

The Dangers of Poison Hemlock in Pastures and Hayfields

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Poison hemlock (*Conium maculatum*) is a highly toxic plant that poses a serious risk to livestock. Its presence in pastures and hayfields can lead to death if consumed. For cattle producers, it is essential to know how to identify poison hemlock, understand its toxicity, and take proactive measures to eliminate it from pastures.

How to Identify Poison Hemlock

One of the key challenges in managing poison hemlock is its close resemblance to other non-toxic plants, such as Queen Anne's lace (*Daucus carota*). Both plants produce similar white, umbrella-shaped flower clusters (Fig. 1), which can make them look similar. However, there are distinct differences that can help differentiate poison hemlock from harmless look-alikes:

- **Purple Spots on the Stem:** One specific characteristic of poison hemlock is the presence of purplish spots or streaks on its smooth, hollow stems (Fig. 2). This is a crucial feature for proper identification.
- **Leaf Shape and Odor:** Poison hemlock leaves are finely divided and fern-like. When crushed they emit a strong, unpleasant odor.
- **Size and Growth Pattern:** Poison hemlock reach heights of up to 8 feet tall. It typically has branched stems and produce clusters of white flowers, in late spring.



Figure 1: Flowering poison hemlock.
(Photo: Bruno Pedreira)

Toxicity and Its Impact on Cattle

Poison hemlock contains toxic alkaloids that can cause severe poisoning in cattle if consumed. Even small amounts can be deadly. The alkaloids affect the central nervous system, leading to symptoms such as muscle tremors, difficulty breathing, and ultimately death. The alkaloid toxicity remains in dried plants and hay that has been stored, meaning that feeding hay contaminated with poison hemlock can also result in fatalities.

This is why it is crucial to avoid baling hay that contains poison hemlock, especially if the plant has not been completely removed. Therefore, it is strongly advised not to feed hay from fields where poison hemlock has been present.

Management and Control of Poison Hemlock

Effective control of poison hemlock requires early intervention. The optimal time to treat poison hemlock is in **early May**, before it matures and sets seed. At this stage, poison hemlock is most susceptible to herbicides.

- **Herbicide:** Applying 18-20 ounces of DuraCor® (AMINOPYRALID + FLORPYRAUXIFEN-BENZYL) herbicide is an effective method for controlling poison hemlock. It is best to spray at the early bloom stage. This herbicide targets the plant's root system, killing it before it can spread further.



Figure 2: Stem with purplish spots.
(Photo: Bruno Pedreira)

- **Mowing:** Mowing can help reduce the plant's presence, but this method alone will not eliminate poison hemlock on its own. While mowing prevents the plant from reaching maturity and producing seeds, it may still regrow from its roots.

Can We Take the Risk?

The bottom line is that we cannot afford to take the risk of poison hemlock in beef cattle production. The toxic alkaloids remain active in the plant even after it is cut and dried. So, feeding hay contaminated with poison hemlock can result in poisoning and death, and unfortunately, there is no reliable way to determine how much of the plant needs to be consumed to cause harm.

If you are concerned about the presence of poison hemlock in your hayfields, it is highly recommended to take immediate action:

1. **Remove Poison Hemlock Early:** the majority of the plant can often be removed before the first hay cutting. After removal, any regrowth should be treated with Duracor to prevent further issues.
2. **Avoid Feeding Hay with Hemlock:** Do not risk feeding hay from fields where poison hemlock was present, even if it was mowed. The toxic alkaloids will remain in the dried plant and poses a serious risk to livestock.

Queen Anne's Lace: Not a Threat, But Beware of Similarities

It's important to note that **Queen Anne's lace** (*Daucus carota*), also known as wild carrot, is not toxic to cattle. While it may look similar to poison hemlock and bloom around the same time, it does not pose a danger if consumed. However, Queen Anne's lace can reduce the nutritive value of hay, potentially affecting the overall quality of the feed. The key difference between the two plants is the absence of purple spots on the stem in Queen Anne's lace.

Bottom Line: Don't Take the Risk

In summary, poison hemlock is a dangerous and highly toxic plant that demands close attention in beef cattle production. Proper identification, early control measures, and proactive hayfield management are essential to preventing losses from this plant. Always prioritize safety by removing poison hemlock from pastures and hayfields, and never risk feeding hay that may contain any part of the plant.



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