



Using Your Pocket Calving

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Record Calf Prices Are Not Generating Record Profits – *Something Is Amiss!*

As I continue to conduct Cost & Return Analyses for individual U.S. beef cow producers, today's record prices are not transferring into record profits for some (and maybe even many) ranchers. Several missed profit opportunities are surfacing and, indeed, are preventing record profits. Something is amiss out there. Generally, these missed profit opportunities can be corrected with more intensive management resulting in little or no added production costs.

I think that every rancher that I have worked with has a calf book in his pocket; but when ever I ask them what they do with the data, the most frequent answer is "not much!" The objective of this article is to suggest how your existing pocket calving book data might be used to turn a frequent missed profit opportunity into a profit.

A calving book that contains the date each calf was born, a unique calf number, the calf's related dam number, plus the weaning weight of that calf is really all that is needed to generate a Herd Calving Distribution Table (HCDDT). A Herd Calving Distribution Table, in turn, turns a calving book's data into a powerful beef cow herd management summary that can tell a herd manager a lot about his herd's production performance.

An Example Calving Distribution Table

An actual Calving Distribution Table is presented in **Figure 1**. This particular North Dakota herd calved 164 females with a herd average weaning weight

of 563 pounds.

The columns in this table summarize this herd's production by 21-day calving intervals while the rows in this same table summarize this herd's production by age of dams. Weaning weight averages for each 21-day calving period are summarized at the bottom and the average calving date and average weaning weight for each age of females are summarized on the right.

Summarizing A Beef Cow Herd By 21-Day Calving Interval

Figure 2 highlights this herd's calving data by 21-day calving intervals. Fifty-six females calved in the first 21-day period generating an average weaning weight of 639 pounds. Thirty-eight females calved in the second 21-day calving interval generating a 571 pound average weaning weight. Thirty-four females calved in the third 21-day calving interval with an average weaning weight of 526 pounds. Eighteen females calved in the fourth 21-day interval averaging 412 pounds. Finally, the eight cows calving late averaged a 380 pound weaning weight. Two females were open.

In order to maximize the pounds of calf weaned, one would like to have all the cows in this herd calve in the first or second calving interval so that maximum calf pounds could be weaned. A profit increasing opportunity comes from managing females from the third, fourth, and late calving intervals forward towards the

Figure 1

Calving Distribution Table
 Total Herd

Dam Age	#Calves Each Age	Early	21 1st	21 2nd	21 3rd	21 4th	Late	Open Cows	Avg Date For Each	Avg WWT
2	31	8	11	4	4	4			4/13	543
3	24		8	8	4	4			4/15	552
4	35	2	19	4		2	8		4/18	598
5	12			4	4	4		1	5/9	579
6	8			4	4				4/22	611
7	14		4	4	6				4/4	578
8	18		2	8	4	4		1	5/3	543
9	12		8		4				4/16	530
10	6		4	2					3/30	518
11	4				4				4/20	528
12+	0									0
Total	164	10	56	38	34	18	8	2	4/18	563

Weaning Wt 642 639 571 526 412 380
 12-30-04

Book to Increase Beef Cow Profits

Figure 2

Calving Distribution Table
21-Day Calving Intervals

Dam Age	#Calves Each Age	Early	21 1st	21 2nd	21 3rd	21 4th	Late	Open Cows	Avg Date For Each	Avg WWT
2	31	8	11	4	4	4			4/13	543
3	24		8	8	4	4			4/15	552
4	35	2	19	4		2	8		4/18	598
5	12			4	4	4		1	5/9	579
6	8			4	4				4/22	611
7	14		4	4	6				4/4	578
8	18		2	8	4	4		1	5/3	543
9	12		8		4				4/16	530
10	6		4	2					3/30	518
11	4				4				4/20	528
12+	0									0
Total	164	10	56	38	34	18	8	2	4/18	563
Weaning Wt		642	639	571	526	412	380			
			+68	+45	+114	+32				

first and second Calving intervals.

Why should ranchers measure 21-day calving intervals? Ranchers can only manage what they measure; therefore, to manage calving intervals, ranchers need to first measure their calving intervals. I know of no better way to measure calving interval than by constructing a herd calving distribution table (HCDDT).

The next question from ranchers is how should they use this herd calving distribution table to enhance profits? The answer lies in the very bottom line of Figure 2 – in the Lbs to be Gained. If one of the eight late calving females could be moved up to even the fourth calving interval, an average of 32 pounds more calf would be weaned in the fall. If one of the eighteen females calving in the fourth calving interval could be moved up to the third interval, an added 114 pounds would be weaned in the fall. Moving

females from the third to the second interval would generate 45 added pounds at weaning.

These added pounds are all economic rewards to tightening up the calving interval. For example, if just one-half of the total females in the third calving interval, fourth calving interval, and late calving interval, could each be moved forward just 21 days, this rancher's average weaning weight would go up 11 pounds and he would have the equivalent of 4 more calves to sell at weaning. With Fall 2004 U.S. record calf prices, this missed profit opportunity is valued at \$2,758. For all practical purposes, these

added calf pounds come at little or no added costs.

If all of the third, fourth, and late calving cows could be moved forward 21 days, this would add \$5,516 to the value of calves produced. This all suggests that this rancher has a \$2,500 to \$5,500 missed profit opportunity due to his wide calving distribution.

Setting A Calving Distribution Goal

So what should be the calving interval goals for this rancher? The best goal guideline that I can offer is the benchmark values generated by other well managed herds. Figure 3 benchmarks this herd against the five-year rolling average of North Dakota's Cow Herd Analysis Performance System (CHAPS) herds. These North Dakota herds all had herd performance records.

This study herd had 44.9% of its calves born in the first 21 days. This com-

Figure 3
North Dakota's Beef Cow Herd Analysis Program (CHAPS)
Calving Distribution Data

Herd Performance Measures	Study Herd	Benchmark Avg	Your Goals
Calving Distribution			
Calves Born During First 21 Days	44.9%	58.2%	—
Calves Born During First 42 Days	74.4%	85.9%	—
Calves Born During First 63 Days	80.4%	95.2%	—
Calves Born After First 63 Days	19.6%	4.8%	—

compares to the benchmark herds getting 58.2% of their calves born in the first 21 days. This study herd had 74.4% of its calves born by the end of the first 42 days. The benchmark herds had 85.9%. By the end of 63 days, the study herd had 80.4% of its calves born while the benchmark herds had 95.2% percent. The study herd had 19.6% of his calves born after 63 days while the benchmark herds had only 4.8%. For some reason, the manager of this study herd can not get his cows bred in a timely manner. I wonder why?

Calving Distribution Tables do not tell us how to correct a problem; they only identify where there are profit increasing opportunities. Once a profit opportunity is identified, it's up to the manager (and his consultants) to determine how to take advantage of this profit opportunity. For example, something needs to be done by this rancher to facilitate breeding his cows in a more timely manner.

If this rancher could get his cows to calve in the same interval as the benchmark herds, his average weaning weight would be 36 pounds higher generating 6,013 more pounds of calf to sell at weaning. With Fall 2004's large price slides, this added pounds would have generated \$4,236 more calf revenue if this rancher had the same calving interval as the benchmark herds in Figure 4. (An interesting side note. As average calf weight is increased, price slides ensure that the market price goes down. The steep price slides experienced this Fall reduced the marginal price of the added 6,013 lbs from marketing heavier calves to just \$0.70 per lb. of added weight.)

Biology sets the limits as to how much a producer can consolidate his herd's calving interval. My recommended set of production guidelines comes from North Dakota's Cow Herd Analysis Performance System's benchmark values (see Figure 4). The top chart summarizes the U.S. Integrated Resource Management Standardized Performance Analysis (IRM-SPA) Guidelines published in North Dakota for operating a high production herd. These guidelines suggest sixty-one percent of your calves should be born by day 21, eighty-five percent by day 42, and ninety-four percent by day 63.

The bottom chart references additional Critical Success Factors (CSF) Guidelines utilized in North Dakota. Thirty-six percent of heifers should calve early, seventy-one percent of the heifers should calve by day 21, and eighty-five percent of heifers should calve by day 42.

In summary, today's high market prices are generating big economic rewards to intensified management. Not all ranchers are taking advantage of today's record prices. Management as usual may just be what is amiss out there.

¹An earlier version of this article was published in the BEEF Magazine, Feb. 2005 under the title of "Something's Amiss with Profits-Part 1".

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Figure 4

CHAPS 2000 Benchmarks
Based on 111,583 Cows Exposed
and Processed During 1997 - 2001

SPA	
Pregnancy% -----	93.48
Preg Loss% -----	.72
Calving% -----	92.83
Calf Death loss -----	3.45
Weaning% -----	90.25
Replacement Rate -----	15.80
CD Loss Based on # Born -----	3.2
Average Age at Weaning -----	195
Calves at 21 Days -----	61.1
Calves at 42 Days -----	85.6
Calves at 63 Days -----	94.1
Calves after 63 Days -----	5.9
Steers WWT -----	559
Heifers WWT -----	542
Bulls WWT -----	612
Average WWT -----	556
Lbs Weaned/Cow Exposed -----	498

CSF	
ADG -----	2.34
WDA -----	2.90
Birth Wt -----	84
Adj 205 Day Wt -----	618
Frame Score -----	5.5
% Heifers Early -----	36
% Heifers at 21 -----	71
% Heifers at 42 -----	85
% Cows at 21 -----	58
% Cows at 42 -----	85
Cow Age -----	5.5
Cow Wt -----	1354
Cow Condition -----	5.4