

## Dietary Changes Needed for Early Lactation Beef Cows

Written by: Glenn Selk, Oklahoma State University

Submitted by: David Kehler, Butler County Extension Ag Program Coordinator

It is necessary that the cow manager understand the change in nutrient requirements of beef cows as they change from gestating cows to early lactation cows.

Beef cow owners have known for years that body condition at calving time is a critical determinant in the re-breeding performance of the cows during the next breeding season. Another key factor that impacts return to estrus cycles and re-breeding is the maintenance or loss of body condition after calving and before breeding. Cows losing body condition after calving and before the breeding season will be slower to return to heat cycles and rebreed at a lower rate. Therefore it is necessary that the cow manager understand the change in nutrient requirements of beef cows as they change from gestating cows to early lactation cows.

Using an example of a 1200 pound cow in late gestation, one can examine the nutrient increases as she delivers the calf and starts to lactate. Look in the Oklahoma State University Extension Circular E-974 Nutrient Requirements for Beef Cattle. A 1200 pound late gestation cow requires 1.9 pounds of crude protein daily and 12.9 pounds of Total Digestible Nutrients (TDN). She can consume voluntarily 24 pounds of dry matter feed/day. The same cow after calving will weigh at least 100 pounds less (birth weight of calf, placenta, and fluid loss). An 1100 pound cow in early lactation requires 2.9 pounds of protein each day. That is a 52% increase in protein needs. Her energy requirements go up substantially as well. She needs 16.8 pounds of TDN each day (if she is an average milking beef cow). This represents a 30% increase in energy intake per day. Her daily dry matter intake also increases from 24 to 29 pounds but this represents only a 20% increase. If the 30% crude protein supplement being consumed is increased by 3.3 pounds, the protein requirement is met and most of the additional energy needs are fulfilled. Her voluntary increase of 2 pounds of hay per day should make up the remaining gap.

As we examine this example it is very clear that the cow will voluntarily consume a small increase in dry matter, however her needs in protein and energy both increase in larger percentages. Therefore an increase in both diet quality and quantity is necessary after calving to insure that body condition is maintained into and through the breeding season.