

Genes reveal elite dairy cow in average-looking body

Dairy farmer: Andrew and Christine Sebire

Region: Northern Victoria

Topic: Australian Breeding Values (ABVs)

By Marian MacDonald*

There's a lesson for every livestock farmer in the story of how a couple discovered Australia's most profitable dairy cow: you should never judge a cow by its coat.

Andrew and Christine Sebire were left scratching their heads after hearing they owned the nation's highest genomically ranked cow.

Although she scored a staggering Balanced Performance Index (BPI) of \$436, neither of the Echuca West dairy farmers could remember the heifer, aptly named Ivyhurst Mystery OC.

Even after doing a few laps of the paddock on their quad bikes searching for their elite cow, the couple was left bemused.

When they finally found her, the Sebires rang Holstein Australia to apologise.

She wasn't a classic black-and-white specimen of the breed. In fact, the OC following her name stands for "off colour".

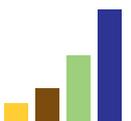
Andrew describes Ivyhurst Mystery OC as a "nugget" and jokingly begged not to take her photo.

But this rising three-year-old's rather average appearance belies the stellar performance that earned her the front page cover of *Stock and Land* newspaper.

In her first lactation, Ivyhurst Mystery OC produced 4.51% fat and 3.79% protein, totalling 591 kilograms of milk solids as a heifer. That's 1.18 kgMS per kg of body weight.



Christine Sebire and her husband Andrew found it difficult to find the stellar young cow, who lived up to her 'Mystery' moniker, and turned out to be a rather average-looking quiet achiever. Photograph: Greg Tiller.



Impressive production didn't compromise her reproduction either, as she got in calf with a single straw of semen each time.

DataGene genetics and delivery group leader Michelle Axford explained that the \$436 BPI reflected all-round performance.

"I think this strikes at the heart of the Balanced Performance Index (BPI)," Michelle said.

"There are more than 45 traits that we can breed for – which can be pretty tough to work with – so DataGene combines the traits with most economic value into an overall number that we use to rank cows, herds and bulls.

"This means top cows and bulls can have different combinations of strengths and weaknesses.

"In the case of Mystery, she has particular strengths for production with an extraordinary ASI (Australian Selection Index) of \$310 and well above-average daughter fertility score of 113."

Neither Andrew nor Christine would have identified Mystery OC as an elite cow without the benefit of genetic and herd-test data.

"The genetics could tell us that she was going to be a fertile cow and that's proven to be true," Christine said.

"The genetics could tell us that she was going to be a good producer. She is and yet she doesn't look like that."

The Sebires contribute to the Ginfo project, Australia's national reference herd for genetic information. Ginfo gathers detailed information on more than 30,000 cows including their genotypes, classification scores and performance data from herd testing.

Christine said the results had been eye-opening.

"Sometimes the most impressive-looking cows actually have really low BPIs," she said. "So that's been a lesson for us: not judging them by their appearance but by their potential.

"We are starting to see how that can be used to justify which cows you keep and which you don't. The ones you think are really valuable may not necessarily be."

As for Ivyhurst Mystery OC, the Sebires don't have any special plans.

"We asked Holstein Australia to come and explain what we do now that we've got all this information," Ms Sebire said.

"We're not great breeders, we're just ordinary farmers giving it our best shot, keeping good records and getting hair samples done."

Holstein Australia's Rohan Butler said that while Ivyhurst Mystery OC might have crossbred looks thanks to a Jersey ancestor, genetic results confirming her sire and grandsire made her a proven Holstein.

Her registration and the performance data also demonstrated how farmers could add value to their herds.

"Every farmer has that opportunity to be doing this," Rohan said.

"Most farms are investing good money year-on-year in genetics, be it for semen, embryos or sexed semen. There's an opportunity to make what is sometimes referred to as the thirteenth milk cheque out of either pure-bred heifers that go to export or to improve productivity out of better cows."

Michelle Axford said that while elite individuals like Ivyhurst Mystery OC were exciting, the bigger picture was always the priority.

"Andrew Sebire told me about the importance of the herd, rather than a single cow," she said.

"Our main aim is to breed a better herd so the focus in the breeding program is about they will do next with the whole group, rather than doing something special for just one cow like Mystery.

"We can apply this to bull selection as well. Breeding programs that use teams of bulls are always less risky than focusing on just one or two individuals."

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