

Cattle Business in Mississippi – August 2006 “Beef Production Strategies” article

Drought Coping Strategies for Beef Producers

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The summer weather in Mississippi varies from year to year. Just one year ago, Katrina and Rita were the big weather stories. The summer of 2006 has started off dry and hot throughout the state, and talk about drought conditions is being heard more and more. By the time this article is in print, hopefully much needed rains will have come. Otherwise, drought coping strategies will need to be in place on Mississippi beef operations. Answers to some common drought-related questions are provided to help provide beef producers with ideas to cope with drought conditions.

Question: I am running out of forage. Is early weaning a good idea?

Answer: Early weaning is often used to improve cow condition for rebreeding, particularly when forage is limiting. The nutrient requirements of a dry (non-lactating) cow are approximately 50% lower than the nutrient requirements of a lactating cow nursing a calf. Research shows that when the stress of lactation is removed by early weaning, cows gain body weight and condition. A Florida study reported that early weaning thin cows resulted in a significant reduction in the amount of total digestible nutrients (an indicator of dietary energy often referred to as TDN) needed to support cow body weight gain. Early weaning also effectively initiated postpartum estrus in these cows. Improved pregnancy rates in cows with early-weaned calves have been documented by numerous researchers. Early weaning may be most beneficial in years when pasture production is inadequate to support herd nutritional needs. Do not wait until the cowherd has lost significant body condition and forage availability is very limiting to early wean.

Calves can achieve dry matter feed conversion rates of 5 to 8 lbs. of dry matter per 1 lb. of gain. Because early-weaned calves can gain weight efficiently, it may be advantageous to retain calves and feed them for a period of time. This allows for more flexibility in calf marketing. By feeding early-weaned calves a concentrate-based diet from weaning time until the time they would be conventionally weaned, research consistently shows that their body weights will be equal to or greater than the body weights of calves nursing their dams up to conventional weaning age. Operations developing heifers for replacements may want to consider less aggressive preweaning nutritional management strategies to prevent negative impacts on long-term productivity. Choosing the most appropriate early weaning diet should take into account whether or not calf ownership will be retained through the feeding period and feed cost and availability. Steers weaned at approximately five months of age versus seven months of age have been shown to have lower feedlot feed intake and better feed conversion. Research indicates that early-weaned calves tend to gain less in the feedlots, have lower carcass weights, and have similar yield grades compared to calves weaned at traditional ages.

One of the challenges with early weaning is getting calves started eating and drinking. In situations where calves are weaned at a very young age (less than three months), intensive management may be necessary. These extremely young, lightweight calves are highly stressed from weaning and may display a wide variation of eating and drinking behavior. It is critical to get these young calves trained to a feed bunk and water trough as quickly as possible to reduce the risk of illness. To both lower the risk of health problems and promote calf growth, implementing proper vaccination programs in consultation with a veterinarian and getting calves accustomed to concentrate feeds is essential prior to weaning. Furthermore, low-stress weaning techniques such as fenceline weaning or fitting calves with anti-nursing devices may be valuable in early weaning programs. Increased labor and feed costs are typically associated with early calf weaning and subsequent backgrounding along with the need for a separate feeding or pasture area. These increased costs may be easily justified during drought conditions or when herd females are thin and run the risk of low rebreeding rates.

With seedstock cattle, make sure that breed association weaning age windows are adhered to for performance reporting purposes when considering early weaning. Contact the respective breed association for weaning age requirements. Early weaning just part of the herd could be a good option as well. Start by early weaning young, pregnant cattle.

Question: Will creep feeding help stretch my forage or reduce lactation demands on my cows?

Answer: Generally, creep feeding will not greatly reduce grazing pressure on pastures nor reduce the strain that nursing calves are putting on their dams. However, the weaning weight advantages of creep feeding have been documented in numerous research trials. Creep supplementation may be attractive in situations of low forage quality where calf nutritional needs to support acceptable growth are not being met. Early weaning may be a better alternative to creep feeding when forage quantities are extremely limiting.

The decision to supplement nursing calves impacts preweaning and postweaning performance and should take into account cost and availability of feed and forage supplements, replacement heifer concerns, calf prices, and calf marketing plans. The value of improvements in calf gains and marketability should offset the cost of supplementation. Look at creep supplementation as a management decision that is evaluated with each calf crop instead of as a management practice conducted each year.

No difference in milk intake but higher total intake (milk + forage + creep supplement) was observed in a research trial of nursing calves with access to creep supplement. According to several studies, no differences in cow performance were observed by changing the length of the creep feeding period. Other research indicates that cows with creep grazed calves have more body condition at weaning and entering late gestation than cows with non-creep-grazed calves.

Profitability of creep feeding may depend in large part upon current market conditions. Typically, when calf prices are high, creep feeding becomes a more viable and

profitable option than when calf markets are lower. Seedstock producers should also consider how increased average daily gains and weaning weights due to creep supplementation affects and in many cases improves marketability of bulls.

Question: What can I expect if I do nothing to help meet the nutrient demands of cattle on drought-stressed pastures?

Answer: Thin cows and lightweight calves are a likely result if nutrient demands of the herd are not met. If cows are allowed to decline to a state of poor condition, then additional nutrients will be required to regain lost body condition. Research has consistently shown that reproductive rates of thin beef females are lower than those of cattle in moderate to high body condition. Dramatic declines in pregnancy rates occur when cows fall below a body condition score of 5 (moderate condition with general good overall appearance with spongy fat cover over ribs and palpable fat cover on either side of tail head) on the 1 to 9 scale for beef cattle. A change of one body condition score on this system equals approximately 75 to 80 lbs. change in body weight on an 1100 lbs. cow. Although there is added expense in supplemental feed, the cost of having thin cattle that do not rebreed or calves that do not grow like they should can be even more costly to profitability. In addition, dramatically reduced weaning weights for calves from inadequate nutrition can hurt profitability.

Question: I am considering reduced herd numbers to reduce forage and feed demands on my operation. Which cattle should be culled first?

Answer: During drought or other conditions where forage and feed resources are limited, culling deeper into the herd than normal is often appropriate. Culling can help alleviate grazing pressure on drought-stressed pastures and decrease overall operation demand for supplemental feed or forage. Stocker operators running short of forage may want to consider shipping cattle to feedlots early and can still take advantage of retained ownership opportunities as they pencil out. In cow-calf operations, prime candidates for culling are open (non-pregnant) cows, cows without calves, cows with physical defects (cancer eye, bad udder, feet and leg soundness problems), older cows (10 years old and older), poor producers, late calving cows, cows outside of the desired calving season, and bad temperament cows.

A logical culling order that may be used is as follows:

Open old cows

Open replacement heifers (still young enough to feed out and meet fed market targets)

Old cows with unsound mouth, eyes, feet and legs

Open cows of any age

Thin cows over 7 years old (body condition score < 4)

Very late bred 2 year olds

Healthy bred cows that are over 7 years old

Healthy bred young cows 2 or 3 years old

Healthy bred cows 4 to 7 year old cows

Cull cow price levels and seasonal trends should be taken into consideration when deciding when to sell cull cows. When cull cows prices are trending upward, it is often advantageous to wait to market cows if the increasing values can cover added

production expenses from holding over cull cows. It may also be advantageous to retain cull cows until weight and body condition can be added. Unlike feeder cattle prices, cull cow prices generally increase on a per pound basis with increasing cattle weights. If cull cow prices are trending downward, however, it may be advisable to market cull cows in a timely manner before more money is invested in cow maintenance, particularly if this investment will not likely be recovered. In Mississippi, the traditional seasonal highs for cull cow prices usually occur in March, while the seasonal lows usually occur in November.

Question: I am concerned about having enough forage and feed going into the winter. What can I do now to plan ahead for winter feeding?

Answer: Priority should be placed on determining nutrient needs of the cattle herd. The best time to improve cow body condition in preparation for calving and breeding is in the months right after weaning. Daily dry matter intake needs approach 2% of body weight for mature cows immediately after calves are weaned. As calving nears, dry matter intake needs will increase, and after calving daily dry matter intake levels should be closer to 2.5% of body weight. If hay quality/supply appear short and grazing plans cannot provide adequate levels of nutrients for the herd, then supplemental feed may become necessary.

Plan cool-season grazing to limit the amount of hay and supplemental feed needed. Develop a cool-season forage plan for this winter keeping grazing needs in future winters in mind. Annual ryegrass and tall fescue are two common cool-season grasses that are used in many winter grazing programs in Mississippi. As an annual forage crop, annual ryegrass acreage decisions should focus on cool-season forage needs for this winter and spring. Tall fescue, on the other hand, is a perennial forage, so tall fescue fields established this autumn need to be pampered during establishment and not grazed until next spring. Therefore, do not plan for acreage established this autumn into tall fescue to be part of the winter feeding plan for this year. Instead, it should be considered a component of a long-term winter-feeding plan where additional cool-season forage production is desired. Small grain forages, such as oats, wheat, and rye, are worth considering also, as they can compliment annual ryegrass production by providing earlier grazing.

Stored forages and feeds should be located, evaluated for nutrient value and price, and purchased or forward contracted. Many hay suppliers fill orders to a regular customer base first before marketing to new customers, especially when hay supplies are tight relative to hay demand. Word of mouth is a common way of locating hay supplies. The Mississippi Market Bulletin and Internet-based hay directories are also potentially useful sources of information on hay suppliers.

By-product commodities are a viable feed alternative to commercially mixed supplements. Take time to evaluate both commodity feeds and commercial supplements to determine what ingredients price in as the most cost-effective to achieve target production levels. It is useful to reevaluate diets over time as feed prices and availability change to make sure that the cost of the current nutritional program is reasonable in comparison with other feeding options.

By-product commodity prices for many common ingredients in beef cattle diets often follow seasonal price trends. Dried distillers grains usually reach seasonal lows around early autumn. Whole cottonseed prices, on the other hand, tend to start falling after June and usually reach annual lows in October and November. Cottonseed hull prices tend to climb in November and December over September and October prices and then drop again in January and February. The best prices on soybean hulls are typically in early summer, with soybean hull prices often rising after August before starting to decline again after January. Prices of wheat midds are generally lowest in May and reach their peaks in December. Price trends in the current year can always buck the traditional seasonal trend, however, so it is important to stay up to date on current commodity prices. Pool resources with neighbors when possible. Purchasing feed in bulk can often reduce cost per unit.

Just because certain by-products are cheap in terms of dollars, does not mean that they are necessarily a good value. The nutritional makeup of feeds and what they will contribute to beef cattle performance determine their true value. Farm feed storage, mixing, handling, and feeding capabilities also determine the feasibility of different diets for the herd. Specific feeds can have characteristics that require special handling considerations, as in the case of the flowability limitations associated with fuzzy whole cottonseed. A cornstarch coating process for whole cottonseed shows promise for alleviating this handling problem though. Some feeds can be fed free-choice in self feeders, while others required daily hand feeding. Because each feed has its own unique feeding advantages and limitations, it is worth the time to visit with someone who is competent in formulating beef cattle diets to avoid any potential nutritional problems or disorders in the herd.

Using ionophores (monensin or lasalocid) in cattle diets can improve gains on high-roughage diets and efficiency of high-grain diets. Consider incorporating ionophores into beef cattle nutritional programs. However, be cautious about using these products where other classes of livestock such as horses are relying on the same feeding areas or equipment as ionophore ingestion in small quantities can be fatal to these animals.

Question: Will deworming help my cow herd in a drought?

Answer: Internal parasites are an additional burden on the cow herd. Visit with a veterinarian about internal parasite control programs best suited for your area. Mid-summer deworming offers the advantages of addressing a controlled parasite load in cattle with reduced chance for reinfestation in dry, hot weather.

Question: What are some tips on managing cattle during hot weather?

Answer: Cattle need access to clean water and a proper mineral supplement at all times. Cattle should not have to travel long distances for water. Water requirements of cattle depend on a number of factors including air temperature, water temperature, milk production level, pregnancy status, physical activity, growth rate, diet type, moisture level in the diet, salt intake, and dry matter intake. Temperature increases from 50 degrees F to 90 degrees F can increase daily water requirements by 2.5 times. Ample shade should be provided (at least 30 to 40 ft² per head for mature cows on pasture). If cattle crowd too closely together, limited shade can be worse than no shade

at all. Shade options include natural (trees), permanent (barns and sheds), and portable shades. Strategic planting of trees along the west side of a pasture will help provide afternoon shade. If a metal roof is used on a permanent shade, make sure that it is insulated and does not radiate heat like an oven. Portable shades are usually less expensive than permanent shades and can be moved to accommodate different grazing systems. Shade placement should be strategic since it will affect cattle distribution and forage utilization. Shades need to be high enough (at least 10 feet off the ground) to allow adequate airflow. Good ventilation and airflow is also recommended for confined cattle.

Arrange to work cattle during cooler parts of the day instead of during the heat of the day. While working cattle in the late evening may seem like a good idea, cattle build up a heat load during the day and need at least six hours to dissipate heat and cool down from an extremely hot day. Researchers have observed cattle body temperatures reaching daily maximums at 10 p.m., well after outside temperatures peaked. If possible, try to work cattle early in the morning before the temperature rises to uncomfortable levels.

Make an effort to limit the amount of time cattle must spend in a confined area with limited air movement when working cattle. If cattle remain in a confined area for an extended period, then attempt to provide access to fresh, cool water. Very excitable cattle are particularly prone to heat stress. Practices that reduce cattle stress are beneficial during hot weather. Implementing a few precautionary measures to help the herd beat the heat can make the difference in avoiding production losses associated with heat stress.

For more information on beef cattle production and drought coping strategies, contact your local Extension office.