Effects of supplementing beef cows grazing spring pasture on performance and reproduction

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Introduction

Spring brings a lush, quick forage growth. This fast growing forage contains mostly water (20-25% Dry Matter (DM)) and as a result of physical fill can limit DM intake. Sufficient DM intake is needed to meet the nutrient requirements of cattle. This forage is also high in protein. Previous research has shown that high levels of protein can be detrimental to cow pregnancy rates.

The majority of cows in the Midwest are calved in the early spring (Feb-April). This calving period aligns peak lactation and breeding season on top of lush, wet grass. Thus, forages at this period of time may consist of immature, lush growth that fails to meet nutrient requirements of this demanding stage of production. As a result of nutrient requirements not being met or unbalanced, cow performance and reproductive success are likely below optimum.

Materials and Methods

One hundred and twenty lactating Angus and SimAngus cows were allotted to 1 of 2 dietary treatments: 1) Supplement (SUP): Supplemented a 4 pound mix containing 45% Soybean Hulls, 45% Ground Corn Cobs, and 10% molasses. 2) Control (CON): no supplementation. Both treatments rotationally grazed fescue-based pastures during the 70 day trial. Cows were rotated using the “Take half, leave half” grazing strategy. This was determined by taking rising plate meter readings. The SUP cows feed was fed in a feed bunk which allowed for at least 75 in. feeding space per cow.

Pastures were sampled at turn in and turn out of each rotation. Pasture samples were analyzed for DM%.

Cow weight and BCS was collected at start and completion of the trial. Pregnancy was determined via ultrasound.

Preliminary Results

Supplemented cows did not differ in weight or BCS when compared to the control cows. However, first service conception rates where improved (67% for the SUP cows vs. 45% for the CON cows). The overall pregnancy rate did not differ.

Pasture samples showed a lush spring grass that was below 25% DM from the start of the trial (April 30th, 2013) until nearly the beginning of June in 2013. The cool temperatures early in the fall delayed forage growth. Quick growth that came with warm temperatures in the first and second week of May also corresponded with low DM% in the forage. The average DM% for all paddocks tested under 20% in the second week of May.

Summary

These data imply that during lush, spring forage growth cows may not be able to physically eat enough forage to meet nutrient requirements or that there is an imbalance of high protein and low energy that causes lower conception rates during peak grass growth. In this experiment, cows were likely experiencing peak lactation at the same time as low forage DM% which could cause lower conception.