APPLICATION OF SYSTEM CONCEPTS IN HEIFER DEVELOPMENT

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INTRODUCTION

The following is a summary and outline of the program I have implemented at Bar L Ranch in an attempt to produce my own replacement heifers to calve at two years of age. My brood cow herd of approximately 800 head is comprised of primarily Beefmaster cross, Braford cross and Brangus-type cows. In the past three years I have leaned heavily toward the Brangus heifers for replacements. The brood cows are divided into two herds, one calving in October, November and December, and one herd calving in January, February and March. The reason for two herds is to spread out my calving so I can give more attention to the cows that have calved. I could not possibly provide controlled winter grazing for all 800 mama cows if they calved in the fall, and further, I get double use out of my bulls and can spread out my sale opportunities. There are other reasons that I won't try to go into in this outline.

I. BIRTH

Replacement heifers begin being born approximately September 10 each year. The reason for September births is that I put only my Brangus bulls in on December 1 of the prior year with the cows that have been calved. This allows the Brangus bulls to breed the more fertile cows that are cycling first. If I wait until December 21 to breed, then calves would drop approximately October 1 of the following year. Further, by gaining the extra 20 days, it gives the potential heifers more age which is so crucial when breeding to calve as two year olds. The Brangus-type calves are all born during the last three weeks of September and

the entire month of October. At the end of October, all Brangus-type calves are worked, and they and their mothers are separated from the dry cows. The steer calves are implanted and castrated. No implants are given to the heifers. All the calves born during this period are notched in the upper part of the left ear signifying they were October-born calves. The calves and mamas are moved to a separate permanent pasture where the cows receive free choice 32% liquid supplement, free choice wintergrazer minerals, free choice hay if permanent grazing is not adequate, and as soon as winter grazing is available, they receive two hours per day grazing on rye, oats and ryegrass combination planted in a prepared seedbed. They continue to receive control winter grazing, free choice hay and liquid supplement, and minerals throughout winter until spring, and thereafter, they continue onto permanent Argentine bahiagrass pasture.

I remove my Brangus bulls approximately January 21 each year, and I add Charolais bulls thereafter. Therefore, the Brangus bulls are used approximately 50 days. I rotate the Charolais bulls with Limousin bulls thereafter until the end of breeding season for both herds.

I continue to add my November and December-born calves to the same herd; however, they are from Charolais and Limousin bulls. The calves are worked the same as September calves and receive the same feeding and treatment.

No cow goes on controlled winter grazing until calved. The springing cows are fed a diet of free choice minerals, liquid supplement and hay. In March, the calves born in September, October and November are wormed with Ivomec, Blackleg vaccinated, and the steer calves re-implanted with Ralgro.

The potential heifers remain with the mamas until late July, at which time they are culled out and weaned.

II. WEANING

The criteria for a heifer to be saved as a replacement at weaning is for her to be black with some ear, she must weigh in excess of 600 pounds, have feminine characteristics, good capacity and be structurally sound.

Upon weaning, the heifers are wormed with Ivomec, given 7-way Blackleg, Lepto, Vibro+ Bar-4 Somnus shots and a number brand is placed on the left hip to signify the year of birth. The heifers are fed a pre-conditioner for three weeks after which time they go on a home prepared feed mixture of crushed shelled corn and peanut hull pellets, free choice liquid supplement, minerals and permanent pasture grazing until killing frost. They continue on this feed until winter grazing has sufficient growth to begin full grazing. At that time, corn feed is discontinued. The heifers remain on full time winter grazing and free choice hay throughout winter. I try to get a $1\frac{1}{2}$ to 2-pound per day gain on the heifers from weaning until breeding.

III. BREEDING

I put Limousin bulls in with the heifers on January 1. I try to use smooth-shouldered, medium-boned bulls with proven performance of siring small calves. The heifers at breeding time are approximately 15 months of age and weigh approximately 850 lbs. I use extra bulls, since they are available and it is good for the bulls to be flushed on the green grazing. I use up to one bull per ten heifers, hoping to breed them as quickly as possible. They are cycling very well due to size and available feed. I leave the bulls in with the heifers for 50 days; however, after the first 25 days, I usually remove some of the bulls reducing the ratio to one bull to 30 head. After 50 days, the bulls are removed from the heifers, and I wait 90 to 120 days to test for pregnancy, at which time I cull the open heifers and rejects for any other reasons. I have consistently had a 95% or better conception rate. The heifers remain on permanent pasture with liquid supplement and mineral free choice. They are kept separate from the main herd.

IV. FIRST CALVING HEIFERS

My heifers begin calving approximately October 10 and continue for approximately 50 days. The heifers are checked three or more times daily. They are calved in a small bahiagrass pasture close to corral and readily visible from the road with no hiding areas. Due to size of heifer, type of bull used and diet provided, calving is not a problem. After killing frost, the heifers receive liquid supplement, mineral and hay free choice, and as soon as winter grazing is available, the heifers that have calved are put on grazing on a full time basis. After all heifers have calved, they remain on full time winter grazing and hay throughout the winter. Charolais bulls are put in with calved heifers on December 21. This would put them to begin calving October 1 of the next year. These heifers rebreed immediately, since they are on winter grazing.

Rather than leaving the heifers' calves on them as long as I do the mature cows, I try to sell the calves of these heifers in May or early June. This gives the heifers adequate time to grow and improve condition during summer and be ready to be added into the mature cow herd in fall.

As I have stated to you many times, it is extremely hard to save your own produced heifers, calve them as two-year-olds, and at the same time, stay on a 90-day calving period. Furthermore, the feed lot demand now is for the quality terminal cross calf, and this makes quality replacement heifers extremely hard to find and buy.

I need to save approximately 100 replacement heifers per year and am having trouble getting this many heifers out of the late September and October-born calves. I feel that to save heifers out of November calves would only stretch out my calving of heifers the next year and make it extremely hard to keep calving within a 90-day period in the future.

Realizing the uncertainty of weather and feed supplies, and in the event of such problems, I am in a position in the event of slow breeding in my fall calves to leave a bull with them, and they will breed in time to calve in January, February or March. I feel that it is better to move a cow; into that period rather than lose a calf and cull the cow; however, if a cow does not calve in the second period, she is culled.

I operate Bar L Ranch, consisting of

2200+ acres with three full time employees, being two nephews and a cousin. My son and my brother assist me on weekends. I personally supervise and direct the day-to-day operation. All cattle work is done on weekends. Weekdays are spent growing crops, making feed, feeding, fencing, etc. I produce all my feed except protein supplements. My two nephews concentrate entirely on looking after cattle, making hay and feeding. My cousin plants 120 acres of peanuts and grows corn and oats for feed and seed.

Hopefully, the above information will be helpful to you in understanding the program I have implemented in producing and keeping my replacement heifers. I have included considerable information about my operation, but felt this was necessary to better understand my reasoning for the type heifer program implemented.