

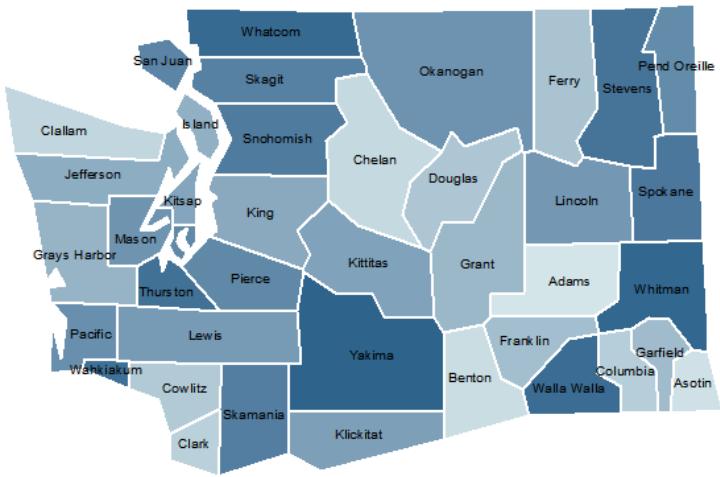
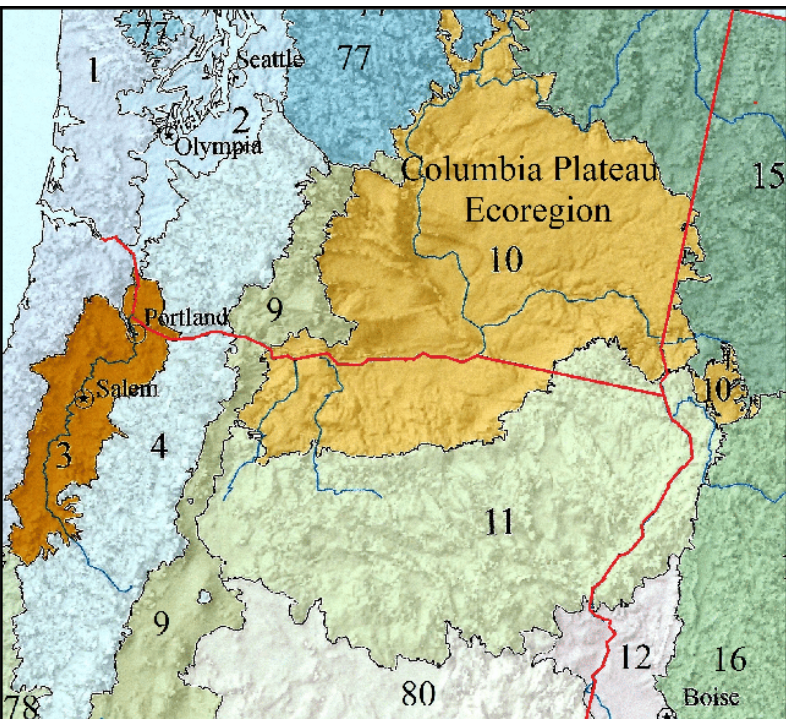
Plant Propagation Protocol for *Allium constrictum*

ESRM 412 – Native Plant Production

Amy Burdick

URL: [https://courses.washington.edu/esrm412/protocols/\[2023\]/\[ALCO3.pdf\]](https://courses.washington.edu/esrm412/protocols/[2023]/[ALCO3.pdf])

TAXONOMY	
Plant Family	Lily Family
Scientific Name	Liliaceae
Common Name	Lily
Species Scientific Name	<i>Allium</i>
Scientific Name	<i>Allium constrictum</i> (Ownbey & Mingrone) P. Peterson, Annable & Rieseberg (USDA Plants Database, n.d.)
Varieties	<i>Allium douglasii</i> Hooker var. <i>constrictum</i> Ownbey & Mingrone in C. L. Hitchcock et al. (eFloras.org, n.d.)
Sub-species	None shown
Cultivar	<i>Allium constrictum</i>
Common Synonym(s)	None found
Common Name(s)	Grand Coulee Onion, Onion (USDA Plants Database, n.d.)
Species Code (as per USDA Plants database)	ALCO3 (USDA Plants Database, n.d.)
GENERAL INFORMATION	

<p>Geographical range</p>	<p>Douglas and Grant Counties in Washington (US Fish and Wildlife, n.d.)</p>  <p>https://ofm.wa.gov/washington-data-research/county-and-city-data</p>
<p>Ecological distribution</p>	<p>Columbia Plateau ecoregion (US Fish and Wildlife, n.d.)</p>  <p>https://www.researchgate.net/figure/The-location-of-the-Columbia-Plateau-Ecoregion-10-USA-modified-from-Omenik-1987_fig1_306255195</p>
<p>Climate and elevation range</p>	<p>Dry, mid-elevations (“<i>Allium constrictum</i>”, n.d.)</p>
<p>Local habitat and abundance</p>	<p>Grand Coulee area of Washington (“<i>Allium constrictum</i>”, n.d.)</p>

Plant strategy type / successional stage	Competitor, rare plant, stress tolerator (“Allium constrictum”, n.d.)
Plant Characteristics	Forb/herb, little geographical range, rare plants list (“Allium constrictum”, n.d.)
PROPAGATION DETAILS	
Ecotype	Seedlings from grown bulb (“Angiosperms (Flowering Plants)”, n.d.)
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Containers or bare-root
Stock Type	ALCO3
Time to Grow	About 3 weeks, or out planted right away with bulb (“Angiosperms (Flowering Plants)”, n.d.)
Target Specifications	Full-size bulb for consumption or replanting (“Angiosperms (Flowering Plants)”, n.d.)
Propagule Collection Instructions	Plant in the ground or in a pot with the bulb up under a few inches of soil. In the late winter, or early spring, after the last frost. Need a minimum of 100 frost-free days (“Angiosperms (Flowering Plants)”, n.d.)
Propagule Processing/Propagule Characteristics	n/a
Pre-Planting Propagule Treatments	No treatments were found.
Growing Area Preparation / Annual Practices for Perennial Crops	Planting density per acre minimum 4800; maximum 11000 (“Angiosperms (Flowering Plants)”, n.d.)
Establishment Phase Details	Can seed directly in the ground or in pots (“Angiosperms (Flowering Plants)”, n.d.)
Length of Establishment Phase	3 weeks (Swainston 2023)

Active Growth Phase	Plant bulbs in ground, or transplant sprouts in ground after three weeks (Swainston 2023)
Length of Active Growth Phase	No time given, flowers in a few months in the spring (Swainston 2023)
Hardening Phase	Tops stop growing, bulb/onion increases, bloom from spring to summer, summer they drop seeds (Swainston 2023)
Length of Hardening Phase	About three months (USDA Plants Database, n.d.)
Harvesting, Storage and Shipping	Harvest bulbs (USDA Plants Database, n.d.)
Length of Storage	Store in cold and dry environment (USDA Plants Database, n.d.)
Guidelines for Outplanting / Performance on Typical Sites	Flower from spring to summer each year, perennial plant (USDA Plants Database, n.d.)
Other Comments	Perennial plants, native and rare to the grand coulee area of washington state. ("Allium constrictum (Grand coulee onion) Native Plants of North America" 2019)
INFORMATION SOURCES	
References	<p>"Allium constrictum." n.d. NatureServe Explorer. Accessed May 15, 2023.</p> <p>https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.148876/Allium_constrictum.</p> <p>"Allium constrictum (Grand coulee onion) Native Plants of North America." 2019. Lady Bird Johnson Wildflower Center.</p>

	<p>https://www.wildflower.org/plants/result.php?id_plant=ALCO3.</p> <p>“Angiosperms (Flowering Plants).” n.d. Angiosperms (Flowering Plants) • Earth.com. Accessed May 15, 2023.</p> <p>https://www.earth.com/plant-encyclopedia/angiosperms/amaryllidaceae/allium-constrictum/vi/.</p> <p>eFloras.org. n.d. “Allium constrictum in Flora of North America @ efloras.org.” eFloras.org. Accessed May 15, 2023.</p> <p>http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242101344.</p> <p>Swainston, Drew. 2023. “Growing onions from scraps: how to get vegetables for free .” Homes & Gardens.</p> <p>https://www.homesandgardens.com/gardens/growing-onions-from-scraps.</p> <p>USDA Plants Database. n.d. “. ” - Wiktionary. Accessed May 15, 2023.</p> <p>https://plants.usda.gov/home/plantProfile?symbol=ALCO3.</p> <p>US Fish and Wildlife. n.d. “Grand Coulee Onion (Allium constrictum) U.S. Fish & Wildlife Service.” U.S. Fish and Wildlife Service. Accessed May 15, 2023.</p> <p>https://www.fws.gov/species/grand-coulee-onion-allium-constrictum.</p>
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Other Sources Consulted	<p>"Allium constrictum." n.d. Inside EWU. Accessed May 15, 2023. https://inside.ewu.edu/ewflora/allium-constrictum/.</p> <p>"ITIS - Report: Allium constrictum." n.d. Integrated Taxonomic Information System. Accessed May 15, 2023. https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=182646#null.</p> <p>Sagebud. n.d. "Grow Your Garden Plant a Tree Pot a Flower Sow a Seed." Grand Coulee Onion (Allium constrictum). Accessed May 15, 2023. https://sagebud.com/grand-coulee-onion-allium-constrictum.</p>
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