

APPLICATION OF SYSTEM CONCEPTS IN HEIFER DEVELOPMENT

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INTRODUCTION

I have been calving my heifers as twos for 33 years and have followed almost the same schedule for that long. I believe in a systems approach to management and that it is the best way to get things done.

I wean my heifers around September 15th weighing over 600 lbs. I feed them around eight to nine pounds of a 16% grain ration plus 200 milligrams of Bovatec until January 1st.

In the first week of January they are weighed, graded and measured for ribeye area. Around January 12 to 15th they are palpated and measured for pelvic opening. All who are ovulating get 5cc of Lutalyse and are put with the bulls for 90 days. At that time, I cull all of the small pelvises, ribeyes, and low indexing animals.

I take the bulls out May 1st and on June 1st heifers are pregnancy tested. All open heifers and usually the ones that bred late are for sale.

The first week in August the remaining heifers are weighed and graded and they weigh almost 1,000 lbs. They start calving around October 15th and their first calves weigh around 550 lbs at weaning the next August.

WHY CALVE AS TWOS?

It: (1) Increases the fertility level of the herd and promotes early calving; (2) Promotes early maturity which hastens finishing and shortens the time on feed; (3) Promotes a younger average age in the cow herd and increases the opportunity for genetic improvement; (4) Hastens the culling rate of old and unproductive cows by replacing them

with bred heifers; (5) Is an economically good practice to sell a 1000 lb cow and keep a 500 lb heifer; (6) Takes advantage of the increase in value of a weaned heifer (i.e., 500 lbs @ \$.80 = \$400, versus a bred heifer at \$700). That might not grab you, but don't forget she has a potential 500 lb calf inside her; (7) Promotes better use of your grass and turnover of your money. Instead of waiting another year on a three year old and tying up your grass, you have a calf to sell. This means more dollars per cow income; and (8) Promotes less calving troubles. Calving as twos, heifers don't get as fat nor their calves as big. Pelvic measurements really help in this case.

SELECTION

I cannot say enough for selection. It is a word that you don't hear very much in cow circles. Most of the talk centers around this new breed or that new breed and three way crossed or show ring winners. If we are going to improve our cattle or even stay in business, we have got to use the tool of selection.

By use of the pelvic meter and Ralgro, I have increased the pelvic opening on my yearling heifers from 165 to 199 square cm, an increase of 34 square cm over the last six years (Table 1).

I have taken pelvic measurements for 12 years, but a dramatic increase came with the use of Ralgro. The reason I had such good results before Ralgro was because I had eliminated the trouble makers by culling the small openings. The dividend is that we hardly ever have to pull a calf unless it is a breach or head turned down and then there has been sufficient room to get the calf out.

RIBEYE AREA

For the last three years I have been selecting for ribeye area in my replacement heifers. They are measured with the sonoscope in January when we are weighing and grading. The ribeyes have ranged from 7.8 to 15.9 square inches. I eliminate everything below 10.

I have observed already that there is a lot of variation and opportunity for selection and I hope to produce animals with superior meat qualities in the future.

WEANING WEIGHT AND AGE

If you plan to calve as twos, I suggest that you start with a 500 lb animal that was born in November or December (or is 9 to 10 months of age) in order for them to be big enough and old enough to work in a program. This means selecting for weaning weight and early calving, of course.

Now there are some other tools on the market which will help in the success of calving as twos: Ralgro, which I mentioned earlier, Bovatec an ionophore and feed supplement, and Lutalyse, a hormone.

RALGRO

Ralgro is a growth implant that we do not want to overlook. It not only gives you an extra 56 lbs in weaning weight and a larger pelvis, but it also increases the percentage of breed back in heifers calving as twos (Table 2). There are some side effects you should be aware of. Some heifers will bag up and look pregnant. I have carried some of these through calving with no bad results. Do not Ralgro your bulls, it ruins their testicles.

BOVATEC

Bovatec, one of the ionophores, is a feed additive that I have been using for the last eight years. It is supposed to increase daily gain and feed utilization. It also guards against Coccidia infection. Bovatec also promotes early maturity which is noted in increased ovulation

and pregnancy rates in heifers and increased scrotal circumference and fertility in bulls. My heifers have received 7 to 9 lbs of a 16% supplement plus 200 milligrams of Bovatec from weaning to the first of January, around 100 days over the past eight years (Table 3). Notice the gain in 1990. They received 9 lbs. The ovulation rate, 89%, was also the best ever.

The biggest dividend in using Bovatec was a 17% increase in breeding percentage. I also feed it to the first calf heifers for 30 days before the breeding season.

SYNCHRONIZATION

I have been synchronizing my yearling heifers for the last eleven years and I believe in it. It encourages heifers to breed early and breed back early and most of them do it the rest of their lives. It also promotes fertility. A cow that breeds early generally stays in the herd. We all know how much more an early calf is worth over a late one.

We palpate yearling heifers around January 15th and give the ones that are ovulating 5cc of Lutalyse. They are then put with the bulls. Within three days most of them will be in heat so we use a ratio of one bull per 20 head. They will start calving around October 15th and most of the calves will be on the ground by the first of December.

To give you an example that really works, look at Exhibit A from my lifetime BCIA Cow Production records. These were 1984 heifers that were synchronized. Look at the calving intervals. These are all productive cows that weight 1,000 to 1,300 lbs at maturity on grass.

One little suggestion on getting first calf heifers to breed back, assuming the nutrition is good: before you put the bulls in, get the heifers up and palpate them and give 5cc of Lutalyse to all that are ovulating. I generally have only a few that are ovulating, but it still works.

I believe that calving as twos is a good practice and the most efficient way to manage the cow herd.

Table 1. The Effect of Selection and the Use of Ralgro on Size of Pelvic Opening in Yearling Heifers		
	January 1 Weight	Pelvic Size, square cm
1985	744	165
1986 Ralgro	772	194
1987 Ralgro	801	202
1988 Ralgro	755	190
1989 Ralgro	748	190
1990 Ralgro	756	199

Table 2. Effect of Ralgro on Weaning Weight, Pelvic Area, and Percentage of Breed Back on Heifers Calving as Twos.

Calf Crop Year	No. Head	Sept. Initial Weaning Weight	Jan. Final Weight	Pelvic Size square cm	Aug. Weight 18 Months	% Breed Back
Ralgro 1990	74	630	756	199	---	--
Ralgro 1989	73	629	748	190	903	--
Ralgro 1988	62	641	755	190	932	91
Ralgro 1987	71	663	801	207	987	95
Ralgro 1986	67	594	772	194	969	93
1985	72	592	744	165	959	76
1984	69	648	778	171	945	84
1983	45	586	741	168	992	80
1982	49	523	647	165	957	68
1981	45	567	718	165	900	87
1980	44	538	711	172	925	74
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*** Ralgro increased weaning weight 576 to 632 pounds, 56 pounds**

**** Ralgro plus selection increased pelvic area opening from 168cm to 196, 28cm**

***** Ralgro increased breed back from 78% to 93%, 15%**

Table 3. The Effect of 200 Milligrams of Bovatec on Gains and Breeding Percentage on Weaning Crossbred Heifers

Calf Crop Year	No. Head	Weaning Weight Sept.	Final Weight Jan.	Gain Per Day	% Pregnant
Bovatec 1990	74	630	756	1.59	--
Bovatec 1989	73	629	748	1.06	84
Bovatec 1988	62	641	755	1.05	82
Bovatec 1987	71	663	801	1.09	80
Bovatec 1986	67	594	772	1.45	95
Bovatec 1985	72	592	744	1.32	91
Bovatec 1984	69	648	778	1.29	80
Bovatec 1983	45	586	741	1.40	88
1982*	49	523	647	.90	67
1981	45	567	718	1.57	78
1980	44	538	711	1.02	74
1979	45	--	697	1.02	55
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*** Infestation of Coccidia. No Coccidia worries since 1983. Note what Coccidia did to gains and pregnancy rate.**

**** Gain per day increased from 1.12 to 1.28, an increase of .16 pounds per day.**

***** Percent pregnant increased from 68% to 85% an increase of 17%.**