



# Pest e-alerts



---

Entomology and Plant Pathology, Oklahoma State University  
127 Noble Research Center, Stillwater, OK 74078  
405.744.5527

---

Vol. 16, No. 23

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

5/10/2017

---

## Minimizing Stored Grain Insect Problems in Structures Prior to Wheat Harvest

Edmond Bonjour, Extension Entomologist for Stored Products

Department of Entomology and Plant Pathology

Oklahoma State University – 127 Noble Research Center, Stillwater, OK 74078

405-744-8134 – [edmond.bonjour@okstate.edu](mailto:edmond.bonjour@okstate.edu)

Wheat harvest will be upon us soon. It is critical that the best storage facility conditions be provided for newly harvested grain. Wheat quality does not improve with storage so we have to do all we can to protect and maintain its quality to receive the best economic gain.

Stored grain insects do not contaminate wheat in the field. If you think that the wheat is contaminated as it arrives, it is because your equipment is harboring a population of residual insects. Therefore, sanitation is a key component to a successful integrated pest management (IPM) system. The smallest amount of insect-infested old grain, moldy grain, dust or trash can contaminate the freshly harvested grain that is coming in from the field for storage. It is essential to clean all equipment that will come into contact with the new grain including combines, headers, trucks, grain carts, augers, scales, pits, and your storage facility - bins, concrete silos, and flat storages.

Take the time now to remove old grain, dust, and debris from all areas of your storage facility. These areas include walls (Fig. A), floors (Fig. B), ledges (Fig C), doors, hatches, slide gates (Fig. D), ladders, steps, and sweep augers (Fig. E). Use a broom, brush, or vacuum to clean these areas thoroughly. Also, remove grain and dust from fans, exhaust openings, aeration ducts, and under perforated floors (Fig. F) where possible. Dispose of all debris in an appropriate manner away from your storage structure. Several insect species can move a great distance so make certain that insects in debris will not return to your structure.



Fig. A



Fig. B



Fig. C



Fig. D



Fig. E



Fig. F

Do not forget to clean the outside perimeter area of your storage facility. Grass and weeds around your structure (Figs. G and H) can harbor insects, especially if there is grain spilled in these areas. Keep the grass cut short to prevent insect harborage. Bare soil, gravel or concrete around your structure (Figs. I and J) is preferred but spilled grain (Figs. K and L) still needs to be removed and disposed of properly or insects may infest this area and then move into your storage facility.



Fig. G



Fig. H



Fig. I



Fig. J



Fig. K



Fig. L

Once all sanitation steps are completed, consider applying an insecticide inside your empty structure. Many times there are areas that are difficult to clean or hard to reach when cleaning. Ideally, empty structure sprays should be applied two weeks prior to loading your facility with wheat as these are contact insecticides so the insects must come into direct contact with the chemical for the product to be effective. If there are areas that the contact insecticides cannot reach, such as under a perforated floor, then a fumigation treatment may be necessary. Perimeter sprays around the outside of the storage structure can help reduce entry of insects into the facility. A list of insecticides approved for empty structure application and perimeter sprays can be found in Oklahoma Cooperative Extension Fact Sheet BAE-1112 (<http://pods.dasn.okstate.edu/docushare/dsweb/Get/Document-9983/BAE-1112web.pdf>).

---

#### Plant Disease and Insect Diagnostic Laboratory

The pesticide information presented in this publication was current with federal and state regulations at the time of printing. The user is responsible for determining that the intended use is consistent with the label of the product being used. Use pesticides safely. Read and follow label directions. The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service is implied.

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, and Title IX of the Education Amendments of 1972 (Higher Education Act), the Americans with Disabilities Act of 1990, and other federal and state laws and regulations, does not discriminate on the basis of race, color, national origin, genetic information, sex, age, sexual orientation, gender identity, religion, disability, or status as a veteran, in any of its policies, practices or procedures. This provision includes, but is not limited to admissions, employment, financial aid, and educational services. The Director of Equal Opportunity, 408 Whitehurst, OSU, Stillwater, OK 74078-1035; Phone 405-744-5371; email: [eeo@okstate.edu](mailto:eeo@okstate.edu) has been designated to handle inquiries regarding non-discrimination policies: Director of Equal Opportunity. Any person (student, faculty, or staff) who believes that discriminatory practices have been engaged in based on gender may discuss his or her concerns and file informal or formal complaints of possible violations of Title IX with OSU's Title IX Coordinator 405-744-9154.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural Resources.