

Protect Farm Stored Grain

from



RATS • MICE

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EXTENSION SERVICE

NORTH DAKOTA AGRICULTURAL COLLEGE AND U. S. DEPARTMENT OF
AGRICULTURE COOPERATING

E. J. Haslerud, Director, Fargo, North Dakota

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PROTECT FARM STORED GRAIN FROM RATS • MICE

Food grains contaminated by rodent filth, such as dead rats and mice, pellets, hair and urine, cannot be sold for human food. The U.S. Food and Drug Administration is making careful checks of grain shipments out of the state and will seize any rodent contaminated grain intended for human food.

This program, if strictly enforced, will be costly to the farmer who allows his "on the farm" stored grain to become contaminated. Farmers who wish to make government loans on farm stored grain may be required to furnish rodent free farm storage in the future.

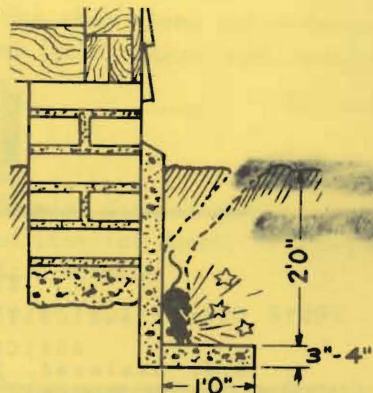
Rodents responsible for grain contamination in farm storage are the Norway rat and the common house mouse. Both pests are costly boarders. Each rat on the farm costs about \$20.00 a year to keep. This does not include the food that rats spoil and contaminate. Total damage and loss by the house mouse is second only to the Norway rat.

Rats and mice are indicators. Their presence in any community or farm is evidence that sanitation has broken down or is pretty bad in spots. Control measures are a continuous process. If you let up in your control program, rats and mice will return to your farm.

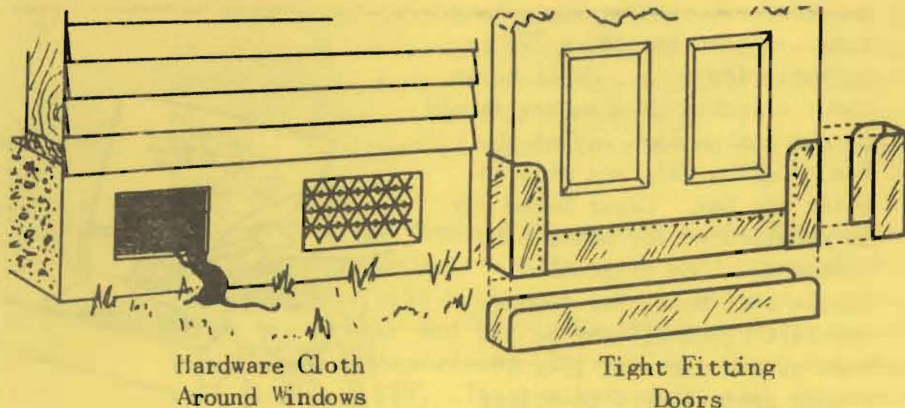
Rat Control

Clean up the farmstead: Clean up trash piles, weeds and food supplies for rats. Pile lumber and fence posts at least 18 inches off the ground. Do away with dead space between double walls and beneath floors. This is where rats live.

Rat Proof your buildings: Rat proofing is permanent rat control. Build rats out of your farm buildings with brick or cement. Repair any holes or cracks in your buildings. Seal up openings or cracks in foundations with 1:3 cement mortar. Cover basement windows with hardware cloth or steel gratings. Use hardware cloth or metal around the foundations, doors and openings near the ground. Use tight-fitting and self-closing doors when possible.



Rat Proof Foundation



Poison baits: Use fresh food for bait. The kind of bait you use is more important than the kind of poison. Put bait where rats feed where they can find it easily. Bait your entire farm and use enough bait to provide several good feedings for all the rats.

Fresh coarse ground corn or meat is the best bait. You may substitute meat scraps, fresh bread, cornmeal, rolled oats, fruits and vegetables or cheese. When rats refuse to accept poisoned bait try putting different kinds of unpoisoned baits out for a few nights until you find out what foods rats like best. Then add your poison to this bait material.

Several poisons can be used for controlling rats. Warfarin and red squill are the materials used for baiting farms, elevators and homes.

Warfarin: A slow killing rat poison which requires several feedings to be effective. Warfarin thins the blood of rats and they die of internal bleeding. Rats must eat warfarin bait for 7 to 14 days to be killed. It is available as a ready-mix in ground cereal grain or pellet form or as a concentrate which is mixed with a bait at the rate of 1 part warfarin to 19 parts bait.

Warfarin is more effective when placed out around the farm in check feeders or other shallow pans in permanent type bait stations (see diagram of permanent bait station). Check bait supply frequently and replenish supply as needed. Remove all moldy or dust covered bait and replace with fresh bait. Rats require water. Fresh clean water near the poisoned bait will usually result in better acceptance of the poison.

Warfarin is safe to use around the farm. However, keep the poisons under cover where rats can get at it but other farm animals cannot.

Red squill: This poison is quick killing. Rats need only a small feeding to die from red squill. Ready-mixed red squill baits are available. When purchasing concentrates make certain that the label guarantees minimum toxicity not to exceed 500 mg/kg. Use at the rate of 1 part red squill to 9 parts bait.

Be sure to mix the poison and bait thoroughly, otherwise rats may detect the red squill and refuse to feed upon the bait.

Place red squill bait in small quantities over the entire farmstead. Red squill is comparatively safe for all animals, except pigs. To be safe, keep baits under cover from farm animals and pets and where rats can get at it easily. Pick up all bait after the rats have been killed. Red squill is preferred where heavy rat infestations exist. Use warfarin baits to control the bait-shy rats and stragglers that may come to your farm later on. Red squill will not control mice. Always pick up dead rats and destroy them.

Mouse Control

CONTROL MEASURES

Trapping: Light infestations of mice can be removed by using several ordinary snap traps. These should be placed at right angles along walls and between objects or by holes and damaged materials so that the trigger mechanism intersects the probable route of travel. An attractive bait is peanut butter smeared over the trigger surface, also cheese, soft candies, meats, etc. At times a small wad of cotton attached to the trigger may be used to catch a mouse in search of nest material.

Poisoning: Poison baits are helpful in controlling large infestations. Warfarin baits are the safest and most widely used. These baits kill the mice by thinning their blood. Cereal baits may be generally improved by adding a little confectioner's sugar.

Precaution should be taken to prevent contamination of food and to protect pets from the warfarin bait. Careful placement of baits in protected bait boxes and prompt and careful disposal of dead mice are essential. It usually requires from 10 to 20 days for warfarin to kill mice.

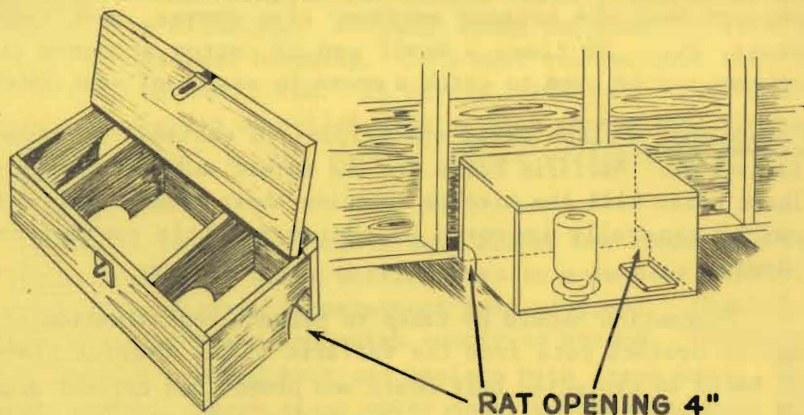
When quick control of mice is desired and danger of accidental poisoning or contamination of food grain is not likely, fast acting poisons such as strychnine poisoned wheat may be preferred. This chemical is sold commercially at 0.5 percent concentration. Teaspoonful quantities are usually ample for each location.

DDT: DDT in the form of 50 percent micro fine dust--sprinkled or blown generously into holes and for several feet along concealed runways will kill mice. It is inhaled by mice or picked up on their feet and fur. The DDT dust is ingested when the animals clean themselves. It requires about two weeks to control mice with DDT. This method is helpful for the protection of farm stored grain but should not be applied in locations which would permit the contamination of food grains. It is especially effective when applied on the floor around feed or seed sacks.

Mice differ from rats in that they require very little water and can survive on a dry grain diet. They feed several times a day and, if food is available, they will not travel more than 10 to 20 feet from their nest site. To effectively control mice, small quantities of poisoned bait must be placed out in several locations within a building, preferably every 10 feet.

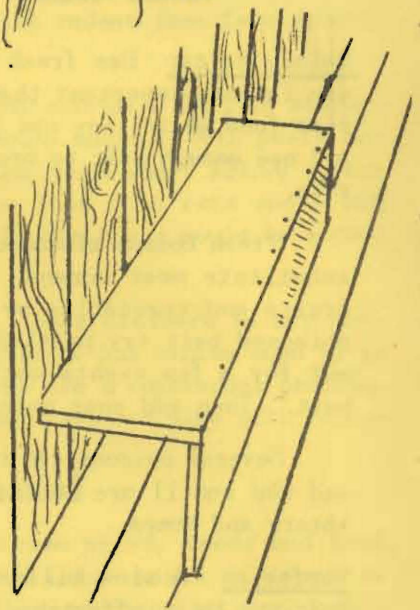
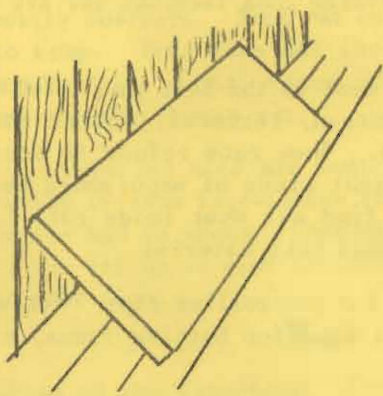
Permanent Bait Stations

The easiest and safest way to poison rats and mice on your farm is with permanent bait stations. These stations are simply constructed boxes which hold the poison bait. The boxes should be large enough to hold the bait and still provide sufficient room for rodents to feed. Bait stations should be made of solid



Remember Grain is

material to stand up for a long time. A bait box 12" x 17" is suitable for rats. Small holes about 4 inches in diameter should be cut out in each end of the box to allow rats and mice to enter the box. Cigar boxes may be substituted for mouse bait stations. (See diagram). Simple bait boxes for temporary bait placement may be made with a piece of 1" x 8" lumber preferably 4 to 6 feet long. Tack the boards along the walls.



Set bait stations where there is the least disturbance by human beings and farm animals. Place them along rat runways, near harboring places and sources of food. These stations may be used inside or outside buildings.

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