Recalibrating and Retooling

The April 2020 genetic evaluations present many opportunities to review, reflect and reassess the genetic direction of the Jersey breed. Perhaps the most important opportunity is to develop strategies to propel positive genetic change for the future.

The reformulated JPI_{2020} predicts the efficiency of production by expressing lifetime production of fat and protein per unit of feed. In addition to the new JPI formula, the breed also saw the five year base change impact the evaluations.

Assessing the Numbers

Change requires a recalibration of levels. Numbers we were familiar with in the previous five years now look much lower. Did the animal's DNA change over time? No, but the genetic evaluation system did.

For example, prior to April, a minimum Parent Average (PA) JPI of +143 would qualify a heifer born in 2019 as a P9—ranking her in the top 10% of the breed. The minimum qualifying level for P9 changed to PA JPI +84. This reflects the base change and revisions to the JPI formula. That's a change of -59 JPI points.

The 505 bulls marketed as Active A.I., Foreign or Genomic Tested Young Bulls (A, F, and G) in December 2019 averaged +135 JPI. Their Jersey Udder Index (JUI) averaged +16.7 JPI points. In April, the 568 marketed A,F and G bulls averaged +74 JPI and JUI averaged +5.3 JPI points. That's a difference of -61 for JPI and -11.3 for JUI.

The impact on cow evaluations is similar. The 191,980 active cows averaged +66.2 JPI and +9.0 JUI with February 2020 evaluations. The April 2020 evaluations for 187,400 Jersey cows averaged +13.5 JPI and +0.5 JUI. That's a decrease of 52.7 JPI and 8.5 for JUI.

More Opportunity

Other modifications to the Jersey-specific selection index in April included the addition of six CDCB Jersey health traits—displaced abomasum, milk fever, ketosis, mastitis, metritis and retained placenta—and two new Jersey type traits—Rear Teat Placement rear view and side view.

Data for health events was sourced through national DHIA from Jersey herds choosing to provide health information. The PTA values can be used to compare the potential extra costs and expenses from a bull's daughters or various cow families in a herd. The bottom line is the more positive the number shows, the better it is for resistance.

The most frequent health events were Mastitis (MAS) at 10.4% and Metritis (MET) at 5%. That translates into resistance levels of 89.6% (100-10.4%) for MAS and 95% (100-5%) for MET.

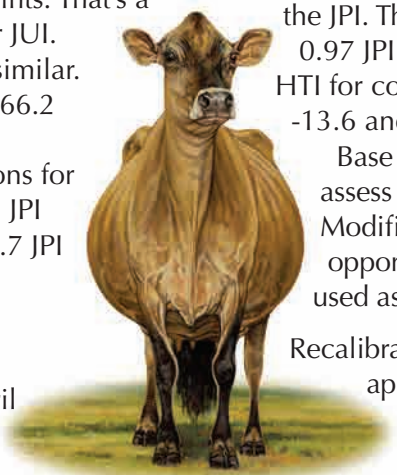
For example, daughters of Jersey Bull A with a PTA for mastitis resistance (MAS) of +3.0 are expected to have an average resistance rate to clinical mastitis of 92.6% (89.6 + 3.0). Likewise, daughters of Bull B with a PTA of –3.0 are expected to have lower average resistance, 86.6% (89.6 + -3.0).

Another way to interpret is that in the typical Jersey environment, only about 7.4% of the daughters of Bull A will have a mastitis incident, while about 13.4% of Bull B's daughters will have the mastitis code.

The six individual health traits are combined as the Health Trait Index (HTI) and represent 4.6% of the JPI. The marketed A,F and G bulls averaged 0.97 JPI points and ranged from -9.5 to 9.1. The HTI for cows average 0.68 with a minimum of -13.6 and a maximum of 10.2 JPI points.

Base changes offer a chance to review and assess the results of prior selection decisions. Modifications included in JPI_{2020} offer the opportunity to redirect the future when used as the breed selection standard.

Recalibrate with tools designed for commercial appeal and financial success specific to the Jersey breed.



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