

## **Community Wide Management of Red Imported Fire Ants in the Belterra Neighborhood, Austin, TX**

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### **Introduction**

Plateau Property Management approached Texas AgriLife Extension Service about demonstrating a community-wide fire ant management program in Belterra, a neighborhood that the company managed. Belterra is a community in southwest Austin, TX that, at the time of treatment, had around 475 occupied homes. The 1,600 acres was still under development, so only about 115 acres where homes already existed were treated. Treated areas consisted of front yards, greenbelts and common areas.

### **Materials and Methods**

Twelve areas (yards and common areas) were selected throughout the neighborhood to collect data on fire ant mounds and foraging. In each selected area, a bait cup lid containing a hotdog slice was left exposed for at least 45 minutes. After 45 minutes, the hotdog slices were checked for foraging ants. If ants were present on the hotdog piece, the bait cup lid was capped with the bait cup and marked with the date and location. Bait cups were frozen, ants were identified and exact numbers recorded at a later time. Each location was also monitored for active fire ant mounds. Suspected imported fire ant mounds were located, disturbed with a stick and counted as active if many (50+) worker ants were observed to emerge.

Extinguish Plus (0.365% hydramethylnon, 0.25% s-methoprene; Wellmark International) was broadcast at a rate of 1.5 pounds per acre. The initial baiting took place on May 14, 2007 starting at 11:00 a.m., continuing until 3:00 p.m. Conditions were warm, 83°F, and sunny. Bait was blown into front yards with a Herd GT-77 (Herd Seeder Company, P.O. Box 448 Logansport, IN) with a blower attachment mounted on a truck. Bait was spread through greenbelt and common areas using a Herd GT-77 spreader mounted on an ATV.

On May 12, 2007 from 11 a.m. until 2 p.m. a booth was set up in the common area of the neighborhood to provide information about fire ants and the community wide management efforts to anyone who chose to participate. After completing a short survey, residents were provided with premeasured bait in a hand spreader. Residents provided approximate square footage of their backyard and bait was measured out using premarked cups. The measuring cups were marked by weighing bait on a scale and writing on the cup ¼, ½ and 1 pound marks. Residents took the bait filled spreader to their backyard, baited and then returned the spreader to the booth.

The neighborhood was only baited in the spring. The neighborhood management company changed by the time a fall baiting was to be planned, and the new management company was not interested in continuing the baiting program.

## **Program Surveys**

A pre-program survey was provided for those residents that participated in the backyard baiting program on May 12, 2007. A copy of the survey and its results are attached to the end of this report (Appendix 1). The pre-program survey was completed by 90 residents (19%).

## **Results & Discussion- Surveys**

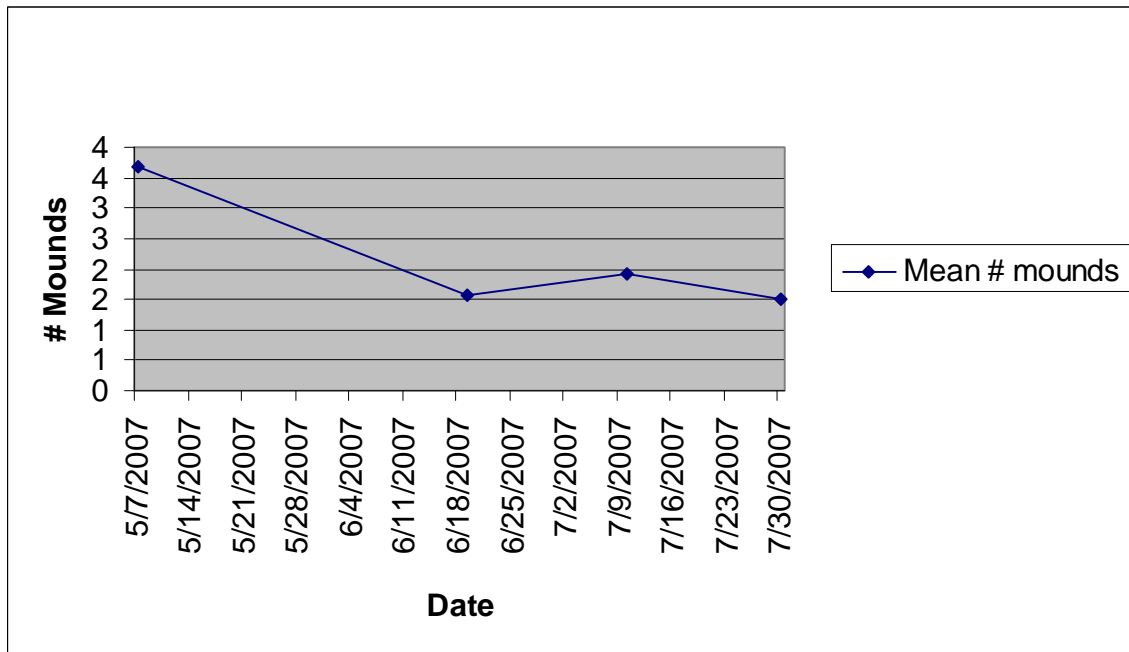
In the 2007 survey, fire ants were the most significant problem around the home for survey respondents with 38 respondents (42%) indicating that they were a slight problem and 38 (42%) marking moderate problem. Playground and park areas seemed to be a concern to some survey respondents; 18 (20%) specified fire ants being a moderate problem in playground areas and 18 (20%) marked fire ants as a moderate problem in parks and greenbelts. Other survey respondents did not think that fire ants were a problem in playground and park areas while 28 (31%) designated fire ants being a slight problem in playground areas and 23 (26%) marked fire ants as a slight problem in parks and greenbelts. There were also numerous non responses to the polling about playground and park areas, each with 28 (31%) non respondents. It is quite possible that many program participants do not spend a large amount of time utilizing park or playground areas as many of these areas were still under development.

Survey respondents spent a mean of \$26-50 on managing fire ants each year and had a mean of 6 fire ant mounds typically on their property. The majority of program participants, 60 (67%) felt that fire ants were of some concern, 19 (21%) felt fire ants were of great concern and 11 (12%) felt fire ants were of no concern. The most popular fire ant treatment method utilized by respondents was mound treatments only practiced by 44 (49%), followed by mound treatments in combination with broadcasting contact insecticides 28 (31%), contracting a pest control professional 9 (10%) and spreading contact insecticides only 5 (5%).

## **Results & Discussion- Data**

Typically, community wide baiting programs can reduce mound numbers by 84% (Riggs et al. 2002), but Belterra showed a reduction of mounds by about 50% (Fig. 1).

**Fig. 1.** Mean number of mounds in monitored treated areas during community wide fire ant project in the Belterra neighborhood, Austin, TX.



Belterra is still being developed with homes and parks being built. During the time of baiting, many areas were inaccessible due to construction and heavy equipment. It is possible that the dramatic reduction in fire ants normally seen in older, fully-developed neighborhoods participating in community wide programs was not seen with Belterra since the neighborhood is still being developed and has many areas undergoing construction. Items being brought into the neighborhood, such as sod, mulch, sand, plants and other landscaping materials, could allow fire ants to be reintroduced throughout the neighborhood numerous times.

### Acknowledgements

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### Literature Cited

Riggs, N.L., L. Lennon, C.L. Barr, B.M. Drees, S. Cummings, and C. Lard. 2002. Community- wide red imported fire ant programs in Texas. *Southwestern Entomologist Supplement* No. 25:31-42.

**Appendix 1: 2007 Belterra Preprogram Survey & Results**

**Spring 2007 Belterra, Austin, TX: Preprogram Survey on Community-Wide Fire Ant Management Effort**

1) Indicate how big of a problem fire ants are now in the following areas of this neighborhood:

	no problem	slight	moderate	severe
Around your home	<input type="checkbox"/> 8	<input type="checkbox"/> 38	<input type="checkbox"/> 38	<input type="checkbox"/> 6
In playground areas <b>No answer 28</b>	<input type="checkbox"/> 8	<input type="checkbox"/> 28	<input type="checkbox"/> 18	<input type="checkbox"/> 8
In parks, green belts or common areas	<input type="checkbox"/> 3	<input type="checkbox"/> 23	<input type="checkbox"/> 18	<input type="checkbox"/> 8
<b>No answer 28</b>				

3) Are fire ants causing problems or concerns on your property?

- \_\_\_\_\_ a. no concern **11 respondents**
- \_\_\_\_\_ b. some concern **60 respondents**
- \_\_\_\_\_ c. great concern/problems **19 respondents**
- \_\_\_\_\_ d. fire ants not present to my knowledge **0 respondents**

4) What strategies do you utilize to manage fire ants in your yard? **1 no answer**

- \_\_\_\_\_ a. mound treatments only (this includes baits, dusts, liquids or granules) **44 respondents**
- \_\_\_\_\_ b. spreading "contact insecticide" (spray or granules) across yard **5 respondents**
- \_\_\_\_\_ c. both a and b **28 respondents**
- \_\_\_\_\_ d. contracting a pest control professional **9 respondents**
- \_\_\_\_\_ e. other \_\_\_\_\_ **0 respondents**
- \_\_\_\_\_ f. nothing **3 respondents**

5) About how much money do you currently spend to manage fire ants per year?

- \_\_\_\_\_ a. <\$10
  - \_\_\_\_\_ b. \$11 - \$25
  - \_\_\_\_\_ c. \$26 - \$50
  - \_\_\_\_\_ d. \$51- \$75
  - \_\_\_\_\_ e. \$76- \$100
  - \_\_\_\_\_ e. over \$100
- Mean spent of \$26-50**

6) Approximately how many mounds are typically on your property? \_\_\_\_\_

**Mean of 6**