ACRU2
Plant Propagation Protocol for *Actaea rubra* (Aiton) Willd.
ESRM 412 – Native Plant Production


Image 1: Foliage (USDA)

Image 2: Berries (USDA)


Image 3: Seeds (USDA)

TAXONOMY

Kingdom Plantae – Plants

Subkingdom Tracheobionta – Vascular plants

Superdivision Spermatophyta – Seed plants

Division Magnoliophyta – Flowering plants

Class Magnoliopsida – Dicotyledons

Subclass Magnoliidae

Order Ranunculales

Family Ranunculaceae – Buttercup family

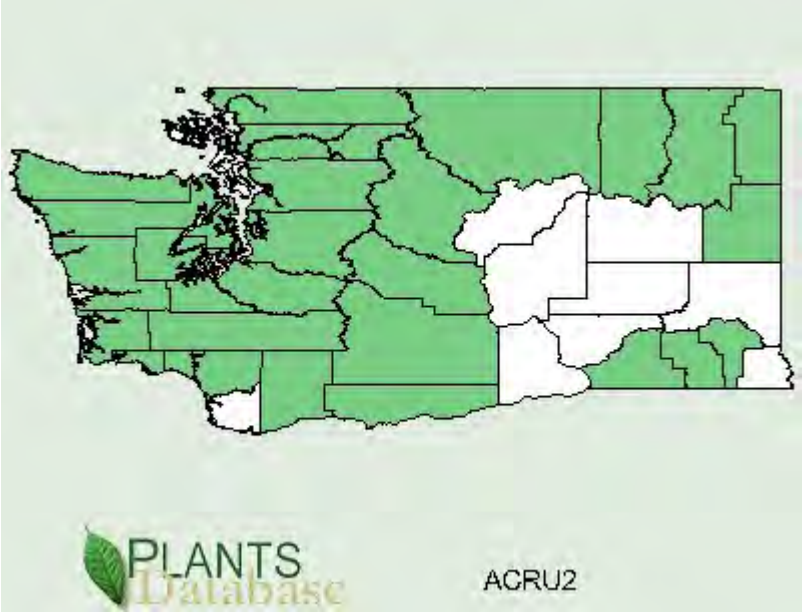
Genus *Actaea* L. – baneberry P

Species *Actaea rubra* (Aiton) Willd. – red baneberry P

Contains 2 Subspecies and 2 accepted taxa overall

Family Names	
Family Scientific Name:	Ranunculaceae
Family Common	Buttercup Family

Name:	
Scientific Names	
Genus:	See Above
Species:	See Above
Species Authority:	See Above
Variety:	See Above
Sub-species:	Subspecies *Actaea rubra* (Aiton) Willd. ssp. *arguta* (Nutt.) Hultén – red baneberry P Subspecies *Actaea rubra* (Aiton) Willd. ssp. *rubra* – red baneberry P
Cultivar:	N/A
Authority for Variety/Sub-species:	See "Sub-species" line above
Common Synonyms	ACRUA8 *Actaea rubra* (Aiton) Willd. ssp. *arguta* (Nutt.) Hultén ACRUA *Actaea rubra* (Aiton) Willd. var. *arguta* (Nutt.) G. Lawson ACRUR2 *Actaea rubra* (Aiton) Willd. ssp. *rubra*
Common Names:	Red Baneberry, Cohosh, Red Cohosh, Snakeberry, Necklace-weed, Poison de couleuvre Poisonberry (CYSIP), Chinaberry, Doll's Eye (Wikipedia)
Species Code	ACRU2
GENERAL INFORMATION	
Geographical range	**Distribution:** *Actaea rubra* (Aiton) Willd Image 4: Distribution by state in US (USDA)  Image 4: Distribution by county in Washington State (USDA)



Related Taxa:
Actaea rubra (Aiton) Willd.

Native Introduced
Noxious Threatened and Endangered Wetland Image

	Noxious Threatened and Endangered Wetland Image
Ecological distribution	Moist, shady forest, stream-banks and clearings (Pojar)
Climate and elevation range	Common at low to subalpine elevations (Pojar)
Local habitat and abundance; may include commonly associated species	Conservation Status: Abundant, of no concern (Burke) Associated Species: Cedar-Hemlock-Douglas Fir Forest (USFS)
Plant strategy type / successional stage	Perennial (Pojar)
Plant characteristics	**General:** Rhizomatous, hairless to sparsely hairy perennial forb with 1 to several, erect, leafy stems. .4-1 m tall. **Leaves**: Few; 1 near-basal leaf large and long stalked, and 1 or leaves, large, crinkly, 2-3 times divided in 3s, the segments coarsely toothed and lobed. and numerous; sepals 3005, 204 mm long, soon deciduous; petals 5010, white, spoon –sl sepals; in rounded clusters, on long stalks. Fruits: Smooth, glossy, red or white berries; common. **Warning:** Berries, foliage and roots are all highly poisonous. (Pojar)
PROPAGATION DETAILS	
Ecotype	N/A
Propagation Goal:	Plants (Native)
Propagation Method	Seeds (Native)
Product Type	Container, Plug (Native)
Stock Type:	Seeds and bare-root (Prairie) Containers (Koonz)
Time to Grow	1-2 years (Koonz)
Target Specifications:	Mature size plant (Koonz). Seeds or bare-root stock, 8” from roots to pruned top of plant
Propagule Collection:	Seeds collected in the Inside Passage region during most recent crop year. (Inside) In g outplanting site as possible (Dumroese)
Propagule Processing/Propagule Characteristics	Seeds exhibit morpho-physiological dormancy. (Native) Require a combination of time and simulated seasonal temperatures to ripen and germina Seed density: 4,450 per ounce (Prairie)
Pre-Planting Propagule Treatments:	Seeds are placed in cold moist stratification for 112 days. Germination occurs at 22D/17 temperature cycle. (Native) An alternative: Cold Moist stratification for 90 days. (Koonz) A second alternative: After harvest, seeds are placed in cool, dry storage without fungicides or other treatment, and packaged the day of shipment (Inside)
Growing Area Preparation / Annual Practices for Perennial Crops:	Potting soil mix is 49% sand, 49% coir, and 2-3% pumice. Sow several seeds in one 4” sown, soil is covered with a thin layer of chicken grit to discourage liverwort fungus. (K
Establishment Phase:	Typically sow 8-10 seeds in one 4” pot in the fall. Germination is more successful if see together. Inoculate with mycorrhizal fungi, Cover with screening to discourage squirrel

	winter. Plants will continue to mature, and will be available for outplanting over 1-2 yea
Length of Establishment Phase:	Fall & winter months (Koonz)
Active Growth Phase	The following spring, when seeds have germinated, transplant seedlings to a larger pot 8 have two true leaves, but continue to keep them together. In late summer when roots are the drainage holes, transplant each plant to its own pot, 4" wide by 8" deep. (Koonz)
Length of Active Growth Phase:	1 year's growing season (Koonz)
Hardening Phase	Outdoors from end of summer through fall. (Koonz)
Length of Hardening Phase:	Plants are not propagated indoors, so hardening occurs naturally (Koonz)
Harvesting, Storage and Shipping	Plants are sold in containers. Customers select & transport (Koonz)
Length of Storage	Containerized plants can continue to mature for 2-3 years while waiting for an outplantin
Guidelines for Outplanting / Performance on Typical Sites	Optimal transplanting seasons: Spring (April-May) and fall (October) (Prairie)
Other Comments	All plants at MSK receive mycorrhizal inoculation. (Koonz)
INFORMATION SOURCES	
References	Burke Museum Herbarium, Actaea rubra page: http://biology.burke.washington.edu/herbarium/imagecollection.php?ID=4673 Accessed May 7, CYSIP Central Yukon Species Inventory Project, Actaea rubra web page: http://www.flora.dempstercountry.org/0.Site.Folder/Species.Program/Species.php?speci Accessed May 7, 2011 Dumroese, R. Kasten, Tara Luna, Thomas D. Landis, editors. *Nursery Manual for Nativ* *Tribal Nurseries*. *Volume 1, Nursery Management.* United States Department of Agricu Inside Passage Specialty Seed Service http://www.insidepassageseeds.com/native_wildflowers.html Accessed May 7, 2011. Koonz, Heidi, Interview, April 29, 2011. Lead Propagator: MSK Plant Nursery, 20312 WA 98177. (206) 546-1281, heidelle@gmail.com. Native Plant Network, Baskin, Carol C.; Baskin, Jerry M. 2002. Propagation protocol fo *Actaea rubra* (Ait.) Willd. plants; University of Kentucky, Lexington, Kentucky. In: Nat http://www.nativeplantnetwork.org (accessed 7 May 2011). Moscow (ID): University of Idaho, College of Natural Resourc Nursery.

	http://www.nativeplantnetwork.org/network/ViewProtocols.aspx?ProtocolID=1490 Accessed May 7, 2011 (Note: The previous 7 lines include five lines for the full citation given by the authors, p and my access date of the specific Native Plant Network *Actaea rubra* web page. The re of Idaho is included in Baskin's citation, so I include it here.) Pojar, James and Andy Mackinnon. *Revised Plants of the Pacific Northwest Coast, Was* *Columbia & Alaska.* Lone Pine Publishing, Vancouver BC. 2004. Prairie Moon Nursery URL: http://www.prairiemoon.com/seeds/wildflowers-forbs/actaea-rubra-red-baneberry/ USDA, Natural Resources Conservation Service Plants Database for *Actaea rubra*, URL http://plants.usda.gov/java/profile?symbol=ACRU2 Accessed May 7, 2011 USFS, United States Forest Service Website: http://www.fs.fed.us/database/feis/plants/forb/actrub/all.html Accessed May 7, 2011 Wikipedia Article, Red Baneberry http://en.wikipedia.org/wiki/Red_baneberry Accessed May 7, 2011 **Images:** USDA, Natural Resources Conservation Service Plants Database for *Actaea rubra*, URL http://plants.usda.gov/java/profile?symbol=ACRU2 Accessed May 7, 2011
Other Sources Consulted	Deno, Norman C. *Seed Germination Theory and Practice, 2nd Edition.* Norman C. Deno, Deno, Norman C. *Second Supplement to Seed Germination Theory and Practice.* Norma PA, 1998.
Protocol Author	Helen J. Wilson
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