



Wild Parsnip

Pastinaca sativa L. (Aka parsnip)

Alberta Regulation:
Unregulated



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Overview:

Wild parsnip is actually the root vegetable but has escaped cultivation. Native to Europe, wild parsnip has spread throughout much of temperate world.¹ It is a biennial or short-lived monocarpic (seeds once then dies), facultative perennial with a thick yellowish or brownish tap root. While the root is edible, the rest of the plant contains toxic compounds which cause photosensitivity in some individuals. Skin contact with leaves, stems and peeling the roots can result in blistering after exposure to sunlight, sometimes severe.² Wild parsnip is a member of the parsley family as is giant hogweed, another invasive plants which causes skin reactions.¹

Germinating seeds produce strap-like cotyledons about 3 cm long by 4 mm wide and taper to a long petiole. The first true leaves have long petioles, are ovate to broadly heart-shaped, about 1 cm long, and coarsely toothed but not lobed.¹ Seedlings quickly develop a tap root for nutrient storage and a rosette of leaves in the first season of growth.¹ The following year flowering occurs for several weeks in Canada, starting in May,

peaking June/July and may last into the fall. The toxic compounds are present during the plant's entire life cycle. Seeds mature mid-summer but do not fall until late summer.¹

Cultivated parsnip is not sufficiently distinct from wild parsnip to be a separate species. Some sources distinguish between the wild and cultivated forms; however *P. sativa* has been grown since at least the Middle Ages resulting in many cultivars.¹

Wild parsnip infestations can reach quite high densities, resulting competition with other plant species for resources and outshading of lower plants.¹

Habitat:

Wild parsnip will grow in a wide variety of soils, from sandy loam to heavy clay. It does best in rich calcareous and alkaline soils. Although it does tolerate wet soils, it thrives in mesic to dry soils and part to full sun.¹

Identification:

Stems: Grow to 2 m high, are grooved, hollow, with sparse hairs, and often branched at the upper nodes.¹

Leaves: Are alternate, once or twice pinnately compound, and up to 40 cm long. Leaves can be smooth or hairy. Leaves become progressively reduced in size and division up the stems, until reduced to narrow, sessile bracts. Petioles (leaf stems) are grooved and clasp the stem.¹

Flowers: Are borne in a flat-topped umbel 10-20 cm across. The umbels are composed of 6-25 rays with the florets borne at the tips. Florets have 5 petals, the edges entire and rolled back, and yellow (rarely white). Sepals are minute or lacking. Umbels are composed of both perfect and staminate florets in varying proportions. The fruits are dry, flattened and oval and split into two strongly flattened seeds. Seeds are rounded or oval, narrowly winged, 4-8 mm long, and straw to light brown coloured. Seeds bear four oil tubes on the outer surface and 2-4 on the inner surface.¹

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Prevention:

Wild parsnip seed can be transported in contaminated baled forage or bedding. Seeds can also attach to vehicles or be spread via soil movement. If grown as a vegetable, do not permit plants to flower and produce seed.

Control:

Grazing: Contact or ingestion of above ground parts is toxic to livestock causing photodermatitis as described above. Cattle tend to avoid it.¹ Invasive plants should never be considered as forage.

Mechanical: Mowing before flowering can prevent seed production but re-sprouting is likely. Hand-pulling/digging is effective for small infestations but it is necessary to wear long sleeves and gloves to prevent contact with skin. Plant material should be bagged and disposed of in landfill-bound garbage. Never put weeds in the compost.

Chemical: Metsulfuron-methyl/ Aminopyralid, 2,4-D, and Chlorsulfuron/ Aminocyclopyrachlor are registered for use on wild parsnip. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: None researched to date.



Seeds
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Fruit
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Infestation
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Root
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Flowers
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Stem
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REFERENCES

- 1 Datasheet report for *Pastinaca sativa*. Invasive Species Compendium. www.cabi.org/isc. Accessed: December 9, 2015.
- 2 Wild Parsnip (Common Name). Canadian Poisonous Plants Information System. Canadian Biodiversity Information Facility. Government of Canada. www.cbif.gc.ca/eng/species-bank/canadian-poisonous-plants-information-system. Accessed: December 29, 2015.