Case Study



Focus on milk boosts sustainability for SA Red breeders

Dairy farmer: Hamilton family Region: Mount Gambier, SA Topic: Sustainability Index

The Hamilton family manages costs on their dairy farm by optimising production. It is also how they make the most of a limited milking platform, their homegrown supplementary fodder, and decades of selective breeding to produce healthy, long-lasting and highly productive Australian Reds.

Bolstering the kilograms of milk solids – and litres – leaving their farmgate near Mount Gambier in South Australia is also paying dividends on Australia's newest breeding index.

The Hamiltons' 600-head Australian Red operation 'Hamilton's Run' was the second-highest herd on DataGene's Sustainability Index (SI) in the December Australian Breeding Values (ABV) release.



Cluain 4909 Matilda (ET), who has a 942 SI.

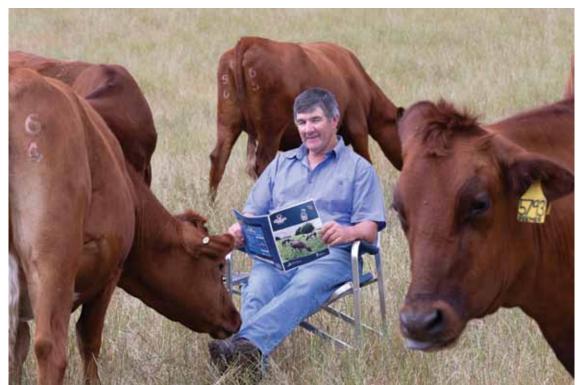
With a herd average of 292 SI, Hamilton's Run has 82 cows with a SI of more than 500 including one cow – Cluain 4909 Matilda (ET) – at 942 SI.

Graeme Hamilton said the Sustainability Index suited his family's breeding philosophy.

"We chase higher production than many, to dilute the unit costs per litre of milk rather than per cow," he said.



Graham Hamilton says DataGene's Sustainability Index aligns well with his breeding philosophy – for a herd that efficiently turns feed (protein and energy) into milk which also means less greenhouse gas emissions per litre of milk produced.



Graeme Hamilton uses DataGene's Good Bulls Guide to create a short list of bulls to use over the herd.

"The title Sustainability Index suggests that it is all about carbon minimisation per unit out the gate. And while it is trying to minimise the carbon and our effect on the planet, it also relates, very much, to the amount of protein and energy I need to put into the cows. The goal is the most production from a given quantity of energy and protein."

Graeme and Michele Hamilton, their son Craig and Graeme's mum Pat calve 600 cows year-round. The herd consumes up to 60% of its diet from direct grazing, while the remainder of their forage requirements - lucerne and maize - are grown locally by the Hamiltons and fed to the herd on a feedpad at their home farm.

Graeme said the SI (and where necessary other DataGene indexes) are used as a 'first cut' to select a range of bulls.

"After that, I start looking at the detailed traits, but I don't make my final decisions based on SI or BPI (Balanced Performance Index) or HWI (Health Weighted Index), they're just how we do a first cut to come up with a short list of bulls to work with."

The next step is to look at production and conformation traits. The milk, fat, and protein output must be balanced; the cow must be robust enough to sustain high production; and her udder must be easy to manage in the dairy.

Production is vital and the Hamilton family takes pride in growing-out young heifers to ensure they express as much of their genetic potential as possible.

"Heifers must be properly grown by the time they calve, or they will divert energy from producing milk into growth," Graeme said.

He said selecting an index to use as a guide for a breeding program should be based on the entire farm system.

"The selection has to be matched by the feeding regime and the healthcare - cow care - and all those things go together to make a whole," he said. "It is no good taking one part (of a farming system - such as breeding) in isolation and saying, 'well, this is going to fix all the problems'. It is not a silver bullet,"

Hamilton's Run is also ranked fifth on the BPI and eighth on HWI.

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