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Calf Survival Index

Figure 1. Calf resting in a straw yard

Genetic index to aid dairy calf survival

The Calf Survival Index, published by AHDB Dairy from April 2018, is available for all bulls evaluated in the UK and genomically evaluated Holsteins.

Improved management for calf rearing has always been a focus for dairy farmers and the Calf Survival Index allows breeders to approach this on a genetic level. In addition to current management practices, bulls can now be selected for progeny which stand a better chance of survival from tagging to 10 months of age.

The Calf Survival (CS) predicted transmitting ability (PTA) based on research conducted by Scotland's Rural College (SRUC) using close to 3 million animal records from the British Cattle Movement Service (BCMS), gives dairy producers a new tool to select bulls with above-average calf survival.

The heritability of CS has been found to be around 5 per cent, which will enable breeders who continually select bulls with improving calf survival genetics to achieve incremental improvements with each new generation of calves.

How does Calf Survival PTA differ from the Lifespan Index?

The new PTA for CS is based on BCMS records of calf deaths between tagging and 10 months of age. This captures a period when mortality is high, although it excludes stillbirths and deaths in the first 24 hours of life – information that is harder to obtain from national records.

In contrast, the existing PTA for lifespan predicts the survival of animals once they are in the milking herd. There is a correlation between the two PTAs of +0.4 indicating they are not the same trait. (This is unsurprising as the common causes of calf deaths are not the same as the common reasons for cows leaving a herd).

The CS PTA is one of only a few such dairy indexes in the world – giving UK producers more information with which to make well-informed breeding decisions.

How to use Calf Survival PTAs

The CS PTA can be used to improve calf survival rates between tagging and 10 months of age by selecting bulls with above zero CS PTAs.

The typical range of CS PTA goes from -6% (bad) to +6% (excellent), which gives a full 12 per cent difference in survival probability between the worst and best bulls, as shown in the graph overleaf.

Calf Survival is published as a stand-alone trait but will be incorporated into the UK national breeding indexes, the Profitable Lifetime Index (£PLI) and Spring Calving Index (£SCI), in the future.

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Sire calf survival PTA

Percent of calves surviving from tagging to 305 days
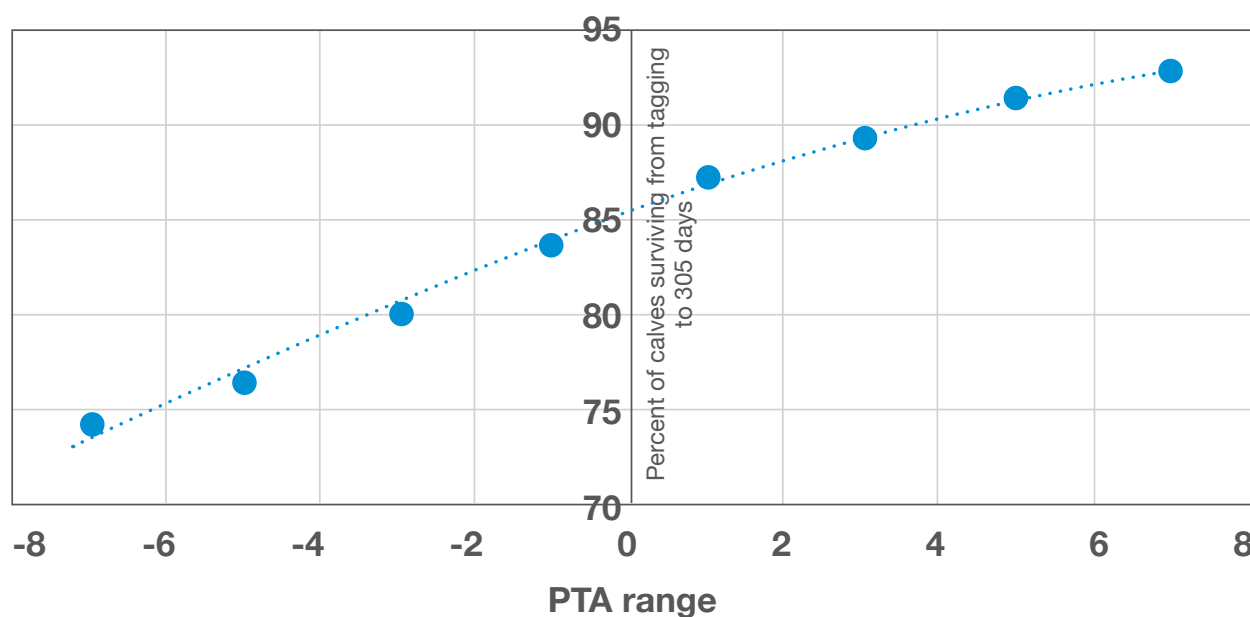
PTA range

Figure 2. Shows the per cent of calves surviving from tagging to 305 days based on sire PTA

Figure 3. Calves in a straw yard

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Further information

For more information on AHDB Dairy breeding and genetics, visit **dairy.ahdb.org.uk/breeding** or email **breeding.evaluations@ahdb.org.uk**

Please note this publication has been rebranded not revised, the information was correct at the time of printing in 2017.

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