

Genetic gain lifts business bottom line

IMPROVING
HERDS

Trevor Saunders and Anthea Day,
Gippsland, Victoria



Genetics Case Study

Gippsland dairy farmers Trevor Saunders and Anthea Day are committed to making rapid genetic gain in their 750-cow dairy herd, 'Araluen Park', and have the figures to prove their efforts are paying substantial dividends.

Their predominantly Jersey herd was one of one of 27 Australian dairy farms that underwent detailed analysis by the ImProving Herds project to investigate the contribution of genetics to dairy businesses.

In the Araluen Park herd, the top cows produced an extra 690 litres/cow/year, 40 kg/cow/year more protein and 56 kg/cow/year more fat than their herd mates in the bottom 25%.

The extra milk produced by the top 25% cows was worth an extra \$498/cow/year in income. This was offset by higher feed costs of \$128/cow/year. Cows in the top 25% produce an extra income, after feed and herd costs, of \$370/cow/year more than the bottom 25%

The top cows also lasted in the herd for an extra 16 months.

"When you look at the figures you can see the clear benefits of genetics," Anthea said. "The results clearly demonstrate the value of investing in genetics to improve farm profitability.

"We always believed using genetic indexes and general herd improvement tools were profitable and the ImProving Herds project has validated our belief in the value of making genetic progress in our Jersey herd."

Trevor and Anthea are both fourth generation dairy farmers and are committed to using the best Jersey sires available from Australia and overseas, as well as genomically testing their females.

"The stock are our second biggest asset after the farm, so we want to use every tool available to add to their value," Anthea said.

She and Trevor are very focused on making genetic gain and this has been possible by selecting the best sires and using them extensively through artificial insemination (AI).

"We've been using 100% AI on the herd since 1985 and have been progeny-testing young sires for more than 30 years.

"Our herd has grown from 350 to 750 in 2½ years through natural increase and we have been able to do this relatively easily without compromising the genetic gain in the herd because we have had 100% of our calves bred through AI."



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– Trevor Saunders and Anthea Day

The couple have a long-standing passion for Jersey genetics and have imported embryos from the US in partnership with a friend to ensure they have access to leading genetics and families. US Jersey families now make up about 30% of the Araluen Park herd.

They use BPI when selecting sires for use in their herd and aim to be ranked in the top 2% for genetic merit for Jersey herds in Australia.

“We always look for bulls at the top of the list for BPI. If a bull doesn’t have a BPI, our key criteria are protein, type, udder, strength and, more recently, fertility. All bulls also have to be genomically tested,” Trevor said.

Most of the Araluen Park herd has been genomically tested, with each drop of heifers tested as calves for the past four years.

Tail hairs are taken from all heifer calves when they are a month to six weeks old and sampling is carried out to coincide with disbudding. Results take about a month to come back.

“Now that our herd numbers have stabilised, we can start using these genomic results to rank our heifer calves on BPI and sell the bottom 25% as weaned calves and make genetic gain earlier,” Anthea said.

The ImProving Herds analysis showed that if Anthea and Trevor had sold the bottom 25% of their calves, they would not have sold a single high performer from their herd; their calf genomic results matched their first lactation performance.

“Identifying the lower-ranked heifer calves earlier means more money in the bank because we are not using as much feed to grow out young heifers we may not want.

“The potential to increase the number of heifer calves by using sexed semen means we can still put more heifers into the herd and then reassess how our three and four-year-old cows are performing after their second or third lactation then decide who to keep and who to cull.”

The Araluen Park herd has recently joined Ginfo – DataGene’s national genetic information reference pool – which is motivating Trevor and Anthea to continue improving the rate of genetic gain in their herd.

ImProving Herds pays dividends

IMPROVING
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ImProving Herds was a three-year project that studied the contribution of herd improvement to Australian dairy businesses.

At the heart of the project were 34 inspiring Focus Farmers who agreed to put their farm, herd and financial records under the spotlight. Seven were Herd Test Focus Farmers and 27 were Genetics Focus Farmers. This is one of a series of case studies about their experiences as ImProving Herds Focus Farmers.

ImProving Herds has shown that:

- *The daughters of High Balanced Performance Index (BPI) bulls perform better under Australian conditions, across dairying regions and feeding systems.*
- *Cows in the top 25% for BPI in a herd outperform cows in the bottom 25% for production, fertility, longevity and contributed on average an extra \$300 income over feed and herd costs.*
- *The benefits of using genomic breeding values to guide heifer selection decisions were demonstrated on the Focus Farms, where the performance of genotyped heifers aligned with their genomic breeding values.*
- *Information from herd testing gave Focus Farmers confidence to make data-driven decisions for routine management and to respond to high pressure events.*

Funded by the Gardiner Dairy Foundation, the project was a collaboration of Dairy Australia, Agriculture Victoria, DataGene, Holstein Australia and the National Herd Improvement Association of Australia (NHIA).

CONTACT US

ABN: 78 613 579 614

DataGene Limited, AgriBio, 5 Ring Road,
La Trobe University, Bundoora Victoria 3083

 email: enquiries@datagene.com.au

 www.datagene.com.au

 (03) 9032 7191



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