

This WEED REPORT does not constitute a formal recommendation. When using herbicides always read the label, and when in doubt consult your farm advisor or county agent.

This WEED REPORT is an excerpt from the book *Weed Control in Natural Areas in the Western United States* and is available wholesale through the UC Weed Research & Information Center ([wric.ucdavis.edu](http://wric.ucdavis.edu)) or retail through the Western Society of Weed Science ([wsweedscience.org](http://wsweedscience.org)) or the California Invasive Species Council ([cal-ipc.org](http://cal-ipc.org)).

*Daucus carota* L.

## Wild carrot

**Family:** Apiaceae

**Range:** All contiguous states, including every western state.

**Habitat:** Disturbed places such as roadsides, fields, pastures, orchards, and in vegetable crops. Usually grows in sandy, gravelly, or moist soils. Grows best in open areas that are not shaded.

**Origin:** Native to Eurasia and North Africa.

**Impact:** Wild carrot competes with native grassland species for resources and can result in a change in the plant community. Growing near fields of cultivated carrots, it can impact seed production because of the potential for outcrossing and hybridization, which decreases the value of the crop. Although its foliage is nutritionally similar to legumes, wild carrot makes poor rangeland feed for cattle and horses due to a slight toxicity in the foliage.

**States listed as Noxious Weed:** Washington



Wild carrot is most often a biennial but can also be an annual or a short-lived perennial. It is an erect herb, 1 to 4 ft tall, with branched hollow stems that are ridged and covered with bristly hairs. Rosette and stem leaves are alternate. The pinnately compound leaves are 1.5 to 5 inches long and finely dissected three to four times. The ultimate segments are linear to lanceolate and nearly glabrous or bristly-hairy. The broken foliage and root have a carrot scent. The yellowish white taproot can be long and thick, with fibrous lateral roots.

The compound umbels are 2 to 4 inches in diameter and convex to flat when in flower, becoming concave at seed maturity. The umbel contains numerous small white flowers, but the central flower of the umbel is sometimes dark red to purplish. Flowers have five petals, tipped with two unequal lobes. The bracts are finely pinnate-dissected with segments that are elongate to linear to threadlike. The fruit is an inferior two-lobed ovary, 3 to 4 mm long with five bristly, longitudinal ribs and four winged ribs lined with barb-tipped bristles. The fruit is schizocarp, separating into two mericarps, and the bristles attach well to animal fur for dispersal. Some seeds survive ingestion by pigeons, pheasants, and possibly other animals. Seeds survive several years under field conditions. Seeds submersed in water can survive up to 2 years. Buried seed can survive up to 20 years.

### NON-CHEMICAL CONTROL

<b>Mechanical</b> (pulling, cutting, disking)	Pulling and mowing can be effective if done in the first year of the infestation before the plants have gone to seed and when the plants are 7 to 10 inches tall. Tilling for 2 or more years can decrease the infestation of wild carrot by depleting the seed bank.
<b>Cultural</b>	Wild carrot thrives in disturbed habitats. The establishment and maintenance of plant communities can reduce the numbers of wild carrot through competition.
<b>Biological</b>	Since wild carrot and cultivated carrots are the same species, traditional biocontrol is not an option.

### CHEMICAL CONTROL

The following specific use information is based on published papers and reports by researchers and land managers. Other trade names may be available, and other compounds also are labeled for this weed. Directions for use may vary between brands; see label before use. Herbicides are listed by mode of action and then alphabetically. The order of herbicide listing is not reflective of the order of efficacy or preference.

<b>GROWTH REGULATORS</b>	
2,4-D Several names	<p><b>Rate:</b> 2 to 4 pt product/acre (0.95 to 1.9 lb a.e./acre)</p> <p><b>Timing:</b> Postemergence when target plants are in the seedling to rosette stage.</p> <p><b>Remarks:</b> 2,4-D is a broadleaf-selective herbicide. It has no soil activity and is often combined with other active ingredients, e.g., dicamba. When using the ester formulation do not apply when outside temperatures exceed 80°F. Aquatic registered formulations are available for use close to water.</p>
Aminocyclopyrachlor + chlorsulfuron <i>Perspective</i>	<p><b>Rate:</b> 4.75 to 8 oz product/acre</p> <p><b>Timing:</b> Postemergence when target plants are in the seedling to rosette stage.</p> <p><b>Remarks:</b> <i>Perspective</i> provides broad-spectrum control of many broadleaf species. Although generally safe to grasses, it may suppress or injure certain annual and perennial grass species. Do not treat in the root zone of desirable trees and shrubs. Do not apply more than 11 oz product/acre per year. At this high rate, cool-season grasses will be damaged, including bluebunch wheatgrass. Not yet labeled for grazing lands. Add an adjuvant to the spray solution. This product is not approved for use in California and some counties of Colorado (San Luis Valley).</p>
Aminopyralid + metsulfuron <i>Opensight</i>	<p><b>Rate:</b> 2.5 to 3.3 oz product/acre</p> <p><b>Timing:</b> Preemergence at 3.3 oz in fall, or postemergence when target plants are in the seedling to rosette stage.</p> <p><b>Remarks:</b> Not registered for use in California.</p>
Dicamba <i>Banvel, Clarity</i>	<p><b>Rate:</b> 0.5 to 2 qt product/acre (0.5 to 2 lb a.e./acre)</p> <p><b>Timing:</b> Postemergence when target plants are in the seedling to rosette stage.</p> <p><b>Remarks:</b> Dicamba is a broadleaf-selective herbicide often combined with other active ingredients. It may injure grasses at higher rates. Do not apply when outside temperatures exceed 80°F. Dicamba is available mixed with diflufenzopyr in a formulation called <i>Overdrive</i>. This has been reported to be effective on wild carrot. Diflufenzopyr is an auxin transport inhibitor which causes dicamba to accumulate in shoot and root meristems, increasing its activity. <i>Overdrive</i> is applied postemergence at 4 to 8 oz product/acre. Higher rates should be used on biennials, such as wild carrot. Add a non-ionic surfactant to the treatment solution at 0.25% v/v or a methylated seed oil at 1% v/v solution.</p>
Fluroxypyr <i>Vista XRT</i>	<p><b>Rate:</b> 22 oz product/acre (7.7 oz a.e./acre)</p> <p><b>Timing:</b> Postemergence when target plants are growing rapidly. The use of a seed oil at 0.25 to 0.5% can optimize weed control.</p> <p><b>Remarks:</b> Reduced control occurs if the plants are under stressed growth conditions.</p>
Picloram + 2,4-D <i>Tordon 101M</i>	<p><b>Rate:</b> For early season application: 1 to 2 pt product/acre; for late season application: 3 to 4 pt product/acre</p> <p><b>Timing:</b> Postemergence from early- to mid- spring when the target plants are less than 3 inches in height. Late season postemergence applications should be made in late-spring to early-summer when the target plants are 3 inches in height to early flowering.</p> <p><b>Remarks:</b> Most broadleaf plants are susceptible, but it is relatively safe on established grasses. Use a non-ionic surfactant at 0.25% v/v. Picloram has a long residual activity and some potential to leach. Some reports indicate that it can injure young or germinating grasses. Do not apply near trees, or where soil is highly permeable and where water table is high. Picloram can also be used in a tank mix with fluroxypyr (<i>Surmount</i>). Picloram is a restricted use herbicide. Picloram and its formulations are not registered for use in California.</p>
Triclopyr <i>Garlon 4 Ultra</i>	<p><b>Rate:</b> 0.75 to 5 qt product (<i>Garlon 4 Ultra</i>)/acre (0.75 to 5 lb a.e./acre)</p> <p><b>Timing:</b> Postemergence when target plants are growing rapidly.</p> <p><b>Remarks:</b> Triclopyr is a broadleaf-selective herbicide that has no soil activity. <i>Garlon 4 Ultra</i> is formulated as a low volatile ester. However, in warm temperatures, spraying onto hard surfaces such as rocks or pavement can increase the risk of volatilization and off-target damage.</p>
<b>BRANCHED-CHAIN AMINO ACID INHIBITORS</b>	
Chlorsulfuron	<p><b>Rate:</b> 1 to 2.6 oz product/acre (0.75 to 1.95 oz a.i./acre)</p>

<i>Telar</i>	<p><b>Timing:</b> Early postemergence to rapidly growing plants.</p> <p><b>Remarks:</b> Using a non-ionic surfactant increases the effectiveness of chlorsulfuron. Apply only to pasture, range, CRP, and non-crop sites. Do not apply more than 1.33 oz product/acre per year to pasture or rangeland.</p>
Imazapic <i>Plateau</i>	<p><b>Rate:</b> 8 to 12 oz product/acre (2 to 3 oz a.e./acre)</p> <p><b>Timing:</b> Preemergence, or postemergence when the target plants are germinating and actively growing.</p> <p><b>Remarks:</b> Imazapic has mixed selectivity and tends to favor members of the Asteraceae and some grasses. It has long soil residual activity. In postemergence applications, use a methylated seed oil surfactant at 0.25%. Imazapic is not registered for use in California.</p>
Imazapyr <i>Arsenal AC, Habitat, Stalker, Chopper, Polaris</i>	<p><b>Rate:</b> 2 to 3 pt product (<i>Arsenal AC</i>)/acre (1 to 1.5 lb a.e./acre)</p> <p><b>Timing:</b> Preemergence, or postemergence when the target plants are germinating and actively growing.</p> <p><b>Remarks:</b> Imazapyr is a nonselective herbicide. It has long soil residual activity and leaves more bare ground than other treatments, even a year after application.</p>
Metsulfuron <i>Escort</i>	<p><b>Rate:</b> 0.33 to 0.5 oz product/acre (0.2 to 0.3 oz a.i./acre)</p> <p><b>Timing:</b> Early postemergence to rapidly growing plants.</p> <p><b>Remarks:</b> Metsulfuron is primarily a broadleaf herbicide. The use of a non-ionic surfactant will increase the effectiveness of metsulfuron. Do not apply when the plants are under stressed growing conditions. Metsulfuron can also be used in premixes with 2,4-D + dicamba (<i>Cimarron Max</i>, 0.25 oz + 1 pt/acre) or aminopyralid (<i>Chaparral</i>, 2 to 2.5 oz product/acre). Metsulfuron and its formulations are not registered for use in California.</p>
Sulfometuron <i>Oust</i> and others	<p><b>Rate:</b> 2.67 to 3 oz product/acre (2 to 2.25 oz a.i./acre)</p> <p><b>Timing:</b> Preemergence, or early postemergence when the target plants are germinating and actively growing.</p> <p><b>Remarks:</b> Add a surfactant at 0.25% v/v for improved control. Sulfometuron has a relatively long soil residual activity and is susceptible to off-site movement in windblown light soils.</p>

**RECOMMENDED CITATION:** DiTomaso, J.M., G.B. Kyser et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center, University of California. 544 pp.