



Don Short, Ph.D., recommends insecticides and baits for mole crickets.

BIOTECHNOLOGY

It's mole crickets vs. biology

Florida researchers have unleashed the natural enemies of mole crickets in what may be an inexpensive, ecologically-sound answer to controlling the pests.

Mole crickets, which do \$30 million damage to private and commercial property in Florida per year, are now forced to square off against a nematode and parasitic wasp—both natural pests of the crickets in South America. Arrangements have been made with researchers there to provide samples and data.

"At the present time, insecticides and baits are the best way of controlling mole crickets," says Don Short, Ph.D., an entomologist with the Institute of Food and Agricultural Sciences at the University of Florida. However, because of Florida's diverse climate, no one solution will work everywhere in the state.

The nematode research is nearest to completion; final testing will take place this spring. Nematologist Grover Smart, Ph.D., is trying to determine the best method of introducing the nematode into the environment.

He is testing two methods: incorporating nematodes instead of poison into mole cricket bait, and injecting nematodes directly into the ground with a water injection system.

The main problem with the

nematode is keeping it in a moist environment long enough to ensure contact with the mole crickets. Smart is trying to create a moister bait solution to prolong the nematode's life from 24 hours to 48 hours.

Fred Bennett, Ph.D., a graduate research professor and entomologist, has been working with the parasitic wasps, in particular the *Larra* species. "We hope to get additional strains and species of *Larra* and any other information on mole crickets," he says. "Release will not happen until we are certain that the organisms won't adversely affect the environment."

ORGANIZATIONS

Landscapers being catered to more

Two professional organizations have realized the value of landscape contractors to their markets.

The Irrigation Association has developed several new programs specifically for landscape irrigation contractors, one of which is a substantial dues discount to new contractor members.

The Irrigation Association also held a successful two-day seminar just prior to its International Irrigation Exposition & Technical Conference.

WEEDS

Timing is essential in herbicide application

Since maintaining healthy turf is the best way to achieve a weed-free lawn, proper mowing, fertilization and irrigation remain the most important elements in a weed management program. If, however, you're planning to apply pre-emergence herbicides to control annual grass weeds in St. Augustinegrass and centipedegrass, several considerations need to be noted, says weed control specialist Bill Lewis, Ph.D., of the North Carolina Extension Service.

These herbicides must be applied before the weed seed germinates. "The ideal time to apply pre-emergence herbicides for crabgrass control is by the time the dogwoods are in full bloom," says Lewis. "And unless rain falls soon after application, irrigation should be applied."

For improved control of goosegrass, benefin + oryzalin, oryzalin, napropamide, or pendimethalin should be selected, notes Lewis. Extended control can often be achieved with two applications eight weeks apart, using the minimum label rate or $\frac{1}{2}$ the maximum rate each time.

Atrazine and simazine have both pre-emergence and post-emergence effectiveness against many annual broadleaf weeds and *Poa annua*, though neither will give you seasonal control of crabgrass when applied as a pre-emergent in the spring. Lewis suggests October to early January treatments for chickweed, henbit, hop clover, corn speedwell, parsley-piert, spurweed and other winter annual broadleaf weeds. He says you can successfully treat annual bluegrass that has already appeared with post-emergence applications.

For more information about IA programs for landscape contractors, write its headquarters at 1911 North Fort Myer Dr., Suite 1009, Arlington, VA 22209.

Also, the American Sod Producers Association has opened its membership to landscape architects and contractors. A new class, termed "Affiliated," will permit "any firm or individual who is neither producing turfgrass sod, nor a product for use on a turfgrass sod farm" to qualify.

Applications for membership may be obtained by calling (312) 705-9898 or writing the ASPA at 1855-A Hicks Rd., Rolling Meadows, IL 60008.

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