

WERA_TEMP_1013: Western Region Evaluation and Introduction of Native Plants

Status: Draft Project

Duration 10/01/2023 to 09/30/2028

Admin

Advisors: [\[Tracy Dougher\]](#)

NIFA Reps:

Statement of Issues and Justification

Interest in and demand for native plants for ornamental landscapes have increased recently. According to a 2018 survey of the American Society of Landscape Architects (ASLA, 2018), native plants and drought tolerant plants are the top projects with the expected highest consumer demand. Native plants offer aesthetics and ecological benefits (ASLA, 2023). These include water conservation (Reid and Oki, 2008) and provision of pollinator habitat (Fukase and Simons, 2016). The regional market for native plants is expanding rapidly, but cost of production currently limits many native plant growers, who rely on limited local demand for their plant materials. Landscapers and landowners in states such as Nevada (Curtis and Cowee, 2007), with high plant production costs due to climate constraints, rely on neighboring states as sources of commercially available native plants for landscaping. Greater cooperation among western states expands the markets for producers in these areas, decreasing cost of production and increasing the use of native plants in home and commercial landscapes.

Other factors that limit the widespread use of native plants by landscape professionals in the western US are lack of plant availability caused by production and marketing challenges, and limitations in landscape professionals' knowledge about landscape use and adaptation constraints of native plants (Hooper et al. 2008; Ricordi et al. 2014). According to industry stakeholders, landscape professionals are increasingly willing to include native plants in their landscape designs, and growers desire to produce native plants to meet the demand. However, demand for specific native plant materials often does not match supply because some desirable native plant species require a longer production time than conventional landscape plants, and landscape professionals are not knowledgeable about species availability and plant size limitations. Regional efforts to match supply with demand for native plants will increase demand for native species that can be produced cost-effectively and will allow growers the lead time to produce plants for which there is high demand. Collaborative regional educational programs targeted to landscape professionals, growers and consumers will stimulate demand for, and knowledge about, native plant species deemed appropriate for landscape use.

As the market for native plants expands to meet demand from gardeners and landscapers, WERA-1013 is well-poised to support the long-term success of native plant growers serving ornamental markets. WERA-1013 member Gail Langellotto is leading a USDA SCRI planning grant project to identify high priority research, teaching, and extension activities that support native plant growers' success. A key element of the project, entitled 'Native Plant Connection' is to lay a strong foundation for a national native plant network with regional hubs, that can support information sharing to improve the efficiency of native plant production. Outcomes from the USDA SCRI planning grant support the overall approach and objectives of the WERA-1013 group.

Our goal for the next five years (2023 to 2028) is to expand the extent of interstate cooperation (from the western intermountain states to the rest of the western US, including Alaska and Hawaii) on research and extension activities to: 1) evaluate and market new native plant materials and cultivars and 2) provide education on native plant propagation/production, the benefits of native plants and native plant use and maintenance in ornamental landscapes.

Objectives

1. Enhance interstate cooperation in evaluating and marketing of new native plant materials and cultivars..
2. Provide education to both the public and industry professionals on native plant propagation/production, the benefits of native plants, and their use and maintenance in ornamental landscapes.

Procedures and Activities

WERA 1013 meets annually in October to chart the course of collaborative educational and research activities for the year. These meetings include networking opportunities for educators, researchers and growers, website updates, distribution and coordination of plant materials, and research and education reports. WERA 1013 meets informally at the annual American Society for Horticultural Sciences conference.

WERA 1013 strives to produce educational and promotional products for landscapers, homeowners, and growers as well as define propagation and production methods for new plant materials. WERA 1013 seeks to support industry-based organizations that advance the production to meet the demand for native plant materials and encourage grower organizations to continue to promote the use of native plants.

Research related to native plants is carried on by individual group members in collaboration with other group members, who may provide seed or cuttings from populations in their state or evaluate the performance of new plants by garden trials and/or public satisfaction surveys. Examples of the type of research conducted includes genetic selection for improved traits and investigation of the genetic variability and relationships within species of particular importance or popularity (e.g., Penstemon). Group members with a primary role in education or extension focus on contributing to information included on the website (<https://cwelwnp.usu.edu/westernnativeplants/index.php>), display of newly developed plants in public garden spaces, and education about the value of native plants to students, master gardeners, and the community.

Expected Outcomes and Impacts

- Increase availability of native plants in the western US by evaluating and distributing region-specific native taxa to native plant growers.
- Develop propagation and maintenance protocols for new and existing native plants.
- Enhance regional education and outreach programs leading to greater willingness of homeowners to adopt native plant concepts and landscape professionals to promote and properly maintain native plant designs.
- Increased use of region-specific native plants by landscape professionals and by the consuming public as measured by increased sales of native plant materials by growers and retailers.

Educational Plan

Inputs will include demonstration gardens, regional professional seminars, regional web-based educational resources, and published materials. Information on native plant use, benefits related to water conservation and pollinator protection, and maintenance of native plant landscapes to promote water sustainability will be integrated into appropriate university courses and master gardener programs, and will be made available to the horticulture industries and the public. Information will be disseminated by individual group members by way of classroom lectures, extension publications, and oral presentations at stakeholder and industry meetings. Efforts will be made to grow our capacity to provide language-appropriate educational opportunities, via non-English translations of materials and resources and recruitment and support of multi-lingual/multi-cultural members to the group. Assessment of outcomes and impacts will occur as a result of, but are not limited to, tracking of website analytics, industry focus group meetings, and pre- and post-seminar surveys. The result of regional educational collaboration involving universities and industry stakeholders will be a concerted effort to stimulate demand for and knowledge about native plants, improve the quality of available plant materials, and facilitate introduction of new plant materials to improve profitability of native plant production.

Organization/Governance

The recommended Standard Governance for multistate research activities includes the election of a Chair, a Chair-elect, and a Secretary. All officers are to be elected for at least two-year terms to provide continuity. Administrative guidance will be provided by an assigned Administrative Advisor and a CSREES Representative.

Chair: serves as key contact and head of the group. Calls for presentations and sets the agenda and convenes the annual October meeting. Works with the Chair-elect to compile and publish the annual Proceedings. **Chair-elect:** supports the Chair, and serves as key contact in their absence. Takes a lead role in organizing the Proceedings.

Secretary: takes minutes at Business meetings. Distributes announcements for upcoming meetings, calls for research reports, and other communications through the Listserv.

Webmaster: manages general updates to the website (<https://cwelwnp.usu.edu/westernnativeplants/index.php>), as needed.

Listserv Manager: Keeps the listserv membership up to date.

Plant Materials Resource Manager: coordinate additions of new plant materials to the website.

State Representative: one member from each state, who can help advertise WERA1013 activities within their state, and recruit new members.

Literature Cited

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American Society of Landscape Architects. 2023. Applying Ecological Design: Native Plants.
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Fukase, J., & Simons, A. M. (2016). Increased pollinator activity in urban gardens with more native flora. *Applied Ecology and Environmental Research*, 14(1), 297-310.

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Reid S, Oki L. 2008. Field trials identify more native plants suited to urban landscaping. *Calif Agr* 62(3):97-104.
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Rupp, L. A., Anderson, R. M., Klett, J., Love, S. L., Goodspeed, J., & Gunnell, J. (2018). Native and Adapted Plant Introduction for Low-water Landscaping. *HortTechnology* 28(4), 431-435. Retrieved Aug 9, 2023, from
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Land Grant Participating States/Institutions

AZ, CA, CO, HI, IA, MN, MT, ND, NV, OR, TX, UT, WA, WY

WERA1013: Intermountain Regional Evaluation and Introduction of Native Plants

Participant Name	Station Name	Objective No.	Research						Extension							
			KA	SOI	FOS	SY	PY	TY	FTE	Program/KA						
Rupp, Larry A. Larry.Rupp@usu.edu	Utah Cooperative Extension	1,2	205	2110	1060	0.05	0.000	0.100	0.6	111						
Niu, Genhua gniue@ag.tamu.edu	Texas AgriLife Research	1,2	203	0	1.000	0.000	0.000	0.000	0	0						
Schuch, Ursula ukschuch@ag.arizona.edu	Arizona - University of Arizona	1,2	203	2110	1020	204	2120	1060	0.100	0.000	0.000	0.6	203	204	205	
Sun, Youping youping.sun@usu.edu	Utah - Utah State University	1,2	111	210	1020	136	2110	1080	0.150	0.000	0.000	0	0			
Dougher, Tracy tracyaod@montana.edu	Montana - Montana State University	1,2	204	2120	1020	204	2130	1020	0.100	0.000	0.000	0	0			
Kratsch, Heidi A kratschh@unce.unr.edu	Nevada Cooperative Extension	1,2	0	0	0	0.000	0.000	0.000	0.000	0.1	136	0				
Chalker-Scott, Linda K lindacs@wsu.edu	Washington Cooperative Extension	1,2	0	0	0	0.000	0.000	0.000	0.000	0.02	124	136	203	206	102	111
Klett, James Jim.Klett@ColoState.EDU	Colorado - Colorado State University	1,2	204	2120	1050	111	2120	1060	0.100	0.000	0.000	0.1	205			
Graves, William R. graves@iastate.edu	Iowa - Iowa State University	1,2	202	2110	1070	0.000	0.000	0.100	0.000	202						

Participant Name	Station Name	Objective No.	Research				Extension		
			KA	SOI	FOS	SY PY TY	FTE	Program/KA	
Baldos, Orville obaldos@hawaii.edu	Hawaii - University of Hawaii	1,2	13421101020						
			13421101140						
			13421221020						
			13421221140						
			13421401020						
			13421401140						
			20221101020	0.100	0.000	0.000	0.000	0	
			20221101140						
			20221221020						
			20221221140						
Hufford, Kristina khufford@uwyo.edu	Wyoming - University of Wyoming	1,2	111790	10700	0.100	0.000	0.000	0.1	111 202
McGinnis, Esther esther.mcginnis@ndsu.edu	North Dakota - North Dakota State University	1,2	10221991020						203
			20321201020	0.000	0.100	0.000	0.1	205	
Miller, Brandon bmmiller@umn.edu	Minnesota - University of Minnesota	1,2	12421101020						0
			12421201020	0.100	0.000	0.000	0.000	0	
Langellotto, Gail gail.langellotto@oregonstate.edu	Oregon - Oregon State University	1,2	1363090	10700	0.100	0.000	0.000	0.75	136

Combination of KA, SOI and FOS	Total SY	Total PY	Total TY
Grand Total:	4.35	0.30	0.10
0 - 0 - 0	0.00	0.00	0.00
102 - 2199 - 1020	0.00	0.10	0.00
102 - 2499 - 1020	0.15	0.00	0.00
103 - 2499 - 1020	0.15	0.00	0.00
111 - 210 - 1020	0.15	0.00	0.00
111 - 790 - 1070	0.10	0.00	0.00
111 - 2120 - 1060	0.10	0.00	0.00
124 - 2110 - 1020	0.10	0.00	0.00
124 - 2120 - 1020	0.10	0.00	0.00
134 - 2110 - 1020	0.10	0.00	0.00
134 - 2110 - 1140	0.10	0.00	0.00
134 - 2122 - 1020	0.10	0.00	0.00
134 - 2122 - 1140	0.10	0.00	0.00
134 - 2140 - 1020	0.10	0.00	0.00
134 - 2140 - 1140	0.10	0.00	0.00
136 - 2110 - 1080	0.15	0.00	0.00
136 - 3090 - 1070	0.10	0.00	0.00
202 - 2110 - 1020	0.10	0.00	0.00
202 - 2110 - 1070	0.00	0.10	0.00
202 - 2110 - 1140	0.10	0.00	0.00
202 - 2122 - 1020	0.10	0.00	0.00
202 - 2122 - 1140	0.10	0.00	0.00
202 - 2140 - 1020	0.10	0.00	0.00
202 - 2140 - 1140	0.10	0.00	0.00
202 - 2499 - 1080	0.15	0.00	0.00
203 - 0 - 0	1.00	0.00	0.00
203 - 2110 - 1020	0.10	0.00	0.00
203 - 2120 - 1020	0.00	0.10	0.00
203 - 2499 - 1020	0.15	0.00	0.00
204 - 2120 - 1020	0.10	0.00	0.00
204 - 2120 - 1050	0.10	0.00	0.00
204 - 2120 - 1060	0.10	0.00	0.00
204 - 2130 - 1020	0.10	0.00	0.00
205 - 2110 - 1060	0.05	0.00	0.10
205 - 2120 - 1070	0.10	0.00	0.00
205 - 2123 - 1060	0.10	0.00	0.00

Grand FTE Total:		2.37
111		0.2
0		0
203		0.2
204		0.2

205	0.2
0	0
0	0
136	0.03
0	0.03
124	0.01
136	0.01
203	0.01
206	0.01
102	0.01
111	0.01
205	0.03
0	0
202	0
205	0.03
111	0.03
202	0.03
0	0
111	0.03
202	0.03
203	0.03
205	0.03
0	0
136	0.25