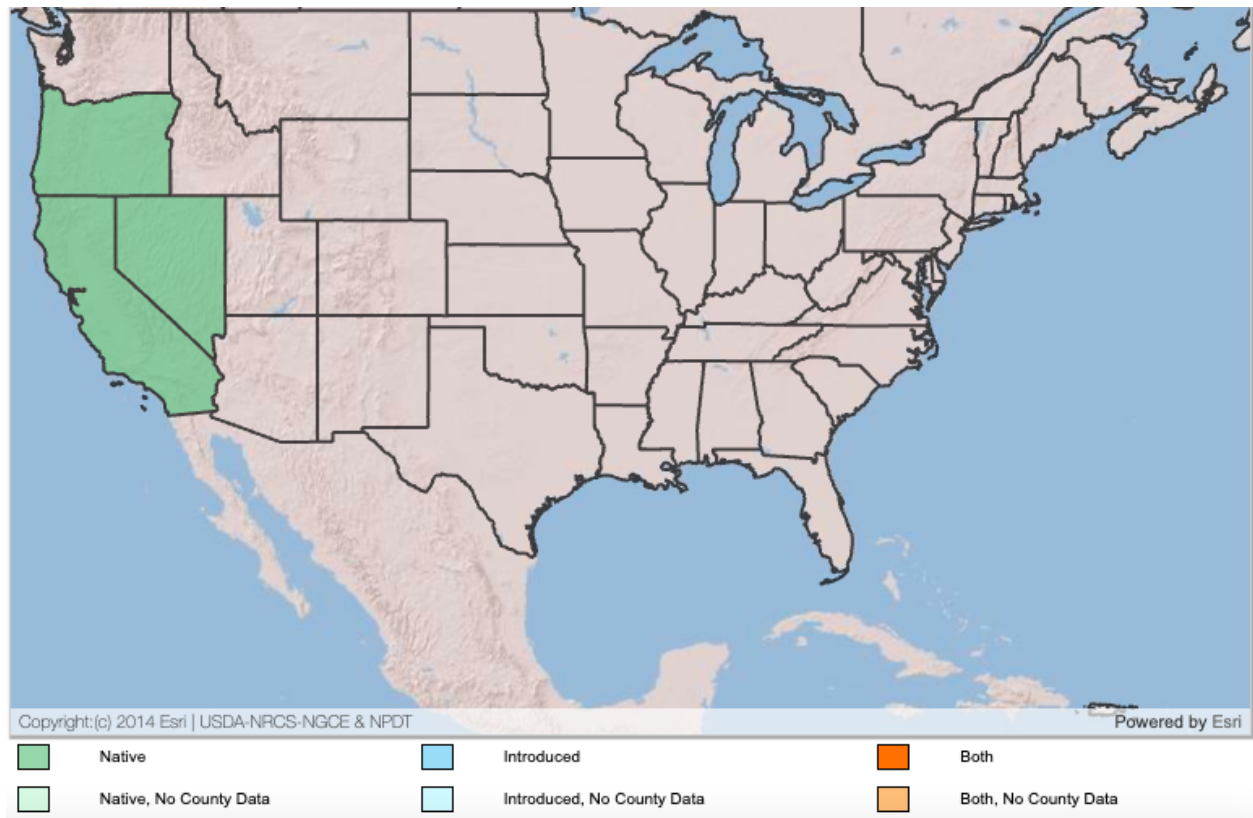


**Plant Propagation Protocol for [*Quercus vaccinifolia*]**  
ESRM 412 – Native Plant Production

This propagation protocol template was modified by J.D. Bakker from that available at:

<http://www.nativeplantnetwork.org/network/SampleBlankForm.asp>

A completed sample protocol is also provided in Appendix 4A of our text (Wilkinson, K.M., T.D. Landis, D.L. Haase, B.F. Daley, and R.K. Dumroese (editors). 2014. *Tropical nursery manual: a guide to starting and operating a nursery for native and traditional plants*. Agriculture Handbook 732. USDA Forest Service, Washington, DC. 376 p).



USDA Database[6]



OSU[1]

TAXONOMY	
Plant Family	
Family Scientific Name	Fagaceae
Family Common Name	Beech
Species Scientific Name	
Scientific Name <i>Genus, epithet, and authority</i> )	<i>Quercus vaccinifolia</i> Kellogg
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	<i>Quercus chrysolepis</i> var. <i>vaccinifolia</i> (Kell.)Engelm. <i>Quercus vaccinifolia</i> Kell.
Common Name(s)	Huckleberry oak
Species Code (as per USDA Plants database)	QUVA
GENERAL INFORMATION	
Geographical range	See above for distribution maps for North America and for the Pacific Northwest.  Native to Southwest Oregon, California, and Nevada. It can be found in the Cascade mountains and is found in Josephine County Oregon to Northern California.[1]

Ecological distribution	Grows in high mountain forests. Found on dry ridges, steep slopes, and rocky areas from the coniferous zone to near treeline of mountains [4]
Climate and elevation range	
Local habitat and abundance	Prefers sandy or loam soils with lower moisture, and partial shade. The natural setting is on steep slopes and ridges. Elevation: 35" - 12016" [3]
Plant strategy type / successional stage	This shrub is known for helping with bank stablisation. [5]
Plant characteristics	This is an evergreen shrub, that flowers in the spring, the leaves alternate, its fruit is acorns, and leaves are leather and oblong. [1]
<b>PROPAGATION DETAILS (Report one type of propagation in section; duplicate section as needed for multiple types of propagation)</b>	
Propagation Goal	Plants
Propagation Method	seed, Seed collection happens in the fall from acorns.
Product Type	container
Stock Type	
Time to Grow	six months
Target Specifications	30 cm to 120 cm
Growing Area Preparation / Annual Practices for Perennial Crops	Needs to be sown in deep pots in a cold frame [2]. Grows best in the soil in 4.8 to 7 ph with decomposed plant material, with a high percentage of loam and some bedrock. The soil needs to be well-aerated but slightly moist.
Establishment Phase Details	Once the seeds are planted in the containers, they need to grow from early winter to spring. the seedling should have light and space to grow and should be watered (irrigated) one to two times a week. [3]
Length of Establishment Phas	two months
Active Growth Phase	seedlings should be watered in the morning
Length of Active Growth Phase	the growth phase is 2 months in a native ecosystem, the season would happen from February to March. [3]
Hardening Phase	Hardening phase begins in the summer. This happens when the water(irrigation) frequency decreases. [7]
Length of Hardening Phase	the length of the hardening phase is 3 months
Harvesting, Storage and Shipping	Is harvested by acorns.
Guidelines for Outplanting / Performance on Typical Sites	Seedlings are planted in late winter or early spring. [6] Plants tend to be established by fall.
<b>INFORMATION SOURCES</b>	
References (full citations)	See Below
Protocol Author (First and last name)	Elliott Peck

Date Protocol Created or Updated (MM/DD/YY)	05/02/2023
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## References

- 1 Breen, Patrick. (2023) "Landscape Plants." *Quercus Vaccinifolia* | *Landscape Plants* | *Oregon State University*, Oregon State University <https://landscapeplants.oregonstate.edu/plants/quercus-vaccinifolia>. [Accessed: 5/2/2023]
- 2 Calflora. (n.d.). *Quercus vaccinifolia* Plant Characteristics and Associations. Calflora database on wild California plants. <https://www.calflora.org/entry/plantchar.html?crn=7009> [Accessed: 5/2/2023]
- 3 California Native Plant Society. (n.d.). *Huckleberry Oak, Quercus vaccinifolia*. Calscape. [https://calscape.org/Quercus-vaccinifolia-\(Huckleberry-Oak\)?srchcr=sc57ef0158d9217](https://calscape.org/Quercus-vaccinifolia-(Huckleberry-Oak)?srchcr=sc57ef0158d9217) [Accessed: 5/2/2023]
- 4 Fern, Ken. (2022) "Quercus Vaccinifolia." *Quercus Vaccinifolia*, Useful Temperate Plants Database, <https://temperate.theferns.info/plant/Quercus+vaccinifolia>. [Accessed: 5/2/2023]
- 5 Fire Effects Information System (FEIS). "Index of Species Information." *Fire Effects Information System (FEIS)*, US Department of Agriculture, <https://www.fs.usda.gov/database/feis/plants/shrub/quevac/all.html#INTRODUCTORY>. [Accessed: 5/2/2023]
- 6 Kartesz, J. T. (2023). *Quercus vaccinifolia* Kellogg. USDA plants database. <https://plants.usda.gov/home/plantProfile?symbol=QUVA> [Accessed: 5/2/2023]

## Sources about other oaks

- 7 S.S. Niemiec, G.R. Ahrens, S. Willits, and D.E. Hibbs. (1995) *Hardwoods of the Pacific Northwest*, Research Contribution 8. Oregon State University, Forest Research Laboratory [Accessed: 5/2/2023]

## Other Sources Consulted (but that contained no pertinent information):

- 8 Emery, D. E. (n.d.). *Seed Propagation*. Calscape from [https://calscape.org/seed\\_propagation.php](https://calscape.org/seed_propagation.php) [Accessed: 5/2/2023]
- 9 Kevin C. Nixon (2002) *The Oak (Quercus) Biodiversity of California and Adjacent Regions*, USDA Forest Service Gen. Tech. Rep. PSW-GTR-184. [Accessed: 5/2/2023]
- 10 Peck, M.E. (1961). "A manual of the higher plants of Oregon, 2nd ed." *Oregon State University Press*, Corvallis. [Accessed: 5/2/2023]

11 Rosatti, Thomas J.; Tucker, John M. (2014). "*Quercus vacciniifolia*". In Jepson Flora Project (ed.). *Jepson eFlora*. The Jepson Herbarium, University of California, Berkeley. [Accessed: 5/2/2023]