

Community wide fire ant management at Wood Glen in Round Rock, TX

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Wood Glen in Round Rock, TX began a community wide fire ant management program in the spring of 2005. Wood Glen is a 250 acre community with approximately 60 acres of green belt area. The Wood Glen Property Owners Association consists of nearly 550 homes. Common areas include items such as a swimming pool, tennis courts, playground equipment and walking trails.

In 2002, Riggs et al demonstrated that community wide fire ant management programs can help reduce red imported fire ant (fire ant) populations and reduce pesticide costs for community residents. By developing community wide programs for neighborhoods, fire ant reinfestation can be reduced or delayed.

Materials and Methods

Sixteen areas throughout the treated neighborhood were monitored for fire ant mounds and activity and data was collected. One area outside the treatment area was selected and monitored for fire ant activity to serve as an untreated control. In each selected area, a hotdog slice was placed in the lid from a 9 dram clear styrene container and left exposed for at least 45 minutes. After 45 minutes, the hotdog slices were inspected for foraging ants. If ants were present on the hotdog piece, the bait cup was capped and marked with the date and location. Containers were frozen, ants were identified and exact numbers recorded at a later time. Each location was monitored for active fire ant mound sites. Each were disturbed with a stick and counted as active if many (50+) worker ants were observed to emerge. Four counts were taken in 2009- pre and post-baiting in both the spring and the fall.

Extinguish[®] Plus (0.365% hydramethylnon, 0.25% s-methoprene) has been utilized for the neighborhood baiting program since its inception in 2005. The bait is broadcast at a rate of 1.5 pounds per acre was utilized for the neighborhood baiting program since its initiation in 2005. In 2008, common areas, green belts and front yards were baited spring and fall by a pest control company that was hired by the homeowner's association.

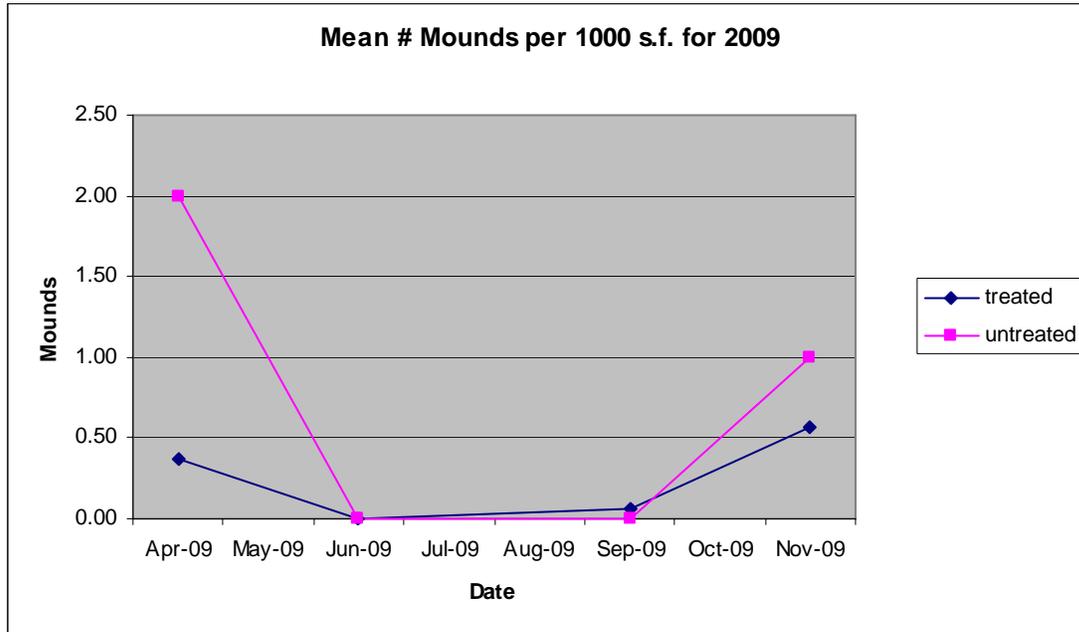
On May 2, 2009, a booth was set up in the common area of the neighborhood to provide information about fire ants and the community wide management efforts to anyone who chose to participate. Residents were provided with premeasured bait in a hand spreader. Residents supplied the approximate square footage of their backyard and the appropriate amount of bait was measured out into their spreader. Fall backyard bait handout occurred on September 19, 2009. During the fall bait handout, residents were asked to complete a short satisfaction survey (Appendix A).

Monitored areas varied in size. The square footage of the areas was recorded and mound numbers adjusted to mounds per 1000 square feet so a true comparison could be made.

Results & Discussion

Both untreated and treated areas showed a decrease in the mean number of mounds per square foot followed by an increase. This trend is most likely due to severe drought conditions for the majority of 2009. The treated area showed a lower mean number of mounds than the untreated area at the initial check in April. The mean number of mounds in the treated area was slightly higher than in the untreated area in September, possibly because of a brush fire in the untreated area that caused vegetation to be burned for a large portion of the untreated area. During monitoring for active mounds in November, data showed that treated areas had a lower number of mean mounds than the untreated area (Fig 1). The mound numbers in the treated monitored areas remain low as in previous years of the study, maintaining fire ants at a level that is satisfactory to residents of WoodGlen.

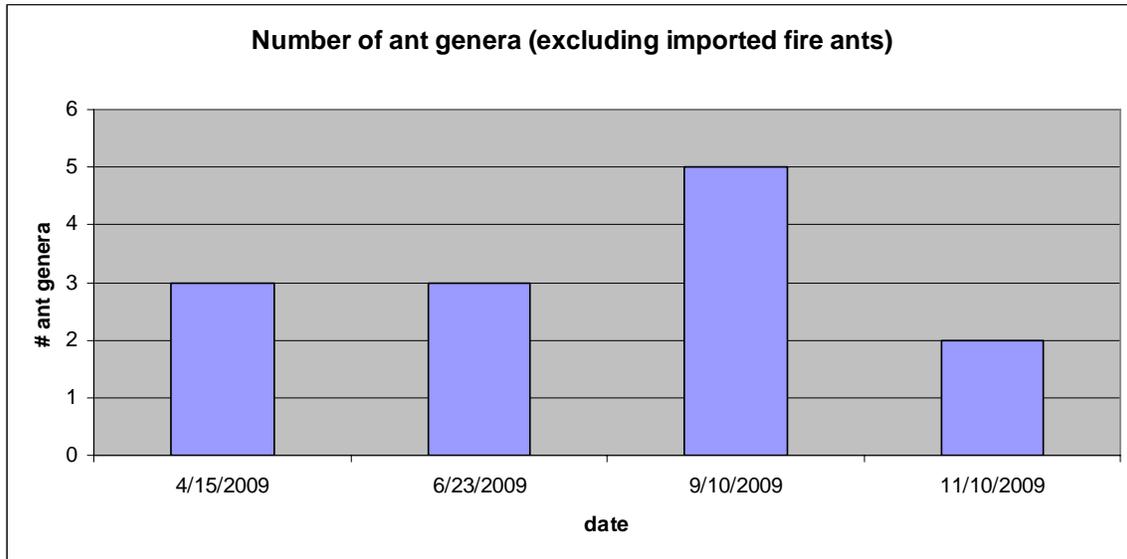
Figure 1. Mean number of mounds of red imported fire ants per 1000 square feet found in selected areas of WoodGlen, Round Rock, TX during 2009 community wide fire ant management project.



Porter and Savignano (1990) found that native ant populations decreased when fire ants moved into an area. When fire ants are suppressed with community wide fire ant management, numbers of native ants can be increased.

The ant diversity in the WoodGlen neighborhood increased as fire ants have been suppressed by community wide fire ant management (Brown et al. 2007). This year showed a continuation of native ants entering monitoring areas (Fig 2).

Figure 2. Number of ant genera other than red imported fire ants found in selected areas of WoodGlen, Round Rock, TX during 2009 community wide fire ant management project.



Community wide fire ant management programs are a wonderful tool for neighborhoods to utilize to reduce populations of fire ants. Not only can these types of programs reduce populations of the pest species, but can also increase native ant populations. Neighborhoods only need to have willing volunteers to formulate a plan and carry it out to reap the rewards of reduced populations of fire ants.

The fall satisfaction survey was completed by 78 out of 91 (86%) participants in the backyard bait handout program. The people completing the survey participated in the community wide fire ant management program for a mean of 4 years. They spent a mean of \$37.50 per year on fire ant management before the community wide management and a mean of \$11.13 after the program (a difference of \$26.37). In addition, participants estimated that they reduced their pesticide use by an average of 59% as a result of the program.

Acknowledgements

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Literature Cited

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Riggs, Nathan L., Lisa Lennon, Charles L. Barr, Bastiaan M. Drees, Scott Cummings, and Curtis Lard. 2002. Community-Wide Red Imported Fire Ant Management Programs in Texas. *Southwestern Entomologist*. Suppl. No. 25:31-41.

Appendix A

2009 Wood Glen, Round Rock, TX: Satisfaction Survey on Effectiveness of the Community-Wide Fire Ant Management Effort Implemented in March 2005

Your input is very valuable to Texas AgriLife Extension Service. Please take a brief moment of your time to help us make our programs more effective for you.

1) How many years have you participated in the community-wide fire ant management effort (program began in 2005- ongoing for 5 years)? **Mean of 4 years**

2) How much were/ are you spending on fire ant management each year?
Before the implementation of the community-wide fire ant management effort
Mean of \$37.50

After implementation of the community-wide fire ant management effort
Mean of \$11.13

3) What percentage of pesticide reduction do you feel you have made relating to treatment of fire ants since the implementation of the community-wide fire ant management effort?
Mean of 59%

4) We would appreciate any other comments on the Wood Glen Community-Wide Fire Ant Management Effort and how it has affected your outdoor activities since its launch. Please feel free to add any comments below (use back of page if needed).

Kids have played free of fire ants since the program began.

Lots less fire ants! Kids play in backyard more.

Works great!

It's great!

Great effort!

Thank you!

Please keep it up!

This is a great service. The combined management is extremely effective!

This program is great- really appreciate it!