

Maintaining Herd Performance During Drought

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Drought always presents unique and difficult management situations. Most managers are caught somewhat by surprise by the size, scope and severity of drought. Getting off to a late start in managing through any drought would completely alter the normal approach to forage and nutritional management. Blanket statements about proper management strategies are completely inappropriate. Recommendations in this discussion will be based on the most common situations observed during drought.

The hardest thing to do is maintain herd performance when forage is limited in quality and quantity. Compounding that problem is the cost of supplemental feed and hay. Feeding through drought usually is not an economically viable option. For hay feeding to make economic sense cattle prices would have to be high. In most situations, the most economical option is to reduce herd size so supplemental forage will not have to be purchased or fed. Forage may still be available for grazing if destocking was carried out early enough. With early destocking, normal herd management practices will be sufficient. All forage will come from growing or standing forage. When the only option seems to be buying hay, then sell cows. Even though cow values are normally low during drought the best long-term economic scenario appears to be to liquidate at least a portion of the cow herd.

Environmental/Stress Management

Managing through a drought requires implementing practices that help reduce stress. This includes nutritional and environmental factors which lead to increased energy requirements of cows and calves. Some things appear to be just common sense. Fencing off watering areas that become boggy will reduce energy required to maintain production. This only works when there are other sources of water available. Hauling water is an expense that cannot be supported for long. There is also the risk of having weaker cows bog down and die before they are discovered.

When water supplies are depleted it is time to liquidate.

Minimize exposure to increased health risks by reducing access to stagnant watering areas. Allow cattle access to shade, normally a problem only on operations with a high percentage of "improved" pastures.

Manage cows to maintain a body condition score (BCS) of 4 or above on mature cows and 5 on two and three year old cows. Accomplish this by culling early and allowing cows to maintain condition on standing forage. Thin cows are more susceptible to pathogens and parasites. To take advantage of natural immunity and ability to withstand pathogens and parasites, cows must be in good physical condition. By taking advantage of nature's little perks, health management practices can be kept to a minimum. The last thing a ranch needs is to battle a health problem in the middle of a drought.

Health Management

Continue to protect cows and calves against clostridial diseases such as blackleg. As cattle graze on shorter and shorter forage the chance of picking up soil born pathogens increase. Blackleg, leptospirosis and anthrax are just a few of the diseases that occur with greater frequency during drought. Check with veterinarians in the local area to get a history on diseases of concern. Chances of leptospirosis becoming a problem also increase as watering areas dry up. Cattle and wildlife are forced into more concentrated areas and the chance of spread between species increases.

Protect against the reproductive diseases, campylobacter fetus (vibrio), brucellosis, haemophilus somnus, trichomoniasis, IBR and BVD to name a few. Nutritional stress will affect reproductive performance. Failure to prevent diseases will only compound the problem. Once again, get with the local veterinarian with the broadest background in local problems. Even if the ranch has been through drought cycles before you may not have seen or heard about all the possible problems.

Parasites, both internal and external, need to be monitored and controlled as needed. When grass is short, due to drought, internal parasites may not be a

problem. Parasites require moisture to reproduce and move up leaf tissue before they can be consumed. Many producers will deworm cows when they become thin just in case the cause is internal parasites. With the cost of deworming products today it would be best to have fecal exams performed on a random sample of cows before deciding to deworm the whole herd. Most often cows are thin due to poor quality and quantity of forage. When rainfall is received and pastures are short, start being concerned about parasites.

Carefully, monitor the herd and watch for signs of heel flies. Under very dry conditions the heel fly and resulting grubs may not be a problem. When heel fly activity is observed wait five weeks after the last observed activity to treat for the parasite. Treating earlier will not kill all developing grubs and treating later will only allow increased stress and weight loss on the cattle. Horn and face flies have been shown to decrease cow condition due to loss of 50 to 100 pounds and decrease weaning weights up to 50 pounds. Both of these flies need to be controlled. Do not compound nutritional stress with a manageable environmental stress. Flies can be controlled for \$2 to \$4 per cow. The potential decrease in weaning weight will more than pay for any fly control measures. Economic threshold level for horn flies is 300 flies per animal, above which cattle begin cutting into grazing time by fighting flies. This results in reduced milk production and a loss in body condition.

Nutritional Management Strategies

The key to successful forage management during drought is to cull and destock early enough and go deep enough to provide adequate forage for the remaining cow herd. To economically maintain cows they must be able to maintain body condition on standing forage without supplemental energy.

When destocking is initiated early fewer cows will have to be culled over the course of a drought. Culling strategies need to be in place well in advance of any drought. Initiate destocking at the slightest hint of dry weather during the growing season. A detailed account of destocking strategies are available in *Destocking Strategies During Drought* and will not be covered in depth here. Keep cows that are least susceptible to nutritional stress caused by poor forage conditions. This will be the mid-aged cows between 4 and 10 years of age. At lower body condition scores (BCS 3 and 4) cows of this age will average 35 and 20% higher conception rates than first and second calf cows, respectively, as shown in table 1.

Although older cows have a higher overall conception rate they also have the least potential for longevity in the herd. Another concern about keeping older cows is decreased milking ability. Decreased milking ability and lighter calves at weaning are reasons older cows have higher conception rates at any given BCS. If condition can be maintained on second-calf cows they can also be kept in the herd. Go ahead and sell replacement heifers and any other cow that will not wean a calf in this production year. If a place can be found to hold these cattle economically there may be justification for retaining ownership. Cull first-calf heifers next. There are two primary reasons. These two groups of cattle are normally the most expensive to develop and maintain and have the lowest production potential. When feed is expensive and cattle are cheap, cost can be reduced dramatically by moving these cattle.

Always manage the forage base to allow adequate consumption and efficient use of marginal precipitation. Cows need to consume forage at the rate of 2 to 3% of their body weight to have a chance of maintaining

Table 1. Body Condition Score at Palpation by Age Group (Parity)

Parity	BCS 3	BCS 4	BCS 5	BCS 6	BCS 7	All
1	40 %	50%	70%	82%	83%	63%
2	43%	79%	89%	100%	100%	77%
3-10	71%	86%	92%	97%	95%	91%
>10	100%	92%	97%	100%	100%	97%
All	54%	76%	89%	94%	94%	84%

(Wikse, Herd, 1995)

acceptable production and reproductive performance. When grass is not growing the only way to ensure adequate forage is to reduce demand through destocking. This will be a constant battle until the drought breaks, requiring constant monitoring and periodic adjusting to prevent decline in range condition and cow performance. Minerals will need to be provided to cattle during periods of drought. Most areas of Texas are deficient in phosphorus and some trace minerals. When it becomes necessary to cut cost, usually one of the first areas to receive the axe is the mineral program. Do not stop supplementing phosphorus! Phosphorus has a major impact on reproductive performance. If the urge to limit mineral costs overwhelms a rancher, trace minerals can be cut without devastating results on reproductive performance. This is certainly not a recommendation to cut trace mineral supplementation. A more economical source may be available. Do not substitute quality for price. If a supplement of equal quality can be found for less money, it might be alright to try.

If, or when, cows become protein or energy deficient supplementation will be required to maintain acceptable production. Manage nutrition to prevent mid-aged cows from dropping below BCS 4 during the production cycle. The last caution on nutritional management will center on selling cows to purchase forage for the remaining cows. This practice will leave a ranch broke and without cows in an extended drought.

Marketing

One common complaint heard at the coffee shop and sale barn concerns the rancher's inability to significantly influence market price for weaned calves. Although absolute value per pound is determined by demand, a producer has complete control over relative value of calves. Every calf produced should sell in the upper 50% of that day's market. It is not feasible to always top the market. Cattle that top a market on any given sale day can change with one order being placed. The high price cattle may change from week to week, month to month and certainly year to year. Calves and yearlings that sell in the top half of a market have not changed for the past 20 years. Moderate to large framed, average muscled, crossbred calves with three-eighths or less Brahman

influence, no more than one-half Exotic and from one to three-quarter British influence have always been in demand. Producers can get caught on the fringes of these specifications from time to time as the market requirements change.

When a good return is desired, do not produce what the buyer does not want. Know the local market and produce for it. The calves described above can be produced anywhere in the state of Texas. There really is no excuse for producing cattle that are not in demand, other than personal bias. Cows not conforming to the formula stated above may be needed for environmental adaptability and production efficiency. If so, use complementary sires to produce the desired kind of calves. There is a need for purebred cattle that certainly do not fit the description of the ideal calf. These cattle are necessary to produce bulls and females for the commercial producer.

Cost Control

Most ranches do not intentionally waste money on production expenses. The same cannot be said about personal expenses. When times are tight, communication between family members and ranch employees needs to open up. Unfortunately, communication normally breaks down and closes up. Ranchers do not want the family or employees to know and/or worry about the financial stability of the ranch. Most underestimate both the family and employees resolve to survive during tough times. Everyone should know what the situation is and input on ways to cut cost should be sincerely requested. Ideas should be carefully evaluated before implementing or discarding. Common strategies normally start by cutting back on expenses necessary to maintain production. The last place they are usually cut are on items that provide no income. These include personal expenses, family vacations, vehicles, equipment and any other purchases that do not generate a positive production response. If trimming is needed it may be accomplished by cutting waste in some management practices. When severe cuts are required start around the house and garage, then move to the equipment shed and horse trap. Thousands of dollars can be saved by cutting personal and living expenses and hundreds by cutting production cost.

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