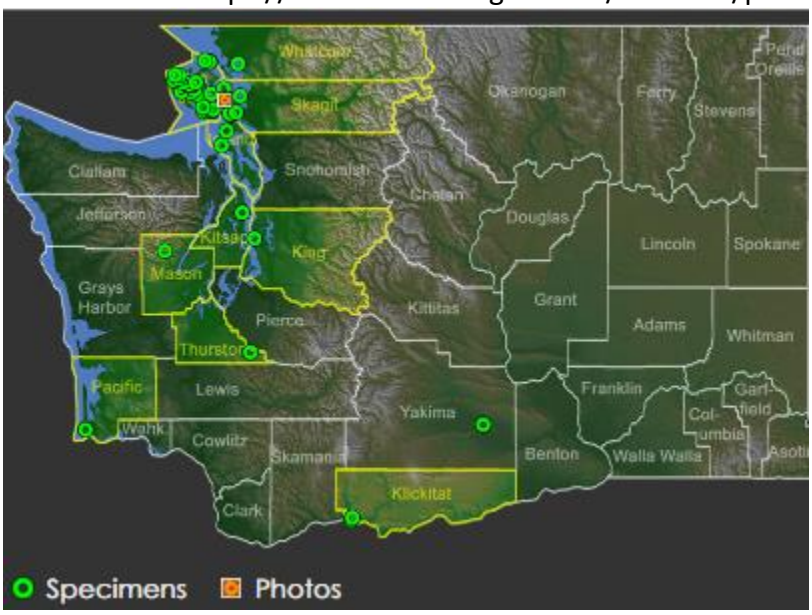
Plant Propagation Protocol for *[Insert Species]*

ESRM 412 – Native Plant Production

URL: https://courses.washington.edu/esrm412/protocols/*[2024]/[TRMI5.pdf]*



(10)

TAXONOMY	
Plant Family	
Scientific Name	Fabaceae
Common Name	Pea or Legume
Species Scientific Name	
Scientific Name	Trifolium microdon Hook. & Arn
Varieties	N/A
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	Trifolium microdon Hook. & Arn. var. pilosum Eastw.
Common Name(s)	Thimble Clover square-head clover Square-headed clover small cup clover Small-cupped clover Trèfle à petites dents Valparaiso clover *(9)*
Species Code (as per USDA Plants database)	TRMI5

GENERAL INFORMATION	
Geographical range	Occurring mainly west of the Cascades crest and in the Columbia River Gorge in Washington; British Columbia to California; also in South America (Chile) See above for distribution in Washington state. *(10)*
Ecological distribution	In Washington: meadows or on rocky or sandy soil at low elevations. *(10)* In Oregon: Meadows, roadsides, dry slopes, fields, open oak or pine forests *(4).*
Climate and elevation range	Elevation in Meters (92-137) *(3)* Climate: cool mesothermal *(1)*
Local habitat and abundance	Mesic to dry meadows, grassy slopes and sandy or rocky clearings in the lowland zone; locally frequent on SE Vancouver Island *(3)*
Plant strategy type / successional stage	Weedy/Colonizer
Plant characteristics	It is an annual herb taking a decumbent or erect form. It is coated in hairs. The leaves are made up of oval leaflets with notched or flat tips, each measuring up to 1. 5 centimeters long. The inflorescence is a head of flowers borne in a deep bowl-like involucre of bracts that can nearly envelop the whole head. The flower corollas are white to pink and about half a centimeter long. *(7)* Bloom period is April-June *(8)*
PROPAGATION DETAILS: FROM SEED: Propagation by seed for Trifolium wormskioldii, a closely related species growing in similar regions to Trifolium microdon	
Ecotype	Not available
Propagation Goal	Plants
Propagation Method	Vegetative
Product Type	Plugs
Stock Type	Not Available
Time to Grow	
Target Specifications	Divide the plant into smaller pieces by hand, retaining only healthy, vigorous sections, each

	with new shoots and rhizome bud. *(6)*
Propagule Collection Instructions	Dig in the fall, after the leaves had started to die back for the winter for green house conditions. Split the plant clump by hand into separate pieces and cut the rhizomes into sections, each with one or more buds *(6)*
Propagule Processing/Propagule Characteristics	To insure effective nodulation by nitrogen fixing rhizobia, commercial inoculants should be applied at rates greater than those recommended by the manufacturers Effective nodulation was achieved by an application of 7.5 X 10^4 Rhizobia per seed. *(5)*
Pre-Planting Propagule Treatments	Make sure to replant the divisions as soon as possible so that they don't dry out. If replanting is delayed a couple of hours, dip the plants briefly in water and keep them in a sealed plastic bag in a cool, shady place until you are ready to plant them. *(6)*
Growing Area Preparation / Annual Practices for Perennial Crops	Replant the divided plant sections to the same previous depth (before division) after the top of the old growth is cut back. Spread the roots out when planting and make sure to give a healthy amount of water. *(6)*
Establishment Phase Details	Transplant plugs in fall or spring. This creates an established field in the first growing season (2).
Length of Establishment Phase	Not available
Active Growth Phase	Spring-Late fall
Length of Active Growth Phase	Not Available
Hardening Phase	Not Available
Length of Hardening Phase	Not Available
Harvesting, Storage and Shipping	If over 6 in, a flail-vac seed stripper can be used. If not over 6 in, then hand cutting is required. Cuttings can be made but can reduce seed yield *(2).*
Length of Storage	Not specific length, but storage should include dipping plants into water and keeping them in a cool and dry storage space. *(6)*
Guidelines for Outplanting / Performance on Typical Sites	Should be planted in 12"-18" centers and in full sun as well as frequent watering. Light fertilization is needed during the growing season. *(6)*
Other Comments	

INFORMATION SOURCES	
References	1. *BC Species Code Definitions*, ibis.geog.ubc.ca/biodiversity/eflora/species_list_metadata.html#Climate. Accessed 30 Apr. 2024. 2. *Native Seed Production Manual for the Pacific Northwest*, www.nrcs.usda.gov/plantmaterials/orpmcpu12767.pdf. Accessed 1 May 2024. 3. *No Atlas Page Present*, linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Trifolium%2Bmicrodon. Accessed 30 Apr. 2024. 4. *Oregonflora*, oregonflora.org/taxa/index.php?taxon=8901. Accessed 30 Apr. 2024. 5. *Shibboleth Authentication Request*, www-jstor-org.offcampus.lib.washington.edu/stable/42935820?sid=primo&seq=1. Accessed 30 Apr. 2024. 6. *Springbank Clover*, plants.usda.gov/DocumentLibrary/plantguide/pdf/cs_trwo.pdf. Accessed 1 May 2024. 7. *Thimble Clover, Trifolium Microdon*, calscape.org/Trifolium-microdon-(). Accessed 1 May 2024. 8. *Trifolium Microdon Calflora*, www.calflora.org/app/taxon?crn=8097. Accessed 30 Apr. 2024. 9. "Trifolium Microdon Hooker & Arnott." *GBIF*, www.gbif.org/species/100022329. Accessed 30 Apr. 2024. 10. WTU Herbarium, Burke Museum. *Trifolium Microdon - Burke Herbarium Image Collection*, burkeherbarium.org/imagecollection/taxon.php?Taxon=Trifolium+microdon. Accessed 30 Apr. 2024.
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