

Plant Propagation Protocol for *Salix lutea*

ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2023/SALU.pdf>

TAXONOMY	
Plant Family	
Scientific Name	Salicaceae Mirb
Common Name	Willow family
Species Scientific Name	
Scientific Name	<i>Salix lutea</i> Nutt.
Varieties	<i>Salix lutea</i> Nutt. var. <i>desolata</i> E.H. Kelso <i>Salix lutea</i> Nutt. var. <i>famelica</i> C.R. Ball <i>Salix lutea</i> Nutt. var. <i>platyphylla</i> C.R. Ball <i>Salix lutea</i> Nutt. var. <i>watsonii</i> (Bebb) Jeps. (USDA)
Sub-species	
Cultivar	
Common Synonym(s)	
Common Name(s)	Yellow Willow
Species Code (as per USDA Plants database)	SALU2
GENERAL INFORMATION	
Geographical range	<p>The geographical range of Yellow Willow is from Alberta to Manitoba, south to western Kansas and New Mexico, west to Arizona and California, and north along the Sierra Nevada Mountains to eastern Washington. Lacking in the great Basin (FEIS).</p> <p>(USDA)</p>
Ecological distribution	Rivers, Creeks, Wet meadows (Jepson Herbarium). Sunny locations (Brandeis).

Climate and elevation range	Annual Precipitation: 5.2" - 87.9" Summer Precipitation: 0.29" - 2.94" Coldest Month: 20.5" - 50.6" Hottest Month: 42.8" - 76.5" Humidity: 0.92" - 29.57" Elevation: 266" - 12501" (California Native Plant Society).
Local habitat and abundance	Red Fir Forest, Lodgepole Forest, wetland-riparian (Calflora).
Plant strategy type / successional stage	Pioneer/early seral species (FEIS).
Plant characteristics	Shrub/Tree of 3-7m. Fast growing, deciduous, flowers are yellow. Found on stream edges and wet meadows. (California Native Plant Society).
PROPAGATION DETAILS	
Ecotype	Wild collections that are harvested and grown at the nursery. Separated by source.
Propagation Goal	Plants
Propagation Method	Vegetative
Product Type	Bareroot (field grown)
Stock Type	1+0
Time to Grow	1 year
Target Specifications	Height: 12 inches Caliper: 3/16 inches Root system: balanced with top growth
Propagule Collection Instructions	Stooling beds are hedged to create straight growth for cuttings. Wild collections also grown.
Propagule Processing/Propagule Characteristics	Harvest hardwood cuttings before budbreak in late winter. Cut in eight-to-ten-inch pieces.
Pre-Planting Propagule Treatments	Store cuttings in cooler after wrapping and bundling them.
Growing Area Preparation / Annual Practices for Perennial Crops	Soils are sandy loam clay. Prepare beds by adding 0-45-0 in May and follow with compost then sulfur. Fields are weeded as needed.
Establishment Phase Details	In early Spring, cuttings are struck by hand into soil, packed around, and watered. Rooting occurs when field soils warm in spring.
Length of Establishment Phase	1 month after rooting in Spring
Active Growth Phase	From April to August, fertilize on the second week of the month with Morgro 21-0-0 (N:P:K). Mechanically apply sulfur and 0-45-0. Cuttings are root pruned in June.
Length of Active Growth Phase	4 months

Hardening Phase	When dormancy is induced, typically in third week of August. No fertilizer after August 28 th . Reduce irrigation duration and frequency.
Length of Hardening Phase	1 month
Harvesting, Storage and Shipping	Lifting window is mid-November, while cuttings are dormant. Bundle graded cuttings in groups of 25 and heeled in sandy soils. Lifted in Spring before the end of dormancy, and then stored in a cooler (RNGR).
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	N/A
Other Comments	Temperatures should be above freezing while collecting hardwood cuttings (ISU).
INFORMATION SOURCES	
Protocol Author	Jacquie Stark
Date Protocol Created or Updated	05/03/2023

References:

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