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### The Effect of Beauveria on Tarnished Plant Bugs

My name is Andrea McNeal; this is my first summer working for SIMRU. Working for SIMRU has been a wonderful experience for me; I learned new and interesting things. However, I was able to distinguish difference between bollworm and tobacco budworm, identify Beauveria infection in tarnished plant bugs, and make tarnished plant bug bioassay diet based on Dr. Maribel protocol. The main experiment we did this summer was spraying Beauveria, and later collecting leaves from cotton, corn, and soybeans. Tarnished Plant Bugs were transferred to the leaves, after 24 hours the bugs are then transferred to meridic assay diet developed by Dr. Maribel. Insect are observed daily to determine mortality and infection from Beauveria or other entomopathogenic fungi. Lastly, data is accumulated and studied over time to determine differences among treatments in insect survival and infection rates. Although work is still in progress and the data is not completely analyzed. In our studies we found really low mortality and infection rates, in order or 10-20%. However, we also pulled tissue from Snodgrass and Jackson field study and we found 40-50% mortality and infection rates. The dose we were applying showed low amount of spores on microscopic slides, Snodgrass and Jackson were applying 8 times more the amount we used. In our first study mortality was highest on cotton, suggesting it can be a different in leaf surface. We have done an experiment at the

same concentration as Snodgrass; we hope using this higher concentration will tell the differences between cotton, corn and soybeans tissue.