

Thomas Sherman

At the Southern Insect Management Research Unit (SIMRU) of the Agricultural Research Service of the United States Department of Agriculture, I am a biological science aid. For my second consecutive summer, I am assisting entomologist, Larry Adams, in multiple tasks that allow us to reach our goal of finding solutions to agricultural problems that affect Americans everyday. The government expects SIMRU to improve the safety and efficiency of pest control for cotton, maize, soybean, sweetpotato and other row crops. SIMRU has three major programs, and I work in the insecticide resistance management and new control strategies for pests of sweetpotatoes. ARS has developed a five-year research plan with Alcorn State University to increase quality and yield of sweetpotatoes. SIMRU also works closely with MSU, LSU and NCSU in sweetpotato research projects.

Larry Adam's aids check above and below-ground pest surveys, sampling methods and control with insecticides and nematicides. Biological Science Technician, Chris Johnson, does all the application of the insecticides and nematicides for the sweet potato plots. Chris instructs us on how to properly operate equipment necessary to get our assignments completed. We have numerous weekly obligations, including pheromone trap captures, seed bait for soil insects in corn plots and sweep-net sampling in the sweetpotato plots in Stoneville, Mississippi and Mound Bayou, Mississippi with Dr. Tahir Rashid from Alcorn State.

From 2003-2006 Stoneville conducted a study on three sampling methods to determine which was the most productive and efficient. The Delta Region and the Hill Region of Mississippi were sampled for insects during this study. Insect numbers in the

Delta Region were slightly higher than the Hill Region, and the variety of insects was much greater in the Delta Region due to alternate crops being planted nearby. The three techniques tested were sweep-net, hand-vacuum and a wheeled blower-vacuum designed to blow insects from the foliage into the vacuum port of a leaf vacuum. The number of insects collected by the blower-vacuum method was lower than the number collected by the other two methods. The hand-vacuum and sweep-net samples were similar during the first few weeks after planting, but the sweep-nets insect count were far greater late in the season. In general, sweep-nets have been the tool of choice for IPM practitioners in sweetpotatoes because of low price, easy use, and low maintenance.

The past two summers in the field and lab have been a unique learning experience, and I am very appreciative of Dr. King for placing me in such a well meshed crew with Larry Adams and Chris Johnson. They have been great mentors and teachers of all we do here at Stoneville. I will take this year and the previous year's experience further into my study of agriculture.