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The Cow-Calf Enterprise: What's The Value of Management?

Dr. Walt Prevatt
 Extension Economist
 Auburn University

Regardless of whether we are talking about a Fortune 500 Company or a simple cow-calf business, management has always been the most important factor of production. Management in the cow-calf business uses land, labor, and capital inputs to produce a saleable beef product. A simple cowboy's definition of management is "using what you've got (land, labor, feed and other inputs, etc.) to get what you want (net farm income)."

Table 1 describes three levels of management often observed on Alabama cow-calf farms. A one-bull unit of 30 cows is used to illustrate the impact of management on cow-calf revenues. A terminal breeding program is assumed (all replacement heifers are purchased) for each management scenario and thus all feeder calves are sold at weaning.

Table 1. An Estimate Of The Value of Management For A One Bull Unit Cow-Calf Enterprise.

Item	Below Average Management	Average Management	Above Average Management	Avg. Mgt. Minus Below Avg. Mgt.	Above Avg. Mgt. Minus Below Avg. Mgt.
Number of Brood Cows, Hd.	30	30	30	NA	NA
Weaning Percent ¹ , %	60%	75%	90%	+15%	+30%
Number of Calves, Hd.	18	23	27	+5	+9
Weaning Weight ² , Lbs./Calf	350	500	650	+150	+300
Calf Crop Total Weight, Lbs.	6,300	11,500	17,550	+5,200	+11,250
Feeder Calf Market Price ³ , \$/Lb.	\$0.86	\$0.76	\$0.74	-\$0.10	-\$0.12
Calf Crop Total Revenue, \$	\$5,418	\$8,740	\$12,987	+\$3,322	+\$7,569
Revenue Per Brood Cow, \$/Hd.	\$181	\$291	\$433	+\$111	+\$252

¹The following Body Condition Scores (BCS) were assumed for various levels of management: Below average management – BCS of 3's and 4's; Average management – BCS of 4's and 5's; and Above average management – BCS of 5's and 6's.

²The following feeder calf grades were assumed for the various levels of management: Below average management – small-medium frame score and #3 muscle score; Average management – medium frame score and #2 muscle score; and Above average management – medium-large frame score and #1 muscle score.

³A ten-year average of feeder calf market prices was used in this analysis (1995-2004).

In the below average management scenario, the cow-calf farm has 30 head of brood cows and one bull. The brood cows are assumed to be in body condition scores of 3's and 4's (less than desirable body condition for maintenance, gestation, milk production, rebreeding, etc.). Therefore, the feeder calf weaning percent is assumed to be only 60%, resulting in 18 calves being weaned. The average weaning weight of the calves is estimated at 350 pounds per head. The total weight of all 18 calves is 6,300 pounds (18 hd. * 350 lbs./hd.). The 10-year average feeder calf market price is \$0.86 per pound for 350-pound feeder calves that are of small-medium frame score and #3 muscle score. The farm's total revenue from the calf crop (selling the 18 calves) is \$5,418 (18 hd. * 350 lbs./hd. * \$0.86/lb.). The total revenue generated per brood cow amounts to \$180 per head for the below average management scenario.

In the average management scenario, again the cow-calf farm has 30 head of brood cows and one bull. The brood cows are assumed to be in body condition scores of 4's and 5's (less than desirable body condition for maintenance, gestation, milk production, rebreeding, etc.). The feeder calf weaning percent is assumed to be 75%, resulting in 23 calves being weaned. The average weaning weight of the calves is estimated at 500 pounds per head. The total weight of the 23 calves is 11,500 pounds (23 hd. * 500 lbs./hd.). The market price per pound is \$0.76 per pound for 500-pound feeder calves that are of medium frame score and #2 muscle score. The farm's total revenue from the calf crop (selling 23 calves) is \$8,740 (23 hd. * 500 lbs./hd. * \$0.76/lb.). The total revenue generated per brood cow is \$291 per head for the average management scenario.

In the above average scenario, once again the cow-calf farm has 30 head of brood cows and one bull. The brood cows are assumed to be in body condition scores of 5's and 6's (desirable body condition for maintenance, gestation, milk production, rebreeding, etc.). The feeder calf weaning percent is assumed to be 90%, resulting in 27 calves being weaned. The average weaning weight of the calves is estimated at 650 pounds per head. The total weight of the 27 calves is 17,550 pounds (27 hd. * 650 lbs./hd.). The market price per pound of these 650-pound calves is \$0.74 per pound they are of medium-large frame score and #1 muscle score. The farm's total revenue from the calf crop (selling 27 calves) is \$12,987 (27 hd. * 650 lbs./hd. * \$0.74/lb.). The total revenue generated per brood cow is \$433 per head for the above average management scenario.

Next, let's use the data from these three levels of management in the cow-calf business to evaluate the impact of improving management. In comparing the farm that has average management with the below average management farm, we find that the farm with average management realized an increase in the weaning percent from 60 percent to 75 percent (+15%) or five more calves being weaned. The average weaning weight of the calves increased from 350 pounds per calf to 500 pounds per calf (+150 pounds or +43%). Thus, the weight of the total calf crop with heavier weaning weights and five more calves increased 5,200 pounds (11,500 lbs. - 6,300 lbs. or +83%). However, the market price received for the feeder calves declined \$0.10 per pound (\$0.76/lb. - \$0.86/lb. or -12%) due to the heavier weight of the feeder calves. The farm's total revenue from the calves increased by \$3,322 (+61%). And the revenue per brood cow increased by \$111 per brood cow (+61%).

Now, let's use the data from the above average and below average levels of management in the cow-calf business to evaluate the impact of improving management. In comparing the farm with above average management with the below average management farm, we find that the farm with above average management realized an increase in the weaning percent from 60 percent to 90 percent (+30%) or nine more calves being weaned. The average weaning weight of the calves increased from 350 pounds per calf to 650 pounds per calf (+300 pounds or +86%). Thus, the weight of the total calf crop with heavier weaning weights and nine more calves increased 11,250 pounds (17,550 lbs. - 6,300 lbs. or +179%). However, the market price received for the feeder calves declined \$0.12 per pound (\$0.74/lb. - \$0.86/lb. or -14%) due to the heavier weight of the feeder calves. The farm's total revenue from the calves increased by \$7,569 (+140%). And the revenue per brood cow increased by \$252 per brood cow (+140%).

As you can see, the farm's total revenue can be significantly increased as you move from below average management to either average management or above average management. In some situations it will cost something to attain these higher levels of management and total revenue, while for some operations it is merely a matter of providing more attention to management (wasting less feed, improving forage utilization, comparison shopping for feed, fertilizer, and other inputs, improving labor utilization, scheduling and implementing management practices, etc.). If it does cost something to increase your total revenue, you want to be sure not to spend more than you expect to get back. In other words, can you improve your cow-calf operation for less than the differences noted in Table 1 above?

The value of management in the cow-calf enterprise presented here may be understated for some operations where beef farmers can achieve higher than 90 percent weaning rates and/or higher than 650 pounds weaning weights. Also, this analysis used a 10-year average of Alabama feeder calf market prices. A beef farmer who receives higher than the 10-year average feeder calf market prices (due to quality, health, services, breeding value, etc.) will realize even larger levels of gross revenue. In addition, since this analysis used a 10-year average of feeder calf market prices, during years with higher feeder calf market prices, the differences in total revenue will be larger than presented here and vice versa during years with lower feeder calf market prices.

An excellent way to improve the quality of what you produce and to improve the total returns of your cow-calf farm is to participate in a Beef Cattle Improvement Association (BCIA). The Alabama BCIA assists performance minded cattle producers in efficiently producing better beef and genetics by utilizing the best genetic and management tools available. BCIA guides its members in reaching this goal by providing access to cattle record keeping and evaluation. By working with Alabama Cooperative Extension agents at the county, regional, and state levels, producers can collect records and receive management reports with detailed performance information on brood cows, herd sires, and calves. BCIA guides the producer in building a performance database to identify where management and genetic selection changes need to be made to increase performance and revenue. For more information on the BCIA program, please contact Mrs. Michelle Elmore (Ph. 205 646 0115, Email: fieldcm@auburn.edu), Extension Animal Scientist/Beef Cattle Improvement, or your Regional Livestock Extension Agent.

Another excellent way to improve your management and the total returns of your cow-calf farm is to participate in one of the Alabama Farm Analysis Associations. There are five Farm Analysis Associations in Alabama. The Alabama FAA provides assistance to farmers with collecting, tabulating, and analyzing their financial records to make better financial management decisions. For more information on the Alabama FAA program, please contact Dr. John Adrian (Ph. 334 844 5625, Email jadrian@auburn.edu, Coordinator, Extension Economist, or your Regional Livestock Extension Agent.