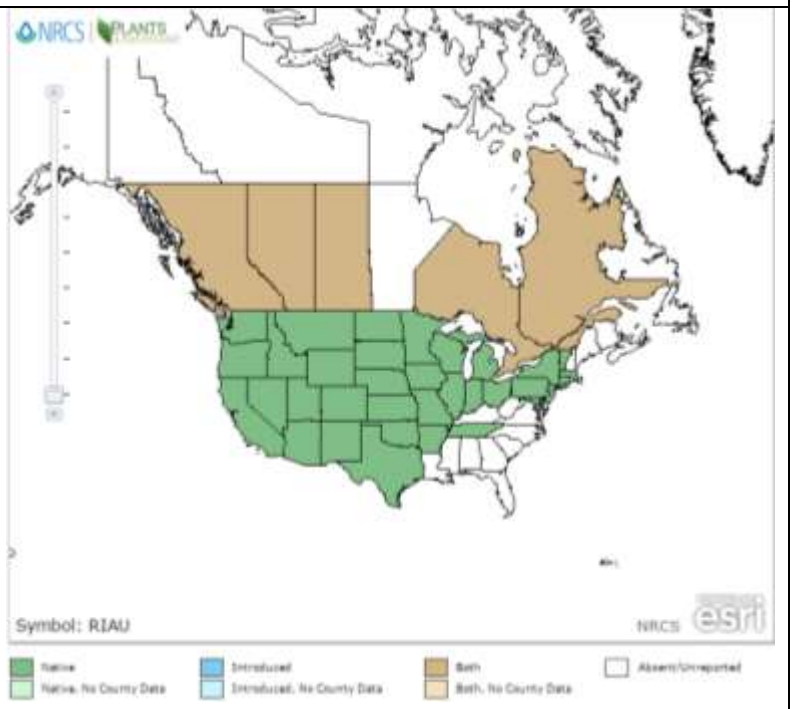
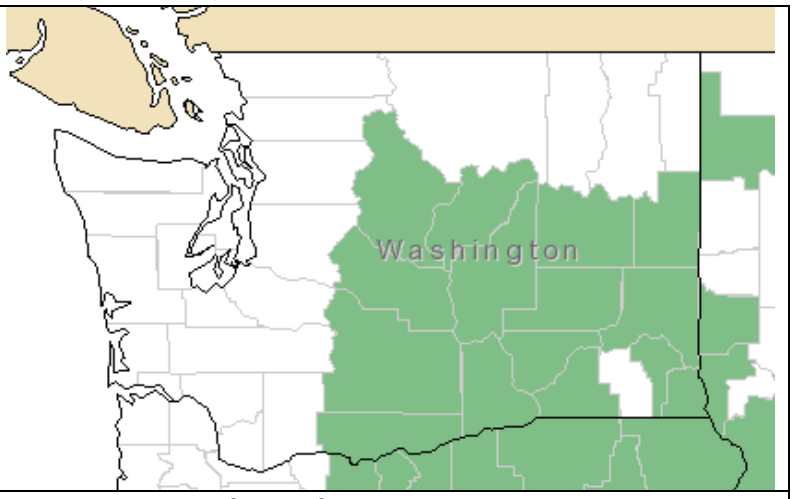
Plant Propagation Protocol for *Ribes aureum*
ESRM 412 – Native Plant Production
Protocol URL: https://courses.washington.edu/esrm412/protocols/RIAU.pdf

TAXONOMY	
Plant Family	
Scientific Name	Grossulariaceae[1]
Common Name	Golden Currant[1]
Species Scientific Name	
Scientific Name	*Ribes aureum* Pursh[1]
Varieties	None
Sub-species	*Ribes aureum* var. *auruem*, golden currant, USDA NRCS National Plant Data Team[1] *Ribes aureum* var. *gracillimum* (Coville& Britton) Jeps., golden currant, USDA NRCS National Plant Data Team[1] *Ribes aureum* var. *villosum*, golden currant, USDA NRCS National Plant Data Team[1] (Formerly *Ribes odoratum*)
Cultivar	Crandall
Common Synonym(s)	None
Common Name(s)	Buffalo Currant, fragrant golden currant, golden flowering currant, clove currant, spicebush[1]
Species Code (as per USDA Plants database)	RIAU[1]
GENERAL INFORMATION	
Geographical range North America[1]	

Washington State[1]	
Ecological distribution	Grasslands, Coniferous forests and woodlands, Riparian and mountain shrub communities[1]
Climate and elevation range	Elevations of 800-2600m[1]
Local habitat and abundance	Occur in wetlands and non-wetlands[1], stream banks, floodplains in grasslands and sagebrush to ponderosa pine forests
Plant strategy type / successional stage	Early to mid-seral species, shade tolerant, medium drought tolerant, medium fire and drought tolerant, rhizomatous[1]
Plant characteristics	Shrub with erect branches, height to 3m, root depth to 0.5m Long lifespan, stable to -39°C[1] Leaves are alternate blue-green in color, simple, ovate or orbicular-reniform, 2.5 to 7.5cm wide, 3 to 5 lobed.[2] Flowers are yellow and spicy fragrance resulting in an edible red/black globular fruit[2]
PROPAGATION DETAILS	
Ecotype	
Propagation Goal	Seeds
Propagation Method	Seed
Product Type	Bareroot
Stock Type	
Time to Grow	1 Year[3]
Target Specifications	Height: 20cm and caliper: 0.5cm with root system which balances top growth[3]
Propagule Collection Instructions	Flowers March-June just after leaves, Fruiting May-August.[1] Collect fruit by hand when purple/black although red and yellow are possible
Propagule Processing/Propagule Characteristics	Clean seeds prior to storage, keep in airtight containers at below freezing temperatures.[3] Seeds often remain in soil for many years retaining viability.[5]
Pre-Planting Propagule Treatments	Stratify naturally: plant in fall in a thin layer of sand on mulched field beds[3] Physiological dormancy- cold moist stratification for -2.2-

	2.2°C for 60 days[4,5] Germination may be enhanced by scarification[5], evidence of fire scarification of soil stored seeds.[5]
Growing Area Preparation / Annual Practices for Perennial Crops	Seed beds are created using a soil of sandy clay loam to clay loam, a 7.5cm layer of compost is added prior to sowing. Seeds are sown in mid-September. Field density 30 shrubs per ft^2. [3]
Establishment Phase Details	
Length of Establishment Phase	1 month from emergence in spring[3]
Active Growth Phase	Active growth occurs from spring until dormancy in fall.[5]
Length of Active Growth Phase	4 months
Hardening Phase	Hardening begins late August, dormancy induced. No fertilizer is added and irrigation is reduced.[3]
Length of Hardening Phase	2 months
Harvesting, Storage and Shipping	Early spring (Feb/Mar) while seedlings are dormant. Undercut the seedling beds and hand lift the seedlings out, store in cooler on stacked pallets 36-42°F (2-6°C) with relative humidity of 92-98%.[3]
Length of Storage	
Guidelines for Outplanting / Performance on Typical Sites	Fruiting generally occurs after 3 years[5] Hardy in USDA zones 2-10, handle wide range of soil conditions from sandy to clay and tolerate a wide range of soil pH conditions.[5] Good soil stabilizer and may be used to re-vegetate disturbed areas and roadsides.[5]
Other Comments	Limbs older than 3 years may be pruned to increase productivity. Prune no more than 1/3 of branches when plant is dormant. Plant readily forms suckers and can be transplanted easily, also reproduces by rhizomes.[5] Alternate host for white pine blister rust (*Cronartum ribecola*), planting restrictions may apply.[1,5]
INFORMATION SOURCES	
References	[1]USDA. (n.d.). *Ribes aureum Pursh*. Retrieved Apr 21, 2015, from Natural Resources Conservation Service: http://plants.usda.gov/core/profile?symbol=RIAU [2]Dirr, M. A. (2009). *Manual of Woody Landscape Plants* (Sixth ed.). Champaign, Il: Stipes Publishing L.L.C. Retrieved Apr 22, 2015 [3]Zeidler, Scott; Justin, John. 2003. Propagation protocol for production of field-grown *Ribes aureum*Pursh plants (1+0); Utah Division of Forestry, Fire and State Land - Lone Peak Nursery, Draper, Utah. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 21 April 2015).

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Other Sources Consulted	Hansen, W. W. (2012). *Hansen's Northwest Native Plant Database*. Retrieved Apr 21, 2015, from The Wild Garden: http://www.nwplants.com/business/catalog/rib_aur.html plantlife.org. (n.d.). *Golden Currant Ribes aureum Pursh*. Retrieved Apr 22, 2015, from Montana Plant Life: http://montana.plant-life.org/species/ribes_aure.htm
Protocol Author	Rebecca Roth
Date Protocol Created or Updated	Protocal Updated 04/19/15

Previous Protocal: Steven Campbell 4-12-06

Plant Data Sheet

Species (common name, Latin name)

Golden Currant, *ribes aureum*

Range
East slope of the Cascades, north Central Washington to California east to the east side of the Rocky Mountains, Saskatchewan and South Dakota to New Mexico

Climate, elevation
Golden currant grows on fine- to course-textured loam soil at elevations up to 8,000 feet (2,400 m).

Local occurrence (where, how common)
East slope of the Cascades, north Central Washington

Habitat preferences
Streambanks and washes in grassland or sagebrush desert to ponderosa pine forest

Plant strategy type/successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional)
Golden currant can be used to revegetate roadsides and disturbed areas

Associated species
Ribes aureum gracillimum, Ribes cereum, Ribes sp., Ribes viscosissimum

May be collected as: (seed, layered, divisions, etc.)
Seed, cuttings semi-hardwood simple layering and transplanted.

Collection restrictions or guidelines
Prick out the seedlings into individual pots when they are large enough to handle

Seed germination (needs dormancy breaking?)
Seed germination is generally enhanced by scarification. About 63 percent germination was obtained in the laboratory by stratifying golden currant seeds at 28 and 36 degrees Fahrenheit (-2.2 and 2.2 deg C) for 60 days without scarification

Seed life (can be stored, short shelf-life, long shelf-life)
Under normal storage conditions the seed can remain viable for 17 years or more

Recommended seed storage conditions

Stored seed requires 3 months cold stratification at -2 to +2°c and should be sown as early in the year as possible

Propagation recommendations (plant seeds, vegetative parts, cuttings, etc.)
Seed - best sown as soon as it is ripe in the autumn in a cold frame. Very tolerant of being transplanted. Cuttings of half-ripe wood, 10 - 15cm with a heel, July/August in a frame. Cuttings of mature wood of the current year's growth, preferably with a heel of the previous year's growth, November to February in a cold frame or sheltered bed outdoors

Soil or medium requirements (inoculum necessary?)
6.6 to 7.5 (neutral)

Installation form (form, potential for successful outcomes, cost)
Prick out the seedlings into individual pots when they are large enough to handle and Grow seeds in a cold frame for their first winter, planting them out in late spring of the following year

Recommended planting density
Adequate space for a decidious shrub growing to 2.4m. Space plants 3 to 4 feet apart in rows 6 to 8 feet apart

Care requirements after installed (water weekly, water once etc.)
Sun or partial sun, remove flower blossoms from plants in the first year to encourage plant establishment and growth for future years. Give some afternoon shade here, amended soil and regular summer water. Also give adequate drainage.

Normal rate of growth or spread; lifespan
Golden currant reproduces vegetatively by rhizomes; it sprouts after cutting and fire. Plants can also be grown from cuttings

Sources cited

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Data compiled by (student name and date)
Steven Campbell 4-12-06