

MESSENGER-INQUIRER



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Managing Moles in the Landscape
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What amazing animals! Too bad they tunnel all over the yard. Moles have the special ability to live underground. Their presence is known by the raised soil left in the lawn and landscape. Managing moles presents a challenge, but with science-based information, the likelihood of success is improved.

The features of moles are unique. Their cylindrical body makes it easier for them to tunnel through the soil. The face of a mole includes a long, tapered snout, and eyes and ears so tiny they almost appear to be missing. Moles have sharp, pointed teeth for catching and eating earthworms and insects. The broadened front feet are paddle-like with enlarged toenails uniquely adapted for digging. The hind legs are very small, enabling the mole to turn with ease in a narrow passage. Fully grown moles measure 4 to 7.5 inches long including a very short tail. Fur color varies from black to brownish to grayish with silver highlights depending on the species. They are not considered rodents.

The most common and abundant mole in Kentucky is the eastern mole (*Scalopus aquaticus*). Lawns, pastures, meadows, and woodlands provide suitable habitats for them.

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Moles construct and use two types of extensive underground tunnels: shallow surface tunnels in the spring, summer, and fall, and deep, permanent tunnels used year-round as the main avenues of travel and for feeding. Surface tunnels are most abundant after a warm rain or during the spring and fall when moles are actively searching for insects or earthworms. They are the only animals that create surface tunnels.

Underground tunnels are often deep, and the only evidence that moles exist may be mounds of soil (molehills) pushed up to the surface. These tunnels are used as highways leading from nest cavities to feeding areas and are used mostly during hot, dry, or very cold weather when earthworms and insects move deeper into the soil. Nest cavities and home areas can be found 12 to 18 inches beneath the soil surface and are connected by deep tunnels.

Moles are antisocial, solitary animals. Males and females come together only for a brief encounter during February to mate. In April, after a 45-day gestation period, two to five large, hairless young are born in the underground nest chamber. At five weeks, they are half-grown. At six weeks, they leave the nest to fend for themselves.

Eastern moles are active any time of the day, but they are most active from 4:00 to 7:00 a.m. and 6:00 to 9:00 p.m. all year. Moles are very active, burrowing as fast as 1 foot per minute. They need to have a diet that meets high energy requirements. High-energy mole food comes as earthworms, grubs, beetles and beetle larvae, insects and insect larvae, snails, and spiders.

With any method of management, the key is to find an active run. Surface tunnels or runs are used most actively during the spring and fall. To determine which runs are active,

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flatten a small section of the run with your foot and check the next morning. Within 12 to 24 hours active runs will be repaired.

One way to manage moles is to use a harpoon trap. Follow manufacturer's directions on the box for setting the trap in an active run. Be sure to handle the trap safely; keep it away from children. Put a small bucket over it if children or pets are present.

If the trap has not captured a mole in three days: the trap was placed in the wrong location; the run was disturbed too much; the mole detected the trap; the mole changed its habits and was not actively using the tunnel; or all the moles in the general area are captured. A publication on moles is available with more detailed instructions on how to be successful with traps at the Cooperative Extension Service Office.

Another product on the market to control moles is a fake worm injected with the rodenticide, bromethalin. Examples of trade names for this product are Talpirid and Tomcat Mole Killer. These can be placed into active runs or mounds to kill the mole immediately after the product is ingested.

When you find an active run, the void within the run is only an inch or two below the grass. This is where the biodegradable worm is placed. With fresh mounds, the underground run is usually 6 to 18 inches below the mound. The worm has to be pushed down into the void by using a dowel or stick through the one-inch diameter hole that the mole made to connect to the run below the ground.

It is not practical to place the fake worms in older runs because the organic worms may decay before the mole returns. Always follow safety precautions when using the product.

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There is some evidence that repellents containing the active ingredient castor oil are effective in repelling moles from lawns. If a suitable habitat remains for the moles, they will return. Follow the manufacturer's label closely and observe safety precautions.

For more information about managing moles, contact the Daviess County Cooperative Extension Office at 270-685-8480 or annette.heisdorffer.uky.edu.

Annette's Tips:

The use of insecticides to control grubs is not recommended to control moles. Moles eat other insects that are beneficial to the soil's environment. Moles do not eat peanuts or chewing gum.

The repellent properties of *Euphorbia lathyris*, and castor bean plants are doubtful. Also, they are poisonous to humans and can become a weed problem.

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