

# Invasive Plants of Wisconsin



## Wild Parsnip (*Pastinaca sativa*)

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Herbaceous plant that establishes as a rosette with upright leaves persisting for at least one year. Plants flower in subsequent years (typically 2<sup>nd</sup> or 3<sup>rd</sup> year), but after plants flower, they die (monocarpic perennial). Flowering stems are stout, hollow, grooved, and up to 5' tall.

**CAUTION:** Sap contact with skin in the presence of sunlight can cause a rash that often leads to blisters and discoloration of the skin (phytophotodermatitis). Wear gloves, long sleeves, and pants when handling.

**Legal Classification in WI:** Restricted. The garden parsnip vegetable is the same species as the invasive form. The garden form is not restricted in Wisconsin.

**Leaves:** Rosette leaves are pinnately compound with 5-15 broad, ovate to oblong leaflets. Stem leaves are alternate, with 2-5 pairs of opposite, sharply-toothed leaflets. Petioles wrap around the stem. Upper stem leaves are reduced to narrow bracts.

**Flowers:** Late spring to midsummer. Numerous, small, 5-petaled, yellow flowers in flat umbels 2-6" wide at the tops of stems and branches.

**Fruits & seeds:** Seeds are approximately 0.25" in diameter, flat, round, yellowish, and slightly ribbed. Seeds remain viable in the soil for 4 years.

**Roots:** Deep taproot.

**Similar species:** Wild parsnip is distinguished from other species in the parsley family by its yellow flowers and pinnately compound leaves which are divided once into more than 5 leaflets. Golden alexander (*Zizia aurea*; native) can be distinguished from parsnip by its earlier flowering timing, shorter stature, less open appearance, and only 2-3 pairs of leaflets compared to parsnip. Prairie parsley (*Polytaenia nuttallii*; native) can be distinguished from parsnip by its oblong leaflets with few teeth and rounded umbels.

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**Ecological threat:**

- Invades prairies, oak savannas, fens, old fields, pastures, and roadsides.
- Thrives in disturbed habitats and along edges of many habitat types.
- Can invade undisturbed grasslands.
- Seeds are readily transported by water.

**CONTROL METHODS:**

**Non-Chemical control**

**Removal** – Cutting the root from the stem or hand removal is an effective individual plant control technique. Cut the entire tap root with a sharp shovel or spade 1-2" below the surface. Pull if soil conditions allow for the removal of the tap root. If flowers are present, bag material and dispose of in a landfill to avoid potential for seed spread.

**Mowing** – Mowing, timed just after the emergence of flower heads, but before seeds enlarge can be effective. Plants may re-sprout and still flower, but rarely do plants produce viable seed. Monitor populations and repeat mowing if concerned about seed production from re-sprouting plants flower. Care must be taken not to mow when mature seeds could be present as this will spread the seed throughout the site. There may be a flush of parsnip after the first mowing as vegetative parsnip is stimulated to bolt, but after 5 years of mowing the population will be reduced.

**Prescribed burning** – Spring burns can kill germinating seedlings and can suppress above ground growth of established plant depending on fire intensity. After the fire, established plants will quickly re-sprout and reinvade areas; this management method is not recommended unless integrated with other techniques. Fire may benefit other species well adapted to this management (e.g. prairie grasses), resulting in improved competition with parsnip. Burns also allow for increased visibility of rosettes for follow-up treatment as they are often one of the first plants to green up after a burn. A hand-held propane torch can be effective for treating seedlings.

**Grazing** – Readily grazed by a variety of animals, especially during mid-season. While effective, if parsnip constitutes too great a percentage of the animals' diet they can also develop phytophotodermatitis . If grazing animals on parsnip, ensure that other forages are included in sufficient amounts to prevent injury.

**Manipulation of the environment** – Establishment and maintenance of vigorous species (e.g. *Solidago*) may effectively compete with established populations as well as reduce the establishment of parsnip at a site.

**Chemical control<sup>2</sup>**

<p><b>Foliar</b> – Apply directly to individual plants or broadcast across an infested area. Broadcasted foliar applications are typically the most cost effective treatment in dense infestations. Use lower rates in the fall as plants are more susceptible at this timing. Spring applications require higher rates, but if applied after seedlings emerge, they will control both seedlings and adult plants. Use lower rates on smaller plants and less dense populations, use higher rates on larger plants and denser populations.</p>	
<p>Active Ingredient (A.I.): 2,4-D Common product name: Many</p>	<p><b>Rate</b> – <i>broadcast</i>: 0.95-1.9 lb a.e./A <i>spot</i>: 1% (0.038 lb a.e./gal)</p> <p><b>Timing</b> – Apply to rosettes in fall or spring, bolting, or flowering plants.</p> <p><b>Caution</b> - Overspray or drift to desirable plants should be avoided, as even minute quantities of the spray may cause severe injury.</p>
<p>Active Ingredient (A.I.): dicamba + 2,4-D Common product name: Outlaw</p>	<p><b>Rate</b> – <i>broadcast</i>: 16-32 fl oz/A (dicamba: 0.14-0.27 lb a.e./A + 2,4-D: 0.18-0.36 lb a.e./A) <i>spot</i>: 0.8% (dicamba: 0.009 lb a.e./gal + 2,4-D: 0.011 lb a.e./gal)</p> <p><b>Timing</b> – Apply to rosettes in fall or spring, bolting, or flowering plants.</p> <p><b>Caution</b> – Rates of dicamba &gt; 16oz/A (0.5 lb a.e./A) may cause stunting and discoloration of sensitive grasses, such as smooth brome. Overspray or drift to desirable plants should be avoided, as even minute quantities of the spray may cause severe injury.</p>
<p>Active Ingredient (A.I.): glyphosate Common product name: Roundup</p>	<p><b>Rate</b> – <i>broadcast</i>: 0.5-1.0 lb a.e./A <i>spot</i>: 1-2 % (0.045-0.09 lb a.e./gal)</p> <p><b>Timing</b> – Apply to rosettes in fall or spring, bolting, or flowering plants.</p> <p><b>Caution</b> – Applications can result in bare ground as glyphosate is not selective. Use aquatically labeled product if potential exists for solution to contact open waters.</p>
<p>Active Ingredient (A.I.): metsulfuron Common product name: Escort</p>	<p><b>Rate</b> – <i>broadcast</i>: 0.3-1.0 oz/A (0.18-0.6 oz a.i./A) <i>spot</i>: 1oz/100 gallons (0.6 oz a.i./100 gal)</p> <p><b>Timing</b> – Apply to rosettes in fall or spring, bolting, or flowering plants.</p>

<sup>2</sup> Herbicide information is based on label rates and reports by researchers and land managers. Products known to provide effective control or in common use are included. Those that do not provide sufficient control or lack information for effectiveness on target species have been omitted. References to pesticide products in this publication are for your convenience and not an endorsement of one product over a similar product. You are responsible for using pesticides in accordance with the label directions. *Read the label before any application.*

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