STATE OF NEVADA

Annual Report to the W6 Technical Committee for Calendar Year 2016

Compiled by Melinda Yerka, University of Nevada-Reno, June 20, 2017

In 2016, germplasm of various plant species from the National Plant Germplasm System (NPGS) was requested and used by Nevada System of Higher Education institutes, farmers, nurseries, hobbyists and researchers in disciplines such as genetics, horticulture, botany, plant pathology, archeology, paleontology, and agronomy. A total of 22 orders were placed for a total of 109 plant accessions. This was a substantial decrease from last year's total of 912 accessions due to a large order of >700 teff [*Eragrostis tef* (Zucc.) Trotter] accessions by Dr. Bill Payne (University of Nevada-Reno, UNR) for an agronomy study in 2015.

The following is a summary of the germplasm requested and any associated user notes.

1. **Cody Sarcinella, UNR, *Artemisia tridentate* sbsp. Genetic studies. Researcher notes:** Genetics studies. We are in the Dr. David Shintani/Howard laboratory. We are currently investigating genetic markers for identification purposes in big sage brush (*A. tridentate* subsp. *tridentata*, *A. tridentata* subsp. *vaseyana*, and *A. tridentata* subsp. *wyomingensis*) to contribute to the conservation of sage grouse species. Often the wrong species of sage brush is planted in sage grouse habitat or invades the natural habitat. It is crucial to identify the right kind of sagebrush species for sage grouse preservation. Recent investigations into previous studies using a close relative of *Artemisia*, the *Helianthus* genus, have yielded a conserved gene: *TFL*. We are developing this and other genetic markers, in addition to ploidy analysis, to tell *Artemisia* species apart without relying on physical characteristics.

2. **David Shintani, UNR, *Taraxacum* Kok-Saghyz. Researcher notes:** Chemistry. Investigating rubber biosynthesis in plants.

3. **Dylan Kosma, UNR, *Solanum tuberosum*. Genetics studies. Researcher notes:** Investigating molecular and biochemical mechanisms of drought tolerance in chipping potatoes.

4. **Mark Mackey, Mars Chocolate North America, Unidentified species. No notes.**

5. **Susan Miszewski, Mars Chocolate North America, Unidentified species. No notes.**

6. **Barbara Smith, Black Thread, *Solanum tuberosum*, *Phaseolus vulgaris*, *Lactuca sativa*. User notes:** Home gardening.

7. **David Rhode, Desert Research Institute, *Zea mays* subsp. *mays* and *Vigna unguiculata* group *unguiculata*, *Nicotiana tabacum*, *N. obtusifolia*, *N. quadrivalvis*, *N. attenuate*, *N.***

***obtusifolia* var. *palmeri*. Researcher notes:** Historical, cultural and anthropological research. Identification and analysis of archaeological materials.

8. **Judy Peck, The ABCs of Gardening, *Phaseolus polystachios* subsp. *sinuatus*. User notes:** Entomological investigations. To see if such seeds can grow to maturity in the high desert area of Nevada, stronger, earlier, and survive our insects during our hot summers and snowy winters.

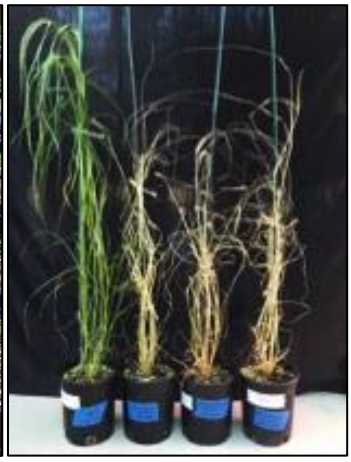
9. **Hattie Igartua, Homeschooling instructor, *Fragaria* x *ananassa*, *Vaccinium corymbosum*, *Malus sieversii*, *Pisum sativum*. User notes:** Public education, demonstrations. I am homeschooling my son and we are researching the different variations of plants that grow within Nevada.

10. **Ariel Simpson, *Fragaria vesca*, *Fragaria vesca* subsp. *vesca*. No additional information.**

11. **Hector Corona Villasenor, *Glycine max*. No additional information.**

12. **Jill Conley, From the Heart, *Capsicum annuum*. User notes:** Public education, demonstrations. Community garden teaching the homeless to grow their own food.

13. **Jefferey Jensen, Desert Rose High School, *Phoenix dactylifera*. No additional information.**

PUBLICATIONS:

No NV recipients of NPGS germplasm in 2016 provided information about published research results based upon data obtained from the materials they received.