State of Nevada

Annual Report for Calendar Year 2017 to the W-6 Technical Committee

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Summary:

Ten individuals from Nevada placed 17 orders and received 91 accessions from the NPGS in 2017. Plant materials were used for chemistry/molecular genetics (40%), plant pathology (18%), anthropology (3%), breeding/varietal development (10%), public educational (19%), and undeclared (11%) efforts. Researchers at the University of Nevada, Reno (UNR) continue to be the primary users (54%), which accounts for the significant reduction in requests made in 2017 as opposed to previous years (large projects are initiated when new plant science faculty are hired or obtain significant grant funding). Users reported that materials would be used for research (70%), education (19%), or other/unspecified (11%) use.

NPGS Germplasm Users in Nevada:

University of Nevada, Reno Affiliates

1. **Dylan Kosma**, UNR Department of Biochemistry:
   - 26 accessions of *Daucus carota*: Chemistry. To analyze different accessions for anti-fungal compound content.
   - 3 accessions of *Daucus carota*: Chemistry. Additional request to analyze different accessions for anti-fungal compound content.
   - 6 accessions of *Ipomoea batatas*: Chemistry. To determine the content of a putatively novel sterol in the skin of different cultivars.
   - 1 accesion of *Solanum tuberosum*: Genetics. For unspecified studies.

2. **Patricia Santos**, UNR Department of Biochemistry:
   - 3 accessions of *Pisum sativum*: Plant Pathology. To look for new pea lines that show higher resistance to plant necrotrophs.
   - 7 accessions of *Daucus carota*: Plant Pathology. To test these different lines against different necrotrophic pathogens. Checking for resistant lines.

3. **Richard Rosencrance**, UNR Department of Anthropology. For all accessions, the reported use was described as Anthropology. Historical, cultural and anthropological research by an archaeologist specializing in paleoethnobotany and coprolite analysis in the Great Basin. Analysis of ancient coprolites for the macro botanical remains can provide insight into past diet and environment. These seeds will be used as a comparative collection for identifying archaeologically recovered specimens.
   - 1 accession each of *Oenanthe sarmentosa*, *Ribes sanguineum*, and *Chenopodium giganteum*.

Non-University Affiliates

4. **Robert McMenamin**, 2 accessions of *Vitus rupestris* and 1 of *Vitus acerifolia* Breeding - plant improvement. For crosses with mustang and champinii for improved root stock.

5. **Nathan Sigal**, 4 accessions of *Ficus carica* and 4 of *Punica granatum*. Public education, demonstrations. Cuttings will be used to demonstrate different urban cultivation techniques for use in the arid climates. Each of the viable cuttings will be planted in containers, large beds, and directly in the ground. Students will learn how to propagate and grow these trees along with other fruits and vegetables in an urban environment while being educated on the importance of genetic diversity as demonstrated by the samples to be sent. Some students will be using these samples for breeding. These samples will also demonstrate the success of each of the varieties in our arid Las Vegas climate.

6. **Adam Connolly**, 2 accessions of *Rubus loganobaccus,* 2 accessions of *Rubus* hybrids, 1 accession of *Rubus occidentalis*, and 1 accession of *Rubus ulmifolius*. Varietal Development. Amateur fruit hybridizer assembling a collection of *Rubus* cultivars for evaluation and possible use in a breeding program.

7. **Lynda Gibson**
   - 1 accession of *Allium porrum* and 3 of *Nepeta cataria*. Class instruction. A five-month communal biology experiment documenting the natural insect-repelling qualities of various plants and how that effect demonstrably increases or decreases during the plant's life cycle.
   - 2 accessions of *Mentha* x *piperita* and 1 of *Mentha spicata*: Class instruction. A five-month communal biology experiment documenting the natural insect-repelling qualities of various plants and how that effect demonstrably increases or decreases during the plant's life cycle.

8. **Elizabeth Melius**, 1 accession each of *Daucus carota* and *Pisum sativum*. Public education, demonstrations. To assess the different effects of growing vegetation in desert climates.

9. **Jacqueline Lechler**
   - 1 accession of *Pycnanthemum tenufolium*: Plant Pathology. To use aquaponics to grow crops and see if it is a possible avenue to reduce disease in plants.
   - 1 accession each of *Pisum sativum, Sixalix atropurpurea, Phaseolus vulgaris, Achillea millefolium,* and *Salvia azurea*: Plant Pathology. To use aquaponics to grow crops and see if it is a possible avenue to reduce disease in plants.

10. Brian Wignall, 3 accessions of *Citrus sinensis*, 2 accessions of *Citrus reticulata*, 1 accession of *Citrus clementina*, 1 accession of *Microcitrus australasica*, 1 accession of *Citrus hystrix*, 1 accession of *Citrus medica*, and 1 accession of *Citrus* x *tangelo*. Unspecified use.

PUBLICATIONS:

No NV publications in 2017 resulted from the plant materials received. No requestors provided updates on the materials' condition.