Case Study

DataGene
Solutions for Herd Development

Breeding and feeding go hand-in-hand at Loch

Dairy farmer: Kate and Jason Kirk

Region: Gippsland

Topic: BPI

Maintaining a top-quality genetic-base ensures Kate and Jason Kirk get the most out of their stringent feeding regime.

The couple, with their son Harvey 9, milk 310 Holsteins in a split-calving system at Loch.

Their Holsteins are not only even in type and stature, they are big production animals. The 640 kg average herd delivers an average 640 kg of milk solids per lactation. Heifers come into the dairy at about 540 kg producing 85 per cent of a mature cows' production in their first season.

While special attention is paid to feeding and nutrition, Kate said without a good genetic base there would be no way the cows could achieve this milk production.

"We always go for top-quality bulls, so we can get top quality cows," Kate said.

"If the genetic potential isn't there, it doesn't matter what you feed them, they won't be top performers compared to all the other Holstein herds. "With the genetics there, and then our general management strategy we can get the potential out of cows."

The herd receives 2.4 tonnes of wheat/cow/year. In mid-November their diet included 8kg of wheat/cow/day and 14 kg dry matter pasture/cow/day. The pasture-base is perennial ryegrass across their 120 ha clay loam country with an average annual rainfall of 1,000 mm. Supplementary feed is mostly homegrown silage and occasionally high protein hay vetch or lucerne hay is bought-in.

Kate completed an advanced dairy nutrition course run by Dairy Australia.

Breeding and genetics

Kate and Jason started with a great genetic base for their operation, purchasing their herd about 10 years ago from Jason's parents Ken and Val, who had 40 years of breeding.

This strong genetic history, including all the cows' information, made it easy to continue with the quality and level of breeding. Jason's parents bred mostly for protein and milk fat.

Jason and Kate Kirk's pasture base is perennial ryegrass across their 120 ha clay loam country.

Kate said breeding and genetics were a very important part of their herd management.

"We only pick high (Balanced Performance Index) BPI sires and we wouldn't take anything under 200 BPI," Kate said.

Less weight is now placed on production when it comes to breeding decisions. Now, those which make the cut must be above 100 for daughter fertility, regardless of their other good qualities.

Longevity has also become a focus as well as good feet and legs. Their steep, hilly farm requires a walk of up to 2 km, including an uphill trek to the dairy.

"Good feet and legs are crucial and without this, the typography of the farm can reduce the length of time a cow stays in the herd. Our cows' frame size has also reduced in recent years, while bulls are also selected for mastitis resistance," she said.

The DataGene *Good Bulls Guide* is used to compare different traits.

"I have a list of what I want, I go through and pick the bulls I like and go through each bull individually and set parameters," Kate said. "For example, I want positive fertility and could have 20 bulls I like, but six or eight could be wiped-out because they don't have positive fertility." Sires for heifers must including a high ranking for calving ease.

Genomic semen makes up about 50% of their total gene pool. Kate said genomic semen has replaced their progeny test semen. While it has contributed to a rise in artificial insemination costs, the reliability has been worth it, and they have been able to advance their genetics quicker.

Kate does all the artificial insemination with a fixed-time program used on the heifers for the past four years.

Sexed semen was first used by the family with their heifers, achieving an average conception rate of about 60%, and now it is used for second to third lactation cows with a good fertility history.

The family will move to a new farm at Dumbalk next year and breeding has, and will continue to play, a key role in their management plans.

The extra numbers bred using sexed semen will help lift the closed herd to 400 or more.

"They certainly pay us back (the cows), that's for sure," Kate said. "We treat them as well as we can, and we don't get a lot of metabolic problems. That comes from good quality breeding."

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