they get larger. Treatment should be applied before stands become threatened.

### Fall armyworms

When scouting fields for fall armyworm damage, look for “windowpane” injury caused by tiny larvae chewing on seedling leaves. Each individual field should be scouted in several locations, including the field margins and the interior. The larvae themselves are usually too small to be easily observed after they first

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hatch, and hide in or around the base of seedlings. Within a few days of hatching, the larvae become large enough to destroy entire leaves.

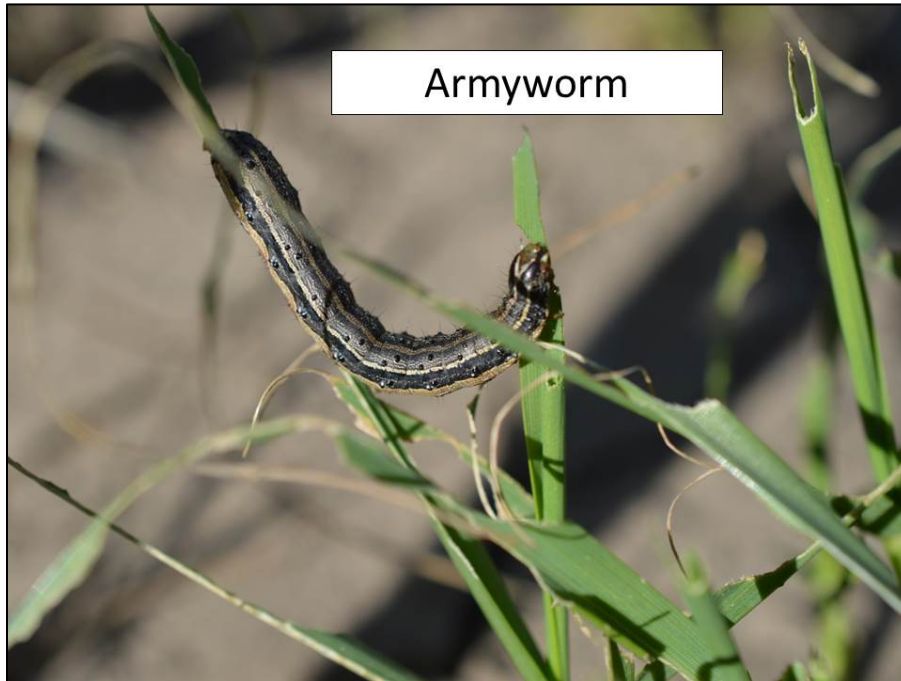
The suggested treatment threshold is 2-3 actively feeding larvae per linear foot of row in wheat. Fields with 25 to 30 percent of plants with windowpane injury should be re-examined daily and treated immediately if stand establishment appears threatened. Larvae increase in size at an exponential rate, and so do their food requirements. Later instars do the most damage, sometimes destroying entire stands, and are the least susceptible to insecticides. Without treatment, problems can continue until larvae reach maturity or until a killing frost. Thin strands of wheat are especially at risk.



Fall armyworms will feed until the temperatures cool into the mid-20's or they pupate, whichever comes first. If a killing frost does not occur soon after the treatment threshold is reached, fields may require chemical treatment.

## Armyworms

Armyworm larvae are green to black with stripes of various colors. The head capsule is medium brown with dark markings. Most damage to wheat in Kansas occurs in southern and eastern areas of the state during warm, moist periods from late April to early June rather than in the fall. Like fall armyworms, armyworms will feed until the temperatures cool in the mid-20's or they pupate, whichever comes first.



Most armyworm damage occurs during the last three to five days of larval feeding. When leaf feeding is observed, look for larvae curled up on the ground under litter, especially in patches of lodged plants. Treatment is usually not necessary below levels of four or five larvae per foot, but is probably justified at infestations of five to eight per foot depending upon larval maturity in relation to crop maturity.

## **Army cutworm**

The army cutworm is a late fall /early spring pest in Kansas. Leaf damage by early stage army cutworm larvae looks very similar to that of fall armyworms. However, army cutworm larvae are typically very small in the early fall – smaller than fall armyworms or armyworms. If the worms causing defoliation in wheat in the fall are relatively large, ½ inch or more, they are probably armyworms and/or fall armyworms.

Adult moths lay eggs in soil in the fall. The brown, faintly striped larvae hatch during the fall and early winter. They will feed throughout the winter (unlike armyworm and fall armyworm larvae), burrowing in the soil to escape frost and emerging again to feed during spells of warmer weather.



Unlike other cutworms, only above ground plant parts are consumed, giving plants the appearance of being grazed by cattle.

Infestations in well-established stands will probably not require insecticide applications while wheat is dormant, but some fields never green up in the spring because of cutworm feeding. Along with fall scouting, frequent inspections during warm periods in February, March, and early April are strongly encouraged, particularly when preceded by a dry fall.

Moisture availability, crop condition, and regrowth potential are all factors influencing potential losses to this pest. Late-planted fields under dry conditions with poor tillering may suffer economic damage with as few as one or two larvae per square foot.

In most fields, treatment will not be necessary until populations average four to five worms per square foot. Vigorous, well-tillered fields under optimal growing conditions can tolerate even higher populations, as many as nine or 10 larvae per square foot, without measurable yield loss. Infestations in later stages of crop development are less damaging than early ones because established plants can compensate for considerable defoliation and larvae normally finish feeding before wheat enters reproductive stages.

## Mixed populations

Mostly the same insecticides are registered for control of these species of worms, but higher rates are recommended for fall armyworm. Any fields with mixed populations should be treated with the fall armyworm rate.

For treatment options, please refer to the latest K-State Wheat Insect Management Guide 2017 at: <http://www.bookstore.ksre.ksu.edu/pubs/mf745.pdf>

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Jeff Whitworth

Holly Schwarting

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## Soybean Stem Borers

Dectes (soybean) stem borer damage is becoming more and more apparent as soybean harvest is delayed throughout north central Kansas. The dectes stem borer was first detected infesting soybeans in Kansas in about 1985 in south central parts of the state. Annually, the adults emerge from soybean stubble, where they overwinter as larvae, around the 4<sup>th</sup> of July. They mate and deposit eggs around soybean leaf petioles. The small larvae bore into the plants and feed, making their way into the main stem.









Dectes stem borer larvae are cannibalistic, so as these larvae come into contact with others only one survives to tunnel down the main stem to the base where they girdle around the interior of the stem, typically just prior to harvest. This girdling activity often goes unnoticed. However, the stems are weakened and wind will blow girdled plants over. Fields with significant infestations will have serious lodging, as we are seeing now in parts of NC KS. Harvesting these lodged plants is very difficult at best, and if harvest is delayed further, the grain lying on the ground may be lost to rodents, disease, etc. Infested fields should be harvested as soon as possible, hopefully before any additional lodging occurs! There is no preventative or rescue treatment available for Dectes stem borers in soybeans.

For more information on the biology of the Dectes stem borer, please visit Dectes Stem Borer, MF2581: <https://www.bookstore.ksre.ksu.edu/pubs/MF2581.pdf>

## Insect Diagnostic Laboratory Report

<http://entomology.k-state.edu/extension/diagnostician/recent-samples.html>

Eva Zurek

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