LANCASTER COUNTY
Weed Authority

2023 Weed Awareness

The Weed Control Authority is responsible for implementation of the Nebraska Noxious Weed Control Act throughout Lancaster County. The Authority has also provided the inspection and administration of the City of Lincoln's Weed Abatement Program since entering into an interlocal agreement with the city in 1996.

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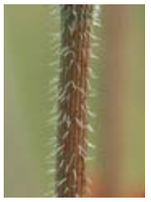
Poison Hemlock IS Toxic, but NOT Designated Noxious

Poison hemlock (*Conium maculatum L.*) and its cousin, water hemlock, are on the list of top 10 poisonous Nebraska plants. Poison hemlock can cause serious issues if ingested by either livestock or humans. As with any weed issue, proper identification is key to control.

One of the things that can make hemlock so dangerous is the ease of which it can be confused with non-toxic species like wild carrot. Both have fern-like leaves, small white flowers and are often found in the same places.

Hemlock thrives in moist soils where water is abundant, so stream banks, roadside ditches and even low areas in pastures are common locations. A biennial (or winter annual), hemlock spends its first year of life as a basal rosette, producing a reproductive stalk the second year and flowering May through July. These flower stalks can reach heights of 10 feet under ideal circumstances, shading out other vegetation and quickly taking over an area.

(Above) Poison hemlock flowers. (Right) Main stem is smooth with purple blotches.



(Above) Wild carrot, aka Queen Anne's lace, flowers. (Right) Main stem is hairy and may have purple hue.

Photos: Ansel Oommen, Jan Samanek, Ohio State Weed Lab, Catherine Herms, *Bugwood.org*

Poison hemlock rosette

Poison hemlock is NOT a state designated noxious weed in Nebraska, so its control is NOT required by property owners.

Toxicity

Hemlock plants produce alkaloid toxins in all parts of the plant. These chemicals are extremely potent. As little as 5 pounds of consumed foliage can be a lethal dose for cattle. The hollow stem on mature plants may seem like an attractive straw or pea shooter for small children, with detrimental consequences.

Luckily, from an animal perspective, hemlock is not an attractive grazing option. In a pasture with plenty of other grazing options, animals will typically leave hemlock alone. However, when forage options are limited, even unpalatable plants may become an option for hungry animals. Early in the year, hemlock may be one of the only green options in areas of a pasture, causing animals to give it a try. Later on, if grazing isn't managed properly and grass gets short or if a pasture is dominated by hemlock and nothing else, it may once again make its way onto the menu. Always make sure animals have plenty of water, salt and minerals available. Thirsty animals or those with a mineral imbalance may seek out plants they would normally pass up in an attempt to fill the missing water or mineral need.

Control Methods

Inspect and map all land for the presence of poison hemlock. Early detection of the presence of poison hemlock is essential to economical control.

Poison hemlock can be treated with a variety of cultural, mechanical and chemical means. Preventing seed production and spread is of primary importance for control. The Lancaster County Weed Authority encourages a holistic management approach as the most effective control for poison hemlock. This involves using many different strategies to eradicate the problem.

For both mowing and herbicide treatment in pastures, do NOT try to control hemlock after July during the grazing season! Following control, keep livestock out of the area. Mowing and herbicides alter the plant, increasing its palatability, even in dead and dying plants.

Regular mowing to prevent flower stalks from forming and producing seed can be an effective mechanical control technique. This is a time-intensive option with the need to mow regularly in early spring, and will typically take several years to achieve full control.

Herbicide recommendations from Nebraska Extension's "Guide for Weed, Disease, and Insect Management in Nebraska" (EC130):

- 2,4-D Ester (4L): 32 ounces per acre + Dicamba – 8 ounces per acre. (Treat at rosette stage in late fall or early spring.)
- Grazon P+D: 2.0–4.0 pints per acre. (Treat at rosette stage in late fall or early spring.)
- Streamline: 4.75–9.5 ounces per acre. (Treat at flowering stage in spring.)

Read and follow the label directions for herbicide application rates and use of surfactants.

Prevention of Spread

- Do not move hay that may contain viable seed from infested areas.
- Clean and remove any seed from equipment after mowing or tillage.
- Feed weed-free hay and forage.

Biocontrol Moth Released In Lancaster County

In cooperation with the Nebraska Weed Control Association (NWCA), the Lancaster County Weed Authority released a biological control moth in 2022 at three locations in Lancaster County. Biocontrol agents are natural enemies of nonnative pests used to reduce the vigor or population of the species. The Poison Hemlock Moth (*Agonopterix alstroemeriana* sp.) is host specific, known to feed only on poison hemlock and not harm any other plants. In the months after releasing the moths, the Weed Control Authority documented significantly reduced amounts of foliage at the sites. If the moths successfully become established, the Weed Control Authority plans to collect and relocate moths around the county.

TAKE 2

Two minutes to **read about two** invasive plants which are working to establish themselves in Lancaster County

Photos: Mary Ellen Harte, *Bugwood.org*

Absinth Wormwood (*Absinthium vulgare* Lam.)

Absinth wormwood is a new invasive to Lancaster County and it is native to Europe. It is on Nebraska's Invasive Plants Watch List and its spread is being monitored. Many years ago, absinth wormwood was the main ingredient in the drink named Absinthe. It was banned in several countries in the early 20th Century because its psychoactive ingredient "thujone" can produce hallucinations and delirium.

Description

Absinth wormwood is an aggressive perennial plant that germinates from seed. It grows to a height of 4–5 feet and flowers from July to mid-September. Flowers are dull, inconspicuous yellow. Absinth wormwood is covered with fine, silky hairs that give the plant a grayish appearance. It has a strong sage odor.

Habitat

Generally found in dry soils in pastures, roadsides, fence rows and waste areas, absinth wormwood invades overgrazed or disturbed areas — most often where hay has been fed, stacked or stored. Single plants on roadsides are likely started from seed, after hauling infested hay. Absinth wormwood has also been found around ponds where gravel with seed was hauled in.

Means of Spread and Distribution

This plant is a prolific seed producer that can also spread by short roots. One absinth wormwood plant can produce 25,000 seeds, which may remain viable for 3–4 years in the seed bank.

Impact

Given the opportunity, absinth wormwood will out-compete desirable forbs and grasses in pastures, fields and native grasslands.

Toxicity

Livestock tend to avoid absinth wormwood and only eat it as a last resort. If ingested, all parts of the plant are very toxic.

Prevention

- Minimize soil disturbance from vehicles and machinery.
- Avoid overgrazing in pastures.
- Monitor your property — early detection will prevent a large invasion.
- Good perennial grass will help to resist infestation of absinth wormwood.

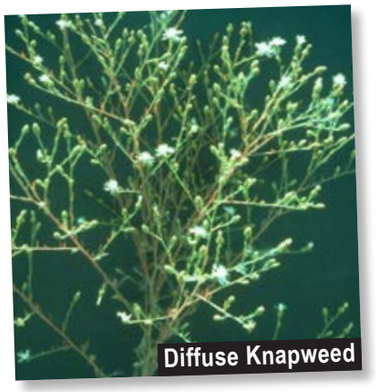
Control

Controlling small infestations is more effective and less expensive.

Mechanical — tillage can prevent establishment of absinth wormwood in crop production areas. Hand dig when soil is moist, making sure to remove ALL of the roots. Mowing may prevent seed production if mowed several times throughout the growing season.

Herbicide — herbicide control is most effective when the plant is 12–24 inches tall. Mature plants are much more difficult to control. Several herbicides are effective in controlling absinth wormwood. Follow the recommendations in the Nebraska Extension's "Guide for Weed, Disease, and Insect Management in Nebraska" (EC130).

Biological — No biological control options at this time.



Photos: Cindy Roche, Rob Routledge, *Bugwood.org*

Diffuse and Spotted Knapweed (*Centaurea diffusa* Lam. and *Centaurea stoebe* L.)

Diffuse & Spotted knapweed were declared a noxious weed in Nebraska in 1992. Landowners are required to control designated noxious weeds on their property.

How Did They Get Here?

Diffuse knapweed is native to the eastern Mediterranean region to western Asia, and the former Republic of the Soviet Union to western Germany. It was first documented in the state of Washington in 1907.

Spotted knapweed is native to Eurasia, from central Europe east to central Russia, Caucasia and western Siberia. It was first documented in North America in Victoria, British Columbia in 1893.

Description

Knapweed flower heads are shaped like a miniature vase.

Diffuse knapweed — flowers are usually white but sometimes rose or purple. Diffuse knapweed bracts (small, leaflike structures beneath the flowers) are buff or brown at the tips, but not usually black, and tipped with a distinctive 1/16- to 5/16-inch-long terminal spine.

Spotted knapweed — flowers are pink to purple or rarely white. Spotted knapweed bracts are tipped with a black comb-like fringe that gives the flower head a "spotted" appearance.

Means of Spread and Distribution

Knapweeds are biennial or short-lived perennials and reproduce primarily by seed. Seeds are dispersed by wind and can remain viable in the soil for more than 7 years.

Impact

Knapweeds reduce productivity of grazing lands and wildlife habitat by displacing native species and changing plant community structure.

Toxicity

Knapweeds are unpalatable to livestock and wildlife. The plants contain allelopathic chemicals that suppress the growth of other plants and may reduce desirable forage. Some people develop a rash after handling the plants.

Prevention

Controlling this plant at the rosette stage, or any time before bloom and seed production, will prevent its spread.

Control

Controlling small infestations is more effective and less expensive. Options for knapweed control include:

Mechanical — suitable only for small infestations — hand digging or pulling, removing and disposing the bloom prior to maturity.

Herbicide — many herbicides are effective in controlling knapweeds. Follow the recommendations in the Nebraska Extension's "Guide for Weed, Disease, and Insect Management in Nebraska" (EC130).

Biological — several insects have been introduced from Eurasia to help control diffuse and spotted knapweeds.

Lancaster County Weed Control 2022 Review

The Lancaster County Noxious Weed Control Authority serves the citizens of Lancaster County to protect effectively against designated noxious weeds which constitute a present threat to the continued economic and environmental value of lands in Lancaster County.

Our office implements the mandates of the State of Nebraska Noxious Weed Control Act by setting forth management objectives and plans, methods or practices which utilize a variety of techniques for the integrated management of noxious weeds. In establishing a coordinated program for the integrated management of noxious weeds, it is the County's intent to encourage and require all appropriate and available management methods, while promoting those methods which are the most environmentally benign and which are practical and economically feasible.

Noxious Weed Program

The Weed Control Authority utilizes a three-phase program to assist landowners in reducing the number of noxious-weed-infested acres in the county.

Phase 1: Prevent the development of new noxious and invasive weed infestations.

Phase 2: Provide education and public outreach on noxious and invasive weed control.

Phase 3: Provide ongoing management of State of Nebraska and Lancaster County designated noxious weeds, as well as the City of Lincoln Weed Abatement program.

Nebraska's Noxious Weed Control Act states: "It is the duty of each person who owns or controls land to effectively control noxious weeds on such land."

Noxious Weeds in County Roadsides

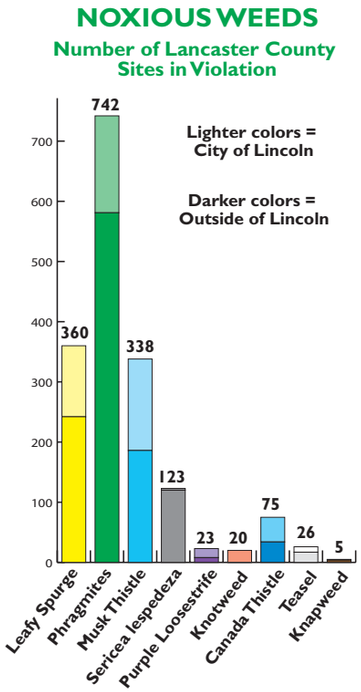
Landowners are encouraged to also control noxious weeds in county roadsides along their property. If not controlled by the adjacent owner, Lancaster County Weed Control will control the perennial noxious weeds such as phragmites, sericea lespedeza and leafy spurge in the county roadsides.

Lancaster County works closely with landowners with specialty crops and offers free-of-charge "No Spray Zone" signs when an agreement is signed. The agreement requires the landowner to control all the noxious weeds in their adjacent right of way.

City of Lincoln Weed Abatement Program

Lancaster County Weed Control Authority is responsible to carry out the administration of the City of Lincoln's Weed Abatement program since entering an interlocal agreement with the city in 1996.

The City of Lincoln's Weed Abatement Ordinance requires landowners within city limits to maintain the height of weeds and worthless vegetation below six inches. This includes all areas to the center of the street and/or alley that adjoins their property. Weed Control Authority inspectors complete inspections based on pre-selected properties due to their history, request from the public and by observing yards while conducting other inspections. When a property is found to be in violation, the owner of record is notified with a legal notice. If the property remains uncontrolled at the expiration of the legal notice, the Weed Control Authority will hire a contractor to cut the property. Landowners are responsible to pay the cost of control plus an administrative fee. If the cost of control remains unpaid, a lien is placed against the property until paid.



City of Lincoln Landfills

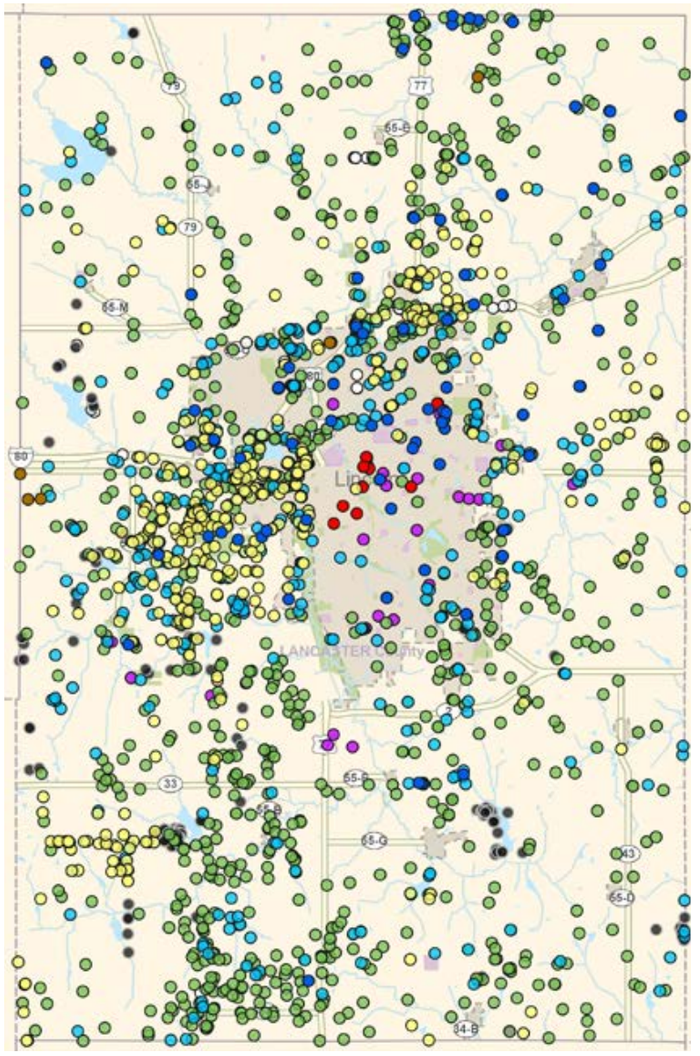
The Weed Control Authority is responsible for managing noxious weeds at the 48th Street and the Bluff Road landfills. To track the spread of noxious weeds and the effectiveness of the control, the landfills are annually inspected and GPS mapped prior to treatment.

Lancaster County Abandoned Cemeteries

Mowing and maintenance on seven abandoned cemeteries throughout the county falls under the supervision of the Weed Control Authority. Cemeteries included are Asplund, the County Poor Farm, Dietz, Evangelical, Highland Precinct, Jordan and Uphoff.

Special recognition goes to the following volunteers:

- Lincoln Tree Service for tree trimming and removal.
- Dave Miller for mowing Jordan.
- Terry Briley for mowing Evangelical.
- Clark Liesveld and Boy Scouts of America Troop 64 for mowing Dietz.
- Troy Henning for mowing Highland Precinct and Uphoff.
- Larry England for mowing the Poor Farm.
- David Almery for mowing Asplund.



The County Commissioners serve as the Lancaster County Weed Control Authority. Currently Brent Meyer serves as the superintendent and supervises a seasonal staff of six weed inspectors with the assistance of Chief Inspector Pat Dugan and Account Clerk Danni McGown.

Nebraska's Noxious Weeds

It is the duty of each person who owns or controls land to effectively control noxious weeds on such land.
Noxious weed is a legal term used to denote a destructive or harmful weed for the purpose of regulation.

The Director of Agriculture establishes which plants are noxious. These non-native plants compete aggressively with desirable plants and vegetation. Failure to control noxious weeds in this state is a serious problem which is detrimental to the production of crops and livestock, and to the welfare of residents of this state. Noxious weeds may also devalue land and reduce tax revenue.

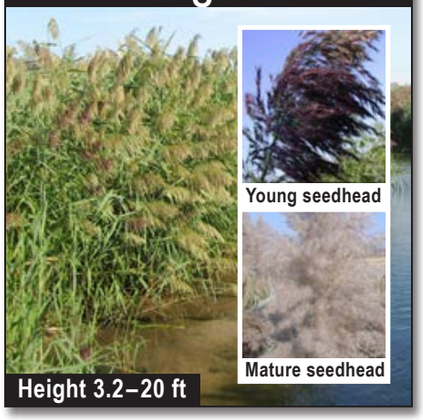
Play Clean Go
STOP INVASIVE SPECIES IN YOUR TRACKS.
PlayCleanGo.org

Musk Thistle

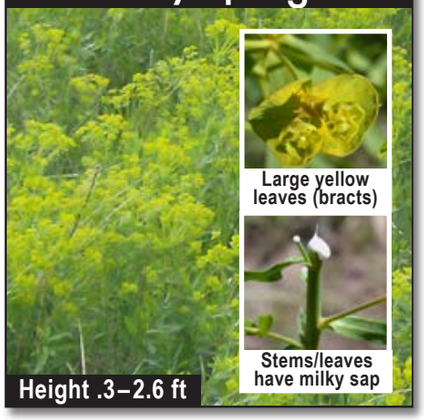
Canada Thistle

Plumeless Thistle

Phragmites



Leafy Spurge



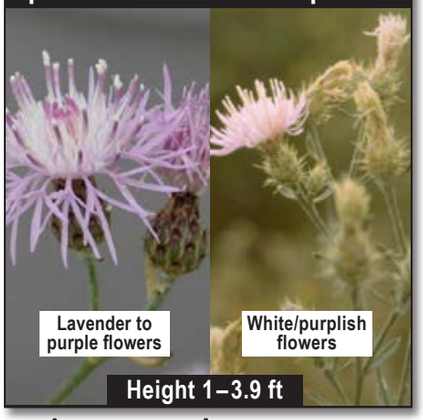
Sericea Lespedeza

Japanese & Giant Knotweed

Purple Loosestrife

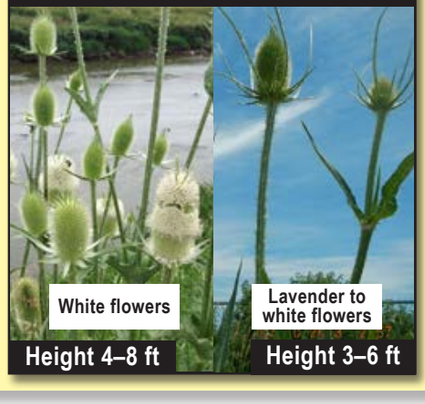
Saltcedar

Spotted & Diffuse Knapweed



Lancaster County's Noxious Weeds

Cutleaf & Common Teasel



Good neighbors control noxious weeds — If you have questions or concerns about noxious weeds, please contact your local county noxious weed control authority, Nebraska Weed Control Association (www.neweed.org) or Nebraska Department of Agriculture.