

MULTI-STATE RESEARCH PROJECT S-009
PLANT GENETIC RESOURCES CONSERVATION AND UTILIZATION

Background: Crop collections of importance to the Southern Region have been supported since 1949 through a joint partnership, designated as Multi-State Research Project S-009, between the USDA, ARS, Plant Genetic Resources Conservation Unit and the Southern State Agricultural Experiment Stations. For 64 years, the S-009 Project has served as a major component of the National Plant Germplasm System, and its activities have markedly improved crop technology in the Southern Region, the U.S., and abroad, by providing plant genetic resources and associated information to scientists and educators.

Accomplishments for 2013:

- A total of 32,958 accessions (13,685 in S-009 region) were distributed in 1,090 orders to users worldwide in 2013. Distributions were made to users in 47 states and 40 countries.
- The plant genetic resources collection totals 92,201 accessions of 1,558 species and 261 genera with 88.3% available for distribution and 97.1% backed up at Ft. Collins, CO.
- New 4C cold storage room was finished and an existing 4C room was converted to -18C increasing -18C storage space from 1,061 to 1,897 sq ft. This added almost 5,000 more accessions into -18C. Currently, 72,478 accessions or 79.8% of the collection are stored at -18 C. Seed longevity is improved by storage in -18 C rather than 4 C.
- Germination tests were conducted on 6,952 accessions. Since 2002 when germination testing began, tests have been conducted on 79,437 accessions (87.4% of collection).
- Oil content and antioxidants in the peanut mini core were quantified and year to year variability was determined by evaluating the accessions over a two year period.
- Tetraploid varieties were found to be closely related to the hexaploid sweetpotato by sequencing their plastid chloroplast genomes. Tetraploid varieties may provide a source of genes for introgression into cultivated sweetpotato via conventional or novel breeding.
- Seed oil content and fatty acid composition was determined for accessions of *Macrotyloma*, *Teramnus*, *Hibiscus*, and castor species.
- The clonal grass collection was reduced by removing redundant accessions, forming crossing blocks to obtain seeds from closely related clonal accessions, and removing clonal accessions that have existing seed in the collection.
- Genotyping-by-sequencing was conducted on 125 *Vigna* and 72 peanut accessions to evaluate genomic diversity, genetic relationships, and develop new SNP markers.
- Due to the susceptibility of most peanut accessions to tomato spotted wilt virus at Georgia regeneration sites, peanut regenerations were successfully conducted with cooperators in south Georgia, Florida, North Carolina, Oklahoma, and New Mexico.
- A plant collection trip was conducted in Georgia, North Carolina, and South Carolina adding 27 new switchgrass accessions to the collection for bioenergy research.
- All available S-009 annual reports and minutes since 1949 are now posted as searchable PDF files online (www.ars.usda.gov/Main/docs.htm?docid=9592).

Financial Situation: Sequestration greatly impacted the location's financial situation with a reduction of \$178,779 in base FY2013 federal funds. All temporary personnel were terminated; thereby reducing seed distribution efficiency and creating a greater workload on federal and S-009 employees. It took as long as 8-9 weeks for requests to be reach users rather than the

previous 2-3 weeks. ARS Office of National Programs provided \$90,000 in temporary funding for FY2013 and again in FY2014 to cover essential expenses. The Vigna curator (Roy Pittman) and technician (James Chalkley) retired at the end of 2013. Their positions were terminated with duties taken on by the legume curator (Brad Morris). The Unit has received support in 2013-2014 from grants by the Sorghum Checkoff Program (\$100,000), Peanut Foundation (totaling \$57,000), and MARS, Inc. (\$20,000). The FY2014 federal allocation for the Griffin location, announced in March 2014, included a \$270,000 increase in base FY2014 federal funds which will greatly help the Unit's financial situation.

S-009 Budget Request

Increase the S-009 FY2015 personnel budget in the amount of \$6,042 for a total S-009 budget of \$438,083. This request reflects a 2% increase in University of Georgia salaries. The state budget has not yet been decided; however the salary increase is not expected to exceed 2%. (Note: This is the first salary increase at the University of Georgia since 2010).

Action Requested: Approval of S-009 FY2015 Budget Request.

**PLANT GENETIC RESOURCES CONSERVATION AND UTILIZATION
FUNDING REQUEST FOR FY2015
TO THE SOUTHERN ASSOC. OF STATE AGRIC. EXPT STATION DIRECTORS**

A. S-009 Budget	REQUESTED		
	FY2013	FY2014	FY2015
Personnel	\$338,349 ^a	\$352,349 ^a	\$358,709 ^a
Travel	1,000	1,000	1,000
Operations	78,374	78,374	78,374
TOTAL	\$417,723	\$431,723	\$438,083
B. USDA/ARS Budget	PROJECTED		
	FY2013	FY2014	FY2015
Personnel	\$1,727,338	\$1,657,180 ^e	\$1,623,292 ^e
Travel	15,760	8,224	20,537
Indirect Research Cost/ Other Services ^b	380,458	358,704	433,712
Operations	23,397	385,565	240,520
Equipment	21,950 ^c	10,000	10,000
Building and Field Maintenance/Support	79,361	80,578	82,190
TOTAL	\$2,248,264^d	\$2,500,251^f	\$2,410,251

^a Does not include salary compression funds received in FY2013 and FY2014 from University of Georgia.

^b Includes R&M at 2% of FY2013, 1% of FY2014, and 4% of FY2015 total funds.

^c Includes \$21,950 in temporary funding for seed storage trays and heavy-duty 20ft trailer.

^d Includes \$178,779 permanent reduction due to sequestration and \$90,000 in temporary funding to offset reduction.

^e Includes 1% salary increase in FY14 and FY15 and termination of Vigna curator and technician positions.

^f Includes \$270,000 permanent funding increase and \$90,000 in temporary funding to offset sequestration reduction.