Case Study



Rising through the ranks

Lyn and David Parish Region: Western Victoria Topic: Genomic testing

Lyn and David Parish (Dornoch Jerseys) continue their rapid ascension in the national herd rankings as they become the first Jersey herd in Australia to reach more than 2,000 genotyped cows.

Milking 650 registered Jerseys on the fertile slopes south of Winchelsea in Western Victoria, the Parishes started genotyping their herd through their involvement in the ImProving Herds Project. In 2014, their first genomic results ranked the Dornoch herd at 278 of 387 herd recorded Jersey herds in Australia for profit, which combines the key traits that contribute to profit. By utilising the genomic data, and the information provided in their Genetic Progress Report (GPR), the Parishes have seen a dramatic rise in their herd's overall genetic performance.

After the April 2022 ABV (Australian Breeding Value) release, the Parishes herd rose to an average BPI (Balanced Performance Index) score of +139 and HWI (Health Weighted Index) of +121, earning them a ranking of No.25 for BPI and No.14 for HWI nationally.

DataGene Extension Officer Peter Williams has tracked the progress of the Dornoch herd over the past 10 years.

Peter praised the Parishes for their dedication to accurate record keeping and data collection, claiming he has not seen another herd improve so much in such a short period of time.

"Their original results ranked them in the bottom 30% of herd recorded Jersey herds for BPI in Australia. Now they



Lyn Parish: "I don't care where he comes from – a good bull is a good bull. We try and use the top bulls each year, and can usually find bulls with pretty decent numbers while keeping all the good traits that I'm after."

are in the top 10% nationally for both BPI and HWI," Peter said. "It's a remarkable achievement to see a herd advance so quickly from where they started."

Peter attributes the success of the Dornoch herd to their willingness to embrace the genomic data, and Lyn's progressive approach to breeding and herd management.

"Lyn is such a great adopter of modern breeding technology," he said. "She knows how it all works, and when you tie it all together – you get a big result!"

When analysing the Parishes Genetic Progress Report (GPR), Peter highlights the compounding gains achieved in BPI across the herd since 2014.

"Coinciding with them having the greatest number of Jersey cows genomically tested in Australia, their Genetic Progress Report shows important traits trending well above the national Jersey average; traits such as type, longevity, mastitis resistance and overall Balanced Performance Index."

"Their herd jumped nearly 100 places in the national Jersey herd BPI rankings in the past two years (April 2020 – April 2022)," Peter said. "It is certainly rewarding for all their hard work."

Lyn said she didn't have any specific goals or expectations when she first began genomically testing her cows. Though she admits their early genomic results showing their low overall herd ranking was disappointing, Lyn was not disheartened. Instead, she was motivated to implement new strategies in the hope of achieving change.

"I never thought of reaching the top 10 or anything like that – it seemed so out of reach," she said, "but it gave us something to aim for, so we kept plugging away. Now we're nearly there it's a bit of a thrill."

Utilising the information provided by the Genetic Progress Report, Lyn's first action was to incorporate the genomic results with their corrective mating program. By combining the genotypic data with the phenotypic evaluation, Lyn was able to customise her sire selection to maximise the genetic progress of her herd.

"We tailor the bulls we select to correct the animals' faults," Lyn said. "We've encountered different faults within the herd over the years, but you have to fix one problem before you fix another."

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Lyn studies the genomic proofs and profit rankings with her breeding adviser accessing genetics from all over the world to meet her breeding requirements.

"I don't care where he comes from – a good bull is a good bull." Lyn says. "We try and use the top bulls each year, and can usually find bulls with pretty decent numbers while keeping all the good traits that I'm after."

Alongside BPI, Lyn has concentrated her program on type traits such as udders and chest width with positive results.

"We are now giving more attention to the fertility and health traits," she said. "It's just another stepping-stone forward each time."

Lyn believes the use of sexed semen over the maiden heifers and high genetic merit cows, combined with the use of beef sires over the lower genetic merit cows, has helped accelerate the genetic improvement in the herd.

This additional selection pressure, combined with a strict culling regime, is continually "pushing the bottom cows out", with very few replacements entering the milking herd that have tested below the herd average for BPI.

To ensure 100% of their herd is genomically tested, the Parishes collect TSUs (tissue sampling units) from every calf born (including bull calves) at dehorning.

"It's a pretty easy job when the vet has them all knocked out," Lyn says.

Aside from the breeding values, Lyn is also utilising the genomic data for parentage verification – which is automatic now that the genotype of all their females and sires (including natural sires) are on the database.

"We're usually pretty on top of our identification, so there are very few surprises," Lyn said proudly. "Though it is helpful for the naturally bred calves during times when we've had to rotate the bulls."

Lyn says watching the rise of her herd in the genomic rankings, the additional demand for their young Jersey sires and surplus stock, and the industry recognition they have received, gives her a goal to aim for.

"It has taken some time – but it hasn't been something that was all that difficult, or a real labour to get there," Lyn admits. "It's very rewarding to see our herd move up the scales and keeps us aspiring to do better."