



# Genetic Value Audit

For C J & P H GEORGE, NANSMERROW

Completed by

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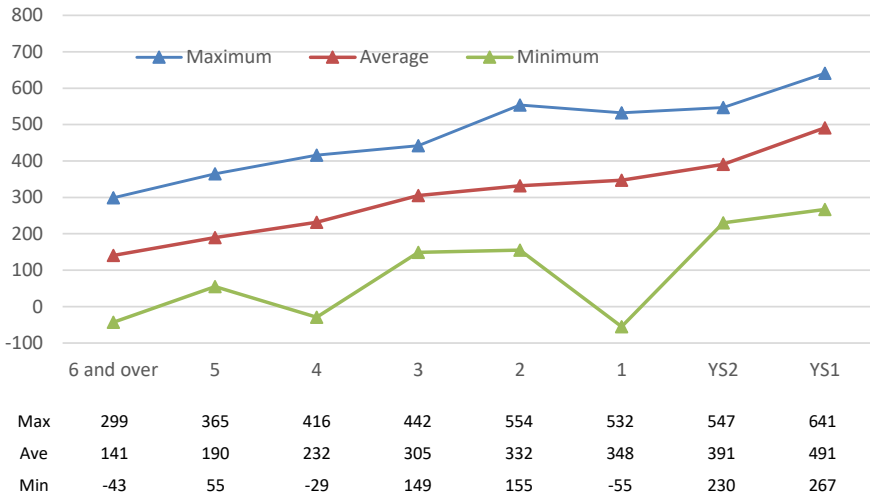
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**PLEASE NOTE: UK genomics testing can only be applied to pure breed animals (min 87.5%). Submission of samples not meeting these criteria will incur a charge as they will be tested but you will not receive any results**

# Your herd genetic progress and relative value

## PLI progress in the herd



## How does £PLI progress look in your herd?

In your herd, £PLI has changed by an average of 50 points with each cohort of animals.

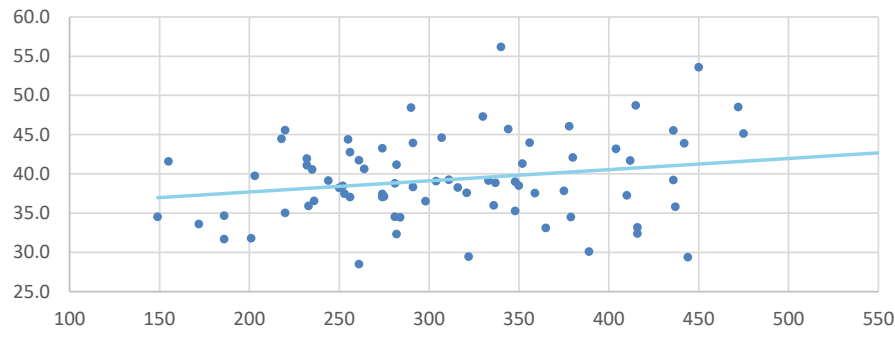
In your fourth calver cohort, the range in £PLI values from maximum to minimum was 445 points. In many herds that gap is growing with each generation, in your case the gap for heifers under 1 year old is 374 points.

Increasing £PLI range may indicate that you may be able to select from a tighter genetic pool. Many herds breed from all maiden heifers but normally there are better options in the milking herd than breeding from a second string heifer

Genomic testing can assist with this by allowing you to identify those heifers which will be best bred to beef. It is identifying optimal breeding groups that allows farm to capitalise on the real value in their herds and produce better, more profitable future milkers. In addition, trait analysis and recessive testing allow you to breed the exact type of animals you need for your future herd

**£PLI is a broad index so higher PLI animals should be more productive with additional improvements in health, longevity and fertility. In terms of production, you get 1.42 kilos increased average daily milk sales per £100 extra PLI. Based upon an average 305 day lactation, that equates to 434kg lactation**

## Production (per productive day) vs PLI in L2 and L3



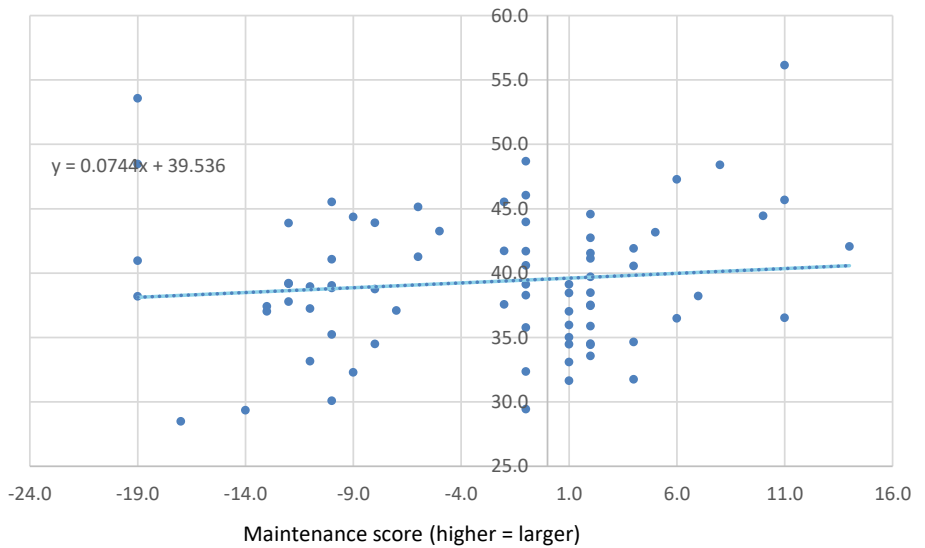
## Genetic Performance Headlines- How does production and cow size map in your second and third calvers?

### Maintenance versus productivity review

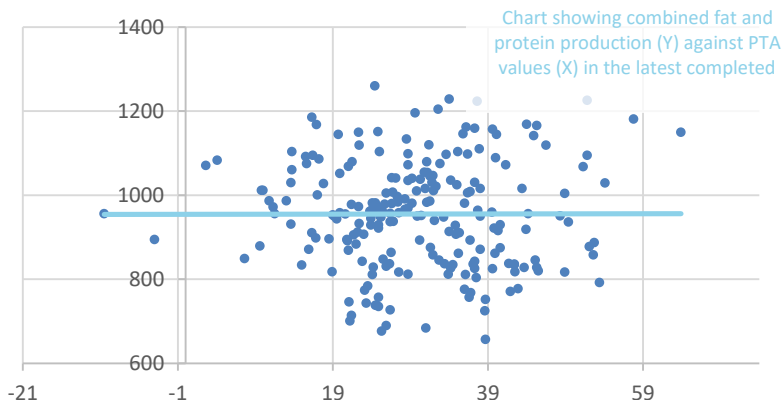
Do smaller cows produce less in your herd? It is a question many people ask, smaller cows will definitely eat less and produce less environmental impact if they are equally as productive. This analysis shows how increasing size is correlated to yield per productive day in your second and third calvers. If the trendline is tending downwards left to right, your smaller cows are more productive, if it is sloping upwards left to right then bigger cows are producing more. It should be noted bigger cows need to produce more to cover their additional feed

**In your herd, for each 10 point increase in maintenance (size) you get a change of 0.74kg daily production**

Chart showing average production per active day in the herd vs maintenance in L2 and 3



## Genetic Performance Headlines- how much do better genetics reward you?

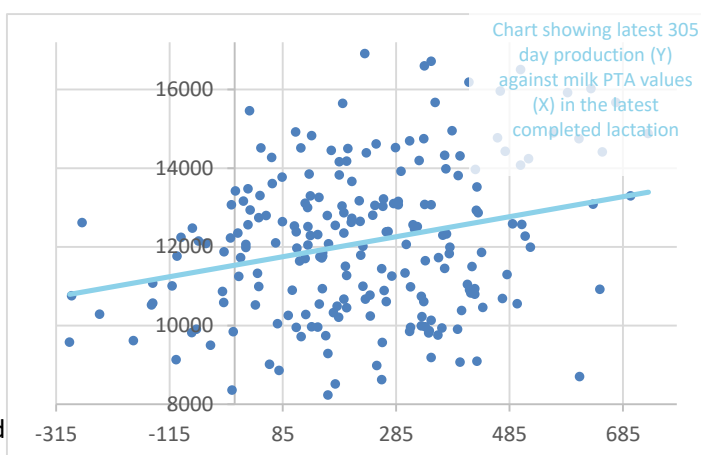


### Compositional trends

- ★ You gained 0.0kg extra solids for each 1kg increase in combined trait value
- ★ Your best 25% (based upon compositional trait PTA's) averaged 950kg of solids
- ★ The lowest 25% averaged 991kg in their latest lactation

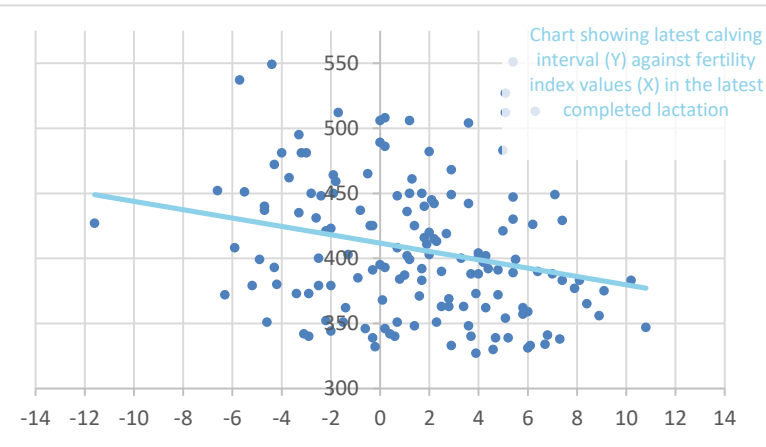
### Milk production trends

- ★ For every 100kg in increasing milk PTA you got a 254kg increase in lactation total, worth £89
- ★ The top 25% on milk PTA averaged 12,655kg in the latest 305 days
- ★ The bottom 25% on milk PTA averaged 11,601kg in the latest 305 days
- ★ This equates to £369 per lactation based upon 0.35 ppl



### Fertility performance

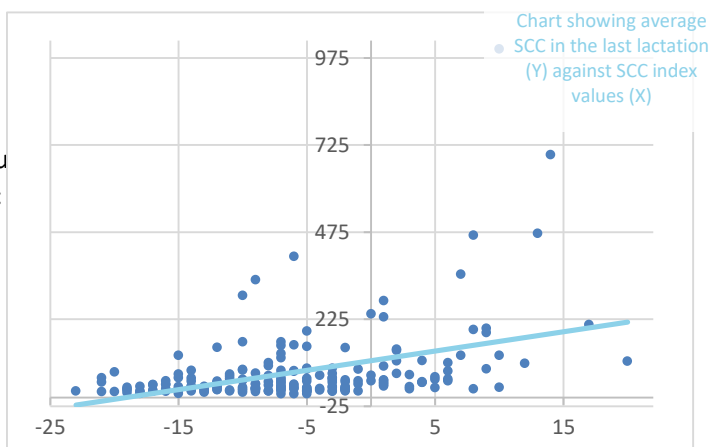
- ★ In the last year, for each unit increase in the value of fertility index, your calving interval changed by -3.2 days
- ★ Your herd lower quartile for fertility index had an average calving interval of 424 days
- ★ Your herd upper quartile for FI had an average calving interval of 395 days



### Somatic cell count trends

How much do genetics play a part in the scc levels in your herd?

- ★ For each unit decrease in SCC index, you get a 6 change point in lactation average scc
- ★ Your top quartile based upon scc index had an average of 32 cells in the last lactation
- ★ The bottom quartile on SCC index averaged 139 cells



### Genomic testing and your herd

The quickest way to substantially increase genetic potential and achieve the best value from your rearing investment is simply to avoid generating poor potential animals. This can only be achieved if you can **reliably identify your best animals irrespective of age**. With most of your best genetic potential in the youngest animals, genomic testing allows you to identify the talent and breed the best possible heifer cohort.

#### How do the numbers look for your herd?

Currently you have 78 heifers under 1 year old and 315 cows in the senior milking herd. This is equivalent to 24.8% replacements. Is this the number of heifers you require? With the increased use of sexed semen, many farms rear more heifers than required but these come at a cost. Each extra heifer equates to one less beef calf to sell and will cost app £1700 to rear. Breeding extra heifers will also mean that your breeding selection group is increased in the herd, the effect of this is to lower the average genetic potential of the group you select to breed from and, so, the average potential of the resulting heifer crop

#### Genetic performance summary within your herd (second, third and fourth calvers combined)

	Top 25% value	Top 25% performance	Bottom 25% performance	Bottom 25% value	PTA Value difference (Top 25% vs bottom 25%)	Performance difference (Top 25% vs bottom 25%)
Milk PTA (kg)	471	12655	11601	-21	493	1053kg
Combined fat and pro PTA (kg)	44	950	991	12	32	-42kg
Fertility index vs calving interval	6.4	395	424	-3.8	10	29.3 days lower calving interval
SCC index vs lactation SCC	-16	32	139	5	-21	-107 lower SCC in latest lact
PLI vs productive daily yield (kg)	£554	41.4	39.7	£149	405	1.7kg / productive day of life

Unlock your herds true potential through AHDB evaluations delivered by NMR milk recording and genomics testing services.



Your Genetic Value Audit is only made possible through recording with NMR



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