

Sweetpotato Demonstration Study

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Introduction:

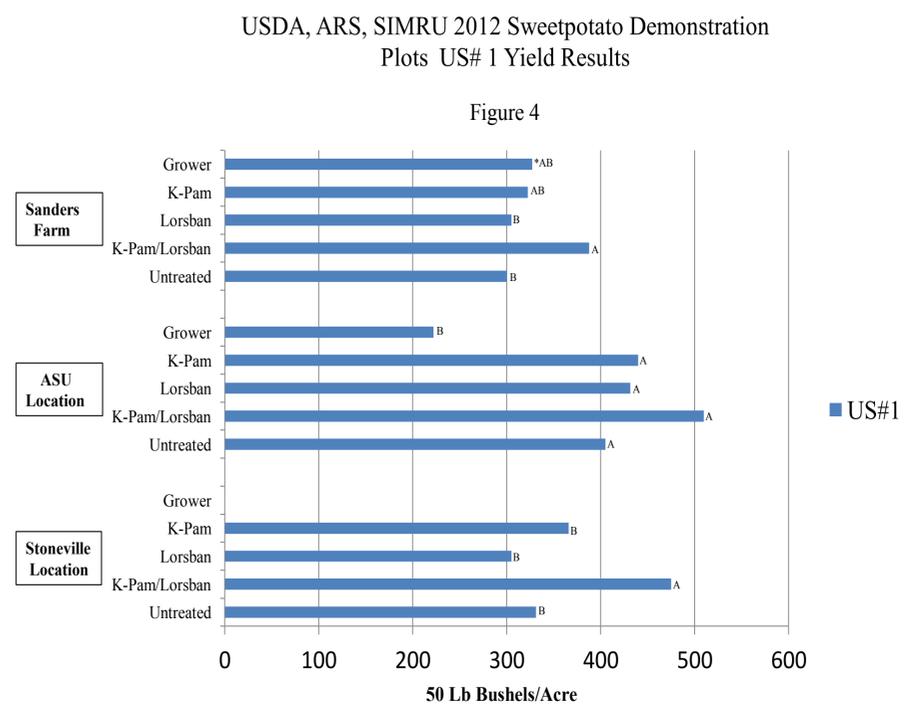
During the 2012 growing season USDA, ARS, Southern Insect Management Research Unit attempted to answer an important question. Do sweetpotato farmers need to apply a preplant incorporated insecticide to control soil insects attacking the developing sweetpotato roots? The method chosen to answer this question was to use transplanted sweetpotato demonstration plots to exemplify the value in taking soil samples for nematode populations. Three Mississippi Delta locations were selected: Alcorn State University Research Farm, Mound Bayou, MS; Sanders Farm, Mound Bayou, MS; and Livingston Farm, Elizabeth, MS. Beauregard 14 slips were transplanted in mid May, and treatments were applied roughly two weeks prior to transplanting which included: Lorsban, K-Pam, Lorsban and K-Pam, an untreated control, and a grower managed field treatment. Soil samples were extracted before plant, mid season, and preharvest to verify nematode populations at different times. All locations were harvested near 115 days. Insect damage, quality, and yield were recorded.

Materials and Methods:

Beauregard 14 sweetpotato slips were transplanted between the dates of May 17, 2012 and June 4, 2012. Plots were eight rows by two hundred feet. Row width was forty inches with a foot between each slip. The two Mound Bayou locations and the farm on Stoneville's campus were treated before transplanting with recommended herbicides and nematicide treatment. All plots were irrigated as needed throughout the season. Every test plot was harvested between the days of September 5 and September 26. Soil pulls were taken on May 5, June 27, and August 17. Above ground insect sampling was performed by the sweep net technique with 100 sweeps at intervals of 25. Insects were recorded.



Mid-season soil sample



* Individual bars within a location category followed by the same letter are not significantly different

Summary:

All locations in the study showed a total insect damage response to the SIMRU managed K-Pam/Lorsban and Lorsban. US#1 yield in the K-Pam/Lorsban treatment was significantly different from the untreated control at the Stoneville and Sanders Farm locations and all treatments were significantly different from the Grower managed treatment at the ASU location. Weed control at the three test locations appeared to be a factor that may have influenced insect populations and yield. USDA, ARS, SIMRU demonstration test plots are currently being evaluated in the summer of 2013.

References:

Calyor, A., D. Picha, K. Piecota. 2013. National Sweetpotato Collaborators Group Progress Report, 2012. www.sweetpotatoes.org

Acknowledgements:

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