

Meadow Vole Damage

After nearly 100 days of snow cover, many readers will be anxious to assess their lands as winter snows begin to melt. When walking through fields and across lawns, many will unfortunately find extensive surface runways with numerous burrow openings. Property owners may also find widespread girdling damage to orchards, ornamentals and tree plantings. The problem will likely be especially bad this spring since we had so many weeks of snow cover

Most likely the damage has been caused by meadow voles. Voles are often confused with field mice, but their appearance and habits are much different. Meadow voles are pudgy mouse to rat-sized rodents with blunt faces, small eyes, short ears, short legs and a short tail. Eight species of voles are widely distributed throughout the various ecosystems of Utah. Damage caused by these compact rodents with stocky bodies is easy to identify.

Most damage by meadow voles occurs during the winter as they eat and multiply under the snow. They are active throughout the day and night and do not hibernate. Reproductively active throughout the year, voles have 1 to 5 annual litters with 1 to 10 babies per litter. Young are weaned by the time they are 21 days old, and females mature in 35 to 40 days. Uncontrolled, they multiply quickly and do significant damage. Evidence of multiple surface runways, following weeks of snow cover, is characteristic of excessive meadow vole populations.

Meadow voles can live in dense populations along ditch banks, rights-of-way, and near unmanaged waterways. Soil tillage is effective in reducing vole damage as it removes cover, destroys existing runway-burrow systems and kills some voles outright. Because of tillage, annual crops tend to have lower vole populations than do lands planted in perennial crops.

Cultural and habitat modifications can also reduce the likelihood and severity of meadow vole damage. The elimination of weeds, ground cover and litter in and around crops, lawns, and cultivated areas reduce the capacity of these areas to support rodents. Mowing, spraying and grazing are examples of some effective ways to control vegetation. Lawns that went into winter without timely mowing will likely have more meadow vole damage than lawns that were well maintained. Trees can be somewhat protected by following the recommendation of horticulturists to clear mulch for a minimum of 3 feet from the base of trees.

Hardware cloth cylinders can also exclude meadow voles from girdling seedlings and young trees. The mesh should be 1/4 inch or less in size and roughly 12 to 18 inches in height. It is wise to bury the bottom of the wire 6 inches below ground level to keep voles from burrowing under the cylinders. Another effective means is to put PVC pipe around the base of young trees. The pipe can be split with a saw and then be placed around the tree trunks. It will be necessary to adjust the cylinders as trees grow. Monitor plants closely and respond accordingly.

Poison grains or pellet formulations containing 2% zinc-phosphide is the most commonly used toxicant for controlling meadow vole infestations. The product can be broadcast at rates of 4 to 8 pounds per acre or placed by hand in runways and burrow openings. Other baits that do not require a pesticide license are available on store shelves, but they are slower-acting and usually require multiple feedings. Precautionary care must be taken to prevent harm to humans or

domestic animals. It is important to always read the label and carefully follow the instructions given.

Certified applicators with a current pesticide license in the vertebrate category may purchase the product in larger quantities from the USDA Supply Depot in Pocatello (208-236-6920). Current prices are \$33 for a 50 pound bag, in addition to shipping. Certified applicators must first call the office of Federal Program Director, Animal and Wildlife Damage Prevention (801-975-3315 or 801-641-9509), where verification of one's Pesticide License will be confirmed. Only then can an order be processed. If there is sufficient interest, the Extension office is willing to help coordinate orders so we can save some costs on shipping.

Large population fluctuations are characteristic of meadow voles. Population levels generally peak every 2 to 5 years. Cache County had a significant problem in 2005, so we may be in for another peak about now. Landowners are encouraged to carefully monitor their property because large populations of meadow voles can have a sizeable economic impact on anticipated crop yields. Often a control program may not appear to be justified in comparison to the damage being incurred. However, the "ounce of prevention" rule frequently applies in vertebrate pest control. Preventative control measures usually prove to be a bargain.