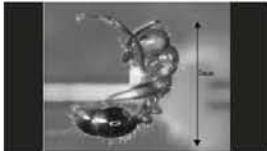


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10 Tips for Effective Control of the Red Imported Fire Ant, *Solenopsis Buren*

These technical tips provide information that will assist the professional applicator in developing a successful red imported fire ant management program.

Determine the appropriate treatment method, broadcast applications or mound treatments based on the conditions present at time of treatment:

- Choose a broadcast treatment in the spring when fire ant colonies are forming and populations are growing.
- Broadcast applications will provide the most cost-effective treatment as substantially less time will be required to complete an application.
- Broadcast applications are desirable for large areas. It is possible to control smaller mounds that are harder to detect, thereby reducing callbacks and extending the interval between treatments.
- Choose a mound treatment if the number of colonies infesting a property is low as less product will be required to gain control.

Select the best type of product to use, bait or contact insecticide (granular, liquid), based on the specific needs at time of treatment. Baits have the ability to control more than one colony and are usually more cost-effective than contact insecticides. Plus, baits have lower rates of active ingredients and introduce less chemical into the environment.

For Bait Treatments:

- The most important factor in successful baiting for the control of any insect pest is the acceptance of the bait by the target species. Be sure that fire ants are actively foraging by placing a little bait in the suspect area and observe for 10 minutes.
- When using a bait for mound treatments, do not apply directly to the mound or disturb the mound in any manner.
- Do not water-in after application. Rainfall within 2 to 3 hours after application may reduce the effectiveness.
- Apply when the soil surface temperature is above 60° F and air temperatures are between 75° and 90° F.
- For optimal effectiveness, use fresh bait and do not apply if grass is wet with dew, rainfall or irrigation or during excessively hot periods of the day.
- During extremely hot summer weather, apply in the late afternoon or evening because fire ants will forage at night under these conditions.

Many factors must be considered when selecting a product for imported fire ant control. The most important ones include: 1) speed of

action; 2) duration of control; 3) ease of application; 4) environmental concerns; and 5) cost. Your customer is going to expect a quick remedy to their fire ant problem with minimal impact on the environment. And control of several months or more is often anticipated. You want a product that is easy to apply and is cost-effective based on the performance that you desire and promise to your customer. Considering these five key factors will help you select the product that is right for you and your customer.

A Closer Look at the RIFA

A red imported fire ant (RIFA) colony consists of eggs, brood (larvae and pupae), polymorphic workers (which are sterile females), one or more reproductive queens and winged males and females. Winged individuals are most abundant in the late spring and early summer, but may be found any time of year. Winged forms are reproductives and an individual colony will produce more of one sex to minimize interbreeding.

Mating flights usually occur in mid-morning one or two days after a rainfall when temperatures are above 72°F and the wind is light. Males fly first and await females in the air, where mating takes place. After mating, the male dies and the female sheds her wings and searches for a suitable nesting site. The new queen excavates a brood cell one to two inches below the soil surface. The queen does not forage for food; rather she relies on fat reserves and the energy acquired by absorbing her wing muscles to survive until her first workers take on the task of colony maintenance.

Queens initially lay 10-15 eggs and workers develop in about one month. The first workers (called minims) are very small due to the limited amount of energy devoted by the queen to their development. Minims open the brood cell and begin foraging for food. Larger workers are produced within 30 days and the workers then divide labor by age. Younger workers care for developing brood. Middle-aged workers maintain and defend the colony. The oldest workers forage for food.

Fire ants are extremely efficient foragers. This is why fire ant bait application rates are so low - typically 1.5 lbs. of product per acre. Within six months, several thousand workers occupy the colony and a "mound" is readily visible. As the colony matures, the polymorphic nature of the worker becomes apparent. The largest workers can be 10 times the size of the smallest workers. The queen lives up to seven years and produces an average of 1,600 eggs per day. At maturity, a monogynous colony can consist of 250,000 ants.