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## How to Control Moles and Reduce Turfgrass Damage

Many individuals have never seen a mole; however they are well aware of the damage caused to turfgrasses and ornamental beds. Mounds of soil (molehills) and surface tunnels (feeding runways) are the common signs of mole presence. Learning to use repellents, traps, and baits and making use of a broom handle or similar stick can greatly reduce mole activity in as little as a few hours. The following information will provide you the most efficient methods of mole control.



Figure 1: Eastern Mole

Many turfgrass managers feel that the presence of moles is due to the presence of white grubs. Their first reaction is to apply a grub insecticide when mole activity begins in spring. While moles do feed on white grubs, their primary food source is earthworms and many grub insecticides are known to reduce beneficial earthworm populations. Mole activity decreases due only to the depletion of their primary food source. In time, earthworms and moles will return. Therefore, grub insecticides should not be used for mole control.

Moles construct feeding tunnels in the surface of turfgrass areas and ornamental beds at a rate of one foot per minute. Moles are carnivores preferring worms and insects as

food. Mole activity increases when soils are moist and earthworms are near the soil surface. Earthworms constitute 85% of a mole's diet and they consume 70 to 80% of their body weight daily. Moles also feed and rest on two-hour cycles, 24 hours a day. It now becomes obvious why so much damage can occur in such little time.

Repellents usually contain castor bean oil as the active ingredient. Repellents need to be applied on a regular basis as a spray or granular application. Repellents can be effective if application rates, frequency and techniques are strictly followed according to the label. Most will last approximately 30 days. Repeat applications are required especially during periods of excess rainfall. Several brand names are available.

Trapping and baiting become the best methods for mole control due to the feeding habits of moles. Their frequent feeding activity allows for effective trapping and baiting in just a few hours. The following steps will increase your success for controlling moles:

1. Use of a broom handle or similar stick to poke holes through the top of feeding tunnels at random throughout the tunnel network.
2. Re-visit those holes in two to three hours and inspect. A hole re-plugged with soil indicates a mole passed through that feeding tunnel making it an active tunnel for that day. Not all feeding tunnels are used daily.
3. Set traps on or insert baits into active feeding tunnels. Use rubber gloves to set traps or insert baits to reduce human scent. If traps have not been triggered in a day or two, repeat steps 1 to 3.
4. Continue to trap and bait until activity ceases. Controlling a few moles in an area equal to an average size lawn (5000 square feet) will greatly reduce mole activity.

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Effective traps include several “harpoon” traps, “scissor” or “jaw” traps, and “hoop” or “choker” traps. Set traps according to the manufacturer’s recommendations.



Figure 2: Harpoon Trap



Figure 4: Hoop or Choker Trap

Available baits contain small amounts of warfarin or bromethalin (rodenticides) in a worm or grub-shaped bait. These baits are flavored respectively (earthworm or white grub) to entice feeding.



Figure 3: Scissor or Jaw Trap



Figure 5: Mole Earthworm Bait

Keep in mind that moles are a perennial problem. When a void in the carrying capacity (number of moles a given area can support) of a given area is realized, more moles will move in searching for earthworms and other insects. For this reason, trapping is the most economical method of mole control.

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