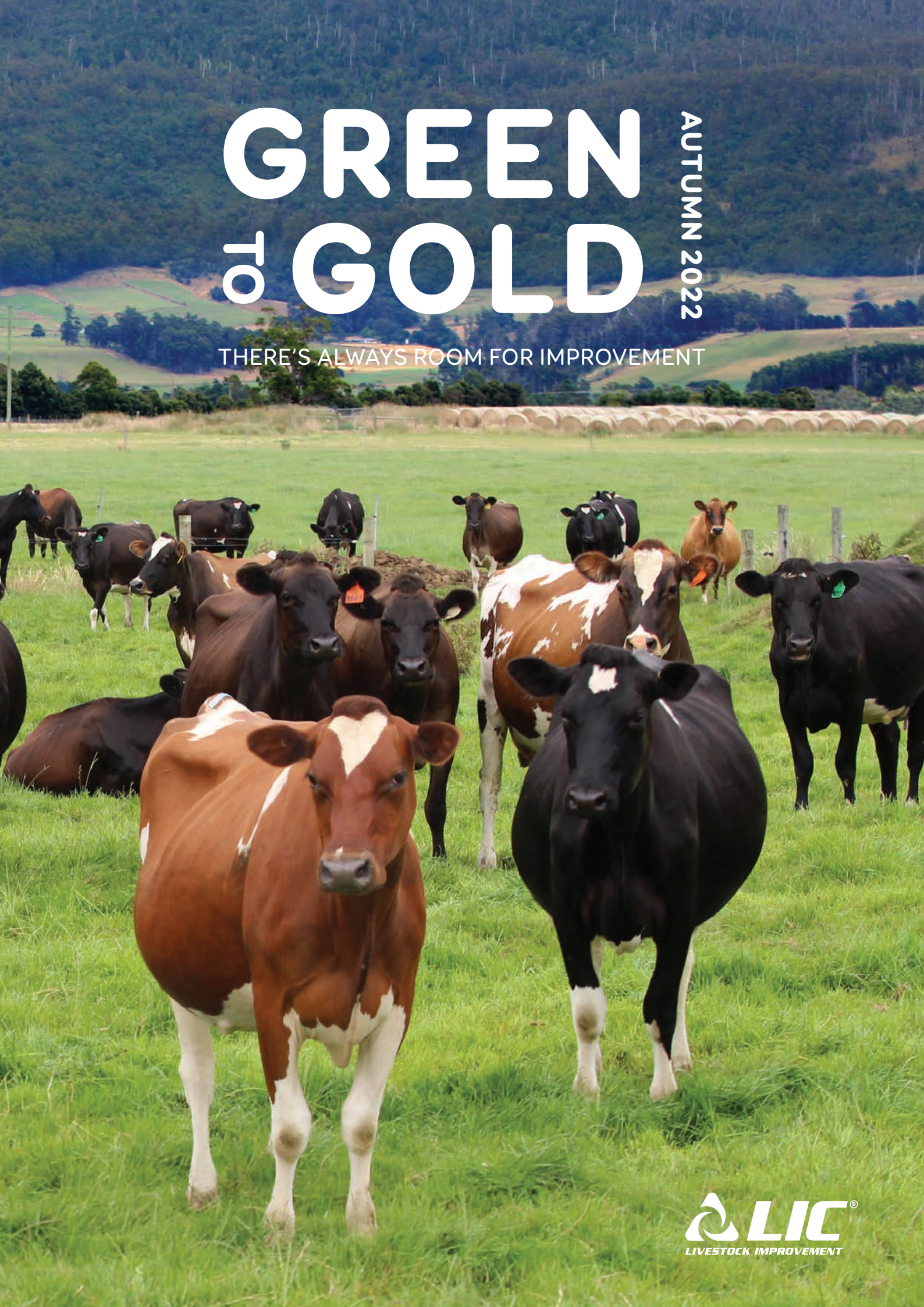
GREEN TO GOLD

AUTUMN 2022

THERE'S ALWAYS ROOM FOR IMPROVEMENT



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Improvement - the name of the game

Mike Rose

We recently surveyed farmers on what they wanted to read more about in our Green to Gold magazine and have taken into consideration the feedback received when preparing this issue and future editions. Farmers loved the articles on local farmers but also wanted to know more about the latest bulls and research and development coming through.

We profile a number of the 'new kids on the block' in our 2022 offering of Jersey, KiwiCross® and Holstein Friesians. With a fantastic line up of bulls this year, we are especially pleased to offer plenty of outcross options and continued improvement on traits other than production. We head across the Bass Strait and profile award winning family farmers the Lawrence's, milking 1200 cows and looking to how they can future proof their business for the next generation.

As is usual at this time of year, there are a number of changes in the animal evaluation system. Key areas of change are in the way fertility is calculated, a replacement to total longevity in the form of functional survival, and the addition of teat length as a breeding value.

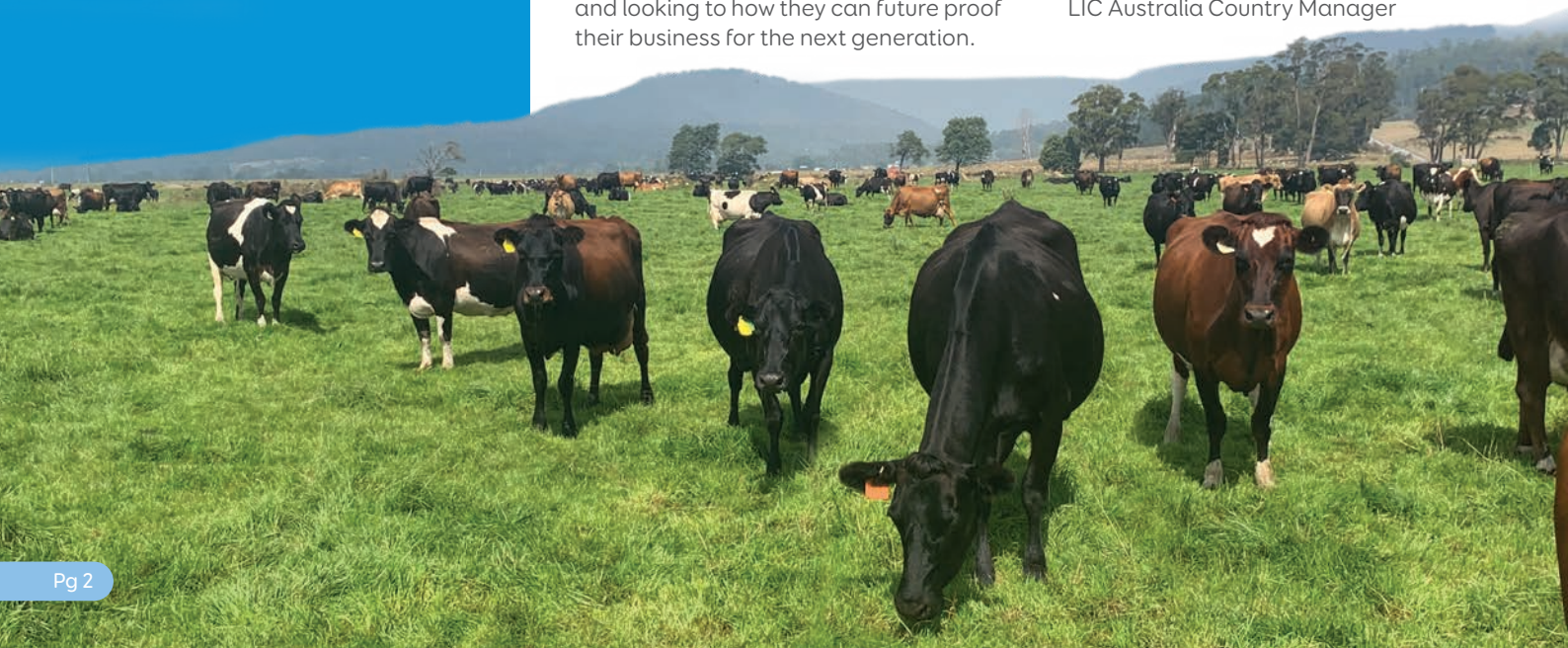
Our Technical Manager Joyce Voogt dives deep into how efficiency is key to the success for both production and in helping the environment on pages eight and nine.

With New Zealand having the largest population of Jersey cows in the world and some very passionate breeders pushing the breed along, we highlight how well our Jerseys are doing on the world stage against the best Irish genetics. This article is well worth a read as Ireland and New Zealand are very similar to many of the production systems in Australia and this trial work is not only current but very relevant to the Australian farmer.

I hope you enjoy reading this issue of Green to Gold as much as we have enjoyed putting it together.

Happy farming,

Mike Rose
LIC Australia Country Manager



What's new in Breeding Worth?

The latest on NZ animal evaluation enhancements

Last December, New Zealand Animal Evaluation Limited (NZAEL) deployed a major upgrade of its evaluation processes, models, and genetic evaluation software as part of its ongoing programme of enhancements. As a result, the evaluations for all traits have changed slightly, with significant enhancements for fertility and survival. The changes commenced from the December update, bringing better accuracy in genetic evaluations and allowing for better breeding decisions. As with any update to animal evaluation, all new models and processes were rigorously tested and internationally peer reviewed before final sign-off by the NZAEL Board.

Fertility BV

The results of the National Breeding Objective survey reinforced the importance of this trait to dairy farmers. This new model puts more emphasis on fertility by spreading the breeding values wider. This allows greater visibility of where the bulls sit in relation to the genetic base of 0.

The enhanced fertility index has increased emphasis on key fertility phenotypes, including calving and insemination data recorded on first-calving to fourth-calving cows. There is less reliance on predictor traits. One change for calving data is the use of Calving Season Day (CSD), in recognition of the better fertility of earlier calved cows within the block. The cow who calved in the first 3 weeks receives a higher fertility score than a cow that calved in week 5, for example. The definition for fertility BV will remain as CR42 (% calving within 42 days from the planned start of calving). Work is already planned to investigate and apply further enhancements to the Fertility BV, including the utilisation of pregnancy diagnosis information.

Functional Survival BV

Residual Survival has been replaced with 'Functional Survival'. Calculated in a different way and utilising actual phenotypic records, this new trait is the average probability of survival from one lactation to the next (for reasons other than fertility and production). The trait BV will be reported as a percentage.

Excluding culling reasons associated with fertility and milk production, it focuses on other reasons why an animal leaves the herd. Given the nature of the trait, and the length of time it takes to obtain phenotypic records, (i.e. an animal surviving to fifth lactation), certain predictor traits are used to provide an early indication of functional survival. These traits include the breeding values for body condition score (BCS), legs, udder overall, and milking speed collected during daughter TOP inspections of pedigree and sire-proving herds.

Economic Values update: Economic Values (EVs) used in the calculation of breeding worth (BW) are a key consideration in all NZAEL updates. Economic weightings were updated in December to reflect the changing economic circumstance on farm and in the global marketplace, and to generate EVs for the new Fertility, Functional Survival BVs, and come April, Udder Overall BV.

These enhancements are improving the national animal evaluation system to provide increased accuracy in genetic evaluations - information that will allow farmers to make better breeding decisions for their herd.

To keep aligned with the changes NZAEL has been working on, LIC's Research & Development team has replicated the changes in its own genomic evaluation system, which incorporates the Single Step Animal Model (SSAM).

Note: Any LIC bulls published by LIC will include genomic information, including for daughter proven bulls. Data published from NZAEL will not include genomic information and so please be aware that bull data will look different depending on which information source you use.

Teat Length BV (TOP)

For a number of years phenotype data has been collected on the teat length of sire proving daughters. This information, plus a desire to put more focus on teat length, has led to the release of the teat length breeding value.

Udder Overall BV - To be added April 2022

The national farmer survey highlighted continued focus on udder traits as important considering increased production per cow over the last decade and potential future farming practice changes. NZAEL is planning to incorporate udder overall into Breeding Worth in April 2022, when a small adjustment of trait emphasis in BW will occur to accommodate the new trait.

Flexibility underpins Tasmanian family dairy farm

The Lawrence family is in a unique position. Or as they like to call it a 'sweet spot'

The Tasmanian dairy farmers are making inroads on their goal of being an attractive workplace and their current team is diverse – including young staff who are interested in agriculture.

For Brian, Michele and their sons Brad and Joe, this advantageous position is a reward for farm business policies that 'prioritise people.'

"We had a massive mindset change a couple of years ago, we decided to hire on culture versus experience," Michele said.

"Hire people that we enjoy working with...people who are really interested in wanting to do the job well. They don't necessarily have to have all the skills; they just have to have the right mindset."

Taking this approach meant the Meander dairy farmers also had to change their mindsets.

They accepted that training was the key to upskilling their workforce and they implemented standard operating procedures as guides.

Drawing on Dairy Australia resources, assistance from Fonterra and their own experience, the team began training staff in everything from milking cows to fencing, farm safety and tractor work.

They even developed a staff website – including videos which cater for people with English as a second language – to guide staff and provide back-up to written standard operating procedures.

The Lawrence farm 'Janefield Dairy' milks 1100 cows and employs up to five full-time staff plus casuals as required.

Every employee has four days off a fortnight, with flexibility in the rosters to suit everyone's lifestyle.

A recent move to '10 in 7' milking has further bolstered the work-life balance of staff.

"Milking 10 in 7, the hours are more normal for people, and we don't need so many staff on weekends," Brian said.

From January, the spring calving herd has been milked twice a day on Monday, Wednesday, and Friday, once on Tuesday and Thursday and there's a 21-hour split between weekend milkings.

Flexible milking isn't new for the Lawrences, they strategically used 16-hour milking in recent years.

Brian said scientific evidence from Lincoln University in New Zealand – demonstrating a 5% production drop – gave them enough confidence to trial the move to '10 in 7' this year.

They were happy to accept this production decline – which is partly offset by reduced costs – for the lifestyle benefits of flexible milking.

While they are yet to decide if they will employ '10 in 7' from the beginning of calving this year, the Lawrences understand it's their cows that provide the flexibility to alter milking times.

"I think the crossbred cows are suitable for more flexible milkings regimes," Brian said.

"We have quite a high fat and protein test – at 5% fat and 4% protein – so the volume of milk in their udders, for the longer period, is a bit less for the same amount of milk solids."

New Zealand genetics have underpinned Brian's family dairy herd for more than 40 years so when he and Michele started milking at Meander in 2007, they maintained the family tradition.

"The appeal of the genetics is that they are proven under a pasture-based system," Brian said.

> "We believe that the environment, especially in the South Island of New Zealand, is similar to where we farm here."

The Lawrence's calve their herd for up to 10 weeks at the beginning of spring.

Up to 600 of the Lawrence's herd includes daughters of former high-ranking and high-selling KiwiCross® bull, Priests Sierra.

"We are really pleased with them," Brian said. "They are quiet, have sound enough udders and are nice cows to work with."

All the Lawrence's dairy replacements are bred from cows in the first 12 days of joining. The bottom half of their herd is bred to beef bulls. Up to 300 heifers enter the herd each year.

Bred from Jerseys, the Lawrence's milkers weigh 460-480kg and produce 500kg of milk solids/year.

Grain is only fed as a pasture management tool during the shoulders of the season.

The farm's perennial ryegrass base, including white clover, is enhanced by irrigation with 13.5 to 14 tonne/hectare/year utilised. This pasture-base and the cows are the key to the farm's profitability.

"We try and run a production system that suits the farm and then we try and have cows that suit the production system," Brian said. "We looked at the strengths and weaknesses of the farm, the production system that suited and then the type of cow that suited that production system. We are trying to work with what we have got, rather than against it."

With an ability to pivot their business to match staffing requirements or seasons, it's no surprise the Lawrence's are open to altering their farming operation if change is required.

Sons Brad and Joe are studying at University, and both are keen to return to the farm.

"It's timely that the boys are at University studying (relevant) courses, they can provide some of the future thinking around what's happening climate-wise, animal welfare wise or any other changes," Michele said.

"They will come back with a new set of skills and way of thinking to manage those things."

Beef has been added to the Lawrence's family enterprise in recent years and is proof of Michele and Brian's risk-averse and philosophical approach to farming.

"We never set out to be dairy farmers, so for (our son's future), if we lock them into being dairy farmers there's a chance they're not going to be able to, because we don't know what's coming in the future," Michele said.

"They need a diverse set of skills so they can flex into whatever."

"We are not sentimental farmers, if the boys say they want to (do something different) that's okay because it is always nice to create your own future."

Black and White - A classic combination

As the ink dries on the 2022 LIC Australia Catalogue, it is exciting to see a line-up of sires that continue to improve from the previous year. This underpins LIC's desire to always strive for improvement and seeing so many bulls in this category is progress indeed.

It's pleasing to hear farmers comment that they are seeing this progress on the ground, with areas of focus such as outcross, higher fertility and better conformation coming through in the new crop of bulls. Two of the genomic bulls we have marketed for a number of years, Governor and Supervisor are currently sitting at number one and three on gBW for proven sires at the LIC bull farm. Taking a closer look at the new kids on the block - this year there is plenty to get enthused about.

118053 Greenwell GR Governor S1F

Being used as both a sire of sons and marketed as a young genomic sire in Australia we had high hopes for Governor and he has delivered. The Greenwell stud has a habit of graduating quality daughter proven bulls at a high rate with names such as Foray, Blitz and Brutus all very familiar to us. Governor goes back to the matriarch of the family, Greenwell's Betty, who milked up to the grand old age of 14 and with longevity coming through the maternal line, three generations averaged an incredible 12 lactations!

A real all-rounder Governor combines strong fertility at 3.1% gBV, low SCC, excellent farmer traits and sound udders. A desirable liveweight coming in at a moderate 31kg complemented by high production, this combination has driven his gBW to near the top of the breed at $391.

Available in conventional and sexed - page 13 in the 2022 catalogue.

Dam of 118053 Greenwell GR Governor S1F

118034 Paynes TT Pastime-ET S2F

It is very rare to have a bull over 7% gBV for fertility in any breed, but this year we have two new Holstein Friesian graduates alone, with Hallville AS Cola being the other. If you're looking for something new to replace the likes of Vector who has led the way in fertility, then Pastime is your man. A great outcross option with no Hothouse in the pedigree and Minted being four generations back in the pedigree. Moderate size and stature, excellent udders and being well liked by farmers means Pastime is going to find his way into many breeding programs this year.

Available in conventional and sexed - page 18 in the 2022 catalogue.

Grand Dam of 118034 Paynes TT Pastime-ET S2F

118068 Bagworth GI Original S3F

Typifying the graduates this year, Original has a nice balance of production, type and health traits. With fertility at 4.7% gBV, low SCC, positive for udder conformation and farmer opinion traits, Original is a bull that can slot into most people's breeding plans. Sired by Inca, a bull not used in Australia, the dam is a Mint Edition cow that is still going strong with 10 lactations under her belt.

Available in conventional - page 17 in the 2022 catalogue.

Daughter of 118068 Bagworth GI Original S3F

117019 McKenzie GF Comet S3F

Comet was a late addition to the Australian line up in 2021 and so will make his first appearance in the 2022 catalogue. Pushing his way into the team through very high production figures, especially protein at 46kg, Comet suits farmers looking to push per cow production and improve strength.

Comet daughters exhibit plenty of capacity, great udder traits and have extra wide rumps. At 0.70 gBV for farmer overall opinion, it shows that farmers enjoy milking them. Comet's sire Foray was also a high milk bull which has been passed on through to Comet. The Mint Edition dam has been a consistent performer for her nine lactations in a very commercial herd.

Available in conventional and sexed - page 20 in the 2022 catalogue.

Paternal Dam of 117019 McKenzie GF Comet S3F

AB code	Breed 16ths	Name	gBW	Fat gBV	Prot gBV	Milk gBV	Lwt gBV	Fert gBV	UO gBV	DC gBV	Sire Name
118053	F16	GREENWELL GR GOVERNOR S1F	391	42	39	576	31	3.1	0.46	-0.03	GALATEA MGH REGIMENT S1F
118034	F16	PAYNES TT PASTIME-ET S2F	259	28	31	791	20	7.8	0.73	0.04	TREGARON TECHNICIAN S2F
118068	F16	BAGWORTH GI ORIGINAL S3F	297	42	35	524	84	4.7	0.33	0.49	GYDELAND EXCEL INCA S3F
117019	F16	MCKENZIE GF COMET S3F	206	30	46	1091	87	0.5	0.85	1.33	GREENWELL SB FORAY-ET S3F

Environmental and Production Efficiencies are key to success

Joyce Voogt, International Technical Manager for LIC, sums up why both are such important targets on your dairy farm

"Breeding more efficient animals helps dairy farmers globally unlock both profitability and environmental gains. "

Summary:

- High genetic merit cows partition more of their feed intake to milk production, and lose less to the environment as nitrogen and methane per kilogram of milk produced.
- Kilograms of milksolids per kilogram of liveweight is a good proxy measure for production efficiency.
- High genetic fertility heifers calve down younger and re-calve sooner than their low fertility herd mates.
- Long-lived cows contribute for more lactations in the herd, diluting their rearing costs through greater lifetime milk and progeny income and lower replacement heifer requirements.

While pressure is mounting on food producers to demonstrate their environmental credentials, economic reality dictates that farmers must at the same time, be consistently profitable.

Production and environmental efficiency are central to achieving these goals. The good news for dairy farmers is that breeding for high genetic merit cows delivers on both.

References:
1. https://ahdb.org.uk/estimated-milk-production-costs
2. Feed Use in the NZ Dairy industry, MPI Technical Paper 2017/53
3. Facts and Figures, Chapter 4, DairyNZ
4. https://landly.com.au/projects

Production efficiency:

Feed efficiency is a key component of on-farm efficiency, and animal feed conversion efficiency (FCE) plays an important role in this. Feed and forage costs are significant and in 2020 accounted for 43% of the cash cost of production in autumn-block and all-year-round calving herds, and 29% of cash costs in spring-block calving herds[1].

One measure of FCE is the calculation of kilograms of milk solids as a percentage of liveweight[2], with ≥100% being the 'glittering target'. A highly efficient cow will, kilo for kilo, exceed her liveweight in milksolids production. Some British farmers already achieve in excess of this across their herd, a feat that is more achievable with moderate sized cows.

Heavier animals use a greater proportion of feed eaten for growth and maintenance, and a lower proportion for milk production. A 50 kg heavier cow will require 200 kg DM more feed annually just for maintenance and will have used 374 kg DM more feed* for growth from 3 to 22 months of age[3].

This means lighter cows can be more feed-efficient in terms of milk output per kg of dry matter eaten, hence the focus on optimising the size and efficiency of LIC-bred dairy animals.

Phenotypic feed efficiency is increasing at 1% per year, at a national level in New Zealand cows. Two thirds of the gain is attributed to a better feeding environment and one-third to genetic gain. See Figure 1.

Over the last 10 years, the average annual rate of genetic gain in New Zealand Friesian cows saw gains in liveweight matched by gains in milksolids, kilo for kilo.

* at 11 MJME/kgDM

Environmental efficiency:

Improved production efficiency comes with environmental benefits too. In the last 30 years, genetic gain in the New Zealand herd has delivered a 16% reduction in urinary nitrogen and 13% reduction in methane outputs per kg of milksolids.

The current annual rate of genetic gain, ($10BW points/year), can achieve 2g less methane and 1.7g less urinary nitrogen per kg milksolids, as environmental efficiency increases.

Figure 2 shows the relationship between methane efficiency/kgMS ranking and feed partitioning. The highest-ranking animals, (HoofPrint rating 10), apportion less feed to growth and maintenance and more to production.

For dairy cows, three key influences stand out for environmental efficiency: liveweight, productivity and longevity.

Higher ranking animals are, on average, smaller and higher producing, directing a greater proportion of their feed to milk production.

Longevity modelling suggests that increasing the herd average number of lactations from four to five can reduce urinary nitrogen by 5.2% and methane by 4.5%/kgMS through lower replacement rates and higher lifetime production efficiency. Fertile cows are essential to this.

Genetic trends for LIC bulls are strongly positive across all these important traits, as the breeding programme delivers sires that will meet future global farmer needs - that is, cows that increase profit and reduce the environmental impact to deliver a more sustainable future.

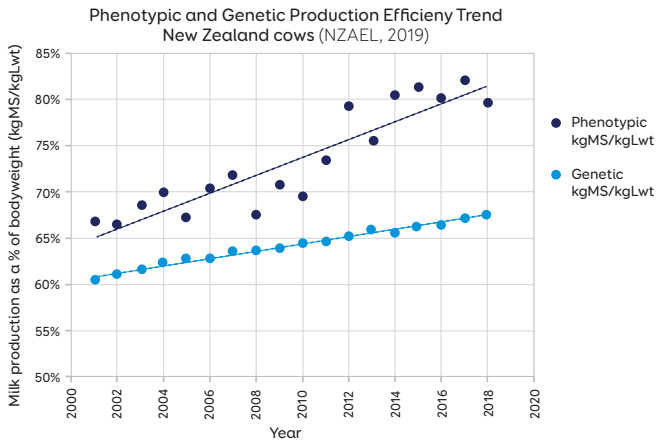


Figure 1: Production efficiency gains over time, New Zealand cows

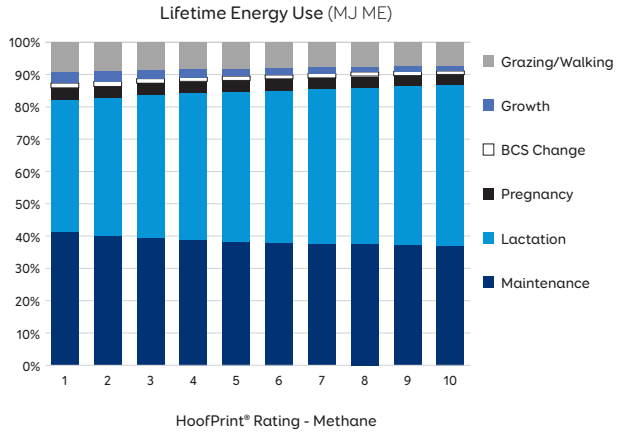


Figure 2: Lifetime Energy partitioning by methane efficiency ranking (LIC, 2020)

The 10 steps

A recent project from Australian dairy industry body, Dairy Tas, 'The 10 Steps', has identified ways for Tasmanian dairy farmers to reduce their carbon footprint.

Central to the findings was the need to breed a cow which produces high milksolids relative to its liveweight, while lasting longer in the herd.

The project suggested a milksolids target of 90 to 100 per cent of liveweight.

Rachel Brown[4], a Tasmanian environmental consultant who worked on the project, said genetics was an obvious starting point for the investigation, as cattle produce 60 to 65 per cent of the emissions from the state's dairy industry.

"This project showed you can milk less cows, but milk better cows," she said.

"With the right animals you can focus on profitability, not production. With the right cows and the right genetics, it flows through the whole business, and you can have good people, who run the farm well."

Read more about the 10 Steps on Dairy Australia's DairyTas website at www.dairyaustralia.com.au/dairytas-10steps

Cream of the crop

The 2022 crop of Jersey sires have caused us some sleepless nights! The problem? Too many quality options to choose from. LIC Jerseys have a justified reputation as animals with high components, have great strength and capacity, and are highly fertile. These traits are cornerstones of the Jersey breed but LIC have also focused on breeding Jerseys that are generally larger in size, have more milk and stronger udder conformation.

Of all the bulls available to us, we are careful to select the ones which possess these traits and have general farmer appeal.

318035 Shelby BC Lotto ET S3J

The number one gBW proven sire in the LIC stable, Lotto will be in high demand in many markets over the coming year. Coming from a high production Degree cow which had four sons graduating in this crop and three of them are in the top six for BW so they have really come up trumps. A production champion with high milk volume and components resulting in fat at 45kg and protein at 26kg. For such a high production sire to still have fertility at 6.7 gBV is remarkable.

This can be partly attributed to Lotto's sire Conrad who has consistently been high for fertility and had good production to boot. Get your order in early as stocks will be limited of Lotto.

Available in conventional and sexed - page 36 of the 2022 catalogue.

Dam of 318035 Shelby BC Lotto ET S3J

318009 Tironui Superman ET

Superman was our only chosen Genomic Jersey marketed for the past two years and so it is extra pleasing to see him live up to the name Superman.

Coming from the renowned Tironui Jersey Stud in the Waikato, New Zealand, that has seen many a quality Jersey bull delivered, such as well-known Joskin, Besiege and Meganev bulls. The Meg cow family oozes consistency with Superman's dam sired by Integrity (pictured) being no different. Superman delivers a lovely balance of production and type which is reflected in his gBW being right up there at $464 and with 161 daughters already milking and plenty more coming in soon, there is plenty to be excited about with Superman.

Available in conventional - page 35 of the 2022 catalogue.

Dam of 318009 Tironui Superman ET

AB code	Breed 16ths	Name	gBW	Fat gBV	Prot gBV	Milk gBV	Lwt gBV	Fert gBV	UO gBV	DC gBV	Sire Name
318035	J16	SHELBY BC LOTTO ET S3J	479	45	26	-52	-35	6.7	0.27	0.12	BELLS CM CONRAD S2J
318009	J16	TIRONUI SUPERMAN ET	464	54	21	-175	-39	0.9	0.68	0.53	PUKETAWA AD SUPERSTITION
318015	J16	GLENUI SUPER LAMAR	421	44	9	-162	-46	6.1	0.84	0.43	PUKETAWA AD SUPERSTITION
318029	J16	GLENUI BC LAREDO ET S3J	416	35	21	43	-51	7.3	0.68	0.33	BELLS CM CONRAD S2J

318015 Glenui Super Lamar and 318029 Glenui BC Laredo ET S3J

Taranaki in the North Island is well known for its Jersey cows and Glenui Stud is making a name for itself, delivering some of the best Jersey genetics around. Lamar is one of two standout sires to join the Jersey team this year with Laredo being the other. Both bulls come from the same cow family with Glenui Integrity Lace being Laredo's dam and Lamar's granddam. Her production worth clocking in at 642 production worth would put her in the top 1% of cows.

Dam of 318015 Glenui Super Lamar

Dam of 318029 Glenui BC Laredo ET S3J

Both bulls are real standouts for fertility and conformation with them both being over 6% gBV for fertility and 0.68 gBV for udder overall. The Glenui name will live on for several years with these two bulls leading the pack.

Available in conventional and sexed - page 33 and 38 of the 2022 catalogue.

New District Manager Gippsland - Hilary Lunn

We are proud to announce Hilary Lunn will be joining LIC Australia in March, bringing her extensive farming knowledge and previous experience working for LIC, as a welcome addition to our team.

Dairy farming for a total of 25 years, Hilary and her husband Darryn owned their own farm in Northland, New Zealand for the last 10 of those. Not only were they long standing LIC customers, but Darryn worked as an AI technician for an incredible 39 years. Adding to their involvement, Hilary was the District Manager for LIC based in Dargaville for seven years, progressing to the Northland Regional Managers role for another two more years.

When asked what she enjoys most about working within the herd improvement and dairying industry, Hilary says,

"I love meeting people and have empathy with dairy farmers, so a role where I can discuss herd improvement and help provide solutions is one that I enjoy. The dairy industry is such an important part of the economy and I relish the challenge of being involved".

The catalyst to do something different came when Hilary was made redundant due to a restructure.

"We sold our dairy farm, bought a big caravan and hit the road!. We've enjoyed three years travelling all over New Zealand and doing seasonal work, including a huge AI run in Canterbury each year."

Hilary adds, "When the Gippsland role came up we decided that would be our next adventure and I'm really looking forward to getting back working with farmers on a daily basis and learning about farming in Victoria."

Outside of work, Hilary enjoys getting out in the fresh air on her e-bike. "I've been lucky in the last three years to experience the amazing scenery New Zealand has to offer via the incredible bike trails winding their way all over the country, and hope to buy a bike soon in Australia."

A self-confessed 'old school Holden fan', Hilary is hoping she'll be able to glance into a few sheds that may have one or two gems hidden away.

"We love to travel and explore, so plan to find some lovely spots to weekend away in Gippsland."

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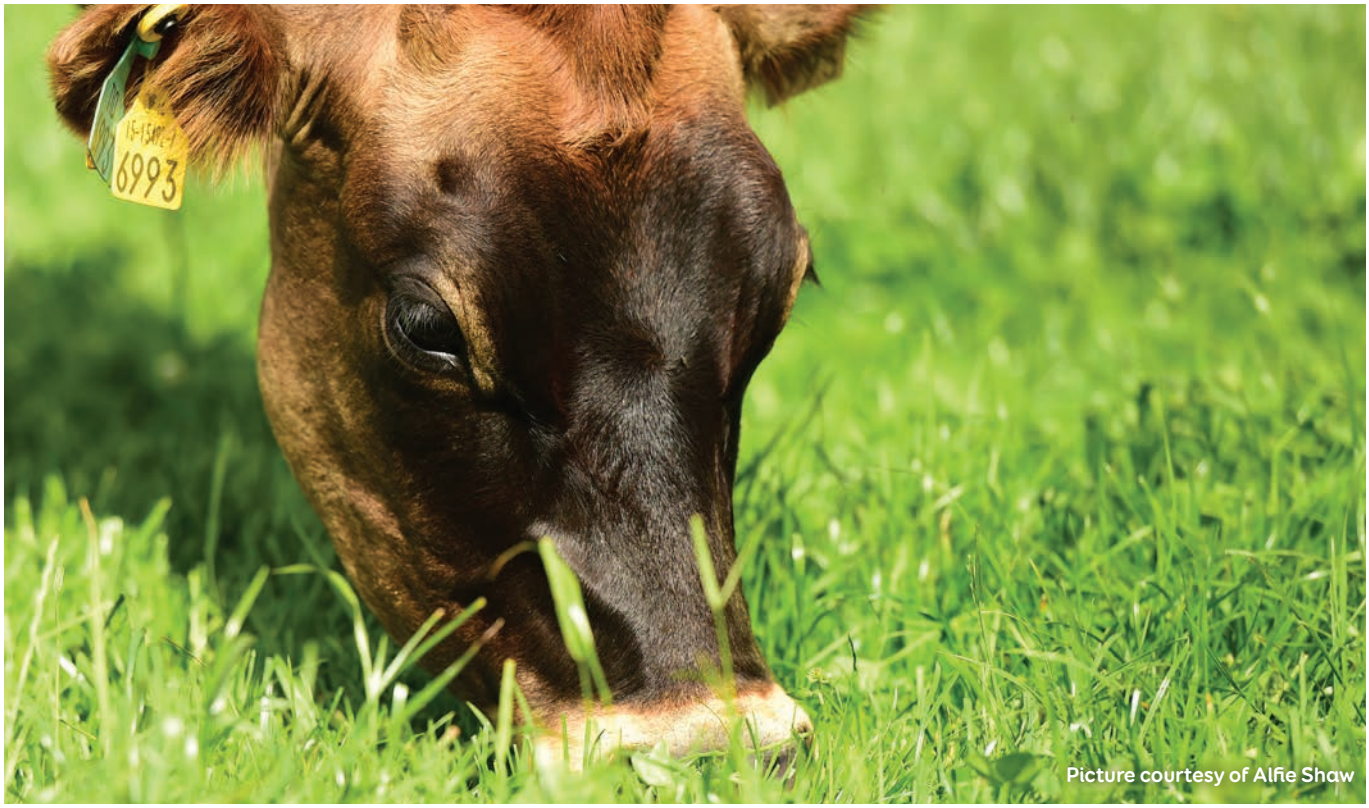
Jerseys deliver the goods



Picture courtesy of Alfie Shaw

Early results show New Zealand Jersey animals outperforming the top 1% EBI cows in Ireland according to data from the latest on-going trials at the world renowned Teagasc facility at Moorepark in Ireland. In addition, FXJ crossbreds were deemed to outperform both the three-way cross and Holsteins at their Clonakilty Research Facility.

The Next Generation herd was established at Moorepark in 2013, and the first phase of the project compared high EBI (elite) Holstein Friesian cows to those that represent the national average EBI. These elite animals are now said to be 10 years ahead of the national average.

A new dimension was added to the study in 2018 when high-EBI purebred Jerseys were included in the study. The Jersey females originated as heifers purchased in Denmark, embryos imported from New Zealand along with females from a small Jersey herd established by Teagasc some years ago, mostly NZ genetics.

Looking at the two strains of Jersey, it soon became apparent that the NZ Jerseys were more suited to the grazing-based system than the Danish Jerseys, with higher milk solids, higher body condition score and better longevity.

In Denmark dairy cows are mainly kept indoors all year round and fed a TMR ration. That's very different to asking a cow to walk to the paddock and graze down to 3 or 4cm every day. It highlights the importance of selecting cows that are bred for the system.

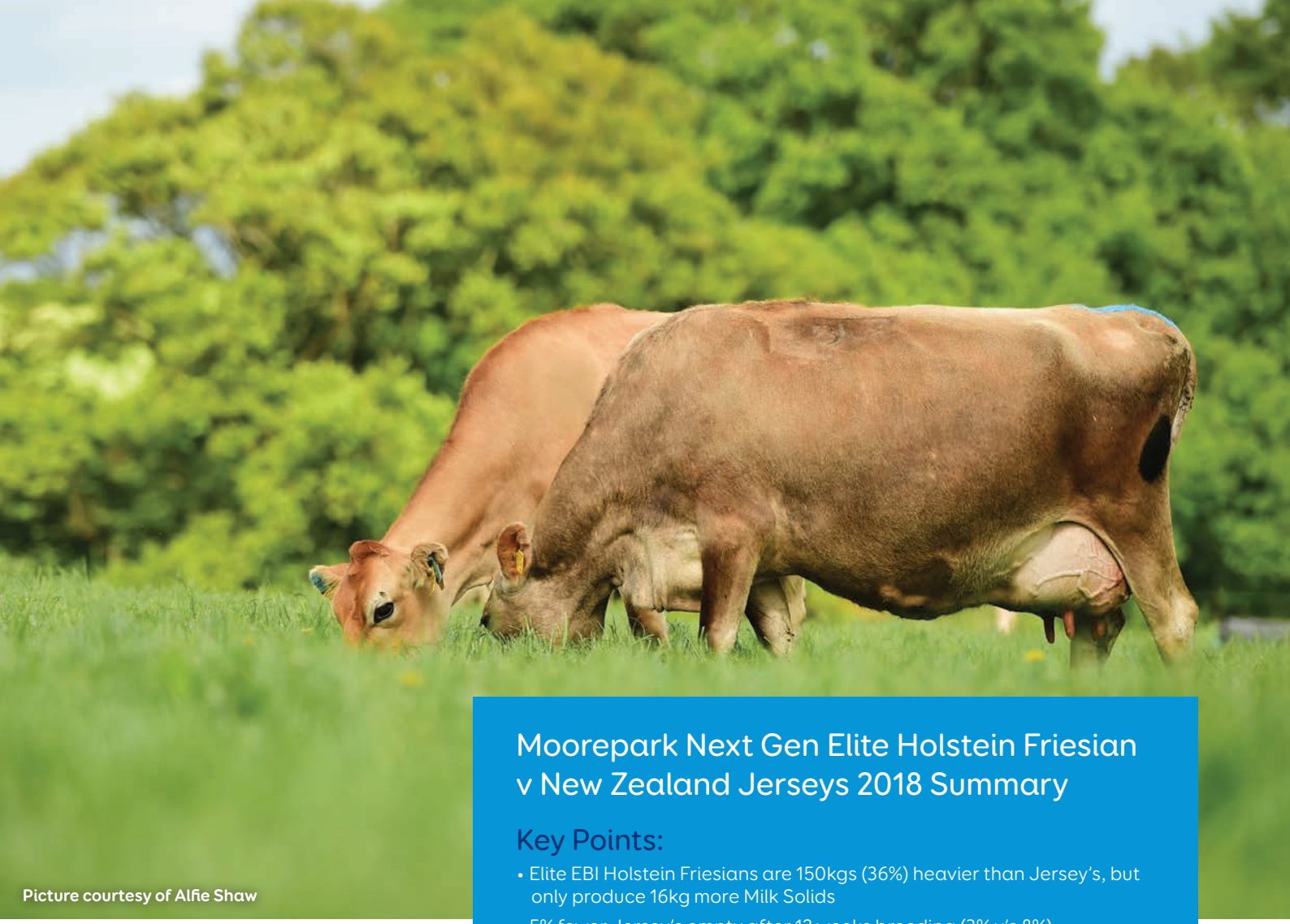
The early findings provide clear evidence of continued additive genetic gain in NZ. This is evidenced by both the production and fertility performances compared to that of previous studies conducted by Teagasc and is reflected by the high EBI of the NZ Jersey cows in the study. This reinforces the value of NZJ as eminently suitable for cross breeding with (and complementary to) the HF to generate highly efficient and highly profitable dairy cows, particularly in the context of Ireland's pasture-based production system.

In terms of milk solids, the performance of the NZ Jersey was 12kg/cow less than the elite cows, but there was a difference in liveweight, with the Jersey's weighing an average of 406kg and producing 445kg MS/cow (1.08kgMS/kg LWT) and the elite cows weighing 514kgs and producing 457kg MS (0.88kgMS/kgLWT).

The lighter Jerseys were stocked 9% higher at 3 cows/ha compared with 2.75 cows/ha for the Holstein Friesians. Concentrate levels were the same per cow.

When the production performance is extrapolated to a per hectare basis, the NZ Jerseys come out on top at 1,305kgMS/ha followed by the elite herd at 1,259kgMS/ha.

These results were recently published in Irish Farmers Journal and led the author to comment: "Whether you love them or hate them, these little Jersey cows at Moorepark are punching well above their weight. Their EBI is almost €40 behind the elite herd, yet they are whipping the socks off both Holstein Friesian groups in terms of production and they have good fertility."



Picture courtesy of Alfie Shaw

Moorepark Next Gen Elite Holstein Friesian v New Zealand Jerseys 2018 Summary

Key Points:

- Elite EBI Holstein Friesians are 150kgs (36%) heavier than Jersey's, but only produce 16kg more Milk Solids
- 5% fewer Jersey's empty after 12 weeks breeding (3% v's 8%)
- Jersey's are 36% more efficient, 1.1 kgs MS/kg BW for Jerseys v's 0.8 kg MS/kg BW for Holstein Friesians
- Jersey's stocked higher @ 3.00/ha v 2.75/ha for Holstein Friesians
- Elite EBI Holstein Friesians have a 25% higher body weight maintenance cost (+300kgs BW per ha).
- Jersey's held a 0.2 higher BCS throughout lactation.
- Jersey's had less mastitis.

Figures from Seamus O'Loughlin

According to a recent article in Irish Farmers Journal, written by Aidan Brennan, while all three breeds performed well, it was the Jersey crossbred that came out on top.

In the same article he presented data available from the Clonakilty study which showed no significant difference in milk solids production per cow between the Jersey-cross at 469kgMS/cow and the Holstein Friesian at 460kgMS/cow. But the three-way crosses produced significantly less than the Jersey-cross at 453kgMS/cow, he wrote. The potential to carry more Jersey-cross cows per ha was not considered, however.

Fertility performance was excellent across all three breeds but was particularly exceptional for the Holstein Friesian who recorded an average of just 3% empty after 23 weeks of breeding with the other two groups recording 7%.

"Despite this excellent performance for the Holstein Friesian, the Jersey crossbred was still more profitable, even on a per cow basis," wrote Aidan.

"Where cow numbers are fixed, net profit per cow in the grass and clover swards came out at €938 for the Jersey crossbred, €926 for the Holstein Friesian and €890 for the three-way cross."

"As more and more evidence emerges from the Moorepark trials that the Jersey and crossbred cows are outperforming their high EBI herd mates in Ireland, we're predicting significant growth in demand. And it becomes more and more critical that we're able to service that demand," says LIC Europe General Manager Mark Ryder.

"It's refreshing to see some neutral science-based analysis being produced. This is very much in line with what we're seeing on farm in NZ, Ireland and the UK, and won't come as a surprise to our customers but it's great to see this being formally realised by true scientific research.

"We're really pleased to be able to report on this work from such an esteemed research facility as Moorepark. The results confirm what we've been telling Irish and UK farmers for many years, yet some producers have remained concerned about the Jersey influence in their dairy herd. Now they can go ahead and buy Jersey and crossbred semen, conventional or sexed, and use it with total confidence when they're looking to secure their future."

Spoilt for choice with KiwiCross®

The KiwiCross® bulls have gone from strength to strength in the past couple of years with excellent outcross options and a great balance between fertility, production and type. This year sees it continue with the best line up we have seen in many years.

518038 Werders Premonition

Topping the gBW list and coming in at a whopping $446, Premonition walks in the footsteps of his sire Sierra who has the highest usage of any LIC bull in Australia ever! One of a number of Sierra sons who have graduated with flying colours, Premonition delivers production similar to a Holstein Friesian with a combined fat and protein of 84kg milksolids. With 118 herd tested daughters milking, the Breeding Worth shows they are very efficient with the liveweight coming in just under the 500kg mark. The rock-solid straight black dam (pictured) has passed on her type with Premonition coming in at 0.71 gBV for udder overall and plenty of capacity. Being A2A2 and well-liked by farmers with overall opinion at 0.61 gBV, Premonition will be in demand in 2022.

Available in conventional - page 45 in 2022 catalogue.

Dam of 518038 Werders Premonition

518016 Horizon Ascott

Did someone say outcross? A bull that will slot into most breeding plans being outcross to popular bloodlines with his sire Burmeisters Bandana not being used in Australia and MGS Jaydie only having limited use. He has rock-solid production, fertility, and capacity. If you are looking for an udder improver Ascott will do the job, with udder overall coming in over 1 gBV. Being A2A2 and easy calving, are there any boxes this bull doesn't tick?

Available in both conventional and sexed - page 43 in 2022 catalogue.

Half sister of 518016 Horizon Ascott

518061 Innovation Homebrew

Homebrew has the distinction of being bred at the LIC Innovation farm and first ever bull to come through as a marketable daughter proven sire. The Arkans Beaut dam called Moonshine was a standout from day one and with the different research carried out on the Innovation farm, she has been herd tested 69 times in her first two seasons alone, so oozes consistency. Homebrew comes in at a gBW of $361 with combined components of over 10%, a desirable breed mix of F9J7, easy calving and excellent management traits throughout. A genuine outcross option for many farmers that like many of the other KiwiCross bulls, ticks all the boxes farmers are looking for.

Available in both conventional and sexed - page 47 in 2022 catalogue.

Dam of 518061 Innovation Homebrew

518068 Morgans Moonshine

If health and fertility is your focus, then Moonshine should be top of your list. Moonshine is the highest fertility sire marketed by LIC Australia coming in at 9.1% gBV. To put that into perspective, 4.5% more of his offspring will get in calf in the first six weeks than average, so quite significant. He is also in the top 5% for SCC coming in at -0.72 gBV. Moonshine has a popular breed mix of F11J5 with his sire being Holstein Friesian Moorbys FM Granite and a high performing Arkans Beaut cow.

Available in both conventional and sexed - page 50 in 2022 catalogue.

Daughter of 518068 Morgans Moonshine

AB code	Breed 16ths	Name	gBW	Fat gBV	Prot gBV	Milk gBV	Lwt gBV	Fert gBV	UO gBV	DC gBV	Sire Name
518038	F8J8	WERDERS PREMONITION	446	58	26	62	12	-0.9	0.71	0.69	PRIESTS SIERRA
518016	F9J7	HORIZON ASCOTT	347	32	24	26	-12	2.9	1.09	0.47	BURMEISTERS BANDANA
518061	F9J7	INNOVATION HOMEBREW	361	40	24	-60	20	2.5	0.60	0.56	ARRIETA BRANSON-ET
518068	F11J5	MORGANS MOONSHINE	299	17	31	343	22	9.1	0.45	0.51	MOORBYS FM GRANITE S2F

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