

## **The role of nutrition and management in maintaining high reproductive efficiencies in beef cattle**

Proper feeding and nutrition are essential to maintain reproductive efficiencies in a beef operation. These begin with the young heifers that will be used as replacement for mature cows. On average, about seventeen (17) percent of the cow in a beef operation is replaced annually. Consequently they must be properly fed early in their lives. Research has demonstrated that young females that received poor nutrition had delayed puberty, reduced conception rates and increase pregnancy loss. In addition, genetics can influence age of puberty or first heat. Cross bred heifers tend to reach puberty earlier than purebred heifers, and daughter from sire with larger scrotal circumference tend to reach puberty earlier. Further, heifer must be able to conceive as early as possible, and so it is important that heifers are recycling before the breeding season. Research has shown that conception rates increased by twenty (20) percent in heifers bred at their third estrus. Heifers must conceive at fifteen (15) to sixteen (16) months in order to produce a calf every year. As a general guideline, heifers should weigh sixty (60) to seventy (70) percent of their expected mature weight at their first breeding. Furthermore, they should weigh about eighty (80) to ninety (90) percent of their mature weight at their first calving. Their daily average gain during gestation should be approximately one pound per day. Although it is important to meet the needs of the replacement or growing heifers, over feeding should be avoided because it can lead to breeding problems.

A manager of profitable beef enterprise expects a cow to produce a calf every year, and so adequate nutrition is one of the key factors that influence reproductive efficiencies in cattle. In general cows that are fed diets high in energy after calving conceive sooner than those diet with low energy. Cows that conceive late extend the breeding seasons, and this usually leads to lighter calves for the feeder market. In addition, it costs more to feed cow that conceive late in the breeding season. The take home message is ensure that heifers and cows are receiving adequate nutrition necessary to produce a calf every . Please note that not every beef producer can get his cow to produce a calf every year, but it is a target one can strive for.

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