#198
AL-37
2006
FINAL

Final Report for Account 367335 304504 2002

**Use of Rye, Oats and Wheat as Cover Crops to Suppress Plant Parasitic Nematodes and Disease in Peanuts in Southern Alabama**

**Principle investigators**: Robin N. Huettel, Dept. of Entomology and Plant Pathology, Auburn University, AL 36849 334-844-3376; huettro@auburn.edu.
Kira Bowen, Dept. of Entomology and Plant Pathology, Auburn University, AL 36849 334-844-1953; kbowen@acesag.auburn.edu.

**Objectives:**
1) To assess the value of rye, oats and wheat as winter crops preceding peanuts relative to reduction of plant parasitic nematodes on peanut in southern Alabama;
2) To evaluate whether winter grains and nematode reduction subsequently affects southern stem rot and *Aspergillus* pod colonization of peanut; and
3) To monitor the occurrence of *Pasteuria penetrans*, a bacterial parasite of root-knot nematodes, and its population dynamics in peanut-winter grain cropping systems.

**Approach**:
The study from 2005 will be repeated for the second season at the Gulf Coast (GCREC) and Wiregrass Research and Extension Centers (WREC) in fields that have been previously planted in peanuts. Due to the severe drought conditions, both yields and nematode numbers were very low. This is not indicative of what would be expected in a normal season. All fields will be again planted in peanut after the rye, oats and wheat are harvested next growing season. Pod colonization by *A. flavus* is being assayed at this time for aflatoxin contamination.