



# Pest e-alerts



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Vol. 16, No. 7

<http://entopl.okstate.edu/pddl/pdidl>

03/10/2017

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## **Army Cutworms Reported in Some Wheat Fields (and Check Your Canola).**

Tom A. Royer, Extension Entomologist.

I have received two reports of army cutworms infesting wheat, and one report of them infesting canola.

Army cutworms overwinter in Oklahoma. They tolerate cold temperatures and feed throughout the winter months. Adult army cutworm moths migrate to Oklahoma each fall from their summer residence in the Rocky Mountains. They usually seek bare or sparsely vegetated fields (like a newly prepared field ready for sowing wheat, or a field that was “dusted in” but not yet emerged). Just because army cutworm moths prefer to deposit eggs in bare soil, it doesn’t mean that no-till fields with residue are safe from infestations; so ALL wheat fields need to be scouted.

Moths lay eggs from August through October that hatch soon after being deposited. This explains why a producer often sees different sizes of larvae in a field. Army cutworms feed throughout the winter and molt seven times before they turn into pupae in the soil. Most larvae will be gone by late March and adult moths begin emerging in April and fly back to the Rocky Mountains to spend the summer.

Army cutworms can cause severe stand loss of wheat and canola if not controlled. Cutworm damage often goes unnoticed through the winter because the caterpillars grow slowly and don’t get big enough to cause noticeable damage until temperatures warm in the spring. Unfortunately, if wheat is not growing rapidly because poor growing conditions due to drought (which cutworms also like), they can be even more devastating.



So it becomes important to check the fields for cutworms. If you notice a field at this time of year with a numbers of starlings or black birds feeding in a concentrated area of your wheat field, they are likely feasting on army cutworms!



All wheat fields need to be scouted NOW. Sample a field by stirring or digging the soil to a depth of two inches at five or more locations. Also, turn over those dried up cow patties, as they are a favorite hiding place for army cutworms. The cutworms will be “greenish grey”, and will probably curl up into a tight “C” when disturbed. A suggested treatment threshold is 2-3 caterpillars per foot of row when conditions are dry or 4-5 caterpillars per row-foot in fields with adequate moisture.

Control suggestions are listed in Current Report-7194 Management of Insect and Mite Pests in Small Grains or E-832, the 2015 OSU Extension Agents’ Handbook of Insect, Plant Disease, and Weed Control.

Army cutworms are also a potential pest of canola. Scout fields just as you would in wheat. The suggested treatment threshold for cutworms in canola is 1-2 per row-foot. Current recommendations for control of army cutworms in canola are listed in CR-7667, *Management of Insect and Mite Pests in Canola* <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-3045/CR-7667web2017.pdf>.

## And What About Mites in Wheat Fields?

Tom A. Royer, Extension Entomologist.

I have also received reports of mites causing visible injury to wheat. There are two common mites that can injure wheat, the brown wheat mite and the winter grain mite. Producers need to remain alert so that they don't mistake damaged wheat from small grains mites for drought or virus disease.



Brown wheat mite with oversummering egg

Brown wheat mite is small (about the size of this period.) with a metallic brown to black body and four pair of yellowish legs. The forelegs are distinctly longer than the other three pair. Brown wheat mites can complete a cycle in as little as 10-14 days. Oklahoma experiences multiple generations of brown wheat mite that usually peak in spring and the last generation occurs in April. At that time, females produce a whitish egg that will over summer.

Winter grain mite



Winter grain mite egg



Winter grain mite is small (about the 1 mm long) with a dark blue to black body and four pair of orange-red legs and a small reddish spot on the top of its abdomen that can be seen under magnification. WGM eggs are kidney-shaped, and change from clear, to yellow to reddish-orange after several days. They are laid on leaf blades and stems or the roots near the crown. Besides wheat, many grasses serve as host plants, including barley, oats, ryegrass and fescue. We typically experience two generations each year a fall generation and a winter generation that cycles out in March.

Stippling from brown wheat mite feeding



Field infested with winter grain mite



Both mites feed by piercing plant cells in the leaf, which results in “stippling”. The leaves take on a characteristic brown-grayish or cast and could be mistaken for injury due to herbicide. These mites are more likely to cause injury in wheat that is stressed from lack of moisture or nutrients.

Brown wheat mites are not light sensitive, but are vulnerable to driving rains of more than 0.25 inches, which tend to reduce populations. Winter grain mites are more tolerant of rainfall, but are very light sensitive and tend to avoid bright, sunny days and windy days, so adjust your scouting accordingly. It is best to scout for winter grain mite on still, cloudy days or early morning/late evening. On sunny or windy days, they hide under the soil surface (up to a couple of inches) or congregate under dirt clods. Both mites are associated with continuous wheat production. Research suggests that brown wheat mite can be economically treated when there are 25-50 mites per leaf in wheat that is 6-9 inches tall. An alternative estimation is “several hundred” per foot of row. The best recommendation for winter grain mite is to treat when plants show visible injury and there are still mites present.

Winter grain mite hiding in residue



Only a few insecticides include either mite species on their label. Work conducted by Dr. Gerald Wilde at Kansas State evaluated several insecticides for control of winter grain mites. Of those actually registered for winter grain mite, the insecticides dimethoate (Dimethoate and other generics) and chlorpyrifos (Lorsban and other generics) were effective. Other insecticides, lambda cyhalothrin (Karate and its generics) and beta cyfluthrin (Baythroid and its generics) were also effective at the high registered rate, even if they are not specifically listed on the label.

For more information on these mites consult EPP-7093 *Mites in Small Grains* <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-9904/EPP-7093web.pdf>. If you find active mite infestations in your field, consult CR-7194, *Management of Insect and Mite Pests in Small Grains* <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2601/CR-7194web2016.pdf> for registered insecticides, application rates, and grazing/harvest waiting periods. Both fact sheets can be obtained from any County Extension Office, or found at the OSU Extra Website at <http://pods.dasnr.okstate.edu/docushare/dsweb/View/Collection-297>

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