

## ■ Fire ant invades Southern California

An unwelcome visitor has made itself at home in Southern California. The red imported fire ant, which swarms over its victims inflicting painful stings, blisters, and sometimes deadly allergic reactions, is now established in 800 square miles of Orange, Riverside and Los Angeles counties. The ants also attack young seedlings and animals, including groundnesting birds.

On Feb. 4, California Department of Food and Agriculture (CDFA) placed all of Orange County under a plant quarantine due to the widespread infestation of red imported fire ant, which was initially discovered there in November 1998. On Feb. 11, CDFA also placed portions of Riverside and Los Angeles counties under plant quarantine.

CDFA, which ruled out aerial sprays, is putting up \$2.8 million to assist local efforts to eradicate the pest in the three counties. The state agency will continue to enforce the quarantines restricting movement of plants and soil.

CDFA and UC scientists have written a leaflet, "How California residents can deal with red imported fire ants," which describes the ant and suggests chemical and nonchemical control methods. The leaflet is being distributed through retail nurseries to homeowners who live in the quarantined areas. It is also on the CDFA website ([www.cdfa.ca.gov](http://www.cdfa.ca.gov)), under "pest updates."

Last year, red imported fire ants were found in Stanislaus, Fresno and Kern counties after infested honey bee hives were brought into the state to pollinate almond orchards. These infestations were confined to single properties and were eradicated. The fire ant outbreaks in Southern California are more serious because they are widespread.

In Orange County, they are everywhere: residential areas, racetracks, parks and nurseries. Because the red imported fire ant is so widespread in Southern California, ant experts suspect it has been here for 5 to 7 years, says John Kabashima, UC Cooperative Extension environmental horticulture advisor for Orange and Los Angeles counties.

"We have a native fire ant, *Solenopsis xyloni*, which looks similar to the red imported fire ant, *Solenopsis invicta*," says Kabashima. "People assumed it was the native fire ant."

In Texas, they use a two-step program to control the red imported fire ant. First they use an insect growth regulator, a slow-acting

chemical that prevents the queen from laying more eggs and causes the larvae to develop into ants that cannot reproduce. Then they apply an insecticide to kill the remaining ants. UC Riverside scientists are recommending this treatment, noting that the insect growth regulator fenoxycarb can be applied only by a licensed pest control applicator.

The infestation is having a profound effect on Orange County's \$166 million nursery industry. Nursery growers estimate it will cost them about \$1,000 per acre to comply with CDFA quarantine regulations.

Using a video borrowed from an amateur videographer, Kabashima and UC Riverside entomologist Les Greenberg have been showing county supervisors, nursery operators and others what the ants and their mounds look like. With funds from CDFA, a professional video is being developed.

UC Cooperative Extension has held hands-on workshops for nursery workers, showing them how to identify, and properly treat for, the imported fire ants. Kabashima, who runs the Master Gardener program in Orange County, says future plans include the use of Master Gardeners to train homeowners to monitor for the harmful ants and use pesticides to control them.

Jay Hamilton, a UC Riverside graduate student in economics, and UC Riverside entomologist John Klotz are working with the Agricultural Issues Center at UC Davis on an economic analysis of the red imported fire ant in California. On May 25, they will report on their Red Imported Fire Ant Case Study at the "Exotic Pest and Disease Policy" conference to be held in Sacramento.



Ken Floss

Red imported fire ants, from left to right, three sizes of worker ants, a winged (virgin) queen and winged male.



Les Greenberg

Red imported fire ant mounds, shown here, are frequently built into domes with more than one entrance hole. When disturbed, the workers boil out and begin stinging.