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## EC72-1530 Grain is Food : Keep Insects Out

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# Grain is FOOD Keep Insects Out

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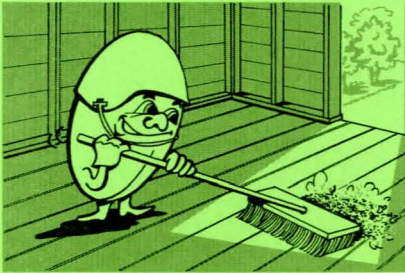
# GRAIN is FOOD - KEEP INSECTS OUT !

Bob Roselle  
Extension Entomologist

Insects that attack stored grain take a big bite out of Nebraska's farm income. Preventing stored grain insects will save you money because insect infested grain loses weight, market value, and Federal laws require that food grains be free of insect contaminants.

Grains that exceed Federal tolerances for insect contaminants may be seized and diverted into channels other than food—resulting in losses to the farmer.

Wheat, and to a lesser extent corn, are human foods. Farmers who grow and store these crops will benefit financially by protecting them from damage or contamination.



**1. CLEAN HARVEST AND HAULING EQUIPMENT, AND BINS THOROUGHLY.** Remove all old grain from cracks in the floor, side walls, and doorways before new grain is stored.



**2. SPRAY BIN WALLS AND FLOORS.** Use premium grade malathion or methoxychlor sprays. Spray all interior surfaces of bins, forcing spray into cracks and between walls. Do this at least two weeks before grain is harvested. Prepare sprays by mixing 1/3 pint 57% premium grade malathion OR 3/4 pint 25% methoxychlor per gallon of water.

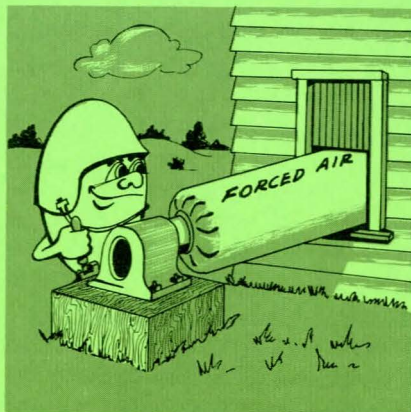


**3. CLEAN OUTSIDE OF BINS.** Cut or kill weeds around bins. Spray outside walls and ground six feet from bins. Remove all grain sacks, spilled grain, or refuse piles from around bins.



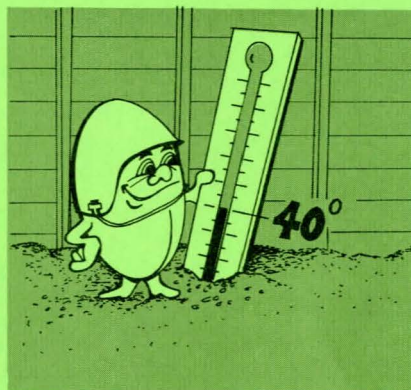
#### 4. STORE DRY, SOUND GRAIN.

There is less danger of insect damage and spoilage when grain moisture is 12% or less. Forced-air drying will reduce moisture content in stored grain. Clean trashy grain immediately after harvest to remove foreign material. This will lower the moisture content and reduce the danger of insect infestation.



#### 5. LOWER TEMPERATURE OF GRAIN BY AERATION.

Insects reproduce slowly in cool grain, and do not reproduce at temperatures of 40° or lower.



**6. USE GRAIN PROTECTANTS ON GRAIN AS IT IS BINNED .** Use one of the following mixtures for each 1,000 bushels of grain as it is augered into bins:

1 pint of 57% premium grade malathion in 3 gallons water.

1 quart of 6 percent pyrethrins + 60% piperonyl butoxide in 3 gallons water.



## 7. TOP-DRESS GRAIN SURFACE.

Insecticide sprays on the surface of stored grains will help prevent entry of some insects. Top-dressing will not control an established infestation. Grain surfaces can be sprayed with one of the following:

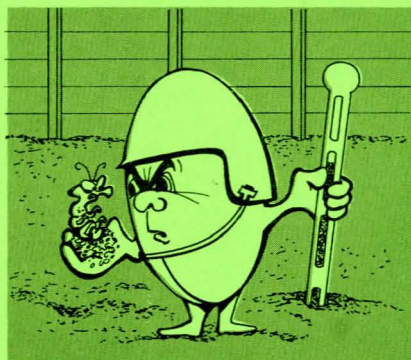
1/2 pint 57% premium grade malathion in 2 gallons water.

3/4 ounces of 6 percent pyrethrins plus 60 percent piperonyl butoxide in 2 gallons of water for each 1000 square feet.



## 8. INSPECT STORED GRAIN REGULARLY.

Examine stored grain frequently during warm weather. Use a probe to sample for insects and signs of heating. In case of heating, move or turn the grain. Use a crop drier if available.



## 9. FUMIGATE GRAIN IF INSECTS ARE PRESENT.

Several fumigants are manufactured for farm use. All are dangerous and must be used with extreme caution. Most farm fumigants are effective only at the maximum amounts registered for use on grain. If they are not used properly or applied when grain temperature is below 60 degrees, poor control is likely. Custom fumigation is more reliable, and may be less expensive when large quantities of grain is stored.

