

Imported Fire Ants: An Agricultural Pest and a Human Health Hazard

Imported fire ants (*Solenopsis invicta* Buren, *S. richteri* Forel, and their hybrid) were accidentally introduced to the United States. The black imported fire ant was brought to Mobile, AL, in 1918. The red imported fire ant arrived in the 1930s. Since then, they have become established across the South and in parts of California and other Western States. These pests pose serious threats to people, small animals, and agricultural equipment. As these insects spread northward and westward, more people are asking the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) for advice about how to manage imported fire ants. This factsheet answers several frequently asked questions.

Q: Why are they called fire ants?

A: Anyone who has been stung by one or more of these aggressive insects can answer this question. Fire ants clamp onto their targets with powerful jaws and sting their victims repeatedly. Each sting injects a dose of venom that causes a burning sensation. The stings raise itching blisters that can become infected. In sensitive victims, the stings can cause anaphylactic shock (symptoms include trouble breathing and fainting) or even death.

Q: What damage do fire ants cause?

A: Fire ants attack and sometimes kill newborn domestic animals as well as pets and wildlife. Fire ants can also destroy seedling corn, soybeans, and other crops. These insects feed on buds or fruits of many plants and may remove bands of bark from young citrus trees, often killing them. Additionally, the hard, cone-shaped nests of fire ants can mount as high as 2 feet, making it difficult to cultivate and harvest crops from infested fields. These fire ant mounds are unsightly hazards in yards, parks, and other recreational areas, where they are especially dangerous to children and pets.

Q: Where are imported fire ants in the United States, and where do they come from?

A: Imported fire ants were accidentally brought to the United States from South America. Since arriving in Mobile, AL, they have spread to 14 States and Commonwealths. They now infest all or part of Alabama, Arkansas, California, Florida, Georgia, Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, and Texas.

Q: How can you identify fire ants?

A: Identifying fire ants is difficult because they look much like ordinary ants. They are 1/8 to 1/4 inch long and reddish brown to black in color. Fire ants are probably best distinguished by their aggressive behavior and characteristic mound-shaped nests.

Q: How does a colony begin?

A: A new colony begins with a "nuptial flight" of winged males and winged females, usually on a warm, spring day. After mating occurs, males drop to the earth and die. Females that successfully elude predators and survive drought and rain seek out nesting sites and burrow underground. A new queen sheds her wings and lays 12 to 24 worker eggs, which she tends to constantly. Upon hatching, the workers, all of which are sterile females, take over all colony functions except reproduction, while the queen only mates and lays eggs. She may produce more than 200 eggs per day.

Q: How large is a colony?

A: Fire ant colonies vary in size, but a mature, 3-year-old colony typically contains 250,000 workers, which are sterile females, and hundreds of reproductive males and potentially reproductive females. A colony population can grow to 300,000 ants. In addition to single-queen colonies, many fire ant colonies have multiple queens, increasing tenfold the number of mounds in a single acre.

Q: How do fire ants spread?

A: Limited local dispersal occurs during the mating process, mass movement of colonies, and floods. Ants travel longer distances by hitchhiking in motor vehicles and in or on soil, plants with roots and soil attached, nursery stock, sand, gravel, grass, sod, hay, wood, or soil-moving equipment.

Q: What is USDA doing to prevent this spread?

A: APHIS works to limit the spread of imported fire ants by requiring that all nursery stock and other items likely to carry the pests be inspected and treated before traveling from fire ant-infested areas to fire ant-free areas. Regulated articles include soil, plants with roots and soil attached (except house plants maintained indoors and not for sale), grass sod, baled hay, and straw that have been stored in contact with soil, and used soil-moving equipment.

Q: How can these pests be controlled?

A: Control of fire ants is made difficult by the protective behavior of the workers who guard the queen. If the colony is disturbed, workers will hurriedly carry the queen to a safe location. There, the queen begins a new colony. Therefore, the best control is not a method that will merely kill workers but a bait that will be taken back to the nest by foraging ants where it will either kill the queen or render her sterile. Baits combine a food to attract the ants with an insecticide or insect growth regulator (a pesticide that works by disrupting the ants' reproductive system). Although baits are slow acting, they are often the best way to reach the queen and eliminate the colony.

Q: How should treatments be applied?

A: Treatment options vary, depending on the type of fire ant problem. Those applying any treatment should read insecticide labels closely and follow all directions. Some of the baits approved by the U.S. Environmental Protection Agency include Amdro®, Award®, Distance®, and Extinguish®. These should be applied by broadcast method over the entire area to be treated. Some contact insecticides may be also be applied by broadcast over the entire area. Others are to be applied to each mound. Many contact insecticides are labeled for use on imported fire ant.

For more information on imported fire ants and Federal restrictions imposed on the movement of regulated articles, contact one of the following:

- Your county's agricultural extension agent, listed in the county government section of your telephone directory under Cooperative Extension Service.
- Your State's regulatory officials, usually listed under department of agriculture, plant protection, or regulatory division in the State government section of your telephone directory.

- A Federal regulatory official, listed in the Federal Government section of your telephone directory under USDA, APHIS, Plant Protection and Quarantine. You can also contact APHIS through the World Wide Web by pointing your Web browser to <http://www.aphis.usda.gov/ppq> and using the "Comments" link to send a request for information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.