

Scientific name: *Solidago simplex* var. *spathulata* DC Cronq.

Family: Asteraceae

Common Names: mountain goldenrod, spike-like goldenrod, sticky goldenrod

Plant Description

Erect, resinous, aromatic perennial with solitary or tufted stems, often reddish, from short stout rhizomes, 10 to 40 cm high; decumbent at base; basal leaves broadly lanceolate or oblanceolate, rounded at apex, somewhat crenate towards tip, 1-veined, 2 to 10 cm long, smaller upper leaves; racemose heads 8 mm high in dense, often interrupted clusters forming a long narrow cylinder at stem tip; flowers yellow (usually eight ray and 13 disc flowers); involucre 4 to 6 mm high, 5 to 7 mm wide; bracts linear-oblong to oblong, obtuse (Moss 1983).

Fruit/Seed: Densely hairy achenes approximately 2 mm long (Johnson et al 1995). Ensiform seed, light brown in colour when they are mature (Young 2001).

Habitat and Distribution

Seral Stage: Grassland, open woods to alpine elevations, meadows, riverbanks, terraces, prairies, parklands, and southern boreal forests (Moss 1983).

Soils: Mesic.

Distribution: Widespread across Alberta. Alaska, Yukon, western District of Mackenzie to Manitoba south to California, Arizona, New Mexico (Moss 1983).

Phenology

Flowers yellow through July and August (eFloras n.d.). Seed dispersed in late August, early September.

Pollination

Insect pollinated.

Seed Dispersal

Seed born on pappus and easily spread by wind.



Solidago simplex in open mixed woods.

Genetics

$2n=18, 36$ (Moss 1983).

Symbiosis

No literature found.

Seed Processing

Collection: Cut heads and place in breathable container or bag.



Seed Weight: 0.1162 g/1,000 seeds.

Harvest Dates: Late August.

Cleaning: Pull seeds from seed heads by hand. Rub seeds with pappus between corrugated rubber in a box. Sieve to remove seeds from chaff using appropriate size screens. Small chaff and dust can be removed by winnowing.

Alternatively, pappus with attached seeds can be placed on a sieve with mesh size large enough to let seeds through, over one to catch the dropping seeds. Place a smaller sieve over the top sieve and direct a strong flow of air (such as that produced by a reversed vacuum) through the top sieve. Seeds will be removed from the pappus and lodge in the small mesh sieve.

Storage Behaviour: Orthodox; dry seed prior to freezing (Royal Botanic Gardens Kew 2008).

Storage: Keep seeds dry and cool (Young 2001).

Longevity: Germination percentages decline after two years when stored dry at room temperatures.

Propagation

Natural Regeneration: Reproduces primarily by rhizomes, and to a lesser extent by seeds (Gerling et al. 1996).

Germination: Over 50% - 75% germination in fresh and year old seeds (Butler and Frieswyk 2001, Young 2001). Seeds germinate 4 to 30 days (Butler and Frieswyk 2001, Young 2001).

Seeds considered non-dormant (Baskin and Baskin 2001).

Have been found to germinate better when seed is exposed to light (Baskin and Baskin 2001).

Optimal germination temperature was found to be 24°C/10°C (Baskin and Baskin 2001).

Pre-treatment: None are required (Baskin and Baskin 2001).

Direct Seeding: Seeds can be sown into flats and lightly covered. Emergence observed after one month (Young 2001).

Planting Density: No literature found.

Seed Rate: No literature found.

Vegetative Propagation: By division.



Micro-propagation: No literature found.

Aboriginal/Food Uses

Food: No known uses.

Medicinal: Boiling the whole plant to make a medicinal tea used to clean wounds, sores, and ulcers on humans, and saddle sores on horses. Less concentrated teas were taken internally to relieve sore throats, throat constrictions, nasal congestion and to promote perspiration. Once ground and dried, the leaves were used as an antiseptic powder on infections. Herbalists have been using goldenrod tea for many years to relieve intestinal gas and cramps. Pharmacologists agree with the benefits of this use. (Marles et al. 2000).

Other: Natural rubber can be found in small quantities in the sap of all goldenrods (Marles et al. 2000).

Wildlife/Forage Usage

Wildlife: No literature found.

Livestock: Low to poor forage value (Gerling et al. 1996).

Grazing Response: Increaser (Gerling et al. 1996).



Reclamation Potential

Have emerged and are reproducing in revegetation trials in northeastern Alberta (Smreciu et al. 2012).

Commercial Resources

Availability: Plants and seed are available in Alberta (ANPC 2010).

Cultivars: None known.

Photo Credits

Photo 1: Allan Carson, University of Northern British Columbia, British Columbia.

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