

## Best Management Practices: Mole Crickets *Scapteriscus spp.*

### Description:

There are three important turf damaging species of mole crickets, *Scapteriscus spp.*

1. Tawny mole cricket (*S. vicinus*);
2. Southern mole cricket (*S. borelli*);
3. Short-winged mole cricket, (*S. abbreviatus*) only in discrete areas of FL

Tawny and southern mole crickets are found throughout the coastal southeast as well as sandy portions of golf courses in Texas.

1. Bahiagrass, centipedegrass, and bermudagrass are the preferred host plants; however, St. Augustinegrass can sustain severe damage from the activity of tawny mole crickets. The most consistent mole cricket damage occurs in Florida and coastal areas of the south.

The various species of mole crickets are similar in size, reaching up to 1.5 inches in length as adults. About 40 eggs are laid 3" to 12" below the soil surface, depending on soil moisture. Eggs hatch approximately 20 days later.

Tawny mole crickets are light honey brown with a v-shaped dactyl spacing space in the foreleg "digger claw." Their mating and egg-laying activity usually occurs slightly ahead of southern mole crickets.

Southern mole crickets are a duller gray/brown color, often less robust in appearance than tawny mole crickets. There may be two pale whitish spots on each side of the prothorax and these mole crickets have a u-shaped dactyl spacing on their digger claws.

Short-winged mole crickets are flightless, having wings only one-third the length of the abdomen. The hind legs of the short-winged mole cricket are distinctly striped, helping to differentiate it from immature stages of tawny or southern mole crickets.

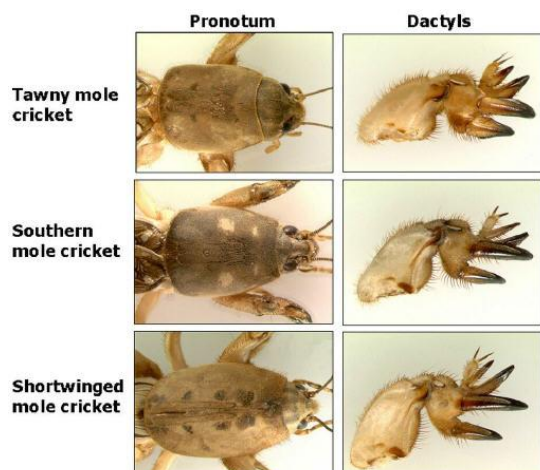


Chart above courtesy of the University of Florida  
 ENY-324 <http://edis.ifas.ufl.edu>



Three mole cricket species: shortwinged mole cricket, *Scapteriscus abbreviatus* (left); tawny mole cricket, *Scapteriscus vicinus* (center); southern mole cricket, *Scapteriscus borellii* (right). Photograph by Lyle J. Buss, University of Florida.

### Damage:

Millions of dollars in damage result from the tunneling and feeding activity of these insects on turfgrasses. Tawny and short-winged mole crickets are vegetarians, feeding on the underground and above ground portions of grass plants. Southern mole crickets are primarily predacious, feeding on earthworms and insects. Their damage to turf is mostly mechanical, resulting from tunneling activity which leads to plant desiccation.

### Management:

Among the most difficult turf pests to control, mole crickets can tunnel downward for several feet and escape treatment, especially during dry spells. Mating and dispersal flights can occur for several months, with adults flying up to 6 miles to new infestation sites. Monitoring, mapping, and timing are critical components in an effective mole cricket control program. Regular inspections can help to track the behavior, location, and developmental stages of the mole crickets in a certain location. Most eggs will be laid in or near the area where adult activity occurs. The optimum time period for a control program is just after peak hatch, when the nymphs are small and easier to control.

Preferred Program	Treatment Options
<b>Season long (70-115 days of control)</b>	<b>1st app.</b> (April-May) Apply Triple Crown® T&O Insecticide or *Triple Crown Golf Insecticide at a rate of 0.57 fl. oz. per 1,000 sq. ft. (25 fl. oz. per acre) <b>2nd app.</b> (June-July ) 60 days after 1st app., Apply Triple Crown T&O Insecticide or Triple Crown Golf Insecticide at a rate of 0.57 fl. oz. per 1,000 sq. ft. (25 fl. oz. per acre)
<b>Over-wintering nymphs &amp; adults (60 day control)</b>	<b>1.</b> Apply Triple Crown T&O Insecticide or Triple Crown Golf Insecticide at a rate of 0.8 fl. oz per 1,000 sq. ft. (35 fl. oz per acre). <b>2.</b> Talstar® Xtra Granular Insecticide Featuring Verge Granule Technology can be applied at 100 pounds per acre (2.3 lb. /1,000 sq. ft.). Be sure to target areas that showed heavy adult activity.
<b>Peak egg hatch (60 day control)</b>	<b>1.</b> Apply Triple Crown T&O Insecticide or Triple Crown Golf Insecticide at a rate of 0.8 fl. oz per 1,000 sq. ft. (35 fl. oz per acre). <b>2.</b> Talstar Xtra Granular Insecticide Featuring Verge Granule Technology can be applied at 100 pounds per acre (2.3 lb. /1,000 sq. ft.). Be sure to target areas that showed heavy adult activity.
<b>Late season adults (60 day control)</b>	<b>1.</b> Apply Triple Crown T&O Insecticide or Triple Crown Golf Insecticide at a rate of 0.8 fl. oz per 1,000 sq. ft. (35 fl. oz per acre). <b>2.</b> Talstar Xtra Verge granular insecticide can be applied at 100 pounds per acre (2.3 lb. /1,000 sq. ft.). Be sure to target areas that showed heavy adult activity. <b>3.</b> *Talstar® Select Insecticide or Talstar Professional Insecticide at 20 ounces per acre (0.5 oz. /1,000 sq. ft.) when dispersal flights and adult activity are evident.
<div> <div> <p>*Triple Crown Golf Insecticide is a restricted use product</p> <p>*Talstar® Select Insecticide is a restricted use product</p> <p>-Apply as late in the day as possible, followed by up to 1/2" of water immediately after application.</p> <p>-The addition of a non-ionic surfactant may help increase control</p> <p>-Do not exceed 50 fluid ounces of Triple Crown T&amp;O or Triple Crown Golf Insecticide per acre per year.</p> <p>-Do not exceed 0.4lbs a.i. of bifenthrin per acre per year</p> </div> <div> <p><b>Triple Crown Mole Cricket Control</b></p> <p>Turf Quality Rating</p> <p>68 DAT 82 DAT 96 DAT 115 DAT</p> <p>Triple Crown 0.8 fl oz    Triple Crown 0.57 fl oz 2X    Untreated Control</p> <p>Turf ratings: 0 = healthy 6 = dying turf</p> <p>All rates per 1,000 sq.ft; 2X = Two Applications</p> </div> </div>	

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