The Role of nutrition in getting a cow to produce a calf yearly

Basil Bactawar
County Extension Director

Introduction

- Good reproduction rates are important to the financial success and profitability for a cow/calf operation.
- The goal is that a heifer or cow should produce a calf every year.
- Cow that do not produce calves every year are using feed and labor resources that can be used to support more productive cows.

How do we measure reproductive efficiency

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- Calving interval = Age in days at fist calving minus age in day at last calving divided by the number of

Reproductive Cycle

- Average gestation period for cattle = 285 days
- No of day remaining for cow to conceive = 365 day -285 day = 80 days
- The process by which the uterus returns to their pre-pregnant state is called involution, and it takes about 45 days
- No of day remaining to come in heat and conceive =80 – 45 = 35. Cow needs to be come in heat and conceived during first heat period

Estrus and conception

- About 90 % of cattle in optimum body condition will resume estrus cyclical activity 60 days post partum
- Select heifer and cows with high reproductive efficiency
- Good herd health program

Estrus and conception

- Semen tested bulls
- Hygiene at calving
- Heat detection
- Pregnancy testing
  - Palpation
  - Ultrasound
  - Blood test

Preparing Heifers

- Poor nutrition delays puberty, reduces conception rates and increases pregnancy loss in heifers.
- Heifers raised on very high nutrition can lead to breeding problems
- It is important that heifers are cycling during their first breeding cycle

Preparing Heifers

- Heifers should weigh about 60-65 % of their expected mature weight at their first breeding.
- During gestation they need to gain a pound of live weight a day.
- They may need supplemental feeding to ensure they are still growing during pregnancy

Preparing Heifers

- There is a misconception that restricting feeding before calving will reduce calving difficulty.
- The fetus continues to grow particularly during the 3rd trimester of pregnancy.
- If the heifer is not fed to meet its requirements for growth and pregnancy, it may reduce its chance of rebreeding in the next breeding season.

Preparing the cow

- In general cows fed a high energy diet after calving conceive earlier than those with low energy intake.
- Protein is generally regarded as less important than energy, but low protein intake can lead to infertility
- In general, cow should be fed well 22 -55 days before parturition and 90 days after parturition

The use of body condition score to feed heifer and cows

- Every cow has an optimum body weight for conception, and it is called the critical weight.
- An animal can be assigned a body condition score that reflects the amount of fat and muscle tissue covering the skeletal frame
- The widely used one is the bodycondition score rangeing from 1 to 9

The use of body condition score to feed heifer and cows

- 1 to 3 = thin/ 4 = borderline/5 to 7 = optimum/8 to 9 = too fat
- Research report by UF as cattle condition score decrease for condition 5 to 4, pregnancy rate decrease by up to 30 percent.
- From BCS 4 to 3, there was another reduction of pregnancy y 30 percent

When to evaluate body condition score

- At least 3 time per year
- At weaning- the advantage is that the time period from weaning to calving has proven to be the easiest and most economical time to add condition to cattle
- Ninety (90)days prior to calving so that one has sufficient time to adjust the feed ration to ensure cows are at the adequate body condition at calving