

inconsistent. Growers relying on repellants should be prepared to tolerate some damage even where deer pressure is low. For best effect, repellants should be applied before deer establish a feeding pattern.

To use small deodorant soap bars, drill a 1/4 inch hole through the center of the bar. Leave the wrapper attached because it reduces weathering; if left in place bars may last several years. Attach the bars with string or wire to outer branches about 30 inches above the ground. There should be no more than 3 feet between bars within the tree. Caution is advised as bar soap sometimes increases vole damage when soap residues run down or drip onto the trunk. Some birds, such as crows, occasionally cause damage to new growth while feeding on soap bars. Human hair can be applied in 1/8 inch (or less) mesh bags and hung in mid-fall and early spring in the same distribution pattern as described for soap bars. Additional applications may be necessary in wet seasons. Light cloth bags filled with 1/2 to 1 cup animal waste can be used in the same way.

Several commercial repellants are available to reduce deer browsing in orchards. With repellents, some damage must be tolerated even if the browsing pressure is low. Big Game Repellent or Deer Away is applied to dormant growth. It works as both a taste and odor repellent. Hinder can be used year round, and is an odor repellent. None of the existing repellents provide reliable protection when deer density is high. Commercial repellants containing predator urine or feces have not been shown more effective than other formulations.

Repellents may be cost-effective when expected degree of damage is not far above a tolerable level, small acreage is threatened, and if only 2 to 3 annual applications will be needed for adequate control. If your situation differs from one or more of these conditions, then exclusion in combination with herd reduction is the most economical long term choice. Sound generating “scare” devices provide protection for only a few days to weeks at best.

## RABBITS

Cottontail rabbits can be found throughout southern New England and often cause serious damage to young fruit trees. Damage includes extensive bark removal and severe clipping of lateral shoots. Rabbit feeding leaves larger and more regular gnaw marks than vole feeding.

Habitat control is an effective rabbit population control measure. Overgrown ditches, brushy fence rows, or stone walls provide rabbits with food plants and protection from predators. Elimination of these areas may be all that is needed for adequate rabbit control.

Rabbit damage can be prevented by exclusion with 1/2-inch hardware cloth tree guards that extend 2 feet above the average snow depth. Taste repellents are another effective way to reduce rabbit damage (see following section on Trunk Painting).

## TRUNK PAINTING for BARK PROTECTION

A whitewash made from diluted white latex paint applied annually to tree trunks helps protect against killing of cambium or bark from sudden temperature changes in late fall and winter (i.e. “southwest injury”). Whitewashing the lower trunk also makes it easier to detect, and may deter, insect borer infestation. Rabbit repellent can be added to protect young trees from bark stripping during the winter. Whitewash but is not as effective as properly installed tree guards.

To make trunk whitewash, mix one gallon of white interior latex paint into 4 to 5 quarts of water. Do not use oil-based paint. Athletic field marking paint has also performed well as a trunk paint.

Be sure to thoroughly mix all ingredients, and pour the final mix through a nylon stocking to filter out lumps that would clog the sprayer nozzle. Hand-pump backpack sprayers work well for application.

If the trunk application is to help prevent damage by voles, borers, or rabbits, then the full circumference must be painted. If the application is only for protection against southwest injury, spray only the south half of the trunk and lower scaffolds. It is only the lower parts of the tree exposed to warming by sunlight that need protection of the reflective paint. For best weather resistance, latex paint should be applied during mild (50°F or higher) dry weather.