Planning for the Third Trimester in Beef Cattle Pregnancy

Rachael Brooke
Phillips-Rooks District Extension Agent
Agriculture and Natural Resources

The third trimester of pregnancy is a crucial period because of the rapid growth the fetus undergoes and because it is our opportunity to improve cow body condition prior to calving if needed. It is easy to forget those things when we cannot see the growing fetus and a growing winter coat may be deceptive when it comes to body condition.

The table below is a simple reminder of when the 3rd trimester begins based on various dates for the start of the spring breeding season.

Start of breeding	Start of 3rd trimester	Start of calving
May 1	Nov. 6	Feb. 8
May 15	Nov. 20	Feb. 22
June 1	Dec. 7	March 10
June 15	Dec. 21	March 24

Fetal growth is exponential during this time with blood flow increasing 3 to 4-fold from mid to late gestation. In the last 60 days, 75% of growth occurs, or 60 pounds of an 80-pound birth weight. The total weight of the pregnancy with fetus, fluids and membranes at calving is around 100-150 pounds total.

Early in pregnancy, the placenta, organs and limbs develop. Muscle fiber growth starts early as well, and the number of fibers is largely determined by the 7th month of pregnancy. The size of muscle fibers and formation of fat cells that produce marbling occur later in gestation and nutrient restriction at this time can reduce the size of muscle fibers and formation of fat cells that produce marbling. The impacts on muscle fiber size have been demonstrated in heavier calf birth weights (no change in calving difficulty), weaning weights, and carcass weights. Additional marbling is not as consistently evident across studies however, by harvest time many additional factors may come into play.

As little as 1 pound of a 28% protein supplement per day during late gestation for cows grazing native range has been shown to be beneficial to calf weights and heifer performance. This level of restriction in the un-supplemented cows was not enough to reduce pregnancy rates compared to supplemented cows.

Feed costs are high this year, but strategic supplementation can pay off in calf weaning weight. Pay particular attention to first calf heifers that are growing themselves in addition to the fetus.

Article written by – Sandy Johnson, Ph.D., Extension Beef Specialist

For more information, please contact the local K-State Research and Extension Office.