

Scientific Name: *Astragalus americanus* (Hook.) M.E. Jones

Family: *Fabaceae*

Common Names: American milk vetch, rattlepod

Plant Description

Tall perennial herb usually with a single erect stem, 50 cm to 1 m tall, sparsely hairy to glabrous; stipules conspicuous, reflexed; the lower nodes marked by stipules only; leaflets 7 to 15, elliptic-oblong, 2 to 4 cm long glabrous; above, sparsely hairy beneath; racemes several, long-peduncled; flowers white, turning yellowish or sordid, 13 to 15 mm long (Moss 1983).

Fruit: Pods drooping, inflated, ellipsoid or ovoid, membranous, 1.5 to 2 cm long, shiny, on stipes 6 to 10 mm long (Moss 1983).

Seed: Kidney shaped, 2 to 3 mm long.

Habitat and Distribution

Stream banks, shaded areas and moist woods (Moss 1983).

Seral Stage: Mid to late seral.

Soil: Tolerant of moderate soil acidity (Tannas 2004).

Distribution: Southeastern Alaska, Yukon, northwestern District of Mackenzie to southwestern Hudson Bay south to British Columbia, Montana, Colorado, Saskatchewan, Manitoba; South Dakota (Moss 1983).

Phenology

Flowers in late June to August.

Pollination

Insect pollinated, obligate outcrosser (Kudo and Harder 2005).

Seed Dispersal

Seed drops from pods when fruit dehisces.

Genetics

2n=16 (Moss 1983).

Symbiosis

Rhizobium bacteria associate with all legume species.

Seed Processing

Collection: For small lots, seed can be collected by cutting, bagging in paper and hanging or spreading to dry (Pahl and Smreciu 1999). Take care to collect before seed are eaten by insects (Lady Bird Johnson Wildflower Center 2007).

Seed Weight: 1.06 g/1,000 seeds (Royal Botanic Gardens Kew 2008).

Fruit/Seed by Volume: No literature found.

Average Seed/Fruit: No literature found.

Harvest Dates: Late July to Early August.

Cleaning: Debreeding may be used to break up pods (Pahl and Smreciu 1999).

Screen the seed until it is free of excess debris (Pahl and Smreciu 1999).

Storage Behaviour: Orthodox (Royal Botanic Gardens Kew 2008).

Storage: 90% viability following drying to moisture contents in equilibrium with 15% relative humidity and freezing for 10 months at -20°C (Royal Botanic Gardens Kew 2008).

Longevity: No literature found.

Propagation

Natural Regeneration: Emergence from seed.

Germination: 90% germination with pre-treatments on a 1% agar media at temperatures of 15°C, 8 hours light / 16 hours dark (Royal Botanic Gardens Kew 2008).

Pre-treatments: Scarify seed with scalpel (Royal Botanic Gardens Kew 2008).

Direct Seeding: Sow seed stratified in the spring and unstratified in the fall (Lady Bird Johnson Wildflower Center 2007).

Planting Density: No literature found.

Seed Rate: No literature found.



Vegetative Propagation: No literature found.

Micro-propagation: No literature found.

Aboriginal/Food Uses

Food: The root could be eaten only in very small amounts during times of starvation (Marles et al. 2000).

Medicinal: The root can be chewed and the juice swallowed to treat stomach aches and cramps (Marles et al. 2000).

Other: Seed pods were used as rattles for babies (Marles et al. 2000).

Wildlife/Forage Usage

Wildlife: No literature found.

Livestock: Good forage value and forms fair quality hay (Tannas 2004).

Grazing Response: Decreaser (Tannas 2004).

Reclamation Potential

Astragalus americanus seed collected in the mountain and foothill regions was removed from a greenhouse seedling production experiment due to poor germination (Smreciu 1995).

Astragalus americanus is tolerant of moderate soil acidity.

Commercial Resources

Availability: No known sources in Alberta (ANPC 2010).

Cultivars: No literature found.

Uses: No literature found.

Notes

Astragalus americanus is listed as 87% intact (more occurrences than expected) in the Alberta oil sands region (Alberta Biodiversity Monitoring Institute 2014).

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