

Gestation length included in the BeefxDairy evaluation

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Gestation length is an important trait when managing calving patterns on a dairy farm and given that it varies between breeds, it becomes even more important for dairy farmers who are engaged in a beef on dairy program. Many previous studies have already shown that the genetic influence on the calf gestation length is mainly through the genes of the service bull. This implies that it is possible to manage this trait by an appropriate selection of the beef bull to be used on the cow. Such a selection becomes easier when having access to a system that allows comparing beef bulls from different breeds, based on data collected from their offspring when used on dairy cows. Hence the efforts put by NAV to add gestation length to the list of the traits available for beef bulls used in dairy herds and starting from May 2023, official breeding values for gestation length based on later parities are available to the farmers.

High heritability

Data collected from all three countries showed very similar statistics across country within breed. All data combined, gestation length is about two days shorter on average for first parity cows (282 days) compared to later parities (284 days) and about one day on average shorter for females (283 days) compared to males (284 days). Heritability estimates were quite high (0,56 and 0,57 for first parity and later parities respectively) and the genetic correlation between the two traits was estimated at 0.99 indicating that we are dealing with the same trait. Thus, the decision to publish only one trait, gestation length based on later parities.

As reported in the literature, results show an obvious breed effect but also lots of variation within each breed emphasizing the benefit of a multi-breed evaluation where all bulls can be compared based on their individual breeding values and not only their breed.

Optimum trait

Gestation length is what we call an optimum trait. It is not recommended to select for shorter neither longer duration but rather opt for intermediate values which were found by many studies to be optimal for other traits like productive life and calving ease. Therefore, Nav has no plans to include it in the NBDI. Therefore, and unlike the other traits, gestation length breeding values are not standardized to a mean of 100 and standard deviation of 10. They are rather expressed in days and as a deviation from a standard dairy gestation length mean fixed at 280 days. This is to make them easier to interpret and use by the farmers.

Breeding values for Gestation length are published if the beef bull has got an official EBV for calving traits and reliability for gestation length is higher than 50%.