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

INSTITUTION: USDA, ARS, PGRCU; Griffin, Ga.

PROJECT TITLE: Generation of F1 plants and advanced lines from crosses of *Arachis hypogaea hirsuta* and/or wild *Arachis* which have new excellent sources of resistance for TSWV and Thrips with new SE adapted varieties with excellent yield and grade potential.

RESEARCH AGREEMENT NO.: 58-6607-7-0100

PROJECT LEADER: Dr. Roy N. Pittman

EXPIRATION DATE: December 31, 2008

SPRI CONTACT: Emory Murphy

NPB CONTACT: R. Marie Fenn

REPORT OF PROGRESS:
Attempted crossing for 2007 were as follows: Three cultivated varieties from the SE area (GeOrganic, York, and Florida 7), CRSP 644W, CRSP 910P, CRSP 1036; Selections from most recent crosses (CRSP 1050 plot 46, plot 49, 83, and 110 which have no appear TSWV in field plots of 2007); and wild peanuts (A. stenosperma, A. magna, A. duranensis, A. cardenasii, A. batizocoi, A. diogoi, and A. ipaensis). Crosses with wild species represented both ‘A’ genome species (Arachis stenosperma, A. duranensis, A. cardenasii, and A. diogoi) by ‘B’ genome species (Arachis magna, A. batizocoi, and A. ipaensis). We were able to recover seed from wild species crosses as follows: CRSP910pink x A. cardenasii (A genome), CRSP1050plot49 x A. stenosperma (A genome), and CRSP1050plot46 x A. magna (B genome). The only cultivated recovered was Fl94022 x Georganic. Fl94022 is Florida’s very highly resistant TSWV hirsute cross selection which originates from North Carolina State University peanut program. Seed from crosses will be germinated and grown in the greenhouse the summer of 2008, F1 plants will be increased via cuttings and grown to harvest to get a large number of F2 seeds where possible for evaluation in the field in 2009. The triploid hybrids all appear to be fertile and thus not triploid; this was not successful. F1 seed from the Fl94022 x Georganic was successful and is being increased in the greenhouse and vegetative cutting being made to increase the F1 plants and generate a large F2 population which will be sent to Winter Nursery Project in the fall. F3 seed will be evaluated in the field in 2009.