



Integrated Weed Management



SULPHUR CINQUEFOIL – Pastures and Rangeland

(Potentilla recta)



Sulphur Cinquefoil

Sulphur cinquefoil, a native of Europe and Asia, is a long lived perennial in the Rose Family now common from low valley grasslands to open forested areas of the southern interior. Sulphur cinquefoil currently infests disturbed sites, idle areas, meadows, pastures and rangelands from the southern Cariboo through the Thompson-Nicola, Okanagan and West and East Kootenay regions of British Columbia. Sulphur cinquefoil is also known from the south coast and Vancouver Island.

Reproduction is primarily by seeds which remain viable for at least 3 years. New shoots, however, develop annually from the outer portion of the main root allowing a plant to live for extended periods as long as 20 years.

Once established in areas with limited competitive vegetation, the spreading root system and seed producing capability of sulphur cinquefoil enables it to become the dominant plant species. It is commonly associated with knapweed infestations and may be increasing at these sites as biological control agents place continuing stress on the knapweeds.

Control

I. Cutting/Mowing/Pulling

Although primarily a seed producer, simply eliminating seed production is not very effective in reducing or eliminating sulphur cinquefoil infestations. Plants are able to perpetuate by vegetative growth and continue to slowly spread. Hand-pulling is effective on small infestations provided the entire root is removed.



Sulphur Yellow Flower



Severe infestation in the North Okanagan

2. Cultural

Sulphur cinquefoil seedlings are not strongly competitive against healthy and competitive domestic or native grasses. Discing and reseeding dense infestations to crested wheatgrass has provided excellent long term control. Maintaining a healthy and competitive forage stand reduces the risk of sulphur cinquefoil invasion.

3. Chemical

Summer applied:

Tordon 22K (picloram) at 1.1 L/ha (0.45 L/acre) provides excellent control for at least a 3 year period. Tordon 22K at 550 mL/ha (222 mL/acre) or 2,4-D amine 500 at rates as low as 2.24 L/ha (0.90L/acre) provides control for a one year period. In studies near Vernon, B.C. a mix of Tordon 22K at 1.1 L/ha (0.45 L/acre) plus 2,4-D amine 500 at 2.24 L/ha (0.9 L/acre) applied at early bud stage provided adequate control over five years.

When using herbicides **READ THE LABEL** before use. **Post herbicide management** of a treated area should include; fertilization; grazing techniques that avoid over-utilization; and annual herbicide maintenance follow-up. This will increase forage growth and competitiveness and aid in preventing re-invasion of sulphur cinquefoil.

4. Biological

Research is underway to determine the potential of controlling sulphur cinquefoil with natural agents such as insects. The close association of this weed with native and ornamental *Potentilla* species and with strawberries may limit this approach.



Palmate Leaf