

## CONTROLLING RODENTS

Rodents destroy property, spread disease, compete for human food sources, and are aesthetically displeasing. Rodent-associated diseases affecting humans include plague, murine typhus, leptospirosis, rickettsialpox, rabies and rat-bite fever.

The first of four basic strategies for controlling rodents is to **eliminate food sources**. Home and land owners or occupants need to do a good job of solid waste management. This includes proper storing, collecting, and disposing of garbage, feeding pets and storing pet food and garbage in a secure location not accessible to wild animals.

The second strategy is to **eliminate breeding and nesting places**. This is accomplished by removing rubbish from near the home, including excess lumber, firewood, and similar materials. These items should be stored above ground with 18 inches of clearance below them. This height does not provide a habitat for rodents, which have a propensity for dark, moist places in which to burrow. Wood should not be stored directly on the ground, and trash should be eliminated.

The third strategy is to **construct buildings and other structures using rodent-proofing methods**. It is much easier to manage rodents if a structure is built or modified in a way that prevents easy access by rodents; including building or covering doors and windows with metal. Many rodents can gnaw through wooden doors and windows in a very short time to gain entrance. All holes in a building's exterior should be sealed. Rodents are capable of enlarging openings in masonry, especially if the mortar or brick is of poor quality or is in disrepair. All openings more than  $\frac{3}{4}$ -inch wide should be closed, especially around pipes and conduits. Cracks around doors, gratings, windows, and other such openings should be covered if they are less than 4 feet above the ground or accessible from ledges, pipes, or wires.

Additional tactics include using proper materials for rodent proofing. For example, sheet metal of at least 26-gauge,  $\frac{1}{4}$  inch or  $\frac{1}{2}$ -inch hardware cloth, and cement are all suitable rodent-resistant materials ( $\frac{1}{2}$ -inch hardware cloth has little value against house mice). Tight fittings and self-closing doors should be constructed. Rodent runways can be behind double walls; therefore, spaces between walls and floor-supporting beams should be blocked with fire stops. A proper rodent-proofing strategy must bear in mind that rodents can routinely jump 2 feet vertically, dig 4 feet or more to get under a foundation, climb rough walls or smooth pipes up to 3 inches in diameter, and sometimes travel on electric or telephone wires.

The first three strategies—good sanitation techniques, habitat denial, and rat proofing—should be used initially in any rodent management program. Should they fail, the fourth strategy is **a killing program**, which can vary from a family cat to the professional application of rodenticides. Cats can be effective against mice, but typically are not useful against a larger rodent infestation. Over-the-counter rodenticides can be purchased and used by the homeowner or occupant. These typically are in the red squill or warfarin groups. Homeowners need to be especially careful when using/storing any hazardous or poisonous materials to ensure they are kept away from children and pets.

A more effective alternative is **trapping**. There is a variety of devices to choose from when trapping rodents. The two main groups of traps are live traps and kill traps. Traps usually are placed along walls, near runways and burrows, and in other areas. Bait is often used to attract the rodents to the trap. To be effective, traps must be monitored and emptied or removed quickly. If a rat caught in a trap is left there, other rats may avoid the traps. A trapping strategy also may include using live traps to remove these vermin.