



Virginia Cooperative Extension

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Controlling Voles

What Are Voles?



Among the voles that live in Virginia, there are two species that cause significant damage. The meadow vole (*Microtus pennsylvanicus*), sometimes referred to as the meadow mouse or field mouse, lives in grassy habitats. It makes trails in the thick grass and constructs its globular nest above ground. If the ground has been cultivated recently, meadow voles may live underground. The other vole that causes damage is the pine vole (*Microtus pinetorum*), sometimes called the pine mouse. The pine vole spends nearly all of its life from one inch to two feet underground in its extensive trail system and burrow. Both voles are brown, have small, rounded ears, and have relatively short, hairy tails. The adult pine vole has smaller eyes, a more blunt nose, and weighs about one-half as much as the meadow vole.

Voles live on plant parts, unlike moles which feed primarily on invertebrates such as worms and insect larvae. Voles eat green, succulent vegetation and fruits during the growing season; but, during the fall, winter, and early spring, the voles may damage blueberry plants, strawberry plants, stems and roots of trees, and bulbs of tulips and other flowering plants. They also gnaw on the stems and roots of ornamental shrubs, including azaleas, apple trees, and pine trees. Annually, the orchards of apple growers in Virginia and the northeastern states sustain substantial damage caused by pine and meadow voles. Pine seedlings in commercial forest plantings and Christmas tree plantations can be damaged by voles.

Signs of Voles

To determine meadow vole presence, look for fresh grass clippings and feces at the bases of large clumps of grass. Feces may be brown or green in color and are shaped like rice grains. In an apple orchard, meadow and pine vole presence can be determined by looking beneath the trees for tiny, elongated tooth marks on chewed apples, for hollowed shells of chewed apples, and for 1-1/2 inch diameter holes in the ground or small earth piles. In contrast with voles, moles push up piles of fresh earth that may be 9 inches high and produce raised ridges in the lawn when they tunnel for insect larvae and worms. Shrews, which cause little or no damage, may use the tunnels of voles and moles. When trapping to control voles, it is not unusual to catch some shrews, especially the short-tailed shrew.

Control Recommendations

Landscape Situations

Voles infesting ornamental plantings and flower gardens may be trapped using standard house mousetraps. Special care is necessary to locate tunnels in which to set traps. The tunnels are in the grass thatch or just beneath the surface of the ground. Bait the traps with peanut butter, or small slices of apple that include part of the skin. Place the peanut butter on the underside of trap trigger to prevent voles from stealing the bait without springing the trap. The trap should be placed at right angles to the line of the tunnel in an area that has been excavated to allow the trap to rest flush with the bottom of the tunnel. The trap should be covered to keep the trap in darkness. The entire area suspected to be harboring voles should be trapped using at least one trap per 100 square feet. Check the traps daily. Bury the dead voles and reset the traps. After a week of trapping, the number of voles caught per day should be near zero. If not, continue to trap until none are caught. When no additional voles are caught, remove the traps and leave covers for future monitoring. In the fall and early spring, check for voles by placing apple slices in tunnels. Check the slices 24 hours later. When tooth marks appear, repeat the trapping process.

Meadow voles can be trapped by setting traps at right angles to their runways in the grass. No excavation is necessary to set the trap.

Trapping conducted in these ways can be as effective as control based on chemicals, but trapping is much more labor intensive. However, some homeowners may want to try chemical control, but a certified-pesticide-applicator license is required to obtain and use most of the effective rodenticides. When using chemical baits, always carefully follow the instructions on the label to avoid injury to yourself, other people, and to pets and wildlife that are not causing damage.

