

Meeting Customer Expectations

Committing to genetics and customer success.

by *Will Fiske*

When commercial cow-calf producers purchase a registered Hereford bull from your operation they are making a commitment to the bull, the program and to you as a breeder. Each tier of commitment prompts a level of responsibility, but more importantly, opportunity. It is an opportunity for you to demonstrate why commercial producers should invest their time and money in genetics that carry your prefix.

Some romanticize seedstock production and marketing, and it can be exciting. But it's still a business transaction between two parties agreeing to the terms of the investment. In this scenario, the bull is the investment and the "terms" refer to the bull's physical ability and genetic potential to perform. This is where the value of an investment intersects the concept of commitment. When commercial producers purchase a registered bull, they commit a portion of their herd's financial outcome to that bull's ultimate performance.

So, how can we assess a bull's potential Return on Investment (ROI)

for a customer's ranch or farm? And what does it have to do with genetics?

A registered bull's value to a commercial cow-calf producer can be defined in many ways, but for the sake of simplicity we will focus on a few that are easy to measure. When Return on Investment (ROI) is considered relative to bull value, it is often in the context of the long-term as commercial producers wait several years to see the results of their genetic investment, e.g. genetic improvement in fertility, marbling, feed efficiency, etc. However, the ROI of a Hereford bull used in natural service to breed heifers can be more easily evaluated for short-term ROI. The investment value of the calving-ease bull can be monitored from two components: physical and genetic.

Physical value

The physical component of a bull's value refers to a sire's ability to remain athletic and vigorous throughout the breeding season to cover cows. Developing bulls to the optimum physical condition where they are ready to breed is the responsibility of the breeder. Failure

Table 2

	CED	MCE
Sire A	14	7
Sire B	3	1
Difference	11	6

to properly develop a bull will result in more open cows per exposure and fewer calves. Fewer calves mean less opportunity for gross profit.

Table 1 illustrates the relationship between the purchase price of a bull and number of cows exposed. This serves as a reminder not to overlook the importance of a bull's physical ability to breed and settle females, as well as the added value obtained by commercial producers investing in a "good bull."

Genetic value

Genetic value refers to the bull's innate ability to propagate progeny with genetics that drive financial success. In the case of our calving-ease sire, an early indicator of the genetic value of a heifer bull being a "good investment" is calves born alive and unassisted. Calving ease is often an economically important trait to the commercial producer and vital when calving first-calf heifers. Hereford breeders have access to genetic selection tools and genomic information to ensure the investment opportunity (in this case, a calving-ease bull) will generate a positive ROI for their commercial customer.

Seedstock producers are responsible for using available

Table 1: Impact of Bull Purchase Price on Cow Breeding Cost (\$/Cow Exposed Annually)

Purchase Price	Number of Cows Exposed			
	15	25	40	50
\$6,000 Bull	\$77	\$50	\$33	\$27
\$5,000 Bull	\$63	\$41	\$27	\$22
\$4,000 Bull	\$50	\$33	\$21	\$17

*Assumptions: 5 year useful life, equal annual costs, equal salvage value

resources to create the most effective genetic package that serves the need of the commercial customer. For example, Hereford producers can use expected progeny differences (EPDs) to support mating decisions intended to produce heifer bulls with a specific genetic criteria, such as calving ease.

Tables 2 – 4 refer to genetic selection tools and information available to breeders, provided by the American Hereford Association (AHA).

Table 2 illustrates two potential sires. Calving ease direct (CED) is based on calving ease scores and birth weights and is measured as a percentage. The CED EPD indicates the influence of the sire on calving ease in females calving at 2 years of age. As an example, if sire A has a CED EPD of 14 and Sire B has a CED EPD of 3, then you would expect, on average, if comparably mated, Sire A’s calves would have an 11% more likely chance of unassisted calving when compared to Sire B’s calves.

Maternal calving ease (MCE) EPD is expressed in percentage of unassisted births with a higher value indicating greater calving ease in first-calf daughters. It predicts the average ease with which a sire’s daughters will calve as 2-year-olds, when compared to daughters of other sires. For instance, if sire A has an MCE EPD of 7 and Sire B has an MCE EPD of 1, then you would expect on average, if comparably mated, Sire A’s calves would be 6% more likely to calve unassisted when compared to Sire B’s calves.

Table 3 illustrates the percentile breakdown for CED and MCE and shows the range of EPD values in the AHA population. This provides context to the ranking of individual animals. This data is adopted from AHA genetic evaluation results as of April 10, 2023. Note, cattle in the upper 1% percentile rank are associated with the most unassisted calf births.

Table 3: Calving Ease EPD Percentile Breakdown for 2021 & 2022 born calves

Percentile Breakdown	Calving Ease Direct (CED)	Maternal Calving Ease (MCE)
Average	3	2
Low	-13.5	-23.5
High	24.4	18.9
Upper 1%	15.6	9
5%	10.5	6.9
10%	8.5	5.8
25%	5.6	4
50%	2.7	2.1
75%	0.1	0.1
90%	-2.3	-2
95%	-3.8	-3.3
100%	-13.5	-23.5

Table 4

AHA Trait	Accuracy Improvement	Effective Progeny Number Increase*
Calving Ease	0.09	17

*Effective Progeny Number Increase (EPNI)- EPNI is the difference gained for genotyped animals versus non-genotyped animals.

Table 4 — progeny equivalence table — illustrates the average increase in accuracy when buying a young animal with genomic-enhanced EPDs (GE-EPDs) versus an animal without GE-EPDs. The “Effective Progeny Number Increase” is the number of progeny an animal would need to produce for the same boost in accuracy provided by genomically enhancing the EPD. DNA testing young, non-parent animals to add genomic information to the EPDs substantially mitigates a buyer’s risk and enables breeders to design matings more accurately.

Adding value to producers’ investments

The AHA provides numerous resources and supporting technology to breed high-quality bulls for commercial cow-calf producers. Commercial producers’ investment in seedstock genetics is arguably one of the most

important decisions they make for their farm or ranch. Commercial producers’ investment — their commitment — to a bull, your program and to you as a breeder comes with opportunity and responsibility. The next time you evaluate your herd, what tools, technologies and services can you utilize to honor the commercial customer’s commitment?

While the example trait we use in this article (calving ease) may not be the top priority for all breeders, it’s important for Hereford breeders to know what economically relevant traits are most important to their customers. How do your customers profit from the genetic merit of the bulls you sell? **HW**

Editor’s Note: Will Fiske is a technical services scientist for NEOGEN.