

## **Report of the Peer Review Committee of the Texas Imported Fire Ant Research and Management Plan -**

respectfully submitted by the Imported Fire Ant Peer Review Committee: Jim Ottea, Sanford Porter, Coby Schal, Beverly Sparks, Chip Taylor, Robert Taylor, Cliff Lofgren, (Chair)

The Peer Review Committee met at the Department of Entomology, Texas A&M University, College Station, Texas, October 27-29, 1998. The 35 Principal Investigators, or their designees, presented the status of their research programs and were questioned by the Committee members for the first 1 ½ days. The Committee then met for 6 hours following the reports and presented a brief resume of their preliminary conclusions on the final day. The final critiques and recommendations for each project were compiled over the next month and represent a consensus of all the Committee members. A short summary of the Committee's evaluations and recommendations follows.

### **SUMMARY**

The Peer Review Committee was impressed with the overall diversity and quality of the 35 projects we reviewed. There was consensus that the goals were generally well-targeted. As the research proceeds, the findings should provide tangible data which can be used to develop a more diversified approach to imported fire ant control and management. We acknowledge the leadership that the State of Texas has assumed through this research and management program and predict that it

will serve as an excellent model for states throughout the imported fire ant infested area. It was the consensus of the Committee that Dr. Bastiaan Drees, Project Coordinator, deserves commendation for his administrative guidance of this diverse and complex program.

While the Committee agreed that the overall aspects of the program were good, we found some strong and weak areas. Before proceeding, however, we would like to state that we recognize two factors that have impacted some of the projects: (1) drought conditions in 1998 hampered many field studies and (2) there were delays in funding, staffing and equipping new research projects. We trust these will not be a problem in 1999.

The Committee was especially pleased with progress in the biocontrol research, particularly the studies with the fungus, *Beauveria bassiana*. The field data indicate that this fungus effectively controlled imported fire ants, but these results need to be verified under a variety of field conditions. If these tests are satisfactory, every effort should be made to develop commercial formulations for imported fire ant control.

The research on the parasitic flies, *Pseudacteon* spp., has progressed well. This is a long-term research effort, but it holds promise as a sustainable approach to managing imported fire ant populations. This is also true of new studies on the microsporidian, *Thelohania solenopsae*. The scientists working on these projects should receive a high degree of support and be encouraged to conduct field tests as soon as possible.

The project teams involved in Communication and IPM Community-wide

programs have been very active and are to be commended for their efforts to inform the public about imported fire ants and to provide them with the newest techniques for their control.

The Committee was impressed with the survey and detection projects. The GIS/Landscape Ecology project was very informative and could be extremely useful in assessing the effectiveness of large area tests of biological control agents and chemicals.

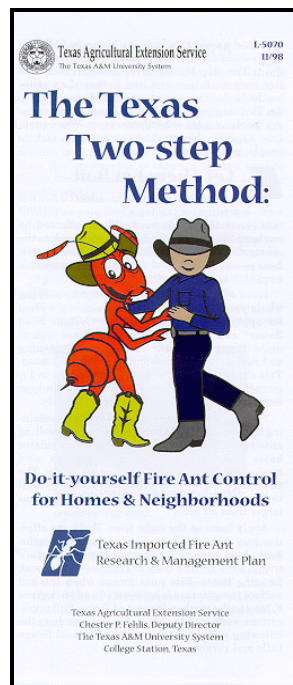
The research on economics is progressing slowly. Information from these studies is essential to guide research, extension and management leaders in planning and directing campaigns to inform the public of the economic and ecological consequences of controlling or not controlling imported fire ants. We encourage the addition of economic assessment studies on the effect of imported fire ants on public health and field crops.

Research on all the other projects, including the long-term endocrinology studies, is progressing well. However, the Committee noted some problem areas. For example, some research on genetics and chemical ecology suffers from a general lack of hypotheses-driven approaches to research. The scientific goals in these projects were often very diverse and needed to be defined more sharply with clear goals that would result in definitive achievements. A second concern was that several projects relied heavily on an "expedition" approach wherein the investigators searched for the chemicals in hopes of somehow connecting them to a function. The lesson of chemical ecology and behavioral endocrinology clearly demonstrates better approaches. The "bioassay-directed" approach has been adopted by most scientists. It consists of the step-wise fractionation of chemicals followed, at each step, by bioassay. This approach eliminates dozens or even thousands of chemicals that have no bearing on the assay. The Committee noted that Technical Teams have been appointed to enhance communications

between scientists working in similar fields. We encourage regular meetings of these teams to ensure coordination of their research programs to avoid duplication. This should drive the research toward realistic goals that would provide early development of new approaches to imported fire ant control.

In conclusion, the Committee compliments the researchers for a good start in the comprehensive effort to develop more effective ways to control imported fire ants. We trust that our comments and suggestions will be helpful, and we look forward to further review of the Fire Ant Research and Management Plan in 1999.

**The Texas Two-step Method - Revised L-5070 now available** - Dr. Mike Merchant, Extension Urban Entomologist



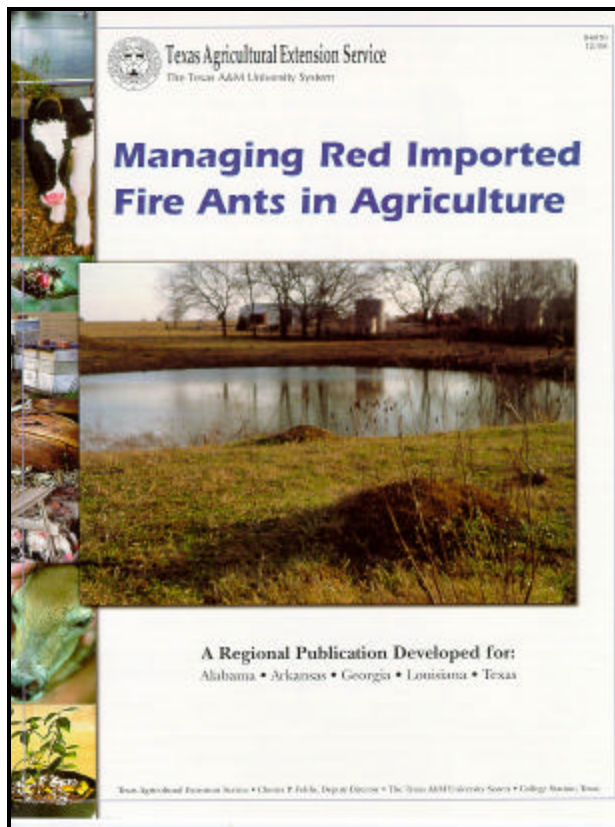
The most popular Extension publication for several years, the "Two Step Method: Do-it-yourself Fire Ant Control" brochure (L-5070) has been revised and is now available through the Department of Agricultural Communications. The new brochure is

enhanced with cartoon graphics and has been significantly re-written to make it more readable and user-friendly. The revised brochure now also includes a section about organizing a neighborhood block party to control fire ants.

Specialists and agents can order up to 250 copies of this fact sheet by mailing a D-1 form to the Distribution and Supply Center (2112), P. O. Box 1209, Bryan, TX 77806-1209 phone (409) 845-6571; FAX (409) 862-1566. Extension faculty needing more than 250 copies must contact Mike Merchant (972-231-5362) for authorization.

**Additional notes:** Dr. Merchant has also developed a slide set and script to support educational programs to promote the Two-Step Method. These should be available soon through the AudioVisual Library.

The publication, "Managing Red Imported Fire Ants in Urban Areas" (B-6043), is now out-of-stock and is scheduled to be revised this summer.



**A New Publication: "Managing Red Imported Fire Ants in Agriculture" (B-6076)** - Bastiaan M. Drees, Fire Ant Project Coordinator, and Charles L. Barr, Extension Program Specialist - Fire Ant Project

The new publication, "Managing Red Imported Fire Ants in Agriculture" (B-6076), resulted from a multi-state effort that involved **Donna R. Shanklin**, University of Arkansas, **Dale K. Pollet**, Louisiana State University, **Kathy Flanders**, Alabama Cooperative Extension System and **Beverly Sparks**, University of Georgia. It contains the most recent information, including the two new ant bait products, Extinguish® and Distance®, which are being released this spring. This publication demonstrates the commitment to address agricultural problem areas by the Texas Imported Fire Ant Research and Management Plan.

Specialists and agents in Texas can order up to 50 copies of this fact sheet by mailing a D-1 form to the Distribution and Supply Center.

**Red Imported Fire Ant Slides on the Web Site, <http://fireant.tamu.edu>**

If you have not already found them, check out the 110 slides of red imported fire ants, impact and management on our website. These slides were scanned onto a CD-ROM and then truncated files were loaded onto our hard drive. They are suitable for downloading into PowerPoint programs. We thank **Khodadad Rezakhani**, who works under the direction of our web master, **Dr. John A. Jackman**, Professor and Extension Entomologist, for his efforts to provide these images. Look under "materials" and then hit "images". The web site was designed by Agricultural Communications team members: **Lynette James**, Communications Specialist, and **Miriam Long**, Graphic Designer.

Also find: **Texas Pest Ant Identification: An Illustrated Key** (FAPFS #010) by Dr. Jerry Cook under the fact sheet section!

## Personnel Changes:

- ◆ **Dr. Ray Frisbie becomes Fire Ant Project Director** - As of December 17, 1997, Dr. Ray Frisbie, Head of the Department of Entomology at Texas A&M University, will assume the role of Director for the Fire Ant Project previously held by **Dr. James Bulter**, Associate Vice Chancellor for External Affairs.
- ◆ **Trey Powers joins FARMAAC** - With the election of **Susan Combs** as Commissioner of Agriculture, Trey Powers, Deputy Assistant Commissioner for Intergovernmental Affairs, has been appointed to replace **John Sneed** as the Texas Department of Agriculture representative on the Fire Ant Research & Management Account Advisory Committee.

Prepared by: **Bastiaan "Bart" M. Drees**,  
Fire Ant Project Coordinator

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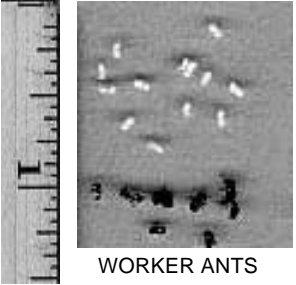
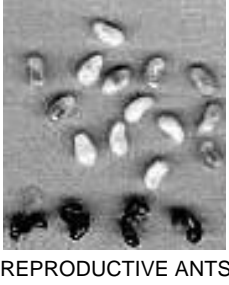
Educational programs conducted by the Texas Agricultural Extension Service serve people of all ages regardless of socioeconomic level, race, color, sex, religion, disability or national origin.

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## Wallet Card: Cut out, fold and laminate (optional):



Texas Imported Fire Ant  
Research & Management Plan

	(Actual size)	
WORKER ANTS	Brood: larvae & pupae	REPRODUCTIVE ANTS
	adults	

**Is your IGR (Insect Growth Regulator)  
Fire Ant Bait Working?**

Check treated ant colonies 3 to 5 weeks following application. After successful treatment, worker ant development will be absent; you will see only reproductive brood (larvae and pupae) or no brood at all. Affected colonies will decline in 2 to 6 months. IGR baits are Logic® and Award® (fenoxycarb), Extinguish® (methoprene) and Distance® (pyriproxyfen).

<http://fireant.tamu.edu>

