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CC115 Grain is Food -- Keep Out Insects

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GRAIN *is* FOOD

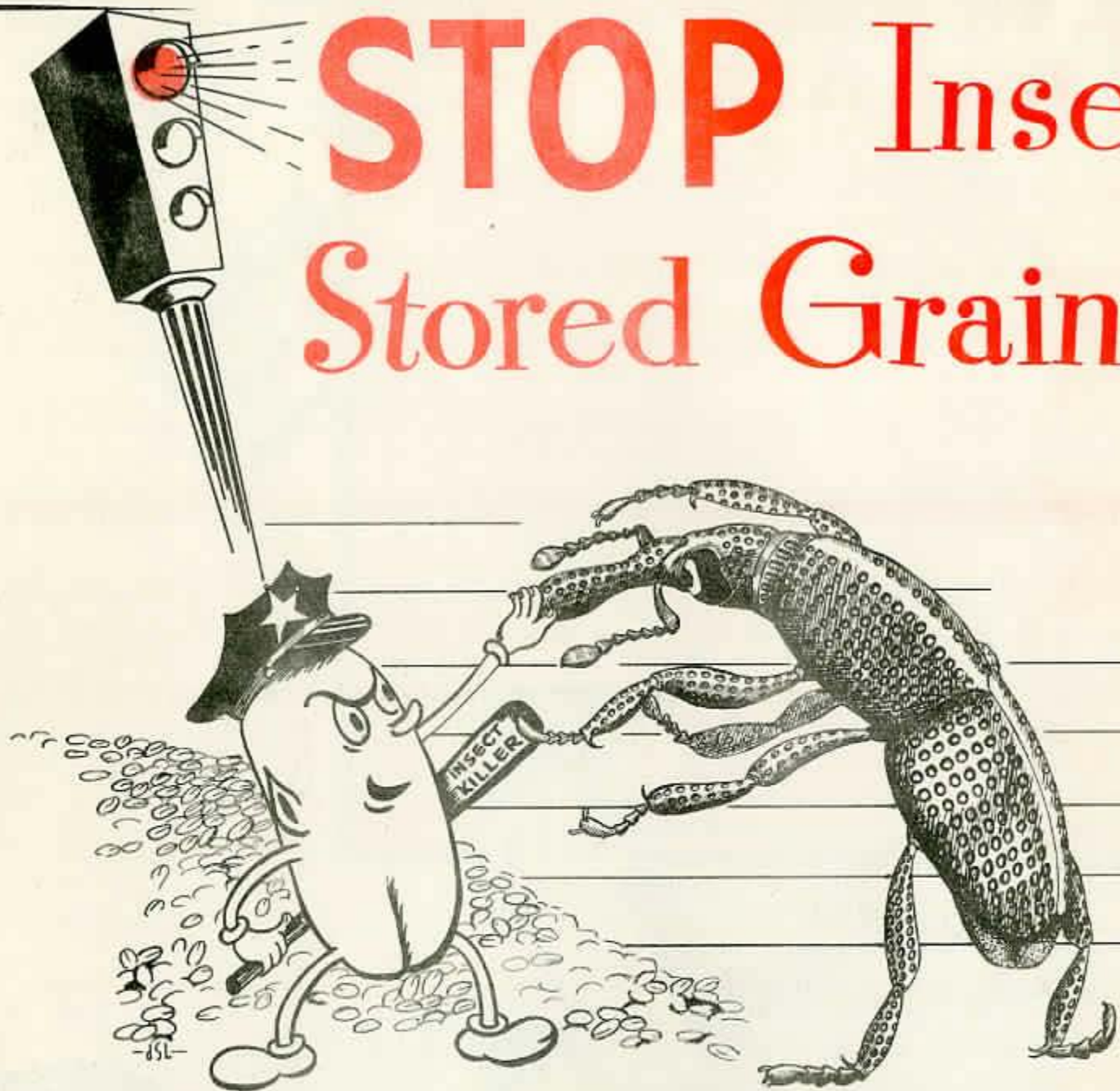
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Keep Out Insects!



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W.V. LAMBERT, DIRECTOR

STOP Insect Damage to Stored Grain...



Insects that attack stored grain take a big cut out of Nebraska's farm income. It has always been profitable to control these pests because insect-infested grain loses weight and market value.

It is now more important than ever for farmers to protect their stored grain from insects, rats, mice, and birds. The Federal Food, Drug and Cosmetic Act requires that food -- including food grains -- be clean. Certain insects spend a part of their life inside grain kernels. Grain infested with such insects is considered "unclean."

Wheat -- and to a lesser extent corn -- is food. Farmers who grow and store these crops will benefit financially by protecting them from damage or contamination.

This circular is to assist farmers in meeting the new grain sanitation requirements and in obtaining the best possible price for their crops.

1



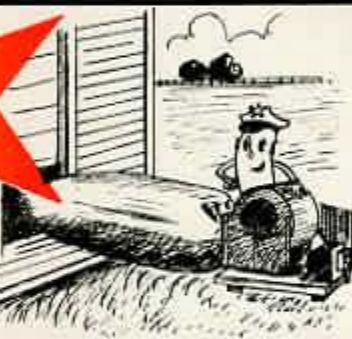
CLEAN GRANARIES AND BINS THOROUGHLY. Remove all old grain from cracks in the floor, side walls, and door-ways before the new crop is stored. Remove all old grain sacks, spilled grain, or refuse piles from around the bin.

2



SPRAY BIN WALLS AND FLOORS. Use a good residual spray. DDT, Lindane, TDE, or Methoxychlor are satisfactory. *BE SURE TO APPLY ACCORDING TO THE MANUFACTURER'S DIRECTIONS.* Never apply bin sprays to the grain itself. Do not use kerosene, distillate, or creosote, as they will impart their odors to the grain.

3



STORE DRY, SOUND GRAIN. There is less danger of insect damage and spoilage when moisture content of wheat is 12 per cent or lower. Forced-air drying will insure low moisture content in stored grain, even if the crop is harvested early to reduce field losses. Cleaning of trashy grain immediately after harvest to remove green weed seeds or other foreign material will lower the moisture content and reduce the danger of spoilage.

4



FUMIGATE GRAIN PROMPTLY. To further protect stored grain from insect infestation, fumigate it two or three weeks after harvest whether insects are present or not. Whenever live insects are found, fumigate at once.

5



INSPECT STORED GRAIN at least once a week in warm weather. Use a probe to check for insects and signs of heating. Fumigate promptly if insects are present. In case of heating, move or turn the grain. Use a crop drier if available.

Clean Grain brings Better Prices!

CHEMICALS THAT KEEP INSECTS OUT:

FUMIGANT MIXTURES. Good grain fumigants are available under many trade names. Four mixtures that give satisfactory results are listed below.

1. The three-to-one mixture -- this means three parts ethylene dichloride and one part carbon tetrachloride. The three-to-one mixture gives a good volume of gas, and is one of the most widely used types of fumigant.
2. The 80/20 mixture -- 80% carbon tetrachloride and 20% carbon bisulfide.
3. EB-5 -- a mixture containing approximately 65% carbon tetrachloride, 30% ethylene dichloride, and 5% ethylene dibromide.
4. The combination of EB-5 and 80/20 mixture -- a mixture of approximately 80% carbon tetrachloride, 15% carbon bisulfide, and 5% ethylene dibromide.

PROTECTANT DUSTS for long-time storage are now on the market -- the wheat protectant for wheat only, and the grain protectant for other grains. Pyrethrins and piperonyl butoxide are the active ingredients in both products. The carrier in the wheat protectant is finely ground wheat. The carrier in the grain protectant is an inorganic material.

These protectants are designed primarily to prevent infestation rather than to kill insects in grain. They have no fumigant effect, and kill by contact only. They also have strong repellent qualities. Their main value will be in long-time storage where they give protection for a season or longer.

These products are designed to be mixed with the grain as it is placed in the bin. The rate for the wheat protectant is 75 pounds to 1,000 bushels of grain. For grains other than wheat, the rate is 100 pounds of grain protectant to 1,000 bushels of grain.

FOR MORE INFORMATION ON INSECT CONTROL :

"Stored Grain Insect Control" - Extension Circular 1552.

"Stored Grain Pests" - Farmers' Bulletin 1260.

"Storage of Small Grains and Shelled Corn on the Farm" - Farmers' Bulletin 2009.

Available from your County Extension Agent or from Extension Service, College of Agriculture, Lincoln, Nebraska.