

Living on the Edge: Managing Imported Fire Ants in West Texas

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If you are fortunate enough to live without red imported fire ants, count yourself lucky! People new to Texas or visiting from an area free of fire ants are usually introduced to these insects in a painful manner. Unsuspecting people (or those who do not pay attention to where they step) can step in the middle of a fire ant mound and be severely attacked. Red imported fire ants can cause painful stings that swell into pustules and, for some, cause serious health problems.

You may not have an imported fire ant infestation. The red imported fire ant, *Solenopsis invicta* Buren (Hymenoptera: Formicidae) does not occur in many West Texas counties (see [Geographic Distribution of Fire Ants](#)). Even in counties that have imported fire ant infestations, parts of the county may not harbor this pest. Other fire ant species may be locally common in far south or West Texas. These are native species such as the tropical fire ant (*Solenopsis geminata* Fabricius), the southern fire ant (*S. xyloni* McCook), or desert fire ants (*S. aurea* Wheeler and *S. amblychila* Wheeler). The red imported

fire ant has been detected in only a few areas of West Texas, which are now under USDA Quarantine through the Texas Department of Agriculture (see [Imported Fire Ant Quarantine Map](#)).

PROPERLY IDENTIFY SUSPECT ANTS

So, how do you know if you have red imported fire ants? This species has two nodes or bumps between the thorax and abdomen (see [Texas Pest Ant Identification: An Illustrated Key to Common Pest Ants and Fire Ant Species](#) for ant identification keys or [Imported Fire Ants: What Are Fire Ants?](#)). They also have 10-segmented antennae with a 2-segmented club at the end. Workers are reddish-black with distinct compound eyes. Red imported fire ant workers are polymorphic, meaning that they come in a range of sizes, but workers are never larger than ¼ of an inch.

Red imported fire ants can be distinguished from other ants by their characteristic mound as well as their behavior. The mound has no central opening and can be up to 18 inches tall. In hot, dry climates, fire ants often do not build mounds. Unlike many native ant species, when the nest is disturbed, worker ants emerge in



large numbers and run up vertical objects to bite and sting.

Imported fire ants prefer to build their mounds in open, sunny areas such as lawns, meadows, or pastures. These mounds often occur around the base of trees, beside brick walls, in irrigated landscaping, in rotting logs, or next to concrete walks. Occasionally, the mound is in or under buildings as well as electrical or utility housings. These ant colonies can move several hundred feet away from the original mound site almost overnight. Mounds may also seem to suddenly appear after heavy rains or in recently flooded areas. Under hot, dry conditions, fire ants may survive for long periods deeper in the soil.

COLLECT AND SUBMIT ANT SPECIMENS FOR IDENTIFICATION

Collect ants by dipping a cotton swab into rubbing alcohol and touching it lightly to the ant. You can also use tweezers to collect them. Place the ants in rubbing alcohol for preservation until they can be identified. Be careful not to get bitten or stung (see *Medical Problems and Treatment Considerations for the Red Imported Fire Ant* for medical problems associated with imported fire ants).

Another method for collecting ants is to place a vial with a food lure (corn, hot dog slices, or potato chips) near the mound and leave it long enough for ants to climb in the vial. Cap the vial and place it in the freezer overnight to kill the ants. Then transfer the dead ants to a vial containing rubbing alcohol for proper preservation, or leave it dry. In all collecting methods, be careful to not damage the ants. Antennae are a common characteristic used for proper identification, and these can be damaged easily. Place the samples in a box or other container so they are not damaged during mailing.

After collecting ants, send them to the county Extension agent in your area for proper identification. The local county Extension agent may

need to send the ant sample to another source for identification, such as a fire ant agent or Extension entomologist (see *Ant Sample Submission Form*). Another source of identification may be pest control companies that have a staff entomologist.

WHY NOT KILL ALL ANTS?

The majority of the approximately 300 ant species found in Texas (see *The Distribution of Texas Ants*), are beneficial. Native ants should be identified and conserved in their original habitat because some native and exotic ant species are our best defense against red imported fire ants. They are thought to provide “biotic resistance” because they compete with red imported fire ants for resources such as food and nesting sites, prey on newly mated imported fire ant queens, and raid small nests. Some competing ant species include the little black ant (*Monomorium minimum*), the thief ant (*Solenopsis molesta*), the big-headed ants (*Pheidole dentata* and others), the introduced pavement ants (*Tetramorium* species), and pyramid ants (*Dorymyrmex* species). It is possible, however, for the competing ant species to become pests in and around the home, but their benefits may outweigh their pest status.

SELECT THE PROPER COURSE OF ACTION

Depending on the pest ant species, management strategies can vary greatly (see *Red Harvester Ants, Carpenter Ants, and Managing Household Ant Pests* for harvester, carpenter, and house-infesting ant control information). If the ants are identified as red imported fire ants and are posing a threat or causing problems, select a management strategy.

General pesticides kill a wide variety of insects. If the goal is to eliminate all ants, these may be ideal products to use. However, if the goal is to preserve the “good” ant species, do not use these products for ant management since general-use

chemicals can kill all ant species in the area. Remember, you are trying to conserve native, competing ant species.

If you live in an area recently invaded by imported fire ants and their mound numbers are low (less than 20 mounds per acre), consider using only individual ant mound treatments as a first line of defense. This strategy helps conserve the native ant species that compete with red imported fire ants. Many mound treatment products come in a variety of forms such as dust, granular, liquid, or powder (see *Natural, Organic, and Alternative Methods for Imported Fire Ant Management*, *Managing Imported Fire Ants in Urban Areas*, and *Fire Ant Control: The Two-Step Method and other Approaches*). Broadcast-applied bait-formulated products are best used in larger, fully infested areas (areas with 20 or more imported fire ant mounds per acre). A spot eradication may be possible if the area for eradication does not have infested areas within two to five miles or more (see *How to Plan, Implement, and Evaluate a Spot-Eradication Program for Imported Fire Ants*).

Help keep the spread of imported fire ants in check. The West Texas counties not currently infested by imported fire ants are the location of the last stand to keep these areas free of this pest. By being aware of the environment as well as informed about the red imported fire ant and its identification, biology, and control options, Texans may be able to keep fire ants from moving farther into these areas.

The United States Department of Agriculture has developed a quarantine program to prevent the spread of the imported fire ant. Quarantine regulations are enforced by the Texas Department of Agriculture. You can help prevent the spread of fire ants by being aware of the law (see *Information for Texas Residents* and *Fire Ant Quarantines and Regulations*). If you live in a noninfested red imported fire ant area, be aware of landscaping material originating from infested parts of Texas or the United States. The material could be harboring transported fire

ants. Inspect all baled hay, landscape plants, and materials such as mulch, soil, compost and sod, as well as construction machinery, and honey-bee-hive-housing equipment. If you discover imported fire ants in material purchased from a nursery or other source, contact the source of the shipment to make them aware of the problem. Also report the fire ant infestation to the Texas Department of Agriculture (see the *Imported Fire Ant Quarantine Map* for information on quarantine areas).

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REFERENCES

- Geographic Distribution of Fire Ants*
www.extension.org/pages/9725/geographic-distribution-of-fire-ants
- Imported Fire Ant Quarantine Map*
texasagriculture.gov/LinkClink.aspx?fileticket=PMDlzzv8K8A%3d&tabid=1013&mid=2948
- Texas Pest Ant Identification: An Illustrated Key to Common Pest Ants and Fire Ant Species*
u.tamu.edu/ento-001
- Imported Fire Ants: What Are Fire Ants?*
www.extension.org/pages/11373/imported-fire-ants:-what-are-fire-ants
- Medical Problems and Treatment Considerations for the Red Imported Fire Ant*
u.tamu.edu/ento-005
- Ant Sample Submission Form*
http://urbanentomology.tamu.edu/pdf/forms/AntIDform.pdf
- The Distribution of Texas Ants*
sswe.tamu.edu/PDF/SWE_S22_P001-92.pdf

Red Harvester Ants

www.agrilifebookstore.org/product-p/e-402.htm

Carpenter Ants

www.agrilifebookstore.org/product-p/e-412.htm

Managing Household Ant Pests

www.agrilifebookstore.org/product-p/eb-6183.htm

Natural, Organic, and Alternative Methods for Imported Fire Ant Management

u.tamu.edu/ento-009

Managing Red Imported Fire Ants in Urban Areas

www.extension.org/pages/11004/managing-imported-fire-ants-in-urban-areas-printed-version

Broadcast Baits for Fire Ant Control

www.agrilifebookstore.org/product-p/e-628.htm

Fire Ant Control: The Two-Step Method and Other Approaches

www.agrilifebookstore.org/product-p/ento-034.htm

How to Plan, Implement, and Evaluate a Spot-Eradication Program for Imported Fire Ants

u.tamu.edu/ento-011

Information for Texas Residents

www.extension.org/pages/14901/information-for-texas-residents

Fire Ant Quarantines and Regulations

www.extension.org/pages/65021/fire-ant-quarantines-and-regulations

For more information regarding fire ant management, see Extension publications *Managing Red Imported Fire Ants in Urban Areas*, *Broadcast Baits for Fire Ant Control*, or *Fire Ant Control: The Two-Step Method and Other Approaches* posted on <http://AgriLifeBookstore.org>.

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