



Pest e-alerts



Entomology and Plant Pathology, Oklahoma State University
127 Noble Research Center, Stillwater, OK74078
405.744.5527

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Wheat Head Armyworms Damage To Wheat Kernels in Oklahoma Wheat Fields

Tom Royer, Extension Entomologist
Edmond Bonjour, Extension Stored Grain Entomologist

Heath Sanders, Canola Field Specialist with Great Plains Canola, was scouting some wheat fields for armyworms in southern Oklahoma this past week and sent us some photos of damaged wheat heads that were being fed upon by wheat head armyworm. He stated that he had a hard time finding the worms because they blended in so well with the color of the wheat.

The insect causing the damage was *Faronta diffusa*, known as the wheat head armyworm.



Unlike the armyworm, which was discussed last week, the wheat head armyworm is very capable of damaging wheat kernels. Adult moths lay eggs on plants in the spring, and the larva feed directly on the grain heads, mostly at night. The caterpillars range in color from gray to greenish with distinct yellow, white and brown stripes going lengthwise across the body. They typically have a larger head relative to their body. Because the larvae are so variable in color, the best way to identify them is to send in a sample to the Plant Disease and Insect Diagnostic Lab.

Fields can be scouted with a sweep net to determine numbers of caterpillars. There is no established treatment threshold because it

rarely causes economic damage and more often than not the damage is not noticed until the grain is harvested. If wheat is at soft dough, consider treating the field to reduce damage. This insect is often found along the margins of fields so if scouting shows that they are restricted to the field edges, consider spraying the field margins with a border spray. Pay careful attention to pre-harvest intervals when selecting an insecticide.

This insect rarely causes significant damage. The major issue with wheat head armyworm damage has to do with the grain grading which is classified as IDK (Insect Damaged Kernels). Grain elevators will dock wheat when samples contain 6-31 damaged kernels per 100 grams of seed. To coincide with the Food and Drug Administration's defect action levels, the U.S. Standards for Wheat consider wheat containing 32 or more insect-damaged kernels per 100 grams as U.S. Sample Grade. This grain is unfit for human consumption and can only be sold as animal feed. It is important to note that although the wheat is damaged, it is not an indication of an on-going infestation of grain weevil or some other stored grain insect pest.



The best strategy to manage the problem at harvest is to combine wheat harvested from head rows with wheat harvested from the rest of the field to dilute IDK percentages. Treating a field with insecticide at harvest will be of little help because the damage is already done, most of the caterpillars have already pupated and remaining larvae can't feed on the mature wheat grain.

If a load is docked or rejected, check on insurance options. Most crop insurance policies have a Quality Loss Adjustment clause that covers the damage up to 25% of the crop's value, regardless of the yield. Work with your elevator to collect and store samples of the wheat that can be used as evidence of the in-field damage.

This link will access Subpart M for US Standards for Wheat which discusses grades and grade requirements for wheat: <http://www.gipsa.usda.gov/fgis/standards/810wheat.pdf>

Dr. Richard Grantham - Director, Plant Disease and Insect Diagnostic Laboratory

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