



Toxic Range Plants and Drought

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When managing livestock during drought conditions, toxic range plants can become a major problem. The possibility of toxic plant consumption by grazing livestock is more pronounced during drought due to reduced grazing selectivity. Such problems may be accentuated by livestock deficiencies of phosphorus or vitamin A which can greatly alter livestock grazing behavior.

Defining the Problem

During periods of drought, many of the more palatable range plants mature and dry up early. Thus, little good forage is produced during much of the grazing season. In contrast, many of our toxic plants have the ability to remain green during these periods. As a result, these toxic plants increase in relative palatability and receive increased use.

Identifying Toxic Plants

The first step in managing for toxic plants during drought is being able to identify them. Range managers must be able to identify plants that are toxic to livestock in their area and understand the poisonous principle and livestock symptoms produced by consumption of the plant. Recogni-

tion of toxic plants before they become a problem can alert managers to potential livestock poisoning problems rather than performing autopsies on stricken animals to determine cause of death. Remember, prevention of livestock poisoning on rangelands is easier to accomplish than curing poisoned animals.

Toxic Plants and Grazing Management

The effects of drought are greatly intensified on overgrazed ranges. On overgrazed or abused ranges, the more palatable non-toxic range plants are already in a weakened state and even the slightest of droughts can cause severe problems. Overgrazed ranges and those that are in a weakened state due to drought, are highly susceptible to a sudden flush of toxic plant growth when the drought initially breaks or when small thunder storms pass through during a drought. It is because of this that as the drought becomes more severe, the potential for toxic plant problems becomes even greater. Temporary drought or extended dry periods may also cause some plants to wilt and become toxic that would normally not be a threat.

Prevention of Toxic Plant Problems

So how can we prevent livestock poisoning due to toxic plants during a drought? If grazing must occur, as it usually does, livestock poisonings may be inevitable. However, there are a few general rules that help reduce or eliminate the chances for toxic plant poisonings. First, use good grazing management practices. Stocking rates should be flexible to match forage demand with forage supply. Grazing systems which give additional rest to plants during drought are preferred over continuous grazing, and livestock distribution within a pasture becomes even more important during drought situations. Good grazing management helps to maintain an alternative forage choice over toxic plants.

Secondly, use good livestock management practices. Strategic supplemental feeding may help reduce losses to toxic plants. Supplementing adequate protein and phosphorus may keep animals from seeking out toxic plants that are high in protein. Vitamin A deficiency, also common on drought stressed rangeland, may alter the grazing habit of the animal and cause it to consume toxic plants that would normally not be consumed. Good livestock management practices also means never releasing hungry animals into a pasture that is known to have toxic plants, especially when toxic plants are the only "green" forage available.

Finally, plant control measures may become necessary to avoid livestock losses to toxic plants. Generally during a drought, fire is not the first control method to choose. However, mechanical, chemical, and biological control methods are valid options. It is extremely important to know what, where, when, and how to control toxic plants during drought.

Individual plant treatments (IPT) may be preferred over broadcast treatments for chemical control during drought. IPT treatments allow the applicator to selectively control only target species leaving the other broadleaf weeds as potential feed. While some plants are toxic to one class of livestock they may not be to another class. "Cleaning up" the range by first grazing with animals not affected by the plant toxins and following later in the season with grazing animals that would be affected by the plant is an example of biological control.

Summary

Knowing which plants are toxic and how they affect livestock is the initial step in preventing toxic plant poisoning. Careful observation of livestock grazing habits during drought is critical. Pastures historically overgrazed can cause problems earlier. During drought, even well managed pastures may produce poisonous plant problems. Once plants and problem areas are identified, use the following suggestions to prevent poisoning.

- ! Good grazing management is probably the most important thing to remember when dealing with potential toxic plant problems.
- ! Practice good livestock management such as observing animals new to an area closely, grazing with the proper class of livestock, and proper supplemental feeding strategies.
- ! Recognize when plant control is necessary and what type of control is best. Control strategies that target infestations before they become large problems are generally most economical.