

Wyoming State Report - 2014

Annual W6 State Technical Advisory Summary

Dave Stout, Meg Gollnick, USDA-ARS-WRPIS; Pullman, WA

In 2014, germplasm of plant species from the National Plant Germplasm System (NPGS) was requested and used by various Wyoming State agencies, farmers, nurseries, hobbyists and researchers in disciplines such as genetics, horticulture, botany, plant pathology and agronomy. The following is a summary of information regarding the performance of the germplasm material Wyoming State groups have requested from the NPGS.

Summary

An email was sent out on May 25, 2015 to the eight groups in Wyoming State that requested germplasm from the NPGS in 2014. The request asked for information regarding the performance of the 49 different accessions received, i.e. germination success or percent germinated, grafting success, propagation success, publications etc. We received three responses to our request, two from the University of Wyoming and one from Shoshone River Farms. Among the responses, a total of 10 different taxa were requested; *Corylus americana*, *Brassica juncea*, *Brassica rapa subsp. oleifera*, *Brassica rapa subsp. trilocularis*, *Vitis aestivalis*, *Vitis amurensis*, *Vitis cinerea*, *Vitis hybr.*, *Vitis subsp. vinifera*, *Vitis x champinii*. Utilization of samples included physiological, anatomical and genetic analyses (Robert L. Baker), and plant tissue cultures in grapevine improvement studies to produce transgenic plants (Sadanand Dhekney). The requestors received their material in good condition and all germinated well with the exception of the *Corylus* due to contamination from Milestone herbicide at the growing site. There was also a question brought up regarding the NPGS's confidence in species assignments and if any genetic analysis is used to confirm species designations. (Robert L. Baker, University of Wyoming)

There are no publications at this time for any of the germplasm requested.

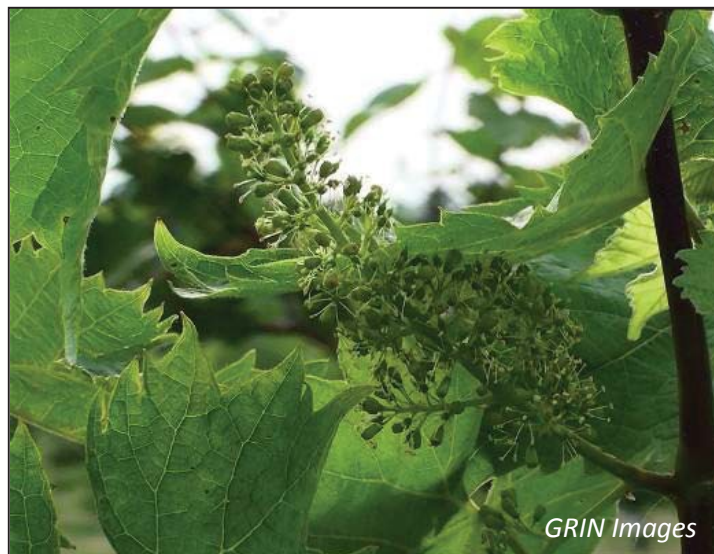


Table 1. Summary of Responses

REQUESTER/TAXON	RESPONSE
<p>Robert L. Baker University of Wyoming <i>(Brassica)</i></p>	<p>What was germplasm used for? 1) I grew replicates of almost all of the germplasm I received for a series of physiological, anatomical, and genetic analyses. The physiological analyses are done and the anatomic and genetic analyses are under way.</p> <p>Did you have success? 2) So far so good!</p> <p>Will there be any publications? 3) Yes, but it might be another couple months/a year.</p> <p>General comments. 4) I'd be interested in how confident you are in species assignments to the germplasm. I found that morphologically it was often very hard to distinguish between and among species as there is considerable diversity within any one species and that tends to overlap with another species. Do you do any genetic analyses to confirm species designations, such as chromosome</p>

	<p>counts? Thanks for the seed!</p>
<p>Scott Richard Shoshone River Farm (Corylus)</p>	<p>We had minimum germination. We were contaminated with Milestone herbicide that came in through contaminated barley straw. We used the straw in our compost and we have had difficulty with all our plantings.</p>
<p>Sadanand Dhekney University of Wyoming (Vitis)</p>	<p>The germplasm we requested was used to initiate plant tissue cultures for use in grapevine improvement studies. We initiated cultures from the requested germplasm and produced transgenic plants. We hope to have two publications this year from the use of this germplasm. We greatly appreciate receipt of the germplasm and are very grateful for receiving it in a timely manner as this has helped us advance our research.</p>