PGOC, NRSP-6, and Regional Plant Introduction Stations Update

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Plant Germplasm Operations Committee June 7, 2012, Spokane, WA

- Joint meeting with 4th Curators workshop
- GRIN-Global discussion
 - Individual questions during poster session
 - Evening workshop during Curators meeting
 - PGOC presentation and discussion
- International cooperators
 - Mexico: New center for genetic resources completed May 2011;
 20,000 accessions; report on molecular service lab
 - Brazil: Summary of scientific exchanges between US and Brazil via LabEx.

Plant Germplasm Operations Committee

- Discussed NP301 review cycle of 5 year project plans. Project plans currently being written.
- PGOC Subcommittees
 - Subcommittee established on updating NPGS Procedures manual
 - Subcommittee reports on Acquisition and Distribution,
 GRIN molecular markers, Updating NPGS brochure,
 Georeferencing, Crop wild relatives, GMOs
 - Medicinal and non-research requests subcommittees completed their charge and were disbanded.

Plant Germplasm Operations Committee

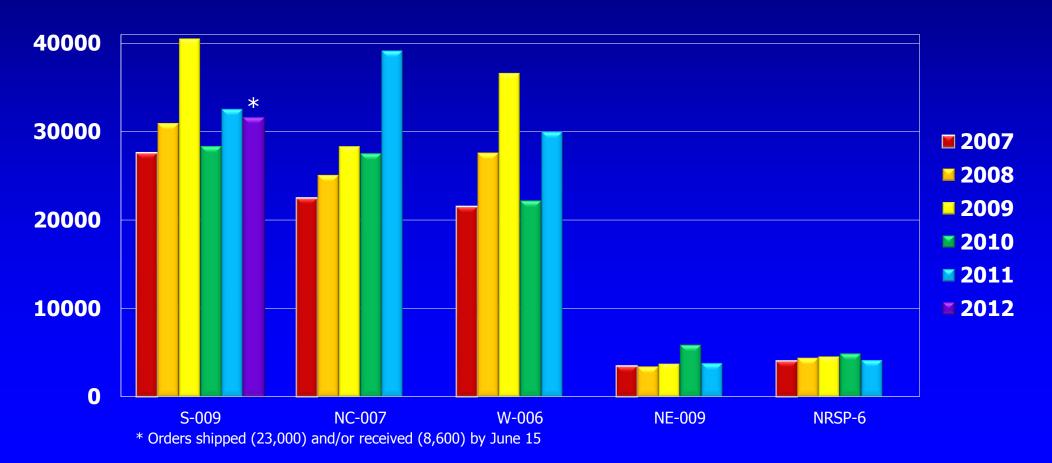
- Phytosanitary certificates
 - Cost went up from \$23 in 2008 to \$61 in 2012
 - Plant Exchange Office had been funding certificates for several locations, but no longer has the money to continue funding certificates for international distributions
 - Several locations have transferred funds to PEO during past two years
 - Motion passed after much discussion:
 - Beginning in F2014 for accessions shipped through Beltsville, ask international requestors to consider paying phytosanitary fees while making concessions for developing countries.
 - Fees for phytosanitary certificates paid directly to APHIS

Plant Germplasm Operations Committee

- Future PGOC meetings
 - No meeting in 2013 (30% federal travel reduction)
 - 2014 meeting
 - National Clonal Germplasm Repository for Fruit and Nut Crops, Davis, CA
 - Joint PGOC meeting with 5th Curators workshop

Distributions

 Over 1.12 million accessions and genetic stocks have been distributed in last 5 years by NPGS



NRSP-6

- Collected Solanum sp. in AZ, NM, and west TX
 - Found new sites for *S. jamesii* in NM and *S. fendleri* and *S. jamesii* in the Davis Mountains of west TX. Added 32 new accessions for the genebank.
- With Kemin Industries (IA), nearly doubled the concentration of an anti-appetite enzyme in potato tubers.
- With ARS (WA), selected yellow-fleshed clones to make a processed product not dependent on highacrylamide frying conditions for acceptable color.

NE-009

- In cooperation with NC State, evaluated tomato core set for numerous tomato flavor traits.
- Added 140 Malus sieversii accessions from Kazakhstan and distributed OP seeds from these accessions to U.S. and European breeders.
 - Evaluated for resistance to major apple diseases and various fruit traits
- Added fruit digital images and ploidy level of apple accessions to GRIN.
- Indexed all grape accessions for 10 major grape viruses.

NC-007

- Distributed large orders of maize inbreds for evaluation, sequencing, and association mapping studies; Brassica for genetic mapping projects; and Amaranthus for trait exploration.
- In collaboration with NC, MO, and NY ARS researchers, phenotyped 2,800 maize inbred lines in project to phenotype and genotype maize inbred collection.
- Worked with DBMU on development of Curator Tool of GRIN-Global.

W-006

- Acquired over 2,000 native plant accessions from Seeds of Success project with BLM.
- Distributed seeds to requestors from all 50 states in 2011.
- Surveyed alfalfa on roadsides in geneticallyengineered alfalfa production areas and found 7-15% of roadside populations had Roundup Ready transgene.
 - Measures implemented to prevent transgene contamination of alfalfa germplasm during regeneration.

S-009

- Completed installation of 4C cold storage room (21 x 30') in new building addition. Existing 4C room will be converted to -18C to enable bulk seed of entire collection to be housed in -18C.
- Characterized entire U.S. collections including:
 - Fatty acid content in castor bean and sesame
 - Seed oil content in watermelon
 - Ploidy level in St. Augustine and seashore paspalum
- All S-009 reports and minutes since 1949 are posted online as searchable PDF files (www.ars.usda.gov/Main/docs.htm?docid=9592)

Seed processing building at Griffin prior to addition



New addition prior to cold room



Cold room installed

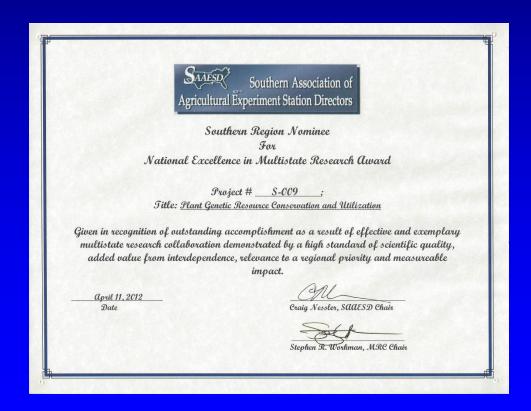


Moveable storage shelves



S-009

Selected as the Southern Region Nominee for 2012 National Excellence in Multistate Research Award



Distributions

Germplasm Di	stributions.	All NPGS.	2007-2011

Total - All Types

SITE - Non-Genetic Stocks Collections	2007	2008	2009	2010	2011	5 Yr Totals
Brownwood, TX				58		58
Corvallis, OR	2462	2476	4632	5724	5210	20504
Cotton - College Station, TX	1687	2083	2849	2360	4454	13433
Davis, CA	4798	4282	5318	4298	5293	23989
Palmer, AK - Arctic Germplasm			137	893	704	1030
Nat. Germplasm Rep, Geneva, NY	10823	8324	4702	5446	7032	36327
Hilo, HI	324	224	107	113	256	1024
Mayaguez, PR	477	435	373	318	496	2099
Miami, FL	396	606	668	460	453	2583
National Arboretum, Glendale, MD	8	64	131	252		455
NC-7 (Ames, IA)	22416	25045	28302	27480	39088	142331
NE-9 (Geneva, NY)	3482	3453	3756	5898	3829	20418
NRSP6 (Sturgeon Bay, WI)	4055	4429	4575	4919	4178	22156
Natl. Small Grains, Aberdeen, ID	44314	39411	40366	56340	63788	244219
NCGRP, Ft. Collins, CO	143	116	329	319	712	1619
OPGC, Columbus, OH	406	473	833	426	787	2925
Parlier, CA	159	624	401	721	468	2373
Riverside, CA	869	563	1057	712	1320	4521
S-9 (Griffin, GA)	27503	30883	40456	28308	32512	159662
Soybean, Urbana, IL	21699	28412	58157	29717	26954	164939
Tobacco, Raleigh, NC	521					521
W-6 (Pullman, WA)	21447	27555	36560	22159	29946	137667
Sub-Total Sub-Total	167989	179458	233709	196921	227480	1004856
Site - Genetic Stocks Collections						
GSHO (Barley Gen Stocks), Aberdeen, ID	846	334	209	177	1232	2798
GSOR (Rice Gen Stocks),	729	2631	2755	6940	9083	22138
GSPI (Pea Gen Stocks), Pullman, WA	61	91	170	53	94	469
GSTR (Wheat Gen Stocks) Aberdeen, IA	206	364	867	1013	2328	4778
GSZE (Maize Gen Stocks) Urbana, ILŦ	3800	32112	13185	8801	8305	66203
Tomato Gen Stocks, Davis, CA	4640	5142	4713	4847	6206	25548
Sub-Total Genetic Stocks	10282	40674	21899	21831	27248	121934

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