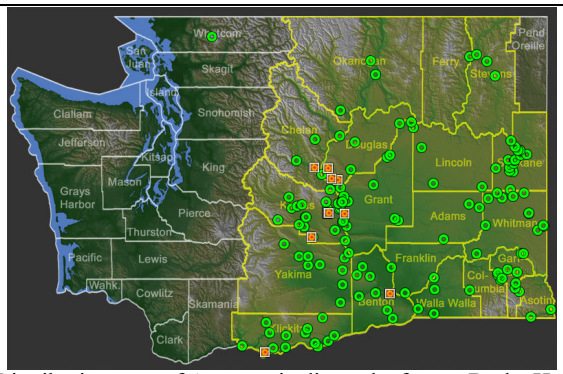
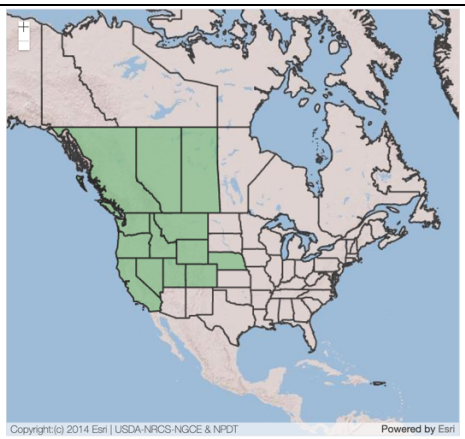
Plant Propagation Protocol for Antennaria dimorpha

ESRM 412 – Native Plant Production

URL: https://courses.washington.edu/esrm412/protocols/*2025*/ANDI2.*pdf*

TAXONOMY	
Plant Family	
Scientific Name	Asteraceae Bercht. & J. Presl
Common Name	Aster Family
Species Scientific Name	
Scientific Name	Antennaria dimorpha (Nutt.) Torr. & A. Gray
Varieties	No information listed
Sub-species	No information listed
Cultivar	No information listed
Common Synonym(s)	Antennaria dimorpha (Nutt.) Torr. & A. Gray var. integra L.F. Hend. (ANDII) Antennaria dimorpha (Nutt.) Torr. & A. Gray var. latisquama (Piper) M. Peck (ANDIL) Antennaria dimorpha (Nutt.) Torr. & A. Gray var. macrocephala D.C. Eaton (ANDIM) *Antennaria latisquama* Piper (ANLA6) *Antennaria macrocephala* (D.C. Eaton) Rydb. (ANMA8) Gnaphalium dimorphum Nutt. (GNDI)
Common Name(s)	Low pussytoes
Species Code (as per USDA Plants database)	ANDI2
GENERAL INFORMATION	
Geographical range	 Map 1: Distribution map of Antennaria dimorpha from a Burke Herbarium survey. https://burkeherbarium.org/imagecollection/taxon.php?Taxon=Antennaria+dimorpha

	 *Map 2: Distribution map of Antennaria dimorpha (Nutt.) Torr. & A. Gray from the USDA* https://plants.usda.gov/plant-profile/ANDI2 Occurring east of the Cascades crest in Washington; British Columbia to California, east to the Rocky Mountains and Nebraska.(2)
Ecological distribution	250-2465m (Average of 716m) elevation; average 18 % slope gradient, average 195 degrees aspect ; 2 SMR – Xeric to Ustic; Average nutrient requirement – Modal nutrient regime class 'C' (3,4)
Climate and elevation range	Dry climates with an average elevation of 716 (3)
Local habitat and abundance	Sagebrush desert to ponderosa pine forest openings often on lithosol (2) Low pussytoes is considered secure, with a global status of G5 based on inspection in the NatureServe Explorer (5)
Plant strategy type / successional stage	High soil acidity, fire tolerance, and slow vegetative growth rate indicate this species may be found in the Herbaceous stage when soil has regained moderate fertility but pH is still high and/or water availability (and retention) is low. No nitrogen fixation (1)
Plant characteristics	Dicot; Forb/herb Subshrub; Active growth in spring and summer; short lifespan; No resprout ability; Slow spread rate; low seedling vigor; Not Conspicuous flower, fruit or seed; Moderate foliage porosity in summer; 0.3 ft at maturity (1,2) Either Stoloniferous or Plants form small, compact mats from a multi-branched woody base (caudex) (1,2) Leaves are Compactly arranged; narrow to linear and sometimes broadest in the upper half; with dense, silky hairs ; dioecious; A single head containing several flowers terminates the leafy stems. Staminate heads 5-7 mm. high and appear blackish-green; pistillate heads 10-15 mm high and appear brown to reddish-brown; Fruits are Achene – technically cypsela (2,4,6)
PROPAGATION DETAILS: FROM SEED	
Ecotype	Dry areas at mid elevation See geographic and ecological distribution above
Propagation Goal	Seeds
Propagation Method	Seed
Product Type	Bareroot plant

Stock Type	N/A
Time to Grow	0 (In reference to ANTEN -Pussytoes; 7)
Target Specifications	N/A
Propagule Collection Instructions	Flowers are from April to May; Harvest seeds post may **Seed cleaning technique:** Separate "fuzzy stuff" from seed head and plant as is (7)
Propagule Processing/Propagule Characteristics	Seed per pound = 7,000,000 Low seedling vigor and spread rate Distributed primarily by wind – consider during processing Fruit/seed do not persist past summer (1)
Pre-Planting Propagule Treatments	No information found
Growing Area Preparation / Annual Practices for Perennial Crops	Growth requires – course or medium textured soils; no cold stratification, medium fertility, moderate to excessive drainage; low moisture; pH between 5.8 and 7.8 ; max planting density of 4800 and min of 1700; low salinity ; precip minimum of 12 and max of 40; direct to partial shade. (1) *Antennaria* Gaertn. Require - Greenhouse, 65-70§F day/55§F night. Propagated on the heating pad (set at 70§F) under tent with misters set 8 am-8 pm, with 10 sec/15 min watering intervals. One week after germination, seedlings were moved to mister area without tent. **Germination media:** Fafard Germinating Mix (superfine). **Growing media:** Fafard Growing Mix 2. (7) Avoid heavy clay soil; minimum 8-10 inches ; well drained; fields plowed and disced prior to planting (8)
Establishment Phase Details	**Sowing/planting technique:** Manually sowed in 4x8 flat. Light is required for germination so seed was left uncovered and pressed firmly into soil. ^ in reference to *Antennaria* Gaertn (7)
Length of Establishment Phase	**Time to germination:** Greater than 7 days (variable!). **Establishment Phase:** Germination is uneven and occurs over several days or weeks. **Time to potting:** 1 month. ^ in reference to *Antennaria* Gaertn (7)
Active Growth Phase	No information found
Length of Active Growth Phase	No information found
Hardening Phase	No information found
Length of Hardening Phase	No information found
Harvesting, Storage and Shipping	“Some techniques with larger nurseries involve machine digging with a tree spade. Tree spades are equipped with three or four hydraulic blades that extract a cone of soil and roots, which are placed in a wire basket, but this method is usually used for balled and burlapped trees. A grower of bare-root liners will likely use a "U"-blade or lifter to cut the roots, lift the plant and shake much of the soil from the plant while in the field.” (8)

	Transport : Refrigerated truck; keep distance short; protect from drying/sun (8) Storage: Prevent desiccation; close to 32 degree F (but not below); process ball (8)
Length of Storage	No information found
Guidelines for Outplanting / Performance on Typical Sites	Low seedling vigor; follow bareroot planting guidelines for better chance at establishment
Other Comments	Be mindful of propagule collection to ensure diversity of selection and collection
PROPAGATION DETAILS: VEGETATIVE	
Ecotype	Dry areas at mid elevation See geographic and ecological distribution above
Propagation Goal	Seeds
Propagation Method	Vegetative
Product Type	Propagules
Stock Type	Seeds
Time to Grow	0 (In reference to ANTEN -Pussytoes; 9)
Target Specifications	No information found
Propagule Collection Instructions	Flowers are from April to May; Harvest seeds post may **Seed cleaning technique:** Separate "fuzzy stuff" from seed head and plant as is (7)
Propagule Processing/Propagule Characteristics	Seed per pound = 7,000,000 Low seedling vigor and spread rate Distributed primarily by wind – consider during processing Fruit/seed do not persist past summer (1)
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Establishment Phase Details	No information found
Length of Establishment Phase	No information found
Active Growth Phase	No information found
Length of Active Growth Phase	No information found

Hardening Phase	No information found
Length of Hardening Phase	No information found
Harvesting, Storage and Shipping	**Seed storage condition:** Seed stored in the greenhouse. (7)
Length of Storage	No information found
Guidelines for Outplanting / Performance on Typical Sites	No information found
Other Comments	Be mindful of propagule collection to ensure diversity of selection and collection When spreading vegetatively ensure proportionate species with female and male flowers

INFORMATION SOURCES

References

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