

Extended testing shows results in improved performance standards

The extended production cycle adopted in the pure lines and field testing mean improved performance results for egg producers.

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In the field of animal breeding, it is important to carefully consider genetic selections and the direction of a breeding program.

Resulting changes in the offspring of our pure lines are not expressed in the commercial stock until about four years after implementation, and these choices can have a major impact on the breeds available to the entire industry.

Careful planning, forethought, and collaboration with all parties is important when making choices in the genetic program to add value for producers all the way down the value chain.

The prolonged laying cycle implemented in the Hendrix Genetics Layers breeding program in 2008 is the reason behind performance results and increased egg production numbers.

Almost 10 years later, it is important to review the reasons behind the change in direction and measure the results. Why was

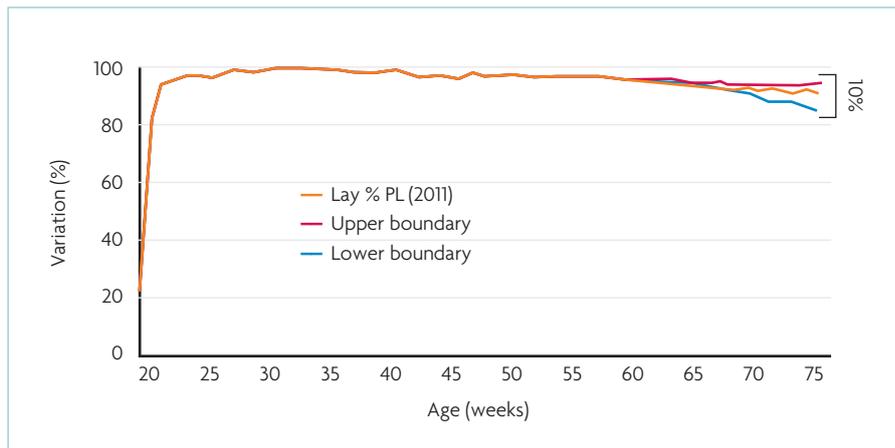


Fig. 2. Variation in laying performance between differing families (2008).

change made? What were the immediate effects of this direction, and where do the results stand at this point in time?

Finally, what does this mean for producers?

Reasons behind the decision to extend testing

In 2008, a change was made in the Hendrix Genetics Layer breeding department to move the pure line data collection to 100 weeks of age. Previously, the birds were tested up until 80 weeks.

This decision was made because of a few, but very important, factors:

- The variation in production between the families was decreasing: maintaining variation is crucial in pure lines because this ensures we can continue to make improvements in multiple traits over time.
- It was determined that overall egg laying persistence, egg quality and livability traits in the birds needed to be emphasised, including resistance to disease, feather cover and pecking behaviour. It was found that we could gain additional information on these traits analysing more data between 80 and 100 weeks in Pure Lines and field tests.

- By measuring performance up until 100 weeks, we could select the birds that could be kept in production longer by customers.

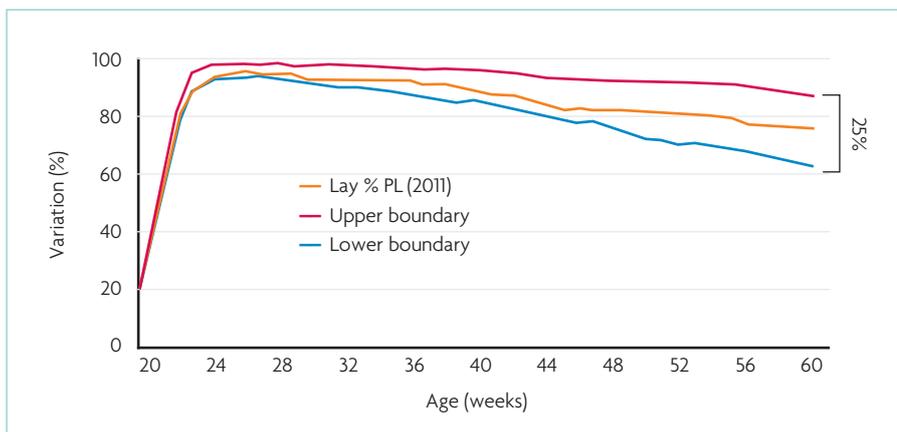
What were the effects?

After moving to 100 weeks, it was clear that the variation between families increased again towards the end of the cycle, giving greater opportunity for future improvement and the opportunity to select the best males and females for each brand.

As can be seen in Figs. 1-3, genetic variation was first reduced from 1992

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Fig. 1. Variation in laying performance between differing families (1992).



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towards 2008 when moving to 100 weeks of age the genetic variation was increased again to 35% in the prolonged cycle.

The resulting effects

It has now been almost 10 years since testing was extended in the pure lines. What results can be measured from this change? The effects in performance can be seen in recurrent test results, in the field and in independent Random Sample Tests all over the world. Most importantly, the release of the new performance standards reflects these results.

Table 1. Results from extended testing.

Product	Average brown products	Average white products
Eggs per hen housed (2014)	404	411.5
Eggs per hen housed (2017)	418	426
Difference (eggs)	+14	+14.5

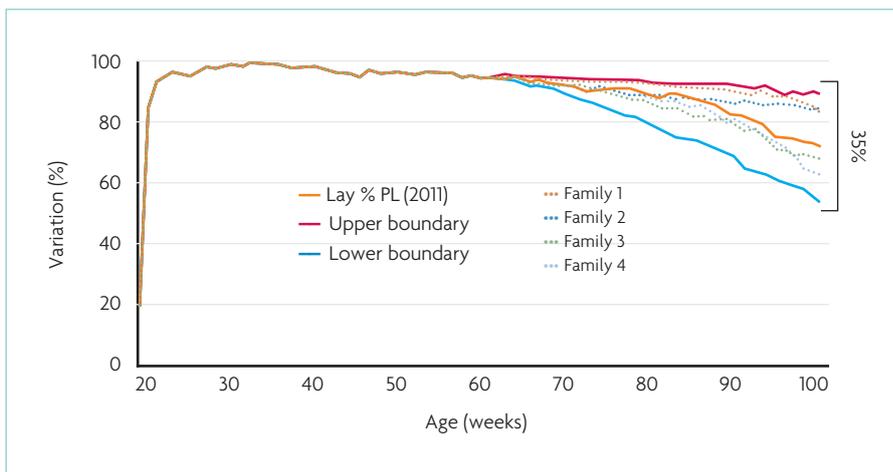


Fig. 3. Variation in laying performance between differing families (2011)

What does this mean for producers in the value chain?

Within a producer’s operations they need to be certain of the expected performance for their chosen product. Many variables are at play to ensure success, including the need for excellent management skills.

When all the right factors are in place, the genetics can be expressed at an optimum level.

Most important to producers is that, thanks to the extension in testing, leading to

extended laying and increased egg production numbers, they can expect to see enhanced performance in their flocks.

As the industry and the field of genetics progresses, it is important to continue to invest in R&D and new technologies in order to get the best performance possible from our breeds.

With the same forward thinking that shaped our breeding department in 2008, the underlying goal is to continue to break new ground in adding value for the industry and egg producers worldwide. ■