

## Lifespan

Lifespan PTAs present the opportunity to select animals for longer herd life.

Lifespan PTAs are calculated from pedigree information, Type, SCC and Lactation survival data.

Type scores for the traits Feet & Legs Composite, Udder Composite, and Fore Udder Attachment together with Somatic Cell Count Information are used to calculate a longevity score and actual lactation survival information is used to calculate a Lifespan score. The two scores are jointly analysed to calculate a Lifespan PTA.

The Pedigree information alongside Type and SCC data collected in the first lactation enables an early prediction of longevity. But as the actual survival information of daughters builds up over time this becomes the most important piece of information.

Lifespan PTAs are published in lactations, as a deviation from a fixed base just like other traits. The range of PTAs is roughly +/- 0.5 lactations.

The associated reliability, published as a percentage, ranges from 20% to 99%. The minimum publication standard for bulls is 20% reliability.

The lower heritability for Lifespan relative to production means that the reliability % is considerably lower for a given amount of information.

A bull with a PTA of +0.5 lactations is predicted to pass on to daughters an extra half a lactation. A bull with a PTA of -0.5 lactations is predicted to pass on a reduction of 0.5 lactations.

The PTA indicates the ability of the animal to withstand involuntary culling.

Lifespan PTAs are incorporated into an economic index known as £Profitable Life Index or £PLI.

