

CDCB Update

Duane Norman, Joao Durr, and Ezequiel Nicolazzi

Council on Dairy Cattle Breeding,

Bowie MD 20716

duane.norman@uscddb.com



What's new since last year?



New Evaluations Came in April 2019

- Early First Calving, aka Age at First Calving
- Evaluations for Genotyped Animals with Multi-Breed Genetics

A New Trait: Early First Calving

- Another New Trait? **Why.** We already have evaluations on about 45 traits, at least in the Holstein breed.
- **Because** maximum genetic gains can only be achieved when all traits having economic value and a genetic component are included in a composite index. That was proven by Hazel and Lush from Iowa State in **1942**.

Early First Calving

- It's easy to show why one makes maximum economic progress by considering all traits having economic value, but I'm not doing that today. So you can read the article in December's CDCB Connection.
- Sleeping Horse Concept: 1942.

Early First Calving

- Rearing heifers is expensive. It accounts for 15 to 20% of total cost of producing milk.
- Stimulated interest in uncovering optimum age at first calving.

Management Improved

- Age at first calving dropped from 28.1 mo. in 1985, to 26.0 mo. in 2000, to 24.5 today.
- Brought a big reduction in rearing cost. They're calving 110 days sooner. Cost is \$2.50 per day or \$275 per animal. In a 277 DHIA cow dairy, that's \$76,000.
- The *Rest of the Story* is: How does the differences in age at first calving affects individual cow's income once in the milking herd?

Management Improved

- We're fortunate that accurate records for age at calving have been recorded for all cows in DHI for decades.
- Using it is what Jay Mattison would call **Taking advantage of the low hanging fruit.**

Interpretation of Early First Calving

- Early first calving is defined in days. It's simply age at first calving with the sign reversed (+ vs. -).
- Selection toward positive values is “preferred” for evaluation traits. So selection could be toward what is “normally considered” to be the more desirable direction. i.e., younger instead of older.
- If a bull transmits the genetics that will reduce first calving by 2 days, his PTA for **Early First Calving** would be +2.0 days.

What's not new since last year?

