

# Sulfur cinquefoil

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## Key ID Points

1. Seeds coated with net-like pattern.
2. Light yellow flowers with 5 petals.
3. Long, right-angled hairs on the leafstalks and stems

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## Sulfur cinquefoil Identification and Management



### Identification and Impacts

Sulfur cinquefoil (*Potentilla recta*) is a perennial forb that is native to Eurasia. The flowers are pale yellow with 5 heart-shaped petals and are slightly longer than the 5 enclosing green sepals and 5 small bracts. Sulfur cinquefoil's flowers appear from May to July with peak flowering generally occurring in late June. Each flower produces numerous small seeds that are slightly flattened and 1.3 mm long. The seeds are comma-shaped, brownish-purple in color and covered with a net-like pattern of veins. Seeds remain viable in the soil for at least three years. Leaves are numerous, alternate and compound with 5 to 7 leaflets having toothed edges. Leafstalks have conspicuous perpendicular hairs and leaves appear green on the underside. The erect stems are single to several, with few (or none) slender branches and are 12 to 28 inches in height that grow from well developed rootstock. The plant has a single taproot and may have several shallow, spreading branch roots but no rhizomes.

Sulfur cinquefoil is unpalatable to grazing animals and is avoided for the most part. The low preference is believed to be a result of a high concentration of phenolic tannins (acidity) in the leaves and stems. The plant has a long life span and twenty year old plants are not uncommon.

Habitats for Sulfur cinquefoil include: open grasslands,

shrubby areas, open forest and logged areas, roadsides, clear cuts, waste areas, abandoned fields, and other disturbed sites. This plant is now becoming common in areas such as natural grasslands, shrubby areas, and open canopy forests. Sulfur cinquefoil grows on dry sandy, gravelly, and rocky soils, and prefers climates that receive from 13 to 50 inches of mean annual precipitation.

The key to effective control of Sulfur cinquefoil is an integrated weed management approach. Properly identifying sulfur cinquefoil is imperative, since it resembles the native cinquefoils. Hand pulling or digging when infestations are small and the soil is moist, is effective. What has proven to be the most effective control method for Sulfur cinquefoil, has been the use of selective herbicides. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Sulfur cinquefoil is designated as a "List B" species in the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local infestations. For more information visit [www.colorado.gov/ag/csd](http://www.colorado.gov/ag/csd) and click on the Noxious Weed Management Program. Or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.



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*Potentilla recta*

**CULTURAL**

Increasing the competitiveness of native species can assist in preventing establishment of Sulfur cinquefoil. Contact your local Natural Resources Conservation Service for seed mix recommendations. Bareground is prime habitat for weed invasions.

**BIOLOGICAL**

Biocontrol species have been used in trials, since Sulfur cinquefoil is similar to strawberries though, the insects used are considered pests. For more information, contact the Colorado Department of Agriculture's Insectary in Palisade, Colorado at 970-464-7916.

**MECHANICAL**

Mowing is not effective, as new shoots will replace the cut stems. Hand dig or pull when soil is moist is effective on small infestations. Be sure to dig up as much of the root system as possible, especially since root fragments can produce new plants.

*Integrated Weed Management:*

*Sulfur cinquefoil is a competitive weed that uses its early emergence to establish itself and push out desirable vegetation. It is not a serious problem in cropland because it does not tolerate frequent plowing. Small infestations can be controlled by hand pulling, but larger stands are commonly controlled with herbicide. Management programs for sulfur cinquefoil should focus on improving the competitiveness of other more desirable species, and preventing the spread of this weed.*

**HERBICIDES**

**NOTE:** The following are recommendations for herbicides that can be applied to range and pasturelands. *Rates are approximate and based on equipment with an output of 30 gallons per acre. Always read, understand, and follow the label directions. The herbicide label is the LAW!*

| HERBICIDE   | RATE  | APPLICATION TIMING  |
|---|---|---|
| Picloram (Tordon 22K - *Restricted Use Chemical*) | 1 pint/acre + 0.25-0.5% v/v non-ionic surfactant  | Anytime during growing season summer or to fall regrowth.                                       |
| Aminopyralid (Milestone)                          | 6 fl. oz./acre 0.25-0.5% v/v non-ionic surfactant | Spray prebud growth stage, at very early stages of flower growth. (Late Spring to Early Summer) |

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