

# At a Glance...

# £PLI: Profitable Lifetime Index

**£PLI & PTA figures appear on many different NMR reports, as well as the on-line i-reports.**

£PLI Profitable Life Index. A single financial value showing expected difference in net margin per cow, per lifetime, based on production and fitness traits (expressed as PTAs), that an animal is predicted to pass onto its offspring. Made up from 45% PIN (Profit Index -production traits) and 55% fitness traits (lifespan, fertility, SCC, udder composition and locomotion).

PTAs -Predicted Transmitting Ability. Predict to what extent a given trait will be passed to an animal's offspring. Do not predict actual performance, but predict the amount of a trait the offspring will, on average receive from its parents, compared with 'average' parents, whose PTA is zero. A PTA of 500 for milk kgs means that an animal passes 500 kgs of potential milk production to the next generation. This, of course, is only half of what is passed, as the other parent also transmits a value too.

£PLI is a single genetic index which brings together a variety of traits into one figure which can be used as a simple screening tool. The traits which contribute to the index are milk production, fertility, lifespan, udder confirmation, cell counts and locomotion. Each is weighted according to their relative influence on Lifetime profitability.

£PLI is calculated from actual performance where available, and takes into account family relationships as well as performance level in herd. It is widely used and respected and has been clearly proven to improve actual profitability on farm. Cows with a higher PLI will, on average, make more profit. In fact each PLI point could be worth £4.50\* in additional margin per cow per year. This can translate to a herd earning £000's extra margin per year through improving genetics alone.

Information included in genetic indexes originates from Milk Recording Organisations (e.g. production and cell count) and breed societies (e.g. type and locomotion information), or a combination of the two (e.g. fertility and longevity). It is then used in the calculation of genetic indexes by DairyCo Breeding+.

\*Promar2007

Graph 1: Relative emphasis of traits included in PLI and (inset) PIN

