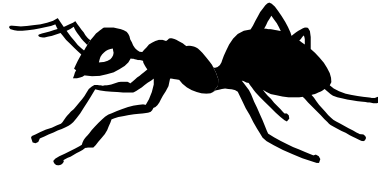


## Bug-Wise

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Fire ants are the most common insect pests of home lawns. They occur in practically every lawn in the state! Even if one manages to achieve a totally fire ant free yard, it probably won't remain fire ant free long, because newly swarmed fire ant queens will quickly re-colonize it, and new fire ant colonies thrive especially well in areas that are free of other, competing colonies. Fire ant control is a never-ending battle in the South, but there are steps that homeowners can take to maintain a lawn and landscape that is relatively fire ant free.

In terms of both cost and effort, the most effective thing that homeowners can do to control fire ants is to make a broadcast application of fire ant bait in the spring, in mid-summer and again in the fall. However, the use of baits must be combined with other methods in order to maintain a landscape that is nearly fire ant free. In most situations, homeowners can accomplish very acceptable control of fire ants by combining broadcast bait treatments with spot treatments of individual mounds.

**Baits:** Although baits can be applied as individual mound treatments, broadcast applications are much more effective. This is because, in addition to the large, readily visible mounds, in an area, there are usually many small, hard to detect colonies. When only the large mounds are eliminated by individual mound treatments, they are quickly replaced by the smaller colonies, which thrive in the absence of foraging competition from the larger colonies. Broadcast bait treatments target all colonies in an area, regardless of size. When using granular baits, early spring application is ideal because it controls recently developed queens before they leave on their nuptial flights and establish new colonies. Follow-up granular bait applications usually are necessary in mid-summer and again in the fall.

For small areas, such as home lawns, broadcast fire ant baits are most commonly applied using a small, hand-powered spreader. Fertilizer spreaders will not work for most fire ant baits, because they put out far too much bait. Most fire ant baits are formulated to be applied at rates ranging from 1 to 2.5 lbs per acre. That's not very much material, and it is easy to over-apply fire ant baits if one does not read and follow the label and directions. However, maintaining uniform coverage is less critical when applying fire ant baits than when applying materials such as fertilizers, herbicides and other lawn insecticides. The foraging fire ant workers will compensate for any narrow untreated areas that may occur between swaths of bait. Therefore, it is not necessary to apply fire ant baits in a criss-cross pattern, as is normally done with seed, fertilizers, herbicides, or granular insecticides.

Apply baits when the ground is dry and when ground temperatures are between 70 and 90° F with no forecast of rain. The insecticides used in granular baits are intended to be slow acting. Baits are picked up by foraging ants, carried back to the colony, and passed among the ants in the colony, eventually reaching and killing the queen. This slow activity is necessary to allow time for the insecticide to be spread throughout the colony. Depending on the specific bait being used, two to six weeks are usually required to obtain maximum control. In summer and fall, apply bait in the afternoon when temperatures are cooler because baits may rapidly degrade on hot, sunny days.

Where they are properly applied two to three times per year, baits can provide 80 to 90% control of fire ants. In relatively small areas, fire ant control can be improved by combining the use of granular baits with spot treatment of any individual mounds that escape the bait treatments. However, it is best to wait several days following the application of a bait treatment, before treating individual mounds with contact insecticide treatments. This allows time for foraging worker ants to carry the baits into the colonies and improves the odds of killing the queen.

Baits can be used to treat individual mounds, but they will not work as quickly as other types of mound treatments. When applying baits to individual mounds, do not apply the bait directly on top of the mound. Instead, apply the specified amount of bait to the area around the mound so that foraging workers can find it readily.

**Mound Treatments:** Individual mound treatments, containing contact insecticides, provide much quicker control than bait treatments, and are an effective way to quickly eliminate fire ant colonies that are especially troublesome. Several different types of individual mound treatments are available. These include liquid drenches, granular treatments, dry powders, and even injectable aerosols. The liquid drenches provide the quickest control, but they are time consuming to mix and apply. The dry powder type treatments are easy and convenient to use, but may take several days to provide control. When treating individual mounds with any insecticide, **do not disturb mounds before treating**. If you do, the colony will attempt to take the queen or queens to safety, either deep down in the mound or move them laterally to establish satellite mounds.

When using liquid drenches, it is important to apply enough liquid to thoroughly soak the mound. Depending on the size of the mound, this ranges from one to two gallons of mixed drench. When applying liquid drenches, begin by applying about  $\frac{1}{4}$  of the total volume to a 12 to 18 inch band around the periphery of the mound. This is to prevent the escape of the queen through lateral foraging tunnels and to improve control of workers. Then apply the bulk of the drench directly to the mound. Failure to use enough water to thoroughly soak the mound is the primary reason for unsuccessful mound drenching efforts.

**Broadcast Insecticide Treatments:** Broadcast insecticide treatments are applied over the entire lawn area. They are generally more time consuming and costly to use than baits, and are more commonly used in highly managed areas, such as athletic fields and golf courses, than in home lawns. Broadcast insecticide treatments may be formulated as liquids, which are mixed according to label directions and sprayed over the turf area, or as granular treatments, which are spread over the turf area using an appropriate spreader.

It is important not to confuse granular insecticides with insecticide baits. Most fire ant baits are formulated as granules that are impregnated with oil, or some other food substance, which the ants will actively collect and carry back to the colony. Granular insecticides are simply granules that are impregnated with insecticide. They are not attractive to ants. Instead, the insecticide in the granules moves into the soil and provides control of foraging ants and newly settled queens through contact activity. Consequently, obtaining uniform coverage is more important when applying broadcast insecticide granules than when applying granular baits.

Many of the insecticides used as broadcast treatments for fire ants also have activity against other lawn pests, such as chinch bugs, white grubs, or mole crickets. However, before choosing a broadcast insecticide, it is important to read the label carefully to be sure that the insecticide chosen provides control of the particular group of pests present.

## Baits for Control of Fire Ants in Home Lawns \*

Brand Name (insecticide) (% ai)	Rate/mound **	Rate/acre ***
Amdro Bait (hydromethylon) (0.73%)	2 to 5 tablespoons	1 to 1.5 lb
Award (fenoxycarb) (1.0%)		
Hi-Yield Fire Ant Bait (fenoxycarb) (1.0%)	1 to 3 tablespoons	1 to 1.5 lb
Come & Get It Bait (spinosad) (0.015%)	4 to 6 tablespoons	2.5 to 5 lb
Distance (pyriproxyfen) (0.5%)	1 to 4 tablespoons	1 to 1.5 lb
Extinguish (methoprene) (0.5%)	3 to 5 tablespoons	1 to 1.5 lb
Ascend (abamectin) (0.011%)	5 to 7 tablespoons	1 lb

\* Avoid applying baits immediately before or after irrigation or rainfall.

Baits may require 4 to 8 weeks to provide maximum results.

\*\* Baits should be applied in an area around the mound, not on top of the mound.

\*\*\* There are 43,560 square feet in one acre.

## Mound Drench Treatments for Control of Fire Ants in Home Lawns \*

Insecticide	Brand Name	Rate
Acephate (75% SP)	Orthene 75 TTO (75%)	2 teaspoons/gal
Carbaryl (22.5% concentrate)	Sevin Concentrate Bug Killer	¾ fl oz/gal
Permethrin (2.5% concentrate)	Bonide Eight Insect Control	2/3 fl oz/gal
Permethrin (38% concentrate)	Hi Yield 38 Plus	1.6 fl oz/gal

\* Depending on the size of the mound, it takes 1 to 2 gallons of water-insecticide mix to drench a fire ant mound effectively. Drench the mound and an area approximately 12 to 18 inches around the perimeter of the mound. **Do not disturb mounds before drenching.**

## Dry Mound Treatments for Control of Fire Ants in Home Lawns \*

Insecticide	Brand Name	Amount/mound
acephate	Orthene 75 TTO (75%)	1 - 2 teaspoons
cyfluthrin	Bayer Fire Ant Killer (1.0%)	1 teaspoon
deltamethrin	Bengal Ultra Dust Fire Ant Killer (0.05%) Terro Fire Ant Killer (0.05%)	1 tablespoon

\* Sprinkle dry product over and around mound as directed on label.

**Do not disturb the mound before or after treatment.**

## Broadcast Treatments for Control of Fire Ants \*

Insecticide	Brand Name	Rate/1000 sq ft
<b>Treatments Applied as Sprays</b>		
carbaryl (22.5% concentrate)	Sevin Concentrate Bug Killer	3 to 6 fl oz
cyfluthrin (0.75% concentrate)	PowerForce Multi-Insect Killer	6 fl oz
lambda cyhalothrin (0.5% concentrate)	Triazicide Soil & Turf Insect Killer Concentrate	2 fl oz
permethrin (38% concentrate)	Hi-Yield 38 Plus Turf, Termite & Ornamental Insect Concentrate	0.8 fl oz
<b>Treatments Applied as Granules</b>		
bifenthrin (0.2% granules)	Ortho Fire Ant Killer Granules	2.3 lbs
fipronil (0.0103% granules) **	Gardentech Over'n Out!	2 lbs
lambda cyhalothrin (0.04% granules)	Triazicide Soil & Turf Insect Killer Granules	2 lbs
permethrin (0.5% granules)	Kill A Bug II Lawn Granules	2 to 3 lbs

\* Most broadcast treatments will provide control for approximately 4 to 8 weeks.

\*\* The label of the fipronil treatment (Over'n Out) indicates that a single spring application will provide season-long fire ant control.

Blake Layton, Extension Entomologist

This information is for educational and preliminary planning purposes only. Brand names mentioned in this publication are used as examples only. No endorsement of these products is intended. Other appropriately labeled products containing similar active ingredients should provide similar levels of control. Always read and follow the insecticide label.