**Small Fruit Crop Germplasm Committee Agenda**

Wednesday 26 Oct 2022 from 11:00 pm to 1:00 pm Central Time

In person or Zoom meeting

<https://uark.zoom.us/j/89616137890?pwd=OFR0TmY4THJpYkhqSWxoaGEvcnFCdz09>

Meeting ID: 896 1613 7890

Passcode: 0E#5xcav

1. CGC Administrative
   * Roll Call

Penelope Perkins-Veazie

Jill Bushakra

Margaret Worthington

Kim Lewers

Vance Whitaker

Mark Ehlenfeldt

Deb Menicos

Nahla Bassil

Jim Luby

Michael Dossett

Courtney Weber

Natalia Salinas

Jim McPherson

Harlene Hatterman-Valenti

Ioannis Tzanetakis

Zhana Deng

Claire Luby

Michael Hardigan

Amin Khan

Hamid Ashrafi

Massimo Iorizzo

Ellen Thompson

Phil Stewart

Cherie Ochsenfeld

Peter Nietzche

* + Minutes from November 2021 posted on-line.

* + Web site: <https://www.ars-grin.gov/npgs/cgclist.html#Small>
    1. Check minutes, evaluation priority lists, vulnerability statements, descriptor lists and send me e-mails to update or revise.
    2. Check your membership information on-line
  + Membership
    1. We have lost two (maybe three) members. Please let me know if you want to nominate anyone for membership?
    2. *Nahla Bassil nominated Natalia Salinas and she accepted*.
  + Next Meeting Venue will focus on proposals in Spring 2023
    - 1. Kim Lewers will be sending emails for proposals. Waiting to hear about actual budget. Funding is through ARS.
    1. Evaluation Research Priority List – Anything to add or give higher priority?
* New diseases
* **Blueberry, reported by Ioannis Tzanetakis:**
  + Luteovirus transmitted by aphids, very diverse virus, found in more than 70% of farm material tested. Working on infectious clones with different cultivars to see effects.
  + Sister virus to blueberry scorch about 4% of 700-800 samples from PNW, Michigan, Northeast and present in the South but enough samples to know how widespread.
* **Blackberry, reported by Ioannis Tzanetakis:**
  + Blackberry leaf mottle virus widely spread, previously thought to be part of the blackberry yellow vein disease complex; used clean Natchez first, then moved to Ouachita because trichomes are more conducive to mite spread and gets severe symptoms from a single mite.
* **Blackberry, reported by Margaret Worthington:** 
  + Fusarium is increasing in severity in North Carolina (listed in Rubus as a disease of concern). Been an issue for a grower in eastern NC but being seen in western NC for first time this year. Big issue in Mexico.
* **Black raspberry, reported by Lauren Redpath:** 
  + Unknown black raspberry virus looks like yellowing leaf mottle on new leaves on field-grown plants. No other symptoms noted (i.e., crumbly fruit); working with Ioannis Tzanetakis. Looks like it is pollen transmitted because the seedlings have it.
  + Vance Whitaker notes that the push in CA to ban neonicotinoid pesticides could influence vector control and could have an impact on virus testing in strawberry. Vance encouraged Doug Thomas to consult with a virologist about virus certification.

1. Small-Fruits Breeding Programs – Any at risk? USDA-ARS Corvallis (blueberry strawberry), Rutgers (cranberry)

* **Blueberry breeding program update, reported by Mark Ehlenfeldt and others:**
* Nick Vorsa cranberry breeder retired. Rutgers in process of interviewing to fill position. Possible hire in winter/early spring.
* Mark Ehlenfeldt is planning on retiring in about a year.
* Steve Stringer from Poplarville will be retiring in about a year.
* Jeanine Rowland molecular biologist for cranberry and blueberry (Beltsville) is retiring in December.
* Jeff Neyhart left the USDA cranberry position at Chatsworth and the position for small fruit breeder is open.
* Claire Luby leaving USDA Corvallis for MT State. New USDA posting is for blueberry only. Working with WSU to see if there can be a collaboration for strawberry breeding.
* Ed Wheeler is retired from Berry Blue. Berry Blue split from Hortifrut. New blueberry breeder
* Paul Sandefur is no longer blueberry breeder at Fall Creek Nursery
* Ye (Juliet) Chu new blueberry breeder at University of Georgia
* Jessica Spencer is new blueberry breeder at NCSU
* Michael Dossett to provide name of new Fall Creek blueberry breeder
* Ellen Thompson to provide name of new Hortifrut blueberry breeder
* **Raspberry breeding program update:**
* Michael Dossett, BC Blueberry
* Ellen Thompson, Hortifrut Genetics
* Matthias Vitten, Driscolls
* Lauren Redpath, PSI & Pairwise
* **Blackberry breeding program update:**
* Ellen Thompson, Hortifrut Genetics
* Gavin Sills, Driscolls
* Zhanao Deng, University of Florida
* Crop Vulnerability Statements and “Quad Charts” keep updated every five years. Can publish in Genetic Resources and Crop Evolution or HortScience, and then post on the CGC website.
  + - 1. *Fragaria* – Kim Lewers (revised 2018 + quad chart 2018) Will be updated with new breeder at USDA-ARS Corvallis, Oregon.
      2. *Vaccinium*
    1. Blueberry – (revised 2016 + quad chart 2018)
    2. Cranberry – (revised 2017) No longer eligible for funding, no Quad Chart.
       1. *Rubus* – (revised 2015 + quad chart 2018) Michael Dossett and Margaret Worthington: The Fall 2020 minutes read, “Michael D. is working on the raspberry CVS, and Margaret W. is working on blackberry CVS. The goal is to have these two CVS 90% complete by March 2021 and finished by October 2021.”

1. Raspberry - Michael Dossett? *– no update*
2. Blackberry - Margaret Worthington? *– no update*
   * + 1. *Ribes* – (created 2018, no quad chart) Are there any breeders in the US?
     + *Vulnerability statement updates: add list of breeders.*

* CGC germplasm evaluation grant progress reports (recipients were not included in meeting invitation)

1. Benjamin Waldo (2022) “Evaluation of strawberry germplasm for resistance to the northern root-knot nematode *Meloidogyne hapla*” Benjamin Waldo was asked for a report.
2. Contreras and Hummer (2021) “Ploidy in Vaccinium species” Ryan Contreras was asked for a report.
   * 1. *Spelling of Contreras corrected*
3. Hummer (2019, 2020) “Phenotyping diverse strawberry cultivars”. Published!
4. **Please include in the acknowledgements, “Partial funding for the evaluations were provided by the USDA/ARS National Plant Germplasm System.”**

* National reports
  + Office of National Programs (ONP) report – *no one present*
  + National Germplasm Repository Lab Beltsville (NGRL) report - *no one present*
  + National Clonal Germplasm Repository - Corvallis (NCGR) report – **Nahla Bassil**

**Nahla Bassil from NCGR Corvallis** (refer to documents sent with meeting agenda)

* Challenges: Vacancies for RL, Farm Manager, Field Tech
* Rebuilding screenhouses and renovating greenhouses (possibly, depending on the option selected). NCGR is starting to build temporary structures to house the container plants. Container plants will be in temporary structures for 2 years.
* Misc collections: who can use them? Where can they go? Examples are *Eleagnus* trees, *Ceanothus* and *Empetrum* seeds.
* Genotyped domestic F. xananassa collection and found 59 mis-identified to re-acquire. Vance Whitaker and Kim Lewers can provide material from their programs. NCGR would like input on what should be the constitution of the F. xananassa core collection. This core collection does not include non-ananassa collections.
* Kim Hummer volunteered to help with the raspberry vulnerability statement.
* The Main Lab at Washington State and NCGR to get funding to address the backlog of observations and data for the crops maintained at Corvallis. The grant provides 2.5 years of funding for a post-doc to upload data to GRIN-global and Genome Database for Rosaceae (GDR) for greater accessibility by the Rosaceae research community. If you have data to share, please contact Nahla Bassil.

Miscellaneous discussion:

**Jim McPherson:** recently elected chair of the National Genetic Resources Advisory Council 13 members provides information to the secretary of agriculture on genetic diversity on plants, animals, microbes, algae and alien lifeforms. Monthly meetings to provide information to Chavonda Jacobs-Young. The 2018 Farm Bill create and develop a strategic plan for addressing backlog, germplasm management and maintenance. How to have an impact across the germplasm system. Peter Bretting and team has created a massive document based on NPGS members to create a database to address these concerns. Jim’s team made a more readable document with a 2-page fact sheet. Report is now at upper levels at ARS and USDA to be vetted before public release. This report addresses the two key priorities of NPGS: resource requests and specific expenditures are in line with what the small fruits, apple and pear CGCs have been requesting for many years. Most stakeholders want the focus on utilization of genetic resources across crops.

**Jim McPherson**, question about distribution NRR makes distribution more efficient. Are there plans to test broader species like what has been done in the Geneva apple collection?

**Kim Lewers** asks if minor genetic variations have found in TC-produced genotypes? How does this affect the longevity of cultivars? What is cause of variation, methylation or transposons? Are there papers published about this?

**Michael Dossett** gives the example of variation in the black raspberry Munger which seems to have somaclonal variation and spontaneous tetraploids from stem culture.

**Nahla Bassil** will compile a list of papers describing this phenomenon.

Link to meeting: [GMT20221026-160535\_Recording\_1920x1080.mp4 - Google Drive](https://drive.google.com/file/d/1xcWQDaBhYlQptLYUwR93dwP5VahLc0Cq/view)

Respectfully submitted,

Jill Bushakra

NCGR Corvallis