Performance Matters

by **Shane Bedwell**

Feed Efficiency Pays at Every Step

Focus on dry matter intake to help your commercial customers.

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Whenever weight is part of the marketing equation, sellers appreciate having more pounds to sell. However, as I mentioned in last month's column, the cost of creating weight is critical to measure because increased feed efficiency reduces cost in the feedlot and in the cow-calf pasture, which in turn creates more net revenue.

I reviewed a paper published by the U.S. Meat Animal Research Center (USMARC) in 2017, which documents breed differences for feed efficiency. That study included approximately 5,600 growing steers and heifers, from 2003-2012. I used the data to calculate the overall cost difference between breeds, based on the performance differences USMARC identified, using average feed costs for 2013-17. At the time (2017), Hereford-sired calves had a nearly $20 per head advantage in feed efficiency across the finishing period, compared to most other breeds.

Recently, I used the same USMARC data to calculate cost differences based on 2021 feed costs (Table 1) for a feedlot diet, in order to calculate a total ration cost per pound of dry matter. Feed cost data was acquired through the USDA Agricultural Marketing Service. You can see the results from the USMARC paper utilizing the assumption that I made (Table 2).

Among those assumptions, since Angus is used as the base breed for all USMARC across-breed adjustment information, I had to assume that they would consume 24 pounds of dry matter per day and gain at a rate of 4 pounds per day. Regardless of where you set this value, it is relative, as the differences are what we want to see. I based the calculation on feeding a 650-pound steer to a finished weight of 1,400 pounds.

Efficiency value increases with higher feed costs

As expected, the Hereford advantage in feed efficiency grows as feed costs increase.

Using the 2021 data Hereford has a $28 advantage over the finishing period, when compared to Angus. Those are real dollars. Multiplied over a pen of fed cattle, those dollars make a significant difference to the bottom line. So, keeping an eye on the Dry Matter Intake (DMI) expected progeny difference (EPD), when making sire selection decisions, can make a big difference to your bull customers.

Furthermore, David Lalman, Oklahoma State University Extension beef cattle specialist, has conducted research the past few years which demonstrated baldy females consumed 2 pounds less feed per day when compared to the black straightbred females. Plus, baldy cows were a 0.5 body condition score (BCS) fleshier. This tells me DMI is a repeatable trait that impacts the entire beef system. Hereford delivers the feed efficiency advantage all along the way. Although feed prices will ebb and flow over time, there is little question they have reached a new and higher historic trading range. Now is the time to focus on maintaining Hereford's leadership position in feed efficiency. HW

Table 1: Five-year average feed cost for a feedlot diet

Feed type	% in diet	2021 $/lb. DM
Corn	60	$0.119
DDGS	20	$0.125
Silage	15	$0.075
Hay	3.5	$0.105
Supplement	1.5	$0.236
Total cost of diet		**$0.115**

Data from USDA Agriculture Marketing Services, accessed 3/1/2022

Table 2: Performance and cost differences associated with USMARC feed efficiency paper

	DMI lb./DM	ADG	F:C	DOF	2021 cost of gain	2021 feed cost	2021 Hereford feed cost advantage compared to:
Hereford	**22.26**	**3.92**	**5.67**	**191**	**0.655**	**$491.54**	
Angus	24	4.00	6	188	0.692	$519.69	$28.15
Red Angus	23.32	3.85	6.06	195	0.699	$524.03	$32.49
Simmental	23.91	3.96	6.04	189	0.697	$523.12	$31.59
Charolais	2.85	3.96	5.77	189	0.666	$499.81	$8.27

Additional details relative to these research findings can be found in the 2017 journal article below:
"Genetic variance and covariance and breed differences for feed intake and average daily gain to improve feed efficiency in growing cattle." J. Anim. Sci. 95:1444–1450