

The House Mouse



- **The house mouse are the most persistent rodent populations in need of control. house mice normally live outdoors in fields, occasionally migrating into structures. In houses, they live behind walls and in cabinets and furniture. They prefer to feed on grains but usually nibble at a wide variety of foods. House mice require only 1/10 ounce of food and 1/20 ounce of water daily, surviving on food alone if it has high moisture. Frequently house mice range 10-30 feet from harborages.**
- **House mice are brown to gray in color with the tail as long as the body. Adults weigh about 1/2 ounce. Their droppings are 1/8 inch long and rod-shaped. House mice live about 1 year and reach sexual maturity in 6 weeks. They have 5-6 young per litter and up to 8 litters per year.**

Recognizing Mouse Signs

- Since mice are active at night and are rarely seen during the day, it is necessary recognize signs of their activity.
- *Droppings and Urine* - Most people first recognize rodent problems by finding droppings or urine stains in and around buildings. Mice will void almost anywhere or on anything. Old droppings are gray, dusty, and will crumble. Fresh droppings are black, shiny, and puttylike. Mice urinate while running, and the streaks are characteristic. The urine glows under ultraviolet lights and glows blue-white when fresh.



Gnawed Objects

Mice gnaw every day in order to keep their teeth short and sharp. Teeth marks on food, building materials, wire, and edges of beams are indications of gnawing. They will gnaw holes in wooden walls, pressed wood, and posts. Fresh gnawing in wood is usually light-colored with sharp, splintery edges. Old gnawing is smooth and darker.



Rubmarks



- **Along runways, dark greasy rubmarks appear from contact with the rodent's body.**
- **Rub marks on walls appear as black smudges left by the rodent.**
- **New rub marks are soft and will smudge. Old rub marks are brittle and will flake when scratched.**

Mice Control



- *Mice proofing* - mice proofing is changing the structure of buildings in order to prevent entry of mice. Remember that,
- Mice can squeeze through cracks $\frac{1}{4}$ inch wide. Any place a pencil can be poked, a mouse can go.
- Mice can climb the inside of vertical pipes $\frac{1}{4}$ -1 inch in diameter.
- Mice can climb the outside of vertical pipes any size if within 3 inches of a wall.

Rodent proofing



•Rodent proofing requires the use of rodent-resistant materials. The following materials are considered rodent resistant:

- Sheet metal (26 gauge or heavier).**
- Perforated metal (24 gauge or heavier with openings no more than 1/4”).**
- Hardware cloth (19 gauge or heavier with openings no more than 1/4”).**
- Brick with mortared joints.**
- Cement mortar (1:3 mixture).**
- Concrete (1:2:4 mixtures).**

The gnawing edges must be protected with rodent-resistant materials. Places to rodent proof are edges of doors, windows, holes where pipes enter buildings, ventilation holes in foundations, roof vents, exhaust fans, and eave vents.

Sanitation



Good housekeeping or sanitation is a basic factor in rodent control. Eliminating food, water, and harborage for rats and mice can reduce rodent populations rapidly. To implement sanitation practices:

- **Clean up garbage and rubbish.**
- **Properly store garbage (Metal garbage cans should have tight fitting lids).**
- **Properly store food (store raw or prepared foods and refuse indoors in covered, rodent proof containers or in rodent proof rooms).**
- **Store pet food and bird seed in rodent proof containers.**
- **Remove harborages (remove piles of rubbish, trash, junk, boxes, and protected enclosures).**
- **Dry up sources of water.**
- **Pick fruits and vegetables when ripe so rodents will not feed on them.**

Sanitation must be used constantly in rodent control to be effective. Yearly clean-up programs are generally ineffective for rodent control.

Trapping



- Trapping is an underrated method of controlling rodents. One reason trapping is often overlooked is that snap traps have been around for a long time and are cheap. Traps can be used to eliminate mice where poison baits would be dangerous, to avoid dead mice odors, and to eliminate bait-shy mice.
- It is important to place traps where the mice are. Mice are used to human odors so there is no need to use gloves when handling traps. Mice are very territorial and travel between 10-30 feet. Mice are curious and will normally approach traps the first night. If you don't catch a mouse in the first few nights, the trap is in the wrong location.

Baiting traps



Baited traps rely on the mouse being attracted for feeding. The bait must compete with other available foods, so no one bait is ever the best bait for all locations. Rodents living on garbage or spoiled food prefer something fresh. The following are some baits that have proven to be successful:

- **Whole nuts, peanuts or peanut butter (soak whole peanuts in water overnight; old peanut butter becomes rancid so replace it frequently).**
- **Dry rolled oatmeal is excellent for mice.**
- **Bacon squares.**
- **Small wads of cotton for mice (they look for nest material).**
- **Gumdrops for mice.**

Baited traps should be set a right angles, set traps along walls behind furniture, and near holes. Remember to set traps where children and pets will not be hurt.

Glue boards

- Special glue can be placed in pie tins or paper plates. The glues do not harden but will hold a mouse in place. Other mice become curious and also get caught. Placing a small piece of bait in the center of a glue board can increase effectiveness. Dusty and wet conditions will impair the trap's effectiveness.
- Glue boards are better suited for mice and safe for children and pets. Boards may be cleaned with cooking oil.



Poison Baits



Traps are effective usually when dealing with small numbers of mice. When mice are plentiful or where unsanitary conditions exist with harborage, poisoned baits are an effective tool to use with trapping.

- Poison baits are available as ready to use, premixed baits. They come in many forms; parafinized blocks for outdoor use and high humidity areas, treated meal, seeds, or parafinized pellets in bulk or in "place packs" for indoor use. Water baits are sold as packets of concentrate that are mixed with water. They are administered with a chick fount, available at most feed stores, and are useful in areas where rodent food is abundant but water is in short supply.

- There are three types of rodenticides; acute toxins, calcium releasers and anticoagulants. Most acute toxins are no longer available due to the risk of accidental poisoning. Zinc phosphide baits react with stomach acids to produce phosphine gas.

- Rodents poisoned with anticoagulants die from bleeding internally. Because the effects show up days after taking the bait, they do not associate their poisoning with the bait. Anti-coagulants are considered safer rodenticides than the acute poisons, because larger doses are necessary to poison humans or pets and these poisons have a simple antidote, Vitamin K.

MANAGING MICE

- Long-term mice control for urban areas combines sanitation, exclusion and, when necessary, the use of traps and baits – integrated pest management (IPM) program.
- IPM is a program where
 - 1) an inspection is made and pests identified before control is implemented;
 - 2) the need for control is assessed along with the efficacy, cost, safety and environmental effects of control methods including environmental, biological, mechanical and chemical methods; and
 - 3) after careful consideration, the best control methods are used to manage the pest.