



Genetic Value Audit

For B G Nicholls Esq, Lower East Middleton Farm

Completed by

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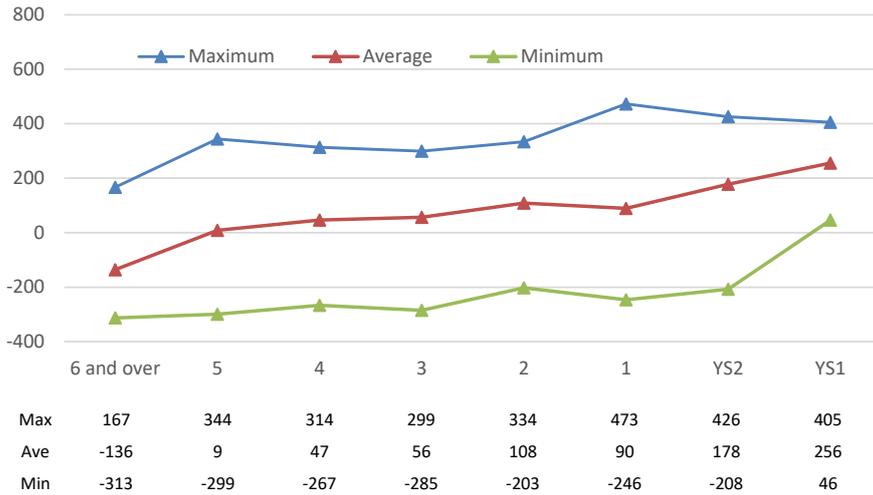
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PLEASE NOTE: UK genomics testing can only be applied to pure breed animals (min 87.5%). Submission of samples not meeting these criteria will incur a charge as they will be tested but you will not receive any results

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 56 points with each cohort of animals.

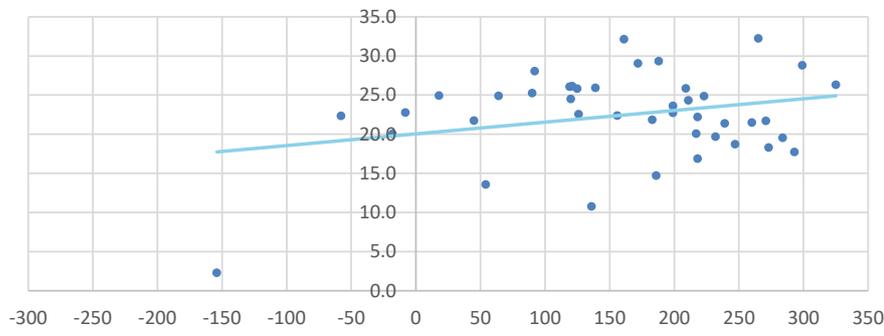
In your fourth calver cohort, the range in £PLI values from maximum to minimum was 581 points. In many herds that gap is growing with each generation, in your case the gap for heifers under 1 year old is 359 points.

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 0.84 kilos increased average daily milk sales per £100 extra PLI. Based upon an average 305 day lactation, that equates to 255kg lactation

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



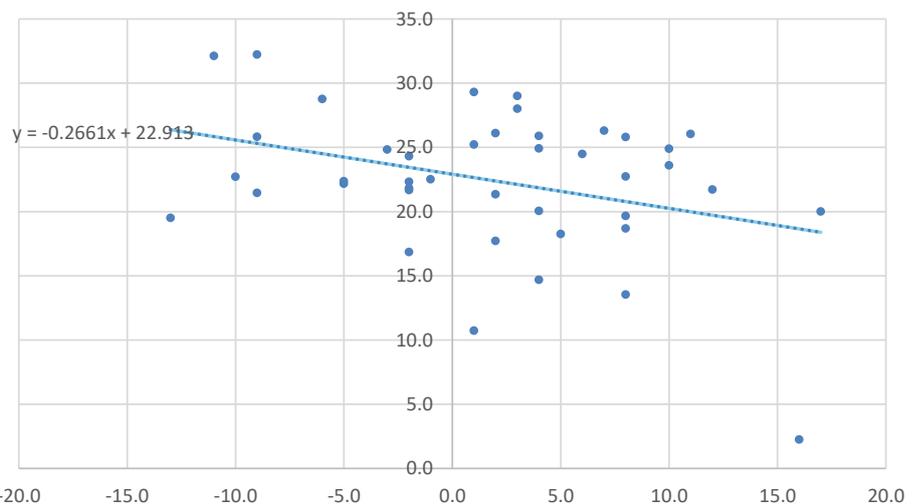
Genetic Performance Headlines- How does production and cow size map in your second and third calvers?

Maintenance versus productivity review

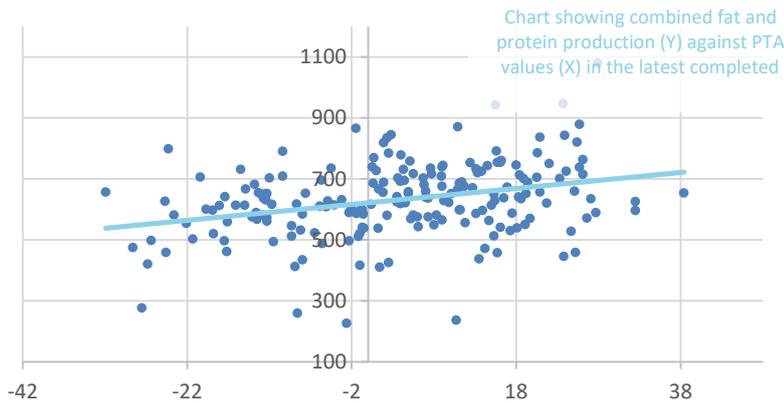
Do smaller cows produce less in your herd? It is a question many people ask, smaller cows will definitely eat less and produce less environmental impact if they are equally as productive. This analysis shows how increasing size is correlated to yield per productive day in your second and third calvers. 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 -2.66kg 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 2.6kg extra solids for each 1kg increase in combined trait value
- ★ Your best 25% (based upon compositional trait PTA's) averaged 684kg of solids
- ★ The lowest 25% averaged 583kg in their latest lactation

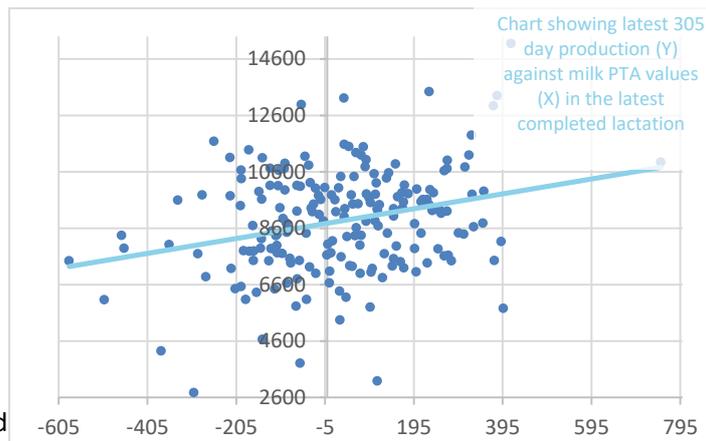
Milk production trends

★ For every 100kg in increasing milk PTA you got a 264kg increase in lactation total, worth £92

★ The top 25% on milk PTA averaged 9,480kg in the latest 305 days

★ The bottom 25% on milk PTA averaged 8,282kg in the latest 305 days

★ This equates to £419 per lactation based upon 0.35 ppl

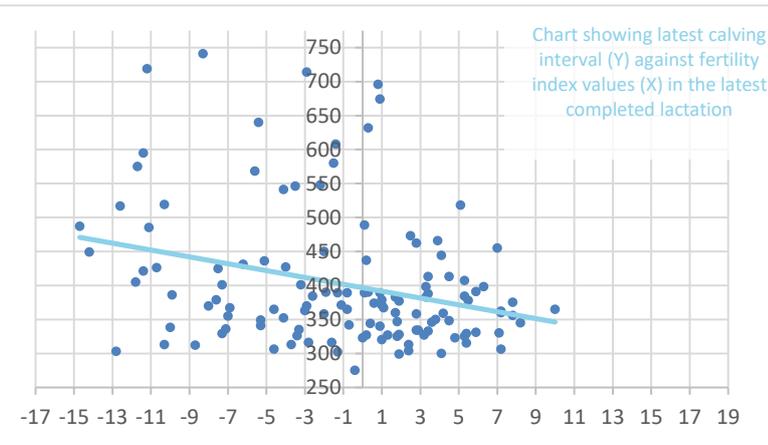


Fertility performance

★ In the last year, for each unit increase in the value of fertility index, your calving interval changed by -5.0 days

★ Your herd lower quartile for fertility index had an average calving interval of 443 days

★ Your herd upper quartile for FI had an average calving interval of 371 days



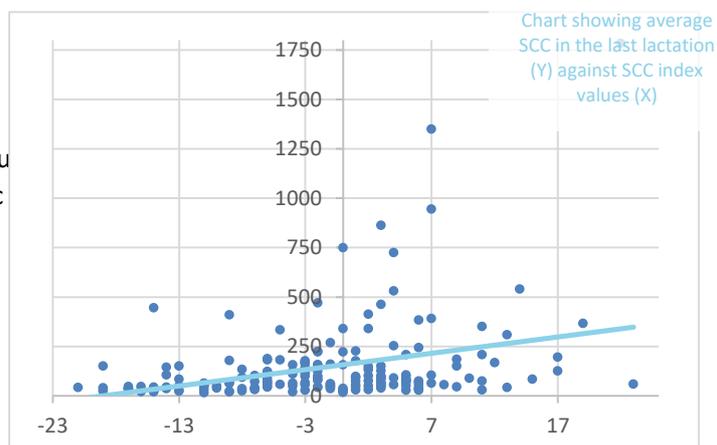
Somatic cell count trends

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

★ For each unit decrease in SCC index, you get a 8 change point in lactation average scc

★ Your top quartile based upon scc index had an average of 69 cells in the last lactation

★ The bottom quartile on SCC index averaged 238 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 5 heifers under 1 year old and 286 cows in the senior milking herd. This is equivalent to 1.7% 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)	272	9480	8282	-207	479	1197kg
Combined fat and pro PTA (kg)	22	684	583	-13	35	101kg
Fertility index vs calving interval	5.6	371	443	-9.1	15	71.1 days lower calving interval
SCC index vs lactation SCC	-13	69	238	9	-22	-168 lower SCC in latest lact
PLI vs productive daily yield (kg)	£325	22.9	19.4	£-285	610	3.5kg / 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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