

DAUCUS PUSILLUS* MICHX.*COMMON NAME: AMERICAN WILD CARROT****FAMILY: APIACEAE****GROWTH FORM: ANNUAL HERB****PLANTING**

Ideally, seeds of this species would be planted during October, before the winter monsoonal period of November through March. However, we have planted the species as late as December. Seeds were hand-sown onto mounded planting beds, and a thin layer of soil was then raked over them. The seeds germinate readily without any form of pre-treatment.

PHENOLOGY

When growing in the San Joaquin Valley, *D. pusillus* germinates with winter rains and will typically begin flowering in April. Seeds can be collected from mid-May to mid-June.

SEED HARVESTING

Fruits are retained well on plants as they senesce. Therefore, we wait for all of the fruits on a given plant to mature and then collect the entire plant. Plants are ready for collection when the fruits are dry and brown, with no green color remaining. The nursery-grown plants were typically less than one foot tall¹. When plants are tall and robust, it may be preferable to clip seed heads off plants in order to reduce the total amount of biomass harvested. It is ideal to minimize the amount of soil that is collected along with the plants; soil particles that are of a similar size and weight as the seeds can be very difficult to remove during seed processing. We would transport the harvested plant material to a warehouse and spread it out on tarpaulins to air dry, before seed processing.

SEED PROCESSING METHODS

Using a hammer mill, raw plant material is reduced into a coarse but uniform mixture of seeds and associated chaff (e.g., pieces of stems, leaves, floral structures). Seeds can then be separated from chaff using either a Clipper Office Tester or Clipper Eclipse (both made by the A.T. Ferrell Company). An air separator (Seed Tech Systems, LLC.) can be used to remove additional lightweight chaff. For relatively small seed lots or in the absence of the equipment mentioned, plant material can be broken up by rubbing it over a screen or sieve. Wire mesh sieves with various screen sizes can then be used to separate seeds from chaff.

CULTIVATION OVERVIEW

D. pusillus was sown in the nursery for three years and we were able to collect seed each year. When growing at the nursery, the species is highly susceptible to browsing by jackrabbits and desert cottontails. In years with below average rainfall when vegetation at the nursery was scarce, *D. pusillus* plants were browsed repeatedly until they measured only a few centimeters in both height and width. However, we observed that the diminutive plants were still capable of flowering and producing seed.

ADDITIONAL INFORMATION ABOUT *DAUCUS PUSILLUS*:*Internet Resources*

Plant Guide from the Natural Resources Conservation Service (NRCS):

http://www.plants.usda.gov/plantguide/pdf/pg_dapu3.pdf

Species profile from the Ladybird Johnson Wildflower Center at the University of Texas:

http://www.wildflower.org/plants/result.php?id_plant=DAPU3

Propagation Protocols from the Native Plant Network:

http://nativeplants.for.uidaho.edu/network/view.asp?protocol_id=585,
http://nativeplants.for.uidaho.edu/network/view.asp?protocol_id=2091

Literature

Pitt, M.D. and H.F. Heady. 1978. Responses of annual vegetation to temperature and rainfall patterns in northern California. *Ecology* 59: 336-350.

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¹ The small stature of the plants could possibly be attributed to dry growing conditions, repeated browsing by herbivores, or unsuitable soil type.

PHOTOS



D. pusillus seedlings at the native plant nursery during February 2008.



D. pusillus seeds.



D. pusillus seeds.