

# UNIVERSITY OF KENTUCKY

### COLLEGE OF AGRICULTURE • DEPARTMENT OF ENTOMOLOGY

**ENTFACT-617** 

#### CONTROL OF MICE

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The house mouse is remarkably well-adapted for living year-round in homes, food establishments and other structures. Homeowners are especially likely to notice mice during winter, following their fall migration indoors in search of warmth, food and shelter. Once mice become established inside a home, they can be extremely difficult to control.

#### **Reasons To Control Mice**

Although most people consider mice less objectionable than rats, mice are more common and cause significantly more damage. Mice are prolific breeders, producing 6-10 litters continuously throughout the year. The greatest economic loss from mice is not due to how much they eat, but what must be thrown out because of damage or contamination. Food, clothing, furniture, books and many other household items are contaminated by their droppings and urine, or damaged by their gnawing. House mice gnaw through electrical wiring, causing fires and failure of freezers, clothes dryers and other appliances. Mice also can transmit diseases, most notably salmonellosis (bacterial food poisoning) when food is contaminated with infected rodent feces.

#### **Mouse Behavior**

Mice are nocturnal creatures, and, therefore, are rarely seen by the homeowner. The most obvious indicators of their presence are droppings (1/8 - 1/2-inches long, dark and pointed at both ends; Fig. 1), sounds of them running, gnawing or squeaking, or damage to stored food or materials used for nesting. Compared to rats, mice forage only short distances from their nest -usually not more than 10-25 feet. When food and shelter are adequate, their foraging range may be only a few feet. For this reason, traps and other control devices must be placed in areas where mouse activity is most apparent. Mice prefer to travel adjacent to walls and other edges-- another critical point to remember when positioning control devices. Mice are very inquisitive and will investigate each new object placed in their foraging territory. If control devices are not initially successful, move them around to a different location.

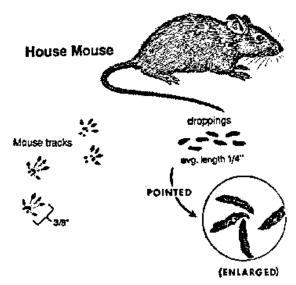


Fig. 1. Identifying characteristics of house mice (note especially size & shape of droppings).

Mice feed on a wide variety of foods but prefer seeds and cereal grains. They also are fond of foods high in fat and protein such as nuts, bacon, butter and sweets (an important point to remember when choosing a bait for snap traps). Mice are "nibblers" and may make 20-30 visits to different food sites each night. Tactics for Control

To control mice, you must "think like a mouse," keeping in mind the behavioral traits noted above. The best way to control mice is to prevent their entry. Mice are able to squeeze through extremely small openings narrower than the diameter of a dime. Cracks in the foundation 1/4 inch and larger should be sealed, as should gaps and openings under doors and where utility pipes enter the structure.

Good sanitation and food storage practices are helpful in reducing problems with house mice. Since seeds are a preferred food, all adjacent to the building should likewise be eliminated. However, because mice are able to occupy such small nesting areas and survive on minute amounts of food, sanitation alone will not

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normally eliminate an existing infestation.

Other than calling a pest control firm, homeowners have three control options available for ridding their premises of mice: 1) toxic baits, known as rodenticides, 2) traps, or 3) glue boards. Rodenticides marketed to homeowners are formulated almost exclusively as food-based baits containing seeds or grain as an attractant. Most rodenticides sold over the counter are anticoagulants containing brodifacoum, chlorophacinone, diphacinone or warfarin as active ingredients. They kill by interfering with normal clotting of the rodents' blood, causing the animal to die from internal bleeding. Since mice forage only short distances from their nests, optimum results are achieved with multiple bait placements as close to the mouse harborage as possible. Extreme care must be taken to position baits in areas inaccessible to children or pets. Dogs, in particular, will seek out and find baits placed in areas which are accessible.

Traps are generally preferred over rodenticides when only a few mice are present. Traps are less hazardous to use around children and pets. Because mice are caught by the trap, there is less chance of odor from mice dying in wall voids or other inaccessible areas. Conventional snap-type traps are easy to use and available at most supermarkets and hardware stores. Trapping efficiency will be enhanced by tying small pieces of bacon, gum drops, peanut butter or raisins to the trigger with thread. Research has shown that snap traps with an expanded trigger catch significantly more mice than conventional designs. Another type of trap available at most hardware and farm-supply stores is a multiple-catch mouse trap (Ketch-All). This device can capture and hold a dozen or more mice before needing to be emptied.

Regardless of which design is used, traps should be placed up against walls, behind objects, and in secluded areas where mouse droppings, gnawing and damage are evident. Snap traps should be oriented perpendicular to the wall, with the trigger end against the vertical surface (Fig. 2). Multiple-catch traps should be oriented with the entrance hole parallel to the wall (Fig. 3).

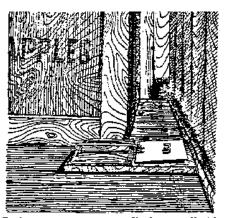


Fig. 2. Position snap traps perpendicular to wall with trigger against vertical surface (note expanded trigger design).

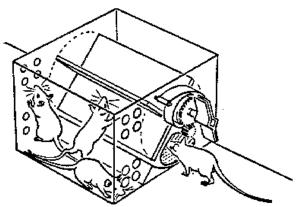


Fig. 3. A type of multiple-catch trap (note orientation of entrance to wall.

Glue Boards (Fig. 4) also are very effective against mice. Mice become entangled in the glue when they run over the boards, soon dying of suffocation. In addition to traps, they are the method of choice in homes and other sensitive locations where toxic baits are a concern. Should the glue from a glue board contact the fur of a pet or the skin of a child, it can be removed with mineral or vegetable oil.

Traps and glue boards should be checked daily and dead mice disposed of in plastic bags. Gloves should be worn when handling mouse carcasses to prevent any chance of disease.



Fig. 4. Glue boards are effective mouse catchers and safe to use around children and pets.