

2013 W6 Idaho State Report Joseph C. Kuhl

In 2013, 2,960 accessions representing 48 genera and 75 species were requested in Idaho from the National Plant Germplasm System. This is a decrease in number of accessions from 2012 (4,221), but a similar number of genera and species were requested in 2012, 33 genera and 81 species. There were a total of 67 orders from Idaho, 5 orders from 4 individuals, 29 orders from the public sector and 33 orders from commercial identities. This represents a 19% decrease in the number of total requests, compared to 83 in 2012. The total number of accessions requested in 2013, 2,960, was down a third year in the row compared to 4,221 in 2012 and 6,404 in 2011. This may reflect the absence of any large screening experiments at the federal or state levels. The major user groups (assessed by the number of accessions requested) in 2013 were ARS scientists (all based in Aberdeen, Idaho) (71% of total accessions) and University of Idaho scientists (17% of total accessions), together accounting for ~88% of the total accessions requested. Mountain Meadows Seed stands out among private companies with 188 accessions requested, or 61% of the accessions requested by private companies. Interestingly, J.R. Simplot Co. requested only 31 accessions in 2013 compared to 250 accessions in 2012. The top three genera requested in Idaho were *Triticum* (1,061) followed by *Avena* (1,044) and *Brassica* (476).

University of Idaho breeding programs once again utilized NPGS germplasm. Dr. Jack Brown's canola breeding program requested 458 *Brassica* accessions in 2013. Dr. Jianli Chen's wheat breeding program requested 2 *Triticum aestivum* accessions.

Dr. Nilsa Bosque-Perez's entomology program requested an assortment of species (15 accessions) to test for expanded host range to barley yellow dwarf virus when transmitted by *Rhopalosiphum*.

In *Beta vulgaris* research, 20 sugar beet accessions were again requested in 2013 by the University of Idaho nematologist Dr. Saad Hafez for use as differential lines in evaluation for BCN resistance.

Germplasm user reports:

Jim Cain - Individual - Meridian, Idaho

1 *Fortunella x crassifolia*

The seed arrived very quickly and in excellent condition. The expected germination is very low, which is already a known fact concerning this species. My intended use is to examine (a)

germination rate under Idaho soil and weather conditions, and, (b) potential level of cold-tolerance in relation to Idaho seasons (with overwintering indoors).

Emily Kniep - Syngenta Seed Company - Nampa, Idaho

3 *Pisum sativum*

I received the seed in good condition and in a reasonable amount of time. I intent to use them as positive and negative trait checks during germplasm screening within the snap pea program.

Brent Searle - Shelley's Fresh Produce & Cut Flowers - Shelley, Idaho

4 *Actinidia deliciosa*

1 *Morus alba*

1 *Morus macroura*

4 *Vitis vinifera* subsp. *vinifera*

1 *Fragaria x ananassa*

I really appreciated receiving the cuttings. I was a bit unprepared for receiving them; I was more expecting root cuttings rather than pruned cuttings. My success at rooting the cuttings was frankly unsuccessful. My objective was to try to find interesting and unusual cultivars of these (kiwi, mulberry, strawberries, table grapes) that would survive in a Zone 4/5 climate and function as part of a working small farm.

Teena Jaramillo - Triple JJJ - Caldwell, Idaho

5 *Lactuca sativa*

1 *Phaseolus vulgaris*

1 *Phaseolus vulgaris* var. *vulgaris*

1 *Pisum sativum*

Seeds they came in great condition I planted with grand kids and friends to show how things grow but nothing sprouted so far and they watering and etc they are a group of 11 and other about 12 give or take maybe Idaho weather but no freezing weather after planted in beginning of April.

Publications: 2013 – 4 publications

Chen, J., Hu, G., Ch. Chu, and Y. Wu. 2013. STS markers developed from drought tolerance candidate genes and mapped in two mapping populations and one set of nulli-tetrasomic lines of common wheat (*Triticum aestivum*). Cereal Communication (Accepted).

Chen, J., J. Wheeler, J. Clayton, W. Zhao, K. O'Brien, C. Jackson, J. M. Marshall, B.D. Brown, K. Campbell, X.M. Chen, R. Zemetra, and E.J. Souza. 2013. Registration of 'UI Stone' Wheat. *J. Plant Registration* 7:1-6.

Handiseni, M., J. Brown, R. Zemetra, and M. Mazzola. 2013. Effect of Brassicaceae seed meals with different glucosinolate profiles on *Rhizoctonia* root rot in wheat. *Crop Protection*. 48:1-5.

Yoshida, H., S. Hafez, B. Young, and R. Portenier. 2013. Management of sugar beet cyst nematode with Telone (R) II using strip-tillage fumigation. *Journal of Nematology*. 45:329-329.