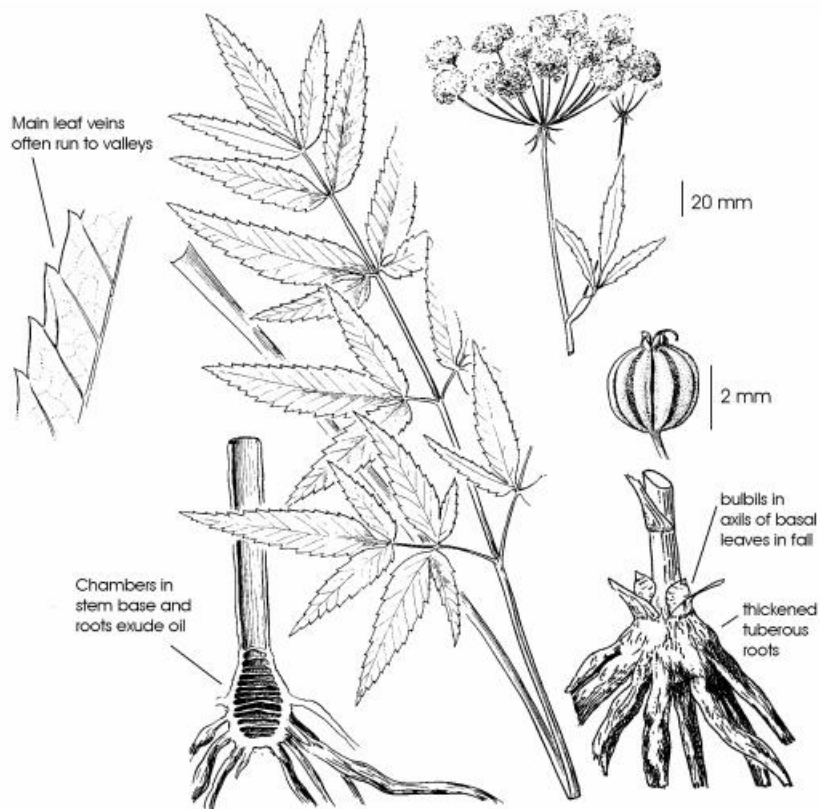


## **BEWARE OF HIGHLY TOXIC WATER HEMLOCK!**

MBP has received calls from several producers concerned about the proliferation of water hemlock in their pasture and hay land. Water hemlock is one of the most toxic weeds in beef cattle production where one root bulb can kill an adult cow in as little as 15 minutes. Water hemlock is a Tier 3 weed under Manitoba's *Noxious Weeds Act*. In terms of the responsibility to destroy or control noxious weeds, the Act states a person must "control a tier 3 noxious weed that is on land that the person owns or occupies if the weed's uncontrolled growth or spread is likely to negatively affect an aspect of Manitoba's economy or environment in the area of the land or the well-being of residents in proximity to the land." For more details about individuals' responsibility related to weed control see: <https://web2.gov.mb.ca/laws/statutes/ccsm/n110.php#3>

### **IDENTIFICATION:**

As with any toxic plant, accurate identification is critical. Water hemlock has narrow leaves with serrated edges. The flowers are small and white, forming umbrella-like clusters similar to other plants in the carrot family. The base of the stem is somewhat swollen with hollow chambers separated by horizontal membranes. The roots are very bulbous or tuberous and are clustered around the stem base and when cut vertically, the chambers exude a yellowish, highly toxic oil that smells like parsley. Look-alike plants such as water parsnip, also has narrow leaves, but lacks serrated edges and bulbous roots. Cow parsnip is common, but it is generally a larger plant and has very large fan-like leaves.



Douglas (Western) water-hemlock

Source: [https://www.beefresearch.ca/files/Stock\\_Poisoning\\_Plants\\_of\\_Western\\_Canada.pdf](https://www.beefresearch.ca/files/Stock_Poisoning_Plants_of_Western_Canada.pdf)

## **BEWARE OF HIGHLY TOXIC WATER HEMLOCK!**

### **POISONING:**

Poisonings related to water hemlock generally occur in the early spring from its young shoots, which appear before much else is growing. Hemlock likes wetter conditions so is often found around dugouts, streams, and other water sources. It generally does not like a lot of shade so is often out in the open. Late fall — when other vegetation is sparse — is the other critical time when poisonings occur from eating the bulbous roots. The plant in its entirety can be pulled out easily which is how livestock, especially cattle, gain access to the roots. Being found in wet areas means that grazing of the plants in spring may result in roots being pulled out of the soft soil. In wet areas the thick roots may have little or no soil cover, and when a pond dries up, grazing animals may access previously submerged areas and easily uproot the plant. Green seeds are highly toxic.

In drought conditions, or under intensive grazing management, cattle are less discriminant about what they consume and are more likely to eat plants that they would normally avoid.

All species of water hemlock are poisonous to all livestock, as well as to human beings. Poisonings of humans are on record throughout countries in which water-hemlocks occur. The toxin acts directly on the central nervous system causing extreme and violent convulsions and death from respiratory failure within a few hours of ingestion of the plant. A small dose is lethal and symptoms of poisoning appear rapidly, usually within 30 minutes after ingestion. The first symptom is excessive salivation and frothing at the mouth. Frothing is followed by tremors, uneasiness, and violent convulsions. Severe pain, especially in the abdomen, is evident. Clamping of the jaws and grinding of the teeth often occur, and the tongue may be lacerated. Relaxed periods with laboured breathing, loss of muscle control and lying down may occur between convulsive seizures.

### **CONTROL:**

It is recommended to wear rubber gloves, protective eyewear and a mask when handling this plant, and to wash thoroughly afterwards. On a hot day, the plants' toxins may be absorbed into the skin. The plant is a perennial, so try to pull the entire root out. This is generally easy especially on the bigger plants by grasping right at the base of the plant. Any small leaf shoots should also be removed. Dispose by desiccating, composting or incinerating. Be vigilant in subsequent years in case of regrowth, and check pastures before livestock are turned out. Leaves are not as toxic as the roots and concentration of the toxin drops during the process of curing but may remain a problem in contaminated hay. The level continues to drop slowly during storage. Therefore, the longer contaminated hay is stored before being fed, the lower the risk but **FEEDING IS NOT RECOMMENDED AS ROOTS REMAIN TOXIC EVEN IN STORED HAY.**

Attempts to control the plant by cutting may result in stimulating late-season regrowth that may be attractive to animals in a drought. For small populations in high-use areas, digging out the entire plant may be the best control method. After the top growth dies in the fall the remaining bulblets are easily separated so care should be taken to collect all of them. If you are able, contact your local weed district, custom herbicide applicator, or other local weed specialist to discuss control options. See Manitoba Agriculture's website for a list of Tier 1, 2 and 3 weeds under *The Noxious Weeds Act*, including a fact sheet with frequently asked questions around the control of noxious weeds: <https://www.gov.mb.ca/agriculture/crops/weeds/pubs/controlling-noxious-weeds.pdf>

Sources of information:

[https://www.beefresearch.ca/files/Stock\\_Poisoning\\_Plants\\_of\\_Western\\_Canada.pdf](https://www.beefresearch.ca/files/Stock_Poisoning_Plants_of_Western_Canada.pdf)

<https://www.manitobacooperator.ca/livestock/western-water-hemlock-is-a-deadly-killer-of-cattle/>