

Spore Distribution of *Beauveria Bassiana* on Cotton Leave Plants At Different Developmental Stages Using Back Sprayers

June Z. Jones

STEP Employee 2011-2012

Supervisor: Maribel Portilla

My name is June Z. Jones. I have been a part of the STEP since August of 2011. I started out in Crop Genetics Research Unit, and then was recently hired in the Southern Insect Management Research Unit in May of 2012. Currently I work in the National Biological Control Laboratory building where I work with *Beauveria bassiana* under the supervision of Maribel Portilla. I am thrilled about research concerning insect/pest control, because it is a subjected discussed habitually in my degree program of Environmental Health.

During the course of this experiment my focus was on the counting of the spores, assessing their viability and coverage in both field and laboratory applications. Before and after every field application spores were counted to determine how many spores are being sprayed and the concentration level per application. During field application plastic cover slips were placed in three locations on the plant. These locations were on the top of the leaf, middle (stem area), and the bottom (stem area near soil). The purpose was to determine the coverage diameter from the backpack sprayer. Once plants were fully sprayed cover slips were collect and brought back to the lab for analysis. Each cover slip was placed in small cups consisting on 2mL of Tween-80. Each cup was vortexed for 1 minute, and then 1uL of suspension was retrieved from each cup

and placed on both counting chamber ends of a hemocytometer, using a pipette. Under the microscope the spore were counted from the 4 larger corner squares plus the middle combined, located in the first quadrant. This is done to determine the particle count per ml. I used the software program Micron to get an enhanced view of the spores on the monitor of the computer and to take pictures. All data was entered into an excel spreadsheet then later converted into a SAS program.

This research has allowed me to apply many skills that I have learned while in school which I greatly enjoy. I have enjoyed every minute of this job because I work with a great group of young scientist that also enjoy their work as well. I think that this research unit is doing exceptional research that it beneficial to all parties involved. I look forward to continuing my education and working for SIMRU gaining essential skills and experiences.