

Plant Propagation Protocol for *Iris douglasiana*

ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2025/IRDO.pdf>

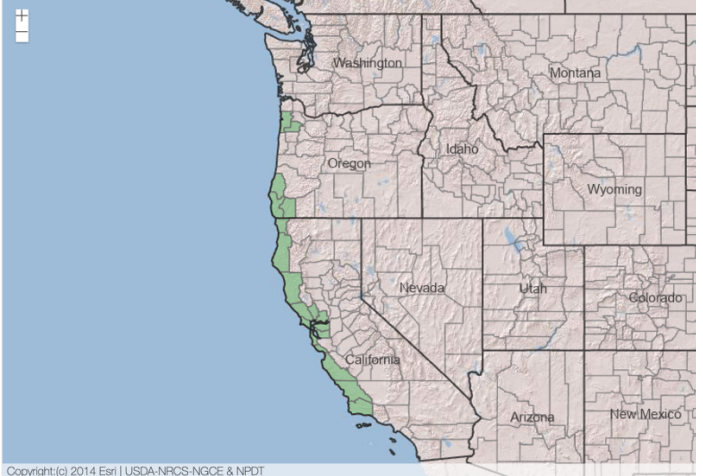


Image by peganum.¹



Image by John Rusk.²

TAXONOMY	
Plant Family	
Scientific Name	<i>Iridaceae</i> Juss.
Common Name	Iris family
Species Scientific Name	
Scientific Name	<i>Iris douglasiana</i> Herb.
Varieties	<i>Iris douglasiana</i> var. <i>major</i> Torr. <i>Iris douglasiana</i> var. <i>oregonensis</i> (R.C.) Foster
Sub-species	
Cultivar	
Common Synonym(s)	
Common Name(s)	Douglas iris
Species Code (as per USDA Plants database)	IRDO
GENERAL INFORMATION	
Geographical range	Grows along the coast from Santa Barbara County, CA to Coos County, OR. Can also be found in Tillamook, Yamhill, and Josephine Counties in Oregon. ³

	 <p>Copyright: (c) 2014 Esri USDA-NRCS-NGCE & NPDT</p> <p>Native Introduced Both Native, No County Data Introduced, No County Data Both</p> <p>Native Status: L48 AK HI PR VI NAV CAN GL SPM NA</p> <p>Distribution map of <i>Iris douglasiana</i> along the western coast of the United States.³</p>
Ecological distribution	Commonly grows in coastal prairies and mixed evergreen forests near the coast. ⁴ Occurs on open, grassy hillsides, cliffs, ⁵ woodlands, bluffs, and pastures near the coast. ⁶
Climate and elevation range	Zones 7a to 9b. Low elevations from central Oregon to southern California. ⁵ Usually less than 300ft above sea level and never found more than 2 miles from the coast. ⁷
Local habitat and abundance	Full sun with moist to dry, well-drained soils ⁵ and plenty of organic matter. ⁴
Plant strategy type / successional stage	Tolerates poor soils. Tolerates salty, windy, sandy coastal conditions. ⁵ Unpalatable to livestock, considered a noxious weed in pastures. ⁸ Fresh iris roots may be toxic. ⁴
Plant characteristics	Perennial forb/herb. Grows from creeping, tuberous rhizomes. Has long, linear, evergreen leaves that overlap. Leaves have parallel venation, ⁴ are usually reddish at the base, and grow up to 1m long and 2cm wide. ⁵ Has 2-3 flowers at the top of the stem. Flowers have 3 large purple sepals with a yellow and white central

	<p>area, 3 narrower erect petals, and 3 erect feathery pistils.⁶ Flowers bloom from early to late spring.⁵</p> <p>Has small, nipple-like bumps at the top of the ovary.⁶</p> <p>Flowers March through July. Cross section of fruits is triangular. Seeds are pear-shaped, wrinkled, and dark brown.⁸</p> <p>Irises start growing during autumn when cool weather and rain are prevalent. They reach the height of their growth in spring and early summer. During the hot, dry summer, after their seeds set, irises go dormant.⁴</p>
PROPAGATION DETAILS: FROM SEED	
Ecotype	<p>Lower elevations, coastal grasslands.⁹</p> <p>Marin County, CA.¹⁰</p>
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container
Stock Type	Seedlings in 6" pots
Time to Grow	22-24 months. ⁴
Target Specifications	Seedlings should be at least 3 to 6 inches tall. ⁴
Propagule Collection Instructions	<p>Seeds are collected between June 1st and August 31st.¹⁰</p> <p>Iris seeds are collected from large, upright capsules.¹¹ Mature capsules are dark brown and open at the top when they are ripe. Seeds are small and brown to black.¹⁰</p> <p>Seed disperses rapidly and is gone two days after ripening.⁴</p>
Propagule Processing/Propagule Characteristics	<p>Each seed capsule contains 20 to 80 seeds.⁴</p> <p>55 seeds/gram.¹⁰</p>
Pre-Planting Propagule Treatments	<p>Remove seeds from capsules by hand or using tweezers.¹⁰ Store seeds in paper envelopes at room temperature until they are planted. Seeds will keep up to 10 years at room temperature.⁴</p> <p>If seeds are stored for any amount of time, a small amount of Captan should be included to prevent</p>

	<p>fungal diseases.¹¹ Captan is a man-made fungicide and can be found in many different products.¹²</p> <p>Requires 30¹⁰ to 80 days of cool/moist stratification at 38F.⁹ Seeds may also need to be briefly frozen to completely break dormancy.⁹</p>
Growing Area Preparation / Annual Practices for Perennial Crops	<p>Plant seeds in 6-inch pots.⁴ Growing media could consist of sand, loam, and peat or screened leaf mold,¹¹ but any good potting soil that is acidic will be good for iris germination.⁴ After sowing, the seed should be covered with 1/2 inch of sphagnum moss to prevent damping-off.¹¹</p> <p>Seeds should be sown in early autumn.¹¹</p>
Establishment Phase Details	<p>After sowing, the 6-inch pots should be over-wintered outdoors.⁴</p> <p>There will be a percentage of hard seeds that do not germinate the first year. Germination will increase the second year.⁴</p>
Length of Establishment Phase	<p>2-3 months.¹¹ 14-15 months if the seed waits till the next year.⁴</p>
Active Growth Phase	<p>Fertilization increases biomass and seed production.⁴</p> <p>Seedlings will not grow large enough the first year and will need to be held over another year.¹⁰</p>
Length of Active Growth Phase	18-20 months. ^{10, 11}
Hardening Phase	-- Missing information --
Length of Hardening Phase	-- Missing information --
Harvesting, Storage and Shipping	-- Missing information --
Length of Storage	-- Missing information --
Guidelines for Outplanting / Performance on Typical Sites	<p>Plant seedlings in May. When planting, space them 6-12 inches apart, or scatter and clump the plantings if wanting a more natural look.</p> <p>Water plants throughout the dry season, allowing the roots to establish. After the first year, plants should not require additional watering unless there is a particularly hot and dry period.⁴</p> <p>Plants should begin to bloom by their second year.^{4, 11}</p>
Other Comments	Direct seeding is also a possibility in undisturbed areas where seedlings can be protected. ¹¹

	Collecting seed on national forests and grasslands requires a permit from the U.S. Forest Service. On national forest lands, it is illegal to dig up or pick native irises. ¹³
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INFORMATION SOURCES

References	<ol style="list-style-type: none"> 1 peganum. (2014). <i>Iris douglasii?</i> [Photograph]. https://commons.wikimedia.org/wiki/File:Iris_douglasii%3F_(13993407670).jpg 2 Rusk, J. (2017). <i>Iris douglasiana – Douglas iris</i> [Photograph]. https://commons.wikimedia.org/wiki/File:J2017_0420-0159%E2%80%94Iris_douglasiana%E2%80%94PBG_(34152417132).jpg 3 USDA NRCS National Plant Data Team (n.d.). <i>Iris douglasiana Herb</i>. USDA NRCS National Plant Data Center. Accessed May 7, 2025. https://plants.usda.gov/plant-profile/IRDO 4 Stevens, M. (2003, May 20). <i>Plant guide: Douglas iris</i>. USDA NRCS National Plant Data Center. Accessed May 7, 2025. https://plants.usda.gov/DocumentLibrary/plantguide/pdf/cs_irdo.pdf 5 Robson, K. A., Richter, A., & Filbert, M. (2008). <i>Encyclopedia of northwest native plants for gardens and landscapes</i>. Timber Press. DOI (if available) 6 Blackwell, L. R. (2012). <i>Wildflowers of California: A month-by-month guide</i>. University of California Press. 7 Turner, M. & Gustafson, P. (2006). <i>Wildflowers of the Pacific Northwest</i>. Timber Press. 8 Meyers, S. C., Jaster, T., & Mitchell, K. E. (2015). <i>Flora of Oregon. Volume 1: Pteridophytes, gymnosperms, and monocots</i>. Botanical Research Institute of Texas Press. 9 Bartow, A. (2015). <i>Protocol information: Iris (douglasiana)</i>. Native Plant Network: Propagation Protocol Database. Accessed May 7, 2025. https://nnp.rngr.net/nnp/propagation 10 Young, B. (2001). <i>Protocol information: Iris (douglasiana)</i>. Native Plant Network:
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Protocol Author	Clara Soltys
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