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To: Dr. Randy Luttrell Research  
Leader USDA, ARS, SIMRU

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Hello. My name is Bailey Tubertini; I am a senior at Mississippi State University majoring in Accountancy. This is my fifth summer as a STEP employee and I work for Larry Adams and Chris Johnson. We are a part of the Southern Insect Management Research Unit (SIMRU) and are a branch of the United States Department of Agriculture. The majority of the research our unit is involved with is sweetpotatoes. We have a number of studies that we monitor and use to conduct various forms of research. However, sweetpotatoes are not the only thing we conduct or research on. We check traps once a week to count for the area surrounding Stoneville. Finally, we have a specific study containing corn and sweetpotatoes that we put bait traps in to estimate underground pest pressure, specifically wireworms.

Our sweetpotato plots are divided into six different plots. We have three plots off Experiment Station Road, one study at the cages, and two studies in Mound Bayou, Ms. We collect insects weekly using sweet nets. We have collected soil samples from our nematode as well as our variety study. Along with these weekly duties, we strive to keep broadleaf weeds out of our plots because they can hurt the yield of the sweetpotatoes.

Our unit has been in charge of checking various moth traps around the Stoneville area since 1992. We are looking for two specific species of moth, *H. zea*, which is the

bollworm and *H. virescent*, which is the budworm. These checks have shown the significant decrease of budworms and boll worms in row crops since the introduction of *Bacillus Thuringiensis* in the mid 1990s.

This year is the second year study involving sweetpotatoes and corn. The study is to try and get a legitimate estimate of wireworm pressure on these plants. We use a method called "bait trapping" to correctly sample for the pests. The wireworm is the immature stage of the click beetle. The wireworms make large feeding holes and tunnels on sweetpotatoes that can seriously damage yield. The bait trap method involves using presoaked corn in water as bait for the wireworms. After placing the traps we wait at least ten days to give the corn enough time to germinate, which is the most optimal stage for attracting wireworms. Then we dig up all of the traps and sift through the dirt to separate the wireworms and collect them. We then write which week, treatment, and plot that we caught wireworms in. at the end of the year the plots containing wireworms will be used to estimate wireworm pressure for the entire study.

Overall this has been another fun yet informative summer as a STEP employee. We had some new things this year that taught me new things, and I also learned more about the things we have been doing over the past few years. By reading "Effect of Valor on Sweetpotato" by M.W. Shankle, J.L. Main, and T.F. Garrett I learned that soil treated with Valor before planting sweetpotatoes can reduce the amount of broadleaves after planting by about 80%. This information only makes me wonder what kind of weed control our crew would have to go through if they had not conducted that study. I hope to return next summer and continue helping and learning about sweetpotatoes and the Southern Insect Management Research Unit.