Nutritional Needs Important During Drought Management

By Kris Ringwall
Extension Beef Specialist
NDSU Extension Service

The beef cow was never intended to lead a pampered life. The beef cow is a ruminant animal specifically designed to convert cellulose or other low quality plant-like material into products edible for humans. Depending on economic or production situations, the quality of feed materials available for the beef cow can vary widely, but producers must remember that the cow can exist on low quality roughage when necessary.

During these times of feed shortages due to drought or other environmental difficulties, a wise maneuver is to avoid over reacting and remember what a normal cow needs. Feeding the beef cow requires a generalized appreciation of what a cow needs to eat. Each operation needs to have an individualized nutritional program. Following is an example to help develop a feel for general quantities of feed.

During a normal year, a beef cow doesnít need supplemental feed if she gets enough good grass hay to fill her up. If a typical mature cow in North Dakota is defined as weighing 1,200 pounds, this cow will need 10 pounds total digestible nutrients (TDN) from late summer to three months before calving. This requirement can be met if the cow consumes about 20 pounds of good grass hay. The cow needs 1.4 pounds of protein daily, so to meet this requirement the hay must have a minimum of 7 percent protein. Grass hay will seldom fail to meet requirements during this period.

That same cow in the last trimester of pregnancy needs another 2 pounds of energy and 0.3 pound of protein. These can both be provided by simply adding 4 pounds of alfalfa to the diet. After calving, the cow will require an additional pound of energy and 0.4 pound of protein. Adding 2 pounds of roughage will meet the energy increase. The protein requirement can be met if the basic grass hay ration is switched to a ration that is two thirds grass hay and one third alfalfa. Essentially, 26 pounds of this grass legume mix would feed the cow.

In herds that have greater-than-average milk production, 3 pounds of barley should be added to the ration and the roughage blend shifted to half grass hay and half alfalfa. So much for basic eating. When normal roughage types are not available, beef producers still do not need to panic, providing they can find a substitute roughage that is at least 7 percent protein. A mixture of 1 pound barley and 4 pounds of high quality straw or weedy hay can substitute for half the roughage, providing the other half is good quality hay.

The increase in protein before calving can be met with 1 pound of 30 percent protein cake daily. After calving, average milking cows would need 2.33 pounds of cake and heavier milking cows would need 4 pounds to replace alfalfa hay until adequate pasture is available in May. During severe roughage shortages, barley can substitute for hay at a rate of 1 pound of barley for 1.6 pounds of hay to a maximum of 10 pounds. Ten pounds of barley and 8 pounds of grass/legume hay would meet the requirements of a cow before calving. There is recent research from Illinois and Ohio which indicates you can go with higher levels of concentrate (corn) to the point where you are feeding essentially a feedlot diet, but this requires very close monitoring and management.

Keep in mind that vitamin A and phosphorus deficiencies are likely when feeding low quality roughage. These requirements are best met with a free-choice mineral-vitamin mix. Any time a non-traditional feed is used, and there are a multitude of them, a nutritional analysis to determine feed quality or unusual mineral composition or imbalances is a must. Check with your local nutritionist for a completely balanced ration.

May you find all your ear tags.

Your comments are always welcome at *www.BeefTalk.com*. For more information, contact the North Dakota Beef Cattle Improvement Association, 1133 State Avenue, Dickinson, ND 58601 or go to *www.CHAPS2000.com* on the Internet. In correspondence about this column, refer to BT0100.

Feed Requirements of a 1200 Pound Cow

State of Life	Pounds of Grass Hay	Pounds of Alfalfa	Pounds of Barley
Pregnant Second Trimester	20	0	0
Pregnant Third Trimester	20	4	0
After Calving Ave. Milking	17	9	0
After Calving Exc. Milking	13	13	3

During severe roughage shortages, barley can substitute for hay at a rate of one pound of barley for 1.6 pounds of hay to a maximum of 10 pounds.

Example

Pregnant Third Trimester	4	4	10

Check with your local nutritionist for a completely balanced ration.