

Alternative Feeding Programs and Feeds for Drought Stressed Beef Cow Herds

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Beef cows traditionally graze forages during the spring and summer months. However, during droughts when forage production stops, alternative feeds and feeding programs need to be used to feed the herd until forages are growing again. When deciding on an alternative feeding program there are several options to consider. The goal is to get the cows re-bred, maintain pounds produced per cow, and minimize feed cost per pound of calf sold. Daily feed costs are going to increase during a drought. Options to consider are feed availability, equipment needs and storage. Integrated Resource Management (IRM) data shows that most producers budget pasture costs at around 50 cents per cow/day. The ideal alternative feeding program will meet the cows' requirements as close to budgeted costs as possible. During early lactation and the breeding the cow's requirements are as high as any other time in the production cycle. Keeping cows in good body condition is very important for getting re-bred. When body condition scores drop below 4, reproduction efficiency drops resulting in more open cows, longer calving interval and less value in calf crop due to younger, lighter calves next year. In the Cow-Link herds, weaning weight drops 45 pounds for each 21-day period that the cow does not calve. Based on \$1.00/lb calf prices, the calf's value will decrease \$45.00 for each heat period the cow is not bred.

As feed costs increase, and available forages become more limited, it may be necessary to cull some of the older or lower producing cows. If the herd is on a performance-testing program like Cow-Link, consult the Most Probable Producing Average (MPPA) rankings and cull the lower producing cows. These cows are least likely to make a profit and will lose the most money when feed costs are higher. Culling low producing cows now will enable the ranch to concentrate on more intensive management strategies during the drought. In addition, culling lower quality females will enable the herd to expand with higher quality animals when forage production returns. If facilities and resources are available to feed the cows, early calf weaning and culling the entire herd may not be the best long-term solution for the ranch. If the herd is culled, the cost of replacing the entire herd in the future with the same quality animals may be cost prohibitive.

The most common method of getting a cow herd through a drought is to feed corn at 0.5 to 1.0% of body weight, 1-2 pounds of protein supplement (>30% CP) and roughly 5 pounds of hay. When corn is priced at \$3.00 per bushel, 40% protein supplement around \$250/ton and hay at \$100 per ton, a limit-fed diet would be priced around 85 to 100 cents per cow/day. This will increase feed costs over a 4-month period around \$75 per cow over that of a traditional grazing

program with free choice mineral, but will reduce forage consumption by 80%. Land O' Lakes has put together easy-to-follow instructions on grain limit-feeding programs for beef cows. STEAKMAKER 40-20 R 400 to fortify a grain-based ration designed to take advantage of protein from NPN sources (such as urea) in addition to Rumensin for increased feed efficiency. When starting a limit feeding program the cows need to be stepped up over a minimum of one week and stay on the same feed delivery schedule every day, just like feedlot cattle. If no forages are available, producers can use shipping conditioner/hay stretcher along with a free choice mineral or Grow-Gest Complete to keep cows in acceptable body condition.

Early weaning the calves will decrease the cow's nutritional requirements, helping to conserve body condition. When weaning young calves (less than 150 days of age) provide calves access to a palatable high quality starter. Stress Care Starter feeds is an excellent option. Once all the calves are eating well (approximately 3.0% of BW), Grow Gest Complete can be used to meet nutrient requirements. If forages are available Ration Manager can be used in grower rations to control grain intake and minimize forage use.

The use of commodity feeds can also help to reduce feeding costs during a drought. Other feed stuffs are commonly used to decrease the dependency on forages and should be considered depending on local availability.

Cottonseed Hulls

Cottonseed hulls have been used as an excellent alternative to feeding hay in many parts of the country. Unlike most by-products they can be used as the only source of roughage. Cottonseed hulls are low in protein (3.5%), but are equal in energy to late cut grass hay. Supplementation is needed to balance for the deficiencies. Cottonseed hulls should be fed with 2-3 pounds of 30-40% all natural protein supplement and minerals. There are a couple of options for this. Producers can supplement with high protein breeder cubes, or use 2 pounds of 35-0 product per head per day. An additional option would be to feed a high protein unfortified cake and free choice mineral.

Soybean hulls

The crude protein in soybean hulls ranges from 10 to 16 percent. They are an excellent energy source in the form of highly digestible fiber. Soybean hulls are often available in both meal and pelleted forms. Soyhulls can be fed without additional forage; however, researchers have demonstrated that digestible energy is increased when fed with hay in a 2:1 ratio. The reduction in energy is caused by faster rumen passage when little or no long-stem forage is fed. The forage serves to slow the rate of rumen passage, thereby increasing rumen retention time and the digestibility of soybean hulls.

Wheat middlings

Wheat middlings are one of several byproducts resulting from flour milling. This feedstuff has been used for many years in cattle diets and is available in many parts of the country. Midds are a good source of protein (18%) and energy. The energy available in middlings is in the form of both starch and highly digestible fiber. Because of the starch in midds, it is not a good idea to feed midds without any additional roughage. Like other alternative feeding programs it is best to feed at least 5 pounds of forage and proper mineral fortification.

Corn Co-Products

Corn gluten feed and Distillers Grains are byproducts of the corn milling industry and are available locally in many areas. These products can replace corn in a limit feeding program. Co-Products are good sources of protein and energy. When balanced with Co-Product mineral, balancer or fortifier they can be fed at 7-10 pounds per day with 5-7 pounds of forage to keep the cow herd in good body condition with very little forage.

Corn gluten feed is what remains after the extraction of starch, gluten and germ. Gluten feed is primarily the hull or bran and is relatively high in digestible fiber. Corn gluten feed is high in protein (25%), with 2/3 of the protein being rumen degradable. When corn gluten feed is fed at 0.5 percent of body weight, with forage the energy value is equivalent to or greater than that of corn grain. Corn gluten feed is available in wet (30-60 percent dry matter) or dry form (90 percent dry matter). The dry form is preferred because it is easier to transport, handle and store for cow calf operations. The wet form can mold and rot in a 3-14 days, depending on temperature and storage conditions. .

Corn Distillers grains is a by-product from the ethanol industry. Like gluten feed, it is available in wet or dry forms, with dry being the preferred method due to storage limitations. It is also a good source of digestible fiber and high in protein and energy. It can be successfully added to cow diets to replace forages. However, because Distillers grains are a product of a fermentation process, it is relatively low in degradable protein, so care must be taken to ensure rumen protein requirements are met.

Properly balanced minerals are important for production. When evaluating any alternative feeds the mineral content of the total diet should be balanced and will meet the animals' requirements. For example, many of the byproducts are high in phosphorus; care should be taken to ensure that the calcium to phosphorus ratio is at least 2:1 in the final ration. Land O Lakes has many minerals, balancers and formulators designed to balance specific cattle diets. Consult your Land O' Lakes Feed representative for help in balancing rations and considering the best solution for your feeding program

When feeding cattle during a drought, here are a few items to keep in mind:

1) Type and source of forage supplement is critical. When forages are limited in both quantity and quality, offering urea containing supplements can lead to urea toxicity. If using cooked molasses tubs, and other low inclusion rate supplements, make sure forage supplies are adequate. Remember, these types of feeds are designed to be forage supplements if forage supply is limited, these products can not work as designed.

2) Hay cut under moisture stress conditions, especially sorghum type hays, may contain high levels of nitrate and prussic acid. If in doubt, it would be good to test for nitrate before feeding such hays, especially before feeding large amounts. Producers who cut drought corn or sorghum for hay are encouraged to check nitrate levels before feeding. Be sure to take a good representative sample when sending to the laboratory for analysis. If forage for hay is allowed to sun cure thoroughly for three to five days, bleaching out any bright green color, prussic acid should not be a problem

3) Cattle grazing short pasture are more likely to consume toxic plants. Talk to your local extension agent or forage specialist for toxic plant potential in your area.

4) Low diet digestibility and reduced intake may result when cattle receive inadequate protein (less than 7% to 8% CP in total diet) and too much low quality forage such as drought pasture or forage substitutes such as peanut hulls, straws or gin trash.

5. Hardware disease. Hay harvested from vacant city lots, roadsides etc., broiler litter and other such feed may contain nails, wire or foreign objects which can pierce the rumen wall resulting in death of the animal. Close observation of feeds and the use of magnets in grinder/mixers can help to reduce the potential consumption of problem materials by animals. 3

5) Lack of adequate water. During a drought be sure to watch natural water sources such as ponds and tanks, to be sure there is adequate quality water available.

6) Feed only the most productive cows in the herd. When forages are limited and feed costs increase, feeding fewer more productive cows is the best economic strategy.