Poison Hemlock

Western Invasive Plant Fact Sheet #7

Conium maculatum

Figure 1

Figure 2

Figure 3

Figure 4

Scan or Click for more management information

Quick Facts: Poison hemlock (*Conium maculatum*) is a tall biennial forb in the carrot family that is native to Eurasia. It has clusters of small white flowers and is often mistaken for wild carrot (*Daucus carota*) and other edible members of the carrot family, making accurate identification especially important. All parts of the plant are highly toxic to humans and livestock. The plant contains alkaloids that can cause respiratory failure and death if ingested. Its sap can also cause adverse effects through skin contact. Plant material can contaminate hay and forage, posing serious health risks and economic impacts in agricultural systems. Poison hemlock readily establishes in disturbed areas such as roadsides, ditches, pastures, and riparian zones, and is especially prevalent in moist areas with full sunlight. It can form dense stands that compete with native plants for resources and reduce biodiversity.

Invasion Strategy: Poison hemlock spreads by seed, with a single plant producing up to 40,000 seeds. Most seeds fall near the parent plant, creating dense, clumped populations. They can also be dispersed by water, animals, and human activity. Seeds disperse over an extended period from mid-summer through winter, and may germinate immediately or persist in the soil seed bank for several years. Together, these traits allow poison hemlock to establish quickly and reappear over multiple seasons, making control difficult.

Identifying Features:

- **Growth form:** First-year plants form a basal rosette of leaves with a taproot. In their second year, plants produce tall, upright, branching stems that can reach up to 12 feet in height.
- **Flowers:** Small white flowers arranged in umbrella-shaped clusters (4–8 inches across).
- **Leaves:** Bright green, finely divided, fern-like leaves with toothed edges and a strong, unpleasant odor when crushed.
- **Stems:** Smooth, hollow, and hairless with distinctive purple blotches or streaking.

Poison Hemlock *Conium maculatum*

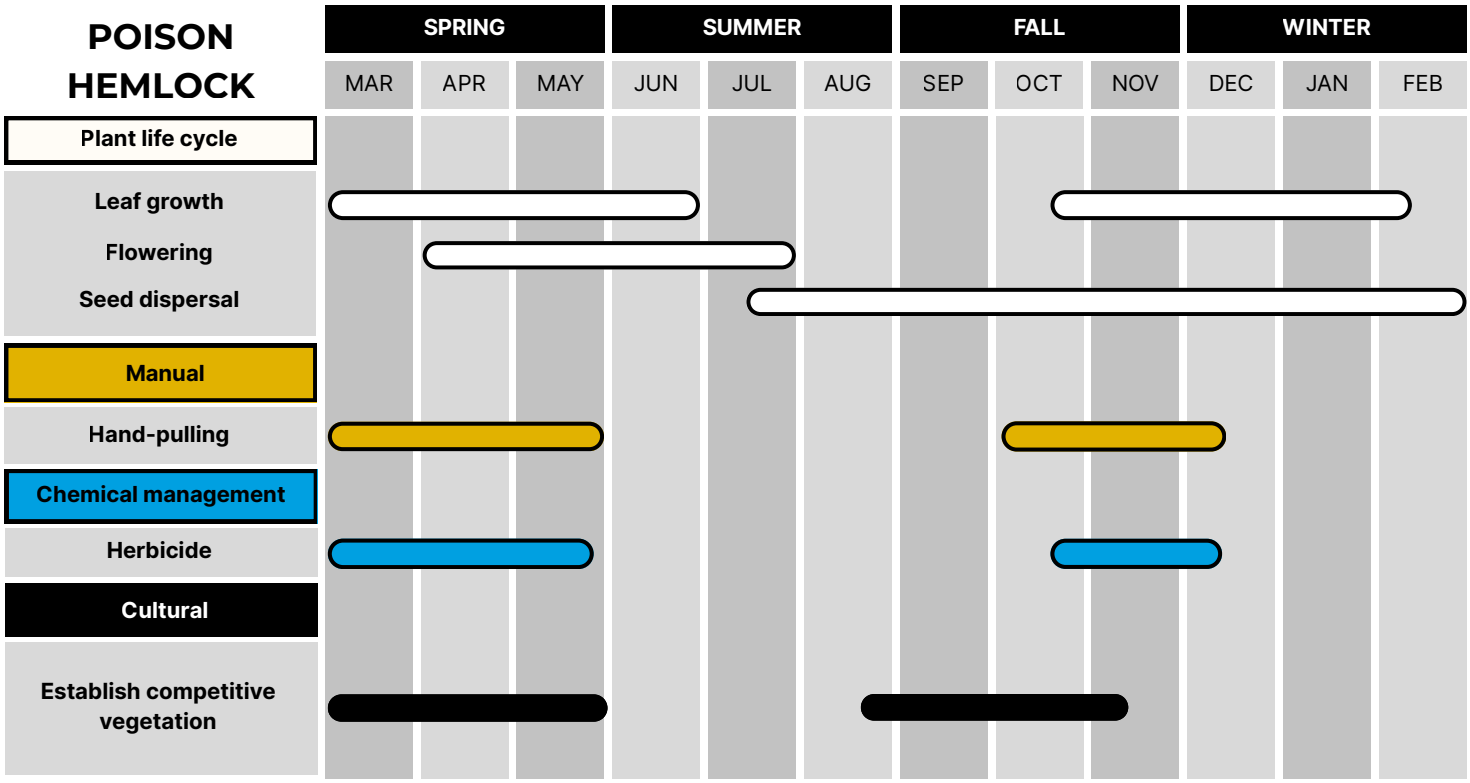
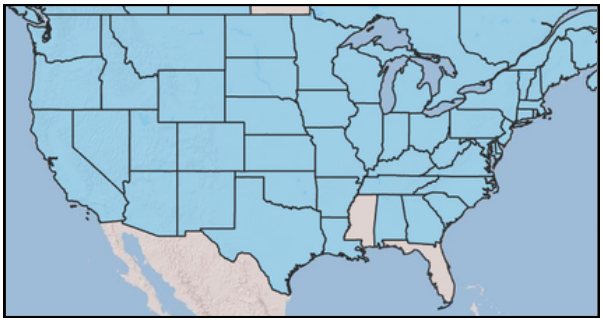


Table 1. This chart is based on USDA plant hardiness zone 7. Plant growth and treatment times vary by region.

Management Methods:
All plant parts are toxic even when dried. Proper protective equipment should be used for all control methods, and care should be taken to safely remove and discard plant material. Mowing is not recommended as it can aerosolize the plant's toxins and leave fragments of toxic plant material.
Manual - Hand-pulling or digging can be effective for small infestations. Removal of the entire root system is necessary to prevent re-sprouting.
Chemical - Foliar spray herbicides are most effective when applied in spring to basal rosettes of leaves before stem growth occurs.
Cultural - Maintaining dense, competitive vegetation can reduce establishment by limiting available light and open ground.
Disclaimer - Selecting the best management method for this plant can be site- and context-specific. Check with your local USDA Service Center or University Extension agent to explore your options and determine what is most appropriate for your location and situation.

Management Information: Dispose of cut plant materials where they cannot resprout. If seeds are present, bag them and dispose of them in a landfill. Equipment should be cleaned after management. Personal protective equipment is recommended when removing any invasive species, and especially when using herbicides. Always follow label instructions when using herbicide!



Species present Absent

USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

This material is based upon work supported by the National Fish and Wildlife Foundation (NFWF) and U.S. Department of Agriculture (USDA), under agreement number 2007.25.085350. The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government or NFWF and its funding sources. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government, or NFWF or its funding sources. USDA is an equal opportunity provider and employer.

POLLINATOR PARTNERSHIP
Protect their lives. Preserve ours.

Poison Hemlock *Conium maculatum*

Look-alike species: Poison hemlock resembles other species in the carrot family, particularly wild carrot, also known as Queen Ann's Lace, and cow parsnip. Both species are toxic and may cause skin irritation on contact. Correct identification is crucial as management approaches differ by species.

Wild carrot *(Daucus carota)* is also known as Queen Anne's Lace. It is an invasive, biennial plant from the carrot family that is visually similar to poison hemlock (Figure 5). Distinguishing features of wild carrot include:

- Flower heads are smaller in diameter (2–4 inches) than poison hemlock, sometimes with a central flower that is dark red or purple.
- Leaves are hairy
- Mature flower heads are convex when dried out at maturity (Figure 6)
- Lack of purple blotches on the stems

Figure 5

Figure 6

Cow parsnip (*Heracleum maximum*) is a perennial plant native to North America that can resemble poison hemlock (Figure 7). Features to distinguish it include:

- Very large, broad leaves, up to 20 in. wide
- Leaves are divided into 3 large, coarsely-toothed lobes
- Stems have hairs
- Stems are green and lack the purple spotting characteristic of poison hemlock

Figure 7

References and Additional Reading:

- Oregon Flora Project *Conium* [Identification, geographic range]
- Oregon State University Solve Pest Problems guide Poison Hemlock [Identification, management]
- Pacific Northwest Pest Management Handbooks Hemlock, poison [Chemical management]
- Washington Noxious Weed Control Board Poison Hemlock [Best management practices, additional references]

Photo Credits:

- Figure 1: iNaturalist, hollie59
- Figures 2–4: iNaturalist, alleyseidler
- Figure 5: iNaturalist, cephalosaurus
- Figure 6: iNaturalist, fernsibley
- Figure 7: iNaturalist, msciamanda
- Range map: USDA PLANTS Database

USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

This material is based upon work supported by the National Fish and Wildlife Foundation (NFWF) and U.S. Department of Agriculture (USDA), under agreement number 2007.25.085350. The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government or NFWF and its funding sources. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government, or NFWF or its funding sources. USDA is an equal opportunity provider and employer.

POLLINATOR PARTNERSHIP
Protect their lives. Preserve ours.