

## Plant Data Sheet

### Species



Common camas, *Camassia quamash*, (Pursh) Greene

Photo Credit: William & Wilma Follette. USDA NRCS. 1992. PLANTS database.

### Range

British Columbia south to California, east to Alberta, Montana, Wyoming and Utah. (Hitchcock and Cronquist 1973)

### Climate, elevation

Camas grows occurs on sites that are moist to wet in winter and early spring, but very dry by late spring and summer. Occurs from sea level to 7,000 ft (2,134 m). (FEIS database)

### Local occurrence

Occurs east and west of the Cascades in montane wet meadows, Puget lowland and Willamette valley prairies and moist forested communities in southeastern Oregon (Franklin and Dyrness 1973).

### Habitat preferences

In the Intermountain region, common camas is usually found in mountain grassland and prairie communities; west of the Cascade crest, it occurs in both forest and grassland types (FEIS database).

### Plant strategy type/successional stage

Seral species; shade intolerant. Occupies openings in forested communities and early to late seral grassland communities. (FEIS database)

### Associated species

*Pseudotsuga menziesii*, *Pinus ponderosa*, *Fraxinus latifolia*, *Alnus rubrum*, *Festuca idahoensis* var. *roemeriana*, *Ranunculus occidentalis*, *Danthonia californica*, *Symphoricarpos albus*, *Erythronium oregonum*, *Achillea millefolium*, *Saxifraga integrifolia*, *S. oregana* *Sisyrinchium angustifolium*,

*Armeria maritima*, *Viola adunca*, *Zigadenus venenosus* and *Balsamorhiza deltoidea*, *Dodecatheon hendersonii*, *D. jeffreyi*, *Senecio subnudus*, *Montia linearis*, and many others. (FEIS database; Franklin and Dyrness 1973)

**May be collected as:**

Seed, bulbs (salvaged), divisions of offsets from bulbs. (FEIS database)

**Collection restrictions or guidelines**

Seeds ripen and are dispersed from late May to July. (FEIS database)

If salvaging bulbs, there is a brief period to harvest bulbs when soils are moist after flowering in the spring; the next time to harvest is in fall after the rains begin. (Anonymous 2000)

**Seed germination**

Camas seed requires 42 to 100 d of cold, moist stratification (1 to 4 °C [34 to 40 °F]) for maximum germination (90 to 100%). (Anonymous 2000) Stratification can also take place through the winter outdoors or in a cold frame after sowing seed in containers in the late fall. (Wick and Evans 2001).

**Seed life (can be stored, short shelf-life, long shelf-life)**

Seed longevity is unknown, however, one seed trial found that germination rates were the same for fresh seed and seed stored in cool, dry conditions for 6 months. (Wick and Evans 2001)

**Recommended seed storage conditions**

Dry seeds can be stored prior to planting in cool, low humidity environment or frozen. (Anonymous 2000)

**Propagation recommendations (plant seeds, vegetative parts, cuttings, etc.)**

Seeds, container grown seedlings, transplanting salvaged or commercially grown bulbs, bulb offsets.

**Soil or medium requirements (inoculum necessary?)**

For container grown plants a soilless mix of peat, perlite and vermiculite with controlled release fertilizer was used in one seed trial. (Wick and Evans 2001)

**Installation form (form, potential for successful outcomes, cost)**

Direct seeding onto lightly scarified soils in the fall is successful; however, seeds buried deeper than 1 to 2 cm (0.4 to 0.8 in) will not germinate successfully. Another possibility is installation of container grown seedlings in the fall or early spring. (Anonymous 2000)

**Recommended planting density**

210 live seed per square meter (20/sq. ft.) was used with fair to moderate success in an Oregon seed trial. (Anonymous 2000)

Suggested spacing for bulbs in naturalized landscapes vary from 7.5 to 20 cm (3 to 8 in) apart. Others recommend 6 to 8 bulbs every 30 cm (12 in) for outdoor gardens. A dense "natural" stand may have 100 plants per m<sup>2</sup> (9/ft<sup>2</sup>) or more. (Anonymous 2001)

**Care requirements after installed (water weekly, water once etc.)**

Soil should be kept consistently moist throughout the spring until the seed pods dry out or the leaves senesce at least during the first growing season. Protection from deer browsing may improve survival of new plantings. (Anonymous 2000)

**Normal rate of growth or spread; lifespan**

Plants generally mature and flower by age 2-3 years and individual plants live for 15-20 years.

(Anonymous 2000)

One seed trial found that container plants grown from seed were ready for planting after 2 years.

(Wick and Evans 2001)

### **Sources cited**

Anonymous. 2000. Propagation protocol for production of *Camassia quamash* plants; Pullman Plant Materials Center, Pullman, Washington. In: Native Plant Network. URL:

<http://www.nativeplantnetwork.org> (accessed 9 May 2003). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.

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Hitchcock, C. L. and A. Cronquist. 1973. Flora of the Pacific Northwest: An illustrated manual. University of Washington Press, Seattle.

Wick, Dale; Evans, Jeff. 2001. Propagation protocol for production of container *Camassia quamash* (Pursh) Greene ssp. *quamash* plants (164 ml (10 in<sup>3</sup>) Leach Cone-tainers); Glacier National Park, West Glacier, Montana. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 9 May 2003). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.

### **Data compiled by:**

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