7-9-2007

Weed watch: Wild parsnip and poison hemlock

Kristine J. P. Schaefer
Iowa State University, schaefer@iastate.edu

Weed watch: Wild parsnip and poison hemlock

Abstract
Conditions the last few years have been especially favorable for two weeds in the parsnip family--wild parsnip (*Pastinaca sativa*) and poison hemlock (*Conium maculatum*). Wild parsnip and poison hemlock are non-native plants that originated in Europe. The edible roots of wild parsnip were consumed in ancient Greece and Rome while poison hemlock was used as a poison, most notably known as the poison that killed Socrates. Both can pose health hazards that many people may not be aware of.

Keywords
Entomology

Disciplines
Agricultural Science | Agriculture | Entomology

Current Newsletter

You are viewing archives for the newsletter from 1993-2007. For current news, see Integrated Crop Management News.

Archives 1993-2007

- Announcements
- Crop Production
- Insects and Mites
- Pesticide Education
- Plant Diseases
- Soils
- Weed Management
- Image Gallery

Printable Version

Printable version of this page

Related Articles

Now's the time to control biennial weeds
April 3, 2006

Weed watch: Wild parsnip and poison hemlock

by Kristine Schaefer, Department of Entomology

Conditions the last few years have been especially favorable for two weeds in the parsnip family--wild parsnip (*Pastinaca sativa*) and poison hemlock (*Conium maculatum*). Wild parsnip and poison hemlock are non-native plants that originated in Europe. The edible roots of wild parsnip were consumed in ancient Greece and Rome while poison hemlock was used as a poison, most notably known as the poison that killed Socrates. Both can pose health hazards that many people may not be aware of.

Identification

Wild parsnip and poison hemlock typically act as biennials (occasionally as perennials), forming a rosette of basal leaves the first year, overwintering, and then flowering the second year. Wild parsnip flowers primarily from May through July; poison hemlock flowers from May through August.

The basal rosette of wild parsnip consists of large, pinnately compound leaves that resemble celery leaves. Leaves that develop on the stem are alternate, pinnately compound, with saw-toothed edges. The lower leaves have petioles (leaf stalks) whereas the upper leaves are attached directly to the stem (sessile). The stem is hollow and grooved, 2 to 5 feet in height. The flowers are small, predominantly yellow (occasionally white), and five-petaled, arranged in an umbel spanning from 2 to 6 inches.

Wild parsnip. (Kristine Schaefer)

Poison hemlock basal rosette leaves are pinnately compound and fernlike. Leaves formed on the stem are alternate, finely divided, and clasp the stem at the nodes. Stems are hollow between nodes, ridged, and hairless with purple spots and blotches. Poison hemlock grows from 4 to 10 feet. The flowers are white with five notched petals arranged in an umbel approximately 2 to 3 inches across. The lack of hairs on the leaves and stems of poison hemlock can be used to distinguish it from wild carrot (Queen Anne's lace).

Poison hemlock. (Kristine Schaefer)

Habitat and distribution

Wild parsnip and poison hemlock typically inhabit roadsides, pastures, field edges, or natural areas. Poison hemlock prefers moist conditions along streams and low-lying areas. Wild parsnip favors calcareous soils and sunny areas. Both are adaptable to different environments and can be found throughout most of the United States and Canada. They produce a large amount of seed, which contributes to their persistence and spread. Poison hemlock is listed as a secondary noxious weed in Iowa.

Special warnings

Wild parsnip plant parts contain a substance called psoralen, which can cause a condition known as "phytophotodermatitis." This reaction occurs when plant juice gets on the skin and the skin is exposed to sunlight. The results are skin reddening, rash development, and in severe cases, blisters and burning or scalding type pain. Wild parsnip burns often occur in elongated spots or streaks. Dark red or brownish skin discoloration develops where the burn or blisters first appeared and can last for several months.

All parts of the poison hemlock plant are highly toxic to humans and animals and may result in death if ingested. Most of the recent cases of human poisoning have resulted from mistaking poison hemlock with edible species of the carrot family. Livestock poisoning usually occurs from the presence of poison hemlock in hay or when pastures are overgrazed and other sources of food have been depleted.

Extra care should be taken to wear protective clothing before working with or exposure to wild parsnip or poison hemlock.

Control measures

Cultural methods that favor the growth and development of desirable plant species are the best measures to deter wild parsnip and poison hemlock. Mechanical removal of flowers and seeds by hand pulling, digging the root crown, or repeated mowing can be effective control methods. Elimination of seed production is the goal. Since flowering does not occur all at once, the area must be monitored for several weeks. Chemical control options are available if mechanical methods are not feasible. Glyphosate can be spot sprayed on basal rosettes, applied in early spring or late fall when most desirable vegetation is dormant. Other options include phenoxy herbicides, such as 2,4-D or dicamba, applied in early spring or late summer/fall. Avoid contacting desirable plants with these herbicides. The area should be monitored as additional herbicide applications or mechanical control measures may be necessary for the next couple of years to control newly emerging plants.

Kristine Schaefer is an extension program specialist with the Pest Management and the Environment Program.

This article originally appeared on pages 219-220 of the IC-498(18) -- July 9, 2007 issue.

Updated 07/27/2007 - 11:58am