Grazing Decisions During and After Extended Drought

Jeff Mosley explains why Montana's semi-arid environment makes it critically important for livestock owners to understand the potential impacts of drought.

Drought – the word conjures angst and even fear among many Montana livestock owners. Will I be able to produce or buy enough hay for the winter? Will I have enough stock water for my livestock to drink? Will I have enough grass for my livestock to graze? Will my pastures suffer long-term damage? Of course, living with drought is part of living in Montana. It's a pretty safe bet that our state's semi-arid climate will deal us at least one or more drought years per decade and people wanting to raise livestock here for the long-term need to plan accordingly. Three or more successive drought years, however, challenge even the best grazing land stewards, stressing their livestock, their finances, and their grazing lands.

Years can pass without much apparent change to seeded pastures and rangelands, but extended drought can cause dramatic shifts in vegetation. The land then remains relatively unchanged until the next environmental trigger occurs. Three or more successive years of

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drought represent an environmental trigger for Montana's pastureland and rangeland, and failure to care for the land during and after extended drought can have serious consequences for decades.

Were weeds or poisonous plants common before the drought?

Grazing plan adjustments depend upon the drought's impacts to pastures. Drought does not impact every pasture equally. Weed infestations, poisonous plant densities, amounts of residual vegetation, and vigor of desirable plants all must be assessed. For example, if weeds were a problem before the drought, your weed problems will probably be worse after the drought ends. Drought stresses all plants, but weeds are usually stressed less than desirable forage plants because most weeds grow earlier in the growing season before soil moisture is fully depleted. When normal amounts of rainfall return, weeds are in better shape to respond and they get a jump-start on the desirable plants.

Poisonous plant problems also commonly worsen during or after an extended drought, especially early in the growing season when many poisonous plants green-up and attract livestock (e.g., low larkspur, death camas, and locoweed). After successive drought years, there is less residual carryover forage available from desirable plants to buffer the toxins in livestock diets, thus dietary concentrations can reach toxic levels even when livestock don't increase the total amount of poisonous plants consumed.

Altogether, areas with weeds and poisonous plants will require extra attention during and after extended drought. It's particularly important to be vigilant about new weed or poisonous plant infestations if hay was purchased from new sources during the drought. Be sure to inspect areas where the hay was fed and plan to control new infestations as soon as possible – before weeds or poisonous plants become well-established and suppression becomes more costly.

When was the pasture grazed during drought?

One silver lining about drought years is that more of the grazing season usually occurs after plants are dormant. Plants are more tolerant of grazing during dormancy, so some plants may have endured less stress from grazing during drought than during

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normal years. The plants stressed most during drought are plants that were grazed in early summer, because these plants were unable to regrow and recover before soil moisture was depleted. Pastures grazed during late spring to early summer immediately after drought should be those pastures that were grazed when plants were dormant during the drought.

How heavily was the pasture grazed before and during the drought?

Light or moderate grazing every year doesn't harm most plants, nor does one year of heavy grazing, provided the plants are given sufficient time to recover before being grazed again. Plants are stressed when heavy use occurs for two or more consecutive years. When drought breaks, plants grazed lightly to moderately in the past will recover from drought quicker than plants that have been grazed heavily for many years. Sometimes stock water supplies dry up during drought and prevent portions of pastures from receiving much grazing pressure during drought. If possible after drought and after stock water supplies recover, these areas should be grazed during late spring-early summer while other areas are allowed more time to recover.

Should I consider delaying turnout onto pasture during and after drought?

Desirable forage grasses may be harmed by grazing in late spring-early summer during drought years and during the first year after drought. However, grasses won't be harmed by moderate grazing later in summer. Therefore, turning out onto pasture will likely need to be delayed as long as possible during and after extended drought. Extra hay will likely need to be purchased to extend the feeding period and allow delayed turnout onto pastures.

Should I consider culling or weaning animals earlier during drought?

The limited amount of forage and stock water available during drought can be stretched by reducing livestock numbers. Early pregnancy detection enables earlier marketing of nonpregnant females. Early weaning and marketing of calves or lambs similarly reduces forage demand. For example, dry cows consume about 35% less forage and water than lactating cows, and one, 400-pound calf consumes about one-third as much forage and water as a mature cow.

Should I consider reducing stocking rate after drought?

Current year's forage production usually recovers by mid- to late-summer of the first year after drought, but total standing forage (current year's forage production plus last year's residual forage) doesn't usually recover until mid- to late summer of the second or third year after drought. Therefore, because livestock consume both current year's forage and last year's residual forage, stocking rate may need to be lower for a year or two after drought ends. To avoid reductions in livestock numbers, extra hay can be purchased to extend the feeding period and thereby reduce pasture stocking rates.

FOR MORE INFORMATION ON GRAZING DURING AND AFTER DROUGHT

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