## Plant Propagation Protocol for [*Ribes oxyacanthoides*] ESRM 412 – Native Plant Production

Protocol URL: https://courses.washington.edu/esrm412/protocols/[RIOX.pdf]



|                             | (10)(2)   |
|-----------------------------|---|
|                             | see distribution maps above for native distribution (10)                    |
| Ecological distribution     | Riparian areas, rocky shores, open areas, talus slopes,                     |
|                             | thickets (2)  |
| Climate and elevation range | Cold temperate regions (5)  |
|                             | On average between 2000 0000 feet mid to lower                              |
|                             | elevations with subspecies occurring at different                           |
|                             | elevations (2)  |
| Local habitat and abundance | Found in riparian habitats, and is typically associated                     |
|                             | with conifers like ponderosa pine, lodgepole pine and                       |
|                             | douglas fir. (2)  |
|                             |   |
|                             | Fairs best in loamy sandy and clay soils which are well                     |
|                             | drained with an acidic to neutral ph. (6)                                   |
| stage                       | Most abundant in shrubiand successional stage (2)                           |
| suge                        | Mildly shade tolerant, prefers woodlands or shrublands                      |
|                             | with mild shade and cannot survive if upperstory is too                     |
|                             | dense (6)   |
|                             |   |
| Plant characteristics       | Shrub, woody perennial (7)(10)  |
|                             | Grows up to 5 feet (9)  |
|                             | green while older stems are brown with longer more                          |
|                             | abundant spines (2)(7)  |
|                             |   |
|                             | Leaves are an 1 <sup>1</sup> / <sub>2</sub> long and have 3-5 rounded lobes |
|                             | and both the upper and lower surface of the leaf along                      |
|                             | with leaf stems are covered in fine hairs (7)                               |
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(photos from 7)

It flowers from April-June and produces berries from June-August. In general R. oxyacanthoides seeds germinate in the spring, (2)

In general Ribes species have shallow root systems that radiate from a central crown (2)

The species is hermaphrodite (has both male and female organs) and is pollinated by Insects (9)(6)

Seeds are orthodox and hardy so they can be stored and are viable for many years (5)

Ribes oxyacanthoides can be distinguished amongst other ribes species by the denseness of spines persisting on its stems, the heart shape of their leaves at the base, and how short the flowers are in comparison to other ribes species (7)

| PROPAGATION DETAILS  |  |  |
|--|--|--|
| Ecotype  |  |  |
| Propagation Goal   | Plants (1)   |  |
| Propagation Method   | Vegetative (1)   |  |
| Product Type   | Layering(1)  |  |
| Time to Grow   | 1 to 2 years (1)(4)  |  |
| Target Specifications  | Shoots 30 cms tall with individual root systems (1)  |  |
|  | After 2 years in the nursery the new shoots will bear fruit (3)  |  |
| Propagule Collection Instructions                                  | Bury the branches a 1 year old mother plant in the spring<br>to early summer, May-June (4)(1)  |  |
| Propagule Processing/Propagule<br>Characteristics                  | Using the layering method all of the canes of a mother<br>plant can be used to produce individual propagules<br>within one growing season (4)  |  |
| Pre-Planting Propagule Treatments                                  | To prepare the mother plant for layering, wait for it to<br>harden off in the fall and cut all the canes down to about<br>5 cm. Wait for new growth in the spring until about 15<br>cm and create a mound of sawdust over the shoots<br>leaving a few inches exposed. (1)        |  |
| Growing Area Preparation / Annual<br>Practices for Perennial Crops | Mother plants should be prepared in stool beds(1)<br>Organic compost like sawdust or cedar compost is ideal<br>for mounding use so that removal of rooted sections is<br>easier (1)(4)   |  |
| Establishment Phase Details  | Continue to add layers at 15 cm and then again at 30 cm<br>of tightly packed sawdust leaving a few inches of the<br>new shoots exposed. Growth occurs throughout the<br>summer and the new propagules will harden in the fall<br>and can be cut and stored until outplanting (1) |  |
| Length of Establishment Phase                                      | May-June   |  |
| Active Growth Phase  | After a mound of sawdust has been added to initial<br>shoots at 15 cms, wait for regrowth until about 30 cm,<br>and again cover the shoots with a mound leaving a few<br>inches exposed (1)  |  |
| Length of Active Growth Phase                                      | June-August  |  |
| Hardening Phase  | Once the new shoots have begun to enter their hardening<br>phase in the fall, the rooted layers should be divided into<br>individual plants for storage (1)  |  |
| Length of Hardening Phase  | August-October   |  |

| Harvesting, Storage and Shipping                             | For optimal outplanting success its is recommended to<br>store propagules in the nursery in partial sun for 1 year  |
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|  | to prepare them for outplanting condition (3)   |
| Length of Storage  | October-August  |
| Guidelines for Outplanting /<br>Performance on Typical Sites | Plant in August, plants should be placed in loamy rocky<br>soil that is well drained. They are mildly tolerant of<br>shade, and can be planted in shade but will most likely<br>not bear fruit. (6)   |
|  | Plants grown vegetatively will bear fruit in two years(3)   |
|  | During winter dormancy plants are required exposure to 32-45 degrees fahrenheit in order to complete their dormancy and begin regrowth next spring. (1)   |
|  | It is recommended individuals not be planted too close<br>to pine trees, as they are susceptible to white pine blister<br>rust (6)  |
| Other Comments   | Both Umatilla gooseberry and Idaho gooseberry are listed as sensitive in washington state. (2)  |
| INFO   | RMATION SOURCES   |
| References   | 1.Barney, Danny L., and Kim E. Hummer. <i>Currants, Gooseberries, and Jostaberries: a Guide for Growers, Marketers, and Researchers in North America</i> . Food Products, 2005.   |
|  | <ul> <li>2.Carey, Jennifer H. 1995. Ribes oxyacanthoides. In:<br/>Fire Effects Information System, [Online].</li> <li>U.S. Department of Agriculture, Forest Service, Rocky<br/>Mountain Research Station,</li> <li>Fire Sciences Laboratory (Producer). Available:<br/>https://www.fs.fed.us/database/feis/plants/shrub/riboxy/a</li> <li>ll.html [2020, May 25].</li> </ul> |
|  | 3."GOOSEBERRY." <i>GOOSEBERRY Fruit Facts</i> ,<br>California Rare Fruit Growers Inc., 1996,<br>www.crfg.org/pubs/ff/gooseberry.html.   |
|  | 4.Green, Samuel B. Popular Fruit Growing: Prepared<br>Especially for Beginners and as a Text Book for Schools<br>and Colleges (Classic Reprint). Forgotten Books,<br>2016.  |
|  | 5.Pfister, Robert D, and John P Sloan. "Ribes L.<br>Currant, Gooseberry." Woody Plant Seed Manual,  |

|                                  | <ul> <li>pdfs.semanticscholar.org/3055/d0a06ec692824adfdcd78<br/>d399abad1746c63.pdf.</li> <li>6."Ribes Oxyacanthoides (American Mountain<br/>Gooseberry)." <i>Practical Plants</i>, 2013,<br/>practicalplants.org/wiki/Ribes_oxyacanthoides.</li> <li>7."Ribes Oxyacanthoides (Northern Gooseberry)."<br/><i>Minnesota Wildflowers</i>, Environment and Nation<br/>Resources Trust Fund, 2006,<br/>www.minnesotawildflowers.info/shrub/northern-<br/>gooseberry.</li> <li>8."Ribes Oxyacanthoides - L." ITIS Standard Report<br/>Page: Ribes Oxyacanthoides, Spacer Image Background<br/>Information The White House Subcommittee on<br/>Biodiversity and Ecosystem Dynamics,</li> </ul> |
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|                                  | https://www.itis.gov/servlet/SingleRpt/SingleRpt?search<br>_topic=TSN&search_value=24493#null.  |
|                                  | 9."Ribes Oxyacanthoides - L." <i>Pfaf Plant Search</i> , 2010, pfaf.org/user/Plant.aspx?LatinName=Ribes%2Boxyacan thoides.  |
|                                  | 10.USDA NRCS National Plant Data Team, editor.<br>"Ribes oxyacanthoides L. Canadian gooseberry" Plants<br>Database, USDA,<br>https://plants.usda.gov/core/profile?symbol=RIOX.  |
| Other Sources Consulted          | $(D^{1}) = 0$   |
|                                  | Foundation 26 Dec 2019  |
|                                  | en.wikipedia.org/wiki/Ribes_oxyacanthoides.   |
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| Protocol Author                  | Mia Niikkonen   |
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