



Pest e-alerts



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Minimizing Stored Grain Insect Problems in Structures Prior to Wheat Harvest

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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

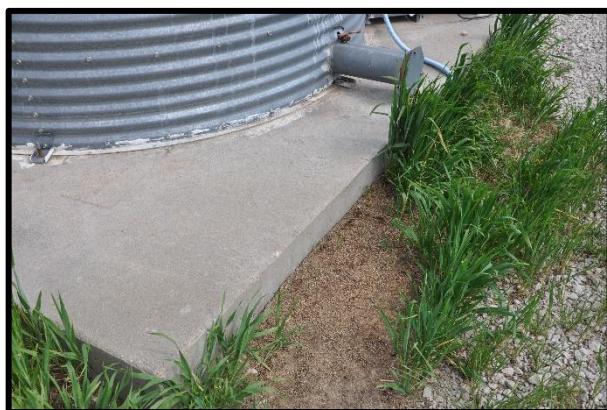


Fig. H



Fig. I



Fig. J

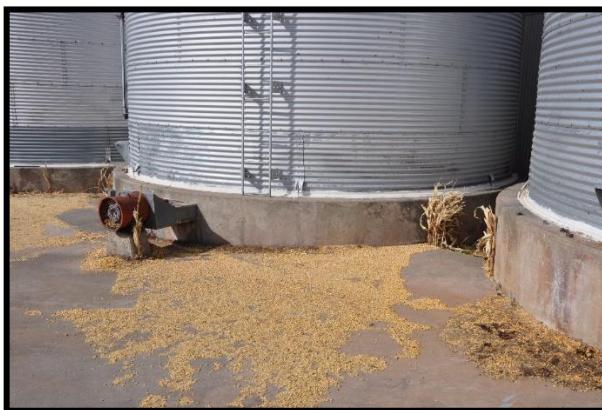


Fig. K



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.dasnr.okstate.edu/docushare/dsweb/Get/Document-9983/BAE-1112web.pdf>).

Plant Disease and Insect Diagnostic Laboratory

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