

T.I.P.S.

Targeted Invasive Plant Solutions

7 Sulphur cinquefoil



Legal Status

- ✓ Invasive Plants Regulation, *Forest and Range Practices Act*
- ✓ Noxious Weed (Provincial), *BC Weed Control Act*

Distribution

Currently distributed in the following areas: Columbia-Shuswap, North Okanagan, Okanagan-Similkameen, and Thompson-Nicola Regional Districts, as well as the southeast coast of Vancouver Island and the Fraser Canyon between Boston Bar and Kanaka Bar.

Identification

Flowers: Sulphur (pale yellow) coloured flowers each with five heart-shaped petals. Petals are approximately 10 mm long.

Stems: One or a few erect stems; hairy; height 0.3–0.8 m.

Leaves: Hairy on both sides; palmately-lobed with five to seven deeply toothed leaflets. Leaves become shorter-stalked closer to the shoot.

Fruits: Brown, 1 mm long achenes (simple, dry, one-seeded fruit).

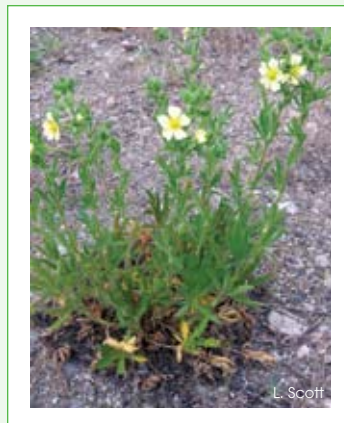
Similar Species: Sulphur cinquefoil is most often confused with graceful cinquefoil, a native species which has woolly white hairs on the underside of leaves, more basal leaves, bright yellow flowers, and is shorter in stature.

Ecological Characteristics

Habitat: Grasslands, shrubby areas, dry open forests, and disturbed sites such as roadsides, pastures, and rangelands. Can inhabit dry to moist areas.

Reproduction: Perennial species that reproduces mainly by seed. A single plant can produce over 1600 seeds. Can also reproduce by vegetative growth. A single plant can live for up to 20 years as new shoots can emerge from the main root. Can spread by root if mowed (e.g. by machinery).

Dispersal: Seeds can be dispersed on or through the digestive system of birds, wildlife, and livestock. Seeds can also be spread in mud caught in tire tread or undercarriages of vehicles or machinery.



Current Distribution in BC



Dots indicate species presence as recorded in IAPP (accessed September 19, 2007).



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Sulphur cinquefoil • *Potentilla recta*

Impacts

Economic: Due to its unpleasant taste, infestations decrease available forage for grazers.

Ecological: Infestations can decrease forage for wildlife and decrease local plant biodiversity.

Integrated Pest Management

IPM is a decision-making process that includes identification and inventory of invasive plant populations, assessment of the risks that they pose, development of well-informed control options that may include a number of methods, site treatment, and monitoring.

Prevention

- Manage activities such as grazing, road construction and maintenance, and timber harvesting appropriately to maintain or establish healthy, competitive plant communities that are resistant to invasion by invasive plants.
- Minimize soil disturbance in areas near infestations.
- Monitor treated sites for several years to facilitate early detection of new plants emerging from the seed bank or portions of remaining roots.
- Clean equipment, vehicles, animals, and clothing before leaving infested areas.

Mechanical Control

- Pulling may be an effective control method for small infestations if, at the least, the growing tissue on the top few inches of the root system is removed. Pulling or digging should be performed before seeds mature and while soil is moist. If seeds are mature, cut and bag seed heads prior to mechanical control.
- Pulling, cutting or mowing larger infestations does not appear to reduce seed production as plants are able to spread vegetatively. Mowed plants will grow new shoots (capable of seeding) and usually re-grow shorter and more branched.
- Hand-pulling or digging followed by seeding may be effective for small infestations.
- Plowing/harrowing and seeding with grass species appears to be effective for large infestations as it is difficult for sulphur cinquefoil to compete with healthy grass populations.

Biocontrol

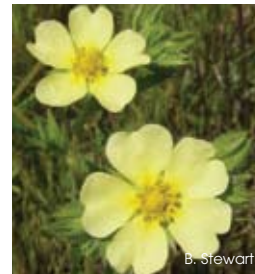
- No biocontrol agents are currently available in BC, as the presence of many closely related species presents challenges for host specificity.

Chemical Control

Herbicide recommendations and use must consider site characteristics and be prescribed based on site goals and objectives. Herbicide labels and other sources of information must be reviewed before selecting and applying herbicides.



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- Selective broadleaf herbicides are most effective when applied in the spring or early summer.
- The following herbicides provide effective control of sulphur cinquefoil: picloram, 2,4-D, combination of picloram/2,4-D, and aminopyralid.
- Application of pesticides on Crown land must be carried out following a confirmed Pest Management Plan (*Integrated Pest Management Act*) and under the supervision of a certified pesticide applicator. www.env.gov.bc.ca/epd/edppa/ipmp/index.html

References and links to further information

- *A Guide to Weeds in British Columbia*. Sulphur cinquefoil. www.weedsbc.ca/weed_desc/sulphur.html
- BC Ministry of Agriculture and Lands. Field Guide to Noxious Weeds and Other Selected Invasive Plants of British Columbia. *Sulphur Cinquefoil*. www.agf.gov.bc.ca/cropprot/weedguid/cinquefo.htm
- BC Ministry of Forests and Range, Invasive Alien Plant Program. <http://www.for.gov.bc.ca/hra/Plants/application.htm>
- E-Flora BC, an Electronic Atlas of the Plants of BC. www.eflora.bc.ca
- Invasive Plants Regulation, *Forests and Range Practices Act* and *BC Weed Control Act*. <http://www.for.gov.bc.ca/tasb/legregs/frpa/frparegs/invplants/jpr.htm>
- <http://www.agf.gov.bc.ca/cropprot/noxious.htm>
- King County. *Best Management Practices. Sulfur cinquefoil - Potentilla recta*. http://dnr.metrokc.gov/wlr/LANDS/Weeds/pdf/sulfur_cinquefoil-control.pdf