

Red Imported Fire Ant Still in Madera County

by Brent Holtz, Ph.D., UCCE Madera County



Red Imported Fire Ant (RIFA) was found in 2000 on 742 acres of agricultural land that encompassed seven properties in Madera County. The California Department of Food and Agriculture initiated ant bait treatment program on these properties aimed at eradicating RIFA. In 2004, 395 acres remained under treatment. In the last five years over 50,000 acres of almonds have been surveyed in Madera County for RIFA. In November 2004, CDFA discovered new acreage infested with RIFA in Madera County, increasing the treatment area to about 1,300 acres. The CDFA, in conjunction with the Madera County Agricultural Commissioner, is in the process of developing a multi-year action plan to eradicate the infestation.

RIFA was probably introduced into Madera County on infested beehives arriving from the southeastern United States used for pollination. The red imported fire ant (RIFA) is unique among exotic pests since it may impact so many facets of the state's population and economy. RIFA poses a threat to agriculture, to urban and suburban lifestyles, and to many California ecosystems. RIFA is a pest because of its sting to humans, its direct damage to crops and livestock, its interference with electrical and irrigation equipment, and its ability to displace native species of ants.

Red imported fire ants have been found to actually plug up irrigation systems when they need to find water in

times of drought. They also have been known to chew through irrigation lines to reach water. RIFA is also attracted to electrical fields around bare wire; once they contact the wire they are killed, but not before setting off an alarm pheromone that attracts other which can cause them to mass on the wire and ultimately cause the equipment to short out.

RIFA can also inflict damage to ground nesting birds and mammals. Immobilized animals such as penned livestock or young newborns and hatchlings are at greatest risk since RIFA are attracted to their mucus membranes causing blindness and potential suffocation. Animals which have learned to avoid RIFA may become malnourished or dehydrated when the ants have infested their food or water.

The red imported fire ants arrival in the US occurred around 1940, probably on infested soil used as ballast on ships coming from South America. It is native to lowland areas of Argentina and Brazil. From its introduction point in Alabama it has spread outward at rates of over 100 miles per year. Its current geographic distribution includes the entire south from Florida to California and as far north as Virginia, Tennessee, and Oklahoma.

The life cycle of a fire ant colony begins with a newly-mated queen searching for a suitable next site in soil. During this search the queen is most vulnerable to predators such as their mortal enemies, the Argentine ant. The Argentine ant and the red imported fire ant, both exotic pest ants from South America, are mortal enemies and fight to the death on contact. If the queen is lucky, she survives and finds a suitable next site where she snaps off her wings, burrows in the ground and seals herself off from the outside to lay her first batch of eggs.

Red Imported Fire Ant Identification Meeting

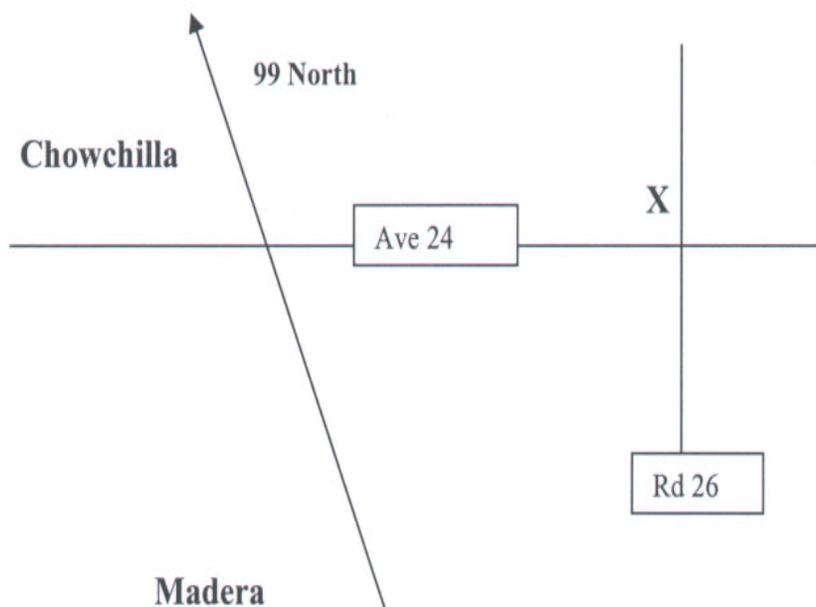
Thursday, March 24, 2005

Green Leaf Farms, Chowchilla

9:00 AM-11:00 AM

- 9:00 a.m. **PCA and continuing education credits sign-up**
Brent Holtz, UCCE Madera County
- 9:15 a.m. **Regulatory issues related to Red imported Fire Ant**
Jay Seslowe, Assistant Agricultural Commissioner
- 9:45 a.m. **Red imported fire ant life cycle and identification**
Art Gilbert, California Department of Food and Agriculture
- 10:15 a.m. **Selective baits, ant control, and identification in almond orchards**
Walter Otus Bentley, IPM Entomology Advisor
- 11:00 a.m. **Adjourn**

2.0 hours of PCA, CCA and Private Applicators Credit have been requested
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North West corner of Avenue 24 and Road 26

THE DIRT ON RED IMPORTED FIRE ANTS

Recent Finds in Central San Joaquin Valley, by Arthur Gilbert, Entomologist, CDFA

Recently discovered in Fresno County, Red Imported Fire Ants are tiny, but their aggressive nature has the potential to destroy farmland, injure agricultural workers, and kill livestock and wildlife. The California Department of Food and Agriculture (CDFA), in partnership with county agricultural commissioners, is waging war on the Red Imported Fire Ant with the goal of complete eradication. Below are answers to some frequently asked questions important to all Central Valley growers.

- ***What Do Red Imported Fire Ants look like? How are they different from other types of ants?***

Red Imported Fire Ants are tiny, measuring 1/16 to 1/4 of an inch in length, and are reddish-brown in color. They closely resemble other ants commonly found in California and can only be positively identified using a powerful microscope.

However, they do have distinctive mounds and are aggressive in nature. In other parts of the country, their mounds resemble gopher mounds, with crumbly soil piled up to 18 inches high. But in California, the mounds tend to be small piles of powdery dirt with visible ant holes or are just flat patches of soil.

- ***Why are they dangerous to people? To crops?***

When Red Imported Fire Ants attack, hundreds of ants swarm and inflict painful stings that leave blister-like sores that could become infected if not treated carefully. Some people are allergic to fire ant venom, and if stung can experience difficulty breathing and other life threatening reactions.

In addition, Red Imported Fire Ants can aggressively expand their colonies by feeding on crops and disrupting growers' integrated pest management programs by eliminating beneficial insects. Any intruder to the nest is attacked by a swarm of ants which could prove life threatening to wildlife, animals and people. Young animals are especially susceptible.

- ***How did these ants make their way to California?***

Red Imported Fire Ants are believed to have first come to this country in the 1930s from South America aboard cargo ships that docked in Mobile, Alabama. Today, the pest has become endemic in a dozen southeastern states, inflicting harm to people, commerce and the environment.

These pests were first discovered in California in the late 1990s. Since then, Red Imported Fire Ants have been reported in eight California counties including Los Angeles, Orange, Riverside and, in the Central Valley, Stanislaus, Madera, Kern and Fresno. It is suspected that Red Imported Fire Ant hitchhike on out-of-state beehives brought into Fresno County.

- ***Specifically where in Fresno County have these ants been found?***

The first Red Imported Fire Ant discovery in the San Joaquin Valley was found in an almond orchard. After that, Red Imported Fire Ant infestations have been reported and confirmed in various areas throughout Fresno County including Clovis and Kerman.

- ***Where are Red Imported Fire Ants typically found?***

Red Imported Fire Ants have been found in agricultural areas, such as irrigation ditches, the bases of trees, beehive staging areas, orchard perimeters and electrical areas, like irrigation pump houses. Red imported Fire Ant mounds are most commonly found in almond orchards and crops that use honeybees. However, neighboring fields also can be at risk since Red Imported Fire Ant queens can establish new colonies hundreds of feet away from their previous colonies.

- ***How can farmers and gardeners protect themselves against these ants?***

Stay alert! Farmers and gardeners should wear protective clothing including gloves and close-toed shoes when outdoors - especially when Red Imported Fire Ants are most active, when temperatures reach between 75 - 95 degrees. Be careful where you walk or dig; survey the area first. Also, if you're stung, remember to keep the area clean by washing with soap and warm water and resist scratching to avoid possible infection. Applying ice or an antihistamine ointment may help to relieve the pain and itching. Seek medical attention immediately if signs of allergic reaction appear, such as severe swelling, shortness of breath, dizziness, nausea, headaches or profuse sweating.

- ***What are typical Red Imported Fire Ant warnings signs for farmers and gardeners?***

If farmers and gardeners answer yes to any of the following questions, they should contact their county agricultural commissioner's office for a free inspection of their property:

- ***Have you, or your neighbor, ever used bee colonies that originated from Texas, Louisiana or any other state infested with Red Imported Fire Ants?***
- ***Do the beehives or their pallets show evidence of packed dirt?***
- ***Are there any clumps of packed dirt in the bed of the beekeeper's delivery truck?***
- ***Does the bee colony appear weak or dead?***
- ***Have you or your workers encountered unusually aggressive ants.***
- ***What should a farmer or gardener do if a Red Imported Fire Ant mound is found or suspected?***

Do not disturb the suspected mound or nest, and don't try to kill the ants or destroy the nest yourself! If you suspect you have found a Red Imported Fire Ant mound on your property, call the California Department of Food and Agriculture's toll-free hotline at 1-888-4FIREANT. Your property will be inspected and treated free of charge.

- ***Can Red Imported Fire Ants be eradicated from agricultural lands?***

Completely eradicating Red Imported Fire Ants from this area will take the cooperation of all residents. Calling and reporting any suspected find is the best and most important first step in eradicating Red Imported Fire Ants. Keep the toll-free number handy, 1-888-4FIREANTS, and tell others to do the same to help eradicate Red Imported Fire Ants from California.

More information can be found at the CDFA website which can be accessed through malcolmmmedia.com.

Ant Identification

Identification of ants present in an almond orchard can provide more accurate estimates of potential ant damage to your crop. Not all ants inhabiting the orchard floor are a problem, in fact some are beneficial. For example, the field ant or native gray ant feeds mainly on other insects including the larvae and pupae of the peach twig borer. Other ants commonly found in some orchards include the harvester and pyramid ants, which have not been reported to feed on almonds. The pyramid ant's resemblance to the pest southern fire ant can cause confusion, however the behavior of these two species is in no way similar. A good test is to pound on the ground near the colony opening. The southern fire ant will respond by swarming out of the nest and sting if contacted. The pyramid ant will not swarm, and for those who prefer the sting test the pyramid ant has no stinger. All species are described in the included table.

Characteristics of commonly encountered ants

Ant Species	Size (mm)	Appearance	Nest Type	Behavior	Habitat	Time Active
Southern Fire Ant	2.5-4.5	red/black, clubbed antennae, 2 nodes	fine grained, low mounds with one to many openings	prolonged swarm response to vibration, can sting	near soil moisture, shady or sunny areas, associated with weeds	morning & evening, decreases at temp. > 90°F
Imported Fire Ant*	1.6-6.0	Reddish-brown, middle tooth, 2 nodes	Dome shaped with no central openings	Aggressive swarm behavior, can sting	Open sunny area, prefers vegetation and moisture	morning & evening
Pyramid	2.5-3.0	red/black, pyramid over last set of legs, 1 node	volcano shaped or bare mound	move in a random jerky motion, cannot sting	Hot sandy, weed free areas, borders of orchard	throughout the day
Field	4.0-7.5	dark red/brown, 1 node	bare mound	easily excited, jerky motion, cannot sting	in leaf litter under trees, often found in trees	throughout the day
Harvester	5.5-6.0	Red, large head and mandibles, 2 nodes	large, several openings, fan-shaped mound	active, fast moving, bite and sting are painful	found in open dry sunny areas	throughout the day

* Imported Fire Ants have recently been found in Madera County.

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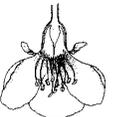
Sincerely,

Brent A. Holtz, Ph.D.
Pomology Farm Advisor

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