



## Controlling Mole Damage

There are several species of moles in the United States, but the only one found in Texas is the eastern mole (*Scalopus aquaticus*).

Moles are small, burrowing mammals that feed on insects. Moles have furless, pointed snouts, small eyes concealed in the fur, and no external ears. They have broadened, shovel-like front feet, webbed to the base of the claws, that enable them to dig effectively for insects. Moles have a keen sense of smell and touch but are almost blind. They are most active on damp, cloudy days in the spring and fall.

Moles live in the seclusion of underground burrows, coming to the surface only rarely, and then often by accident. Because of its secluded life underground, the mole has only a few natural enemies. Coyotes, dogs, badgers and skunks dig out a few of them, and occasionally a cat, hawk or owl surprises one above ground. Probably the greatest threat to moles is the flooding of lowlands during rainy seasons.



The principal diet of moles consists of earthworms, grubs, beetles and insect larvae. Vegetation occasionally makes up a small portion of their diet. They eat from 70 to 100 percent of their weight each day to compensate for the tremendous amount of energy expended in burrowing through soil. Because of their food requirements, moles must cover a larger area than most animals that live underground. Therefore, three to five moles per acre is considered a high population for most areas.

### Biography and Reproduction

Adult weight: 4 ounces.

Total length: 7 inches.

Color: Grayish-brown.

Gestation: 42 days.

Litter size: Three to five.

Litter number: One litter per year, born March to early April.

Weaning: 1 month.

### Damage

Moles destroy only a few plants or bulbs by direct feeding. The main damage is done when plant roots are dislodged as the animals tunnel through the soil in search of insects. Their burrowing can disfigure lawns and parks, destroy flower beds, tear up the roots of grasses and create havoc in small garden plots.

## Trapping

Trapping can be a satisfactory method of control when the habits and instincts of the mole are understood. A mole becomes suspicious when its sensitive nose encounters anything foreign in its runway. Therefore, it will back up and burrow around or under an ordinary trap set in its tunnel. It is not suspicious of dirt blocking the runway since its burrow frequently is closed by the impact of farm machinery, man and large animals. The mole pushes its way into a dirt blockage, reopens it, and continues on its way.

There are special mole traps designed to take advantage of this behavior. Harpoon and choker loop traps encircle or are suspended above the runway. The trap's trigger pan rests on the dirt blockage. Pushing into the dirt obstruction, the mole lifts the trigger pan and releases the trap spring. Traps are available at hardware, lawn and garden, or farm and ranch supply stores.

The best trap set is in a frequently used runway. A runway that follows a straight course for some distance or one that connects two systems of workings usually is in constant use. A tunnel that has mouse holes or other breaks in it is an inactive tunnel. Active runways can be located by depressing the tunnel in the evening. The following morning, the active runways will be raised again. Set a trap where the active tunnel is raised. If a catch is not made within several hours, relocate the trap to another active tunnel. Reset the trap whenever a catch is made because main runways may be used by several moles.

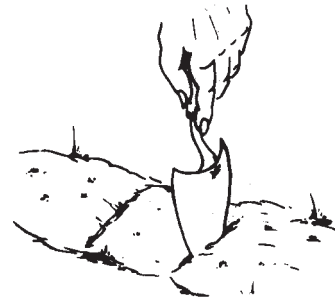
Deeper tunnels usually are 3 to 12 inches or more below the surface, and are located along fence lines or ridges in open fields or at crossings from sodded to cultivated ground. An entire field can be treated successfully by setting traps along the fence rows in early spring at the first signs of activity. Moles may be trapped at any season, but it is not practical to do so when the ground is frozen or exceedingly dry.

### Setting Procedure for Choker Loop Trap

Press down a small section of the runway with your hand or foot to make a firm base for the trigger pan. The trigger should rest at least an inch above the original tunnel. Measure the width between loops and make slits in the soil for the loops with a shovel or trowel. Set the loops in the ground so that the trap frame is steady. Loops must encircle, not intersect, the tunnel.



Press down a small section of the runway with your hand or foot.



Measure the width between loops on the trap and make slits in the ground with a shovel or trowel.



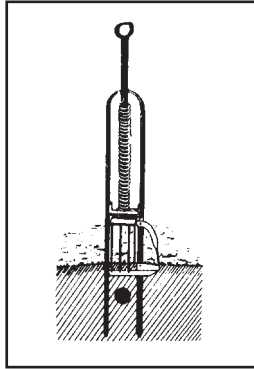
Set loops of the trap into the slits in the ground so that the trap frame is steady.



Properly set choker loop trap.

### Setting Procedures for Harpoon Trap

Prepare the ground as for the choker loop trap. Press trap supports firmly into the ground to the depth allowed by the trigger. Set the trap and spread loose soil lightly over the prong holes.



Properly set harpoon trap.

### Cultural Control and Habitat Modification

Packing the soil with a roller or reducing soil moisture may make the habitat undesirable to moles. Moles may also be encouraged to leave an area if insecticides are used to kill the insects and worms on which they feed. However, before leaving the area moles may increase their digging in search of food, thereby increasing the damage to turf or garden areas. If you wish to begin an insect control program in an effort to discourage moles, contact your agricultural Extension agent for further information.

Sometimes, small areas such as seedbeds or gardens sustain persistent mole damage. In such areas the installation of a barrier made of sheet metal or hardware cloth may be justified. The barrier should begin at the ground surface, go to a depth of at least 12 inches, and bend outward at a 90-degree angle for an additional 10 inches. All seams in the barrier must be secure if it is to be effective.

### Toxicants

Commercial baits are available at hardware, lawn and garden, or ranch supply stores. However, poisoning moles is usually not effective because moles normally do not eat grain baits.

### Fumigants

Fumigants registered for use against moles include aluminum phosphide and gas cartridges. These may be restricted-use pesticides that can only be used by a licensed pest control operator or by a person who has a private applicator's license to use such chemicals. These fumigants are most effective if placed in the deep burrows rather than in the surface runways. Care should be taken when using chemicals, and the label instructions should be read, understood and followed precisely.

For additional information, contact the nearest office of the Texas Wildlife Damage Management Service.

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