Aster foliaceous Lindl. leafy aster

**Family: Asteraceae** 



Figure 92. Documented range of Aster foliaceous in northern British Columbia.

#### **Background Information**

*Aster foliaceous* is found north to Alaska, the Yukon and Northwest Territories, east to Alberta and south to New Mexico, Arizona and California (Hitchcock et al. 1969, Douglas et al. 1998). In British Columbia, it is found in all vegetation zones throughout the southern half of the northern Interior (south of 56°N). Reports that it occurs in the extreme northwest corner of the province (MacKinnon et al. 1992, Douglas et al. 1998) could not be confirmed.

<u>Growth Form</u>: Rhizomatous perennial herb with a short woody stem base; stalked basal leaves, unstalked stem leaves with clasping flanges; rose-purple to blue or violet ray flowers, yellow disk flowers; mature plant size is 10-60 cm tall (MacKinnon et al. 1992).

<u>Site Preferences</u>: Moist to mesic meadows, streambanks, slopes and forests in all vegetation zones and at all elevations (MacKinnon et al. 1992, Douglas et al. 1998).

# Aster foliaceous Lindl. (continued)

<u>Seed Longevity</u>: In our research, two year old *Aster foliaceous* seeds had 10% higher germination than seeds grown in the same year, suggesting that some degree of after-ripening or inadvertent stratification may occur in storage.



Figure 93. Seeds of *Aster foliaceous*. Rule divisions are 1.0 mm.

#### **Considerations for Growing**

#### Techniques for Seed Production

Seed treatment: Higher germination can be achieved with stratification prior to sowing.

*Soil considerations*: Establish on loamy, well-prepared soils with a firm seedbed. Superior germination under cool conditions suggests that sowing very early or late in the growing season would be advantageous.

*Stand establishment*: Site should be free of all weeds, especially rhizomatous grasses and other persistent species because there are currently no selective herbicides that can be used once plants are growing. Stands can be established from seedlings started in the greenhouse or from seed.

*Row spacing*: 75 to 120 cm under dryland conditions, 30 to 90 cm with good irrigation (Smith and Smith 2000).

*Seeding density*: Unknown at present; recommendation of 375 PLS seeds per linear metre based on the similar species, *A. ericoides*.

*Seeding depth*: Surface to shallow seeding (Pahl and Smreciu 1999); a light dusting of peat moss will help keep the seeds in place.

*Stand maintenance*: Regularly cultivate rows and spot spray with herbicide to keep plot weed free; annual fertilization with low N formulations may extend the life of the plot.

#### Harvesting and Seed Processing

*Dates of selective harvesting* in the Bulkley Valley of northwestern B.C. have ranged from August 16<sup>th</sup> to September 21<sup>st</sup>. Seed scatters moderately easily.

*Hand clipping*: May or may not be a suitable method for harvesting, as the ability of immature seeds to ripen after clipping is unknown. Hold the seed heads over bins placed alongside the plants being clipped, or place a bag over the seed heads before clipping to minimize seed loss.

*Vacuum:* Vacuum ripe seed heads selectively as they ripen by placing the vacuum cleaner intake completely over seed heads; a shop vacuum works best for harvesting this species; harvest as soon as seeds ripen, as they are easily airborne.

Seed stripper: Not recommended for harvesting this species.

*Combine/thresher settings*: Repeated runs at 1241 rpm with 3 mm gap; can use rotary flail to dislodge all remaining seeds from seed heads if harvested with long stalks.

## Aster foliaceous Lindl. (continued)

(Harvesting and Seed Processing, continued)

*Seed cleaning*: Put through fanning mill, screen sizes: prescreen 1.2 x 7.1 mm slot; top screen 1.8 x 12.7 mm slot; bottom blank.

Storage requirements: Cool dry storage (Link 1993).

#### **Considerations for Use in Revegetation**

There is little information available about *Aster foliaceous*. However, the following is reported about two similar species, *Aster ericoides* (Pahl and Smreciu 1999) and *Aster laevis* (Sullivan 1992):

- *Aster ericoides* and *Aster laevis* are both considered palatable to grazing by cattle in the early stages of growth (Sullivan 1992, Pahl and Smreciu 1999).
- These *Aster* species increase in response to bison grazing on the prairies (Pahl and Smreciu 1999).
- These *Aster* species can spread quickly in open areas with little competition (Pahl and Smreciu 1999).
- Aster laevis sprouts well from rhizomes after being top-killed by fire (Sullivan 1992).
- *Aster laevis* is recommended in seedings and plantings for rehabilitation or restoration of native mixed-grass and tallgrass prairies (\*Moyer and Smoliak 1987, \*Nuzzo 1978, \*Woehler and Martin 1978).

\* *fide* Sullivan 1992.

#### Other considerations

• Some *Aster* species have ornamental potential (Douglas 1995).

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### Aster foliaceous Lindl. (continued)

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