

419/1323

2014

NATIONAL PEANUT BOARD/SOUTHEAST PEANUT
RESEARCH INITIATIVE
QUARTERLY PROGRESS REPORT FOR WORK
DONE UNDER RESEARCH AGREEMENT

Final Report

INSTITUTION: University of Georgia

PROJECT TITLE: - Improving Farm Systems with Internet, & Solar-Powered Sensing and Control Systems

RES. AGR. NO.: PID #419

PROJECT LEADER: Craig Kvien

GACCP Budget No.: SID #GA-169, BID # ~~1387~~

EXPIRATION DATE:
6-30-2016

NPB CONTACT: Bob Parker/Maria Mehok
NPB Budget No.:

Final Report - Summary:

In this project, two research and demonstration sites have been equipped with variable-rate sub-surface drip systems, interactive pan, tilt, zoom cameras, temperature, and moisture sensors. The research locations are linked using standard & "Super WiFi" Internet radio systems. At these sites, additional solar photovoltaic systems are being added to determine the best strategies for growers to enhance and power on-farm power sensing systems. The information being generated by these systems will soon be available on the NESPAL web-site and linked to the state commodity commissions web-sites.

419/1323

2014

NATIONAL PEANUT BOARD/SOUTHEAST PEANUT
RESEARCH INITIATIVE
QUARTERLY PROGRESS REPORT FOR WORK
DONE UNDER RESEARCH AGREEMENT

Final Report

INSTITUTION: University of Georgia

PROJECT TITLE: - Improving Farm Systems with Internet, & Solar-
Powered Sensing and Control Systems

RES. AGR. NO.: PID #419

PROJECT LEADER: Craig Kvien

GACCP Budget No.: SID #GA-169, BID # ~~1387~~

EXPIRATION DATE:
6-30-2016

NPB CONTACT: Bob Parker/Maria Mehok
NPB Budget No.:

Final Report:

In this project, two research and demonstration sites with variable-rate sub-surface drip systems were established. We noted the drip systems at 8 inches below the surface would wet the soil surface. We are now testing a new drip tape that promises to be an even better solution for peanut production; to adequately access this tape we will carry the experiment through the 2016 crop year.

We are close to completion (one camera system left) of new interactive pan, tilt, zoom cameras, temperature, and moisture sensors at the research locations and will be linking them using standard & "Super WiFi" Internet radio systems. Made by Carlson Wireless The information being generated by these systems will soon be available on the NESPAL web-site and linked to the state commodity commissions web-sites.

We have expanded the sensing and control systems to compare camera systems, soil moisture sensing devices, occupancy and vacancy sensors for energy and security monitoring, and the devices and strategies to remotely read and control the systems they are designed to work with.

We have purchased, not yet installed, additional solar photovoltaic systems to determine the best strategies for growers to enhance and power on-farm power sensing systems and power generation for larger equipment and for marketing the additional power generated.

Our website is constantly being improved as are the information panels at the test locations to enable growers a place to go to (*physically and electronically*) to test the systems, learn more about them and help them in implement these technologies on their farms.