

TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE WYOMING SOIL CONSERVATION SERVICE

Biology No. 106

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Subject: MEADOW VOLE*

General

The meadow vole (Microtus pennsylvanicus) prefers moist areas with dense grassy cover. Meadow voles are found within cultivated lands and along grassy borders of streams, lakes, swamps, and roads. They congregate under protective cover during the winter.

Food Requirements

Grasses form the bulk of the meadow vole's diet. Bluegrasses (Poa spp.), panicgrass (Panicum spp.), and muhly grass (Muhlenbergia spp.) are consumed in the greatest amounts, and a small amount of insect matter is included in their diet.

Water Requirements

No specific information on water requirements was found. Several authors have noted the vole's preference for moist areas.

Cover Requirements

Meadow voles in Montana preferred moist areas where grasses (especially Kentucky bluegrass) and grasslike species comprised 50 percent or more of the vegetative canopy cover. Herbaceous canopy coverage of at least 85 Percent provided optimum cover. Biomass exceeding 0.2 lb/ft² (700 g/m²) was an indicator of good vole habitat. Meadow voles will inhabit areas where the vegetation is only 3.9 to 7.9 in. (10 to 20 cm) tall. Wooded areas were avoided by meadow voles in Michigan. Runways constructed from herbaceous vegetation supply cover for travel. Underground burrows with entrances along the surface runways may also be present.



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*Information taken from Ecoregion M3113 Handbook and Habitat Suitability Index Models, Wildlife Species Narratives (literature searches), U.S. Fish and Wildlife Service, various dates between 1978-1984.

Reproductive Requirements

The young are born in an aboveground nest made of grasses or in pockets connected with an underground burrow.

Special Habitat Requirements

No special requirements were found in the literature.

Interspersion Requirements

The meadow vole's home range is estimated to be 478.4 to 956.8 yd² (400 to 800 m²).

Special Considerations

Intensive cultivation forces meadow voles into right-of-ways, fence rows, and grassy drainage strips. Meadow voles are extremely prolific and local populations are cyclic. Large populations of meadow voles are capable of doing considerable damage to farm crops, and control measures such as poison are sometimes used.