Case Study

DataGene
Solutions for Herd Development

Selecting sires for tomorrow's dairy industry

Dairy farmer: James and Sophie Greenacre

Region: Tasmania

Topic: Ginfo

Breeding a dairy cow for the future should take economic and environmental changes into consideration.

That's according to Tasmanian dairy farmer James Greenacre.

James and wife Sophie are equity partners in a 1150-cow operation at Cressy, just south of Launceston in Tasmania with Rob and Jo Bradley.

At 30-years-old, he wants to build a robust farm business that thrives in the industry long-term – regardless of the macro and micro economic or social conditions.

"I'm looking to breed the most efficient cow, so in the back of my mind, when the $4 (a kilogram of milk solids) milk price comes, or the government comes in and says we have to cut herd numbers by 20% or something, we are in a position to take it as an opportunity rather than something that would completely undermine our business," he said.

For James, he looks across the Tasman for an insight into what might occur in Australia.

"Look at New Zealand, it seems like they have had to cut their stocking rate," he said.

"You speak to farmers in New Zealand who were milking 1100 cows and are now milking 950 but they produce just as much. That sort of pressure, to reduce cow numbers, might come here at some point."

That's where data will play a role in future-proofing his business.

Data will play a role in future-proofing James Greenacre's business.

The farm James manages has recently joined DataGene's Ginfo project, the industry's national reference database of genomic information.

As part of this industry project, they will genomically test their rising 2-year-old heifers before they are joined to calve next year.

Genomic testing uses DNA patterns to determine an animal's genetic merit for traits, such as production and fertility, which otherwise wouldn't have been known until the heifer had calved and was milking.

James wants to use this genomic information for joining. Practically, this would mean higher genetic merit heifers would be used to breed herd replacements. Those with lower genetic merit would either be joined to beef or culled.

In time, James hopes genomics will guide culling and breeding decisions within the herd.

"For me, genomic testing is about getting a bit more certainty and robustness around culling decisions and herd testing data. It could be used in conjunction with herd tests."

For the past two years the herd has grown 47% thanks to retaining all female animals and purchasing some additional cows.

Now herd numbers have stabilised, they want to limit 'passengers' and make sure they are milking the most efficient animals.

The 'liquorice all-sorts herd' has been put together over the past six years and includes mostly crossbreds with some Red breed cows from the highly ranked Balanced Performance Index (BPI) Graham herd from Pyree in NSW.

The herd's average liveweight is about 480kg with average production at about 460kg of milk solids across a 300-day lactation. The herd calves seasonally from August 10 until the middle of October and eats about one tonne of grain, 300kg of turnips, four tonnes of pasture and silage. Cows are wintered off-farm.

The farm is 400ha with 250ha under pivot irrigation. The dryland is "pretty much useless" from late spring through to April which means the summer stocking rate its "quite heavy" at 4.5 cows/ha.

This management system is considered when James selects bulls and fertility is the biggest factor in bull selection.

He uses DataGene's Good Bulls App to rank bulls on BPI prior to selection.

"We are slowly moving towards the New Zealand-type cow, so I look through a New Zealand catalogue and then from that I look at the *Good Bulls Guide* to see what these bulls do in Australia," James said.

"I then rule them out based on fertility and cost comes into it. I also look at production and then I really look at stature – their capacity – I really like capacious cows."

James' breeding vision includes a Holstein/Jersey Kiwi-cross type cow with Red Breed infusion but is "more than happy" to crossbreed his way to achieving this type of cow.

James favours proven sires, rather than those which had been genomically tested, as he feels this helps having more reliability in his choices as he's coming off a "lower genetic base".

Increasing the genetic merit of their herd holds the key to unlocking future profitability, according to James.

But he wants breeding to be formally taken into consideration by lenders.

"It would be really nice to have a system like they have in New Zealand where banks actually take into account the genetic merit breeding worth of your herd when they lend you money," he said.

"We are young farmers trying to have a go in the industry and we can do that, if we have a better herd."

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December 2019