Using Good Bulls on a budget

IMPROVING HERDS

Jared and Courtney Ireland,
Northern Victoria

Genetics Case Study

Jared Ireland share farms at Lockington in Northern Victoria. Over a relatively short period, Jared and his wife Courtney have built the genetic capacity of their herd by selecting for Balanced Performance Index (BPI) and using genetically superior bulls. Jared shares the experience in this case study.

I grew up on a dairy farm in Tasmania. I began full-time work in 2000 as a 16-year-old and started buying cows. In 2002, I started working for George Wagner (I eventually married his daughter Courtney) and by 2006 had 25-30 cows of my own.

In 2006, when I was 21, I moved to Victoria to start share farming, however we put it off a couple years due to the drought. We moved into our current share farming partnership with Paul Weller in 2008 and started increasing our herd size.

In 2011, Paul let us buy the rest of herd, which increased our share in the farming business. We don't have a conventional share-farming arrangement but it works very well and we have been with the same property owner now for 12 seasons. We moved to our current farm in 2013 and now have our own herd of 420 cows.

Why genetics are important

We intend to be career share farmers so we see our herd as our biggest asset. Realistically, if we were to buy our own farm it would be a minimum investment of

Farm stats (April 2018)

HERD SIZE
420 cows of their own in a share farming arrangement

BREED
Holstein

FARM SIZE
250 ha

CALVING PATTERN
Three times a year. March/early April, August/September, November

DAIRY
44-unit rotary

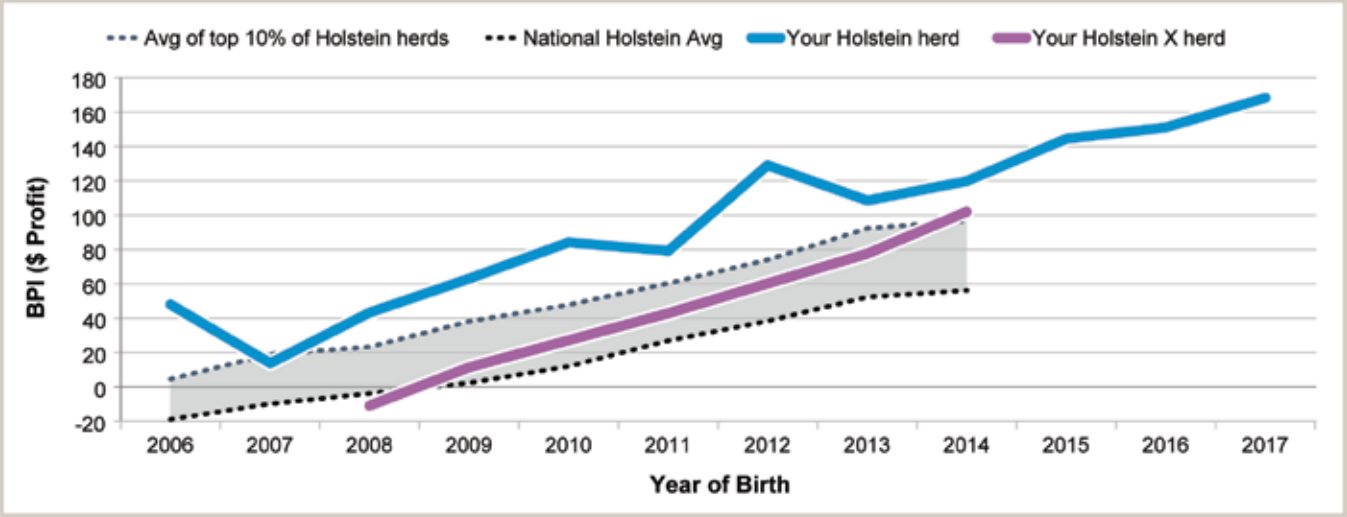
STAFF
2 full-time and 2 part-time

FEEDING SYSTEM:
Average 6 kg of grain, equivalent to 2.2 t/cow/year and grazing lucerne and ryegrass

"We intend to be career share farmers so we see our herd as our biggest asset."

– Jared Ireland

Genetic Progress for Balanced Performance Index



The Balanced Performance Index (BPI) reflects the economic drivers of net profitability for the range of dairy farming systems in Australia. Traits include production, survival, type, mammary, milking speed, temperament, cell count, fertility and feed efficiency.

$2 million, which is a big commitment. Share farming gives us flexibility to invest off farm.

When I started share farming, the herd I was milking was averaging 6,000 litres/cow/year and 3.1% protein. I knew it could be better because I had seen what Courtney's dad, George Wagner, was doing in his herd and what he had achieved through breeding. We had bought in a lot of cows to get a foot in the door but the cows we had lacked the genetics we needed to achieve the production we wanted. It was a wakeup call that we needed to breed better cows.

We started looking at using better bulls. High BPI, protein and fat became our selection priorities but we had a to keep costs down and be clever about our bull selection. We started off by picking 1-2 proven bulls then used progeny test sires to keep our costs down with a budget of $16/straw.

It's been a strategy that paid off. Our herd now averages 3.45% protein with 8,000-8,500 litres/cow.

Breeding objectives

Our current breeding objectives are very focused on BPI with main criteria on type, cell count and fertility. Our aim is to breed good replacement heifers that are better than the cows they replace.

We look closely at the performance within our herd and there is a substantial difference between the performance of the top 25% of the herd and bottom 25%. The top 25% of cows produced an extra 1,338 litres and 1,387 kg milk solids/year and lasted nine months longer in the herd. The extra milk production from the top cows resulted in an extra $585/cow/year in milk income after feed and herd costs compared with the bottom group.

When you look at the bottom 25% there are always some cows that we can clear out.

We keep a spreadsheet on our cows so we can monitor our genetic improvement. We think in the next couple of years it will be possible to have an average herd BPI of 135; it's certainly a target to aim for anyway.

We use the Good Bulls phone app to get a short list of the bulls based on our criteria for BPI, and then filter for traits such as milking speed and temperament; then look at prices and pedigrees by going through semen catalogues.

We synchronise all our heifers and they are joined to fresh sexed semen. We've been getting conception rates of 55-62% at each joining.

After the first joining we repeat the program but use frozen sexed semen on the higher genetic merit heifers. Lower genetic merit BPI heifers get calving ease conventional semen.

After two rounds, all heifers are then put out with home-bred bulls that have been genomically tested.

We use natural heat detection in the cow herd. We used some sexed semen in the cows but mainly stick with conventional semen because of extra stress put on milking cows we don't see the same conception rates as heifers. We don't run any bulls in the milking cows, only using AI three times a year.

We genomically test every calf and have done so for the past four years. Half our milking herd is now genomically tested, having come through our breeding program.

Having access to the genomic results on heifer calves means we can look at traits such as BPI, milking speed and fertility

and sell surplus heifers into the export markets. Selling five or six heifers for export covers the costs of the genomic testing for the year.

Using sexed semen gives us a high proportion of heifer calves and in 2018 will have 145 two-year-olds enter the herd of 420 head. It means we have a young herd and can put more selection pressure on the herd for things like cell count and fertility.

Nowadays, our budget for the milking herd averages $20/straw even though we use a lot of sexed semen in the heifers, which costs $50-$70/straw, . We might use a couple of expensive bulls now and then, but we don't have to pay big prices to get excellent bulls for the rest of the herd.

Bulls that are $100/straw aren't necessarily better than cheaper bulls. The high price is often driven by breeding fashions, high demand and low availability. Wait six months and the same bulls will be cheaper.

We've got to where we are by breeding on a budget and choosing good, affordable bulls. It's achievable.

Putting it into practice

The following examples are all based on buying 200 straws and follow the approach we use to keep bulls costs down, while getting bulls that will make genetic progress in our herd.

Using the Good Bulls app (April ABV release data), I select the minimum criteria for the bulls I want:

- BPI of 300
- Milking speed for 100
- Temperament of 100
- Cell count of 100
- Fertility of 100
- Type & Mammary of 100.

The app then gave me a short list of 50 bulls to choose from.

About 10 bulls were sexed semen at $50+ /straw so they automatically dropped off the short list because they would blow the budget limit of an average price of $16/straw.

After going through the semen catalogues, I found a group of genomically tested bulls on the list were available at $16/straw on special at some stage during the year. I then went through and looked at the pedigree of the bulls to make sure they offered something that suited our herd and came up with a list that has six bulls sired by six different bulls at an average BPI of 323, ASI of 194 and Daughter Fertility of 109, at the average price of $16.

I then tried another approach that we had used to keep costs down, which involved using a mix of proven bulls with progeny test sires for a total of 200 straws to still keep my average at $16/straw or less.

This involved using:

- 100 straws of five progeny tests sires with, let's say, an average BPI of 280 at $12/straw
- 50 straws of MAEBULL with a BPI of 309, which was available for $22 a straw when it was on special
- 50 straws of a genomic bull SILVERLINE with a BPI of 352, which was on sale for $16/straw.

All up, this approach gave me an average BPI of 314 for the bulls with an average cost of $15.50 a straw. There is some risk using cheaper progeny test bulls, but they are genomically tested.

A third approach that I believe could be used for someone not needing a heap of replacements or in conjunction with a sexed semen program in heifers is to use some beef semen in the bottom quarter of the herd. This lets you just keep calves from the better females and will increase genetic gain faster again.

- 50 straws of MVP at $24 when on special
- 50 each of Vador and Silverline at $16 when on special
- 50 straws of dairy beef at $8.

This gives you a BPI average of 329, ASI of 216, Daughter Fertility of 105 at an average price of $16/straw.

Plan ahead when buying semen

One of the traps I believe people fall into is that they don't think about which bulls to use or buying semen a couple of weeks before joining.

We buy semen all year round and store it in our own tank on farm. We have our list of bulls we are interested in each proof run and read the semen catalogues when they come in rather than throwing them out, so we can watch the market. If a bull off my list is in a promotional pack then I grab it when it's on special. For example, this year I bought semen when it was on special during International Dairy Week; it wasn't a time of the year when we were joining but the semen price dropped and was within our budget.

It is important to talk with semen retailers when you are buying bulls – don't be afraid to negotiate on their advertised prices.

ImProving Herds pays dividends

ImProving Herds was a three-year project that studied the contribution of herd improvement to Australian dairy businesses.

At the heart of the project were 34 inspiring Focus Farmers who agreed to put their farm, herd and financial records under the spotlight. Seven were Herd Test Focus Farmers and 27 were Genetics Focus Farmers. This is one of a series of case studies about their experiences as ImProving Herds Focus Farmers.

ImProving Herds has shown that:

- *The daughters of High Balanced Performance Index (BPI) bulls perform better under Australian conditions, across dairying regions and feeding systems.*
- *Cows in the top 25% for BPI in a herd outperform cows in the bottom 25% for production, fertility, longevity and contributed on average an extra $300 income over feed and herd costs.*
- *The benefits of using genomic breeding values to guide heifer selection decisions were demonstrated on the Focus Farms, where the performance of genotyped heifers aligned with their genomic breeding values.*
- *Information from herd testing gave Focus Farmers confidence to make data-driven decisions for routine management and to respond to high pressure events.*

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Solutions for Herd Development

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