

Youngstock survival included in the BeefxDairy evaluation

Haifa Splittorff, Anders Fogh, Terhi Vahlsten and Carolina Markey

The NAV BeefxDairy evaluation traits portfolio has now been expanded to include Youngstock survival. This new trait comes to fulfill requests that were expressed by the industry since the launch of the NAV BeefxDairy evaluation in 2018. These requests were driven by the implications of this trait on both economy and animal welfare which makes it beneficial for both farmers and consumers.

To achieve that goal, survival data were collected from all three countries and extensive analyses have been conducted to investigate the variations of the trait, define the model and its effects, estimate genetic parameters, and run a thorough validation study. Two survival traits were considered, youngstock survival between day 1 to 30 days (period 1) and 31 to 200 days (period 2). Heritability estimates were quite low (0.01 and 0.015 for period 1 and 2 respectively) but results showed enough genetic variation between sires to improve survival of crossbred calves through animal breeding.

To reach that purpose, farmers have now available three new official breeding values for beef bulls to be used on dairy cows. These new breeding values are 1) YSS1: Survival day 1-30 2) YSS2: Survival day 31-200 and 3) YSSI: a combined index based on equal weights of both first breeding values. Proper economic weights to be used for both the combined youngstock survival index and inclusion in the NBDI are being calculated and are planned to be implemented in 2023.

Average survival rate varies across country, sex, and breed. Across all the data the survival rate is about 96-97 % in the first period and 95-96 % in the second period. For period 1, the effect of 10 index units equals to 0,5 % among offspring and for period 2 the effect of 10 index units is 0,75 % among offspring.

For the breeding values and index to be published, the bulls' EBV reliability for period 2 (YSS2) must be at least equal to 50% or based on at least 500 offspring or the bull has official EBVs for Calving and Growth traits.