

# Cow quality matched with production

IMPROVING  
HERDS

Paul (pictured) and Adam Lenehan,  
Western Victoria



## Genetics Case Study

Paul Lenehan has never wavered in his passion for breeding productive cows that are true to type. "I left school the week before my 14th birthday and started work on the farm milking Jerseys, and that was more than 50 years ago!" Paul said.

Today, the Jersey Australia board member and his wife Lynette, along with their son Adam and his wife Samantha manage a milking herd of 320 Jerseys and 120 Holsteins on their farm at Crossley in Western Victoria. Both herds are registered under their Murray Brook prefix.

The quality of the Lenehans' Jersey herd has been recognised with their success in the Semex Southern Challenge. Their Murray Brook Jersey herd had the overall champion in 2009 and the champion three-year-old in 2014.

"I've always bred for type. If I'm going to be milking them then I want to look at nice cows, but I want highly productive cows as well," Paul said. "Last season our Jerseys averaged 6,600 litres and the Holsteins averaged 9,200 litres."

And an analysis of their Jersey and Holstein herds by DataGene's ImProving Herds Project has shown that their approach to breeding is on track.

### Herd analysis

The herds were included in the 27 dairy farms across Australia that recently underwent detailed analysis by 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), and compared their production, longevity and financial contribution to the farm business.

## Farm stats (August 2018)

### HERD SIZE

420

### BREED

300 registered Jerseys, 120 registered Holstein

### FARM SIZE

200 ha milking areas plus 200 ha run off block for young stock

### CALVING PATTERN

330 cows in autumn and 100 cows in spring

### DAIRY

16-a-side double up herringbone

### STAFF

3 full-time plus Paul and Adam

### FEEDING SYSTEM

In bail, about 2.2 t/cow/year

### HERD TESTING

40 years



*"I've always bred for type, but I want highly productive cows as well."*

Paul Lenehan, pictured with his son, Adam, Western Victoria

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

The study found the top 25% of the Lenehans' Jersey herd produced 677 more litres, 38 more kilograms of fat, and 50 more kilograms of protein per cow per year than the bottom 25% of the herd. The top 25% also lasted 20 months longer. The extra milk production from the top Jersey cows resulted in an extra \$470 cow/year in milk income after feed and herd costs compared with the bottom group.

Figures for of the Holstein herd show the top 25% produced and extra 29 more kilograms of fat, and 47 more kilograms of protein per cow per year more than the bottom 25% of the Holstein herd. The extra milk production from the top Holstein cows resulted in an extra \$292/cow/year in milk income after feed and herd costs compared with the bottom group.

### Breeding

The Lenehans split calve with around 330 cows calving down in autumn for 12 weeks starting in February. A second mob of 100 cows calves down in spring, starting August.

The Lenehans are devoted Jersey breeders, but their Holsteins are also registered and run as a purebred herd.

The Holstein herd came into the farm operation when Paul bought extra land when he was 21 years old and kept the 12 Holstein cows that came with the land.

"We run the Jerseys and Holsteins as one herd, but we herd test as two separate herds on herd test day. We breed and cull each herd on the same criteria," Paul said.

Paul has been working closely with Amy Wright from World Wide Sires in selecting suitable genetics for the Murray Brook breeding program.

"We want type, good udders, good feet, high fertility and production. BPI is also part of it and has become more of a priority since we began genomically testing our replacement heifers four years ago.

"Once we have a bull list, we look at the Good Bulls Guide to see where they sit so we can make sure they are well placed in the rankings."

Mature cows are joined to three rounds of AI using conventional semen followed by a home-bred mop-up bull.

Elite Jersey cows are flushed and the embryos go into Holsteins or lower genomic BPI Jersey heifers.

### Genomics

Genomic testing of replacement heifers at two to three weeks of age allows the Lenehans to rank the heifers on





BPI and identify how they will be managed in the breeding program.

The top heifers in the ranking are joined to sexed semen from high BPI bulls while heifers with a low BPI become recipients for embryos flushed from elite mature cows in the herd.

“We’ve used sexed semen over the top heifers for the past two years and it means we are getting more heifer calves out of the best heifers we have,” Paul said.

“It means we end up having more cows than we need, so we can sell off around 35 cows to other farmers.”

The Lenehans rear around 100 heifers from the autumn calving and up to 35 from the spring calving. Most of the autumn drop heifers are Jerseys sired by sexed semen. Any heifers sired by mop up bulls are sold.

Around 25 to 30 Holstein heifers are reared annually, half of which become recipients for Jersey embryos flushed from elite cows. The remaining Holstein heifers are joined to sexed semen.

Up to 30 Jersey bull calves are also reared a year; some are used as mop up bulls over heifers and a number are sold to other farmers.

A portion of the bull calves are genomically tested and selected by AI companies as potential sires. One of the bulls bred by the Lenehans is currently being marketed CSCSHADOWMAN.

## Records

The Lenehans have been herd testing bimonthly for 40 years, so their herd is backed by a wealth of data on individual cow production, as well as cow pedigrees.

“Originally all our records were on paper but Adam has put everything on the computer, which has made everything easier,” Paul said.

The Lenehans’ detailed herd records were a key factor in their involvement in the ImProving Herds program and has also led to their two herds recently being accepted into the Ginfo program. Ginfo is Australia’s national reference herd for genetic information. Managed by DataGene, Ginfo includes more than 100 commercial herds with excellent records.

## 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