

## Genomic testing reset culling criteria

### Shiona and Caleb Berry

**Region: Gippsland Victoria**

**Topic: Genomic testing**

Shiona Berry isn't that interested in cattle genetics. Neither is her husband, Caleb. But these Glen Alvie dairy farmers started genomic testing their heifer calves two years ago.

Shiona told a recent DataGene Genomics Discovery Day that DNA testing their calves helped accurately select the top animals for retention.

"We are rearing so many more heifers now because of sexed semen and our cows are getting pregnant really quite well now," she said.

"We are selling a lot to the export market, and we knew what we were doing to pick the ones for the export market was not great. We went through a stage where it was all the tailenders (born at the end of the calving season) that were culled.

"Then we went through a stage where we looked at the mothers (of the calves) to see their production and whether we liked their traits and then we'd get rid of their calves if they did not tick a box."

With two years of genomic testing under their belt – including all the animals' Balanced Performance Index (BPI) data – Shiona and Caleb realised their previous approach to culling wasn't the most beneficial for their business.

"The stab in the dark we were having previously was crazy," Shiona said.

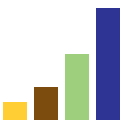
"We were cutting tailenders off, and I look at our genomic testing data and our tailenders were not our poorest BPI ... actually we have poor BPI spread all through."

Now the Berrys select the heifers they want to retain based on BPI and use industry tools such as DataVat\* to navigate the genomic information.

Shiona, Caleb and their children Ella 16, Freya 14 and Olivia 11 operate Glen Alvie Dairies, milking 700 cows in a split calving system.



*Shiona Berry uses genomic results to select the heifers to keep as replacements based on BPI with the surplus being sold for export.*



With a nutrition background, Shiona's passion is feeding cattle.

Until 10 years ago she hadn't given much thought to the genetics in their herd as this job was outsourced.

At that time, their herd was "going the wrong way". The cows were too big for their hilly farm, and they weren't necessarily getting pregnant.

Shiona and Caleb took the reins of genetic selection and created a clear breeding goal.

"We want an animal that can march up hills; it's probably a bit more robust than the normal dairy-type that we've always been led to believe was great," she said.

"We've got production in mind as well; our cows do 8500-9000 litres, so that's definitely a focus. We want our cows pregnant, all four legs on the ground and to have the choice to cull a cow. We don't want to have to cull a cow because she's empty or has mastitis and we want the cow to last."

Not long after this change in breeding direction, Shiona and Caleb learnt about genomic testing.

Initially, they dismissed the concept because of cost and the fact neither of them was into genetics. But, a few years ago, they became involved in an industry research project where they were required to take a DNA sample from dead calves. It opened the door for them to start testing their live calves.

Taking the initial genomic samples proved challenging.

"We were taking the samples from the calves and they were standing up and running around," Shiona said.

"Now we do it when we disbud the calves under general anaesthetic on the ground. I walk along and they get their vaccination, and we do a notch at the same time. It is very easy and a lot calmer."

Another benefit of genomic testing has been accurately identifying parentage.

***"It has been much more helpful for me, as a non-genetics person, to have that (genomics) data to then decide what bull I'm going to use."***

– Shiona Berry



Shiona said she now receives an email post-genomic testing which highlights all the misidentified animals, enabling them to rectify records.

Looking ahead, Shiona anticipates using genomic information for more targeted breeding.

"It has been much more helpful for me, as a non-genetics person, to have that data to then decide what bull I'm going to use."

\* DataVat is a web portal that allows farmers access to customised reports and tools based on their own herd and business records, including genomic results.

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