



## Exciting Changes Coming with April Evaluations

Jersey genetics will push the reset button in April with a new look to genetic summaries. The evaluations will feature Jersey-specific health traits, base change<sub>2020</sub>, and a newly formulated Jersey Performance Index (JPI).

### Jersey-Specific Health Traits

April 7, 2020, marks the release of national genetic evaluations for six health traits that will help alleviate six costly health conditions impacting Jerseys. The traits will help build resistance against displaced abomasum, milk fever, ketosis, mastitis, metritis and retained placenta.

These unbiased evaluations will come from the Council on Dairy Cattle Breeding (CDCB), and are derived from Jersey data recorded in Dairy Herd Information (DHI) herds from across the nation. Thanks to the cooperation of Jersey dairy producers, the national collaborators' database has been established to provide the on-farm records to support a nationwide genetic evaluation system. More herds may participate by contacting your dairy records processing center or AJCA.

PTAs for each of the six health traits (below) will be the predicted daughter difference for resistance above or below the Jersey breed average. The larger the positive values, the more favorable the genetic resistance to the disorder. The genetic evaluations can help identify individuals that transmit costly difference and help manage their use in breeding programs.

### Base Change

Since 1980, the U.S. genetic base has been updated

every five years. Milking Jersey cows born in 2015 define the new base coming in April 2020. This resets the '0' point for comparison. Most PTAs will be lowered by the genetic gain because gains were made across five years. Jersey leads the way in gains for production traits across all breeds.

However, if trends were unfavorable, PTAs will generally increase. Daughter Pregnancy Rate (DPR) and Cow Conception Rate (CCR) are two traits that did not show genetic improvement in cows born from 2010 to 2014.

Base changes offer a chance to review and assess the results of prior selection decisions. CDCB offers this

recommendation, "if selection is based on standards like percentiles (recalculated every run) or by simply selecting the top-ranked bulls on an economic index of their choice, forward progress would occur, devoid of any delays."

However, the most important opportunity is to develop strategies

to propel positive genetic change for the future. The AJCA Board is doing just that as they examine and evaluate the Jersey Performance Index (JPI) and make plans for modifications to the Jersey-specific selection index.

The objective of updating JPI is to reflect new research results that will allow Jersey breed progress to continue, while also ensuring that tomorrow's Jersey cattle are genetically predisposed to remain healthy, fertile, and functional at high levels

of milk solids production.

Watch for more details in upcoming press releases, *Jersey Journal* announcements and education webinars.

Trait	Estimated PTA Change
Milk (pounds)	524
Fat (pounds)	25
Protein (pounds)	20
Somatic Cell Score (SCS)	0
Productive Life (month)	1.54
Livability %	0.08
Daughter Pregnancy Rate %	-0.99
Cow Conception Rate %	-0.90
Heifer Conception Rate %	0.44

Trait	Estimated PTA Change
Final Score	0.7
Stature	0.5
Strength	0.0
Dairy Form	0.4
Foot Angle	0.1
Rear Legs	0.0
Rump Angle	0.4
Rump Width	0.1
Fore Udder	0.7
Rear Udder Height	0.6
Rear Udder Width	0.2
Udder Depth	0.9
Udder Cleft	0.1
Teat Placement	0.3
Teat Length	0.0

### Description of Health Disorders

**Milk Fever or Hypocalcemia:** Typically results after calving due to low total blood calcium levels.

**Displaced abomasum:** Enlargement of the abomasum with fluid and/or gas that caused its movement to the left or right of the abdominal cavity; the twisting blocks the digestive process and usually requires veterinary intervention.

**Retained placenta:** Retention of fetal membranes more than 24 hours after calving.

**Ketosis:** Build-up of ketone bodies that typically occurs due to negative energy balance in early lactation.

**Mastitis:** Infectious disease that causes inflammation of the mammary gland; one of the most common and costly diseases of dairy cattle.

**Metritis:** Infection of the endometrium (lining of the uterus) after calving.