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Do You Have a Drought Plan?

Managing grazing resources as usual will have consequences.

Story & photos by **Troy Smith**

The dry conditions that persist in much of cow country serve as a harsh reminder that drought is a natural occurrence in every production environment. According to rangeland ecologist and management consultant Pat Reece, of Prairie & Montane Enterprises LLC, that's the reason every manager of grazing lands needs a drought plan. Managing grazing resources "as per usual" will have severe consequences.

Reece likens that approach to proceeding according to "default settings." All computers, cell phones and other electronic equipment have these preset options for operation that are automatically followed unless purposely changed. Many, if not most, users are satisfied with that. They do nothing to change them.

"During a drought, management by default settings is a recipe for business failure," states Reece, noting how drought-induced shortages and resulting higher prices for forage and feed drive up production costs. Drought often results in lower cattle body condition, decreased cow pregnancy rates and lower gains among calves and yearlings. Widespread reduction in herd numbers typically depresses livestock prices, too. Producers may be able to remain in business only at the expense of equity.

"Risk of business failure is greater during and following drought than at any other time," says Reece. "Ranchers who use written drought plans are much more likely to avoid

costly and sometimes career-ending mistakes than those with no drought plan."

Set objectives

Reece advises producers to establish goals and objectives for optimizing use of their land base, as well as cattle production. Managers should consider the impact they want to have on the land's ecological health and the enterprise's sustainability. A drought plan enhances the likelihood of accomplishing their mission by helping choose appropriate actions for balancing forage supply and forage demand during drought.

For example, a manager of a purebred or other specialized cow-calf enterprise may choose, initially, to emphasize management of forage supply. This may be accomplished by purchasing feedstuffs to replace grazing days. Reece warns, however, that feeding harvested forage can dramatically increase cost of production. Relocation of cattle is an alternative, and taking cattle to feed may be less costly than hauling feed to cattle.

Reece believes commercial cow-calf producers should focus primarily on reducing forage demand. That means reducing the number of grazing animals. Operators can plan well in advance to remove animals sorted by class (stocker cattle, breeding heifers or cows). Within each class, producers will want to consider factors including quality, age, weight or pregnancy status. For example, ranches that maintain cow-calf and yearling enterprises have the option of marketing yearlings early to save forage for cows.



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Reece says producers commonly resist selling any but the very oldest and least productive brood cows, explaining how they have 30 or 40 years invested in building the herd.

“What they’re really telling me is they have a good opportunity to put a decent cow herd back together after the drought breaks. They can do that by keeping the young females, which probably represent their best genetics,” counters Reece. “Complete liquidation of a commercial cow herd is always a viable alternative to minimize loss of financial and ecological health.”

Reece says early recognition of forage deficits requires monitoring and knowledge of average seasonal plant growth and regional precipitation patterns. Generally, shortages of precipitation and soil moisture prior to and during the early part of the growing season (when plant growth is rapid) cause forage deficits. The average volume of growth produced per inch of precipitation declines as the growing season progresses. Reece says this decline in production rate occurs even in non-drought years. Forage demand, however, increases by 35%-45%, as forage consumption of calves or yearlings increases. Forage deficits caused by a lack of early moisture won’t be recovered, even if rains come later.

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“In average years, plants ‘outgrow’ livestock on the front half of the season. When this does not happen, in drought years, you must act quickly,” warns Reece.

Prioritize

When early precipitation is lacking and the likelihood of drought is high, Reece advises producers to have “first-to-go” livestock identified and sorted into separate herds by turnout time. If cattle must be sold, moving them early can help avoid selling at later “fire-sale” prices.

Reece recommends consulting with Natural Resource Conservation Service (NRCS) and university personnel for help in

identifying early indicators of pending forage deficits — indicators such as soil moisture, preceding-year growing conditions, plant year precipitation, precipitation in recent months, and precipitation and temperature forecasts. Other indicators are current standing and residual herbage. Producers should identify “critical dates” at which indicators trigger planned actions.

The National Drought Mitigation Center provides information about monitoring and establishing critical dates for responding to drought conditions. For example, Great Plains operators can find planning tips and examples at the “Managing Drought Risk on the Ranch” website (drought.unl.edu/ranchplan).

Reece says striving for drought resilience should be a strategic objective of every grazing operation. His favorite admonition, in the words of a west Texas rancher, is “Put your pastures to bed properly.” In other words, never overgraze. Leaving adequate plant cover behind will enhance infiltration of rainfall and snowmelt. Reece advises producers to forget the old “take half and leave half” adage when dealing with drought. Take less. Taking a third, says Reece, should not hinder next year’s forage production.

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Setting critical dates for action

Is drought planning just a lot of paperwork? Will it really make a difference? Those are common questions heard by Cody Knutson and his research colleagues at the National Drought Mitigation Center (NDMC).

While he admits it’s probably impossible to render a grazing operation completely drought-proof, Knutson says planning can help protect range and pasture plant health so recovery following drought is hastened. Planning when to take specific actions to reduce demand for diminishing forage supply can lessen the amount of destocking often required when producers wait too long. Planning can also reduce market risk, compared to being forced to completely depopulate the ranch or farm when cattle prices are very low.

“There’s a lot of information on how to respond to drought,” says Knutson, who led development of NDMC’s Managing Drought Risk on the Ranch website (www.drought.unl.edu/ranchplan). “This brings it all together in one spot so ranchers can learn what to do before, during and after a drought. It provides a step-by-step methodology on how to integrate these strategies into a drought plan tailored for an individual operation.”

Knutson emphasizes that the planning guide can help producers identify “critical dates” for making management decisions. They need to understand the forage production potential of their grazing resources. Know what “normal” is and monitor growth frequently. On critical dates, current and projected forage supplies should be compared with current and projected forage demand. Steps are then taken to balance supply and demand.

Critical dates are based on periods when dominant grass species exhibit rapid growth. Producers need to remember that precipitation and soil moisture reserves are most important just prior to and during these rapid growth windows. Critical dates will be earlier for cool-season grasses, compared to warm-season species. For pastures containing mixtures of cool- and warm-season plants, multiple critical dates may be needed to evaluate the contribution each type is making to total forage production.



► Cody Knutson stresses that a drought plan is not just about surviving one drought event. It’s also about preparing for those yet to come.

For example, a central Great Plains producer may identify April 15 or May 1 as a critical date, since precipitation received since the previous fall will significantly impact this year’s forage production. Therefore, this is a time to consider stocking rates relative to normal years.

Suppose the producer is also aware that a majority of precipitation he or she receives annually occurs in April, May and June. Based on the dominance of cool-season grasses, the producer knows about half of the season’s forage growth typically occurs by June 15. That too is a critical date for evaluating forage supply and demand under the current stocking rate. A fall date should also be identified to evaluate the growing season just ending and start planning for next year.

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Reece believes the worst time to initiate mob grazing or any kind of intensive system is during drought. Exposing pastures or paddocks to multiple grazing periods over the course of the grazing season does not allow sufficient recovery for already drought-stressed plants. Rotation through multiple pastures, but grazing each pasture just once, is preferred. In Reece's opinion, grazing pastures only once between turnout and killing frost is always best for optimizing drought resilience of semi-arid rangeland.

For managing grazing lands after a drought breaks, Reece recommends producers follow three critical guidelines:

- 1) Do not graze weed-infested pastures.
- 2) Restock slowly, based on recovery evidenced by cover and height of preferred plant species.
- 3) Delay entry to summer pastures by one or two weeks.

If there is a silver lining to drought, Reece believes it is the opportunity for improved stewardship. Producers can use grazing and precipitation records to study cause

and effects when recovery differs among pastures. Drought experience may also show how the addition of watering sites and the addition or modification of cross fences may aid management.

A good understanding of an operation's financial health and the potential financial consequences of allowing management to proceed in default mode should be a strong motivation for preparing a written drought plan. To get through a drought and prepare for the next one, producers must be willing to exchange short-term losses for long-term gain.

