

THE AREA-WIDE PEST MANAGEMENT OF GLASSY-WINGED SHARPSHOOTER IN KERN COUNTY

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Reporting Period: The results reported are here are from work conducted from January 2002 through December 2002

INTRODUCTION

The year 2002 marks the second of a proposed three year study to develop and demonstrate the Areawide Management of Glassy-winged Sharpshooter (GWSS) in Kern County, CA. The first year successfully demonstrated the areawide concept as a strategy that will reduce GWSS to very low population densities in a robust multi-crop perennial growing system. Critical to this success is a well organized and coordinated delivery system that growers can adapt to their present pest management programs. The strategy in 2001 was to treat citrus using an action threshold of greater than one GWSS/tree which resulted in 1830 acres out of 3600 receiving a foliar, knockdown, insecticide. All citrus received a single systemic application of Admire ® following the foliar treatments. All acreage, approximately 13,000 acres, is monitored utilizing a combination of direct observations and sticky traps arrayed in a ¼ mile grid.

Grower interest in the results of the pilot study in 2001 culminated in a request to initiate an areawide program in Kern County. An expanded program was implemented in the county. This areawide program utilized the strategies developed in the first year of the pilot study.

OBJECTIVES

1. Adjust management strategies based on current GWSS population levels.
2. Test compatibility of selected insecticides and biological control agents.
3. Develop and implement biological control based strategies. (See Report by Isabelle Lauziere)
4. Implement an area-wide pest management program in Kern County.

RESULTS AND CONCLUSIONS

Results from the monitoring program suggested that in 2002 three of the groves treated last year in the pilot study required treatment with a systemic insecticide. Four groves required only a foliar treatment. Although the GWSS populations in these groves were below the action threshold used in 2001, the decision was made to treat these as hot spots and prevent the possible reinfestation of adjacent groves. Monitoring data indicates that the groves still infested in 2002 were adjacent to eucalyptus windbreaks that border the groves. The windbreaks were initially treated with a foliar insecticide treatment but did not receive a systemic treatment to prevent recurring populations of GWSS. We are currently waiting for an approved label to treat these windbreaks.

GWSS population monitoring in the pilot project study area during 2002 indicates very low levels of infestation. Insecticide inputs during the second year of the study were minimal, suggesting that the area-wide approach to treatment may provide adequate control of the pest over multiple years. The addition of natural enemies in the form of augmentative releases of egg parasitoids may extend this control, potentially building in a long-term sustainable regulating component into the area-wide program.

Limited fiscal resources for an expanded area-wide program in Kern County required the county to be divided into zones that could be effectively managed with available funds. Four zones have been established and are monitored for GWSS populations using a trapping grid of one trap/per 32 acres. The Northern Zone, Edison area, has historically been troubled with large populations of GWSS. This is the first zone to be treated. The management strategy followed the established protocol from the pilot study. The current population of GWSS has been reduced to almost non-detectable levels in citrus. Since Pierce's disease is known to occur in this area of the county, vineyards that continued to have GWSS after harvest were treated to prevent their return into citrus. Hot spot treatments for GWSS in grapes have reduced this population to similar levels as seen in the citrus.

FUNDING AGENCIES

Funding for this project was provided by the USDA Animal and Plant Health Inspection Service.