

## Areawide Suppression of Fire Ant Populations in Pastures: Project Update

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### ABSTRACT

The red imported fire ant, *Solenopsis invicta*, is an invasive species that creates serious medical and agricultural problems, damaging many crops and cattle production. Its annual economic impact to the US economy is approximately \$6 billion dollars. The integration of chemical bait pesticides and biological control agents is utilized in an areawide management program for fire ants coordinated by USDA-ARS scientists at the Center for Medical, Agricultural and Veterinary Entomology in Gainesville, FL. Control sites, where no biological control agents were released, and biocontrol treatment sites, where both decapitating flies and the microsporidium *T. solenopsae* were released, have been established in five states (Florida, Texas, Mississippi, Oklahoma, and South Carolina). All sites received chemical bait applications of a 1:1 mixture of hydramethylnon and methoprene baits applied at 1.5 lb per acre.

To evaluate the effect of the treatments on the arthropod biodiversity, pitfall traps were used twice a year. Decreases in fire ant populations have been observed at the different demonstration sites. The decapitating fly (*P. tricuspis*) has been established in demonstration sites in 3 states (Florida, Texas and South Carolina); *P. curvatus* was established in Mississippi, Florida and South Carolina. The disease *T. solenopsae* has been established in 4 states (FL, SC, TX, and OK), and continues to spread.

The project has a website (<http://www.ars.usda.gov/fireant/>). This new approach to fire ant control may have significant impact on the management of fire ant populations in the future.

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