Protocol Information

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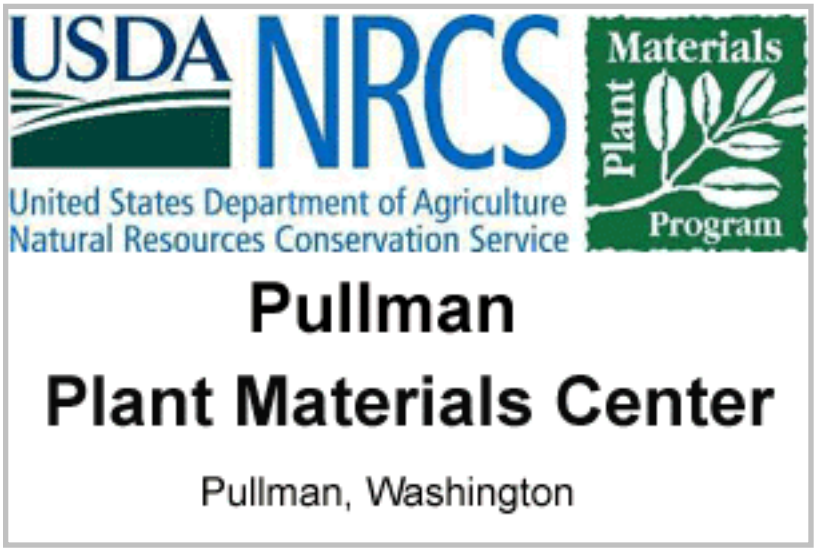

Family Scientific Name: **Apiaceae**
Family Common Name: **Parsley**
Scientific Name: ***Lomatium triternatum*** **(Pursh.) Coult. & Rose**
Common Synonym: ***Cogswellia triternata*** **(Pursh.) M.E. Jones**
Common Name: **Nine-leaf Desert Parsley**
Species Code: **LOTR2**
Ecotype: **Paradise Creek Drainage near Pullman, WA**

General Distribution:	**Dry to mesic open areas of western North America from southern British Columbia to northern California and east to Utah, Wyoming, and Montana. In eastern Washington it is commonly found in shrub-steppe, meadow-steppe, and open ponderosa pine forests. Mean annual precipitation range is from 8-20 inches (USDA NRCS 2007).**
Propagation Goal:	**Plants**
Propagation Method:	**Seed**
Product Type:	**Container (plug)**
Stock Type:	**10 cu. in.**
Time To Grow:	**18 Months**
Target Specifications:	**Tight root plug in container.**
Propagule Collection:	**Fruit is a schizocarp splitting to 2 mericarps (seeds). Seed is collected in late June or early July when the inflorescence is dry and before the seeds shatter. Seed ripening within each individual umbel is uniform, but is less so between umbels on the same or different plants. The seeds are tan in color. Seed can be stripped from the inflorescence or the entire inflorescence can be clipped from the plant. Harvested seed is stored in paper bags at room temperature until cleaned.**

Propagule Processing: **The inflorescence is rubbed by hand to free the seed, then cleaned with an air column separator. Larger amounts are cleaned with air screen equipment. Clean seed is stored in controlled conditions at 40 degrees Fahrenheit and 40% relative humidity.**

We determined 63,812 seeds/lb or 141 seeds/gram for this ecotype.

Pre-Planting Treatments: **Extended cold, moist stratification is needed. Cool spring temperatures may also be necessary. Unpublished data from trials conducted at the Pullman Plant Materials Center showed no germination occurred without stratification and no seed germinated after 30 days cold, moist stratification. High germination was obtained from seeds sown in containers in November and left outside under cool, fluctuating spring temperatures. Seed began emerging in late March. Seedlings which germinated outside died when moved into the greenhouse. We did not determine whether warm greenhouse temperatures or root pathogens were the cause.**

Growing Area Preparation/ Annual Practices for Perennial Crops:	**In November seed is sown in 10 cu. in. Ray Leach Super cell conetainers filled with Sunshine #4 and covered lightly. A thin layer of coarse grit is applied to the top of the planting soil to prevent seeds from floating during watering. Conetainers are watered deeply and placed outside.**
Establishment Phase:	**Containers remain outside. They are watered only during dry spells. Emergence will begin as daytime temperatures warm in March, and may occur over 2-4 weeks.**
Length of Establishment Phase:	**3-4 months**
Active Growth Phase:	**Plants are watered as needed while outside and fertilized once a week with a water soluble, complete fertilizer. They are moved to the lath house in early June. Growth does not occur during the summer months and the plants may senesce. Fertilizer is withheld in July and conetainers are watered only enough to prevent complete drying.**
Length of Active Growth Phase:	**4 months**
Hardening Phase:	**Since the plants are grown outside, additional hardening is not needed.**

Harvesting, Storage and Shipping:	**Plants are stored in the lath house over winter. They should be afforded some protection from extreme cold temperatures. Mulch or foam sheets provide sufficient protection. The protection should be removed in late winter or early spring as temperatures begin to rise. Regrowth will begin in early March as soon as temperatures begin to warm. Rodents may be active under mulches and overwintering plants should be protected from them.**
Outplanting performance on typical sites:	**Transplanting is done in early May by using an electric drill and portable generator to drill 1.5 inch diameter holes at the planting site. Survival in seed increase plantings without competing vegetation approaches 100%. Transplanting into sites with existing vegetation reduces survival and vigor depending on weather conditions following planting. The plants will generally go dormant in June and begin growth the following March. Flowering and seed production occurs 1-2 years after transplanting.**

Other Comments: **Some insect damage to seed has been noted but it is usually not extensive. Damaged seed can easily be removed with an air column separator.**
A few plants will flower the year following outplanting, but most require 2 years in the field to produce seed. Plants will go dormant during the warm parts of the summer.
Rodents will feed on the caudex over winter and may kill the plants.
Plants are andromonoecious, having both perfect and staminate flowers. The proportion of staminate flowers increases in later flowering umbels.
Dispersed seeds are consumed by ground beetles and small mammals (Thompson 1985).
The roots of some *Lomatium* species are edible but others are unpalatable.
The lomatiums are also know as biscuit-roots.

References:

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Citation:

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