

## 2021 W6 Idaho State Report

### Joseph C. Kuhl

In 2020, 1,683 accessions were requested in Idaho from the National Plant Germplasm System. The total number of accessions was similar to 2018 and 2019 when 1,810 and 1,385 accessions were requested, respectively. A total of 70 orders were placed from Idaho in 2020, similar to the number of orders placed in 2018 and 2019 (63 and 79, respectively). The major user group (assessed by the number of accessions requested) in 2020 was once again USDA, ARS scientists (primarily based in Aberdeen, Idaho) accounting for 81% of the total accessions. The number of orders placed in 2020 by private, state and federal entities was 42, 13, and 15, very similar to 2019 when 40, 19 and 20 orders were placed, respectively. The top three private requests were from Sid Perry with 44 accessions (retiring from wheat breeding), Bayer Crop Sciences with 40 accessions, and Crookham with 20 accessions. Overall, USDA-ARS Aberdeen Plant Pathologist, Sidrat Abdullah, placed the largest order with a total of 1,082 accessions (64% of the total accessions), primarily for screening for crown rust resistance. Of the 1,683 accessions requested, there were 29 genera. The top three genera by number of accessions requested were, *Avena* with 1,103 accessions, *Triticum* with 307 accessions and *Malus* with 43 accessions requested.

#### **Publications: 4 reported**

Isham, K., R. Wang, W.D. Zhao, J. Wheeler, N. Klassen, E. Akhunov, J.L. Chen. 2021. QTL mapping for grain yield and three yield components in a population derived from two high-yielding spring wheat cultivars. *Theoretical and Applied Genetics*. DOI: 10.1007/s00122-021-03806-1

Chen, J.L., J. Wheeler, N. Klassen, W. Zhao, K. O'Brien, C. Jackson, J.M. Marshall, K. Schroder, X.M. Chen. 2020. Registration of 'UI Bronze Jade' hard white winter wheat. *Journal of Plant Registrations*. 14:357-364.

Gordon, T., R. Wang, B. Bowman, N. Klassen, J. Wheeler, J.M. Bonman, H. Bockelman, J.L. Chen. 2020. Agronomic and genetic assessment of terminal drought tolerance in two-row spring barley. *Crop Science*. 60:1415-1427.

Gordon, T., R. Wang, D. Hole, H. Bockelman, J.M. Bonman, J.L. Chen. 2020. Genetic characterization and genomie-wide association mapping for dwarf bunt resistance in bread wheat accessions from the USDA National Small Grains Collection. *Theoretical and Applied Genetics*. 133:1069-1080.

#### **Germplasm user reports for 2020 (or older) requests (5 replies out of 29 emails):**

1. What is/was the planned use for the NPGS germplasm(s) you received in 2020?

2. Did you release any plant material(s) to the public in 2019 that was partially or fully derived from any NPGS germplasm(s) that you received in 2019 or previously? If yes, please provide as much information as possible about the released plant material(s).
3. If you published an article in 2019 that includes NPGS germplasm that you received in 2019 or earlier, please provide the publication citation (authors, title, journal, etc.).

**Jennifer Yates, Bayer Crop Science**

1. Evaluation of traits (seed color, etc)
2. No
3. na

**Caleb Antram**

1. Personal germination study of *Fragaria X* in different conditions.
2. N/A
3. N/A

**Cari Schmitz Carley, Aardevo USA**

1. NPGS germplasm was/will be used in diploid potato breeding.
2. No releases have been made.
3. No publications to report.

Thank you!

**Dustin Batt, Crookham Company**

1. To create new breeding lines/populations of sweetcorn for fresh and processing consumption.
2. No
3. No publications

**Tylr Pearson**

1. Germination testing, Growth habits, seed saving for 4-H projects as learning materials.
2. Seeds were given to multiple aged children in 4-H projects but no other plants given to other public or private organizations. If more specific information is needed please request.
3. No publications.