

Minutes

NRSP6 Technical Advisory Committee meeting 2016

June 14, Fort Collins, CO

The meeting was hosted by the US Potato Genebank at the joint 5-year RTAC, PGOCC & NPGCC Meetings.

Tuesday, June 14th

Attending - Genebank personnel: M. Martin, J. Bamberg. Tech Reps: R. Novy, D. Douches, D. Holm, W. De Jong. Administrative Advisors: None. Quarantine: None. AAFC - B. Bizimungu. Industry: G. Gusmini (PepsiCo). Local scientists and miscellaneous guests: R. Hoopes (retired).

1. R. Novy called the meeting to order at 8:05 am – Announcements – Regional reports sent via email. All accounted for.
2. Agenda – No changes made (unanimous approval)
3. Review of 2015 Minutes – unanimously approved.
4. Chairman Novy appointed C. Yencho and W. DeJong appointed to the resolutions committee.

Reports and topics for discussion

5. Lead AA (Lindroth) and other regional AA's (Nessler, Ashworth, Curtis)
R. Lindroth report –
 - Submitted to John prior to meeting. Dr. Lindroth is stepping down from Assoc. Dean and returning to faculty ranks. A new Lead Administrative Advisor of NRSP-6 will be assigned. Updates: Peninsular station next in line for possible funding reductions, dependent on future UW-system budget cuts. Genebank is located on a UW-Madison agriculture research experiment station, one of twelve such stations in the state. Effect of cuts, if any, on these research stations is currently unknown. Discussions on how NRSP-6 project will address reductions. Various options exist and what is done will depend on extent of cuts and whether or not station is closed entirely or not, what staff are retained, etc. Utility costs are the major costs. Low use of the Peninsular Station by UW scientists not helping.
 - NRSP-6 renewal approved for another 5 years. Proposal reviewed favorably. Strong support by all regions. Concerns about future level of off-the-top regional funding at \$150K. ESCOP unanimously recommended it be approved, with additional recommendation that external funding be secured in the future. Alternative funding models need to be explored and should be submitted at mid-term review. Various options being pursued for cost-sharing – industry (NPC, State commodity associations, private gifts, etc.).

- G. Gusmini (dialed in mid-way in conversation) – Provided some thoughts on long-term viability models for genebank, public-private partnership opportunities. Task force needed to begin formulating thoughts on how to address. Lots of folks open to listen not sure on how many are willing to support.
- J. Bamberg – Strategy to move forward laid out – NPC, UWisc, Private industry, National program office, USDA-ARS. Significant discussions on grants, etc. ensued. No strong consensus expressed on how to proceed, but this is a recurring problem. Need to wait and discuss with next Advisor then establish committee.
- C. Yencho – Provided a brief comparison of sweetpotato and potato genebank activities. The potato genebank and its personnel are much more active and engaged than the sweetpotato genebank. He wishes this could be so for the sweetpotato genebank.

6. Regional AA Reports – None submitted.

7. Regional, USDA and Ag Canada Tech reports (Holm, Douches, DeJong, Yencho, Novy, Bizumungu) – written reports from tech reps are attached.

Highlights:

D. Holm – Submitted (see attached)

D. Douches – Submitted (see attached) – North Central 4 breeding programs active, NDSU now using *S. verneii* for *Globodera pallida* resistance and GN. Discussions on changing needs for nematode resistance. Minnesota moving forward with a new potato breeding position. MSU reemphasizing diploid breeding for self-compatibility research efforts with M6 gene – phu, chc, mic, ber, tar, tbr. On 1st backcross with materials. Starting some insect R work again with ber and chc using inbred diploids. Last yr. with CGC funding screened 150 demissum materials in fields for PLB resistance. Cooperacion 88 from CIP has gone through quarantine. Reported to have good late blight R and virus R.

W. DeJong - Submitted (see attached) – Provided some thoughts on role of local breeding programs providing materials as opposed to genebank providing materials. John followed up on this discussion. Roughly 70% for research 30% home gardener, but 94% of what is sent out goes to research or industry and affiliated community. C. Yencho - Is it time to charge a cost-recovery fee for providing materials to public as a way to address funding needs? Consensus is no, but perhaps needs to be revisited in the future as it is not a significant cost at this point.

C. Yencho - Submitted (see attached) – Dave D. recognized R. Veilleux's tremendous work over the years. With CGC funding, TAMU requested the Mini-Core collection from the US Potato Gene Bank, Sturgeon Bay, WI for evaluation of potato psyllid (*Bactericera cockerelli*) and/or *Candidatus Liberibacter solanacearum* (Lso) resistance.

R. Novy – Submitted (see attached) - Overview of research highlights covered by germplasm requests. Pest Resistance: Potato psyllid and potato cyst nematode; Enhanced Tuber Qualities: Cold-induced sweetening resistance and increased tuber calcium; Unique/Enhanced Marketability: Reduced tuber greening, exaggerated fingerling shape, and deeper yellow flesh with use of *Criolla* egg

yolk type potatoes; Nutritional Improvement: Increased Folate; Environmental tolerances: Improved salinity and heat tolerances; Novel Traits: Floral mutants, enhanced species tuberization (earlier maturing with large tubers), mineral uptake in epiphytic potato species, fatty acid profiling of potato TPS, species' hyperspectral reflectance patterns and use in taxonomic classification.

B. Bizimungu - Submitted (see attached) - Agriculture and Agrifood Canada Report – New cultivars and advanced selections released to industry for commercial evaluation virtually contain one or more wild species in their pedigrees. A major focus: resistance to major diseases and pests (including late blight, PVY, PLRV, *Verticillium* wilt, blackleg and the Colorado potato beetle); cold-induced sweetening resistance into parental lines and adapted cultivars. Example: Utilization of *S. oplocense* as a source of CPB resistance breeding. Interesting comments on heirloom varieties “Prince Albert” and “Likely”.

8. Industry and Cooperator Reports –

G. Gusmini (Pepsico) – Proposal on multi-year “ploidy management system” based on micro-spores with NRC in Saskatoon pending.

9. NRSP6 Project Sturgeon Bay report (Bamberg, Martin) and reports from other USDA project staff – Bamberg has already made it available online.

Some highlights:

- Annual report format. Report written for FY15 (ended Sep 30, 2015).
- Orders are up 26%
- Potential ornamental from 4x commersonii
- Diploid breeding materials from Henry DeJong imported and available. Need to get feedback from germplasm recipient on how useful the materials are to determine what to keep/drop in future.
- Colombian “Egg Yolk” Criolla research continues with taste tests
- Genetic diversity “Hot Spot” research – Several diversity dense locations found in American SW for Jamesii. Low TGA, dormancy, tuber freeze tolerance...perhaps indicators of domestication? Virus resistance present in jam.
- Jamesii as an example for determining how many populations needed to sampled to assess germplasm diversity?
- SCAN project – use of flat bed scanner for plant pictures
- Zebra chip psyllid resistance discovered in ver with Rodney Cooper ARS-Wapato.
- Freeze tolerance research of mini-core –Jamseii
- Germplasm sharing with Puno, Peru

10. NIFA (A. Thro) – Not present, no report – Gary Kinard (Res. Leader, Natl. Germplasm Resources Lab) stopped in to say hello to group and provided a quick report of national program activities. The potato genebank research stations funding question addressed earlier by the group (see item 5) was posed by R. Novy re. NRSP-6. Dr. Kinard indicated this question is best placed to Peter Bretting at national level.

11. APHIS Quarantine – Jorge Abad has moved to a new position with APHIS. No updates on pending replacement. Update on 55 Peruvian lines imported to US and request by TAC for Jorge to address. Gabe indicated emails were sent to address this issue and it has been resolved. G. Kinard - NextGen sequencing technologies becoming more relevant to quarantine issues. How this will impact future work is to be determined and it may raise interesting issues.

12. Resolutions – unanimously approved:

- Whereas Richard Lindroth, served faithfully and conscientiously as the Lead Administrative Advisor of the NRSP-6 technical advisory committee from 2010 until 2016, let it be resolved that we acknowledge Dr. Lindroth for his dedicated service and advice to the US potato genebank. His advice and good will be missed and we wish him well.
- Whereas John Bamberg, Max Martin, Jesse Schartner and other genebank staff have organized an excellent and efficient meeting, and they have provided a thorough overview of the excellent work they conduct to maintain, characterize and disseminate germplasm resources for the benefit of scientists in the USA, Canada, and around the world, let it be resolved that the genebank staff be commended in the highest possible terms for their hospitality and scientific contributions to the potato community.
- Whereas, this meeting was held in conjunction with the 2016 Joint National Germplasm System Meeting, we would like to recognize the support of Dr. Stefanie Green, Mr. Harvey Blackburn and the Fort Collins USDA-ARS plant germplasm group for assisting with the organizational and logistical support of this meeting.

13. Election of New Officers and Venue for 2017 –

New TAC officers for 2017:

Gusmini = Secretary

Yencho = Vice Chair

DeJong = Chair

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Venue for 2017: Sturgeon Bay, WI. Dates to be announced.

Meeting concluded at 11:15 Am, Wednesday June 24th.

Respectfully submitted,
Craig Yencho, Secretary

NRSP-6 TAC16

Meeting Schedule

Ft. Collins, CO

(joint 5-year RTAC, PGOCC & NPGCC)

MONDAY, June 13th = travel day

TUESDAY, June 14th

8:00 AM: NRSP6 TAC business meeting as in bold below from provided multimeeting schedule.

Tuesday June 14, AM- Curator Workshop I/RTAC/NPGCC meetings

Tuesday, June 14, PM- Joint PGOCC meeting

Wednesday, June 15 AM- Joint PGOCC meeting

Wednesday June 15 PM- Tour NLGRP (1:30-2:30), PGOCC meeting (3:00-5:00)

AGENDA

NRSP6 TAC 2016 BUSINESS MEETING

Tuesday, June 14, 2016

Chair = Novy

Vice Chair = DeJong

Sec = Yencho

Preliminaries

1. Welcome, introductions, announcements, distribution of documents
2. Approve, add to, schedule and prioritize agenda items
3. Review of 2015 minutes
4. Chairman Novy appoints Resolutions Committee
- Reports and topics for discussion
5. Lead AA (Lindroth) and other regional AAs (Nessler, Ashworth, Curtis)
6. Regional, USDA, and Ag Canada Tech Reps (Holm, Douches, DeJong, Yencho, Novy, Bizumungu)
7. Industry and other cooperator perspectives/reports
8. NRSP6 Project Sturgeon Bay report (Bamberg, Martin) and reports from other USDA project staff
9. NIFA (Thro)
19. APHIS/Quarantine
11. Review and approve resolutions
- 12 Elect new officers and set next meeting venue