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7/22/2006

Alternative Strategies and Feeds for Drought  
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Drought conditions reduce the available forage for cow herds and feed cost can become expensive. The goal during periods of drought is to re-breed cows, maintain calving interval, maintain pounds of calf produced per cow and minimize feed cost per pound calf sold. Try to plan to avoid feeding hay before winter season begins if hay crop is going to be below normal. There are two primary concerns in drought:

1. Effect of reduced feed supplies on the weight gain of calves.
2. Effect on the cows and sending them into winter in poor body condition.

Plans should be made early to consider all the alternatives available in trying to minimize the effects of reduced feed, on these two areas. Even a mild reduction in feed supplies, compared to normal, may reduce calf gains by 70 pounds from that expected during the normal grazing period prior to normal weaning.

### ***Early Wean Calves***

- ? Consider early weaning calves. The nutrient requirement of a dry cow is about 50% to 65% of that of a cow nursing a calf.
- ? A young calf on dry feed has an efficient feed conversion rate.
- ? It is more cost-effective if you wean and feed the calf and let the cow forage for her own needs.
- ? Early weaning can be done before the cow loses substantial condition and if rain occurs and forage growth is obtained this fall, the cow should be in reasonably good body condition at the time that hay is normally fed or winter pastures become available.
- ? Early weaning can allow the cows to maintain their body condition for winter. Cows will have at least 40 pounds more weight, with 2 months early weaning, even when there was adequate feed available.
- ? Early weaning can produce gains comparable to nursing calves and does not have to cause excessive illness rates.

### ***Weaned Calf***

- ? Dry matter feed conversions of 5-8 pounds of dry matter per pound of calf gain can be achieved.
- ? The best feed conversions are obtained when feeding a higher concentrate diet and achieving higher average daily gain (ADG).
- ? Start 300-400 lb calves on 4 pounds/head of corn and supplement mix.
- ? Commercial protein supplements that contain minerals are the best option to feed with whole-shelled corn.

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- ? The first 14 days, the diet should be 16-18% protein to take into account low feed intake.
- ? After the calves are consuming close to 2% of their body weight, the protein concentration can be decreased to 14-16% protein.
- ? Give calves hay at 1.0 to 2 pounds/head/day, and then top dress the concentrate mix.
- ? If hay is not available, pelleted soybean hulls or alfalfa pellets can be used as a source of fiber.
- ? Calves can be weaned on a diet of no more than 2-4 pounds of roughage per day.
- ? The concentrate feed is what allows rapid gains (not hay), but the cattle must be adjusted to the diet slowly.
- ? When feeding corn, however, you must be careful not to over feed calves and create acidosis.
- ? Calves as young as 3 months can be successfully weaned and fed a dry diet.
- ? With very good management, you may be able to wean calves as young as 2 months.
- ? Use the early weaning strategy, do not wait until the cowherd has lost substantial body condition and/or there is no forage remaining
- ? The calves must be observed closely and facilities must be available for early and easy treatment of those which do become ill.

### **Creep Feed Calves**

- ? Creep feeding of the calves but leaving them on their mothers, or weaning the calves early and feeding them a growing ration in dry lot or with access to pasture.
- ? The extra feed for calves must be of high quality in either of these situations.

### **Cows**

- ? Design a feeding program to fully utilize local feeds
- ? Corn Gluten Pellets, wheat midds or rice bran or other available by-products can be fed with low quality roughage such as cotton burrs.
- ? 4 pounds per head per day of corn gluten pellets, wheat midds, and rice bran can be fed with 15 to 16 pounds of cotton burrs per head. This will meet cow needs.
- ? Body conditions should be observed and the feed amount can be increased or decreased as body condition changes. Body condition score of 5 should be maintained.
- ? Substitute 1 pound of grain for 2 pounds of alfalfa hay or 3 pounds of grass hay.
- ? Do not exceed grain feeding by 0.4 % of live body weigh, when forage is major component of the diet.
- ? Cows going into winter in poor shape will have increased nutrient requirements through the winter and could hinder the herd's reproductive performance next spring.

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- ? Experience has shown that in moderate forage depletion, mature cattle may lose 65 pounds instead of gaining an expected 92 pounds, during just a 6 week period (while nursing calves).
  - ? If the cows were in moderate condition originally, that may not be serious, especially if they have some moderately good feed later in the fall. But, if fall and winter feed will also be very limited, it can have serious consequences.
  - ? The cow absolutely must have an adequate amount of all nutrients and be gaining weight during the last 30 to 60 days of pregnancy or she will produce weak, sickly and dead calves.
  - ? The cow can adjust to a maintenance ration after conception and can endure some weight loss during mid gestation.
  - ? But weight loss or lack of gain in late pregnancy will extract a cost in the form of calf scours, calf deaths and reduced breeding for the next year.
  - ? The goal should be to have cows at a body condition of 5.
  - ? Consider culling poor producers. The earlier you do it the better.
  - ? Cull cow prices are likely to drop 10-15 cents between now and September.
  - ? Old cows, late-calving cows, open cows, and worn-out bulls should be marketed as soon as possible.
  - ? Cows should be checked for pregnancy this year.
  - ? Ship any open or questionable cows at that time.
  - ? There may be more open cows than usual because of the stress associated with drought.
  - ? Do not keep marginal cattle at a time when feed resources are scarce because feed will be your major expense.
  - ? Cows can live on mature grass, leaves, and some weeds, but they cannot live on bare ground. They will have to be supplemented with available forages or by products.
  - ? Limit feed high grain diets in dry lot or semi-confinement. The most expensive nutrient for a cow is energy.
  - ? Limit feed cows with corn to their energy needs
- Starting cows on corn:
1. Take 3-4 days adjusting up the corn and decreasing hay to the 3-4 lb level.
  2. Feed intake is being limited, so make sure that cows have enough space so that all cows can eat at once.
  3. A complete salt mineral supplement should be available at all times, 2 or more calcium to phosphorus with trace minerals and Vitamin A.
  4. Feed corn whole.

### **Body Condition Score 5**

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**Moderate** - (BCS 5) 12th and 13th ribs not visible to the eye unless animal has been shrunk. The transverse spinous processes can only be felt with firm pressure to feel rounded - not noticeable to the eye. Spaces between the processes not visible and only distinguishable with firm pressure. Areas on each side of the tail head are fairly well filled but not mounded.



Cows should be maintained at body condition score of 5 for best results next year.

Cows not nursing and dry daily requirements to maintain Body Condition Score 5  
Table 1

Cow Weight	Mcal Net Energy of Maintenance Daily
900	8.7
950	9.0
1000	9.4
1050	9.7
1100	10.1
1150	10.4
1200	10.7

The protein needs are met with 8 percent protein.

Table 2. Possible Feed Products

Products	Dry Matter Percentage	Net Energy of Maintenance (NEM) per lbs of DM	Percentage Protein, Dry Matter Basis (DM)
Soybean Hulls	91	0.84	12.1
Whole Cotton Seed	92	1.10	23
Corn Gluten Feed	90	0.91	23.0
Dry Brewers Grains	91	0.68	25.4
Wheat Midds	90	0.87	17.2
Grain Screenings	90	0.70	14.0
Rice Bran	91	0.74	14.0
Corn Hominy Feed	90	0.98	11.5
Sorghum Grain processed	87	0.93	11
Corn Grain	89	0.96	10
Dehydrated Alfalfa	92	0.61	18.9
Alfalfa Hay	90	0.59	18
Grass Hay 8% Protein	90	0.44	8.0
Cotton Burrs (Gin Trash)	90	0.43	8.0
Corn Stalks	90	0.44	5.5
Sorghum Stubble	90	0.50	6.0
Cottonseed Hulls	91	0.40	4.2
Oat Straw	91	0.42	4.4
Wheat Straw	90	0.40	3.6
Peanut Hulls	91	0.22	7.0
Rice Hulls	92	0.12	7.0

Using the energy needs from Table 1 above combinations of possible feeds (table 2) can be calculated as the best buy for energy. The feeds can be fed separately as example 4 pounds of wheat midds can be fed with 14 to 18 pounds of cotton burrs (gin trash) per head per day and meet energy and protein needs depending on the weight of the cow. Close monitoring of the cows and the feed amount can be decreased or increased to maintain body condition score 5.

### **Replacement Heifers**

- ? Consider sending replacement heifers to a feedlot for development so you can divert their feed/hay use to the cowherd.
- ? Feedlots that will grow your heifers at 1.5 to 1.8 pounds per day with by products should be cheaper than buying feed for them.

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- ? Even after paying trucking and labor, you may not have any more cost in the replacement heifers than if you fed them at home

### ***Planning for Fall Forage***

- ? Consider planting winter varieties of rye, triticale or wheat or other small grains.

### ***Other***

- ? A complete mineral should be fed at all times
- ? Supplement Vitamin A. Normally, summer forages which are actively growing will provide plenty of Vitamin A. However, drought stressed forage may be deficient.
- ? Make sure your salt-mineral mix is fortified with Vitamin A. The minimum level suggested is 200,000 units per pound.

### ***Summary***

Energy is the most deficient nutrient during period of drought and can affect the cow herd reproduction and calf growth. Use available feedstuffs and combination to give the best cost for energy to allow the cows to maintain body condition score of 5.

If standing forage is available, will best be utilized by grazing rather than harvesting and feeding. This reduces the expense of baling. Consider corn supplementation with limited grazing or some combination of rotational grazing with corn or other product to meet energy needs.