Indexed Maternal Efficiency

The top 20 BMI$ bulls share a unique profile.

American Hereford Association (AHA) selection indexes provide a simple, powerful way for commercial producers to identify genetics to accelerate improvement in specific production systems.

Consider the Baldy Maternal Index (BMI$). This maternally focused index is for producers breeding registered Hereford bulls to Angus cows. It assumes some daughters are retained in the herd and the remainder of the calf crop is finished and marketed on a quality-based grid.

Essentially, all traits are important in this scenario, but Sustained Cow Fertility (SCF) is clearly the driver when you look at the average expected progeny differences (EPDs) and percentile rankings for the top 20 active BMI$ sires in the breed (Table 1).

SCF is a longevity trait, which predicts a sire's ability to produce daughters that last longer in the herd. A cow that lasts longer in a commercial herd is going to bring more revenue back to the operation. So, it makes sense that this trait tops the list of importance for commercial producers building widely sought F1 black baldy females.

The top 20 BMI$ bulls are also above breed average for all other traits in the index, except for Yearling Weight (YW) and Rib Fat (FAT), which are slightly below breed average. It's a subject for debate, but moderate growth and more fleshing ability (FAT) make sense when producing females that last longer in production. There is a time and place for high-octane cattle, but I don't know if they're necessary within a multipurpose index that rewards sustained cow fertility and efficiency.

Look at Table 1 again. Consider the suite of traits utilized in the BMI$ and the percentile rankings of EPDs for the top 20 BMI$ bulls. Think about the genetic merit of the black baldy females they will sire. Who doesn't want an efficient, moderate female with a high-quality udder and better than breed average carcass traits? Sign me up.

Simplified selection

This BMI$ discussion also underscores the reason for selection indexes and their value.

The AHA's genetic evaluation includes EPDs for 17 traits. Given the sheer number of traits evaluated and the natural antagonisms that exist between traits such as growth and calving ease, making genetic improvement in specific areas without sacrificing gains in others can be daunting.

Selection indexes incorporate multiple traits and rank animals economically to simplify decision making. In theory, using the index value enables selection of bulls with appropriate levels of performance in all traits used in the index. Keep in mind, selection indexes assume specific production systems. As noted, BMI$ assumes using Hereford bulls on Angus cows, keeping replacements and marketing other peers on a value-based grid. So, it will be effective only in identifying bulls for that scenario.

AHA offers two other economic selection indexes — the Brahman Influence Index (BII$) and Certified Hereford Beef® Index (CHB$) — for use in other specific production systems.

Keep them sound. **H**W

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Table 1: Average EPD Values for the Top 20 Active Sires for BMI as of 10.3.22																			
Trait	CE	BW	WW	YW	DMI	SC	SCF	Milk	M&G	MCE	MCW	UDDR	TEAT	CWT	FAT	REA	MARB	BMI	BII	CHB
EPD	9.1	0.0	54	86	0.1	1.4	30.4	38	65	5.3	63	1.40	1.50	70	0.035	0.50	0.31	573	666	139
% Rank	15	16	50	54	40	17	1	12	17	21	22	12	9	45	66	41	23	1	1	25