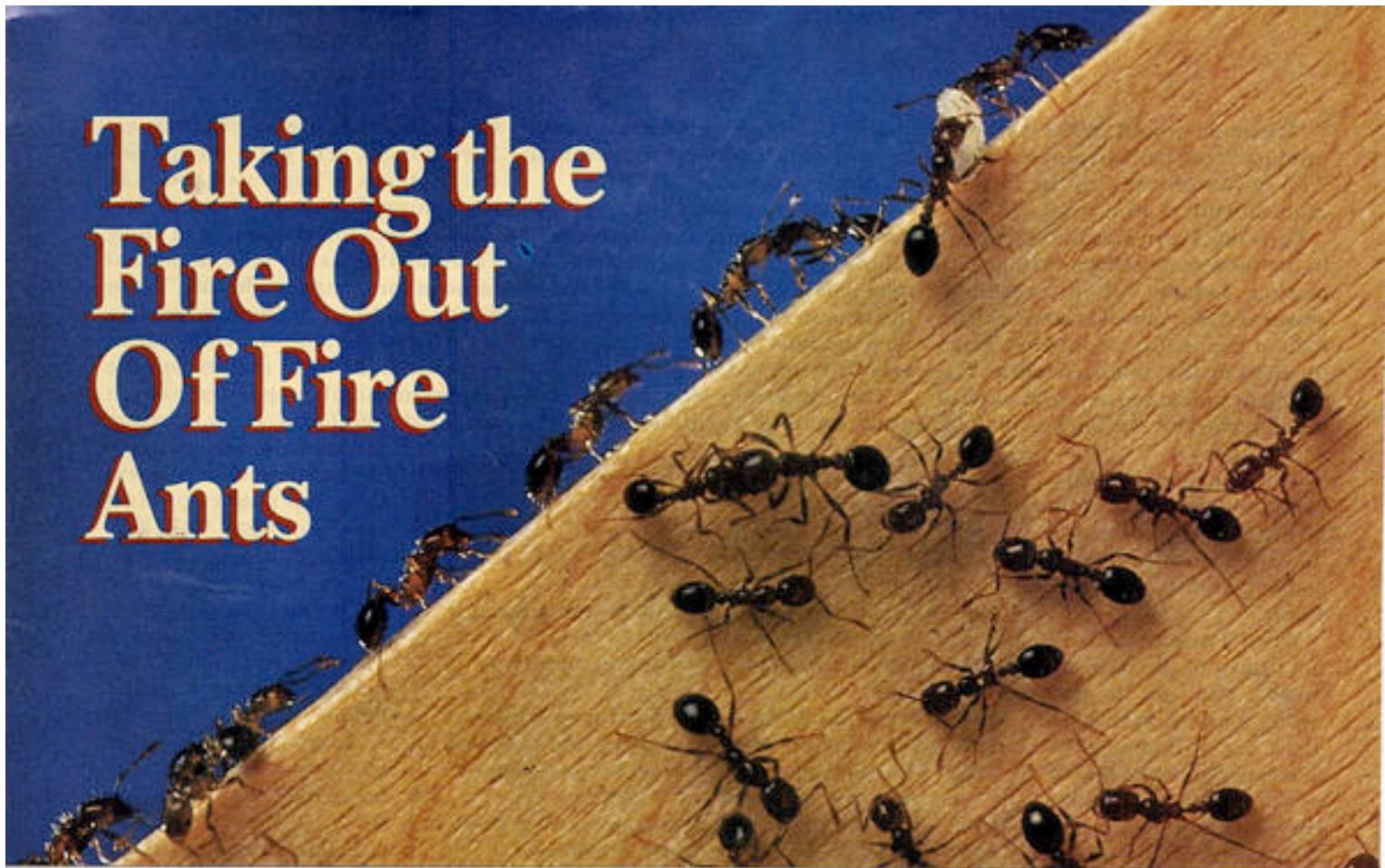


Taking the Fire Out Of Fire Ants



Fire ants, those tenacious stinging insects, bring out the "kick-cuss-and-kill" instinct in anyone who encounters them.

The imported Brazilian red devils infest Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Texas. To a lesser extent, the pest plagues Oklahoma, Tennessee, and Virginia.

Fire ants will attack the seed and seedlings of a variety of crops. They can also blind or suffocate livestock.

Young animals born in fields where fire ants are present are at risk, according to Bradleigh Vinson, a Texas A&M entomologist. Broiler producers report that chicks suffocate themselves when trying to get away from the ants.

Fire ant mounds may also damage equipment. "In clay areas, the mounds get almost like concrete," says David Williams of the USDA Agricultural Research Service in Gainesville, Fla.

"If a cutterbar slams into a mound, I can guarantee it's going to give you down time."

Methods of Attack

Control, not eradication, is the key. Consider what would be most effective, least expensive, and least harmful to the environment. You should

also be aware that any treatment will provide only temporary relief.

■ **Treating mounds.** Mound-drench solutions are distributed directly onto a mound. It takes a few days for most to work. Faster results are possible from injectable products that contain pyrethrins, tetramethrin, or chlorpyrifos. But these cost more and take more time to apply.

Baits tend to act more slowly and are usually more expensive than other types of individual mound treatments. Amdro (hydamethylnon) works in

You can't get rid of these insects, but you can control them with the right plan of attack.

about a week, Fire Ant Ender and PT370 Ascend (avermectin) require several weeks, and Logic (fenoxycarb) may take five weeks or longer.

Sprinkle fresh bait about 3 feet from the mound in late afternoon or early evening on dry ground when no rain is forecast for 24 hours.

■ **Broadcast application.** Granular forms can be applied using fertilizer spreaders; liquid products call for a high-volume hydraulic sprayer. Both forms must be watered into the soil. Products containing carbaryl, chlorpyrifos, diazinon, or isofenphos are long-acting contact insecticides.

Bait-formulated insecticides are broadcast at low rates (1 to 1½ pounds per acre), using calibrated application equipment. The Black Flag Fire Ant Ender (avermectin) is sold in small containers for home use. Amdro and Award (fenoxycarb), also known as Logic, are the other products registered for agricultural use. None are registered for use on crops.

The least expensive application equipment includes hand-powered seed spreaders, such as Cyclone Seed Sower, Ortho Whirlybird, and Republic's or Scott's hand-held spreaders. These can be used while walking or while riding on the back of a vehicle.

Electric spreaders, such as the Cyclone Spreader Model M-3 or the Herd Model GT-77A, can be used on slow-moving vehicles. However, these should not be used with ground-driven or power-take-off-driven equipment. Aerial application is another costly option.



Soaps, cleaning products, wood ashes, battery acids, bleaches, ammonia, grits, and citrus peels all have little effect on fire ants. But there are ways to control them.

PHOTO: USDA AGRICULTURAL RESEARCH SERVICE

Fire Ants May Be Moving North

The fire ant's march northward may not be over. Some speculate that a fertile hybrid of the red and black imported fire ant better tolerates existing means of control and colder weather.

"It's a big concern," says David Williams of the USDA Agricultural Research Service. "But at this point, absolutely no one has any data."

USDA recently began studying an infestation of 3,000 acres in Middle Tennessee that is 50 to 70 miles farther north than where the ants had colonized previously.

"There's no way a population that large could not have overwintered," Williams says.

So what's next? Researchers at Texas A&M are studying a native

parasite called *Strepsiptera* that attacks fire ants. They have also looked at nematodes, some fungi, and a parasitic ant from South America.

Williams' group is studying *Thelohania solenopsae*, a protozoan from Argentina that causes a slow, debilitating disease in the insects.

For More Information

The source for the treatment options in this article is a booklet called *Fire Ants and Their Management*.

For more details on other options, write to Texas Agricultural Experiment Station, Texas A&M University, Dept. of Entomology, College Station, TX 77843-2475.

Ask for the publication by name and number (B1531).

■ **Physical Methods.** Pouring about 3 gallons of boiling water on a mound will get rid of about 60% of the ants. The other 40% will have to be treated again. However, serious burns can easily occur.

Mounds can also be dug up and moved with shovels and buckets. Talcum powder will deter crawling, attacking ants. Mixing colonies of ants in hopes they will kill each other off is not a good option.

Most home remedies are ineffective. Although gasoline will kill ants, it will also kill grass and plants and can pollute the soil for years.

According to fire ant literature at Texas A&M, most mechanical and electrical products "are expensive, labor intensive, not scientifically validated, and of questionable value."

How To Control

There is no one best way to fight fire ants. How you decide to wage war will depend on the situation.

■ **Crops.** To prevent damage to corn and sorghum seedlings, treat seedlings with lindane. Or band an insecticide such as Lorsban 15G over an open furrow at planting when you've suffered stand loss.

Unfortunately, no products are

specifically registered for fire ant control in watermelon, sunflower, and other crops. But some products containing pyrethrins (Prentox, Exciter, and Fairfield American Pyrenone Crop Spray) are labeled for ant control at these sites.

Insecticides registered for other pests on these crops are occasionally used to suppress foraging ants temporarily.

■ **Pastures and rangeland.** A chemical program costs \$10 or more per acre per year. Ants will not be completely stopped, but they will be suppressed after a few weeks. If you have fewer than 15 to 20 mounds per acre, this method may not be worth the money.

If you have more than 20 fire ant mounds, broadcast a bait-formulated insecticide once or twice a year. Use a product for pastures, such as Amdro or Logic. (Logic is newly registered for that purpose.) Also, treat individual mounds with products containing 75% acephate, such as Orthene Turf and Ornamental Spray.

At least two days after broadcasting the bait, begin treating individual mounds. If you have 200 mounds or more per acre, two applications may be needed within several months. If summer calving is planned, choose a pasture and treat it.

If you don't want to use chemicals, schedule your fertility program so that calving occurs in cooler weather. Scatter manure so that fly larvae won't attract ants.

■ **Poultry houses.** Remove sources of food for the ants. Clean up potential nesting sites, such as lumber piles. Mow or apply herbicides to get rid of weeds.

Inside poultry houses, you should treat litter with a registered product such as carbaryl. Keep the insecticide away from feed or water. Spray a barrier around the building with either chlorpyrifos or diazinon. Keep chickens away from treated areas.

■ **Wildlife breeding areas.** The risk to wildlife from fire ants is greatest just after birth or hatching during the warm months.

Treat wildlife areas with discretion; the pesticides could be toxic to game species. Make an annual or a semi-annual broadcast application of a bait-formulated insecticide (avermectin B1, fenoxycarb, or hydramethylnon) in spring, or fall, or both. Begin treating individual mounds two days later.

If you have 200 mounds or more per acre, two applications of bait may be needed within several months.

BY NANCY DORMAN-HICKSON