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Wild Carrot

Daucus carota L.

J. Colquhoun, J.P. Fitzsimmons, and L.C. Burrill

Wild carrot (*Daucus carota*), also known as Queen Anne's lace, was introduced from Europe and is the genetic source of edible carrots. It is a problem in perennial cropping systems such as grass seed production, pasture and hay fields, and Christmas tree production. It is an especially serious threat where cultivated carrot seed is produced because it hybridizes with the crop and ruins crop seed. Wild carrot is the predominant weed in many undisturbed habitats.

Wild carrot is widely distributed in North America, Europe, and Asia. It is abundant west of the Cascades in Oregon and Washington and is well established locally on the east side of the mountains. Wild carrot is a Class B noxious weed in Washington, and the transport or sale of wild carrot seed in packets, flower seed blends, or wildflower mixes is prohibited. Counties in the Columbia Basin where carrot seed is grown require control of wild carrot.

There is no record of wild carrot toxicity in this country, but there are reports from Europe that wild carrot can be mildly toxic to horses, cattle, and pigs. Animals usually avoid grazing it, but a high concentration of wild carrot in hay is a potential problem because livestock eat hay less selectively than green forage. Ingestion of large quantities can irritate the digestive tract. Sheep seem to graze wild carrot without any harmful effect.

Figure 1.—Mature wild carrot plant.

Identification

Wild carrot forms a rosette of leaves the first year, then flowers, produces seed, and dies the second year. Wild carrot also is known as Queen Anne's lace because the finely cut, lacy leaves often were used in fashionable headdresses and bouquets during the 17th, 18th, and 19th centuries.

Wild carrot forms a deep, whitish taproot that has a distinctive carrot odor. Mature plants reach 2 to 4 feet high and have erect stems and few branches (Figure 1). Stiff hairs

Figure 2.—Note the curved bracts at the base of the flower, which are unique to wild carrot.

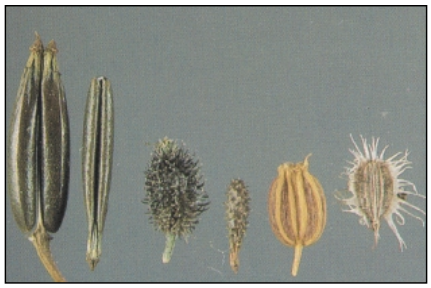

Figure 3.—From left, seeds of wild chervil (joined and single), hedgeparsley, bur chervil, poison hemlock, and wild carrot.

Figure 4.—Wild carrot seedling.

Revised by Jed Colquhoun, Extension weed specialist. Originally prepared by Jim P. Fitzsimmons, former graduate student in crop and soil science, and Larry C. Burrill, Extension weed specialist emeritus; Oregon State University.

cover the entire plant. Leaves divide several times, forming many long, narrow segments. Leaves on the lower part of the plant have stalks. Those on the upper part of the plant are attached directly to the stem.

White flowers are clustered at the end of the stem in flat, umbrellalike structures (umbels) 2 to 4 inches in diameter. One to several flowers in the center of the umbel often are purple-tinged. Umbels are surrounded at the base by long, forked modified leaf structures or bracts (Figure 2). Other plants that might be confused with wild carrot lack these conspicuous bracts.

Flowering occurs from July to September. When the seeds ripen, the umbels contract into the shape of a hollow cup or nest. Seeds are 0.12 to 0.17 inch long with one distinctly flat side and one rounded side that is ridged with bristles (Figure 3). Seeds may remain on the plant after it dies, falling gradually throughout the winter as weathering occurs.

Ecology

Wild carrot often is found in gravelly or sandy soils and in wet areas. It is most prolific in areas with 32 to 40 inches of annual precipitation or irrigation and at least 120 consecutive frost-free days. Vigor and seed production decrease with increased shading; a severely shaded wild carrot will act as a short-lived perennial. Often, the second cutting of a hay field is mostly wild carrot because competition for light from the crop is reduced after the first cutting.

Wild carrot emergence is continuous and evenly distributed throughout the wet season in the Pacific Northwest. In the winters of 2000–2001 and 2001–2002, wild carrot emergence was monitored at 12 sites in the Willamette Valley of Oregon. Emergence was variable within a given period, but it can occur any time from October through March.

Control

Cultural

As with all weeds, prevention of wild carrot seed dissemination in cultivated fields will help avoid costly and troublesome weed infestations. Therefore, control of wild carrot in noncropland roadside ditches and field edges is critical to the maintenance of a weed-free crop. Grazing is relatively ineffective because the central stalk is grazed first, allowing woody, less palatable secondary stalks to develop and produce viable seed.

Mechanical

Wild carrot often is found in waste areas, old pastures, and meadows. Plowing these areas and planting to a cultivated crop for 2 years decreases the infestation. Frequent cultivation in these crops promotes seed germination and destroys the seedlings before plants can flower and produce seed. This process helps deplete the supply of seeds in the soil. Another approach is to mow after stems elongate but before flowering.

Chemical

Chemical control is more effective when herbicides are applied to plants in the seedling stage (Figure 4). As plants mature, herbicides are ineffective, or more chemical is required to kill the plants. Yearly applications are necessary to control the young seedlings that arise from the soil seed bank.

Herbicide registrations change frequently; therefore, this publication does not contain specific herbicide use instructions. Registered uses are summarized each year in the *Pacific Northwest Weed Management Handbook*.

In addition, detailed instructions for herbicide use are provided on herbicide container labels and in other literature provided by herbicide manufacturers.

Use pesticides safely!

- **Wear** protective clothing and safety devices as recommended on the label. **Bathe or shower** after each use.
- **Read** the pesticide label—even if you've used the pesticide before. **Follow closely** the instructions on the label (and any other directions you have).
- **Be cautious** when you apply pesticides. **Know** your legal responsibility as a pesticide applicator. You may be liable for injury or damage resulting from pesticide use.

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