Calving Season Affects Nutrition and Reproduction in Beef Cows

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Management of a beef herd in today's economic climate dictates a high level of reproductive performance. It is difficult to envision any profitability in herds weaning less than a 90 percent calf crop. My definition of a 90 percent calf crop is that for every 100 cows exposed to breeding, there are 90 calves to sell at weaning time (15 to 17 months later after the cow is bred).

A high percent calf crop requires that nutritional needs of the cow be met every day and under changing circumstances. If a cow is not adequately fed during the last one-third of pregnancy, she will calve thin and will fail to return to heat and rebreed. Following calving, priorities for nutrients are: maintenance of life, milk production, and lastly, reproduction. If a cow is not a good milk producer, she should probably not remain in the herd. If she is a good milk producer, she must have the nutrients to meet her genetic capabilities for milk production - plus nutrients to reproduce. Reproduction will be the first function to suffer with poor nutrition.

A definite calving season is a prerequisite to any sound nutritional program for a beef herd. A large portion of nutritionally related reproductive failures in cows can be directly attributed to our lax philosophy on a fixed calving season. With prolonged (or even yearround) calving seasons, dry cows are commonly overfed and lactating cows are underfed. This results in high overall feed costs and reductions in herd reproductive performance. The nutrient needs of an individual cow vary dramatically over a production year.

Cows should be grouped so requirements for all stages of production are met; otherwise, a sensible nutritional program is impossible. Unfortunately, available data and my experiences indicate many producers have no definite calving season, or have one that is too long. Many producers feel they need to have long breeding and calving seasons to get all cows pregnant. However, a logical argument can be constructed that short breeding and calving seasons (60 days) would increase pregnancy rates over time. With a four-month calving season, a cow could have an average interval between calves of 405 days and stay in the herd for six calf crops. If her daughters were selected as herd replacements, they potentially would also have long calving intervals. Even if heritabilities for reproductive traits are low, which recent data dispute, continual selection for long calving intervals can certainly reduce overall herd pregnancy rate.

A short calving season has obvious advantages in fitting beef management to the local environment. One study in the Southeast compiled weaning weight data on 13,000 calves in commercial herds where year-round breeding and calving seasons were used. Heaviest calf weaning weights were with the birth-months of December through April. The average weaning weight of calves born during these five months was 51 pounds heavier due to when the calves were born. Another study indicated cows calving November through April had an average calving interval of 376 days and cows from the same herds calving May through October had an average calving interval of 431 days. (Obviously, a calving interval of 365 days is a calf each year). Note the close agreement between calving season months that resulted in calves with the heaviest weaning weights (December through April) and months that resulted in cows with the shortest calving intervals (November through April). In these studies, herds received only limited supplemental feed. The majority of differences in weaning weight and reproductive performance were nutritionally related.

All areas of the country will not exactly fit these data, but studies in other geographical areas also indicate there are months of calving which favor increased weaning weights and decreased calving intervals. The argument for a short calving season - 60 and certainly no more than 90 days - becomes overwhelming. This calving season will generally best fit into late winter or early spring so the calving season is about two months ahead of good grass in your area.

Other options may work but will require more management and certainly more supplemental feed. As a general rule, forages harvested by the cow are the most economical feed, and a knowledge of forage characteristics for a local area is essential for planning a calving season and feeding program for a beef herd. Again, if a calving season is planned to fit around the forage system so that high quality "cow harvested" forages are available when the cow has her greatest nutritional needs, supplemental feeding can be kept to a minimum, weaning weights and reproductive performance will be high, costs kept in line, and profits maximized.

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