**Minutes**

**2015 Sugarcane Crop Germplasm Committee Meeting**

**New Orleans, LA**

**22 June 2015**

In attendance:

Niranjan Baisakh (LSU AgCenter)

Yong-Bao Pan (USDA-ARS)

Hairong Huang (PRC)

Jorge da Silva (Texas A&M)

James Todd (UF/USDA-ARS)

Wayne Davidson (FSCL)

Herman Waguespack (ASCL)

Kenneth Gravois (LSU AgCenter)

Collins Kimbeng (LSU AgCenter)

Atticus Finger (ASCL)

Charley Richard (C. Richard & Assoc.)

Vanessa Gordon (USDA-ARS)

Stephens Brumbley (UNT)

David Kuhn (USDA-ARS)

Per McCord (USDA-ARS)

Andy Scott (Rio Farms)

Mike Grisham (USDA-ARS)

Jack Comstock (USDA-ARS)

Jeff Hoy (LSU)

Philippe Rott (UF)

Jim Shine (SCGC)

Nael El-Hout (Wedgworth’s Inc)

Hardev Sandhu (UF)

Tomas Ayala-Silva (USDA-ARS)

Chris LaBorde (USSC)

Michael Pontif (LSU AgCenter)

Dexter Fontenot (KleenTek)

Amber Keizerweerd (USDA-ARS)

Dimitre Mollov (USDA-ARS)

Via Phone: Gail Wisler (USDA-ARS NPL)

Joseph Foster (USDA-APHIS)

Mike Irey (USSC)

Susan Schenk (HARC)

Herman motioned, Jim seconded approval of 2014 CGC minutes. Motion carried.

USDA-ARS NGRL 2015 Report given by Dmitre Mollov. GRIN Global still awaiting security audit before full deployment. Questions referred to the Plant Disease Research Unit RL, Gary Kinard (not present). Jack Comstock asked about the status of Clarissa Maroon-Lango’s replacement. Joe Foster should give comment later in the meeting.

National Plant Germplasm System report by Gail Wisler (NPL). Steady increase in numbers of accessions 2005-2014. Fluctuating demand for NPGS information (judged by numbers of Web page hits. Slight decrease in funding 2005-2014 as measured by ERS research deflator. Discussion of FY2016 President’s budget. Minor increases for various initiatives, not all germane to sugarcane. Big Data initiative underway (has been funded). First step to build 5 HPC hubs around the country. Stephens Brumbley asked about the status of phenomics resources in the U.S. Gail said it would be part of the 2017 budget proposal. Jack Okamuro is the contact person for this effort, as well as for the Big Data Initiative (along with Doreen Ware).

Annual Quarantine Report (Joe Foster): Clarissa’s position should be announced in the next month or so. Anna asked about space for sugarcane in the quarantine facility. Joe said that the number varies, but 50 is a good estimate. Mike Irey asked if NGS is being used (or considered) as part of the quarantine process. Joe said that they were ‘watching’ the scientists to see what methods/technologies were being developed, but he hoped to include the technology in the future. Ken Gravois asked about the definition of NAPPRA (Non Admissible pending pesk risk analysis). Per the report, “sugarcane is not impacted by this regulation”. Requests to import germplasm should be directed to Joe, preferably by the first of June. Collins requested that a current list be sent of accessions in quarantine.

Status of World Collection (Tomas Ayala-Silva): Staff involved in collections include Tomas, David Kuhn, and Cecile Tondo. ~1400 total accessions, replanted May 2014. ~450 *S. spontaneum* accessions. New accessions hardened off in full-sun nursery, weak accessions maintained in greenhouse. 170 clones in tissue culture, 48 clones in cryopreservation (work in progress) at Ft. Collins. Request for accessions submitted in March 2013 to Sugar Research Institute (Coimbatore). No response to date. Tomas is collecting data from accessions that are not yet in GRIN/GRIN Global. Collection maintained by Tomas and one technician (both are responsible for all germplasm collections at Miami). No dedicated staff for at least the last 4 years. Continuing to send material to Ft. Collins. Hoping to acquire material from Colombia. Visited Puerto Rican collection, which has some ‘BM’ high-biomass germplasm. Jim Shine suggested these clones should be sought after. Tomas recently acquired a 100-gallon sprayer for foliar application.

Report of 2014 CGC-funded project (Niranjan Baisakh): 1238 unique accessions, 115 from LSU, 119 from Houma (not present at Miami), 17 additional from Houma. 1489 accessions being fingerprinted. To date, 31 SSRs run. Target is 1000 bands (dominant alleles). Niranjan expects to publish results by the end of the year.

Sugarcane Yellow Leaf Discussion (D. Mollov). Need to produce more antibody for SCYLV detection. Ben Lockhart from Minnesota is willing to do it, but needs more greenhouse space. Space potentially available in Beltsville. Mike Irey said Stuart Rutherford from South Africa has produced a polyclonal antibody specific for a synthetic YLV protein, which US Sugar has replicated. Jeff Hoy said they have produced something similar. Dimitre and Jeff said they could test the ability of these new antibodies to trap the virus, and to detect multiple genotypes. Susan Schenck offered to send a high-titer H variety from HARC. Mike, Vanessa, Philippe, Jack, Jeff, Claudia, and Dimitre agreed to participate in a conference call next week or the following to discuss sending tissue blots or another representation of the virus from various collections, to Dimitre for testing the synthetic-derived antibodies.

Yellow Canopy Syndrome (Jeff Hoy): YCS is a growing problem in Australia. Australia has begun a number of research projects on the problem already. Jeff suggests we familiarize ourselves and consider how to be prepared. YCS is across varieties and environments. Stress is a factor, still unknown whether a pathogen is involved. Jeff said many varieties are ‘susceptible’, but severity is variable across varieties. Jack said he had emailed Rob Magarey from SRA (he distributed Rob’s response); they are looking at physiological aspects of the syndrome, management practices and their effects, a molecular search for the pathogen. Sugar transport to the stalk appears to be affected. Herbicide injury, nutrient deficiency, and various other factors have been ruled out. One experiment in deep sequencing has been undertaken (results not yet available). Jeff directed committee members to follow the Web link he sent in an earlier email.

Inclusion of sugarcane as a Specialty Crop (Jim Shine). Sugarcane not currently considered a specialty crop vis-à-vis Federal funding, and there is political resistance to doing so. As a member of the Florida Vegetable Crops organization (need proper name), Jim said he would not be able to serve as part of an effort to get sugarcane listed as a specialty crop.

Fuzz importation (Chris LaBorde): Requested 10 families from Barbados (total 2000 seeds). Request submitted 11 November 2014. Rene DeVries (USDA) has served as APHIS POC. Various back-and-forth discussions undertaken for conditions for release. APHIS has inspected USSC greenhouses to see if they meet the requirements of the original proposed method. Permit finally approved on 11 May 2015, for one year. Chris has acquired USDA-approved shipping labels, but has not yet sent these to Barbados. Chris has communicated with FDA/CS throughout the process. Collins questioned the ‘100 seed per cross’ sampling methodology; Mike Irey suggested he ‘not muddy up the water’. Chris will supply Ziploc bags with silica gel packs to APHIS, to allow the fuzz to be resealed after inspection. Collins asked if USSC would be willing to receive fuzz for other recipients; both Chris and Mike felt this was not a good idea, partly due to interstate quarantine requirements. Ken asked if the final protocol was ever distributed, as it was developed after the last CGC meeting. Chris agreed to email the text of the permit he received.

Open discussion:

Per McCord solicited ideas for how to achieve results vis-à-vis securing technical support for the World Collection. Technical support is needed to help Tomas maintain the collection and to enter information into GRIN, which is out of date. David Kuhn said funding had been approved, but severe delays within ARS have prevented hiring technical staff. The World Collection is an important resource for national and international research and variety development. Jim Shine suggested including this discussion in the final report, so that he could forward it to the appropriate personnel.

Ken Gravois pointed out the fact that sugarcane germplasm is available via Ebay, outside of the quarantine process, including from overseas.

Jack Comstock asked if anyone has had success importing clones interstate from Hawaii. In Florida, FDA/CS has tried to impose additional quarantine restrictions. Na-El corroborated Dr. Comstock’s frustrations. Andy Scott said he is importing material into Texas from both Florida and Louisiana, and offered to send the protocol/agreement approved by Texas and the corresponding states departments of agriculture. Susan said that exports from Hawaii are regulated by APHIS. Mike advised that we send FDA/CS a suggested protocol.

Charley Richard spoke about recent research on juice quality of various varieties, that haven’t received attention previously (parameters that weren’t previously investigated). Based on data from Houma, there are statistical differences in starch, ash, turbidity, color, and total polysaccharides. This may be something that should be considered for variety development. Wild germplasm, though it is higher in these ‘contaminants’, fortunately shows a wide distribution. Crop cycle, soil type, and location and other factors do affect the results, but varietal differences seem to be the biggest. James Todd said that fiber components were analyzed for the World Collection.

Nominations:

Nominations for committee members from 2014 meeting were motioned by Ken, Seconded by Andy. Motion carried

Meeting adjourned by Anna Hale.