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# Current Information Letter

For the Information of County Extension Agents and Extension Workers Only

AGRICULTURAL EXTENSION DIVISION—PAUL E. MILLER, DIRECTOR

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UNIVERSITY FARM  
ST. PAUL, MINNESOTA

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FILE UNDER: ENTOMOLOGY -- Injurious Insects

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Further Information on Insects Damaging Farm-Stored Grains -- H. H. Shepard,  
ST. PAUL CAMPUS LIBRARIES

Division of Entomology.

(For basic discussion and recommendations on Insects Injuring Farm-Stored Grains see  
C. I. Letter No. 00002, October 30, 1940.)

Heating of stored grain because of excessive moisture has resulted in prolonging and extending the problem of insect damage which began right after harvest. Except in large bins where heating persists, cold weather will put a stop to insect activity and worries from that score will be over. Under ordinary circumstances, fumigation need no longer be considered. In any case, low temperatures make it practically impossible to do any more fumigating in unheated buildings this season.

Because of the present difficulty of obtaining the usual quantities of the requisite chemicals it is more important to clean the grain and otherwise to control insects by good housekeeping methods now than ever.

When necessary to use a fumigant the usual (or basic) combination is a 3 to 1 mixture of ethylene dichloride and carbon tetrachloride. Under favorable temperature conditions (grain temperatures of 70° F. or above) this mixture must be used at 5 gallons per 1,000 bushels to get results. There are various mixtures on the market, however, which contain larger proportions of the ethylene dichloride, or are "pepped up" with some carbon disulphide or sulfur dioxide. Such grain fumigants need not be used in quite so large amount although none should be used at less than about 3 gallons per 1,000 bushels.

Usually the various grain elevators handle grain fumigants. One should not attempt to make up the mixtures as they can be obtained ready-mixed as cheaply as the ingredients by themselves. In order to save on the chlorinated chemicals the Federal Government recommends the mixing of 10 per cent methyl bromide with the 3 to 1 mixture mentioned first. The brand name and manufacturer of this ready-mixed fumigant will be supplied on request. It can be used at 2 to  $2\frac{1}{2}$  gallons per 1,000 bushels and is effective at somewhat lower temperatures than the other fumigants. The U. S. Bureau of Entomology warns that the operator should wear a suitable gas mask while exposed to its vapors, that it be applied from outside the bin by means of spraying equipment, and that precautions be taken to see that no persons or animals are allowed in the building for 72 hours after application.

Regarding availability of grain fumigants, the Bureau advises: "We are informed that provisions have been made by the Office of Production Management to enable dealers to purchase supplies of fumigants from the manufacturers on orders accompanied by a statement that they are to be sold for use in fumigating stored grain. It is suggested that the attention of dealers and farmers be called to the fact that these fumigants are now obtainable and to the desirability of their procuring sufficient supplies of them to fill normal demands and also to meet a probable increase in demands on account of the larger quantities of grain now being held in storage."

"The Agricultural Adjustment Administration has already taken steps to procure supplies of grain fumigants sufficient to meet their needs for the care of corn belonging to the Commodity Credit Corporation and stored in steel bins. The Commodity Credit Corporation is also notifying licensed warehouse storage men holding Commodity Credit grain that fumigants can now be obtained and urging them to secure supplies while obtainable."