

# PROTECTING FRUIT TREES

## *Against Mice and Rabbits*

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MICHIGAN STATE  
COLLEGE

EXTENSION SERVICE

EAST LANSING

Wire netting and poison bait offer the most satisfactory means of tree protection against rabbits and mice. (Note the two types of poison baits stations; either has given satisfaction.)

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## *Good Home for Mice*



*Fig. 1. Heavy sod next to the tree trunk affords favorable quarters for mice, and as a general rule, severe injury occurs in such places.*

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AT the approach of winter, fruit growers should see that their trees are properly protected against mice and rabbits. Injury may occur in both sod and clean-cultivated orchards, but is most frequent in orchards where the sod system of soil management is practiced, especially in orchards that have received additional mulch. It is far better to prevent girdling than to try to save trees by bridge-grafting after the damage is done.

Several methods may be used to protect trees from injury by mice and rabbits: (1) Placing mechanical protectors around the tree trunks; (2) Cleaning the sod and weeds away from the tree trunks and mounding with soil, cinders, or gravel; (3) Killing the mice by means of poison baits; (4) Pruning the trees (at least partially) in the fall and leaving the prunings on the ground until spring; (5) Painting trunks of trees with repellent.

## MECHANICAL PROTECTORS

Several types of mechanical protectors may be used to protect trees from mouse and rabbit injury. Some of the more satisfactory are made of wire netting having three to four meshes to the inch, (see cover illustration) wood veneer strips, and waterproof paper. These protectors should cover the trunk of the tree to a height of 15 to 20 inches and have been employed for this purpose and given satisfactory results. If wire netting is used it should be pushed into the soil an inch or two to hold it firmly in place after removing weeds and grass from the trunk of the tree. The wire should be cut in strips of sufficient width so they will not have to be removed for several years. Wood veneer strips and paper, however, should be placed around the trunks every fall and removed the following spring. Tar paper should not be used as it may cause injury to the trunk. The wire netting is the most satisfactory and cheapest over a period of years.

## REMOVAL OF SHELTER

Cleaning the sod and weeds away from the trunks of the trees and mounding around the trunks with cinders, fine gravel, sand or earth are helpful. (Figs. 1, 2, 3.)

In the case of danger from underground injury, removing the soil to a distance of 8 to 10 inches from the trunk of the tree, and 6 to 8 inches deep, and filling in with coarse cinders, has been found to be a satisfactory means of protecting the roots from being girdled by mice. However, caution should be taken to work fine soil well among the cinders to prevent injury from winter freezing.

### KILLING THE MICE

The foregoing methods have proved relatively effective against rabbits and mice, but it is usually necessary to reduce the infestation or population



*Fig. 2. Same tree as that in Fig. 1 but showing sod and grass removed. This method is helpful but should not be relied upon altogether.*

to insure complete protection to the orchard. This can be done by the use of poisoned bait, placed along the surface runways, or in the holes in the ground made by mice.

If the orchard seems to be heavily infested with mice it is advisable to bait early, or place the initial bait about the first week in November, thus trying to reduce the infestation before snow covers the ground. A re-baiting of the stations in January may be advisable if weather conditions are suitable for locating the stations. If the infestation or population continues to be high after these previous treatments, then early spring poisoning would aid.

Bait stations (Figs. 1 and 4) protect the bait from the weather and prevent birds and other animals from consuming it. Several types of bait stations may be used, such as wood, tile (2" to 3" in diameter), or tin cans that have been crushed on the open end so that the opening is just large enough for mouse entrance. Light weight (35- to 45-lb.) asphalt building paper that is waterproof and cut into strips 9 inches wide and 13 inches long to make a

two-inch tube, double thickness, also makes a fairly good bait station. Tar paper should not be used as it may repel the mice from the bait.

The bait station should be baited with about a tablespoonful of the poison bait and placed by every tree, or at least by every other tree, in the orchard and also along the fence rows. It should be covered lightly with grass, weeds or straw to make a natural cover or hiding place for the mice.

The poison bait for mice may be obtained in 10- and 25-pound bags from the Grand Rapids Growers, Inc., Grand Rapids, Mich. The pre-



*Fig. 3. Same tree as that in Fig. 2 showing mound around the tree. This method is more beneficial than just clearing the sod and grass away, but care should be exercised to prevent water pockets from forming.*



*Fig. 4. Placing poison bait and stations by every tree in the older blocks is perhaps the most satisfactory means of protection against mice.*

pared bait will keep indefinitely if stored in a dry, cool place.

**Caution:** This bait is prepared for the control of field mice; it is not effective for house mice nor rats.

The foregoing poison bait is prepared by the United States Department of Agriculture, Bureau of Biological Survey, at their mixing station in Idaho. Grand Rapids Growers, Inc., is the distributor for Michigan.

### FALL PRUNING

Many fruit growers have observed that when trees are pruned in the fall of the year and the prunings have been allowed to remain on the ground until spring,

mice and rabbits will feed upon those relatively tender branches in preference to the tree trunks. Consequently some growers are making a practice of pruning a few branches from every tree in the fall. In many cases this method has been effective, but growers are cautioned not to rely upon it alone.

### RABBIT REPELLENT

A tree coating consisting of a mixture of rosin and denatured ethyl alcohol has given satisfactory results as a repellent for rabbits. This combination, however, is not satisfactory against the ravages of mice.

The above coating or repellent is made by dissolving seven (7) pounds of finely powdered rosin in one gallon of denatured commercial ethyl alcohol. So-called "antifreeze" alcohol may be used if it does not contain methyl alcohol. Methyl alcohol (wood alcohol or methanol) does not dissolve rosin and, therefore, should not be used. These proportions are slightly more than one part of rosin to one part of alcohol by weight. A good method of mixing is to add the rosin to the alcohol in a container with a cover tight enough to allow shaking and prevent evaporation. If the container is kept in a warm place, and shaken occasionally, the rosin will dissolve more rapidly. **Do not apply any heat.** To heat the solution is not only dangerous but may evaporate enough alcohol to alter the composition of the mixture. Handled in this manner, it usually takes about 24 hours for the rosin to dissolve. It is best if only rather small quantities are mixed at a time—just what will be used in two or three days' time.

Water causes a white precipitate to be formed in this solution. If much of this precipitate is present, it will greatly alter the consistency of the repellent, or even seriously interfere with its application. To avoid contamination of the reserve stock, a smaller container should be used in the orchard.

This material can be applied to the trunks of the trees and lower branches as long as the bark is dry and any time when the weather will permit working out of doors. Best results can be expected when the temperature is above freezing. Early November is a good time to make application. It should be repeated each year.

Trees treated with this rosin-alcohol repellent always turn white in the next snow or rain. This, however, does not alter the effectiveness of the repellent.

*If the foregoing suggestions are followed, it will not be necessary every spring to worry about the possibilities of saving some valuable fruit trees which have been girdled by mice or rabbits, during the winter. Fruit growers should take the necessary measures to protect their trees from injury by mice and rabbits as a regular orchard practice, just as they spray for insects and diseases.*

**You Will Find These Bulletins Helpful, If—**

1. *You wish to control rats or house mice.*

Bulletin CI67. Controlling Rats and House Mice  
Extension Folder F-86. Rat Control

2. *You plan to prune fruit trees.*

Bulletin C 179 The "Thin Wood" Method of  
Pruning Bearing Apple Trees

Bulletin E148. Pruning Young Fruit Trees

*Address applications for bulletins, giving number and title, to*

BULLETIN ROOM,  
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