

# Nevada State Report - 2014

Annual W6 State Technical Advisory Summary

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In 2014, germplasm of various plant species from the National Plant Germplasm System (NPGS) was requested and used by various Nevada 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 Nevada State groups have requested from the NPGS.

## **Summary**

An email was sent out on May 25, 2015 to the four groups in Nevada State that requested germplasm from the NPGS in 2014. The request asked for information regarding the performance of the 98 different accessions received, i.e. germination success or percent germinated, grafting success, propagation success, publications etc. We received one response to our request from the University of Nevada, Reno. Among the response, a total of nine different taxa were requested; *Achnatherum hymenoides*, *Achnatherum lemmomii*, *Achnatherum lemmonii* subsp. *lemmonii*, *Achnatherum lettermanii*, *Achnatherum thurberianum*, *Hesperostipa comata*, *Hesperostipa neomexicana*, *Nassella pulchra*, *Nassella viridula*. Utilization of samples included the quantification of varying levels of root phenotypic plasticity in seedling perennial grasses (NSF funded grant). The goals of this project were 1. To determine whether there is significant connection between seedling response to stress and geographic range size, 2. To determine what role plasticity may play in the transition between succession stages with fluctuating resource availability and 3. To offer land managers further knowledge about the establishment processes of desired perennial grasses. The requestor received their material in good condition and all germinated well. One issue the requestor mentioned was that it was, “difficult to select specimens online as the vast majority of specimens for these species are

lacking locality information in their descriptions (a critical piece of information for studies regarding distribution).”

There are no publications at this time for any of the germplasm requested, but the requester is currently working on a manuscript for publication.



**Table 1. Summary of Responses**

REQUESTER/TAXON	RESPONSE
<p>Riley Anderson University of Nevada, Reno <b>(<i>Achnatherum</i>, <i>Hesperostipa</i>, <i>Nassella</i>)</b></p>	<p>The seeds I requested last summer were used for an experiment under the Research Experience for Undergraduates program funded by NSF. My study looked at quantifying varying levels of root phenotypic plasticity in seedling perennial grasses. The goals of this project were threefold; first, to determine whether there is a significant connection between seedling response to stress and geographic range size, second, to determine what role plasticity may play in the transition between succession stages with fluctuating resource availability, and third, to offer land managers further knowledge about the establishment processes of desired perennial grasses. I had success in the fact that my seeds germinated and</p>

grew. Significant trends were few and far between to answer my first two questions. However, I now have a plethora of useful descriptive data to answer my third question. I am currently working on a manuscript for publication. The acknowledgements section will recognize NPGS, if published. I am assuming there are guidelines on your website as to how NPGS wishes to be referred (or maybe you can answer that one for me)?

My only other comments would be to express the difficulty I had in selecting specimens online as the vast majority of specimens for these species are lacking locality information in their descriptions (a critical piece of information for studies regarding distribution). After a lengthy email conversation with many NPGS employees I learned that this information is available, just not publicly listed. I am assuming this is just the nature of a lengthy, never ending, time-consuming process. Nevertheless, I greatly appreciate all the assistance and guidance I received from NPGS staff.