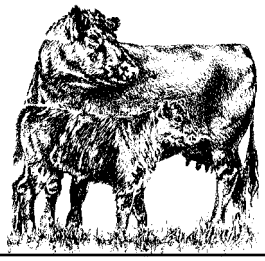

Western Beef Resource Committee *Fourth Edition*

Cattle Producer's Handbook

Animal Health Section 635

Halogeton Poisoning

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Halogeton glomeratus, an annual weed poisonous to sheep and cattle, was first observed in the United States near Wells, Nevada, in 1934. Halogeton now covers millions of acres in the United States. Cattle and sheep are susceptible to intoxication and death from consumption of halogeton, but cases of large scale poisoning of cattle are rare compared to sheep.

Most losses occur when hungry and thirsty animals are allowed to consume large amounts of halogeton. The toxic substance in halogeton is sodium oxalate, which is contained in leaves and other above ground parts of the plant. Halogeton is dangerous at all times. It becomes more toxic as the growing season advances, reaching a peak of toxicity at maturity. Livestock readily graze halogeton.

Grazing management for halogeton involves procedures to prevent accidental poisoning of the grazing animals, and management to encourage the density and vigor of competing perennial vegetation to biologically suppress halogeton.

Where and When It Grows

Halogeton often grows along railroad beds, roads, trails, and in other places where the soil has been disturbed. Dense stands are found on burned-over areas, overgrazed ranges, dry lakebeds, and abandoned dry farms. It thrives in the saline soils of colder semiarid regions—especially where native plant cover is sparse. Halogeton, however, lacks the capacity to compete with vigorous perennial plants and the more aggressive annuals.

Halogeton is a prolific seed producer. Wind, water, animals, and vehicles spread seed. New plants established from February to mid-August produce a seed crop before the growing season ends in November. Moisture and warm temperatures cause the seeds to germinate. Seeds may remain viable in the soil for 10 years or longer.

How It Affects Livestock

Halogeton is actually more toxic to cattle than sheep, but because of the free roaming behavior of cattle they seldom consume enough to become intoxicated (James 1971). Symptoms of toxic consumption of halogeton on winter ranges are cattle become stiff and walk with extreme difficulty when driven. Some cattle lay down and stay down for several days.

Given the right conditions, halogeton can be a sudden and important factor in cattle management. In 1962, ranchers in Elko County, Nevada, lost about 150 cows in one day to halogeton poisoning (Young et al. 1999). The cows were driven down an old sheep trail where there were moderate to high concentrations of halogeton. The presence of hoarfrost on the halogeton probably contributed to the consumption of the toxic weed by thirsty cattle.

Sheep can tolerate large amounts of halogeton if they eat other forage at the same time and if they have been acclimated to halogeton in their diet. About 12 ounces of halogeton dry matter will kill a sheep that has been without feed for a day or longer; 18 ounces are required to kill a sheep that has been feeding on other forage. The first signs of halogeton poisoning occur two to six hours after an animal eats a fatal amount; death usually occurs in nine to 11 hours.

How to Reduce Losses

Livestock losses may be reduced by maintaining range that supports good forage and by proper management of animals on halogeton-infested ranges. Supplemental feeding helps prevent halogeton poisoning when animals trail through or graze infested areas. Animals unloaded in halogeton-infested areas after shipment may benefit from supplemental feeding before grazing in the halogeton-infested areas. Avoid congregating and introducing animals in these areas.

Livestock should not be placed into areas heavily infested with halogeton unless they can be introduced slowly to allow time for adaptation to the toxin. Always allow animals access to water. This can be accomplished by grazing areas with plants such as shadscale or light stands of halogeton. Livestock should not be allowed to become hungry or thirsty while grazing in areas infested with halogeton. Death in livestock occurs when an animal eats a large amount of halogeton in a short period of time. There is no known treatment for halogeton poisoning.

Because each halogeton plant produces vast numbers of seed, some of which may survive for 10 years or more in the soil, it is not practical to eradicate a plant population that has been in existence for two years or more. Plants can be held in control by proper use of herbicides, and small infestations can be eradicated if treated early. Revegetating infested rangelands with more desirable species of perennial grasses seems to be the most economical and practical method of controlling the spread of halogeton.

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Fig. 1. Halogeton often grows along roadways, trails, and in other places where the soil has been disturbed.

Fig. 2. Dense stands of halogeton are found on burned-over areas, overgrazed ranges, dry lakebeds, and abandoned dry farms. It thrives in the saline soils of colder semiarid regions—especially where native plant cover is sparse.

Fig. 3. Halogeton is a prolific seed producer. Moisture and warm temperatures cause the seeds to germinate. The toxic substance in halogeton is sodium oxalate, which is contained in leaves and other above ground parts of the plant. Halogeton is dangerous at all times. It becomes more toxic as the growing season advances, reaching a peak of toxicity at maturity. Livestock readily graze halogeton.

Fig. 4. Halogeton seeds are spread by wind, water, animals, and vehicles. New plants established from February to mid-August produce a seed crop before the growing season ends in November. Seeds may remain viable in the soil for 10 years or longer.