

Protocol Information

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Aberdeen Plant Materials Center

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Family Scientific Name: **Asteraceae**

Family Common Name: **Sunflower**

Scientific Name: *Chaenactis douglasii* (Hook.) Hook. & Arn.

Common Name: **Douglas' dustymaiden**

Species Code: **CHDO**

Ecotype: **Intermountain West**

General Distribution: **Dustymaiden** occurs throughout western North America at elevations from 1,000– 3,000 m (3,000– 10,000 ft) from British Columbia to Arizona, ranging as far east as South Dakota. Variety *douglasii* is known in and east of the Sierra and Cascade ranges extending to the western edge of northern Great Plains.

Propagation Goal: **Seeds**

Propagation Method: **Seed**

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

Time To Grow: **2 Months**

Propagule Collection: **Collect wildland seed by bending the top of the plant into a bag and vigorously shaking the ripe seed off. This method produces little inert matter for further cleaning.**

Propagule Processing: **Store collected seed in open collection sacks to dry prior to processing. If seed is collected by hand or with a Jet Harvester (Tilley and Bair, 2010), little additional processing is necessary. Seed harvested in this manner will have an intact pappus and fair to moderate purity.**

Following drying the seed can be sifted through 0.6 to 1.2 cm (0.25 to 0.5 in) hardware cloth to remove sticks and intact flower heads. When mixed with a diluent such as rice hulls, seed in this condition flows well through grain and no-till drills and other seeding equipment.

Pre-Planting Treatments: Plant as a fall-dormant seeding in November or December to allow for natural stratification.

Growing Area Preparation/

Annual Practices for Perennial Crops: Seed is sown into weed barrier fabric at 23 to 45 cm (9 to 18 in) spacing. Seed should be planted in late fall into slightly roughened soil and then lightly packed. Each hole is seeded at a target rate of 12 to 25 seeds using a "Penstemon Popper" seeder, a 3 inch diameter tube with a spur at the bottom. The spur is used to roughen the soil, then seed is dropped through the tube into the roughened area and the soil is then compacted by foot. Weed control efforts should begin prior to planting. Planting into a weed-free seed bed, or using weed barrier fabric greatly reduces management inputs. Weeds can be controlled using pre-emergent herbicides and by hand rouging or by mowing along the edges of weed barrier fabric. Weedy grasses can be controlled with selective herbicides.

Establishment Phase: Seed germinates in early spring. Some light irrigation may be used to assist germination if soil crusting is a problem.

Length of Establishment Phase: 1 month

Active Growth Phase: When using weed barrier fabric, supplemental irrigation is not necessary. Flowering begins in early summer and continues for several weeks.

Length of Active Growth Phase: 3-4 months

Harvesting, Storage and Shipping: Seed can be collected by hand, combine, flailvac, or vacuum-type harvester. We use a "jet combine" with the fan running at 6000 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. The jet harvester also limits the amount of trash and other inert matter being collected and makes post-harvest cleaning easier. Harvesting by other methods significantly adds to the inert matter which can be very difficult to clean out.

References: Bair, C. and D. Tilley. 2010. The Jet Harvester: A New Tool

**for Harvesting Native Forb and Shrub Seed. USDA–NRCS.
Technical Note 55. Boise, ID.**

Citation:

Tilley, Derek 2010. Propagation protocol for production of *Chaenactis douglasii* (Hook.) Hook. & Arn. seeds; USDA NRCS - Aberdeen Plant Materials Center, Aberdeen, Idaho. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 10 November 2010). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.