Replacement Heifer Development:
Changing Minds for the Change In Times

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Introduction

Over the past 10-11 years there have been a lot of changes in agriculture that led to changes in how some have managed their beef herds. One of those areas in the beef production processes is heifer development. In 2003 Veterinary Medical Center(VMC) organized and placed heifers in a dry feedlot setting to develop and breed.

Changes

We typically see replacement heifers selected and developed along with the cow herd. This was mainly because of numbers. It was hard to justify a heifer bull with only 5-10 head and rightfully so. But with commodity prices, land prices and changes in technology producers have become aware that efficiency and consistency need to be addressed in the handling of their replacement heifers.

Some of the issues that needed to be addressed were having heifers at the right age to start the breeding season. Around 35% of beef heifers fail to reach puberty by 15 months of age. The reason may be in genetics, or the delay may be due to nutrition. Bull selection can be a major issue when it comes to calving. Dystocia rates can be as high as 30% nationally. All of these issues can lead to the first calf heifer falling out of the herd because of not rebreeding. With VMC heifer development some of these issues can be addressed because the space, time, and economics to develop replacement heifers can be controlled.

Heifer selection

A few guidelines in selection are: 1. Try to retain heifers out of the first 21 day calving window. 2. Early growth heifers but selection of these types of heifers may lead to heifers that do not produce milk as well because of mammary fat deposits and may not breed as well because of hormonal imbalances. 3. Cull heifers that are extreme on either end. Fertile heifers should have a 60-70% first service conception rate with a 90% pregnant rate after a 65 day breeding season. 4. Selection for large pelvic area heifers decreases dystocia rates. 5. Potential milking ability. 6. Structural soundness, temperament, and frame score.

The Heifer Development Program

The first step in success of a heifer program is having a plan in place that everyone can see and understand. Without a plan very important steps can be forgotten or delayed that may lead to poor results. All necessary vaccinations must be placed at appropriate times for breeding to be at optimal levels. Heifers should have a target weight set for breeding. VMC uses a 70% of mature weight, but that can change based on philosophy and/or types of cattle. At about a year of age, a reproductive tract score and pelvic measurement helps narrow selection of heifers and provides an understanding of where heifers are at in terms of puberty and potential breeding success.

Breeding in the VMC program is started first by synchronization of the heifers with MGA. If managed this protocol can be very successful but does have limitations if heifers are not fed in a manner that will allow all heifers to receive the adequate dose of MGA. CIDRS are becoming more common in synchronization programs and VMC will be using more CIDR programs in the future. VMC has been time breeding all heifers. Any heifer that shows heat prior to the timed insemination date will be bred before hand. This is key in having a high AI pregnancy rate. In the VMC program clean up bulls are turned in 1-2 days after AI. Clean up bulls are pulled in 40-45 days. Heifers are then ultrasounded 30 days after pulling the bulls.

Cost and Data

In the last few years the VMC heifer program has grown to 500 head of heifers being developed. The total program costs have exceeded $600 dollars just once in these times of high commodity prices. Our average feed cost has been around $1.50 with total feed and yardage cost around $1.85 average. Calculating on a total per day cost for all cost involved in heifer development the average would be close to $2.30 per day from 2003 to 2013.

The bred heifer cost for heifers coming out of the program has risen as cattle prices have gone up. Accounting for opens the 2013 developed bred heifers cost on average $1,600. Heifers in today's market cost $2000 plus.

The big advantage to VMC development is the breeding cost. Even with all the synchronization, AI, and clean up bull, breeding costs are $56 to $59 per head. Prices of good calving ease clean up bulls can be in the $3000 to $4000 price range. If there are 10 head of heifers to be bred to a bull in that price range the breeding cost are $175 to $275 per head that first year. Even with 2nd and 3rd year use, the breeding cost is still above the $59 per head in the VMC program.

Well developed heifers like the ones in the VMC program can achieve 60 to 70% pregnancy rate in the first 10 days of the breeding season. The percentage of heifers being pregnant in the 45 day breeding window set under the VMC program has be 85 to 90 %.