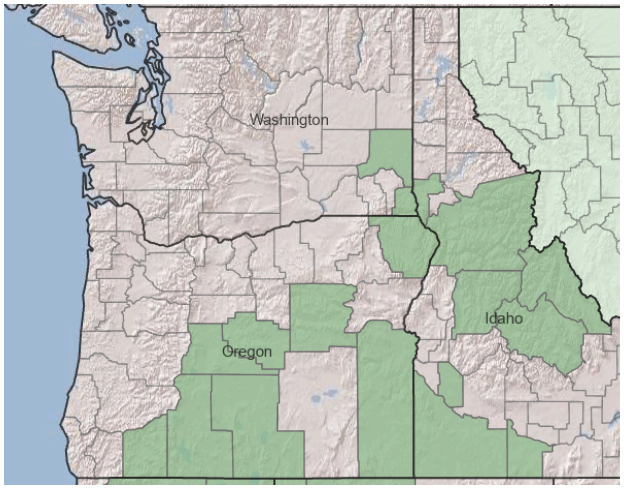
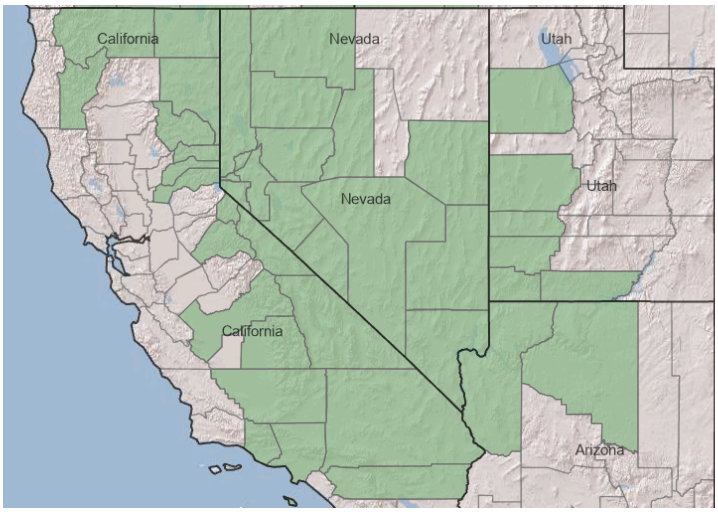
Plant Propagation Protocol for *Ribes velutinum* Greene

ESRM 412 – Native Plant Production

URL: https://courses.washington.edu/esrm412/protocols/2025/RIVE.pdf

TAXONOMY	
Plant Family	
Scientific Name	Grossulariaceae [1]
Common Name	Currant Family
Species Scientific Name	
Scientific Name	*Ribes velutinum* Greene [1]
Varieties	*goodingii* ; *velutinum* [1]
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	*Grossularia velutina* (Greene) Coville & Britton; *Ribes gooddingii* M. Peck [1]
Common Name(s)	Desert Gooseberry; Gooding's gooseberry [1]
Species Code (as per USDA Plants database)	RIVE [1]
GENERAL INFORMATION	
Geographical range	 Distribution in PNW includes arid spaces in southern and central Oregon and Idaho, as well as south-eastern Washington. County data for

	distribution in Montana is not available. [1]  Distribution in California is along the east of the Cascades and Sierras, in arid environments extending into Nevada, Arizona, and Utah [1]
Ecological distribution	Occurs along slopes and in steppe environments including Sagebrush Scrub, Yellow Pine Forest, and Pinyon-Juniper Woodland habitats. [2]
Climate and elevation range	Inhabits elevation ranges of 700[3]500 m; suited to warm dry summer seasons characteristic of the ecosystems in which they are found[2,3] Temperature range from 8 to 19 ° C, hardiness zones 5b to 9a. [2]
Local habitat and abundance	Most commonly found in arid and semi-arid mixed woodland environments along with species like *Pinus ponderosa* and *Juniperus spp.* [2]
Plant strategy type / successional stage	Can tolerate shaded conditions in the understory, but grows most vigorously in open spaces with sun exposure. [4] Dominant shrub in basalt outcrops and along cinder cones. [4] Predominantly reproduces through seed but will sprout from the root crown when disturbed or burned. [4,5,10] Early-mid seral stages showed the highest percent frequency of R. velutinum, but it can be found in all

	successional stages of pinyon-juniper woodlands. [4,10] Will dominate the post-fire vegetative communities along with additional sub-dominant fire-responsive shrubs for around 10-15 years. [5,10]
Plant characteristics	Shrub form taller than 2m, and inflorescences have between 1-4 flowers of light yellow color. Flowering is April-May. [2] Fruit ripens from yellow to purple when mature and ranges between 6-7mm in size. The fruits are edible. [3]
PROPAGATION DETAILS: FROM SEED **Information extrapolated from protocols for *Ribes sanguineum* Pursh, *Ribes lacustre* (Pers.) Poir., *Ribes cereum* Dougl.**	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	1 gallon container
Time to Grow	1.5 year [4,7,8]
Target Specifications	Seedlings should show well-branched, bushy growth above soil, and robust root development below ground [8,11]. Height should be above 50cm.
Propagule Collection Instructions	Propagules should be collected late August to September to ensure the fruits are ripened. Fruits should be placed in plastic bag upon collection and placed in an insulated container to prevent reduction in viability[2,4,8]
Propagule Processing/Propagule Characteristics	Mature berries (see above) should be de-pulped through maceration and running a dulled-blade blender with water. Remaining plant matter should be sieved and seeds dried before entering refrigeration for cold stratification [4,6,7,8].
Pre-Planting Propagule Treatments	Seeds can be held for multiple years, potentially up to a decade under proper management [13]. Cold stratification should last for at least 3 months before sowing, and % germination when stored for longer periods may benefit from additional scarification of seeds [4,8]. Stratification should be performed with seeds sown into peat and perlite mixture, and sealed in a polyethylene bag. Refrigerated temperatures should be slightly above 0°C [4]

Growing Area Preparation / Annual Practices for Perennial Crops	Fully Controlled greenhouse, Transfer to Hoophouse for Hardening Direct seeding. Media should be coarse and loamy, with adequate drainage. A mixture of sphagnum peat, vermiculite, and perlite is recommended in a 6:1:2 ratio. Seeds should be sown into Slow release fertilizers will provide necessary nutrients for the establishment phase and through the active growth phase before up-potting to 1 gallon containers[5,6,7,8,9,11]
Establishment Phase Details	Germination should occur over a 2 week span after sowing. Seedlings should be transplanted into containers of at least 800ml volume an additional 2 weeks after germination. [6,7] Watering should be done through drip irrigation daily until containers are leached.
Length of Establishment Phase	4 weeks
Active Growth Phase	Seedlings should be fertilized biweekly with 20NPK fertilizer, and watered through drip irrigation. [7,8] Seedlings in 800ml containers should be well spaced to prevent the development and spread of rust, and monitored frequently for aphids. [6,8] New growth in June should be headed to encourage lateral growth and branching. By August, plants should be up-potted to 1 gallon pots and weaned from fertilization and irrigation in preparation for hardening and winter acclimation in the hoophouse.
Length of Active Growth Phase	3 months (May-August)
Hardening Phase	No additional irrigation will be provided during winterization, after the gradually increasing intervals between watering from the end of August through September.

	Plants will harden-off in a hoop house without temperature control before outplanting in the following spring.
Length of Hardening Phase	5 months (September-February)
Harvesting, Storage and Shipping	Prior to outplanting in the spring, plants will continued to be stored in the hoophouse, and will be transported to the target site via a van or light duty truck if properly protected from wind and other potentially damaging elements during transport.
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	Outplanting should be performed in spring after regional snowmelt; the phenology of *R. velutinum* is unknown. [4]
Other Comments	Phenology of R. velutinium is unknown, this may influence the relative periods of establishment, active growth, and hardening phases. Propagation procedures from related species within the Ribes family were used to estimate the phenology and production needs of this plant.
INFORMATION SOURCES	
References	1. Natural Resources Conservation Service. Plant profile for *Ribes velutinum* (RIVE) [Internet]. United States Department of Agriculture, PLANTS Database; 2025 [cited 2025 May 7]. Available from: https://plants.usda.gov/plant-profile/RIVE 2. The Calflora Database. Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals [Internet]. Berkeley (CA): The Calflora Database; 2025 [cited 2025 May 7]. Available from: https://www.calflora.org/ 3. Mesler MR, Sawyer JO Jr. *Ribes velutinum*. In: Jepson Flora Project, editors. *Jepson eFlora* [Internet]. Berkeley (CA): University of California; 2012 [cited 2025 May 7]. Available from: https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=41472

4. Marshall KA. *Ribes velutinum*. In: Fire Effects Information System [Internet]. Missoula (MT): U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory; 1995 [cited 2025 May 7]. Available from: https://www.fs.usda.gov/database/feis/plants/shrub/ribvel/all.html

5. Young JA, Evans RA. Population dynamics after wildfires in sagebrush grasslands. *J Range Manage*. 1978;31(4):283–9.

6. Young B. Propagation protocol for production of container (plug) *Ribes sanguineum* Pursh plants, 4 inch pot; San Francisco, California. In: Native Plant Network [Internet]. U.S. Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources; 2001 [cited 2025 May 7]. Available from: https://NativePlantNetwork.org

7. Evans J, Wick D, Hosokawa J. Propagation protocol for production of container (plug) *Ribes lacustre* (Pers.) Poir. plants, 800 ml containers; USDI NPS - Glacier National Park West Glacier, Montana. In: Native Plant Network [Internet]. U.S. Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources; 2008 [cited 2025 May 7]. Available from: https://NativePlantNetwork.org

8. Trindle JDC, Flessner TR. Propagation protocol for production of container *Ribes cereum* Dougl. plants (1-gallon containers); USDA NRCS - Corvallis Plant Materials Center, Corvallis, Oregon. In: Native Plant Network [Internet]. Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery; 2003 [cited 2025 May 7]. Available from: http://www.nativeplantnetwork.org

	9. Luna T, Evans J, Wick D. Propagation protocol for production of container (plug) *Artemisia tridentata* Nutt. plants, 172 ml conetainers; USDI NPS - Glacier National Park West Glacier, Montana. In: Native Plant Network [Internet]. U.S. Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources; 2008 [cited 2025 May 7]. Available from: https://NativePlantNetwork.org 10. Koniak S. Succession in pinyon-juniper woodlands following wildfire in the Great Basin. *Great Basin Nat* [Internet]. 1985 [cited 2025 May 7];45(3):Article 24. Available from: https://scholarsarchive.byu.edu/gbn/vol45/iss3/24 11. Hahn PF. Plug+1 seedling production. In: Duryea ML, Landis TD, editors. *Forest nursery manual: Production of bareroot seedlings* [Internet]. The Hague/Boston/Lancaster: Martinus Nijhoff/Dr W. Junk Publishers for Forest Research Laboratory, Oregon State University; 1984 [cited 2025 May 7]. Chapter 16. Available from: https://rngr.net/publications/nursery-manuals/fnm/Chapter%2016 12. Moss VD, Wellner CA. Aiding blister rust control by silvicultural measures in the western white pine type. Washington (DC): U.S. Department of Agriculture; 1953. Circular No. 919. 32 p.
Other Sources Consulted	
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