

Does genetics pay in practice?

IMPROVING
HERDS

Paul Mumford,
Gippsland, Victoria



Genetics Case Study

The high genetic merit cows in Paul and Lisa Mumford's herd produce an extra income, after feed and herd costs, of \$282/cow/year more than their lower genetic merit herd-mates.

This is the finding of an analysis by the ImProving Herds project, funded by the Gardiner Dairy Foundation and presented at the Won Wron Focus Farm open day in September 2018. The Mumfords' herd is one of a few in the world to undergo a rigorous comparison of cows of different genetic merit drawing on a long history of herd testing and detailed farm and financial performance records.

With a shared passion for breeding Jerseys, Paul, Lisa and their sharefarmer Aaron Thomas have built the genetics of the herd (Gelbeado Park Jerseys) to rank number six in Australia for Balanced Performance Index (BPI)

Being a GippsDairy Focus Farm has led Paul, Lisa and Aaron to question every aspect of the farm business, including whether their investment in genetics is a profitable one.

"I get a lot of enjoyment out of my breeding program, but we need to run a profitable business and when finances are tight, we look closely at every aspect of the business," Paul said.

The analysis drew on detailed records kept by the Mumfords over many years. It combined cow records including herd tests, mating and health records with farm financial and physical data. The study identified the top and bottom 25% of each herd, ranked on Balanced Performance Index (BPI), and compared their performance in terms of production, longevity and financial contribution to the farm business.

Cows in the higher genetic merit group had higher feed costs, but this was easily compensated for by increased milk income and lower replacement rearing costs. Some costs, such as pregnancy testing were similar between the high and low genetic merit groups.

Cows in the high genetic merit group produced more milk (L), fat (kg) and protein (kg) each year. Their inter-calving interval was a month shorter and they lasted 13 months longer in the herd than their lower genetic merit herd mates. There was no difference in their lactation length.

Paul said the results gave him confidence in his breeding choices.

"It's great to know that high genetic merit cows are more profitable, even in seasons with challenging weather and



The high genetic merit cows in Paul Mumford's herd contribute \$282 more income (after feed and herd costs) every year than their lower genetic merit herd-mates.



Farm consultant, Matt Harms, Lisa and Paul Mumford and Karen Romano, GippsDairy.

ImProving Herds pays dividends

IMPROVING HERDS

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).

milk price. The Focus Farm has helped us to lift pasture consumption so we can expect even more profitable returns from our high genetic merit cows when seasonal conditions improve,” Paul said.

Michelle Axford, from the ImProving Herds Project, said the Mumfords’ results demonstrated that the BPI is an effective reflection of an animal’s genetic merit for profitability in Australian dairy herds.

“The BPI is based on Australian farmers’ breeding priorities, cow performance under Australian conditions and world leading science. Now we have the confirmation that it works on farm,” she said.

“The easiest way to use the BPI in your breeding program is to use the Good Bulls app or look for bulls that carry the Good Bulls logo.

“There are hundreds of bulls on the market in Australia that meet the Good Bulls criteria, and they are available in every price range. Choose bulls that meet your own breeding priorities but always check they carry the Good Bulls logo.”

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