

# Best Management Practices

## Red Imported Fire Ants

### Background

Red Imported Fire Ants, (RIFA), were introduced accidentally into the U.S. at Mobile, AL in the 1930's. *Solenopsis invicta* now infest over 300 million acres, continuing to spread by 15 to 30 miles per year ranging as far north as North Carolina. These ants are a threat to human activity because of their painful stings, which may cause severe allergic reactions in venom sensitive people. Thus, efforts to prevent their spread are important to nurserymen, sod producers, landscape professionals, and homeowners throughout the infested areas.

### Description

Fire ant workers are sterile females ranging in size from small to medium to large. Workers may live for 1 to 6 months, and are produced by queen ants, which can live for 2 or more years. A mature fire ant colony may contain a quarter of a million workers, brood and winged reproductives along with one to several queens. Brood includes cream-colored eggs, larvae, and pupae. After the mating flight, new colonies are established during warmer months by winged, newly mated fire ant queens, each of which may lay more than a thousand eggs a day. Females mate only once during their long lifetime, while the males die shortly after mating.

The most obvious part of the colony is the fire ant mound. The height of the mound and the depth to which its core extends into the ground are related to factors such as colony age and size and the physical characteristics of the soil. Mounds may be one to two feet across and as high as 1 foot. Radiating from the mound are subterranean tunnels that open to the surface some distance away from the mound. Worker ants use these passages as they come and go from the colony. Open sunny areas are preferred for mound building, but mounds may also be located inside rotted logs, around trees or stumps, or inside electrical switch boxes. Established colonies can also be found in structural interiors.

The last stage larvae are the only life stage of the RIFA that are capable of digesting solid food brought back to the colony by foragers. This digestive process converts the solids into liquid that is then available to other ants in the colony.

### Damage

RIFA will aggressively attack anything that disturbs or threatens their mound. They are capable of stinging repeatedly and painfully, with each sting resulting in a long-lasting, itching pustule. Individuals sensitive to RIFA stings may go into anaphylactic shock. The RIFA are a threat to pets, newborn chicks and calves, wildlife, and sleeping or bedridden individuals. They damage electrical equipment and their unsightly mounds interfere with cutting and harvesting machinery in cattle operations and other landscape and agricultural functions.



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1735 Market Street Philadelphia PA 19103

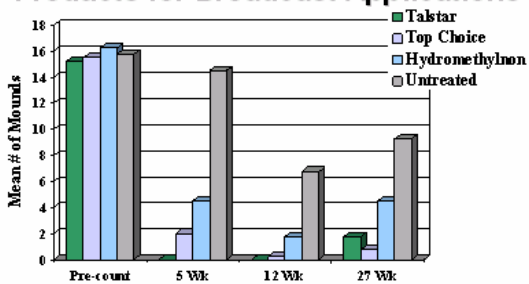
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## Management

Although RIFA can generally be eliminated from a specific site, reinfestation readily occurs unless long residual products such as the Talstar® line of products are used in an ongoing control program. RIFA can be difficult to manage due to their tendency to relocate their mound if it is disturbed. If, however, the entire lawn or turf area has received an application of Talstar® Professional insecticide or Talstar® Select insecticide, Talstar® EZ Granular insecticide, or Talstar® PL Granular insecticide, the ants will not reinfest the area for several months.

Combining broadcast applications that control foraging workers and newly mated fly-in queens with mound drenches that will eliminate existing colonies will optimize RIFA control. Talstar Professional or Talstar Select at 1 oz/1000 sq. feet; Talstar EZ Granular or Talstar PL Granular, as appropriate to the site should be broadcast at up to 4.6 lbs/1000 sq. ft. Mounds should be treated either by diluting 1 teaspoon of Talstar Professional or Talstar Select formulation per gallon of water and applying 1-2 gallons of finished spray per mound, or by applying ½ cup of Talstar granular products per mound and then drenching the mound with 1 – 2 gallons of water. The mound should be treated with sufficient force to break their apex and allow the insecticide suspension to flow into the ant tunnels. A four-foot diameter circle around the mound should also be treated. If the soil is dry at the time of application, it is important to irrigate before application.

### Comparative Performance of Fire Ant Products for Broadcast Applications

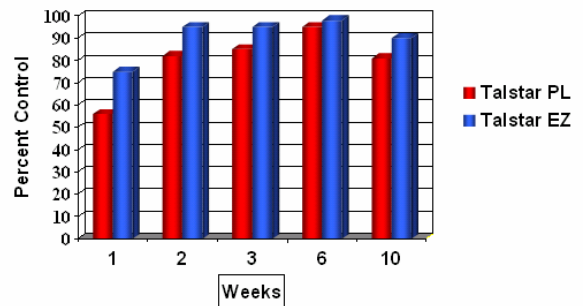


1. Talstar was faster acting than Top Choice and Hydramethylnon
2. At 52 weeks there were no statistical difference was observed between Talstar and Top Choice treatments.

Bifenthrin 0.2 lb ai/A, Fipronil 0.012 lb ai/A

Source: Barr and Best, 1999-2000 (Coulter Field, Bryan, TX)

### Control of RIFA Using Talstar® PL and EZ Granular Insecticides at 0.2 lb ai/A



Jan Weinbrecht, 2000 in FL

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