

ACHYRACHAENA MOLLIS* SCHAUER*COMMON NAME: BLOW WIVES****FAMILY: ASTERACEAE****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, *A. mollis* germinates as early as mid-January, and will begin flowering in mid-March. April and May are the peak months for seed collection. In a year with above average amounts of winter rainfall, we observed *A. mollis* germinating at the beginning of December, albeit under the protection of floating row cover.

SEED HARVESTING

A. mollis produces both ray and disk achenes; ray achenes lack an attached pappus, but disk achenes have an attached pappus of shiny white scales (Hickman, 1993). We have only collected the disk achenes. When the disk achenes (seeds) are mature and ready for collection, they will be displayed on plants in a ball-shaped cluster, and are very conspicuous due to their shiny white pappus. Seeds mature continuously over a period of several weeks, so seed collection on multiple dates is ideal. To collect seeds, we would shake or hand strip them into a collecting bag or envelope. If a significant quantity of seed has been dispersed from the plants before a seed collection visit, we have collected seed off the ground by hand. This method is not ideal because of potential for contamination with seeds of other species or deterioration in seed quality. But if the seed appears to have fallen recently and has not become damp or mixed with soil and plant litter, a seed collection of reasonable quality can be made.

SEED PROCESSING METHODS

If seeds have been collected from plants by hand, very little seed processing will be required. One can sift through the

seed lot by hand to remove any large pieces of debris (e.g., stems, leaves, etc.). When fruits have been collected from the ground, we have spread the seed lot out on a large surface so that soil particles and seeds of other species can be removed by hand.

Seeds per gram = 245¹

CULTIVATION OVERVIEW

A. mollis was sown in the nursery for four years and we were able to collect seed during two of the years. During the 2004-05 growing season, when precipitation received was above average, the species germinated densely and had good competitive ability against weedy species. During the 2006-07 and 2007-08 growing seasons, when precipitation received was far below average, rabbits browsed the plants heavily and very few of them survived to maturity. However, during spring of 2007 we harvested seed from numerous volunteer *A. mollis* plants that were growing within a fenced herbivore enclosure.

A horticultural entry included in The Jepson Manual recommends that *A. mollis* requires excellent drainage and does best in full or nearly full sun (Hickman, 1993). The soils at the nursery are Tranquillity clay with poor drainage, but *A. mollis* individuals growing at the nursery appeared healthy.

REFERENCES

Hickman, J. C. (editor). 1993. The Jepson manual: higher plants of California. University of California Press, Berkeley.

ADDITIONAL INFORMATION ABOUT***ACHYRACHAENA MOLLIS*:***Internet Resources*

Seed photos from the Rancho Santa Ana Botanic Garden:
<http://www.hazmac.biz/031208/031208AchyrachaenaMollis.html>

Species profile from the Ladybird Johnson Wildflower Center at the University of Texas:
http://www.wildflower.org/plants/result.php?id_plant=ACMO2

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¹ This figure (n = 4; standard deviation = 8) is derived from a seed lot harvested in 2008 from a wild population.

PHOTOS



A. mollis seedlings at the native plant nursery during January 2006.



A. mollis seedlings at the native plant nursery during January 2008.





A. mollis seeds. Scale shown is millimeters.

