**Minutes**

**2017 Sugarcane Crop Germplasm Committee Meeting**

**New Orleans, LA**

**14 June 2017**

Attendance:

Per McCord, USDA-ARS Canal Point

Kenneth Gravois motioned to approve minutes; Jim shine seconded. Motion passed

Dimitre Mollov (ARS-NGRL): Very happy to have hired new botanist (Dr. Melanie Schori). Referred committee to submitted NGRL report. No questions about report at the meeting.

Dr. Peter Bretting (National Program Leader for NPGS). Germplasm collection locations cover broad range of USDA hardiness zones. Number of accessions slowly increasing. Major collection phase is over, but still filling in gaps. NPGS web page access fairly stable over time, as are NPGS germplasm distributions (~250,000 per year). 2/3 to ¾ of distributions are domestic, mostly to land grant university researchers. NPGS budget saw peak in 2010-2012, dropped with sequestration in 2013, slight recovery in 2014-2016 (~$44 million), but purchasing power of research dollars is slowly declining. Key challenges for NPGS include: meeting increased demand for germplasm and associated information; recent and upcoming NPGS staff retirements; developing cryopreservation and in vitro conservation methods for preserving clonal germplasm; BMPs for managing accessions with GM traits; acquiring and conserving additional germplasm, especially crop wild relatives. Highest priority of NPGS is germplasm maintenance (also regeneration, documentation/data management). Personnel changes at NPGS include the transfer of Tomas Ayala-Silva from the ARS-SHRS location in Miami, to ARS-TARS in Mayaguez, Puerto Rico. Recently (2016) had a review of NP301, the largest National Program (Plant Genetic Resources, Genomics, and Genetic Improvement). Review assessed quality and impact of NP301’s accomplishments. Panel determined that NP301 is ”leading the world to exceptional innovation.” Per asked Dr. Bretting about the status of CGC grant proposals. He responded that he is waiting for the apportionment of the FY17 budget, but that information would be available soon.

Dr. David Kuhn, ARS-SHRS at Miami: presentation of the status of the World Collection of Sugarcane and Related Grasses. SHRS is using ARC-GIS maps to manage the collection. Each plot stake has a QR code that links back to the local database. SHRS is understaffed (no curator, sugarcane technologists, 2 tractor operators, RL, administrative officer), and still under hiring freeze. Current collection is about 1400 accessions, representative core is about 300 accessions. Would like to duplicate at least the core collection to a backup site. Possible backup sites include ARS-PBARC in Hilo, HI and ARS-TARS in Mayaguez, Puerto Rico. Need dedicated personnel and resources to maintain the collection. James Todd asked how difficult it would be to get accessions back into the mainland US from either Hawaii or PR. According to APHIS (Dr. Malapi-Wight), should not be a problem, but state regulations make this more difficult. Jim Shine felt confident these rules could be changed (in Florida) to not require re-quarantining. Jim also suggested backing up the collection (no distribution services) at Canal Point; Vanessa Gordon was concerned about space/personnel resources. Dr. Bretting stated that additional resources need to be put into cryo-preservation/ in vitro, but that currently, duplicate plantings are the best option. Dr. Whalen stated that backing up is a formal repository function. Jim Shine and Charley Richard remarked that a backup site has been under discussion for decades. Dr. Bretting said that Mayaguez has better personnel/facilities for a backup site in Puerto Rico, but there is a concern about disease pressure if commercial cane begins to be grown there again. Stakeholders will reach out to respective state departments of agriculture, Hawaii, and Puerto Rico regarding rules governing transport of sugarcane.

Dr. Malapi-Wight (APHIS PGQP): Referred generally to submitted report. Large turnaround of personnel at APHIS. Only one lab person right now to do molecular screening of sugarcane and other crops. Just hired two additional personnel, including one dedicated to NGS (next generation sequencing) in Poaceae. Majority of clones coming into quarantine infected with virus (especially ScYLV). Infected accessions take up 2X the amount of space as non-infected clones. Dr. Malapi-Wight thanked stakeholders (particularly ASCL) for letters of support regarding the use of NGS in the PGQP program. PGQP is not the first to be using NGS, but also not the last. Validation of the technique will require three years, but has the promise of being able to identify multiple pathogens of concern in a single test. Goal is to be able to run NGS immediately upon reception, saving up to 9 months of establishment time.

Dr. Mollov (ARS-NGRL): Sugarcane represents about 25% of the work done at his unit. Working hard to implement NGS in virus detection. CIRAD (France) currently the leader in using NGS for sugarcane quarantine; very open and willing to share information. NGS already showing that many putatively singly-infected (SCYLV) clones are actually infected with multiple viruses. Reported on project (with Mike Grisham) with sugarcane mosaic disease in Louisiana. Early results show some clones indeed infected with sugarcane mosaic virus, but appears to be the same genotype. Many more clones are infected with sorghum mosaic virus, with considerable genetic diversity that may not be captured with existing PCR primer sets. Working to develop new synthetic polyclonal antibody for SCYLV, but one challenge is to obtain singly-infected sugarcane. Also doing research to better classify diversity within SCYLV. Coat protein sequence appears to be well-conserved. Simultaneously planning to clone entire coat protein into E. coli, purify, and use that to make antibodies. Working with Mike Butterfield (ICSB), but would like to extend project under ICSB auspices for an additional 18-24 months; could use letters of support from local stakeholders.

Charley Richard (SPRI): Juice quality project has been going on for many years. Varietal differences exist, especially for juice color and turbidity. The project is nearly complete; Charley wants to know if there is stakeholder interest in continuing this kind of work. Collins Kimbeng and Per McCord showed interest; further discussion will continue on the side.

No changes to committee membership.

Collins Kimbeng asked Chris Laborde about the status of seedlings from Barbados. Chris responded that 1st batch looks good (no weird diseases). 2nd batch (arrived early 2017) also looks good from a disease perspective. Everton commented that initial results show higher family variance. Jim Shine requested that further discussion of this material be tabled, as it is proprietary germplasm.

Charley pointed out that motion from 2016 regarding letter to ISSCT about the non-functioning status of the world collection at Coimbatore has seconded (in 2016), but letter still needs to be written.

Per motioned to adjourn, seconded by Jim; meeting adjourned.