

## INSIGHTS INTO THE HISTORY OF FIRE ANT CONTROL

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Since its introduction into the United States over 70 years ago, the red imported fire ant, *Solenopsis invicta*, presently infests more than 310 million acres (126 million hectares) in thirteen states and Puerto Rico. The recent invasion of California could allow this pest the necessary foothold needed for the spread along the west coast of the U.S. This ant has had a substantial impact in the U.S. on humans, agriculture, wildlife and other organisms in the environment, and has caused damage to roads, electrical equipment, and telephone junction boxes.

The control of the fire ant has taken many twists and turns during the years since its first discovery with loads of advice given, numerous solutions recommended and many control techniques tried, however, it is still with us, expanding its range, and continuing to pose major problems. When fire ants were first discovered in 1929, their range was limited to the northern Mobile area and the small town of Spring Hill located nearby. In 2 years, they were discovered in other small communities and had spread to another county. Six years later, their populations had increased to levels of concern among the local people who demanded action from government agencies. Thus, the first organized control program for fire ants began in 1937 in Baldwin County, Alabama under the cooperative efforts of Federal, State and County agencies. Control consisted of opening a mound with a shovel, applying 1 to 3 oz (28 to 84 g) of 48% calcium cyanide dust into each mound and then covering up the opening with soil. With the outbreak of World War II, government control programs stopped but in 1948, control operations began again with the states of Mississippi and Alabama providing chlordane to farmers for fire ant control. In addition, the state of Louisiana funded the purchase of chlordane to farmers at cost and the state of Arkansas conducted an eradication project in 1957 in Union County and the city of El Dorado applying granular heptachlor by aircraft. In 1957, the U. S. Congress appropriated over two million dollars for a Federal-State cooperative project to use aerial and ground applications of granular heptachlor and dieldrin. Also, a Federal Quarantine was put in effect on all shipments of nursery plants, grass sod, sand, gravel and wood products with soil attached. Soon after the first treatments with heptachlor, mortality of wildlife began to occur and although rates were reduced several times, the growing concern with the effects on wildlife, intense criticism and pressure by many conservationists and some U.S. Congressmen to suspend the fire ant campaign was the beginning of the end of this program. Meanwhile, many fire ant researchers were well aware of the potential problems with large scale programs using chlorinated hydrocarbons and began development of baits for control at several laboratories in the South. Baits were thought to be far more environmentally acceptable than residual contact insecticides since only a very small amount of active ingredient is used in the formulation. In 1962, because of the low application rate and the apparent lack of harm to the environment, mirex bait became the standard treatment for fire ant control replacing heptachlor. Mirex bait was used from 1962 to 1978 and was applied to more than 140 million acres (56 million ha).