Low larkspur in full bloom. Photo by Barton Stam.

Death camas. Photo by Barton Stam.

# Protect your livestock from poisonous plants

When the *Barnyards & Backyards* coordinator asked me to write an article about poisonous plants, I asked if the article should be about how to avoid bad-tasting plants like cauliflower. However, apparently some people like to eat the aforementioned plant, so this article will focus on minimizing livestock losses due to toxic plants.

Many plants found in Wyoming can be toxic to livestock; larkspur, lupine, death camas, false hellebore, and field bindweed are just a few. Other plants can be toxic under certain conditions but perfectly fine at other times. Oats, alfalfa, clovers, and tall fescue are among those that under certain conditions, or when fed incorrectly, can be deadly.

## Plant identification

One of the best ways to minimize the risk of livestock consuming toxic plants is to know the plants in your pastures. Nowadays there are apps that can help you identify plants—and, of course, friends, neighbors, county extension offices, weed and pest district offices, and other agencies are also good sources for plant ID help.

If you identify species that may be toxic, the next step is to learn if your species of livestock are susceptible to them. For instance, sheep have a much higher tolerance to larkspur than cattle. It is probably possible for sheep to get sick or die if they eat enough larkspur, but that is uncommon.

Low larkspur in early spring. Photo by Barton Stam.

Halogeton. Photo by Brian Sebade.

Season of use also greatly affects the risk level. The risk of livestock consuming death camas is much higher in the spring with sheep than other times of year or species of livestock, for example.

## Grazing management

Proper grazing management can play a role in reducing the risk of poisonous plants. But it is not true that poisonous plants are always a result of poor management. Many toxic plants, including larkspur, lupine, and death camas, are native to Wyoming. Some are even included in seed mixes used by various land management agencies.

Careful grazing management should include strategies that will encourage desirable species to thrive. Allowing desirable species to complete their full growth cycle at least some years and selecting species for seedings that are also well suited for livestock grazing are important considerations for a grazing plan.

## Herbicide treatments

Another way to manage the risk of toxic plants is to limit their presence in your pastures. Chemical control, with herbicides, is a popular method and can be effective.

For herbicides to work most effectively, start with a proper identification of the species and then look at which herbicides applied at what time of year will produce the best results. You also want to be careful to not harm desirable plants.

### Recommended resources

- Plants Poisonous to Livestock in Montana and Wyoming: https://bit.ly/b-1359
- Plants Poisonous to Livestock in the Western States: https://bit.ly/usda-ars-poisonous-plants
- "Taming Toxic Plants" video series: https://bit.ly/taming-toxic-plants

Wyoming Weed and Pest offices are a good source of information on what herbicides to use, and how and when to apply them. You can often purchase the herbicides there as well. A private pesticide applicator's license is required to purchase some herbicides, but many can be purchased and applied without one.

## Common toxic plants in Wyoming

**Larkspur** is responsible for more cattle poisoning than any other plant in the country. There are several species of larkspur in Wyoming. It is by far the most common poisonous plant that I deal with while working with livestock producers around the state.

Depending on the time of year, larkspur can be very palatable to cattle. Season of use, plant density, and even wet or humid weather can impact the level of risk of larkspur poisoning. Herbicide options are available to control it; however, be careful because larkspur plants that have been killed by an herbicide can still be very

palatable and poisonous to livestock. Herbicide control on larkspur is frequently not available on public land grazing allotments.

As mentioned, sheep have a much higher tolerance to larkspur than cattle and they can be used as a way to reduce the risk of livestock losses to it. For instance, grazing a larkspur area with sheep before grazing cattle there (or only using sheep there and excluding cattle) can reduce the risk of poisoning cattle from larkspur ingestion.

**Halogeton** is a fast-growing annual that tends to grow in disturbed areas. Livestock, especially sheep, will readily consume it even when it is dried out. Losses are most likely when hungry livestock are in places with a lot of halogeton and few other grazing options, such as in corrals before or after being hauled, or when trailed down a road for a long distance. Grazing large amounts of grass can increase livestock's tolerance of halogeton.

**Russian knapweed** is a highly invasive perennial plant. It is extremely competitive and readily exploits disturbed and overgrazed areas. It can grow in very poor soils, and I've even seen it growing in a pile of discarded asphalt. It grows in good soils as well and can compete with other perennial species. Russian knapweed is toxic to horses and can cause a fatal condition called chewing disease. Control with an herbicide treatment in September and October can be effective, especially when combined with a well-managed perennial forage crop.

Russian knapweed. Photo by Beth Fowers.

## Nitrate poisoning

Nitrate poisoning poses another risk to livestock, but it is not specific to one plant species. Many factors, including management and environmental conditions, affect the level of nitrates in a plant, but some species are considered nitrate accumulators. These plants include oats, corn, sorghum, sudan grass, and many weedy species such as kochia.

Livestock can be poisoned by eating harvested or unharvested feeds containing high levels of nitrates. It is a good idea to test feeds that are considered high risk for dangerous levels of nitrates. Testing is fairly easy and inexpensive. Your local UW Extension office is a good source of information on how to test feeds.

## Risk management

Dealing with poisonous plants is usually an exercise in minimizing the level of risk to your livestock. If livestock and poisonous plants are in the same proximity, there is almost always some level of risk. Hopefully this article has given you some valuable information to reduce that risk as much as possible.

**Barton Stam** doesn't like cauliflower (or tomatoes), but he knows a lot about Wyoming's poisonous plants. A UW Extension educator based in Hot Springs County, he can be contacted at brstam@uwyo.edu or (307) 864-3421.