

**S-009 Regional Technical Advisory Committee
Minutes of Annual Meeting July 30-31 2013**

**Research and Education Garden Building
University of Georgia Griffin Campus
Griffin, GA**

Members present:

Florida (University of Florida) Kevin Kenworthy kenworth@ufl.edu
Georgia (University of Georgia) Paul Raymer praymer@uga.edu
Guam (University of Guam) Mari Marutani marutani@uguam.uog.edu
Kentucky (University of Kentucky) Tim Phillips tim.phillips@uky.edu
Mississippi (Mississippi State University) Brian Baldwin bbaldwin@pss.msstate.edu
North Carolina (North Carolina State University) Tom Stalker tom_stalker@ncsu.edu
South Carolina (Clemson University) Stephen Kresovich skresov@clemson.edu
Virgin Islands (University of the Virgin Islands) Tom Zimmerman tzimmer@live.uvi.edu

Members absent:

Alabama (Auburn University) Edzard van Sariten vandedza@auburn.edu
Arkansas (University of Arkansas) James Correll jcorrell@uark.edu
Hawaii (University of Hawaii) [vacant]
Louisiana (Louisiana State University) Don LaBonte dlabonte@agcenter.lsu.edu
Oklahoma (Oklahoma State University) Yanqi Wu yanqi.wu@okstate.edu
Puerto Rico (University of Puerto Rico) Bryan Brunner brbrunner@yahoo.com
Tennessee (University of Tennessee) Fred Allen allenf@utk.edu
Texas (Texas A&M University) Gerald Smith g-smith@tamu.edu
Virginia (Virginia Tech) Richard Veilleux potato@vt.edu

USDA, ARS, PGRCU representatives present:

PGRCU, Griffin, GA Gary Pederson gary.pederson@ars.usda.gov
PGRCU, Griffin, GA Roy Pittman roy.pittman@ars.usda.gov
PGRCU, Griffin, GA Bob Jarret bob.jarret@ars.usda.gov
PGRCU, Griffin, GA John B. Morris brad.morris@ars.usda.edu
PGRCU, Griffin, GA Ming Li Wang mingli.wang@ars.usda.gov
PGRCU, Griffin, GA Noelle Barkley elle.barkley@ars.usda.gov
PGRCU, Griffin, GA Merrelyn Spinks Merrelyn.Spinks@ars.usda.gov
PGRCU, Griffin, GA Melanie Harrison-Dunn Melanie.harrisondunn@ars.usda.gov

Others present:

Administrative Advisor Gerald Arkin garkin@uga.edu
USDA-ARS, Beltsville, MD Peter Bretting peter.bretting@ars.usda.gov
USDA-ARS, Tifton, GA Brian Scully brian.scully@ars.usda.gov
Mississippi State University Brett Rushing jbr93@pss.msstate.edu

The meeting was called to order at the UGA-Griffin Research and Education Garden building at 1:05 p.m. by acting Chair Kevin Kenworthy. Due to weather and flight delays, Chair Mari Marutani was delayed by one day. Tom Zimmerman took the minutes as acting Secretary for Fred Allen who was on foreign travel. Each person in attendance introduced themselves and indicated the institution they were from.

Dr. Gerald Arkin, the administrative advisor for S-009 and liaison to the Southern Directors, welcomed those in attendance to the UGA Griffin campus. He emphasized that the S-009 plant germplasm program has been in existence since 1949 and that it has made important contributions to plant germplasm in the southern region as well as the rest of the country. He encouraged us to do a better job of outreach to the public of the importance and value of the program and our contribution to plant improvement through the use of the germplasm collection. He stated that by keeping the public informed of our work, they will follow with support. The UGA Griffin campus has followed this policy of outreach to the public. The UGA Griffin campus has five colleges offering degrees and will be adding a new Food Technology Center that is supported by the Griffin community through a SPLOST tax.

The minutes from the 2012 meeting were discussed. A motion to approve the 2012 minutes was made by Paul Raymer and seconded by Brian Baldwin. The motion passed. Since both the Chair and Secretary were not present, Kevin Kenworthy moved to extend their term another year. Tom Zimmerman seconded the motion and it was unanimously approved.

Dr. Peter Bretting, Office of National Programs, gave an overview of what had taken place this past year (Appendix 1). There was a loss of two members from the NGRL Database Management Unit in Beltsville due to untimely deaths. USDA/ARS researchers at the NGRL, Beltsville and collaborators from the University de San Carlos in Guatemala, Bioersity International, and CIAT completed the Guatemalan Atlas of Crop Wild Relatives which provides detailed information on 105 species of wild plant that are related to 29 different crops. The sequestration resulted in a 7.8% reduction in funding for FY2013. There was hope expressed that the cuts would be restored and \$600,000 added to the 2014 budget. The 30 Crop Germplasm Committees are working toward standardization. A crop vulnerability statement outline is in progress with apple that could be developed into a journal publication. The National Genetic Resources Advisory Council (NGRAC), which consists of private and public members, met for the first time in 14 years. The NGRAC will advise on ways to ensure NGRP serves the needs of all farmers for high quality diverse seeds. NGRAC is also interested in genetic resources and GMOs as well as purity of germplasm and how to monitor seed purity. Alfalfa was deregulated again which now makes 20 deregulated crop plants. Regarding international germplasm issues, Tom Stalker asked if national and international issues were to be dealt with in the future. There seemed to be a problem with ICRISAT in that it won't send peanut material to curators or allow gene bank to gene bank exchange, but only sends material to researchers. Peter will investigate this international exchange issue.

Dr. Gerald Arkin spoke on the National Plant Germplasm Coordinating Committee (NPGCC) that meets yearly with representation germplasm collection and plant breeders. He mentioned concern with regard to duplication of activities between NPGCC and NGRAC but explained that they each deal with similar issues but at different levels.

Dr. Gary Pederson informed the group that the S-009 project was renewed for five years, through 2018. It was not possible to renew for ten years as had been done with the previous S-009 project due to NIFA guidelines. Gary provided summary of the PGRCU activities for the year (Appendix 2). Total plant accessions at the Griffin location, 92,180 with 81,022 (87.9%) available for distribution and 89,061 accessions backed up in Colorado. Some significant distributions include: 1,496 cowpea; 6,232 peppers; 526 sweet potato in tissue culture; 1,637 sesame; 1,818 warm season grasses; and 17,165 sorghum. GRIN contains over 18,614 digital images representing 20.2% of the collections. There are 67,806 accessions in -18C storage representing 74.6% of the collection. Regenerations occurred at the Griffin

location as well as through cooperation with others in Puerto Rico, St Croix, Florida, Oklahoma, North Carolina, Georgia and New Mexico. A new 4 C cold room (20' x 30') was constructed and the previous 4 C cold room converted to -18 C expanding the total -18 C space from 1,061 sq ft to 1,897 sq ft. A field day, with outreach to Master Gardeners, was set for August 21. During the discussion of his report, Tom Stalker inquired about the policy for acquiring new genetic peanut material.

The meeting was adjourned at 4:00 pm and reconvened July 31 at 8:35 a.m. Due to heavy rains the scheduled tour was delayed until after the business meeting and state reports. Tom Stalker asked what the primary mission of the unit was. Gary stated that the primary mission is plant germplasm maintenance and preservation, followed by germplasm regeneration, then germplasm distribution and finally germplasm characterization. The federal budget was greatly discussed and the impact of sequestration's effect on the Griffin unit (Appendix 3). A major impact has been the loss of temporary employees. The unit is behind in updating GRIN information. Due to the loss of temporary employees, distributions now take up to eight weeks to complete. Curation (Cat. 4 position) requires less funding than a Cat. 1 Research Scientist position. Curators are not required to publish research but a Cat. 1 scientist must publish each year. The federal budget at PGRCU has less flexibility than that of other germplasm units, because there is only one ARS Unit at this location. The fiscal year begins October 1 but often budgets are not available until March. Then there is a flurry of activity to spend out funds by the year's end. The following summarizes the points made during the discussion:

1. Contact the Area director about using Research Support Agreements for personnel.
2. Approach seed companies/commodity groups about funding (i.e. Sorghum Check Off program)
3. Continue working with universities for regeneration
4. Don't plant anything for 1 year or plant less in a year
5. Use Master Gardener volunteers
6. Charge for accessions
7. Acquire donations, but have them routed through the state for use.

State oral reports were given from each state and territory including: Florida, Georgia, Guam, Kentucky, Mississippi, North Carolina, South Carolina and US Virgin Islands. In the Florida report, the maize group released 8,000 new lines for functional genomics research. Discussion on the potential handling of this material indicated that corn requires 10,000 seeds. Suggested release as a population and not individual lines. During the North Carolina report, a multistate project is being conducted to create 6,400 recombinant inbred lines plus 3,000 mutant peanuts. Discussion centered on the possible handling of this peanut material. Curators and CGC determine acceptance but concern was expressed on space availability in Griffin if given this material. A seed increase to 5,000 seeds would be needed. Traditionally breeding lines aren't taken but only wild and released lines. With 5,000 seeds they could be held for a limited time or until the seed stock is exhausted but wouldn't be increased.

During the business meeting, discussion of the next TAC S-009 meeting focused on conflicts with ASHS or NAPB meetings. The dates of July 22-23, 2014 were chosen for the next S-009 meeting in Griffin, GA. Tom Zimmerman brought up the issuing of certificates of appreciation to the retiring members of the S-009 committee. When put to a vote, five were in favor and five were against the issuing of certificates, so the measure failed. Following the adjournment of the S-009 meeting at 10:06 a.m., a tour of the facilities was conducted between light showers of rain.

Thomas Zimmerman
Acting S-009 Secretary

Appendix 1

DR. PETER BRETTING

2013 OFFICE OF NATIONAL PROGRAMS REPORT

2013 OFFICE OF NATIONAL PROGRAMS REPORT
FOR THE U. S. NATIONAL PLANT GERMPLASM SYSTEM
OFFICE OF NATIONAL PROGRAMS, NATIONAL PROGRAM 301: PLANT GENETIC RESOURCES,
GENOMICS, AND GENETIC IMPROVEMENT
(PETER BRETTING, JOSÉ COSTA, JACK OKAMURO, SALLY SCHNEIDER,
ROY SCOTT, GAIL WISLER, DA KAY SIMMONS)

1 Personnel changes:

- 1.1 Farewell and best wishes to Dave Ellis, who left the NCGRP in Ft. Collins, CO to curate the potato and sweet potato genebank in CIP, Peru; and to Molly Welsh, who retired as the Phaseolus curator at the WRPIS, Pullman, WA. We mourn the loss of Mark Bohning and Gorm Emberland, both staff members of the NGR L Database Management Unit, Beltsville, MD.
- 1.2 Welcome to Carolyn DeBuse, new Prunus curator at the NCGR-Davis; Josef Pohl, new IT specialist at the NCGRP, Ft Collins; and José Costa, new NPL for Grain Crops, ONP.

2 Site developments and changes:

- 2.1 Researchers at the USDA/ARS NERPIS at Geneva, New York applied new statistical genetic approaches to identify, from tomato breeding stock, latent genes that originated from tomato wild relatives. They uncovered not only genes from wild relatives introduced into tomato through deliberate breeding, but also other genes genetically-linked to the target traits. Previously-unrecognized hybridizations in nature between tomato and wild relatives were identified. These results will enable these genes from tomato wild relatives to be characterized, and tomato genetic resources more effectively conserved and utilized in breeding.
- 2.2 USDA/ARS researchers at the NGR L Beltsville and collaborators from the University de San Carlos in Guatemala, Bioversity International, and the International Center for Tropical Agriculture (CIAT) completed the Guatemalan Atlas of Crop Wild Relatives. The Atlas provides detailed information on 105 species of wild plants--related to 29 different crops--which will support genetic resource conservation efforts. Because Guatemala and adjacent nations are very rich in plant biodiversity, these efforts will also support global efforts to conserve plant genetic resources. Available at <http://www.ars.usda.gov/ba/atlas/wrguatemala>
- 2.3 USDA/ARS researchers at the WPRIS in Pullman, WA; Children's Nutrition Research Center in Houston, TX; and their university collaborators analyzed the genetic diversity, population structure and genome-wide marker-trait association with seed nutrients for pea (Pisum) accessions in the NPGS pea core subset, identifying 28 significant marker-trait associations for eight of the seed mineral nutrient concentrations, including Ca, Cu, K, Mo, Ni and P. This information could help breeders implement marker-assisted selection in pea for improved mineral nutrient content.

2.4 The USDA/ARS NCRPIS, ONP, and OCIO partnered with the Oregon State University PRISM group and Esri, Inc. to deliver an updated edition of the USDA Plant Hardiness Zone Map (PHZM) on the web at

<http://planthardiness.ars.usda.gov/PHZMWeb/> Unlike prior editions, the new PHZM is GIS-based, identifies the PHZ for any zip code, and includes an interactive map for exploring variation in PHZ with the resolution of 800 m.

3 Budgets:

The current Administration's research priorities for USDA include climate change, food safety, children's nutrition/health, international food security, and bioenergy.

ARS has implemented the Consolidated and Further Continuing Appropriations Act, 2013 (FY 2013 appropriations) which includes rescissions and other reductions to the ARS's budget due to sequestration. The President's FY 2014 budget proposal, presented on 10 April 2013, would increase ARS's funding by about 2.7% above the FY 2012 appropriated funding level, and specifically would increase the NPGS's budget by \$581,000. The House Agriculture Appropriations Subcommittee "mark-up" the FY 2014 budget would provide a 5.6% increase above the enacted FY 2013 operating level, which translates to a total that is 2% lower than the FY 2012 appropriated funding level. The Senate Agriculture Appropriation Committee "mark-up" of the FY 2014 budget would provide a 10.7% increase above the enacted FY 2013 operating level, which would increase ARS's budget by about 2% above the FY 2012 appropriated funding level.

4 National Programs:

ARS's research portfolio is organized as a series of 17 national programs. Plant and microbial genetic resource management, genetic improvement, genomics, molecular and biological processes, biotechnology risk assessment, bioinformatics, and genome database management are incorporated into National Program 301 (see the WWW at: <http://www.nps.ars.usda.gov/programs/programs.htm?NPNUMBER=301>). NP 301 recently completed its second five year cycle. Based on customer/stakeholder comments, the NP 301 Action Plan, and other input, ARS researchers developed individual Project Plans for its third five-year cycle, 2013-2017. More than 92% of the individual NP 301 Project Plans received "passing grades" during initial external reviews, and will now proceed to implementation.

5 National Plant Germplasm Coordination Committee (NPGCC):

The NPGCC seeks to promote a stronger, more efficient, more widely-recognized and better utilized NPGS. Its goals are to facilitate the coordination of ARS, NIFA and SAES planning and assessment mechanisms for NPGS policy, organization, operations and support; promote awareness and understanding of the NPGS across ARS, NIFA, and SAES and more broadly to the scientific community; and serve as a vehicle for

improving communications and discussions about issues impacting the NPGS with ARS, SAES, and NIFA. It will assess, develop and recommend to the SAES, ARS and NIFA strategies for improved coordination of NPGS activities; develop and recommend a process for improved communication of the value of the NPGS; initiate a strategic planning effort for the NPGS to better define and communicate the vision, mission and short- and long-term goals; and to evaluate the current funding models for the NPGS and report findings to the SAES directors, ARS and NIFA.

The current members of the NPGCC are T. Burr (Cornell University-SAES), Chair; E. Young (Executive Director, Southern Region), Secretary; L. Sommers (Colorado State-SAES), J. Colletti (Iowa State-SAES); G. Arkin (University of Georgia-SAES); A. M. Thro (NIFA); E. Kaleikau (NIFA); P. S. Benepal (NIFA); P. Bretting (ARS-Office of National Programs); D. Upchurch (ARS-Southern Plains Area); and G. Pederson (ARS-Griffin). Representatives of the Association of Official Seed Certifying Agencies (AOSCA--Chet Boruff); the American Seed Trade Association (ASTA—Tim Cupka); and the National Association of Plant Breeders (NAPB, David Baltensperger) attend the annual NPGCC meetings as observers.

NPGCC members made a joint presentation on the NPGS to the 2006 Experiment Station Section/State Agricultural Experiment Station/Agricultural Research Directors Workshop September 24-27, 2006. That presentation, plus testimonials from key Directors about the NPGS's value, increased the NPGS's visibility to this important group. In May 2007, the NPGCC recommended to the National Research Support Project Review Committee that it recommend restoring off-the-top funds designated for NRSP-5 (the Prosser, WA virus-free pome and stone fruit project) and NRSP-6 (the potato genebank project at Sturgeon Bay, WI) to their FY 06 levels to sustain these valuable efforts. Since then, funding for NRSP-5 has been assumed by the National Clean Plant Network. Support for NRSP-6 has been maintained at the FY 06 level since then. The NPGCC met on June 5, 2008, in conjunction with the annual PGOC and biennial CGC Chairs meetings. It discussed the NPGS's budget levels, funding for NRSP-5 and NRSP-6, the location of crop collections, and mechanisms for publicizing the NPGS. Similarly, the NPGCC met on 23-24 June 2009, 9 June 2010, 16-17 June 2011, 12 June 2012, and 13-14 June 2013 in Beltsville, MD to continue its work on these priority issues.

6 International germplasm items:

The FAO International Treaty (IT) for Plant Genetic Resources for Food and Agriculture came into force on 29 June 2004, and beginning in 2007 its standard material transfer agreement (SMTA) for plant genetic resource exchange was adopted by Parties to the IT and the CGIAR Centers for distributing plant genetic resources. On 7 July 2008, the White House transmitted the IT to the Senate; ratification would require the advice and consent of a 2/3 majority of the Senate. The Senate Foreign Relations Committee (SFRC) held hearings on the IT on 10 November 2009. During their last Business Meeting of the 111th Congress (30 November 2010), the SFRC voted the IT out of committee, for consideration by the full Senate. Unfortunately, the Senate adjourned on

22 December 2010 without voting on the IT. It is uncertain whether the SFRC will schedule new hearings on the IT during 2013, which might enable vote for consent (or not) to IT ratification to occur during the 113th Congress.

Concurrently, the Convention on Biodiversity (CBD) adopted the voluntary, non-binding Bonn Guidelines on Access and Benefit-Sharing during the sixth Conference of Parties (COP-6) of the CBD at The Hague in April 2002. Starting in 2006, Parties to the CBD began negotiating what became the legally-binding Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization. Adopted by the COP-10 on 29 Oct. 2010, the Nagoya Protocol is quite complicated, with many ambiguous components; its ramifications are currently under analysis (see <http://ictsd.org/downloads/2010/11/abs-protocol.pdf> for the text).

The preceding developments at FAO and with the CBD will substantially affect international exchange of plant genetic resources, and the NPGS, whether or not the U. S. is ultimately a Party to either or both treaties. Precisely how these treaties will affect U. S. users of germplasm depends on the treaties' implementations.

7 **National Genetic Resources Advisory Council (NGRAC):**

The National Genetic Resources Advisory Council (NGRAC) includes nine members, was originally established by the 1990 Farm Bill, and had been inactive since 1999. Secretary of Agriculture Vilsack re-established the NGRAC in 2012 to formulate recommendations on actions and policies for the collection, maintenance, and utilization of genetic resources; to make recommendations for coordination of genetic resources plans of several domestic and international organizations; and to advise the Secretary of Agriculture and the National Genetic Resources Program (NGRP) Director of new and innovative approaches to genetic resources conservation. The NGRAC will advise on ways to ensure that the NGRP serves the needs of all farmers for high-quality and diverse seed (both genetically engineered and non-genetically engineered) for their particular farming operations. The NGRAC will also advise on how the USDA can develop a broad strategy for maintaining plant biodiversity available to agriculture, and strengthening public sector plant breeding capacities.

Last year, the NGRAC held an initial organizational teleconference, and its first meeting occurred in Beltsville 5-6 March 2013. The members of the NGRAC include Drs. Manjit Misra (Chair, Iowa State University), Jane Dever (Texas A & M), Karen Moldenhauer (University of Arkansas), Stephen Smith (DuPont Pioneer), Allison Snow (The Ohio State University), Mulumebet Worku (North Carolina A & T), Mr. Matthew Dillon (Seed Matters, Clif Bar Family Foundation), Dr. Herman Warren (Warren and Associates Seeds), and Mr. Terry Williams (Tulalip Tribes). Ex officio members include Drs. Gary Pederson (ARS-Griffin), and Peter Bretting (ARS-ONP), and representatives from other Federal science and technology agencies.

Orientation to Crop Vulnerability Statements

Crop vulnerability statements (CVS) communicate periodic assessments of the challenges that crops face, particularly from reduced genetic diversity resulting from genetic erosion. Collections of genetic resources are key mechanism for reducing crop vulnerability resulting from genetic erosion and uniformity, and for supplying crop breeding and research programs with novel traits and underlying genes to satisfy evolving demands.

Crop vulnerability statements will be reviewed as part of the periodic (usually annual, sometimes biennial) Crop Germplasm Committee (CGC) meetings. During the CGC meetings, the crop-specific curators will be encouraged to communicate a status update for the crop germplasm collection along the lines of CVS section 3 (see outline below).

After the CGC meetings, the CVS will be updated by the CGC chair, secretary, or designate, and submitted to the CGC for review along with the meeting minutes. After internal review by the CGC, the updated CVS text will be provided to the CGC Coordinator at the National Germplasm Resources Laboratory (NGRL). The updated CVS will then be posted on the GRIN-Global website for public access.

Following an initial update according to the outline below, the CVS might change relatively little from one year to another, but considerably over a multi-year time span. CGCs should conduct a more comprehensive assessment of current conditions every five or so years, focused particularly on updating CVS sections 2 and 5.

Maximum page lengths are suggested for the different sections of narrative text. Additional information in the form of text, tables, illustrations, etc. could be included as appendices to the narrative text.

Crop Vulnerability Statement Outline

Summary of key points (1 p. maximum)

- 1. Introduction to the crop (2 pp. maximum)**

- 1.1 Biological features and ecogeographical distribution
 - 1.2 Genetic base of crop production
 - 1.3 Primary products and their value (farmgate)
 - 1.4 Domestic and international crop production
 - 1.4.1 U.S. (regional geography)
 - 1.4.2 International
2. Urgency and extent of crop vulnerabilities and threats to food security (4 pp. maximum)
- 2.1 Genetic uniformity in the “standing crops” and varietal life spans
 - 2.2 Threats of genetic erosion in situ
 - 2.3 Current and emerging biotic, abiotic, production, dietary, and accessibility threats and needs
 - 2.3.1 Biotic (diseases, pests)
 - 2.3.2 Abiotic (environmental extremes, climate change)
 - 2.3.3 Production/demand (inability to meet market and population growth demands)
 - 2.3.4 Dietary (inability to meet key nutritional requirements)
 - 2.3.5 Accessibility (inability to gain access to needed plant genetic resources because of phytosanitary/quarantine issues, inadequate budgets, management capacities or legal and bureaucratic restrictions)
3. Status of plant genetic resources in the NPGS available for reducing genetic vulnerabilities (5 pp. maximum)
- 3.1 Germplasm collections and in situ reserves
 - 3.1.1 Holdings
 - 3.1.3 Genetic coverage and gaps
 - 3.1.3 Acquisitions
 - 3.1.4 Maintenance
 - 3.1.5 Regeneration
 - 3.1.6 Distributions and outreach
 - 3.2 Associated information
 - 3.2.1 Genebank and/or crop-specific web site(s)
 - 3.2.2 Passport information
 - 3.2.3 Genotypic characterization data
 - 3.2.4 Phenotypic evaluation data
 - 3.3 Plant genetic resource research associated with the NPGS

Appendix 2

DR. GARY PEDERSON

PLANT GENETIC RESOURCES:
CURRENT STATUS

Plant Genetic Resources: Current Status

Gary A. Pederson

USDA, ARS, Plant Genetic Resources
Conservation Unit

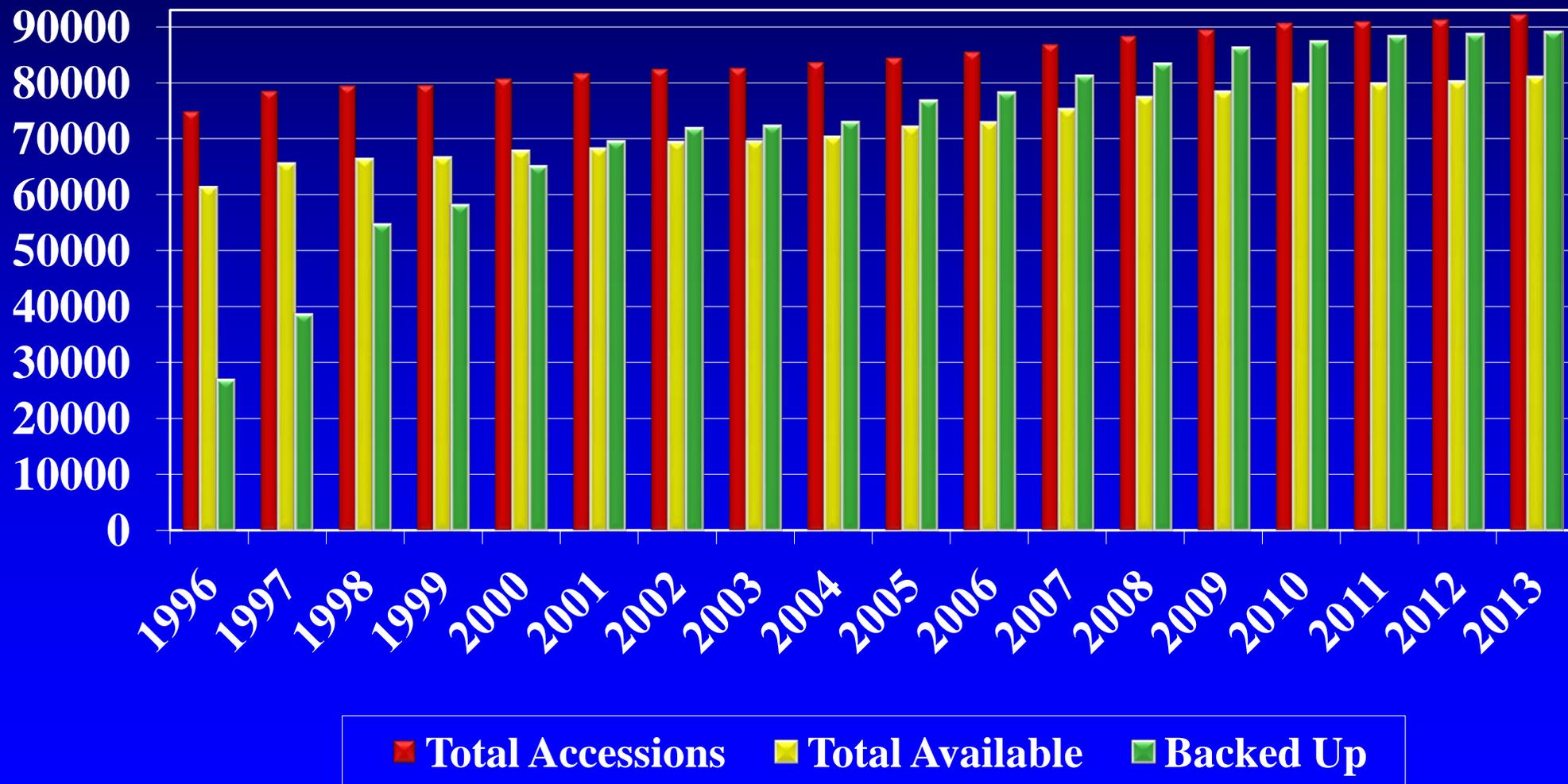
Griffin, GA

PGRCU Collection - June 2013

- Total Accessions
 - 92,180
- Total Available
 - 81,022 (87.9%)
- Backed Up
 - 89,061 (96.6%)

Acknowledgement: Merrelyn Spinks and Lee Ann Chalkley, PGRCU, compiled and summarized all numbers shown in this presentation.

PGRCU Collection 1996 - 2013



Vigna

CURATOR	CROP	TOTAL ACCESSIONS	TOTAL AVAILABLE	NUMBER BACKED UP	ITEMS SHIPPED IN 2012
Roy Pittman	Cowpea	8,253	6,825	8,206	1,496
	Mung bean	4,232	3,845	4,232	411
	Other Vigna spp.	496	301	353	43

Vegetable Crops & Sweetpotato

CURATOR	CROP	TOTAL ACCESSIONS	TOTAL AVAILABLE	NUMBER BACKED UP	ITEMS SHIPPED IN 2012
Bob Jarret	Cucurbits	1,420	537	1,314	1,029
	Eggplant	1,020	914	1,006	332
	Okra	2,971	1,515	2,935	108
	Peppers	4,929	4,849	4,926	6,232
	Sweetpotato - tissue culture	766	734	681	526
	Other Ipomoea spp.	461	208	406	243
	Watermelon	1,908	1,518	1,876	5,317

Legumes and Misc. Crops

CURATOR	CROP	TOTAL ACCESSIONS	TOTAL AVAILABLE	NUMBER BACKED UP	ITEMS SHIPPED IN 2012
Brad Morris	Castor bean	377	168	376	41
	Hibiscus	340	278	338	595
	Legumes	3,082	2,322	2,996	261
	Guar, Winged Bean, Misc	720	552	632	1,367
	Sesame	1,216	1,173	1,216	1,637

Warm-Season Grasses

CURATOR	CROP	TOTAL ACCESSIONS	TOTAL AVAILABLE	NUMBER BACKED UP	ITEMS SHIPPED IN 2012
Melanie Harrison- Dunn	Bamboo	96	96	2	12
	Grasses	7,454	6,116	7,014	1,818
	Pearl millet	1,320	1,269	1,320	468

Clover and Sorghum

CURATOR	CROP	TOTAL ACCESSIONS	TOTAL AVAILABLE	NUMBER BACKED UP	ITEMS SHIPPED IN 2012
Gary Pederson	Annual Clover	2,245	1,993	2,228	301
	Sorghum	38,175	36,827	36,879	17,165

Peanuts

CURATOR	CROP	TOTAL ACCESSIONS	TOTAL AVAILABLE	NUMBER BACKED UP	ITEMS SHIPPED IN 2012
Noelle Barkley	Cultivated Peanuts	9,321	8,165	9,062	715
	Wild Peanuts	617	424	395	106

Number (and %) of accessions that are unavailable

Crop	2012	2013	Crop	2012	2013
Cowpea	1,525 (18%)	1,428 (17%)	Hibiscus	57 (17%)	62 (18%)
Mung bean	382 (9%)	387 (9%)	Legumes	796 (26%)	760 (25%)
Cucurbits	867 (61%)	883 (62%)	Sesame	38 (3%)	43 (4%)
Eggplant	105 (10%)	106 (10%)	Grasses	1,212 (16%)	1,338 (18%)
Okra	1,447 (49%)	1,456 (49%)	Pearl millet	48 (4%)	51 (4%)
Peppers	82 (2%)	80 (2%)	Annual clover	387 (17%)	252 (11%)
Sweetpotato (TC)	25 (3%)	32 (4%)	Sorghum	1,236 (3%)	1,348 (4%)
Watermelon	345 (18%)	390 (20%)	Cultivated peanuts	1,170 (12%)	1,156 (12%)
Castor bean	206 (55%)	209 (55%)	Wild peanuts	199 (33%)	193 (31%)
			TOTAL	11,117 (12%)	11,158 (12%)

Digital photos

Crop	Images
Sorghum	8,959
Cowpea	2,208
Watermelon	1,825
Pepper	1,789
Grass	1,086
Cucurbit	827
Peanut	662
Pearl millet	451
Other crops	447
Total (+220)	18,614 (20.2%)

Germination Testing

(Accessions with seed only, tested since 2002)

Crop	Accessions	%	Crop	Accessions	%
Sorghum	33,001	86.4	Clover	1,990	88.6
Peanut	8,365	89.7	Okra	1,756	59.1
Cowpea	7,155	86.7	Watermelon	1,755	92.0
Pepper	4,892	99.2	Pearl millet	1,297	98.3
Grass	4,869	65.3	Sesame	1,211	99.6
Mung bean	3,928	92.8	Eggplant	939	92.0
Legume	2,400	77.9	Cucurbit	699	49.2
			TOTAL	76,698	84.4

Accessions in -18 C storage

(Accessions with seeds only, seed splitting initiated in 2001)

Crop	Accessions	%	Crop	Accessions	%
Sorghum	27,761	72.7	Watermelon	1,907	99.9
Grasses	6,910	97.5	Cucurbits	1,404	98.9
Peanuts *	6,161	66.1	Sesame	1,216	100.0
Peppers	4,924	99.9	Eggplant	1,018	99.8
Mung bean	4,074	96.3	Cowpea	838	10.2
Legumes	3,078	99.9	Gourds	477	99.0
Okra	2,971	100.0	Ipomoea spp.	454	98.5
Clover	2,218	98.8	TOTAL	67,806	74.6

*Rest of peanut accessions (3,160) are in foil bags and will be in -18 C as soon as existing 4C cold room is converted to -18C.

Requested for regeneration in CY2013

Crop	# accessions	Crop	# accessions
Cowpea	94	Grasses	289
Sorghum	1,213	Legumes	181
Cucurbit	75	Wingbean	8
Clovers	63	Cult peanut	1,756
Peppers	151	Wild peanut	55
Sesame	8	Hibiscus	5
Ipomoea sp.	9	Castor bean	5
Watermelon	102	Misc crops	24
Pearl millet	46		

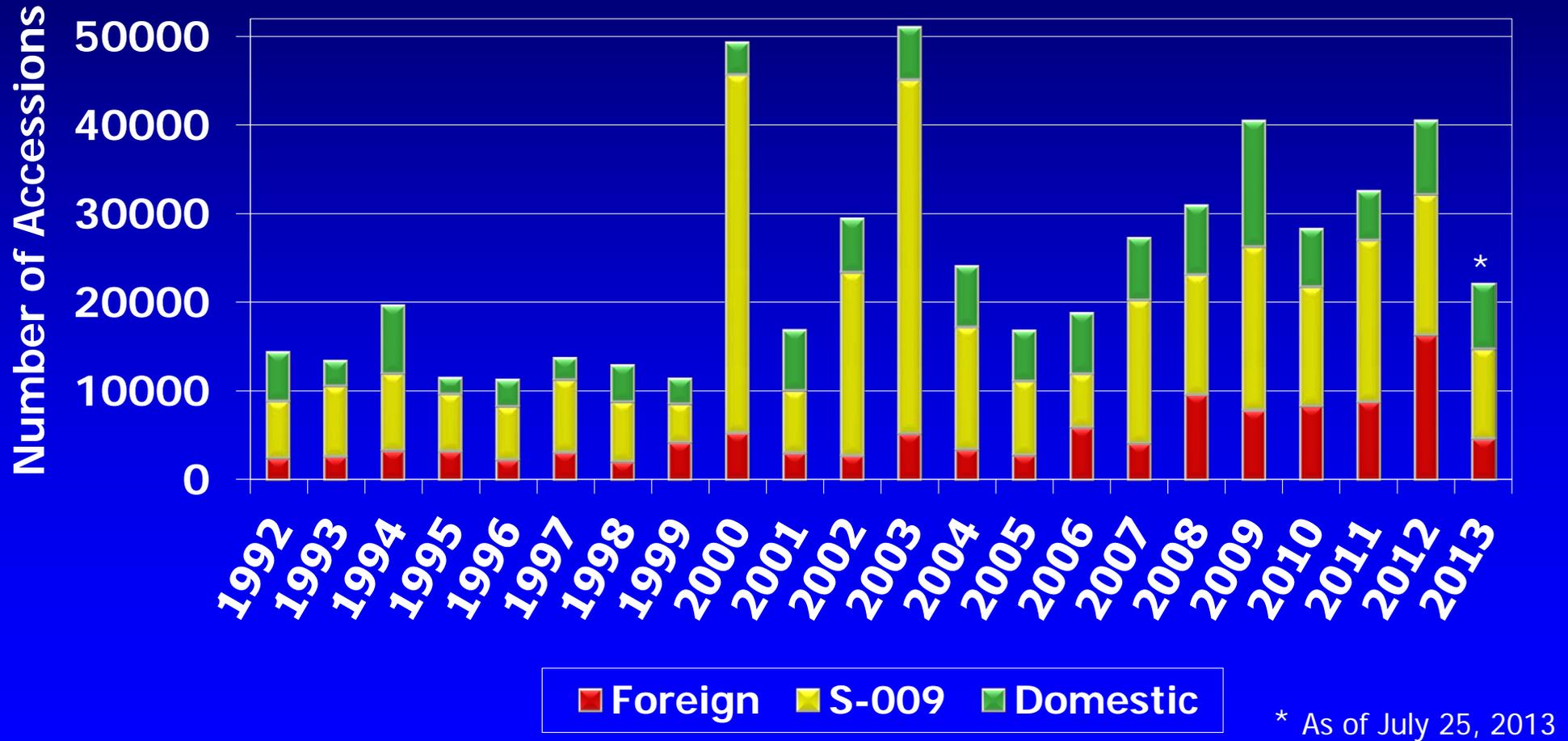
Regenerations by others in CY2013

- 17 sorghum, 50 cowpea, 4 cucurbit, and 2 *Ipomoea batatas* accessions
 - R. Goenaga, USDA, ARS, Puerto Rico
- 2,515 sorghum, 19 legume, & 18 pearl millet accessions
 - A. Quiles, USDA, ARS, St. Croix
- 510 peanut accessions
 - 59 accessions, J. McKinney, Univ. Florida, Citra, FL
 - 73 accessions, K. Chamberlin, USDA, ARS, Stillwater, OK
 - 100 accessions, C. Holbrook, USDA
 - 111 accessions, T. Isleib, North Carolina State Univ., Raleigh, NC
 - 96 accessions, K. Moore, AgResearch Consultants, Sumner, GA (TX nursery)
 - 71 accessions, N. Puppala, New Mexico State Univ., Clovis, NM
- 73 wild peanut accessions
 - T. Stalker, North Carolina State Univ., Raleigh, NC

Distributions in CY2012

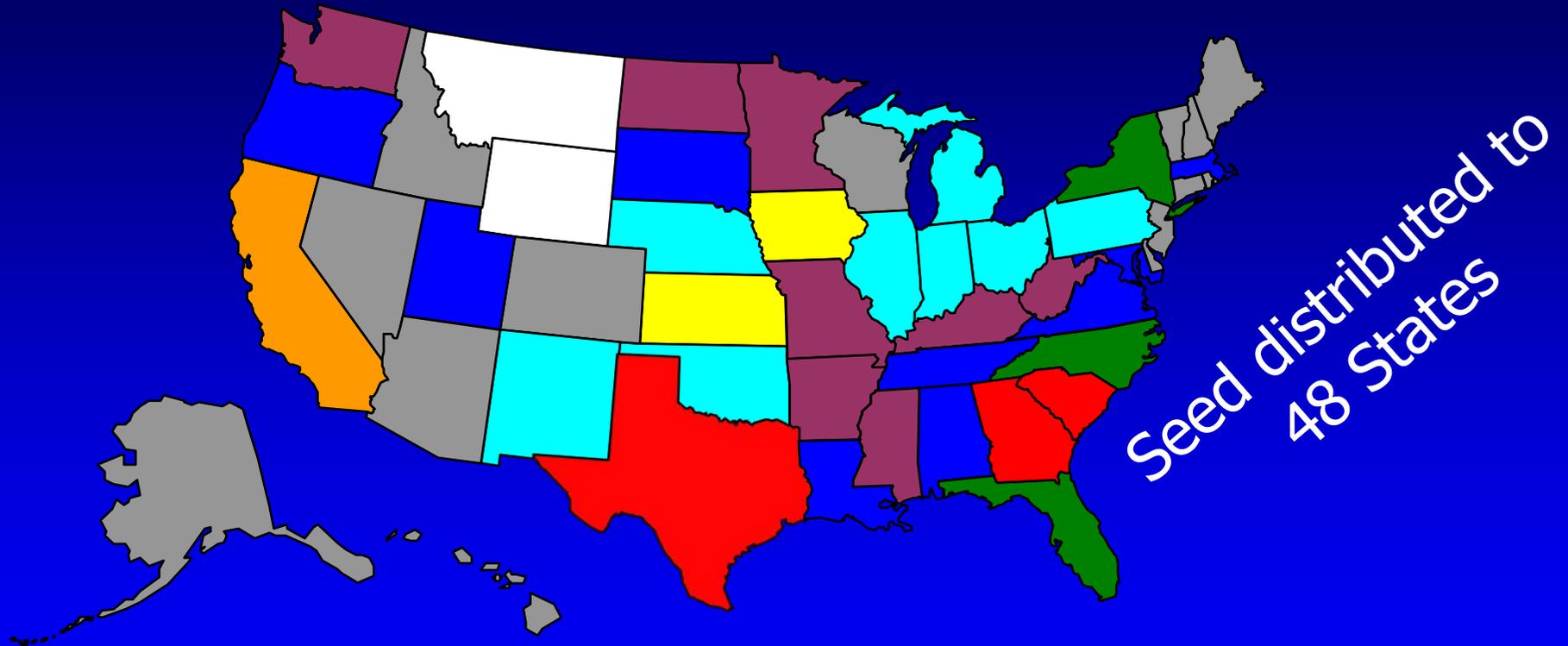
- Domestic = 24,146 items in 871 orders
 - S-9 region = 15,802 items
- Foreign = 16,319 items in 210 orders
- Total CY2012 distributions = 40,465 items

Distributions



* As of July 25, 2013

Domestic Distributions in CY2012



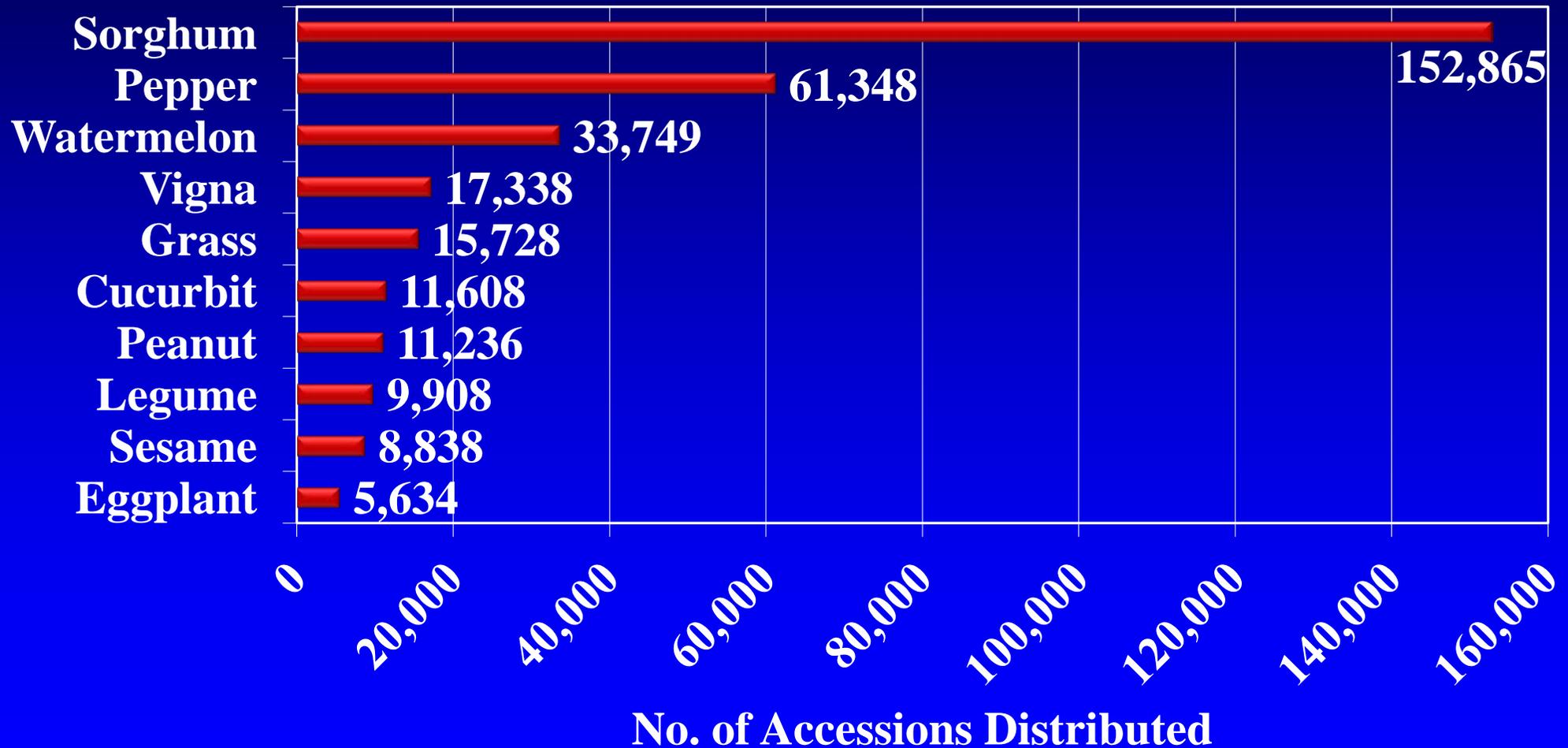
Total number of accessions by state



Distributions outside of 50 U.S. states in CY2012

Algeria	Czech Rep	India	New Zealand	United Arab Emirates
Argentina	Dominican Rep	Indonesia	Pakistan	United Kingdom
Australia	Egypt	Israel	Puerto Rico	Uruguay
Belarus	Ethiopia	Italy	Romania	Vietnam
Bolivia	France	Japan	South Africa	U.S. Virgin Islands
Brazil	Germany	Jordan	South Korea	
Bulgaria	Ghana	Mauritius	Spain	
Canada	Guam	Mexico	Thailand	
China	Honduras	Netherlands	Turkey	

Top 10 Crops Distributed 2002 - 2013



Building and Cold Room Construction

- ARS Seed Processing Building Addition

- Contains new 4 C cold room (20 x 30')
- Existing 4 C cold room in State Seed Storage building will be converted to -18 C during 2013
- Current -18 C seed storage space of 1,061 sq ft will be increased to 1,897 sq ft to house bulk seed of entire Griffin collection in -18 C



Facility Repair and Maintenance

Items completed

- Installed new workstations in Seed Storage Bldg.
- Installed mobile shelves in new 4C cold room.
- Replaced weather station that monitors weed speed and controls greenhouse vent operation.
- Replaced compressor for chiller unit in Headhouse Bldg.
- Replaced motor for chart recorder on -18C freezer.

Items underway

- Converting existing 4C cold room to -18C freezer (currently receiving bids. Project should be completed in 2013).
- Purchasing additional seed storage trays (currently receiving bids after initial company declined).

PGRCU Field Day – August 21, 2013

PLANT GENETIC RESOURCES CONSERVATION UNIT
S-009 MULTISTATE PROJECT

GRIFFIN, GEORGIA
AUG. 21, 2013

**WELCOME TO
FIELD DAY 2013**



Appendix 3

DR. GARY PEDERSON

PLANT GENETIC RESOURCES:
FINANCIAL STATUS

Plant Genetic Resources: Financial Status

Gary A. Pederson

USDA, ARS, Plant Genetic Resources
Conservation Unit

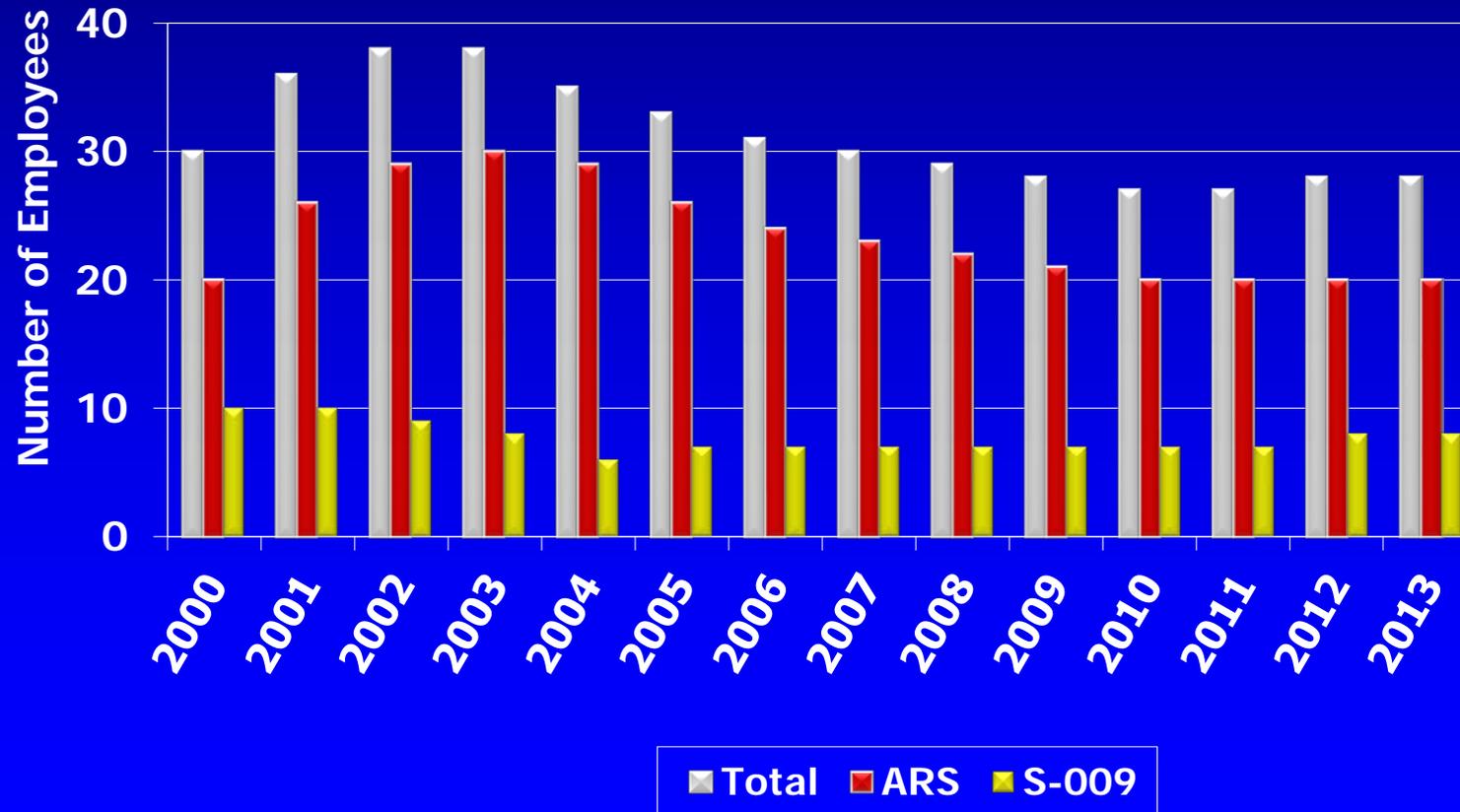
Griffin, GA

Total PGRCU Funding

- ARS base funding
 - FY2012 = \$2,318,940
 - FY2013 = \$2,140,251 (\$178,689 decrease)
 - FY2014 = \$2,140,251 (?)
- S-009 base funding
 - FY2012 = \$417,723
 - FY2013 = \$417,723
 - FY2014 = \$431,723 (\$14,000 increase)

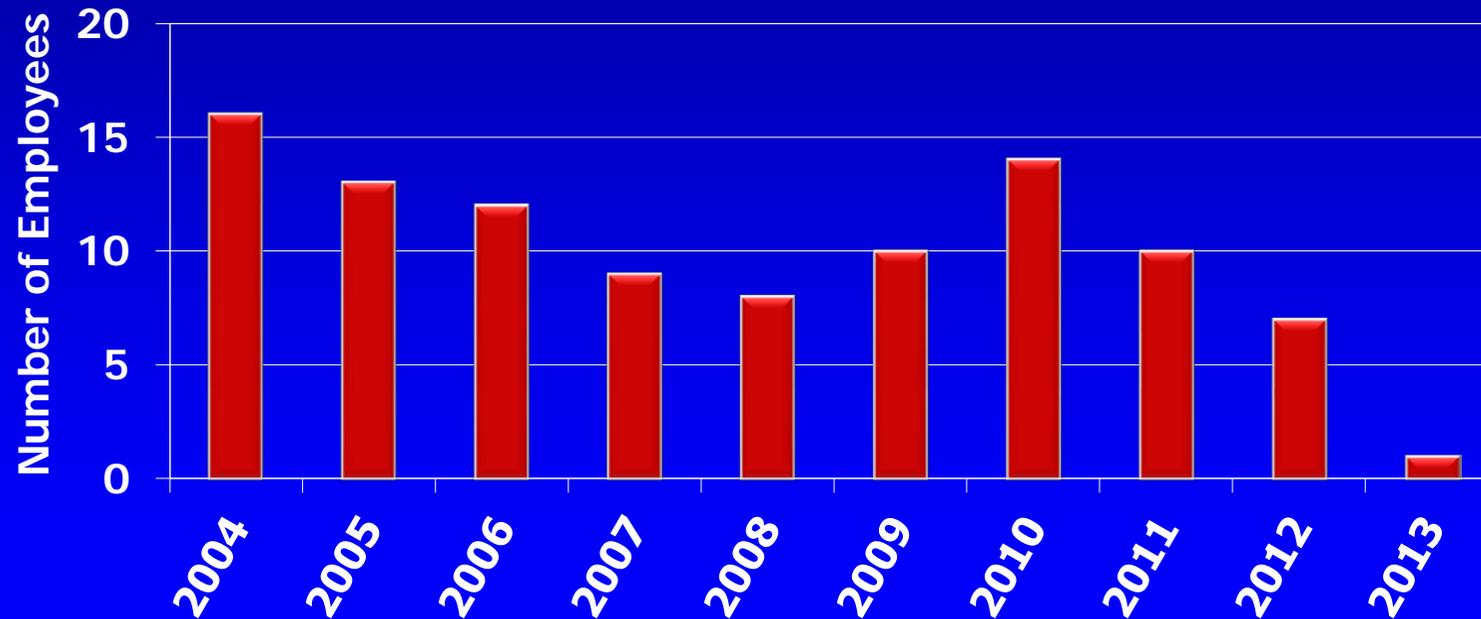
Staffing summary

- Current staff is 28 employees (20 ARS and 8 S-009)



Temporary Staffing summary

- S-009 temporary employees (seed room, field crew, curation, germination, laboratory, weekend watering)



ARS Funding

- All salaries frozen FY2011-FY2013
- Travel capped at 70% (now 67%) of FY2010 travel amounts
 - Includes work travel to plant and harvest regenerations at remote locations
 - Travel to major conferences restricted
 - Need USDA approval to attend major conferences
- Number of teleconferences increased
 - 2013 PGOOC teleconference

S-009 Funding

- All salaries frozen FY2010-FY2014
- State funds cannot be used to pay certain PGRCU expenses that are inherently federal
 - Federal salaries, travel, fuel for federal vehicles, publication charges, service contracts on federal equipment

Impact of FY2013 budget reduction - ARS -

- After budget reduction of \$178,689, federal salaries comprised 89.0% of ARS FY2013 budget.
 - No cash awards
- Travel was reduced to 31% of FY2010 actual travel.
- ARS would not allow furloughs or use of R&M funds (2%) for operations.
- Office of National Programs provided \$90,000 to help fund PGRCU ARS operations through FY2013.

Impact of FY2013 budget reduction

- S-009 -

- S-009 funds have not been reduced.
- All S-009 temporary positions (other than weekend watering) were terminated on Jan. 1, 2013.
 - Three seed storage positions
 - Two seed cleaning (total 750 hrs in 2012)
 - One seed cleaning, processing, assistance with seed orders (870 hrs in 2012)
 - One laboratory position
 - NMR operations conducting seed oil characterization (1,800 hrs in 2012)
 - Two field/greenhouse positions
 - Assist in curation operations (total 870 hrs in 2012)
- After terminating temporary positions (FTE = ~2.0), S-009 funds provide the majority of supplies to maintain PGRCU operations.

Impacts on FY2014 operations

- Any vacant position will be proposed for termination.
 - Upon retirement in 2014, Vigna curation position will be proposed to be combined with Misc. Legume curation position.
- Proposed travel reduced to 24% of FY2010 level.
- Service contracts reduced (1 visit instead of 2 visits/yr).
- Publications submitted to journals without page charges.
- Health evaluations limited to licensed pesticide applicators.
- Only one ARS computer will be replaced.
- Limited ARS supply funds will only cover federal fuel costs and meeting registrations.
- All other supply expenses will be funded by S-009.

Impacts on FY2014 operations

- Seed requests continue at 30,000-40,000 per year.
- Labor is limited to handle these seed requests and seed processing of regenerations.
- Cooperators should request accessions at least 8 weeks in advance of their need. (Also new GRIN-Global procedures)
- Seed processing of sorghum regenerations from St. Croix and other regenerations will continue at a reduced rate.
 - Over 2,400 sorghum accessions need to be cleaned and processed.
 - Regenerated accessions will not be available promptly.
 - Short term temporary labor may be hired.
- Seed availability will gradually be reduced over time.

Impacts on FY2014 operations

- Field regenerations will continue at present rate.
 - Seed will be stored until able to be processed.
- Few, if any, field characterizations or evaluations will be conducted.
- Bee pollinations will not be conducted.
 - Bee source is a state employee who can only be paid with ARS funds.
 - ARS Homeland Security is limiting access to Byron location. May be problem for all non-federal employees.
 - One cross-pollinated accession per species can be regenerated per location.
- Seed oil and fatty acid composition studies will be conducted at a reduced rate.

Summary

- With no further reductions in FY2014, ARS funding barely covers existing federal salaries and essential operations.
 - Temporary funding and grants help meet specific needs, but will not support all genebank operations over the long term.
- S-009 funding is essential to provide supplies and other operating expenses to continue regenerations and distributions.
- Storage in -18C provides viable seed supplies over a longer period of time without need for immediate regeneration.
 - This allows PGRCU to meet most distribution needs for the immediate future in these times of tight budgets.