

Protocol Information

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Plant Materials Program

Family Scientific Name: **Asteraceae**

Family Common Name: **Sunflower**

Scientific Name: *Machaeranthera canescens* (Pursh) A. Gray

Common Name: **Hoary tansyaster**

Species Code: **MACA2**

Ecotype: **Intermountain West and Rocky Mountains**

General Distribution: **Western North America**

Propagation Goal: **Seeds**

Propagation Method: **Seed**

Product Type: **Propagules (seeds, cuttings, poles, etc.)**

Time To Grow: **4 Months**

Target Specifications: **Foundation quality seed with high purity and viability.**

Propagule Collection: **Wildland collections can be made by hand stripping or shaking ripe seed into collection bags.**

Propagule Processing: **Vacuumed seed is first sent through a Westrup laboratory brush machine with a number 7 mantle at a speed of 2. The gate is closed to allow the brushed seed to fall through to the catch pan below. We brush the seed lots 2 or 3 times to remove seed from the floral heads and to clean off as much pappus as possible. The brushed material is then cleaned using a Westrup LA-LS multi-deck air screen cleaner with a 2.3 top screen, blank middle, and solid bottom screen. The air is set very low, near 0.5 to pick up the removed pappus and light inert**

matter. Purity is relatively low (40–50%), but is clean enough to seed through drills and other equipment. Pure seed contains approximately 1,066,900 seeds per pound.

Pre-Planting Treatments: Seed is stored in cool-dry conditions with temperatures of approximately 10° C (50° F) and relative humidity of 20 to 30%.

Growing Area Preparation/

Annual Practices for Perennial Crops: Seed is sown into weed barrier fabric at 23 to 30 cm (9 to 12 in) spacing. Seed should be planted in late fall or early spring into slightly roughened soil and then lightly covered and packed.

Establishment Phase: First emergence occurs in early spring in late April and early May.

Active Growth Phase: Seed can be harvested the first full growing season. Two to three years of additional harvests may be possible depending on ecotype. Plants go dormant in late summer and can be mowed for the winter.

Harvesting, Storage and Shipping: Seed can be collected by hand, combine, flailvac, or vacuum-type harvester. We use a “jet harvester” (Bair and Tilley 2010) with the fan running at 3,000 to 5,000 rpm. This ensures that only ripe seed is harvested and allows for multiple harvests during the season. Seed readily disarticulates from flower heads when ripe.

References: Bair C, Tilley DJ. 2010. The jet harvester: a shop built tool for harvesting forb and shrub seed. Aberdeen (ID): USDA Natural Resources Conservation Service, Aberdeen Plant Materials Center. Technical Note 55. 6 p.

Citation:

Tilley, Derek 2011. Propagation protocol for production of *Machaeranthera canescens* (Pursh) A. Gray seeds; USDA NRCS - Aberdeen Plant Materials Center, Aberdeen, Idaho. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 3 June 2011). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.