

## Genomic testing delivers benefits across the farm business

**Rob Cooper**

**Region: NSW**

**Topic: Genomic testing**

Implementing a sexed semen program using genomic testing not only provides productivity and financial gains, it sets a farm business up for the future, according to a NSW dairy extension officer.

Rob Cooper works for Dairy NSW and was previously an equity partner in a 1,600-cow, irrigated dairy farm at Manilla about 60 km north-west of Tamworth in NSW.

He is as passionate about the genetic gain genomics can deliver on-farm now as he was when he first started taking DNA samples from his own calves almost seven years ago.

Rob learnt about genomics during a trip to the US in 2013 and it was here he understood how the testing could help him make better on-farm decisions.

“I’d started using sexed semen a couple of years before that, so when we started genomic testing the heifers and had the ability to be able to select which heifers to use the sexed semen on, it was a big plus,” he said.

This process allowed Rob to select which heifers to join to beef semen, so he wasn’t rearing replacements from poorer cows.

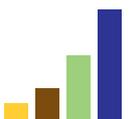
Genomic testing is the DNA analysis of a tissue or hair sample to provide insight into the potential performance of bulls and cows.

DataGene conducts genomic evaluations for the Australian dairy industry.

Once the genomically tested heifers entered the herd, Rob used this information about the animals to pair with bull genomics for more targeted breeding decisions, such as improving the herd’s fertility and milk solids.



*Rob Cooper used genomic results to select which heifers to join to beef semen so he wasn’t rearing replacements from poorer cows.*



This extra genomic data paid significant dividends.

“In round terms, we were getting a double rate of genetic gain because we were selecting replacements from the better half of the herd and then using sexed semen on the best half of the herd, and beef on the rest,” he said.

The former dairy farmer used the extra income from beef calf sales to offset the cost of genomic testing his heifer calves and the sexed semen.

Rob said his sales of the beef calves were more than 200% more lucrative than sales of Holstein bull calves.

“It did vary from year-to-year, but instead of getting \$50-\$60 for a Holstein bull calf, we were getting \$200-\$250 for the beef-cross calves at the same age – seven days old,” Rob said.

“Thanks to the beef calves, genomic testing pays for itself immediately. Long-term, with the herd improvement benefits, it actually costs very little to do the genomic test and it’s also simple. I don’t think a lot of people realise it is that simple.”

Rob’s first foray into genomic testing involved taking heifer tail hair samples. He progressed to ear tissue samples and said this was not only easier, but also helped reduce the workload because it fit in with the routine job of applying of NLIS (National Livestock Identification System) tags.

“It really didn’t take any time to get that sample,” he said.

Encouraging farmers to start small, by taking samples from their latest batch of heifer calves, Rob said they’d soon see how the data would improve breeding and culling decisions.

Before he used genomics, he made a random choice about which heifer calves to keep and which to sell.

“With genomics it is based on fact and the actual numbers,” he said. “You can now say with confidence, because you genomic test ‘this is the bottom end of my heifers and I’m getting rid of that lower end which will improve my herd.”

Rob is also board member of DairyBio, Dairy Feedbase and Subtropical Dairy, which has given him insight into the industry-wide benefits of genomics through improved Australian Breeding Values and the development of new breeding traits.

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– Rob Cooper, Dairy NSW



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April 2021