BYTHE NUMBERS

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Maternal Weaned Calf Value

Where it's been and where it's headed.

In 2019, the American Angus Association officially released new and updated dollar value indexes (\$Values). Those updates included the unveiling of the maternal weaned calf value (\$M) index.

This tool was created to be a solution for commercial cattlemen who focus on maintaining replacements from their own herd and whose marketing systems are targeting the sale of weaned calves. The underlying breeding objective is based on a 500-head self-replacing commercial cow herd model, which practices a 20% herd replacement level and sells male progeny and additional cull females as feeder calves. It includes nine different expected progeny differences (EPD) that are appropriately weighted according to their economic importance.

Table 1: Traits included in SM vs. SW.

	\$W	\$M
CED		Χ
BW	Χ	
WW	Χ	Χ
CEM		Χ
MILK	Χ	Χ
MW	Χ	Χ
DOC		Χ
HP		Χ
CLAW		Χ
ANGLE		Χ

The \$M index was an upgrade from the former weaned calf value (\$W) index, as it included additional maternal traits to better describe the profit and loss centers of the commercial cow-calf industry. Table 1 lists the EPDs included in \$M vs. \$W.

Since then, \$M has been included in many conversations from marketing to research, and its significance in the industry has grown. Traits included inside of the index have grown in importance, as well. Frequently, the American Angus Association receives questions on how to continue to grow the value of \$M relative to its influence in the combined value index (\$C) that aims to describe whole-chain profitability. The answer remains the same — increase data recording. Table 2 describes the number of records captured since \$M inception in May 2019. The most notable growth comes with the massive increase in data recording

Table 2: Increase in data recording since before the inception of \$M and after.

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	Jan-19	Jan-22	% Increase
CED/CEM	1,618,612	1,825,667	13%
WW/MILK	9,132,624	9,994,594	9%
MW	218,356	248,789	14%
DOC	290,016	360,662	24%
HP	98,230	136,338	39%
CLAW	15,613	145,846	834%
ANGLE	16,387	145,051	785%

around structure traits. Both foot angle (Angle) and claw set (Claw) recording have skyrocketed for several different reasons: 1) producers have been paying much attention to the collection of these scores, 2) at the guidance of the membership, Association staff has been diligent about including foot scoring as a main educational topic, and 3) the joint foot score evaluation between the American Angus Association and Angus Australia.

Increasing data collection for individual traits will allow for more variation, or differences, across the population to be explained. Capturing more variation in individual traits will increase the variation of \$M and its influence in \$C. In Current Sires alone, the maximum \$M, since its release in May 2019, has increased from 117 to 125; and \$M minimum value has decreased from -23 to -38, widening the gap between the best and worst sires currently recording progeny.

Where is \$M going?

Although \$M was a significant upgrade from the previous maternal index, and data recording and subsequent variation in the profit indexes continues to improve, the work on \$M is still not done. One factor that is still a hole in the \$M index is the inclusion of a

genetic predictor for how long sires' daughters will stay in the herd.

Many different variations of this type of trait exist in other breeds and species today, including longevity, stayability, productive life, etc. The Angus Genetics Inc. (AGI) group has been working to understand how to best utilize the production and disposal/culling records already reported to the Association as well as complete herd information being captured in Angus Herd Improvement Records (AHIR®) Inventory Reporting and the MaternalPlus® system.

Using these types of records allows for the genetic prediction of how long a sire's daughters will stay in the herd and be productive, something that has been missing from any maternal index provided by the Association. Having this trait

will make \$M more representative of the profit drivers affecting the commercial cow-calf sector. However, with any new EPD, the variation, or spread, will be limited until selection pressure is applied to the trait; this will limit its influence on \$M and subsequently, \$C.

Some of the variance captured by this trait might also be described by traits already published including foot structure, mature size, calving ease and temperament. This, too, can affect the economic weight placed on this new trait inside of \$M.

In addition, the team continues to use the American Angus
Association data to drill into the maternal assumptions that are important inside of the \$M index including replacement rates, culling percentages, etc., to really refine the maternal index and make it the best

it can possibly be. Some of these ongoing updates were shared at the 2021 Angus Convention during the "Finding Balance" session on the main stage. Members should realize any update to \$M will mean subsequent updates to \$C, as \$C is just a linear combination of the maternal (\$M) and terminal (\$B, beef value) indexes.

As work continues, the Association aims to provide continual updates to the membership as they become available. Members should be looking for additional updates on these potential changes near summer's end. Be sure to sign up for the Inside Angus email blasts to stay up to date on additional information that may be released.

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