

# Jerseys on continual improvement

IMPROVING  
HERDS

Lyn Parish  
Winchelsea South,  
Western Victoria



## Genetics Case Study

Lyn and David Parish, and David's brother Paul, milk up to 600 Jerseys on their Winchelsea South dairy in Western Victoria and have a commitment to continually improving their herd.

Their detailed herd and farm records enable them to make their herd improvement decisions based on hard data. The industry has also benefited from the Parishes' records, as they have been used by projects such as Ginfo and ImProving Herds.

Their was one of 27 dairy farms across Australia that recently underwent detailed analysis by the ImProving Herds project to investigate the contribution of genetics to dairy businesses.

The study identified the top and bottom 25% of each herd, ranked on Balanced Performance Index (BPI), the genetic index for profit used by the Australian dairy industry and compared their performance in terms of production, longevity and financial contribution.

Ten years of historical performance data, plus recent farm financial data from the Parishes' herd records were analysed to look at the difference in contribution to the farm business between the top and bottom BPI groups in the herd.

The top 25% of the Parishes' herd, ranked on BPI, produced 636 more litres of milk per cow per year, 50 more kilograms of fat and 38 more kilograms of protein than the bottom 25%.

The extra milk production from the top 25% of cows resulted \$350/cow/year more income after feed and herd costs compared with the bottom 25% of the herd.

## Farm stats (September 2018)

**HERD SIZE**  
600 milkers

**BREED**  
Jersey

**FARM SIZE**  
200 ha milking are on main block plus a 100 ha and two 40 ha blocks used to run dry stock

**CALVING PATTERN**  
6 months from April to September

**DAIRY**  
50-unit rotary

**STAFF**  
Five full-time and two part-time including family and employees

**FEEDING SYSTEM**  
Individual grain feeding in head bail more than 2 t/cow/year

**HERD TESTING**  
More than 30 years, with a few years break



*"With more heifers to choose from we can put greater selection pressure on our replacement heifers and the older cows in our herd."*

Lyn Parish, Western Victoria

“We want to continually improve our herd and maintain high production figures across all the age groups, so it was a great opportunity to be involved in the ImProving Herds Project,” Lyn said.

“Our farm was selected to be part of the Ginfo project, which gave us even more data on our cows. The two projects go hand in hand.”

### Goodbye sheep

The Parishes’ Jersey herd is part of a mixed farm operation that includes beef as well as dairy. David’s father originally ran sheep on the property in the 1970s before the farm was converted to dairy.

The sheep paddocks and shearing shed have long given way to improved dairy pastures and a 50-unit rotary that was built in 2004 and a 600 cow Jersey herd that became a registered stud in 2014.

The prefix, Dornoch, which means rolling green hills in Scottish, was originally established by David and Paul’s mother, Jean.

Today, the milking area covers 200 ha and is supported by a 100 ha and two 40 ha blocks that are used to run dry stock and replacement heifers.

Calving spans six months, starting in April and finishing in September with two groups of heifers calving in April and July.

Cows are fed grain in the dairy, which has a Jantec system that reads each animal’s NLIS tag and can feed cows according to their stage of lactation and production level.

Cows are joined to AI using natural heat detection, backed up with tail paint and scratchies. After one round of AI the cows are run with home-bred mop-up bulls that have been AI bred from the elite cows in the herd.

The Parishes used their herd test results to monitor individual cow production and cell count. Cows with low milk production are dried off, run with bulls then culled if empty.

### Breeding changes

“We always aim to keep improving our herd and breed better heifers each year,” Lyn said.



Lyn has made a number of significant changes to the breeding program in recent years with the aim of further improving the quality of their heifer replacements.

“We used AI on our replacement heifers last year for the first time. This year, sexed semen was used for one round of AI on the heifers, which were then run with mop-up bulls,” she said.

“The mop-up bulls are home-bred, by AI sires and out of the top cows in the herd.

“We also used sexed semen for the first time this year on the elite cows in the herd with conventional semen used on the other milkers.”

Sire selection is carried out by Amy Wright of World Wide Sires who evaluates all of the Parishes’ heifers and develops a corrective mating strategy.

“She looks at the bulls to minimise inbreeding and makes suggestions on which sires to use,” Lyn said.

“Our main priorities when selecting sires are production (fat and protein), fertility and type.”

### Better heifers

About 130 heifers came into the herd in 2018 – 80 in the April calving and 50 in the July calving.

“We aim to rear every AI bred heifer calf we have and that has certainly gone up this year after using sexed semen last year!” Lyn said.

“We could be rearing up to 250 heifer calves this year with the AI bred heifers born from the sexed semen used over first calving heifers and superior cows.

“Having more heifers to choose from will mean we can put greater selection pressure on our replacement heifers and the older cows in our herd.

“We would prefer to keep good young heifers and cull older cows.”

While the Parishes can milk a maximum of 600 cows at the moment, having a large number of replacement heifers gives them the option to grow the herd in the future.

They regularly weigh their heifer calves to monitor their growth rates to ensure they reach target weights for joining.



Their last group of 47 heifers had a 100% submission to AI in 11 days, which Lyn said was “very pleasing”.

“It shows that heifers need to be well grown and we achieved that with most of the heifers 12-13 months of age at joining,” Lyn said.

In the past, tail hairs for genomic testing were collected when the heifers were classified as two-year olds, but last year tail hair samples were taken from the heifers as yearlings, which gave the Parishes information on the genetic merit of their heifers earlier.

### Genomics

“When we get the genomic results we always look at BPI and the parentage confirmation – it’s valuable information when you are making decision on which heifers to keep as replacements,” Lyn said.

“It means we can rank the heifers on their BPI and use it as a selection tool.

“We plan to start genomically testing our heifers at a younger age this year now that we have more heifers resulting from the sexed semen.

“It will mean we will be able to make decisions earlier on which heifers we want to keep and which sires to join them to. The results will also help identify which heifers are surplus to our requirements and can be sold for export.

“Apart from using production info and classification results, the genomic testing also gives us more scope on rearing quality bulls for our own use and potential sales.”

Genomic testing is also giving the Parishes an insight into other traits that may be important for their herd down the track.

“We can use the results to monitor the prevalence of the A2 gene in our heifers, which means we can select for it if we consider shifting to A2 production in the future,” Lyn said.

“I’d also like to be in a position to use genomically tested polled Jersey sires in the future, when there are more polled bulls of a suitable standard to choose from. This is a trait we would like to incorporate in our herd to enhance on farm animal welfare.”

## 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).*

## CONTACT US

ABN: 78 613 579 614

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

 email: [enquiries@datagene.com.au](mailto:enquiries@datagene.com.au)

 [www.datagene.com.au](http://www.datagene.com.au)

 (03) 9032 7191



Disclaimer: DataGene is an independent and industry-owned organisation responsible for driving genetic gain and herd improvement in the Australian dairy industry and is an initiative of Dairy Australia and industry. This report is published for your information only. It is published with due care and attention to accuracy, but DataGene accepts no liability, if for any reason, the information is inaccurate, incomplete or out of date whether negligent or otherwise. Copyright © DataGene Ltd. All Rights Reserved.

October 2018