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

25-21-RF330-404

DATE: August 10, 2009

INSTITUTION: University of Georgia, Tifton Campus

PROJECT TITLE: **Breeding and Development of Multiple Pest Resistant Peanut
Cultivars for Traditional Food and Non-traditional Industrial Uses
with Genetically Diverse Germplasm**

RESEARCH AGREEMENT NO.: 25-21-RF330-404

PROJECT LEADER: Dr. James W. Todd

EXPIRATION DATE: June 30, 2009

SPRI CONTACT: Emory Murphy

NPB CONTACT: R. Marie Fenn

NPB Control No.: 036687-01

NPB Project No.: 241

FINAL REPORT OF PROGRESS:

One of the main objectives of the project has been to create and develop high levels of pest resistance in new peanut breeding lines. One thousand and forty-one breeding lines were created out of crosses with peanut cultivars and/or plant introductions with high levels of resistance to one or more pest species. This effort was an outgrowth of the USAID funded project between the University of Florida, the University of Georgia, the USDA, and a Bolivian Host Country organization, ANAPO, which is an oilseeds cooperative based in Santa Cruz, Bolivia. Excellent progress has been made in fulfilling this objective, but additional work is needed to bring the best of these lines to the marketplace in the form of new peanut cultivars. Thus far, one germplasm line has been released jointly between USDA and the University of Georgia. Two other cultivar applications were also submitted, but were not approved for release. The principle investigator, (Todd) will retire completely at the end of this year, and Dr. Roy Pittman will carry certain lines forward for additional testing. Additionally, several collaborating scientists have agreed to carry certain elite lines forward with additional work to this end. Dr. Corley Holbrook, Peanut Breeder and Geneticist with USDA-ARS at the University of Georgia, Tifton Campus, has accepted thirty-four candidate lines for further testing and possible use as parents and/or cultivar development. Dr. Barry Tillman, Peanut Breeder with the University of Florida, has accepted twenty-five candidate lines for further testing and possible use as parents and/or cultivar development through the joint USAID UFL/UGA/Bolivia project, and/or jointly through

the University of Florida and the University of Georgia. Dr. Albert Culbreath, Professor of Plant Pathology, University of Georgia, has accepted five candidate lines suitable for "Organic" peanut production. Dr. Tim Brenneman, Professor of Plant Pathology, University of Georgia, Tifton Campus, has accepted seventeen candidate lines for further testing and possible cultivar development in cooperation with Drs. Holbrook and Culbreath. Dr. John Beasley has accepted twelve candidate lines for further testing and possible cultivar development in cooperation with Drs. Holbrook, Brenneman, and Culbreath. And finally, Dr. Wilson Faircloth has accepted twenty-five lines for evaluation of their suitability as lines to be grown primarily for industrial use as sources of bio-diesel in his research program at the USDA National Peanut Research Laboratory at Dawson, Georgia. In addition to these gentlemen, Dr. Roy Pittman will continue developmental work on his own and in collaboration with each of the above scientists. Todd will also collaborate with all of these as the need arises as Professor Emeritus of the University of Georgia.