



# SLENDER CINQUEFOIL

## *Potentilla gracilis* Douglas ex Hook.

Plant Symbol = POGR9

### Alternative Names

*Common Names:* northwest cinquefoil, graceful cinquefoil, western cinquefoil, prairie cinquefoil, fivefinger cinquefoil, cinquefoil, five-finger, graceful five-finger, northwest fivefinger, slender potentilla

*Scientific Names:* None

### Description

*General:* Slender cinquefoil is a native perennial wildflower that is part of the rose family (Rosaceae). This species grows from a thick rhizome and a branched, woody crown. Rough brown stems extend upwards ranging from 8 to 40 inches in length. Palmate leaves are divided from a single point into 5 to 9 inversely-lance-shaped and sharply toothed leaflets. Underside of leaflets are white with fine silky hairs while the upper leaf surface is green with minimal hairs. Basal leaves may grow up to 12 inches in length. Flower clusters are loose and consist of 3 or more golden yellow flowers with heart-shaped petals about 1/8 to 2/3 inch long. Flowers may range from linear to cup-shaped. Flowering period is June to September. Achene fruits are less than 1/16 inch and light brown to reddish in color. Slender cinquefoil is highly variable with 7 recognized botanical varieties that sometime inter-grade across their range (Lapp et al., 2008).



*Slender cinquefoil.* © G.D. Carr, 2006

*Distribution:* This species is widely distributed throughout North America: from Alaska to Baja California and east through the northern Great Plains to the Great Lakes Basin and Quebec.

For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

*Habitat:* Slender cinquefoil is commonly found in meadows, grasslands, roadsides, subalpine meadows, open forests, moist areas in deserts and arid shrub-steppe regions at elevations up to 11,500 ft.

### Adaptation

This plant is adapted to grow in USDA hardiness zones 3-7 (<https://planthardiness.ars.usda.gov/>) and in precipitation zones ranging from 18-25 inches. Plants grow well in full sun to light shade, moist to somewhat dry soil, and can tolerate moderate saline and calcium carbonate soil conditions.

### Uses

Cinquefoil serves as a pollen source for many beneficial insects such as the syrphid fly and is a host plant for the two-banded checkered skipper, purplish copper, and strawberry grown moths. It is commonly visited by honeybees and non-social bees that nest underground (Ogle et al., 2019). This plant does not provide suitable forage for mammalian wildlife due to its high tannin content.

Slender cinquefoil is an attractive plant for perennial garden borders, wildflower meadows, openings in a woodland or wildlife garden, or around a pond. Aside from the beautiful early-summer golden blooms, plants have attractive seed heads, showy fall foliage that turns shades of pink, orange and yellow, and are generally deer-resistant.

As a native, hardy, perennial, slender cinquefoil is an important component of many meadow and prairie ecosystems and should be considered for restoration projects.

## Ethnobotany

Slender cinquefoil was used by tribes of the Pacific Northwest for various medicinal purposes. The Okanagan-Colville tribe made an infusion of pounded roots as a tonic for the blood, general aches and pains, diarrhea, gonorrhea, and for washing sores. The Thompson tribe used a poultice of mashed leaves and roots on wounds to draw out the pain.

## Status

*Threatened or Endangered:* No

*Wetland Indicator:* Considered a facultative wetland species in California.

*Weedy or Invasive:* This species has little potential to become weedy or invasive. There is, however, a similar looking, related Eurasian species, sulfur cinquefoil (*Potentilla recta*), that is considered a noxious weed in Colorado, Montana, Nevada, Oregon, Washington, and British Columbia. *P. recta* may also hybridize with native potentilla species (Reeves, 2010). Leaves and stems contain high levels of tannins which make it unpalatable for grazing livestock. Sulfur cinquefoil may be distinguished from native cinquefoil species by its light-yellow petals, “long hairs perpendicular to the stem, many stem leaves but few basal leaves”, and “net-like patten on its seed coat” (Reeves, 2010). Additionally, *P. recta* underside leaf color is green whereas the native *P. gracilis* is silvery-white in color (Skinner et al., 2016).

Please consult the PLANTS Web site (<http://plants.usda.gov/>) and your state’s Department of Natural Resources for this plant’s current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

## Planting Guidelines

Seeds exhibit physiological dormancy which requires 60 to 120 days cold-moist stratification or fall sowing to break dormancy, depending on the latitude and elevation of the source population. Seeds should be lightly covered, and usually germinate within one to two weeks after appropriate stratification. Cinquefoil may easily be established as a transplant from container stock in the fall or spring. For pollinator habitat or prairie restoration, seed can be broadcast or drilled at a pure stand seeding rate of about 2 pounds per acre, or 0.1 lb/acre or less as part of a mix, depending on composition. There are approximately 1.2 to 1.7 million seeds per pound and 28 to 62 live seeds per square foot for each pound of pure live seed sown.

## Management

Slender cinquefoil requires little maintenance once established and will generally persist for 3 to 10 years. For seed production fields, seeds are usually started as large plugs in the greenhouse during the winter and planted out in the spring on 12-inch within row spacing and 18- to 24-inch between row spacing. Transplants will flower and produce seed one year after transplanting. Large seed production fields can be direct combined, while plants in small fields are generally swathed and collected to dry under cover on tarps or in bags. Harvested material is threshed with a hammermill, and then cleaned with air screen equipment. Small seed lots and hand-collected material can be rubbed to free seeds from the pod-like dried sepals, and then cleaned with an air column separator.

## Pests and Potential Problems

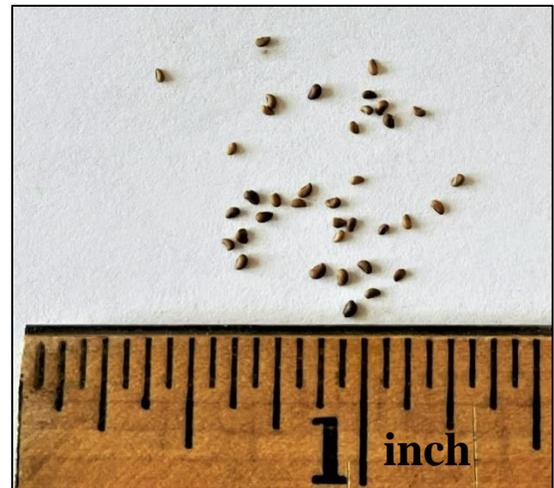
There are no known pests or diseases associated with slender cinquefoil.

## Environmental Concerns

There are no known environmental concerns associated with this species.

## Seeds and Plant Production

Seeds are typically mature by late summer early fall. For seed production fields, seeds are usually started as large plugs in the greenhouse during the winter and planted out in the spring on 12-inch within row spacing and 18- to 24-inch between row spacing. Transplants will flower and produce seed one year after transplanting. Large seed production fields can be direct combined, while plants in small fields are generally swathed and collected to dry under cover on tarps or in bags. Harvested material is threshed with a hammermill, and then cleaned with air screen equipment. Small seed lots and hand-collected material can be rubbed to free seeds from the pod-like dried sepals, and then cleaned with an air column separator.



*Slender cinquefoil seed.* Jessica Wayment, USDA-NRCS, Pullman. WA PMC.

### **Cultivars, Improved, and Selected Materials (and area of origin)**

There are no developed cultivars of slender cinquefoil, but both non-certified and certified source identified seed is widely available from commercial sources. Container plants are also sometimes available from native plant nurseries.

Cultivars should be selected based on the local climate, resistance to local pests, and intended use. Consult with your local land grant university, local extension, or local USDA NRCS office for recommendations on adapted cultivars for use in your area.

### **Literature Cited**

- Lapp, J; Luna, T; Evans, J; Wick, D. (2008). Propagation protocol for production of Container (plug) *Potentilla gracilis* Dougl.ex Hook. plants 160 ml conetainers; USDI NPS - Glacier National Park West Glacier, Montana. Native Plant Network. Retrieved August 8, 2022, from <https://NativePlantNetwork.org>.
- Ogle, D.; Tilley, D.; Cane, J.; St. John, L; Fullen, K.; Stannard, M.; Pavek, P. (2019). Plants for Pollinators in the Inland Northwest. Technical note 2A USDA – Natural Resources Conservation Service Boise, Idaho and Spokane, Washington.
- Reeves, K. (2010). Exotic species: Sulfur cinquefoil (U.S. National Park Service). National Parks Service. Retrieved August 8, 2022, from <https://www.nps.gov/articles/sulfur-cinquefoil.htm>
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- Stark, E. (2016). Pacific Northwest Native Plant Profile: Graceful cinquefoil (*Potentilla gracilis*). Real Gardens Grow Natives. Retrieved August 8, 2022, from <https://realgardensgrownatives.com/?p=2141>

### **Citation**

Wayment, J. Young-Mathews, A. 2022. Plant Guide for Slender Cinquefoil (*Potentilla gracilis*). USDA-Natural Resources Conservation Service, Plant Materials Center. Pullman, WA 99163.

For more information about this and other plants, please contact your local NRCS field office or Conservation District at <http://www.nrcs.usda.gov/> and visit the PLANTS Web site at <http://plants.usda.gov/> or the Plant Materials Program web site: <http://plant-materials.nrcs.usda.gov>.

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