

Several months ago we discussed a frequently used term in the cattle industry that “bigger is better”. This week we will briefly revisit this controversial topic, and present a more efficient management plan for producers to implement in their operation.

As we discussed in our July article titled “Is Bigger Always Better?” although larger cattle may seem like they are most efficient and produce the biggest calves at weaning, we revealed that this is not usually the case. Heavier cattle have a higher maintenance cost due to their higher nutritional requirements compared to lighter weight cattle. Studies show that the females in the heavier end of a herd seldom out-produce the average sized cow in the herd. Additionally, the chart below reveals that heavier cows are often not the same females that produce the biggest calves at weaning (see Figure One below).

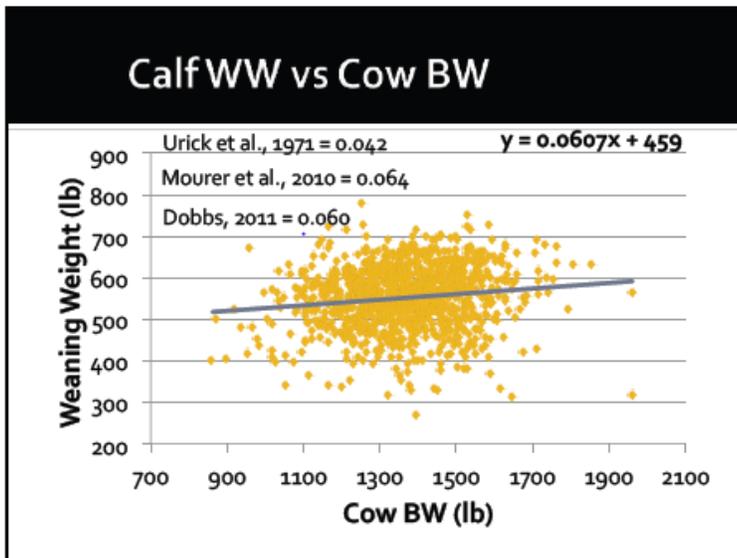


Figure 1 Lalman, 2013.

As you can see, aiming to produce the biggest cattle is likely not the most efficient management plan for your operation- but what is?

We believe that a profitable management practice to put into place is to place more emphasis on the percent dam weight weaned of each cow in your herd. This term represents the percentage of the cow’s weight that her calf is at weaning. For example, if a 1000lb cow weaned a 500lb calf the % dam weight weaned is 50%. In a year of average rainfall and adequate forage production a minimum dam weight weaned of 55% or higher should be expected of each cow in your herd. In years of below average rainfall and poor forage production a decrease in cow productivity will likely be detected. If the cow’s nutrient requirements are not met her reproductive system will be the first to shut down. Next, she will stop producing adequate quantities of milk, and if she continues to be shorted of adequate nutrients her body condition and basic body maintenance systems will begin to shut down as well. Aside from the issue of ensuring that the heavier cows are indeed receiving proper nutrition, it is equally important to determine if those larger cows are going to be profitable in your operation.

Studies reveal that for every 100lb of increased mature cow weight, her calf will only weigh an additional 6lb at weaning. The value of that added calf weight is about \$6-\$9. Additionally, every 100lb of additional cow weight requires a \$42 maintenance cost. Below are two different tables that reveal the importance of the productivity

of a cow, and how it directly impacts the profitability of an operation.

Table 1

Cow Weight	Cow Cost/Year	Calf Wean. Wt.	Calf Price	Profit
1100lb	\$590.85	605lb	\$937.75	\$346.90
1200lb	\$632.85	660lb	\$1023	\$390.15
1300lb	\$674.85	715lb	\$1108	\$434
1400lb	\$716	770lb	\$1193	\$477

As you can see, Table 1 represents prices and calf weights that may be expected from four different weights of cows. Because 2013 numbers have not been calculated, we used the 2012 annual cow cost/year (calculated by Stan Bevers) of \$590.85 for the cow cost of our 1100lb “base cow”. For each of the remaining weight classes we added \$42 to the annual cost in order to compensate for the extra \$42 required to add 100lb to a cow. **Calf weaning weight for Table 1 was calculated using the 55% weight goal that we previously referred to.** Calf price was calculated using average steer and heifer prices from the Oklahoma National Stockyard Market Report for this week. We averaged this price to be approximately \$1.55/pound. The profit was calculated by subtracting annual cow cost from calf income, and ranged between \$347 and \$477. This table reveals that the opportunity for profit is available if your cows are weaning calves that are 55% or more of their weight. Unfortunately, few 1400lb cows are actually weaning calves over 700lbs. Therefore, we have created a second table that is a more accurate representation of the average production efficiency of a herd.

Table 2

Cow Weight	Cow Cost/Year	Calf Wean. Wt.	Calf Price	Profit
1100lb	\$590.85	605lb	\$968	\$377.15
1200lb	\$632.85	611lb	\$977	\$344.15
1300lb	\$674.85	617lb	\$987	\$312.15
1400lb	\$716	623lb	\$996	\$280

Table 2 is a similar table compared to Table 1, with a few differences present. Rather than assume a 55% dam weight weaned regardless of dam weight (as in Table 1), we applied the research study results and assumed that the 1100lb “base cow” had a 55% dam weight weaned, and each cow with a 100lb increase weaned a calf that weighed 6lb more. Additionally, due to the decrease in range between calf weights, we assumed a calf price of \$1.60/pound using the Oklahoma Stockyards Market Report. This resulted in a range of profit between \$377.15 and \$280, this time with the heavier cows generating a smaller profit than lighter weight cows. This is largely due to the heavier cows’ inability to wean a calf 55% or more of her weight. Instead, the 1400lb cow weaned her calf at only 44% of her body weight.

Although it is possible to produce heavy cattle that have a high % dam weight weaned, we see that this percentage is easiest achieved, and most profitable when using lighter weight cows. For more information about % dam weight weaned, or to learn how to implement it in your herd, please contact us. Next week we will discuss heifer selection with the above information in mind. How do you avoid producing bigger and bigger cattle?