



Bug-Wise

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Control Fire Ants in Hay Fields, Pastures, and Barnyards: Fire ants thrive in Mississippi pastures and hay fields because these habitats are similar to the pampas in their native lands of Brazil and Argentina. It's no fun to haul hay bales from a fire ant infested field and the mounds can interfere with mowing and even damage equipment. Fire ant infested hay cannot be shipped to fire ant free areas. Permanent pastures can have fire ant densities ranging from 50 to more than 200 mounds per acre. At these densities fire ant mounds can interfere with management operations and the ants sting animals and interfere with grazing. Around barns and barnyards fire ants cause problems by getting into feed and stinging animals, as well as people working in the area.

Occasionally fire ants are even blamed for deaths of newborn calves and foals, but this is not as common as one might think. Finding a dead calf with fire ants crawling out of its mouth and nose does not necessarily mean fire ants killed the animal. Healthy newborns that are able to quickly gain their feet are at little risk, but fire ants will quickly begin foraging on animals that are stillborn or die shortly after birth. However, fire ants can contribute to the death of distressed, immobile newborns, as well as older animals that are sick or injured.

You can control fire ants in pastures and hay fields by using granular fire ant baits, but you have to realize that baits work slowly and need to be applied preventively. The cost ranges from around \$8 to \$45 per acre, depending on rate and how many times you treat each season. If your goal is just to reduce the number of fire ant mounds in a permanent pasture, one treatment may be enough, but if you want to eliminate and prevent fire ant mounds around a horse barn and paddocks, you will need to treat more than once per year.

To treat a pasture or hay field for fire ants you need two things, a bait that is labeled for use around grazing animals and a spreader that will apply the bait properly.

Fire ant baits for pastures and hay fields: Not all fire ant baits are labeled for pastures and hay fields; some baits contain active ingredients that are not approved for use around grazing animals. Check the label—before you buy—to be sure the product is labeled for your intended use.

Currently, three active ingredients are labeled for use as fire ant baits in pastures or hay fields: methoprene, pyriproxyfen, and hydramethylnon. A list of commercially available fire ant baits is shown in the following table. These products are sold in small quantities, one to five pounds, and in 25 pound bags through farm supply stores, but you may have to special order the larger quantities. Although these baits can be applied in pastures with grazing animals present, there may be a short waiting period before cutting hay. Be sure to read and follow the label.

Fire Ant Baits for Pastures, Hay Fields, and Barnyards

Brand Name	Active Ingredient	Rate/acre	For Use around grazing		PHI for Hay ¹
			Cattle	Horses	
Amdro Pro	Hydramethylnon (0.73%)	1 to 1.5 lb	Yes	Yes	7 days
Esteem	Pyriproxyfen (0.5%)	1.5 to 2 lb.	Yes	Yes	1 day
Extinguish	Methoprene (0.5%)	1 to 1.5 lb	Yes	Yes	NA

1 PHI is the number of days you must wait to cut hay after a bait application.

How much do fire ant bait treatments cost?: When purchased in large quantities, such as 25 pound bags, fire ant baits cost around \$8 to \$10 per pound. If you use 1.5 pounds per acre and only treat once per year, that's about \$12 to \$15 per acre. One way to reduce cost when treating pastures with the growth regulator products (Extinguish or Esteem) is to skip every other swath. These growth regulators take longer to work, but are more forgiving of wide swaths than the quicker acting hydramethylnon products. This cuts the cost of treatment in half and does not seem to reduce efficacy that much. This is because fire ant workers routinely forage as far as 100 feet, or more, from their mound. Don't buy more bait than you can use in one season because the oil in fire ant baits will go rancid, and fire ants don't like rancid bait.

How long does it take baits to work and how long do they last?: Fire ant baits are designed to be slow-acting. The worker ants find the bait granules when they are out foraging, take them back to the colony, and feed them to their young. If fast-acting insecticides were used in the baits, they would kill the foraging workers before they could carry the bait back to the mound. With hydramethylnon, you will begin to see results in two to four weeks, but it can take two to three months to see the full effects of a growth regulator product, like methoprene or pyriproxyfen.

The growth regulators work by interfering with development of immature fire ants, but they do not kill adults. Mounds eventually die out because there are no new workers to replace the ones that die. This doesn't mean the slower-acting baits are not a good option, because they do provide long-term control, usually longer than the hydramethylnon treatments. But it does mean you have to plan ahead, know what results to expect, and be patient.

The effects of a single bait application can persist for the whole season, meaning you will see fewer mounds than if you had not treated. You won't get rid of every mound, but if you apply the bait properly and do not get rain for a couple of days, you should get around 80% control. The area will be re-infested as newly mated queens fly in and establish new colonies, but you can improve control by treating again later in the season.

When is the best time to apply baits?: You can apply fire ant baits any time during the growing season, but spring is probably the best time. Wait till soil temperatures warm in the spring and fire ants are actively foraging. You can use potato chips, the greasy kind not the baked ones, to check for foraging activity. Scatter a few chips in the area and come back and check on them in 20 to 30 minutes. If fire ants find the chips in this time, they will find the bait.

A single bait treatment, applied in the spring, will substantially reduce fire ant numbers. If you want even better control, and are willing to spend the time and money to get it, make a second and even a third treatment later in the season, like mid-summer and fall. Fall treatment helps reduce the number of mounds present the following spring.

How to apply fire ant bait on large acreage: Rates for most granular fire ant baits range from 1 to 2 lbs per acre. That's not very much bait, and it is easy to over apply and waste a lot of money if you don't have a proper applicator. A typical fertilizer spreader will put out way too much bait. And it's not a good idea to mix the bait in with fertilizer because the fertilizer will absorb some of the oil from the bait granules, making them less attractive to the ants.

If you only have a few barn lots to treat, you can use one of the hand-operated spreaders used to apply fire ant baits to home lawns. Hand seeders designed to spread small seed will also work, if properly calibrated. But if you plan to treat large pastures or hay fields, you will need a power-operated spreader that can be easily calibrated to apply the right amount of bait. Herd Seeder Company and Spyker Spreaders are two companies that make spreaders specifically designed to apply fire ant baits. These bait spreaders are driven by a small electric motor, and can be mounted on a tractor, ATV, or other vehicle. These can be purchased, usually as a special order item, though farm supply stores or internet sources. Aerial application is also an option for treating very large acreages, but you may have to do some searching to find an aerial applicator equipped to apply fire ant bait.

Tips for using fire ant baits

- 1} Always read the label at least twice, once before buying and again before treating. Follow label directions.
- 2} Buy only as much bait as you need. Most baits contain vegetable oils, which go rancid over time and fire ants don't like rancid bait.
- 3} Be sure you have the right kind of applicator to do the job.
- 4} Calibrate your applicator properly. One to two pounds per acre is not very much bait. At first it may look like the spreader is not putting out enough bait, just a granule here and there. That's probably about right! Follow the calibration directions that come with the spreader.
- 5} Try to pick a time when its not likely to rain for a day or two after treatment. Rainfall will wash away or dissolve your costly bait. Reapply if you get significant rain within 6 to 12 hours after treatment.
- 6} Wait until the grass is dry of dew or rainfall before applying bait.
- 7} Don't be tempted to apply excessive rates in order to 'really get um'. If you are willing to spend more money for improved control, it's much better to spend it on a second application later in the season!
- 8} Don't worry if you have a few gaps between your bait swaths. Remember, the fire ant workers are out there looking for the bait. That's one reason baits work so well.
- 9} Know what results to expect. Baits aren't fast, and they won't eliminate every mound in the area, but by one to two months after treatment you should get around 80% control.
- 10} If your goal is to maintain a very high level of control around a horse barn or other sensitive area, don't wait until you start seeing new mounds appear before treating again. Apply baits preventively in spring, mid-summer, and fall.

To Quickly Eliminate Problem Mounds in Barnyards: Sometimes a fire ant mound is just in the wrong place at the wrong time and needs to be eliminated quickly. Maybe it's right by the door to the feed room, beside the headgate to the cattle chute, or in some other place where folks using the area are sure to step in it. You can quickly eliminate such mounds by treating them with a liquid drench, but it is important to be sure the insecticide you use is labeled for use on or around animals and for drenching fire ant mounds. Note that these are different uses and the label will give specific instructions for each use. Examples of insecticides that have such labels are shown in the following table.

Examples of Insecticides for Use as Fire Ant Mound Drenches

Brand Name	Active Ingredient	Use Directions
Hi-Yield Garden, Pet, and Livestock Insect Control	Permethrin (10%)	Mix 1 ½ fl. Oz. (3 tbsp) in 1 gal. water to treat one mound.
Martin's Permethrin 10% Multi-Purpose Insecticide	Permethrin (10%)	Mix ½ fl. Oz. in 3 gals of water and apply as a drench.
Sevin 80 S	Carbaryl (80%)	Mix 8.4 grams (about 1 2/5 tbsp./gal.) and apply 2 gal./mound

Use a watering can, or similar container, to mix and apply liquid drenches. Read the label, mix the specified amount of insecticide in water, and pour over the mound. Avoid disturbing the mound before treating. The key to success with liquid drenches is to use enough liquid to thoroughly soak the mound. Depending on the size of the mound, this ranges from one to two gallons. Begin by applying about ¼ of the total volume to a 10 to 12 inch band around the outside of the mound. This prevents the queen from escaping through one of the underground foraging tunnels and improves control of workers. Then apply the rest of the drench directly to the mound.

Use enough drench to soak the mound well; mix more if you need to. Failure to use enough drench is the main reason for unsuccessful mound drenching efforts. Liquid drenches are the quickest way to eliminate fire ant mounds. Drench a mound properly and all ants that were not out foraging will be dead within a few hours.

Caution: Do not use dry mound treatments containing the active ingredient acephate around animals. Such products are commonly used to control fire ant mounds in home lawns, but acephate is a systemic insecticide that can result in illegal residues if used around grazing animals.

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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