

Poison Hemlock in Illinois

Poison hemlock (*Conium maculatum*) is an invasive plant in the carrot family (*Apiaceae*). Poison hemlock is a biennial plant, meaning that it has a two-year life cycle with first-year plants being low-growing, non-flowering rosettes; all leaves emerge from the ground and no central stem is present. Second year plants forming an upright flowering stem. Biennial plants die after setting seed.

Poison hemlock is widespread in Illinois, being reported from at least 78 counties. It prefers sites with full sun and is commonly found in roadsides, railroad rights-of-way, utility corridors, ditches, old fields, pastures, and other open, disturbed areas. Populations in Illinois seem to be increasing, as indicated by observations and public reports.

Poison hemlock is regulated through the [Illinois Exotic Weed Act](#) (525 ILCS 10), and sale, purchase, or transport of poison hemlock is prohibited in Illinois. It can form very dense patches, particularly in areas with some soil disturbance. It is a concern in Illinois because of the serious health risks involved with contact with plants.



Health Risks

All parts of poison hemlock are highly poisonous and ingesting even a small amount can be fatal. Poisoning may also occur via inhalation of smoke when poison hemlock plants are burned or when sap comes into contact with cuts or abrasions on skin. Contact dermatitis is a possibility as well, resulting in rashes and burns, though this is typically more severe with other carrot species, such as wild parsnip or giant hogweed. Recently some extreme cases of rashes from poison hemlock contact have been reported in Illinois. Poison hemlock is also highly poisonous to livestock.

What to Do if you Have Been Exposed to Poison Hemlock

If you think you may have been exposed to poison hemlock, particularly through ingestion or inhalation, call 911 or the Illinois Poison Center Helpline at (1-800-222-1222) or seek medical assistance.

Reporting

Since poison hemlock is widespread throughout Illinois, direct notification of infestations via phone calls or email is not required. Still, passive reporting of infestations through websites or smartphone apps such as those available on www.eddmaps.org can help track poison hemlock throughout the state.





Identification

First-year plants of poison hemlock are large rosettes. Second-year plants form tall flowering stalks, reaching heights of 4 to 10 feet. Leaves are compound and finely dissected and fern-like in appearance. Leaves are generally triangular in shape. The leaves from the base are typically larger than the leaves arising from the flowering stem. The flowering stem is smooth with no hairs or bristles. Stems are thick, green, and typically blotched with purple colors. A waxy coating covers the stem.

Small, creamy white flowers occur in small clusters that are 2 to 5 inches in diameter with loose flat tops. Usually many flowers clusters occur on a single plant. Flowering occurs in early summer. After flowering and seed formation, poison hemlock plants will slowly turn brown and die back.

Several look-a-like plants can be found in the same habitats. Water hemlock, a native species that is also highly poisonous, has leaves that are not as dissected. Queen Anne's lace, or wild carrot, is a common species found in similar areas but is generally much smaller, lacks the waxy coating, and only has a few flowering clusters per plant. Elderberry bushes have flower clusters that are similar looking at a distance and can grow in the same general area, but elderberry has woody stems.

Management

Since poison hemlock is a biennial plant and populations persist through seed development, any control efforts should be made before seed set in mid-summer and, ideally, before flowering.

Manual Control Options

Cutting or mowing can delay flowering, but is not considered an effective treatment for killing poison hemlock. Weed whipping or mowing from an open-cab tractor or mower is not recommended due to potential exposure. Hand removal should be done with care and proper protective clothing, including gloves, a long-sleeved shirt, and pants. The taproot should be removed to prevent regrowth. Cutting the taproot 1 to 2 inches below the surface with a spade or shovel is an effective strategy at removing the taproot. Hand-removed plants should not be burned or added to mulch or compost piles intended for use in areas where additional exposure is likely, as it takes several years for the toxins to dissipate, even in dried plants parts. Repeated tillage/cultivation can control infestations and prevent seedling establishment.



Chemical Control Options

Always read and follow product label directions when using herbicides and wear personal protective equipment specified on the label. Any mention of trade names of products is not an endorsement of one product over another product. Treatments are generally most effective when applied at the rosette or bolting stage of growth and less effective at or after flowering.

Chemical Control Options for Poison Hemlock	
Herbicide	Spot and Broadcast Treatment Application Rates
2,4-D*	(broadcast) 1 lb a.e./A (spot) For a 3.8 lb a.e./gal product. 0.5 - 0.8% (0.02 - 0.03 lb a.e./gal)
Chlorsulfuron	(broadcast) 1.5 - 2.5 oz/A (1.1 - 1.9 oz a.i./A) (spot) 0.04 oz/gal (0.03 oz a.i./gal)
Clopyralid#	(broadcast) 8 - 21 fl oz/A (0.2 - 0.5 lb a.e./A) (spot) 0.2 - 0.4% (0.005 - 0.01 lb a.e./gal)
Dicamba + 2,4-D	(broadcast) 16 - 28 fl oz/A (dicamba: 0.1 - 0.2 lb a.e./A + 2,4-D: 0.2-0.3 lb a.e./gal) (spot) 0.8% (dicamba: 0.01 lb a.e./gal + 2,4-D: 0.01 lb a.e./gal)
Glyphosate*	(broadcast) 1 - 2.25 lb a.e./A (spot) For a 3 lb a.e./gal product. 1 - 2% (0.03 - 0.06 lb a.e./gal)
Imazapic#	(broadcast) 8 - 10 fl oz/A (0.13 - 0.16 lb a.e./A) (spot) 0.50 - 1.5% (0.01 - 0.03 lb a.e./gal)
Imazapyr*#	(broadcast) 32 - 48 fl oz/A (0.5 - 0.75 lb a.e./A) (spot) 0.5 - 2% (0.01 - 0.04 lb a.e./gal)
Metsulfuron	(broadcast) 1 - 2 oz/A (0.6 - 1.2 oz a.i./A) (spot) 0.04 oz/gal (0.02 oz a.i./gal)
Picloram + 2,4-D#	(broadcast) 32 - 48 fl oz/A (picloram: 0.14 - 0.2 lb a.e./A + 2,4-D: 0.5 - 0.75 lb a.e./A) (spot) Equivalent to broadcast rates.
*Triclopyr	(broadcast) 32 fl oz/A (1 lb a.e./A) (spot) 1 - 2% (0.04 - 0.08 lb a.e./gal)
Sulfometuron#	(broadcast) 3 - 5 oz/A (2.25 - 3.75 oz a.i./A) (spot) Equivalent to broadcast rates.
Source: Modified from mipncontroldatabase.wisc.edu * - denotes products labelled for aquatic use available # - denotes products with significant soil residual time	

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Resources

- Giant Hogweed comparison and identification sheet (includes poison hemlock): go.illinois.edu/HogweedID
- Management of Invasive Plants and Pests of Illinois: go.illinois.edu/ManagingInvasives
- Illinois Plants Regulated by the Illinois Exotic Weed Act: go.illinois.edu/ILRegulatedInvasives
- Poison Hemlock, Illinois Poison Center Blog: bit.ly/3yfT8G8
- Poison Hemlock Weed Report (from 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. bit.ly/3OynokX
- Poison Hemlock Fact Sheet, Midwest Invasive Species Information Network: <https://www.misin.msu.edu/>
- Poison Hemlock, Invasive Plants of Wisconsin Factsheet: shorturl.at/LqjgM

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