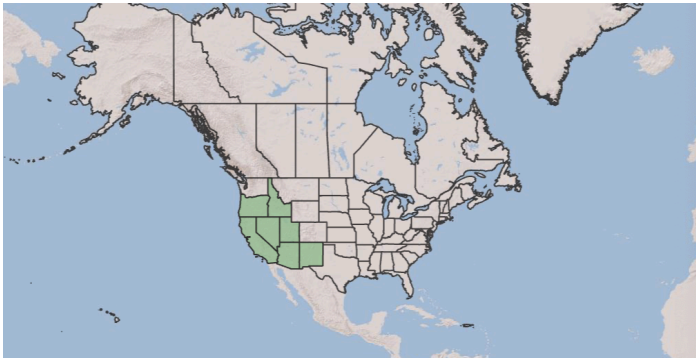


# Plant Propagation Protocol for *Allium bisceptrum*

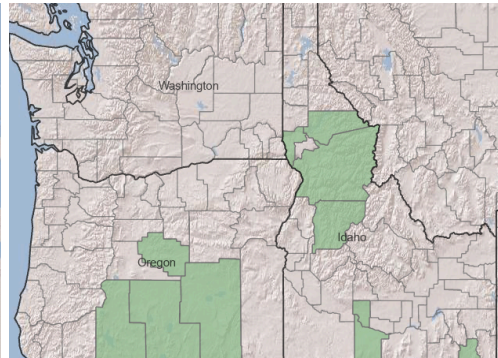
ESRM 412 – Native Plant Production

Spring 2025

North America Distribution



Oregon and Idaho Distribution



Source: USDA PLANTS Database

TAXONOMY	
Plant Family	Liliaceae
Scientific Name	<i>Allium bisceptrum</i>
Common Name	Twincrest onion
Species Scientific Name	<i>bisceptrum</i>
Scientific Name	<i>Allium bisceptrum</i> S. Watson <sup>10</sup>
Varieties	<i>Allium bisceptrum</i> S. Watson var. <i>bisceptrum</i> <sup>10</sup> <i>Allium bisceptrum</i> S. Watson var. <i>palmeri</i> Cronquist <sup>10</sup>

Sub-species	None officially recognized beyond the varieties listed.
Cultivar	None documented or named in cultivation literature.
Common Synonym(s)	<i>Allium bisceptrum</i> var. <i>typicum</i> , <i>Allium bisceptrum</i> S. Watson <sup>10</sup>
Common Name(s)	Twincrest onion, Two-crested onion, Aspen onion <sup>10</sup>
Species Code (as per USDA Plants database)	ALBI2 <sup>10</sup>
<b>GENERAL INFORMATION</b>	
Geographical range	This is a perennial herbaceous species native to the western United States, particularly the Intermountain West including regions in Nevada, Utah, Idaho, Colorado, Oregon, and parts of California and Arizona <sup>10</sup> . See maps above for distribution in North America and Oregon and Idaho.
Ecological distribution	This species typically inhabits open meadows, forest margins, montane slopes, and clearings where soil drainage is good and competition is moderate <sup>7</sup> .
Climate and elevation range	It is adapted to relatively dry climates with cold winters and seasonal snow cover, growing primarily at elevations between 1,500 and 3,500 meters <sup>[6][7]</sup> .

Local habitat and abundance	Locally abundant in subalpine and montane habitats with well-drained soils. It often grows in areas with moderate summer precipitation and is most successful in undistributed, open slopes and forest gaps <sup>7</sup> .
Plant strategy type / successional stage	Stress-tolerant, perennial herbaceous geophyte that often appears in late seral to climax communities in mountainous areas <sup>6</sup> .
Plant characteristics	It is a perennial herb with clustered bulbs, linear to lanceolate leaves, and pink to lavender flowers on a slender upright scape. The flowers are typically borne in a terminal umbel. The plant reproduces both sexually via seeds and vegetative via bulb division <sup>6</sup> .
<b>PROPAGATION DETAILS: FROM SEED</b>	
Ecotype	Not experimentally defined; wild-collected from montane populations <sup>8</sup> .
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	Seedlings
Time to Grow	12-18 months until ready for outplanting <sup>[8][9]</sup> .

Target Specifications	Healthy seedlings 5-10 cm tall with robust root development and 2-3 true leaves <sup>2</sup> .
Propagule Collection Instructions	Seeds should be harvested when the capsules dry and begin to dehisce naturally, typically late summer to early autumn <sup>8</sup> .
Propagule Processing/Propagule Characteristics	Moderate seed longevity under ideal storage; average seed count 250,000 - 300,000 per kg <sup>8</sup> .
Pre-Planting Propagule Treatments	Cold stratification for 4-6 weeks at 4 degrees celsius improves germination <sup>9</sup> . Seeds should be surface sterilized and sown shallowly in well-drained media <sup>2</sup> .
Growing Area Preparation / Annual Practices for Perennial Crops	Use deep plug trays or root trainers with well-drained sterile substrate (peat-perlite mix). Maintain greenhouse temperatures 15-20 degrees celsius <sup>9</sup> .
Establishment Phase Details	Keep soil moist but not wet. Cover the seed lightly with fine vermiculite. Germination begins in 2-4 weeks <sup>9</sup> .
Length of Establishment Phase	2-4 weeks <sup>9</sup> .
Active Growth Phase	Fertilize lightly every 2-3 weeks with a diluted balanced fertilizer. Provide full light and adequate spacing <sup>3</sup> .
Length of Active Growth Phase	4-5 months <sup>3</sup> .
Hardening Phase	Gradually reduce water and lower temperature to 5-10 degrees celsius. Expose to natural light cycles <sup>[8][9]</sup> .

Length of Hardening Phase	1 month <sup>[8][9]</sup> .
Harvesting, Storage and Shipping	Transplants can be held in cold frames for up to 4 weeks. Keep the root ball intact during transport <sup>8</sup> .
Length of Storage	Up to 1 month if refrigerated and kept moist <sup>8</sup> .
Guidelines for Outplanting / Performance on Typical Sites	Outplant in early spring or fall. Moderate success expected in montane open areas with 60-80% survival in prepared beds <sup>[6][7]</sup> .
Other Comments	Based on congeners such as <i>A.cepa</i> and <i>A.sativum</i> . Temperature and water stress significantly affect germination <sup>3</sup> . Mycorrhizal inoculation may support early development <sup>[4][5]</sup> .

**PROPAGATION DETAILS: VEGETATIVE**

Ecotype	No experimentally derived ecotype reported; information compiled from wild-sourced populations and closely related taxa where applicable.
Propagation Goal	Bulbs
Propagation Method	Vegetative
Product Type	Bareroot bulbs
Stock Type	Divided bulbs

Time to Grow	9-12 months from planting to mature bulbs <sup>2</sup> .
Target Specifications	Bulbs 2-4 cm diameter with multiple leaf shoots <sup>[2][4]</sup> .
Propagule Collection Instructions	Collect mature bulbs in late summer during dormancy. Separate offsets carefully <sup>2</sup> .
Propagule Processing/Propagule Characteristics	Store dry at 2-5 degrees celsius for 2-3 months <sup>2</sup> . Treat with fungicide if needed.
Pre-Planting Propagule Treatments	Chilling period required for dormancy breaking. Soak in water for 2-4 hours prior to planting <sup>2</sup> .
Growing Area Preparation / Annual Practices for Perennial Crops	Raised beds with sandy loam and compost. Avoid high nitrogen <sup>[2][4]</sup> .
Establishment Phase Details	Keep soil lightly moist. Partial shade preferred during early establishment <sup>[2][4]</sup> .
Length of Establishment Phase	3-6 weeks <sup>[2][4]</sup> .
Active Growth Phase	Apply diluted fertilizer every 3-4 weeks. Ensure good drainage to prevent rot <sup>3</sup> .
Length of Active Growth Phase	4-5 months <sup>3</sup> .
Hardening Phase	Reduce water. Let foliage die back naturally. Dig and cure bulbs 2 weeks before storage <sup>[2][4][1]</sup> .

Length of Hardening Phase	4 weeks <sup>[2][4][11]</sup> .
Harvesting, Storage and Shipping	Sure at room temperature for 2-3 weeks. Store at 2-5 degrees celsius in mesh bags with airflow <sup>[2][4][11]</sup> .
Length of Storage	3-6 months <sup>[2][4][11]</sup> .
Guidelines for Outplanting / Performance on Typical Sites	Outplant in fall or early spring. Moderate bulb division success reported in related species <sup>2</sup> .
Other Comments	Techniques based on <i>A.sativum</i> and <i>A. cepa</i> <sup>[2][3]</sup> . Vegetative propagation is useful for conserving unique genotypes. Climate may affect dormancy break and bulbing <sup>7</sup> . Consider conservation needs when collecting wild bulbs <sup>1</sup> .

**INFORMATION SOURCES**

References	See Below
Other Sources Consulted	See Below
Protocol Author	Nala Tillman
Date Protocol Created or Updated	05/26/25

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