

# SULPHUR CINQUEFOIL

*Potentilla recta* L.

**Family:** *Rosaceae* (Rose).

**Other Scientific Names:** None.

**Other Common Names:** Rough-fruited cinquefoil.

**Legal Status:** Regional Noxious: Columbia-Shuswap, North Okanagan, Okanagan-Similkameen, Thompson-Nicola.



## Identification

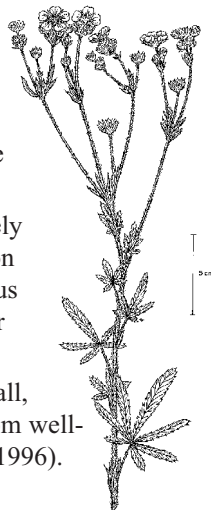
**Growth form:** Perennial forb.

**Flower:** Flowers are light-yellow (sulphur coloured) with 5 petals.

**Seeds/Fruit:** Each flower produces numerous small seeds (1 mm) that are slightly flattened.

**Leaves:** Leaves are alternate, palmately compound with 5–7 toothed leaflets on each leaf. Leaf stalks have conspicuous perpendicular hairs, and leaves appear green on the underside.

**Stems:** Mature plants are 30–70 cm tall, with one to several stems growing from well-developed rootstocks (Whitson et al. 1996).

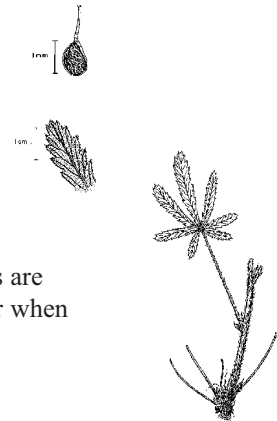


**Roots:** Fibrous roots and lateral rhizomes.

**Seedling:** No information available.

### Similar Species

Twenty-seven species of *Potentilla* are found in BC (Douglas et al. 2000). Floral characteristics, arrangements of leaves and leaflets, and the type and arrangement of hairs are important features to consider when identifying cinquefoil.



## Impacts

**Agricultural:** Unpalatable to grazing animals. It is also very competitive with native plants and reduces forage for livestock and wildlife on rangelands (Rice 1999).

**Ecological:** A competitive, early successional species that can dominate sites and displace native plant

species in both disturbed and undisturbed habits. It may also alter ecosystem function, although this has not been verified scientifically (Powell 1996).

**Human:** No information available.

## Habitat and Ecology

**General requirements:** Sulphur cinquefoil is a pioneer species found in habitats from early succession to relatively dense forest overstorey, but the plant appears intolerant of complete shade (Powell 1996). It appears adapted to a wide range of soils and climates, but currently it is mostly restricted to the grasslands and dry forest zones in BC (Powell 1996).

**Distribution:** Naturalized throughout much of North America, occupying dry to moist habitats, roadsides, pastures, overgrazed rangelands, and disturbed areas (Douglas et al. 1999). Common in southern British

Columbia, especially in the Douglas fir zone (Powell 1996). Considered a major concern in the Kootenay, Okanagan, and Thompson agricultural reporting regions.

**Historical:** Introduced from Eurasia.

**Life cycle:** A long-lived perennial. Plants germinate in spring and establish a woody taproot. Plants can live up to 20 years, but the central core of the taproot slowly rots away and the plant gives out to other species. In southern parts of the province, flowering

occurs from June to late July and seeds are set in July and August. Herbaceous material dries in August to end the life cycle (Powell 1996).

**Mode of reproduction:** By seed and vegetatively from roots.

**Seed production:** Some plants produce 1,650 seeds (Powell 1966).

**Seed bank:** Seed survival may be short, not exceeding 2 years (Powell 1996).

**Dispersal:** Seeds can be dispersed by birds, small mammals, ungulates, and other grazing animals, either through digestion or by being picked up and moved on hooves or in hair. Seeds can also be dispersed in cut hay and bedding material (Powell 1996).

**Hybridization:** No information available.

## Management

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**Biocontrol:** None. Preliminary screening work is currently being conducted.

**Mechanical:** Small infestations can be managed by hand-digging.

**Fire:** No information available.

**Herbicides:** Picloram, clopyralid, and 2,4-D have been effective in the US. Picloram and, to a lesser extent, glyphosate have been used for management in BC. Consult the most recent edition of BC Ministry of Agriculture, Food and Fisheries Crop Production Guides for specific recommendations. **Before applying herbicides, read the label for full use and precautionary instructions.**

**Cultural/Preventive:** It does not survive cultivation well.

### Integrated Management Summary

Integrated management should focus on prevention of new infestations through grazing management and maintaining vigorous perennial plant communities. Cultural controls, such as hand-pulling, can be effective on new infestations but should be followed up to ensure that the plant has been eradicated. Seed disturbed areas to perennial grasses to provide competition. Use appropriate herbicides for larger infestations, along with other management techniques.

## References

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