Controlling fire ants in the South

Baits, dusts, broadcast sprays, mound injections and drenches—these are some of the answers.

After first chemical treatment, fire ants will re-infest an area in greater numbers.
Photo by Harry N. Howell, Jr., Center for Urban & Public Health Entomology, Texas A & M University.

■ The key to controlling imported red fire ants in warm-season areas is to kill the queen and her brood, says Dr. Beverly Sparks of the University of Georgia. "The mound will rebuild if you only kill the workers," she says.

"Controlling fire ants can get confusing because there are so many products labeled," she notes. "But it's not necessarily the product—it's how you apply it—that makes a difference."

Red fire ants (*Solenopsis invicta*) came to the United States in the 1930s from South America. Entering the country in Mobile, Ala., they have infested many parts of the southern U.S. Unlike most landscape pests, the small (3 to 6 millimeters) imported red fire ant does little damage to turfgrass. "They are a people problem," says Sparks. "They will attack anything that disturbs their mounds." Fire ant bites will cause white pustules to form on humans.

Sparks: fire ant control a long term program, over months.

The population of an average colony can be between 100,000 and 500,000 workers with several hundred queens.

Before treating for fire ants, you must balance potential health risk with the environmental impact of chemical applications. That decided, you must then commit to a long-term program.

You can temporarily control fire ants with chemicals. However, if you stop treatment, the fire ants will probably re-infest the area, perhaps at levels exceeding the original infestation.

One of the key principles in controlling fire ant infestations is that they tend to seek warm soil and that freezing soil temperatures limit their distribution. "The queen and brood will be closer to the soil surface and much easier to control in the spring and fall and immediately after a rain," Sparks points out.

Some solutions—Sparks says mound drenches are effective and economical for controlling fire ants. Products such as chlorpyrifos (Dursban), acephate (Orthene), carbaryl (Sevin), diazinon (home lawns only) and others are labeled for this purpose.

If you cannot treat mounds individually, several products are labeled for broadcast application.

The basic prescription is two gallons of diluted product per mound. "Sprinkle one gallon around the mound, one gallon over the mound and you get 90 percent mortality," she points out. "Do not disturb the mound before application, though."

The main drawback to drenches is that they kill by contact and may require several days to be effective.

Granular products and dusts can also be used. Bendiocarb (Turcam), chlorpyrifos and diazinon (home lawns) are also formulated as granules that need to be watered in, or the mound will just move to a different location. Some products containing acephate are specially labeled for dusting individual fire ant mounds when water is not available. Granulars will generally take several days to kill a colony while dusts can take up to a week.

"Often, it is not feasible to treat fire ant mounds individually, and for these situations there are several products labeled for broadcast application," Dr. Sparks notes. She lists granular or liquid formulations of chlorpyrifos, isazophos (Triumph) and isofenphos (Oftanol) to kill foraging worker ants and prevent small mounds from becoming established.

Some insecticides, like pyrethroids and chlorpyrifos, can be injected directly into the mounds. "However, at $1 to $1.50 per mound, this is a very expensive control procedure," Dr. Sparks says.

Liquid fumigants—methyl chloroform (MC96) in particular—have also proven effective. One to two ounces of the liquid poured into the mound rapidly

changes into a deadly gas that kills the fire ants within a matter of seconds. "This method is good on athletic fields and places where you're concerned with pesticide residues," notes Sparks.

Baits for the long haul—Baits can also be used as a two-pronged solution to fire ant infestations: (1) broadcast at 1 to 1.5 lbs./acre, and then, two to three days later, (2) follow with an individual mound treatment. Some products labeled as fire ant baits are hydromethylmon (Amdro), fenoxycarb (Award, formerly Logic) and Bushwacker.

"In situations where immediate control is needed, I do not recommend baits," Dr. Sparks admits. "However, baits work well as broadcast treatments for control over a long period of time."

According to a University of Georgia extension booklet authored by Sparks, to achieve satisfactory results with baits, you should:

a) use fresh bait, preferably from an unopened container or one that has been tightly resealed and not stored for more than two years;

b) apply when the ground and grass are dry and no rain is expected for 24 hours;

c) apply in late afternoon or early evening when worker ants are actively foraging for food; and

d) treat individual mounds by sprinkling the recommended amount of product up to three feet away, but not on top of an undisturbed mount.

"Baits take several weeks to six months to be effective," says Dr. Sparks. With a second bait application in the fall and annual treatments, you get 90 percent control for $15 to $20 per acre per year. "If you do get on this regime," she adds, "you need to stay on it."

—Jerry Roche

Treatment options

- ***For small areas of turf, or where preservation of native ants is desired:***
  1) Treat unwanted fire ant mounds using the individual mound treatment of choice.
  2) Selectively treat new or undesirable mounds as needed.
- ***For long-term suppression of ants in turf and non-agricultural lands:***
  1) Make an annual or semi-annual broadcast application of bait formulated insecticide in the spring and/or fall.
  2) At least two days after broadcasting the bait, begin treating individual mounds in sensitive or high traffic areas using the individual mound treatment of choice.
- ***To eliminate all mound building and foraging activity in turf:***
  1) Make an annual or a semi-annual broadcast application of a bait formulated insecticide in areas where there are fire ant mounds; or treat individually.
  2) Routinely broadcast or spray a contact insecticide every eight weeks or when new ants are detected.