Sugarcane Crop Germplasm Committee

Minutes of the Meeting held at the Trade Winds Hotel, St. Pete Beach, Florida

June 20, 2012

**Attendants (arranged alphabetically):**

Baisakh, Niranjan Li, Ruhui

Comstock, Jack Maroon-Lango, Clarissa

Davidson, Wayne Narayanaswamy, Chowdappa

Gravois, Kenneth Raid, Richard

Grisham, Michael P. Richard, Charley

Gubbju, Hamide Scott, Andy

Hale, Anna Silva, Tomas Ayala

Hernanadez, Eddie Shine, Jim

Hoy, Jeff Sood, Sushma

Kimbeng, Collins

Legendre, Ben

**Listening In by Teleconference:**

Griesbach, Rob Irey, Mike

Introductions – Sugarcane Crop Germplasm Committee

Status of Commercial Breeding Position

* Neil Glynn and Charles Chin positions are in the process to be filled
* Tom Tew – Candidates are reviewed and the choice will be made soon

Minutes – Motion to approve by Jim Shine and seconded by Windell Jackson. Approved

Sugarcane Quarantine – Clarissa (2 Handouts)

* Filled the tissue culture position that had been frozen and then approved (just started); sugarcane, rice, and sweet potato
* 74 accessions released in April (clones sent to Miami)
* 157 accessions entered as introductions for testing
* Pathogens – Sugarcane Yellow Leaf Virus, Streak Mosaic Virus, Poty-virus (Primarily from Pakistan

Germplasm Wish List

Tomas – Status of World collection

* Ray Schell has retired; new project leader for tropical fruits and sugarcane. 2.55 SY’s deviated to sugarcane collection.
* 2011; revitalized the Sugarcane spontaneum Collection
* 2010 The other portion had been revitalized
* The permit for noxious weeds is renewed every 2 years.

Aside - John Lyden for Miscanthus guidelines

* Working with David Ellis to back up via cryopreservation and tissue culture
* Lost several clones of *S. Officinarum* and *S. Robustum* in the cold weather of late 2010 and early 2011.
* *Miscanthus* collection to Japan was cancelled at the last minute
* Screening for RSD, Sugarcane Yellow Virus and Orange Rust (negative)
* Seed germinated from Fort Collins cold storage, approximately 5,000 seedlings have been germinated and will be further evaluated.

Rob Griesbach – USDA-ARS-OTT, Beltsville

* There is more willingness to share fuzz with individual scientists (germplasm); not protect the resulting seedlings, but allows protection of the original clone
* CGC lists priorities for your crop, ARS will pursue specific clone that may be better accessed via true seed production. Once hybrids are made from the crop then a wider and freer distribution can be made.
* Jim Shine – this was the rationale to bring in fuzz.

ARS National Germplasm Resource Laboratory – Ruhui Li Beltsville, MD

* Assist with germplasm exchange
* Database management thru GRIN system – Grin – Global, web –base V 1.0 rel. in Dec. 2011; Grin-Global. org
* Plant Disease Research Unit
  + Ray retired in February 2012 – position will be filled
  + New visiting scientist coming in August
* Research summary
  + *Pennisetum* disease to be determined. The cause will be investigated and tissue culture will be done to rehabilitate.
* Recovery of fuzz from South Africa SCMV, Sugarcane Yellow Leaf Virus, Leaf Scald and Fiji Disease
* Recognize Dr. Ray Mock for his contributions and hard work over the years – Jim Shine

Jack Comstock – new type of rust in South Africa, Swaziland and northern portion of South Africa. South Africa will send a scientist to work in Beltsville.

Movement of *Miscanthus* is fairly loose.

*Miscanthus* can be susceptible to sugarcane pathogens. *Miscanthus* Blight is it similar to sugarcane blight.

Also, concern with sweet sorghum movement – no association with a CGC.

National Plant Board – Chair of Chairs of CGS

* Anna Hale will write a letter addressing our concerns with feedback from pathologist.
* Mike Grisham – mosaic work movement (paper in meeting)

Seed transmission of disease – Jack Comstock, Mike Grisham, Jeff Hoy, Clarissa, and Anna Hale

Jack C. – YLV presented by Sushmu Sood

* Susceptible female parent used in crossing, germinate seedlings in screened GH; 50 seedling/ crossed were pooled; RT-PCR used with primers
* X 10 – 10341 + Reactions confirmed
* X 10 – 0527 3.1 – 6.3 % were +
* Virus is phloem limited; interesting.

Jeff Hoy – Leaf Scald

* All work to date is negative, but more work is needed

Mike Grisham – Mosaic

Plants did not flower, but got seed from LSU and germinated. Seedling 5 – 10 seedlings appeared to have symptoms but PCR was negative.

Clarissa – Survey of countries regarding the importation of fuzz. White leaf phytoplasma – seed from Thailand

536 plants were germinated; tested for disease, pooled nested PCR protocol used; all tested neg. for WL phytoplasma.

Survey summary – Clarissa (Handout) (PowerPoint)

Mauritius China

Columbia Brazil

India Guatemala

Pakistan Barbados

Philippines Australia

* 7 questions for the survey (see handout)

Guatemala - No protective steps

Mauritius - Broad spectrum fungicide and germinated in the GH for disease observation.

Pakistan – Inspection, fungicide treatment and seedlings germinated in quarantine facility

Colombia – defuzz, fungicide treatment, germinate in sterile soil in approved GH for 1 month open terrace for rouging – transplanted to field

Australia – import permit with defuzzing fungicide. Treatment; phytosanitary certificate (stalk deterioration from disease/pest–free area) Inspection & bleach treated; germinated in facility and observed for 3 months with numerous visits; PCR tested for mosaic; open quarantine. Field inspected 4 times; released for distribution.

Discussion – How would we build a system to import fuzz?

* Fungi and bacteria appear not to be transmitted, but virus less certain – provide appropriate PCR evaluation?
* Need a key “white paper” from the group and published somewhere, ISSCT preferably.
* Need a check-point to regulate entry.
* Smaller group should work-out the details and may involve other federal groups that Clarissa will pursue.
* Benefits vs. Risks
* Clarissa and pathologist will work toward a plan
* Need industry buy-in
* Jeff Hoy will lead the effort on publishing the paper. Clarissa will work on policy issues.

Committee members will be listed in bold print.

Adjorn