

## September 1999

### Contents:

- 1 Project Summary: Implementation of the Texas Imported Fire Ant Research & Management Plan
- 2 Results and Discussion: Final Report September 1999
- 7 Appendix 1. Volunteer neighborhood groups contacted by Extension Program Specialist and Extension Agent - IPM (Fire Ant Project) staff, Sept. 1977 through May 1999.
- 10 Appendix 2. Result demonstrations and applied research projects in progress conducted by Extension Program Specialist and Extension Agent - IPM (Fire Ant Project) staff, Sept. 1977 through May 1999.
- 12 The Texas Imported Fire Ant Research & Management Plan - Project Highlights for 1998 and Community-Wide Imported Fire Ant Management Projects at Mt. Pleasant, San Antonio, Austin, Houston and Dallas (proceedings article for 1999 Annual Imported Fire Ant Research Conference)
- 16 Web Server Statistics, February 97 - September 98
- 17 Web Server Statistics, January 1999 - September 98

THE TEXAS IMPORTED FIRE ANT  
RESEARCH & MANAGEMENT PLAN

Texas Agricultural Extension Service Programs 1998

OUR GOALS:

Fire Ant Management Education and Assistance for Establishing Community-Wide Fire Ant Management Programs in Travis/Williamson Counties, Bexar County, Harris County, Dallas/Tarrant Counties (TAEX) Development of Integrated Fire Ant Management Systems for Agricultural Areas and Evaluation of Deliverable Technologies (TAEX)

Project Summary: Implementation of the Texas Imported Fire Ant Research & Management Plan

Principal Investigator:

Bastiaan M. Drees, Fire Ant Project Coordinator

Department of Entomology

Texas A&M University

College Station, TX 77843-2475

Phone: 409/845-5895; Fax: 409/845-7026

Email: b-drees@tamu.edu

Funding Amount/2 Years: \$1,144,300

Methods and Materials - Summary of Work to be Done:

The Texas Agricultural Extension Service will use funding provided to conduct intensified educational program efforts to assist individuals battling fire ant problems. Programs will be initiated in Dallas/Tarrant, Harris, Travis/Williamson and Bexar counties to promote the concept of community-wide fire ant management programs in urban areas. In heavily infested areas, the "Two-Step Method" will be promoted as a low-cost, least-toxic approach. Steering committees, composed of volunteers from within a community such as homeowner association representatives, will be formed and encouraged to find ways to support and implement such efforts on properties within their area. Because no legislatively-appropriated funds are to be used to purchase or apply insecticides, Extension faculty/staff will be expected to work with these groups to help find ways to implement any treatments they have selected. Faculty at Texas A&M University will provide technical support to assist with efforts conducted in these assisted and intensively monitored pilot program areas. In addition, program activities will concentrate on developing and improving fire ant management programs through applied research efforts, with emphasis on cattle production systems and wildlife areas.

Results and Discussion: Final Report September 1999

Texas Imported Fire Ant Research Ant Management Project

Title of project: Implementation of the Texas Imported Fire Ant Research & Management Plan

Principal investigators:

Dr. Bastiaan "Bart" M. Drees  
Fire Ant Project Coordinator  
Department of Entomology  
Texas A&M University  
Minnie Belle Heep, Room 412-F  
College Station, Texas 77843-2475  
Phone: 409/845-5895 (or 845-6800)  
Fax: 409/845-7029 (or 845-6501)  
Email: b-drees@tamu.edu

Dr. Charles L. Barr  
Extension Associate  
Fire Ant Project - IPM Research  
P.O. Box 2150  
Bryan, Texas 77806  
Phone: 409/845-6800  
Fax: 409/845-6501  
Email: c-barr@tamu.edu

Nathan L. Riggs  
Extension Agent-IPM (Fire Ants)  
Bexar County  
3427 Northeast Parkway  
San Antonio, Texas 78218  
Phone: 210/467-6575 or 467-6578  
Fax: 210/930-1753  
Email: n-riggs@tamu.edu

Scott Russell  
Extension Agent-IPM (Fire Ants)  
Dallas/Tarrant Counties  
10056 Marsh Lane, Suite B-101  
Dallas, Texas 75229  
Phone: 214/904-3050

Fax: 214/904-3080  
Email: sarussel@tamu.edu

Pamela Traylor  
Extension Agent-IPM (Fire Ants)  
Harris County  
#2 Abercrombie Dr.  
Houston, Texas 77084  
Phone: 281/855-5600  
Fax: 281/855-5638  
Email: p-traylor@tamu.edu

Lisa Lennon  
Extension Agent-IPM (Fire Ants)  
Travis/Williamson Counties  
1600-B Smith Rd.  
Austin, Texas 78721  
Phone: 512/708-4797  
Fax: 512/473-9611  
Email: li-lennon@tamu.edu

Rody Best  
Extension Assistant  
P.O. Box 2150  
Bryan, Texas 77806  
Phone: 409/845-6800  
Fax: 409/845-6501  
Email: r-best@tamu.edu

Major accomplishments to date (Sept. 1, 1997 through June 30, 1999):

- County based Extension Agents were hired in Dallas/Forth Worth, Houston, Austin and San Antonio to work with neighborhood groups to encourage and initiate community-wide fire ant management programs and document the benefits from controlling this pest in larger areas such as city blocks and subdivisions
- Applied research to document performance of fire ant control products has helped introduce two new fire ant bait products to the market in 1999: Distance® (pyriproxyfen) and Extinguish® (methoprene). Extinguish is registered for use in cropland and livestock pastures

- Developed the web site, <http://fireant.tamu.edu>, for quick easy access to fire ant research, education and regulatory information; result demonstration/applied research reports issued since the late 1980's conducted by B. Drees, C. Barr and others posted on the web in a searchable format by C. Barr and R. Best

- Developed a new publication, "Managing Red Imported Fire Ants in Agriculture"(B-6076) together with Extension Services in Arkansas, Louisiana, Georgia and Alabama

- Developed nearly 20 Fire Ant Plan Fact Sheets and issued two volumes of the newsletter, Fire Ant Trails, on a wide variety of topics and newsworthy developments for managing fire ants

- Contacts (Sept. 1998-May 1999)

Barr 2,270

Riggs 7,708

Traylor 2,192

Lennon 1,866

Russell 4,808

Total: 18,844

Goals achieved:

- Pilot showcase community-wide fire ant management programs have been selected and/or established in each county program unit

- A number of other neighborhood groups have received information, training and support to develop their own community-wide fire ant management programs

- Survey "instrument" has been developed and distributed to pilot program participants and data generated is being collected and analyzed to evaluate the economic, environmental and social impact of the Bexar and Travis County programs.

- Outside funding has been obtained from:

The Texas Department of Transportation (\$40,000)

The Texas Army National Guard (\$90,000)

Private industries developing/evaluation products (\$54,000, April 1999)

- A partnership through the Southern Legislative Conference (SLC) has been established to support the national imported fire ant strategy.

- Phorid flies (*P. tricuspis*) has been released by TAEX/TAES near Elgin and Dobbin

- Numerous result demonstrations/applied research trials have been conducted and initiated using

recently registered and experimental fire ant controls

- House Concurrent Resolution 259 was passed and signed by Gov. G. W. Bush declaring the second week of September as Fire Ant Awareness Week

Relevance to the Texas Imported Fire Ant Research Ant Management Project:

The goal of the Texas Imported Fire Ant Research & Management Plan is to develop sustainable programs and methods which will eliminate the fire ant as a serious pest. These efforts are not currently expected to eradicate the fire ant from within program areas. However, as research by participating universities and agencies produces other more cost-effective and sustainable methods to reduce fire ant populations or eliminate the problems they cause, they can be integrated into existing programs to improve them. Assisted by a team of specialists in the Department of Agricultural Economics and other departments as appropriate, the adoption and impact of conducting community-wide fire ant management programs in urban areas will be documented. Specific pilot program areas within participating counties will be selected in which intensive efforts will be made to document the impact of these efforts, including: 1) the reduction in fire ant populations; 2) reduction or change in pesticide use for fire ant control by individuals; 3) reduction in costly ant-related problems; 4) possible effects on non-target insect populations including native ant species; and perhaps 5) the reduction of pesticides such as diazinon detectable in runoff water.

Extension Agents - IPM (Fire Ants) are the critical link between the researchers and Extension specialists involved in Fire Ant Project activities and the general public. These staff will be delivering new technology to the "users" of these advances and helping them solve their fire ant problem(s). Efforts to date have focused on the selection, development, implementation, evaluation and documentation of "Showcase" Pilot Programs (one or two in each county program area). In-depth survey "instruments", geographic information system (GIS) based systems and biological survey methods have been developed to help document the impact of managing fire ants on a community-wide basis. Results of these efforts will be critical in demonstrating the success of the fire ant management strategies implemented as a result of TAEX educational program activities.

Fire Ant Management Programs for Agriculture and Rural Counties

Dr. Charles Barr, Extension Program Specialist, Fire Ant Project - IPM Research, has the assignment to continue to address agricultural fire ant issues. The document, "1997-1998 Progress Towards Lessening the Sting of the Fire Ant Problem", cites specific research funded projects (see Segarra, Herring, Dabbert) to evaluate the impact of the ants in agriculture and wildlife.

Issue of Fire Ant Trails Vol. 2, No. 2 introduced a new fire ant bait product registered for use in pastures and cropland, based on applied research conducted by the Texas Agricultural Extension

Service since 1992. I have attached the Extinguish® product label. This information will also be available in the 20 page publication, "Managing Red Imported Fire Ants in Agriculture" (B-6076) currently in its second printing on our web site, [fireant.tamu.edu](http://fireant.tamu.edu). Finally, publications previously developed by our program and published in the Texas Veterinarian (Vol. 57, No. 2) and the Journal of Economic Entomology (Vol. 85, No. 3), addressing fire ant impact and management issues in agriculture.

Although areas of emphasis promote community-wide fire ant management in urban areas (in Harris, Bexar, Travis/Williamson, and Dallas/Tarrant counties), we are fully committed to developing improved sustainable and pest management solutions for fire ant problems in rural and agricultural areas. In these areas, we rely on the talents of our County Extension Agents in Agriculture, Horticulture and Integrated Pest Management to make this part of their overall program efforts.

Publications submitted/published; presentations/posters presented at national technical meetings/conferences:

Extension Publications:

Drees, B. M. 1999. Red Harvester Ants. L-5314. Texas A&M University, College Station, Texas. 4 pp.

Drees, B. M., C. L. Barr, D. R. Shanklin, D. K. Pollet, K. Flanders and B. Sparks. Managing Red Imported Fire Ants in Agriculture. B-6076. Texas Imported Fire Ant Research & Management Plan. Texas A&M University, College Station, Texas. 18 pp.

Merchant, M. and B. M. Drees. 1998. The Texas Two-Step Method: Do-It-Yourself Fire Ant Control for Homes and Neighborhoods. L-5070 (revised). Texas A&M University, College Station, Texas. leaflet.

Drees, B. M. 1997, 1998. House-Infesting Ants and Their Management. L-2061. Texas A&M University, College Station, Texas. 8 pp. (Reprinted 1/98)

Drees, B. M., C. L. Barr, S. B. Vinson, R. E. Gold, M. E. Merchant and D. Kostroun. 1996. Managing red imported fire ants in urban areas. B-6043. Texas A&M University, College Station, Texas. 18 pp.

Proceedings Articles:

Drees, B. M., C. L. Barr, N. Riggs, L. Lennon, P. Traylor and S. Russell. 1999. The Texas Imported Fire Ant Research & Management Plan - Project highlights for 1998 and community-wide imported fire ant management projects in Mt. Pleasant, San Antonio, Austin,

Houston, Dallas. Proceedings 1999 Imported Fire Ant Conference, Charleston, SC, March 3-5. pp. 1-5.

Charles L. Barr, Bill Summerlin, Bastiaan M. Drees. 1999. A cost/efficacy comparison of individual mound treatments and broadcast baits. Proceedings 1999 Imported Fire Ant Conference, Charleston, SC, March 3-5. pp. 31-37.

Teal, S., E. Segarra, K. Moates, C. Barr and B. Drees. 1998. Spatial Economic Impacts of the Red Imported Fire Ant on the Texas Cattle Industry, Technical Research Report No. T-1-484, College of Agricultural Sciences and Natural Resources, Texas Tech University, 38 pp.

Drees, B. M. 1998. Implementation of the Texas Imported Fire Ant Research and Management Plan. in Proceedings of the 1998 Imported Fire Ant Research Conference (compiled by D. Shanklin, L. Thompson, D. Petty and A. Cochran). Hot Springs, Arkansas, pp. 2-5.

Smith, H. R., C. Flueckiger, B. Drees and C. Barr. 1998. Logic™ - Methods of Application for Fire Ant Control in Pasture and Label Update in Proceedings of the 1998 Imported Fire Ant Research Conference (compiled by D. Shanklin, L. Thompson, D. Petty and A. Cochran). Hot Springs, Arkansas, pp. 24.

#### Fact Sheets (21):

- (#001) Selecting a Strategy and Contracting a Commercial Pest Control Service for Community-Wide Management Programs (for community groups) 2 pp, 5/98
- (#002) Commercial Pest Control Operator Involvement Community-Wide Management Programs (for PCO's & Landscapers) 4 pp, 6/98
- (#003) Animal and Plant Health Protection Product Evaluation 3 pp, 1/98
- (#004) Managing Fire Ants in Vegetable Gardens 2 pp, 5/98
- (#005) The ABC's of Fire Ants and Their Management 2 pp, 5/98
- (#006) Managing Red Imported Fire Ants in Wildlife Areas 2 pp, 5/98
- (#007) Survey-Based Management of Red Imported Fire Ants 2 pp, 5/98
- (#008) Collecting and Maintaining Colonies of Red Imported Fire Ants for Study 2 pp, 5/98
- (#009) Potential Biological Control Agents for the Red Imported Fire Ant 4 pp, 5/98
- (#010) Texas Pest Ant Identification 6 pp., 10/98



- (#011) Managing Red Imported Fire Ant in Electrical Equipment and Utility Housings 4 pp 5/98
- (#012) A Review of "Organic" and Other Non-Traditional Methods for Fire Ant Control 8 pp, 10/98
- (#013) Identification of Texas fire ant species (Hymenoptera: Formicidae: Solenopsis spp.) 4 pp, 5/99
- (#014) Fire Ant Control Methods for Pets 2 pp, 6/98
- (#016) Managing Fire Ants in Texas Schoolyard and Butterfly Gardens, 2 pp, 10/98
- (#017) Fire Ant Management Options for Golf Courses, 4 pp, 10/98
- (#018) Texas Imported Fire Ant Research and Management Project Covenant Not to Sue and Agreement to Hold Harmless 2 pp, 10/98
- (#019) Red imported fire ant management considerations for bee keepers 2 pp., 11/98
- (#021) Fire ant control around bodies of water (S. Russell)(2 pp.)
- (#022) Diagnosing and treating animals for red imported fire ant injury (4 pp.)
- (#023) Medical problems associated with imported fire ants 2 pp, 4/99
- (FAPTFS#001) Hormiga brava

Miscellaneous Items:

- Fire Ant Trails newsletter (Volumes 1 & 2)
- Two large fire ant displays, 6 Downing displays
- Videotape (18 minutes), "Texas Imported Fire Ant Research & management Plan" (VHS-2321)

Presentations:

Entomological Society of America Annual Meeting (1998):

FASIMS: The Fire Ant Spatial Information Management System. Maria D. Guzman, Department of Geography, Texas A&M University, College Station, TX 77843; S. B. Vinson,; Robert N. Coulson; Bastiaan M. Drees, Department of Entomology, Texas A&M University, College

Station, TX 77843

Annual Imported Fire Ant Research Conference (1999):

The Texas Imported Fire Ant Research & Management Plan - Project highlights for 1998 and community-wide imported fire ant management projects in Mt. Pleasant, San Antonio, Austin, Houston, Dallas. B. M. Drees, C. L. Barr, N. Riggs, L. Lennon, P. Traylor and S. Russell, Texas Agricultural Extension Service

A cost /efficacy comparison of individual mound treatments and broadcast baits. Charles L. Barr, Bill Summerlin, Bastiaan M. Drees, Texas Agricultural Extension Service, TX

Appendix 1. Volunteer neighborhood groups contacted by Extension Program Specialist and Extension Agent - IPM (Fire Ant Project) staff, Sept. 1977 through May 1999.

Presentations and Contacts Made, Jan. 1998 - May 1999 to Promote Community-Wide Fire Ant Management Programs

#### Statewide

B&G PCO Workshops in Dallas, Houston, El Paso  
52nd Midwinter PCO Workshop for Advanced Learning, College Station  
Greater Houston Pest Control Association  
Carl Teel, Bowie County Commissioner  
Texas Association of Landscape Contractors  
Texas Association of Nurserymen  
Urban Extension Conference on Agriculture and Natural Resources  
Mount Pleasant Housing Authority (HUD)\*  
Rogers City Council  
County Government Conference, College Station  
Walker County Home Landscape and Garden Seminar

#### Bexar County

Oxbow Homeowners Assn.  
Winsor Square Crime Watch Group  
Balcones Heights Crime Watch Group  
Northchase Homeowners' Association\*\*  
Vista Homeowners' Association

Northwood Hills Homeowners' Association  
Precinct 3 Quarterly Meeting  
Olympia Homeowners' Association  
Northview Homeowners' Association  
Sprinvale Homeowners' Association  
Donaldson Terrace Homeowners' Association  
Waterwood Property Owners' Association  
Lackland Terrace Neighborhood Association  
Arboretum Homeowners' Association  
Big Country Mobil Homeowners' Association  
Encino Bluff Homeowner's Association  
Encino Park Homeowner's Association  
Jade Oaks Homeowners' Association\*  
Forest Oak Homeowners' Association  
Villas of Northgate Homeowners' Association  
Trainor Hill Road Neighborhood Association  
Long Creek Homeowners' Association  
Cambridge Park Condominiums  
San Antonio Ranch Homeowners' Association and Governing Board  
Oak Grove Neighborhood Association  
Countryside Neighborhood Association (treated with Centrex Hometeam Services Pest Control)\*  
Deer Hollow Homeowner's Association  
City of Windcrest  
Oak Grove Neighborhood Association\*\*  
Ventura Maintenance Homeowners' Association

### Harris County

Houston Planning and Community Development Department and Health Department for Mosquito Control  
Enchanted Oaks Homeowners' Association  
Sam Houston Water Utilities Association  
Harris County Precinct 1 Parks Department  
Memorial Bend Civic Improvement Association  
North Houston Heights Homeowners' Association\*\*  
De Zavalla Park Community Improvement Association  
Meadow Brook Homeowners' Association  
Pecan Park CIA  
Belleau Woods Homeowners' Association & Community Park  
Court Yard West Way Homeowners' Association  
Brookhaven Homeowners' Association  
Braeburn Valley West Homeowners' Association  
Journal of the Greater Houston Chapter of the Community Association's Institute (article)  
Spring Branch CIA

Spring Woods Civic Association  
Sycamore Valley Homeowners' Association  
Concord Bridge Homeowners' Association  
Garden Villas Homeowners' Association\*\*  
South Houston Citizens Coalition  
Hester House Community Center in the 5th Ward  
Hockley Community Center

Dallas/Tarrant Counties

Far North Dallas Neighborhood Alliance  
City of Mosquite  
Far North Dallas Neighborhood Alliance  
City of Saginaw  
City of Benbrook, Benbrook Neighborhood Task Force  
Police Crime Prevention Units representing Dallas, Arlington, Rowlett and Fort Worth  
Benbrook Homeowner's Association  
Spring Hills/Hidden Valley Homeowners' Association  
Highland Oaks Homeowners' Association  
Mistletoe Heights Homeowners' Association\*  
City of Fort Worth Yard Smart Seminar  
Meadowbrook Garden Club  
Keep Mansfield Beautiful  
City of Flower Mound's Spring Landscape Clinic  
City of Fort Worth  
City of Richland Hills  
South Benbrook Neighborhood Association  
Lakeview Country Estates Homeowners' Association

Travis/Williamson Counties

Del Web's Sun City Georgetown Community Association  
Southview Homeowners' Association  
Old West Austin Neighborhood Association  
Springwoods Municipal Utility District  
Bull Creek Foundation  
Spicewood Estates Homeowners Association  
Lago Vista City Council, Lago Vista Property Owners Association  
Great Hills Homeowners Association  
Dell Webb Corporation golf course superintendents  
Mt. Bonnell Shores/Colorado Crossing Homeowners' Association\*  
West Austin Homeowners' Association  
Walnut Creek Neighborhood Association

Allendale Neighborhood Association  
Canyon Creek Neighborhood Association  
West Park Oaks Neighborhood Association in Cedar Park  
Mountain City, Texas \*\*  
Sandy Creek Community Association  
Williamson County Professional Grounds Maintenance Conference  
Georgetown Community  
Scofield Farms Gazette Neighborhood Association  
Glenlake Community Association  
Apache Oaks Neighborhood Association  
Westcave Preserve  
Battle Bend Springs Neighborhood Association, Board of Directors  
Lady Bird Johnson Wildflower Research Center

\* indicates this program has been selected to be a "pilot showcase" community-wide fire ant management program

\*\* assisted in helping the group conduct their own community-wide fire ant management program

**Result demonstrations and applied research projects in progress conducted by Extension Program Specialist and Extension Agent -IPM (Fire Ant Project) staff, Sept. 1977 through May 1999.**

Comparison of Various Individual Mound Treatments Versus Broadcast Applications of Amdro® and Logic® for the Control of Red Imported Fire Ant Colonies - Charles L. Barr

Evaluation of abamectin (Climch™) and fenoxycarb (Logic®) for Red Imported Fire Ant Control in Commercial Pecan Orchards C.L. Barr

Evaluation of Methods for Co-Application of Logic® and Fertilizers - C. L. Barr, H. R. Smith, D. Herd

Proposal (not funded): Evaluation of Spot Treatment of Bait Formulations to Individual Red Imported Fire Ant Mounds as a Species-Specific Treatment - B. M. Drees, S. B. Vinson, R. E. Gold, J. Cook and C. L. Barr

Evaluation of Fipronil Formulations for the Suppression of the Fall Armyworm and the Red Imported Fire Ant - C. L. Barr and R. Best

Evaluation of Bifenthrin Treatments, Applied to Individual Ant Mounds and Broadcast to Field Plots, for Control of the Red Imported Fire Ant (Coulter Field Trial) - C. L. Barr and R. Best

Field Efficacy Testing of BioStim™ Microbe-Based Bait for the Elimination of Red Imported Fire Ant Mounds - C. L. Barr and R. Best

Evaluation of Spinosad Bait for Red Imported Fire Ant Control Applied to Individual Ant Mounds and Broadcast-Applied - C. L. Barr and R. Best

Non-Replicated Evaluation of Spinosad Bait for Red Imported Fire Ant Control Applied to Individual Ant Mounds- C. L. Barr and B. M. Drees

Evaluation of Expanded Shale, Clay and Slate Lightweight Aggregate as a Pesticide Carrier Material

Trial 1. Lightweight Aggregate Baits; Trial 2. Lightweight Aggregate Granules

Evaluation of Expanded Shale, Clay and Slate Lightweight Aggregate as a Pesticide Bait Carrier Material

Evaluation of Ant-Express (66% crude glycerine + 34% sulfonated tallow) as an Individual Fire

Ant Mound Drench - C. L. Barr and B. M. Drees

Evaluation of Hot Water Injection as an Individual Mound Treatment for the Red Imported Fire Ant

Evaluation of an "Ant Incubator Trap", an Electrical Device for the Control of the Red Imported Fire Ants - V. L. Barr and R. Best

Proprietary Agreement for 17 years: Evaluate Fire Brigade F. A. E. as an Individual Fire Ant Mound Treatment

Evaluation of Beauveria bassiana Formulations (BioCide TRF WP) as Individual Mound Treatments for the Red Imported Fire Ant (Sept. 19, 1997 formulations)

Screening Trial for Candidate Treatments for Individual Red Imported Fire Ant Mounds (Garden-Ville Fire Ant Control, Vinegar, Sugar, etc.) - C. L. Barr and B. M. Drees

Evaluation of Garden-Ville Fire Ant Control for Red Imported Fire Ant Control

Evaluation of Individual Mound Treatments to Eliminated Red Imported Fire Ant Colonies Infesting Bales of Hay - B. M. Drees and M. E. Heimer

Evaluation of Fool-A-Bug® V-M Protector as an Exclusion Device Against the Red Imported Fire Ant and the German Cockroach - R. L. Best, B. M. Drees and C. L. Barr

Second Evaluation of the Fool-A-Bug® V-M Protector as an Exclusion Device Against the Red Imported Fire Ant and the German Cockroach - R. L. Best, B. M. Drees and C. L. Barr

#### Texas Department of Transportation

Development of Informational Brochure for Visitors Centers, Entitled, "Howdy, Welcome to Texas Watch Your Step Avoiding the Stings of Fire Ants" - C. L. Barr

Development of Imported Fire Ant Training Manual for Field Staff - Drees

Development of Bait Blower - Charlie Coble

Methods of Monitoring Red Imported Fire Ants and Other Ant Species to Determine Appropriate Pest

Management Strategies - Vinson/O'keefe

Agreement Between TAEX and TxDot for Support of Texas Imported Fire Ant Research & Management Plan - Drees

Development of Ant-Free Relay Switch Boxes for Traffic Lights - Drees

### Texas Army National Guard

Target-Specific Fire Ant Suppression for Preservation of Native Ant Species and Non-Target Organisms such as Horned Lizards - J. Cook

Chemical Management of Fire Ants in on Texas Army National Guard Grounds - J. Cook

Natural Enemies of the Red Imported Fire Ant - J. Cook

### Nathan Riggs, EA-IPM (Fire Ant Project), Bexar County

Effects of Broadcasting Fire Ant Baits in the Fall on Spring Fire Ant Populations (site: Bexar Co. Justice Center)

Evaluation of Methoprene-based fire ant baits against fire ants - Wellmark, Int'l funding (site: Patriot Heights Retirement Center, SATX)

Effects of Broadcasting Fire Ant Baits on Mound Densities (site: Kendall Co. Fairgrounds Horse Arena - w/Kendall Co. CEA-Ag Bob Bailey)

Effects of Selected Treatments on Fire Ant Mounds at the Jones Maltsberger Turfgrass Management Site in SATX.



The Texas Imported Fire Ant Research & Management Plan  
Project Highlights for 1998 and Community-Wide Imported Fire Ant Management Projects at Mt.  
Pleasant, San Antonio, Austin, Houston and Dallas

(proceedings article for 1999 Annual Imported Fire Ant Research Conference)

Bastiaan M. Drees, Charles L. Barr, Nathan Riggs, Lisa Lennon, Pam Traylor and Scott Russell

Texas Agricultural Extension Service  
The Texas A&M University System  
College Station, Texas

The red imported fire ant, *Solenopsis invicta* Buren, infests the eastern two-thirds of Texas, as well as all of the southeastern United States. In 1998, these ants were found in California. In Texas, they cause approximately \$300 million in losses per year, including a \$67 million annual loss in the cattle production system alone. Aside from medical consequences of fire ant stings (about 1 percent of the population is hypersensitive to stings), the ants disable electrical equipment and affect wildlife. The presence of the multiple queen form of the ant is thought to be increasing ant populations, thereby increasing the damage they do.

There are more than 3 million households in Dallas/Fort Worth, Austin, Houston, and San Antonio. People in 85 percent of these households spend about \$36 annually on fire ant control, medical costs and other damage caused by the ants -- totaling \$93 million per year.

Currently, fire ants are controlled largely by insecticides. Overuse and misuse of ant mound treatments, particularly with diazinon products, is blamed for contamination of surface runoff water in several Texas cities, including Fort Worth.

In 1997, Texas A&M scientists and extension personnel teamed up with other Texas agencies and universities to create a statewide fire ant research and management plan to control, not eradicate, the pests. In the first year of the plan, much has been accomplished. Extension IPM agents have been placed in Dallas/Fort Worth, Austin, Houston, and San Antonio to educate the public at large about ways to manage fire ants and to work with neighborhoods to implement community-wide management programs to treat for fire ants at the same time. One community from each city has been selected as a pilot program to measure the effectiveness of community-wide management programs. In September 1998, the group created a state-proclaimed Fire Ant Awareness Week to educate the public about research progress being made and about another new approach -- broadcasting non-toxic, slow-acting baits in the fall that will kill ants during the winter while people are indoors. To get this new approach across to the public, a communications campaign with the theme, "Tackle fire ants in the fall," was implemented. A news conference kicked off the campaign, which included a cartoon TV PSA and radio PSA that aired in all major media markets, billboards in the major cities, newspaper and cable TV ads, Web site, print and broadcast news releases, and packets for county agents that included fill-in-the-blank news releases and columns.

As a result of the campaign, page accesses to the Web site increased from 2,000 a month to 100,000 a month and stores sold out of bait. One neighborhood's residents have coordinated fire ant management for the past three years and report that they don't have a fire ant problem any longer. Evaluation in terms of ant reduction in monitored areas will take place in 1999.

### Fire Ant Management Pilot Showcase Programs Underway Across Texas

#### Mt. Pleasant

A "showcase" program was established at the HUD Housing Authority in Mt. Pleasant (NE Texas) during Fire Ant Awareness Week, September 14 through 20, 1998. A press conference was held the day of treatment (Sept. 17) at which Rep. Tom Ramsay, legislative sponsor of the Fire Ant Plan, and others addressed a crowd of over 60 people, including several County Extension Agents and out-of-town residents. Several other HUD facilities have subsequently contacted us for information and programs.

In addition, community-wide fire ant management programs and result demonstrations have received assistance to become established with local County Agents in Franklin Co. (Mt. Vernon), and Marion Co. (Jefferson). In cooperation with the County Agent of Bowie Co. (Texarkana) and a County Commissioner-elect, a county-specific fire ant management program was developed and adopted by their Commissioner's Court.

#### San Antonio

The Oxbow Neighborhood Association in San Antonio learned about community-wide fire ant programs in a February '98 presentation and decided to take action. Almost 50 percent, or 495 out of 1000 homes participated in the program. The Oxbow group planned to purchase PT-370 Ascend® Fire Ant Bait, but the San Antonio Pest Control Association donated the bait at the last minute. Volunteers from the San Antonio Pest Control Association and the Green Brigade Program assisted the Oxbow group by broadcasting bait over common areas, parks and homes in the neighborhood. The Green Brigade Program is an Extension Service program designed to involve first-offender teens in city landscape and gardening projects as a way to "work off" restitution for their crimes.

Soon after the Oxbow Fire Ant Day, the Northchase Homeowner Association also decided to hold a neighborhood Fire Ant Day after an Extension Service presentation. In a show of neighborhood solidarity, the Oxbow neighborhood group donated 25 pounds of bait they had left over to the Northchase group for their program. The Northchase group had 49 of 114 homes participate. Northchase Homeowner Association president, Richard Meneses, said, "The neighborhood has never participated in something with as much enthusiasm and involvement as this Fire Ant Day".

The Encino Park Homeowner Association requested a neighborhood do-it-yourself "kit" to help establish their community-wide fire ant management program. They scheduled their Fire Ant Day

in late August, but tropical storm Charley rained on their parade! They reportedly postponed their attack on fire ants for a week and had good participation at that time.

The Jade Oaks Homeowner Association, in northwest San Antonio, was so excited about beginning a community fire ant program that they called the Bexar County Extension office and asked for guidance about starting their program. The real estate office for Jade Oaks promotes their newly initiated community fire ant program as a selling point for prospective home buyers!

Jade Oaks agreed to be the showcase pilot program in Bexar County for 1998-1999. A biological survey in 15 of 91 front lawns revealed imported fire ants in every lawn with three other species of ants present in much fewer numbers. Bret Royal, Developmental Representative with American Cyanamid donated Amdro® Insecticide Bait to treat common areas and vacant lots, and promotional "Block Party" materials. Interest and involvement was high, with 81 of 91 homeowners participating. The association members will receive a comprehensive survey requesting information on past history, insecticide use, and other impacts imported fire ants have had before and after program initiation.

### Houston

The community of Belleau Woods Community Park in Humble organized a group of volunteers to treat their 7-acre community park on Sept. 22, 1998. Prior to the treatment, ant mound numbers were estimated and baited vials were used to monitor ant species present. Before treatment, the park harbored about 270 imported fire ant mounds per acre. No other ant species were collected. The community had their annual picnic at the park in late October and no one was stung by a fire ant! Post-treatment ant surveys will be conducted to document the control of fire ants in this park.

An educational program for the North Houston Heights community in August resulted in plans for a community-wide fire ant management program initiated on October 3. Prior to the treatment, ant mound numbers were estimated and ant species were monitored using baited vials. Twelve lots were randomly selected to monitor ants. Each lot had from 1 to 20 ant mounds. Red imported fire ants were present in every lot, and only two other ant species were detected. Volunteers from the homeowners association and the Extension Service treated over 90 percent of the lots in about three hours. Ant population levels will be monitored periodically to document the effectiveness of the treatment.

The Copperbrook Homeowners Association has initiated their own community-wide fire ant management project. They have had two fire ant days this year, with homeowners treating the ants with whatever they had on hand. A neighborhood "kit" was mailed to them earlier this year with information. Next spring, an educational program will be given and the Two-Step Method for fire ant control will be implemented in this community.

## Austin

Sun City- Georgetown, a retirement community consisting of approximately 3,000 residents battle fire ants by having their Landscape Director and Golf Course Superintendent announce when their areas will be treated. During these designated "Fire Ant Weeks" residents are encouraged to treat their lawns for fire ants using a bait product. In the spring, the Extension Service presented a program on the benefits of community-wide fire ant management and provided publications and handouts. This fall, news articles were released stressing the importance of fall treatment to produce fewer fire ants by next spring. An educational presentation was also made at their Garden Club's meeting.

Following an initial contact through a survey, the City of Lago Vista contacted the Extension Service about the concept of doing a city-wide fire ant management program. The Extension Service initially gave a brief presentation to the city council at the request of the mayor. As a result, they designated a 'fire ant weekend' and posted announcements in the local newspaper several weeks ahead using material supplied by the Extension Service. It was encouraged that all residents purchase Amdro® and broadcast on that weekend. The progress of this program is being monitored.

During "Fire Ant Awareness Week" a pro-active citizen of Mountain City, Texas (a residential subdivision south of Austin in Hays Co.) contacted the Extension Service about doing a fire ant management program. The city council passed a resolution calling for homeowners and landowners to participate in a city-wide effort to combat fire ants by purchasing Amdro® fire ant bait and broadcasting it on Saturday, Oct. 3<sup>rd</sup>. A Hays High School Booster Club bought hand spreaders and Amdro® for use as a fund raiser and convenience to the residents.

Coupled with product donations, reduced purchase costs from Lowe's and Wal-Mart and rebate coupons furnished by Bret Royal, Development Rep. for American Cyanamid, participation was above average.

The Extension Service provided fact sheets, handouts and method demonstrations to residents who were not familiar with broadcasting a bait. A television crew taped the event and propagated added publicity. They are planning a spring 'fire ant day' that promises to be bigger and better.

A Board of Directors Member of the Mt. Bonnell Shores/Colorado Crossing Homeowner Association contacted the Extension Service following an informational letter sent out regarding fire ant management. She was interested in the community-wide management program, but needed additional information regarding native ants. A meeting was arranged to meet with her and the Extension Agent, to determine types of management, areas, and compliance issues. The Association is very organized and every homeowner is required to be a member. The neighborhood is comprised of 131 homeowners and is divided into five 'neighborhood watch' groups. Each group has a block captain, which makes distribution of information and communication easy. The block captains are Board members and utilizing the Extension Services' fire ant management program had previously been discussed.

Mt. Bonnell Shores Homeowner Association has been designated as a as the pilot showcase program for Travis County. Fire ant mound numbers were estimated in early October from random-selected yards, followed by obtaining ant samples using baited vials to determine infestation and ant species present. Flyers were sent out and distributed to each homeowner explaining the program and a date set for treatment. Since the Extension Service is using the neighborhood as an enhanced Result Demonstration, baits were donated for use as test trials in each block. Block captains distributed enough bait to each participant to treat their property. Volunteers treated yards that owners were not able to treat. Survey questionnaires were also passed out to each participant.

Of the 134 lots possible (not counting untreated "control" lots), 119 were treated for a participation rate of 88.8 percent. Charts have been developed to show ant distribution by species, lots treated, and an aerial photo will allow digitization of data.

### Dallas and Fort Worth

The State Fair of Texas was a big event for the Dallas/Fort Worth metroplex. More than 52 volunteers were trained in fire ant biology and management options. Volunteers were also given an overview of the Texas Imported Fire Ant Research and Management Plan.

These individuals manned the fire ant booth and display at the State Fair from September 25 through October 18, 1998. They answered questions about fire control, the ant's origins, ongoing research and politics (to the best of their abilities). Over 7,600 handouts and publications were given to booth visitors.

During the day on October 9, the Texas Department of Agriculture hosted "Fire Ant Day" in the Food and Fiber Pavilion. On this day the Extension Service made presentations about fire control, involving adults and children, and using questions to interact with the audiences. Feedback from the volunteers has been positive and participation in the state fair will be a regular event.

During "Fire Ant Awareness Week", an appearance was made on the FOX- 4 "Insights" program. This interview launched the weeks activities in Dallas and Tarrant Counties and generated an increased volume of telephone calls requesting community-wide management kits and presentations. Fort Worth Community Cable aired a pre-recorded program in which Extension staff discussed fire ant biology and control. The City of Duncanville sponsored a community meeting during fire ant awareness week. This community meeting has resulted in the production of a Community-Wide Fire Ant Management video by the Duncanville Community Cable in cooperation with Extension Agent.

Result demonstrations have been established in Tarrant County, including one at the Northeast sub-courthouse and another in a pasture to reduce fire ant populations while preserving native red harvester ants.

Since March 1998, 26 community-wide fire ant management presentations have been made to neighborhood associations, crime watch units and civic clubs. The Singing Hills/Hidden Valley Neighborhood Association is working with the Texas Agricultural Extension Service and the City of Dallas Parks and Recreation Department to implement a community-wide project next spring. This group will likely serve as a showcase pilot project in Dallas county.

### Acknowledgements

The authors wish to thank Lynette James, Agricultural Communications Specialist, and Anna Kjolen, Staff Assistant for the Texas Fire Ant Project, for their contributions and technical support for developing this proceedings article and the presentation.

### Web Server Statistics

February 97 - September 98

The monthly report for the Fire Ant Web Site indicates that the most hits the web site received was in the month of June 1998 with a total of 6,265 hits, until September, the month of Fire Ant Awareness week during which the number of hits exceeded 100,000. The web site received a steady increase in hits beginning in March 1998 with only a slight decrease in hits in July 1998. The web site server location was transferred from Agricultural Communications to the Department of Entomology at the end of August after Agricultural Communications staff re-designed the web site's structure and graphics.

Reports are available which provide daily and hourly summaries. Include is a Domain Report which shows where the web site hits are coming from. The majority of hits are coming from within the United States. Other countries accessing the Fire Ant web site include Canada, Japan, Germany, Netherlands, South Africa, Saudi Arabia and Chile. The most requested files with at least 10 requests include the logo, fact sheets, links, and news.

### Web Server Statistics

January 1999 -September 98

During 1999, the number of "hits" averaged about 100,000 per reporting period (about a month). During Fire Ant Awareness Week alone, however, we received nearly 50,000 hits:

1/25 - 2/22 90,596

2/22 - 3/22 83,723

3/22 - 4/19 106,562

4/19 - 5/17 107,699

5/17 - 6/14 132,244

6/14 - 7/12 95,172

7/12 - 8/09 105,088

8/09 - 9/06 92,242

9/12-9/18\* 49,859

\*Fire ant awareness week, 1999