SEPTEMBER
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2018

The Australian Dairyfarmer

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CODE OF CONDUCT

Dairyfarmers deserve a code with teeth

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The Australian Dairyfarmer

Vol 33, No.5 SEPTEMBER-OCTOBER 2018

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OUR COVER

Nita McRae feeds calves on her Gippsland farm where she raises about 1000 calves a year. Last year she had only six calf deaths — a testament to her rearing systems.
See story page 76
Picture: Jeanette Severs

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An important lesson for us all

THE Dairy Research Foundation's annual symposium at Sydney University's Camden, NSW, campus as always delivered an interesting mix of speakers. The event showcases some of the latest in dairy science from around the world, as well as providing a platform for emerging scientists to present their work.

One of the event's major speakers was world-renowned calf-rearing expert Dr Bob James, Professor Emeritus (Virginia Tech) and president of Down Home Heifer Solutions.

He gave two fantastic presentations at the event, presenting some of the latest thinking about calf rearing. A report appears on page 72 of this edition.

But the most interesting message for me wasn't in the nuts and bolts of what he presented — as interesting as that was.

The big take-home for me was when Dr James spoke about having changed his approach and thoughts about some of the key aspects of calf rearing, including the amount of milk fed to calves and group housing of calves.

Here was a man who has been an expert in this field for more than 30 years openly admitting that what he had previously preached was not what he now believed to be the best way of rearing calves.

In dismissing the idea of restricting milk intake to force young calves to eat more concentrate or calf starter to aid early rumen development, he said "our industries and universities have supported the idea of limited feeding and early weaning and some still do — I used to teach this".

Dr James admitted to what the Americans called "having to eat crow" — having to admit that he was wrong.

There was a real lesson for everyone in this.

And it wasn't about calf rearing. It was about being open and willing to take on new ideas, even when they challenge our well-held beliefs or practices.

It was about having an inquiring mind. It was about the power of observation and of measuring and assessing the things that we do.

A good example of this was when Dr James discussed what happened when his farm set up a calf-rearing facility using automatic feeders. He said when he first saw the calves in the facility he was concerned because they were sleeping. Some of them woke and wandered over for a feed. But none rushed to greet him as they had done before the system was introduced. "It is not normal behaviour for calves to get excited when you come out to them in the morning — they are doing that because they are looking for food," he said.

It's something we can all take on board.

As much as I love social media and its ability to quickly spread the word, people on it often forget this important lesson of being open to new ideas.

Often people's first reaction, when presented with something that challenges their established practices, is to attack. Often people attack without even reading more than the headline or a few lines of what has been presented. This then develops into a frenzy of more and more shrill comments that do little to advance the debate or understanding of what has been presented.

So next time you read or hear something that challenges your ideas, take the time to listen, read the detail and understand before launching into an attack. You just might learn something that could make a difference. D

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The Australian Dairyfarmer

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Worst drought in living memory

Key points
- ✔ Severe drought in NSW
- ✔ Drought affecting other regions
- ✔ Governments offering assistance packages

FARMERS are calling it the worst drought in living memory. Rural communities across NSW are battling worsening conditions in one of the driest winters on record as the state is now 100 per cent in drought.

Drought conditions are also at their toughest in Queensland. The latest Queensland government figures show 57.4 per cent of the state's land area is drought declared.

Almost the entire southwest of Queensland is now dry, as well as several parts of the state's central regions, including the Lockyer Valley, Southern Downs and Toowoomba regions.

The story isn't any better for northern Victoria, the eastern pastoral and southern agricultural regions of South Australia, and southern and Gascoyne coast of Western Australia.

The outpouring of support for farmers has prompted a flurry of responses from special interest groups, and both state and federal governments.

The National Farmers Federation has raised more than $8 million in partnership with Channel 9 and Rotary Australia World Community Service (RAWCS) for the 2018 Drought Relief Fund.

So far, $1 million from the fund has been provided to the Country Women's Association (CWA) in both NSW and Queensland, and the Need for Feed initiative, which currently services NSW.

"These funds have, by and large, been donated by everyday Australians wanting to support the bush through a tough time," NFF president Fiona Simson said.

"We've been overwhelmed by Australia's generosity and every cent [we raise] will make its way into the hands of our farming families."

The NSW Government announced an extra $500 million in emergency drought relief, bringing its total assistance package to more than $1 billion.

Feed is running low on Southern Highlands dairyfarmer Craig Whatman's farm. Photo: Olivia Ralph.

Drought transport subsidies of up to $20,000 per farm business will cover up to 50 per cent of the full cost of transporting fodder, water for stock and livestock to pasture, slaughter or sale.

There will also be $150 million to bolster the Farm Innovation Fund (FIF) infrastructure program and funding for counselling and mental health and animal welfare and stock disposal.

'The outpouring of support for farmers has prompted a flurry of responses from federal and state governments.'

"We have listened to farmers throughout NSW who have told me they urgently need help," NSW Premier Gladys Berejiklian said.

Queensland's Palaszczuk Government has pumped more than $670 million through grants, loans, infrastructure projects and drought climate adaptation programs to assist farmers.

Queensland farmers experiencing drought conditions in areas that aren't drought-declared have been urged to contact the state Department of Agriculture and Fisheries and apply for an Individual Droughted Property declaration.

The federal government also unveiled a raft of measures to help drought-stricken farmers, bringing the Commonwealth's total drought relief package to $1.8 billion.

The package includes Immediate accelerated depreciation provisions for fodder infrastructure valued at $75 million, an expansion of low interest loans on offer from $1 million to $2 million through the recently-established Regional Investment Corporation, and $72 million for a special drought round of the National Water Infrastructure Development Fund.

This second round of funding comes on the back of the federal Government's earlier pledge to open emergency payments for eligible farmers through the Farm Household Allowance (FHA) scheme. Couples will receive up to $12,000 in additional lump-sum payments and single households will get $7200.

The first payment will be made on September 1, with the second payment due on March 1 next year. The package will also include extra funding for mental health support.

But communities in NSW and Queensland are heaping pressure on the federal and state governments to solve the country's water crisis.

Irrigators at Mundubbera, in Queensland's North Burnett region, are worried persistent dry weather could wipe out the district.

Levels on the 200,000-megalitre Boondooma Dam have dropped towards 70,000ML. Local water authority SunWater is saying that water for irrigators will be cut off in September.

North Burnett Mayor Rachel Chambers told ABC the council would lobby the Queensland Government to support farmers until a reliable long-term water supply can be secured.

"We've all come together — the community is being very vocal and they're not giving up. Council is very vocal and we're not giving up. And finally, we have the State Government's ear," she said. D

Dairyfarmers deserve a code with teeth

Key points

- ✔ Review underway of Voluntary Code of Practice
- ✔ Plan to include measures to strengthen code
- ✔ Effectiveness of voluntary code being assessed

A STRONGER dairy industry Code of Practice must include a formal dispute resolution mechanism and penalties procedure to solve conflicts between farmers and processors, according to the country's peak dairyfarmer group.

Australian Dairy Farmers is pushing for a revised code to establish a complaints tribunal that would have the power to enforce a range of sanctions for any breaches in a bid to give farmers more security in their dealings with processors.

"Introducing a complaints procedure is a recognition that the code needs to include enforceable measures to protect farmers," ADF president Terry Richardson said.

"We absolutely want to achieve the best outcome for farmers, which is why we are taking a thorough approach to strengthening the Code of Practice and presenting this to industry for consideration."

The Australian Dairy Industry Council, which Mr Richardson also chairs, is reviewing the Code of Practice against the report into the dairy industry handed down in April by the Australian Competition and Consumer Commission.

"The ADIC review is focused entirely on how the voluntary code operated, what elements were successful and what needs improving in a new Code of Practice," Mr Richardson said.

"We understand that the ACCC has already recommended that the dairy industry adopt a mandatory Code of Practice, but they haven't provided adequate analysis on how this new code would operate.

"It is our understanding that it is difficult to amend or alter a mandatory code once it is enacted, which is why we need to review all options to ensure farmers will truly benefit."

The ADIC has engaged legal counsel to provide technical advice to be incorporated into a second version of the code.

"We are working with a law firm that has extensive experience with codes of practice, and they will help us work through a number of amendments that should be included in a new dairy industry code," Mr Richardson said.

Terry Richardson: This work is complex and ADF is proceeding one step at a time.

"We are extremely aware that the industry is waiting for an outcome of this review, but we must ensure all reasonable steps are taken to address the issues identified by the ACCC report in a way that assists farmers."

> ***'The review will determine how effective the Voluntary Code has been and whether it is necessary to adopt a different approach.'***

The competition watchdog acknowledged the "positive impact" the current code of practice had on contracting practices but cautioned it had been unable to secure participation by all processors, reduce risk for farmers, independently arbitrate complaints or penalise breaches.

Mr Richardson said the dairy industry agreed when the voluntary code was first introduced that a review process would assess strengths and weaknesses after the first 12 months, considering feedback from the ACCC.

"We were aware at the start of the code review process that the next version of the industry code must have such procedures in place," he said.

"This Code of Practice was always a first draft and must be viewed in the context that only a little over a year ago there was no mechanism at all in place to assist farmers with their contractual arrangements with their processor."

The ADIC has consistently stated that all options will remain open in reviewing the code. Mr Richardson said in May that "nothing is off the table" in the ADIC review.

"The review will determine how effective the Voluntary Code has been and whether it is necessary to adopt a different approach," he said. "This could be a prescribed voluntary code, mandatory code or another mechanism altogether."

Estimates suggest a Mandatory Code of Practice would take 15-18 months to develop, but that timeline would likely be pushed back further with a federal election due in the first half of next year.

"Our next step is to prepare a strengthened industry code including dispute resolution procedures, and we expect this to be complete in the next couple of months," Mr Richardson said.

"This work is complex and ADF is proceeding one step at a time, recognising the urgency of moving this work forward." D

Working together for animal health

Key points

- ✔ Animal Health Australia independent co-ordinator
- ✔ Lead organisation in event of emergency animal disease outbreak
- ✔ Helps manage endemic diseases

THE sustainability of Australia's livestock industries balances upon their profitability and their freedom to farm. Underpinning both are good outcomes for animal health on-farm and throughout the supply chain.

Animal health is a complex system, with success relying on livestock producers working together with vets, industry councils and governments, to detect and manage livestock diseases in the national herd. While there are varying approaches to any number of challenges facing the industry nationwide, diseases do not respect state borders and many do not discriminate between species and breeds. As such, a national approach to animal health is vitally important.

As an independent co-ordinator, Animal Health Australia (AHA) is privileged to play a part in strengthening and protecting the national animal health system. This helps to ensure delivery of a world-class system for the management of livestock biosecurity risks, which helps Australia maintain freedom from many destructive livestock diseases, improves industry productivity, sustainability and enhances market access.

AHA works with its members, including Australian Dairy Farmers, to maintain Australia's guiding document for responding to an emergency animal disease, known as the EADRA (Emergency Animal Disease Response Agreement), as well as manuals for detecting, diagnosing and managing a range of these emergency conditions, known as AusVetPlan.

EADRA sets out the policies and procedures to be followed when dealing with an emergency disease outbreak. It also spells out the arrangements for sharing the costs of a response between federal and state governments and livestock industry reserves, where appropriate, to ensure that all affected parties shoulder the burden of control and eradication measures.

Maintaining EADRA means ensuring it fulfils its purpose. Through regular simulation exercises, opportunities are provided for government and industry staff to train and prepare to take part in a response when needed.

Animal Health Australia is privileged to play a part in strengthening and protecting the national animal health system.

Emergency disease preparedness is also supported by a range of programs that conduct surveillance for signs of exotic diseases and pests and help to underpin Australia's claims of freedom from certain major diseases.

'Through regular simulation exercises, opportunities are provided for government and industry staff to train and prepare to take part in a response when needed.'

Of course, it's not just exotic diseases that threaten the integrity of the system; many livestock diseases are endemic to Australia, having come with historical shipments of livestock. Some of these conditions are 'facts of life' to be managed and treated as you might nurse a common cold, while others can create big problems for the producer if introduced to their herd.

Whether through the death of infected animals, loss of condition or impact on milk production, or wastage at the processing plant, endemic diseases cost the livestock sector millions of dollars a year. To help producers manage the risks and impacts of endemic diseases, AHA co-ordinates a range of programs designed to monitor for instances of endemic diseases, build awareness of the risks and promote the adoption of on-farm biosecurity practices to help minimise the introduction and further spread of endemic diseases on individual properties.

Among the most significant of these programs is the Farm Biosecurity program, run in conjunction with counterparts at Plant Health Australia. The Farm Biosecurity website <www.farmbiosecurity.com.au> provides a range of tools and resources for producers to implement on-farm biosecurity practices, filtered into six broad 'biosecurity essentials', which apply to any given farming operation.

Biosecurity, food safety and traceability in the dairy industry benefit further from representation in a range of projects, such as the National Johne's Disease Project, which assist livestock industry members in developing a national, cross-sector consensus on issues that affect a number of industries.

AHA is proud to work alongside members such as Australian Dairy Farmers to help build a robust and resilient animal health system, contributing to strong and sustainable livestock industries for the benefit of livestock farmers. D

United we stand, divided we fall

Key points

- ✔ Culture of blame and negativity
- ✔ Need to work together to overcome problems
- ✔ Engage with industry leaders at all levels

By **Terry Richardson**
Australian Dairy Farmers President

IT'S not news to say that the Australian dairy industry is highly fractured. Divisions exist all along the supply chain, often for historical reasons.

We should acknowledge the impact of the challenges of the last few years — the bargaining imbalance between different sections of the industry, volatile markets reflected in farmgate milk prices, adverse seasonal conditions, and other factors outside farmers' control.

While there has been hardship for many, this environment has facilitated a culture of blame and negativity, which now permeates the industry and could have destructive consequences.

It is doing none of us any favours to attack our own. Our focus must be on working together to rebuild our industry.

Every step along the value chain depends on strong relationships, based on trust and confidence, the value of which we only know when it's lost.

Much has been made of the trust deficit engulfing our industry. It has been broadly acknowledged that trust has been lost right across the supply chain. But we cannot let anger describe us. We simply cannot allow the industry to implode.

Tough questions bring forward new options. Cynicism leaves us closed to new ideas. There is always be room for differences to be expressed. But this process must be constructive.

It is vital that we find a way to cooperate, share knowledge and support each other — bring together our considerable capacity for optimism and resources to face the future. Only through sharing our experiences can we truly understand and regain trust in our industry.

Unfortunately, this is common advice which is rarely followed. It is sad to note that the Australian dairy industry traditionally has failed to stick together during difficult times, when unity is most important. We cannot let this vicious cycle of negativity continue.

The dairy industry needs unity, collaboration and support if we are to effect change.

'We need to show our unity of purpose, shared belief and passion for the dairy industry.'

We have a lot to be proud of as an industry. Our achievements are significant, but imagine how effective we could be as a cohesive, united industry? That's how we have an impact. That's how we influence decision makers.

We need to show our unity of purpose, shared belief and passion for the dairy industry. None of us by ourselves has an answer to what may be sought, but unity brings an open, honest, and shared discussion about the challenges faced by our friends, neighbours, or the broader industry.

If we cannot deal with challenges as an industry, there is a real problem. We need unity, collaboration and support if we are to effect change. If we don't have farmers sitting at the table, we lose the opportunity to help ourselves and influence the future for others

How can we expect government to help us if we can't first help ourselves? Government doesn't want us to dump our problems on them. They want us to seriously consider solutions that they can implement to benefit industry.

It's time to stop being part of the problem and start contributing to the solution. Share your pride in the work we do and value the need to contribute to industry development. Acknowledge the belief others have shown in us through investment and a shared desire for a sustainable industry.

Join a local branch of your state dairyfarming organisation, bring forward your ideas and help rebuild a strong and vibrant dairy industry.

Engage with industry leaders at all levels. They need to hear from you. Reach out with respect and ensure they have an opportunity to walk with you and share your issues.

Be tough on issues but also respectful to our friends and others who are taking action on your behalf.

Our industry depends on our ability to unite. D

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Acting now, investing in future

By **David Nation**
Managing director
Dairy Australia

Key points

- ✔ Farmers responding to feed challenge in all regions
- ✔ Long term investment to deliver high-value outcomes
- ✔ Genetic gain improves on farm performance

THIS is my first column for the *Australian Dairyfarmer* magazine, and I'd like to start by recognising the important contribution that Ian Halliday has made to advance the dairy industry. Dairy Australia now has a much stronger presence in all eight dairy regions and provides market insights to help inform the industry to make better decisions. This work will play a key role in a challenging season, while informing investments that will benefit the industry.

The most widespread challenge this year is a feed shortage, with concerns about both the cost of bought-in feed and limited access. Water prices and availability are also affecting some regions. Farmers in all regions are now actively responding to this challenge, with a focus on acting now and being prepared for the possible year ahead.

'While the focus for now has to be the immediate challenges with feed and water, it's important to not lose sight of the opportunity for the future.'

While work is underway to help farmers navigate this challenging environment, it is also important that Dairy Australia continues to focus on longer-term investments with high-value outcomes. One of the highest value opportunities is to deliver gains without significant changes to farming practices. This is mostly achieved through genetic gain, where faster progress can be made to breed herds and sow improved pasture varieties.

Genetic gain that is targeted at Australian farming conditions is a major success story and is now double the rate of gain than what it was 10 years ago. This is a real credit to the whole herd improvement industry and we are now seeing the rewards. And what is even better, the industry is only half-way in fully realising what can be achieved by continuing this herd improvement strategy.

Genetic gain in pasture varieties is also essential and has the potential to be the single greatest impact on farm performance in the next 10 years. Ongoing investment in DairyBio, in partnership with Agriculture Victoria, Gardiner Foundation, DairyNZ and Heritage Seeds, is on track to deliver large increases in yield, nutritive value and persistence of pasture.

Investments for a better future expand beyond genetic improvement alone. There continues to be important work in communicating the value of dairy in the diet, and in describing the high standards that industry sets for management of your herds, your land, and your people. Retaining our strong international relationships and expanding the opportunities for exporting dairy products, while retaining our recognition for quality, is also key to the industry's success.

While the focus for now has to be the immediate challenges with feed and water, it's important to not lose sight of the opportunity for the future.

I look forward to working with Dairy Australia, industry and government to deliver benefit to you and your dairy community. D

Dairy Australia announces 2018 board nominees

DAIRY Australia has announced the three board nominees standing for election at the 2018 annual general meeting to be held in November. James Mann, David Lord and Roseanne Healy have been selected to fill the director vacancies, each of the three roles requiring unique skills and expertise.

The two-year term position is for a director with skills in agribusiness, innovation and adoption, while the remaining three-year term vacancies must be filled by a milk producer and a director with a strong background in dairy processing.

Dairy Australia chair Jeff Odgers said this year's nominees brought a range of experience that would greatly benefit the organisation. "We are very impressed by the skills and diversity of this year's candidates, and I am confident their expertise will enable us to capitalise on future opportunities the industry presents," Mr Odgers said.

James Mann was nominated to fill the milk producer position, having been instrumental in developing one of Australia's leading dairy businesses, Donovan's dairying. With more than 30 years' experience in the dairy industry, Mr Mann has fulfilled an initial term on the DA board, and was also chair of the DairySA board for 10 years.

David Lord has been nominated for the director role with a dairy processing background, demonstrating extensive experience in fast-moving consumer goods and industrial food products. Mr Lord previously served as chief executive officer and managing director of Parmalat Australia, Warrnambool Cheese & Butter and most recently, Saputo Dairy Australia.

The final nominee Roseanne Healy was selected for the agribusiness, innovation and adoption vacancy. Her current roles include deputy chair of the Grains Research and Development Corporation, chair of Dairysafe and chair of VineHealth Australia.

To be successfully elected into the vacant director roles, each of the three nominees will require more than 50 per cent of the votes cast at the AGM.

For applicants who wish to nominate separately from the board selection committee process, they must submit a written nomination, supported by signatures from at least 100 Group A members of Dairy Australia.

Mixed reaction to milk price index

Key points

- ✔ Long-awaited milk price index launched in July
- ✔ Provides index of key commodity prices and regional index
- ✔ Concerns about lack of processor costs

By **Andrew Miller and Carlene Dowie**

THE Federal Government's long-awaited Milk Price Index met with a mixed response when it was launched in July.

The index was promised in 2016 by the then Minister for Agriculture, Barnaby Joyce, in the wake of industry turmoil following the late-season milk price step-down by Murray Goulburn and Fonterra. But its establishment was delayed after the original contractor was replaced by another late last year.

The Minister for Agriculture, David Littleproud, in launching the index said it would enable dairyfarmers to better understand and interpret commodity market price signals.

Farmers would be able to see an index of commodity prices received by Australian dairy processors for cheese, butter, skim milk powder and whole milk powder exports.

"There will also be a one-year forecast of prices that will be updated quarterly, along with regular global, national and regional commentary," Mr Littleproud said.

A Regional, Retrospective Farmgate Milk Price Index will accompany the index, with farmers urged to provide price data via an online form.

But the index met a mixed response from farmers — some saw it as a good start while others thought it fell short of farmer expectations and wanted to see processor costs included.

Australian Dairy Farmers welcomed the release. ADF president Terry Richardson said the index aimed to help farmers make decisions about their businesses.

"The index was developed so that farmers have a more comprehensive understanding and are able to better interpret price signals," Mr Richardson said. "This is just one tool that dairyfarmers can use, and there will be a feedback channel available to allow an opportunity for input into any future adjustments that may be deemed necessary in the future.

"The index will be supported by a one-year forecast of prices that will be updated quarterly, along with regular global, national and regional commentary.

"The purpose of the retrospective index is to help build a marker of actual prices received in each dairy region."

United Dairyfarmers of Victoria president Adam Jenkins said the index should allow farmers to make more informed judgements on the fairness and competitiveness of prices offered by their processor. It would provide earlier, and clearer, pricing signals.

"The index will help farmers focus on the trends of the world market and how that aligns with the farmgate milk price," Mr Jenkins said. "The index allows farmers to track commodity pric-

es received by Australian dairy processors."

But he said the index would fall short of providing transparency in the processing sector. "We're still lacking transparency into manufacturing costs and their impact at the farmgate," he said.

"UDV advocates for transparency throughout the entire supply chain and we are disappointed the index does not achieve this."

He said any review of the index should give an analysis of manufacturing costs to give farmers a clear idea of how the world price translated into farmgate prices.

Katunga, Vic, dairyfarmer Paul Stammers said he had entered his figures into the index but would not be updating it regularly, as he was on a fixed milk price.

"It would be better if there was an app," Mr Stammers said. "If they want more data, they could send us a reminder." He said he was interested in seeing processors' cost of production.

Crossley, Vic, dairyfarmer Karinjeet Singh-Mahil said the success of the index would depend on how many farmers used it. "It's a great idea, but we'll have to wait and see how the education package works and if it drags more farmers into using it," she said.

The index was one of a number of tools, including the Global Dairy Trade and Fresh Agenda's dairy trade simulator, Global Dairy Directions, which needed to be considered by farmers.

"As people use it and provide feedback, that gives the opportunity to refine it and make it better," she said. "Farmers have to use it and feedback their response, not bad mouth it off to their mates."

Larpent, Vic, dairyfarmer Lachie Sutherland agreed without feedback, the index would not be of much value. He welcomed the market commentary around supply and demand provided on the website.

"At least it's something, which is better than nothing," Mr Sutherland said. "It will take a little bit of time for people to gain trust in it."

He said the index should help farmers find out what their milk was worth. "We can sense whether we are being overpaid or underpaid," he said. "As we know, from recent history, it's always important to know if we are being overpaid."

But the chief executive of lobby group, Dairy Connect, described the index as 'half-baked' because it didn't provide analysis of the farmgate impact of the costs of processing.

'There will also be a one-year forecast of prices that will be updated quarterly, along with regular global, national and regional commentary.'

Shaughn Morgan said while the industry welcomed the initiative, its market analysis value was diminished by what it did not deliver.

"Producers need transparency around processor manufacturing costs and their impact at the farmgate," he said. "Right now, we simply don't have that information."

He said the Australian Competition and Consumer Commission had stated processors should publish information "identifying how their pricing offers applied to a standardised set of model farms, accounting for common differences in farm size, seasonality of production, whether production is growing or retracting and how penalties, such as those relating to quality requirements, impact on pricing offers".

Dairy Connect president and Gloucester, NSW, dairyfarmer Graham Forbes said producers needed access to whole-of-supply-chain analysis in order to build reliable future business strategies. "Here we are months out since the ACCC published its final recommendations and we're still waiting on the Federal Government to commit to implementing a mandatory code of conduct to regulate producer and processor relationships, which will deliver fairness and transparency," Mr Forbes said. "Now we have a milk price index of sorts, but our members are seriously questioning the impact of outcomes that had been set in train previously."

Leongatha, Vic, dairyfarmer Bernhard Lubitz said he had understood that the initial proposal was for an index to give an indicative milk price that took into account the weighted international dairy commodity prices available less the processors' cost of production in Australia. "That would have given farmers real clarity as to how much real value was being delivered or lost by the individual processor's product mix, milk supply profile and pricing structures," he said.

The index put forward was "a pale watered-down imitation of the original proposal that does nothing for transparency". "What is now proposed will be of little value in the real world," he said.

Mr Littleproud said the department would work with industry to educate farmers on how best to use and interpret market signals from the index.

Deloitte Access Economics was providing the economic modelling and analysis and RM Consulting Group was developing the education resources for dairy farmers. D

The milk price index is available at website <http://agriculture.gov.au/milkpriceindex>.

E Effluent Pumps, Stirrers, Separators & System Control by Yardmaster

I Irrigators by Williams

W Weeping Walls by RX Plastics

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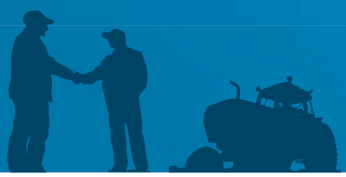

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Drought hits farmers across Australia

Key points

- ✔ Drought hits hard in NSW and Qld
- ✔ Feed shortage causing big price increase
- ✔ Hitting farmers across Australia

By **Fairfax staff writers**

SEVERE drought conditions across parts of eastern Australia are hitting dairy farms in those regions hard as farmers are forced to buy in all their herds' feed requirements. But the impact is also being felt in most dairy regions as prices of fodder and grain skyrocket.

NSW advocacy group Dairy Connect's chief executive officer Shaughn Morgan said the drought was financially crippling the dairy and livestock sectors. "Many farmers are desperately scrambling for feed to keep precious livestock alive as the drought drags on through its second year," he said.

"Paddocks have been picked clean in NSW, parts of Queensland and South Australia. Livestock producers and dairyfarmers all need fodder supplies, and short supply and demand are forcing prices up."

Croom, NSW, dairyfarmer Jason Maloney told Fairfax Media although his dairy farm looked green, it was not growing any feed. A lack of rain had not only dried up the dams on his property but has also turned his finances to dust.

"Don't be fooled because it looks green around you," Mr Maloney said. "We're lucky we're on the coast. We'll get a bit of a southerly breeze come in that's got some moisture in it and that helps keep the grass green, but the grass isn't growing. We haven't had grass of any sort of substance for quite a long time; the drought's just so widespread."

Mr Maloney said he was buying in hay from "wherever we can find it in the country" .

Jamberoo, NSW, dairyfarmer Mark Honey, said the drought created a "double whammy". He has been buying in hay for about nine months and feeding his cattle more grain than usual. "Your income's down [and] your expenses are probably double of what they would be in a normal season," he said.

Maffra, Vic, dairyfarmer Justin Johnston, said with 750 cows being milked now, growing to more than 1000 by the end of calving, sourcing hay and fodder was a constant and expensive exercise.

Jason Maloney on his farm at Croom, NSW. He says the green grass is deceptive — the farm is not growing any feed.

Mr Johnston, who operates the family farm with parents Robert and Lynette, said the 440-hectare farm was carrying around 1700 cattle including all heifers, dry stock and milkers.

The milking herd alone was chewing through 10 kilograms per cow of hay — nearly 50 tonnes of hay a week — 5kg of grain every day and a little bit of grass. With virtually no rain recorded since September 2017, access to hay was a priority and limited by competition from local drought-affected areas as well as areas interstate.

The price for good quality hay increased from $190-$220/tonne delivered on farm before Christmas to $280-$300/tonne to $450 plus, he said. The drought meant young cattle needed more hay because of a lack of feed in the paddocks.

> ***'Many farmers are desperately scrambling for feed to keep precious livestock alive.'***

Northern Victorian dairyfarmers say the triple whammy of high water, grain and hay prices have left many in a precarious position. With grain prices hitting $385 a tonne, hay reaching $400/tonne and water at $350/megalitre, farmers say they badly need rain, to grow spring pastures for grass or hay.

Echuca, Vic, dairyfarmer Steve Hawken said the cost of production pressures would also be alleviated by processors offering milk step ups.

Mr Hawken said he had the capacity to milk 340 cows but was likely to run 280 because of grain prices. "That's for plain wheat, but I need canola meal, maize and vitamins to keep the girls happy," he said.

High water costs were another concern, with brokers saying concerns about a dry spring and summer had seen a temporary price spike.

Steve Dalitz, Numurkah, Vic, said this time last year, he had 250 megalitres of carryover water; this year he had none. While he had an assured 300ML, he used 700ML a year. As a result, he had decided to reduce his herd, selling 45 yearlings two months ago.

"I figured I would have to keep them for another 12 months or buy water to grow grass or hay," Mr Dalitz said. "Hay is non-existent now — you have to buy it from the western districts or South Australia, and there is not much left."

Farmers were dependent on what rice and cotton growers would do. "If they decide to plant, water prices will go through the roof," he said.

Waaia, Vic, dairyfarmer James Dillon agreed dairy herds could be reduced. "Oaten hay is $400, who can afford that?," Mr Dillon said.

He said farmers would have to do their sums and try and grow as much grass as they could. "They are better off paying $300 a megalitre for water, which is going to get roughly two tonnes of food, from spring growth, per megalitre," Mr Dillon said. D

See how to plan for the feed shortage, pages 84-89.

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Bega buys Koroit factory

Key points

- ✔ Bega buys Koroit plant from Saputo for $250 million
- ✔ Plans to increase supply collected in region
- ✔ Complements existing operations

By **Kate Zwagerman**

THE Bega signs officially went up at the Koroit milk processing plant on August 17, marking the first day of business for the company at the former Murray Goulburn factory. Bega Cheese chair Barry Irvin said the $250 million deal to take on the site was good news for workers and the wider region. "There's a little over 100 (staff) coming across," Mr Irvin said. "Basically, the staff that were here.

"I think that's really another positive. People can feel secure about their prospects and jobs after a number of years of turmoil."

Mr Irvin said Bega had been collecting milk in the south-west for a decade and would now be looking to increase supply from the about 100 million litres collected in the region, as well as growing the factory's capacity.

"We're always looking to grow and expand, obviously there is a lot of opportunity here, there is a lot of unused capacity that we will look to utilise and also look to refine the business bringing in the knowledge we already have," he said. "Our field service team will get very active very quickly in terms of recruiting supply.

"We've had a very positive response from the dairyfarmers down here, I think they're very pleased to see the facility purchased — because we have been here for 10 years a lot of people know us already.

"We've already had lots of inquiries, so that's really good."

Bega chief executive officer Paul van Heerwaarden, South West Coast MP Roma Britnell and Bega chair Barry Irvin on the first day of Bega's operation of the former Murray Goulburn factory at Koroit, Vic.

Mr Irvin said the takeover was important to the south-west Victorian region. "For us, it's really nice to own such a significant facility and it gives us a great opportunity to grow," he said. "For farms, it also gives them a really nice choice.

'We're always looking to grow and expand, obviously there is a lot of opportunity here.'

"One of the attractions for us was that this factory fits in very well with what we do, particularly up at Tatura, with nutritional powders and those sorts of products."

Member for South West Coast and dairyfarmer Roma Britnell said it was a big day for Koroit and the wider region and the move demonstrated confidence in the region's dairy industry.

"I think it's good for the Koroit community, the people who work here at the factory and great for the Victorian dairy industry, particularly in south-west Victoria," she said.

Bega Cheese bought the plant, which produces butter and milk powders, from Canadian dairy giant Saputo for $250 million, after the Australian Competition and Consumer Commission had made the sale of Koroit a condition for its approval of Saputo's acquisition of the assets of Murray Goulburn.

Bega announced in July that it would buy Koroit, subject to approval by the ACCC.

As part of the sale, Bega Cheese is guaranteed the plant's current milk supply of 300 million litres until June 30, 2020.

The Koroit factory produces bulk and retail butter, commodity and retail milk powders and growing up milk powder.

Bega Cheese chief executive officer Paul van Heerwaarden said the Koroit plant would provide Bega with "a significant presence in western Victoria and operational flexibility with our other milk processing sites".

"Importantly the acquisition will support the continued growth of our core dairy business and provide domestic and export customers with an expanded range of products," Mr van Heerwaarden said.

Bega Cheese said it expected the Koroit factory to generate annualised Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA) of $20 million assuming the current annual intake of 300 million litres.

Bega said there was potential for increased milk intake at the factory. The plant had a processing capacity of one billion litres and was MG's biggest processing plant before it was hit hard by an exodus of suppliers after MG slashed its milk price in early 2016. D

Murray Goulburn faces another class action

LEGAL firm Slater and Gordon announced it had lodged a claim in the Federal Court against Murray Goulburn. The action is on behalf of those who invested in Murray Goulburn's listed entity MG Unit Trust from May 29, 2015, to April 26, 2016, including those who replied to an initial public offering in 2015.

Slater and Gordon argues the firm misled investors with profit forecasts and failed to meet market disclosure duties by not announcing a downgrade in 2016.

Murray Goulburn Co-operative and MG Responsible Entity, the bodies with oversight of the unit trust, responded to the lodging with a statement declaring they "intend to defend the proceeding".

Slater and Gordon senior lawyer Andrew Paull said investors party to the claim comprise institutions, those with self-managed superannuation funds and farmers.

"We wouldn't take it on if we didn't think there was a good chance of success," Mr Paull said. "This looks like a strong case, all the evidence that has come out not just publicly, but with court cases with ASIC and the ACCC point to that."

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It costs not to herd test

Key points

- ✔ Herd testing provides data to make decisions
- ✔ Dropped herd testing when moved farms
- ✔ Started when looking to cull cows

GIPPSLAND dairyfarmers, Guy and Leanne Gallatly, have a clear goal with herd testing — they want information on their cows so they can make better management decisions.

"Herd testing is a tool I need," Guy Gallatly said. "It helps me identify animals to cull for mastitis or production; and lets me assess the performance of our younger stock and refine our breeding program by making it easy to monitor the improvements in our production index with each new group of young cows coming into the herd.

"It does involve a cost but there is cost in having cows with subclinical mastitis; or feeding cows in the bale that aren't producing.

"You can think you know what your cows are doing, but you don't really know unless you have their herd test results."

ImProving Herds Focus Farm

The Gallatly farm was one of seven ImProving Herds Focus Farms in the 2015/16 season. The ImProving Herds project set out to demonstrate how herd test data could be used for improved farm decision making by following how each farm used their herd-test information.

Mr Gallatly said their experience with herd testing clearly showed that a cow's production or cell counts couldn't be assessed by just observing the animal in the dairy.

Leanne and Guy Gallatly with Jo DeMoel, from herd testing company HICO.

'The figures don't lie, but if you don't have the figures you don't really know.'

"It certainly showed up some of the higher producing animals weren't the ones that I thought they'd be — it's the same with milk quality," he said.

"The figures don't lie, but if you don't have the figures you don't really know."

The Gallatly family have used herd testing ever since they started dairyfarming and became involved because they wanted to have figures on every cow in the herd.

"We've moved farms a couple of times — and have had milked herds ranging from 170 to 340 cows," Mr Gallatly said.

"We were originally sharefarming when we started herd testing, so we knew what the cows were doing.

"When we decided to buy a buy a small farm where we could milk 170-180 cows, we sold off a number of cows and decided which cows to sell based primarily on calving dates as well as herd tests figures.

"Unfortunately, the move to our own farm coincided with a fall in the milk price so we dropped out of herd testing because we needed to reduce our costs and after four years we sold the small farm and moved onto the 102ha farm we currently lease."

The current farm has a 44-unit ro-

The Gallatly farm is home to 310 milkers and operates on a simple system.

Jo DeMoel, from herd testing company HICO, helps Guy and Leanne Gallatly set up for herd testing.

Table 1: Gallatly farm stats (March 2018)

Herd size:	Up to 310 cows
Breed:	Mainly Holstein, some Jersey and cross breds
Farm size:	102 ha main farm plus two other blocks (16ha 2/3 spring, 1/3 autumn
Dairy:	44-unit rotary
Staff:	1 full-time worker, 2 casual milkers and half a labour unit
Feeding system:	4kg/day year round in dairy

tary and is on the Macalister River allowing for 100 per cent irrigated pastures under sprays, a centre pivot and flood irrigation.

The farm is home to 310 milkers and is supplemented by two other blocks, which the Gallatlys own — a 16ha fodder block and a 54ha block that is used for fodder production and growing out young stock.

"Our rule of thumb is that we need three bales of silage per cow, so we aim to produce around 1000 bales of silage a year," Mr Gallatly said.

"We also feed 4kg in grain in the dairy all year round; it's a no-fuss system and it takes 45 minutes to milk 230 cows at the moment.

"The move to the current farm five years ago meant we needed to increase our herd size and we did this by leasing an extra 30 cows and not culling as heavily.

"It created a few challenges with reintroducing herd testing because we weren't in the position to cull cows, but we were keen to restart herd testing once our we reached our target herd size. Becoming an ImProving Herds Focus Farm was perfect timing."

Each ImProving Herds Focus Farm was given six free herd tests as well as support in interpreting the results.

Herd testing

Normal milking on the rotary involves two staff — with Mr Gallatly working at cups on and another staff member at cups off. On herd testing days, the herd test technician stands just along from Mr Gallatly, which means they are not in the way but can readily talk to Mr Gallatly if they have any questions.

The Gallatlys use freeze branding for individual cow identification. The brands are clearly identifiable when the cows are in the dairy and are used for the herd-test recording.

One of the drawbacks of herd testing is the time taken to set up dairy before milking and then dismantle after milking, according to Mr Gallatly.

"Setting up can be a bit of a pain because it's another job you have to do," he said.

"It takes about an hour to set everything up on the rotary before milking and then about 20 minutes to dismantle everything after the automatic wash cycle."

For more information, contact DataGene, phone (03) 9032 7191 or email <abv@datagene.com.au>.

Benefits of data

AT the end of the ImProving Herds project, six of seven herd test case study farmers valued the benefits of herd testing enough to invest the time and money to continue the service.

The one farmer who stopped herd testing did so as they were changing their herd to supply A2 milk. After several months, they went back to herd testing as they missed the level of data they had been getting.

The following partial budget highlights how small benefits can cover the entire year's cost of herd testing.

When one case study farmer saw a feed shortage looming, he used herd test records to identify 67 low-producing cows that were in calf and dried them off early.

"That brought the herd back down to about 350 (cows) which meant more grass for less mouths and actually increased the total milk yield, the total herd production increased quite dramatically actually," he said.

Additional gain	
Extra milk income from milking herd Concentrate not fed Saved labour	
Total	**$11,903**
Additional costs	
Six herd tests Lost milk income from cows dried off early	
Total	**$8060**
The net value of this single decision based on herd test data	**$3800**

Dairy Australia
Your Levy at Work

Emerging scientists return from US

Key points

- ✔ Emerging scientists given opportunity to travel to major science conference
- ✔ Hear about latest scientific advances in key areas

A TEAM of four up-and-coming dairy scientists has returned from the United States, where they learned about the latest scientific innovations occurring in dairy across the globe. Aged between 24 and 44, the group attended the 2018 American Dairy Science Association annual meeting, the world's largest dairy science conference, allowing them to build their knowledge base and bring back learnings to incorporate in their work in Australia.

Their learning experience was made possible by Dairy Australia's Dairy Science Travel Grants program, which gives Australians with a passion for dairy innovation an opportunity to network with world-leading scientists.

Dairy Australia program leader Peter Johnson said the program would continue to pay dividends for the Australian dairy industry.

"The American Dairy Science Association meeting showcased some of the most significant developments in dairy science, and it is vital these learnings are brought home to Australia through our program," Mr Johnson said.

This year's event showcased international research across a number of fields relevant to Australia, including the effect of heat stress in dry cows and advances in calf rearing.

"In conversations with other attendees, we were also able to share some of the great scientific research happening in Australian dairy — including the work being done at DairyBio, DairyFeedbase and DataGene," Mr Johnson said.

"These Dairy Australia and industry initiatives bring together large-scale integrated research using cutting-edge agricultural technologies, and to be able to talk about those innovations with some of the world's leading researchers was a terrific experience."

The Dairy Science Travel Grants are made available annually to applicants who are either early career scientists working in dairy or PhD students researching animal health, animal welfare or genetics and who have a background working in dairy.

This year's recipients were:

- Mikaela Baker, 24, from Beechport, South Australia.
- Tim Luke, 34, from Warragul, Victoria.
- Cassandra MacDonald, 29, from Bega, New South Wales.
- Daniel Espinosa, 44, from Trafalgar, Victoria.

To find out more, visit website <www.dairyaustralia.com.au/farm/people/scholarships-and-awards>.

For stories about two participants, see next page.

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Mikaela Baker was able to visit dairy farms in California and Tennessee.

A chance to bring new knowledge home

FRESH from participating in Dairy Australia's 2018 Dairy Science Travel Grants program, Mikaela Baker feels privileged to have been given a rare opportunity to broaden her knowledge and experience in dairy.

The 24-year-old from Beechport, South Australia, grew up in Mansfield, Victoria, and studied a Bachelor of Agricultural Science at Charles Sturt University.

Through the Travel Grants program, an annual grants program designed for up-and-comers in dairy, Ms Baker said she was able to design a learning experience overseas tailored to her own interests.

Taking advantage of the program's flexibility, she attended the American Dairy Science Association conference and spent time on farm in California and Tennessee.

"This meant I was given a real opportunity to ground some of the knowledge I had gained at the conference and ask questions about what I had learned," Ms Baker said.

She said she would not hesitate to recommend the program to others in dairy. "This is not an opportunity you will come across very often," she said.

"I never thought I would be able to go to America and explore their dairy system, but through Dairy Australia's program I was able to do just that very early on in my career."

After graduating from university, Ms Baker went to work as a farmhand before landing her dream job as a farm productivity consultant at Total Result Ag Consulting.

She feels lucky to have had an opportunity to take the time to build relationships with innovative dairy researchers at the top of their field so soon after finishing her studies.

"The highlights for me were identifying the most topical areas of research that the industry believes will have a significant impact on production and profitability," she said.

"The main areas that interested me included the impact of lameness in lactating cows, as well as a larger focus on dry cows, fortified milk powder concentrations, weaning methods and compost barn setup and management.

"All of this is knowledge I can bring back to Australia and apply to the work I am doing in my community," she said.

Passion for dairy research

Receiving one of this year's Dairy Science Travel Grants has reinforced PhD graduate Daniel Espinosa's passion for dairy research at home and abroad.

Mr Espinosa, 44, said the program has real benefits for those who have a keen interest in learning more about dairy science and studying the major advancements being made.

"It was exciting to have the opportunity to see firsthand what researchers from outside Australia and across the world are doing," he said.

After studying Veterinary Medicine at Colombia's La Salle University, Mr Espinosa completed his PhD in Agricultural Sciences at Latrobe University in 2016.

He has worked extensively with cows in areas including ruminant nutrition, animal health protocols and pasture management and has a particular interest in animal welfare.

"The conference covered a number of areas, but I was particularly interested in animal nutrition and pasture management, which were the focus of a number of presentations and posters," he said.

"One concept I found particularly fascinating at the conference was precision dairyfarming, which is research being conducted into collecting data at the farm level and using this to make more informed farm business decisions."

What he saw in the United States confirmed for Mr Espinosa that the dairy science research being conducted at home in Australia was among the best and most advanced in the world.

In Australia, for example, DairyBio is conducting significant research at Latrobe University to create improved pastures and improved herds for the Australian dairy industry through the latest approaches in bioscience.

DairyBio is a co-investment between Dairy Australia, the Victorian Government, the Gardiner Foundation and commercial companies in the dairy industry.

To read more about the ground-breaking research being conducted, visit website <www.dairybio.com.au>.

Pasture focus answer to volatility

Key points

- ✔ Milk price squeeze on farms
- ✔ Home-grown pasture represents big opportunity
- ✔ Key to realisation is measuring pasture growth

By **Ollie Roberts***

Ollie Roberts says the first step to improved farm profitability is measuring pasture.

AUSTRALIA and New Zealand are known as predominantly pasture-based dairy systems. This is due to our unique geographical position of growing perennial pastures such as ryegrass and kikuyu.

This position allows both country's dairy industries to supply animals with an abundance of home-grown and nutritious feed. Other large producers of the world are competing but with varying levers such as higher feed conversion efficiencies or lower labour costs.

Australia has a lot of room to increase its feed conversion of pasture to milk. This, I believe, is starting to sink in for us pasture-based farmers, which is perhaps being driven by milk prices.

To give some reasoning behind this statement. In 2001, the Australian Bureau of Agricultural Research, Economics and Sciences (ABARES) estimated that the inflation-adjusted retail price of one litre of milk in 1901 was $1.50, while the price of 500 grams of butter was $6.50. At that time, the ABARES research estimated the price of milk at $1.40 and the price of butter at $2. In comparison, the price of a common 'basket' of goods and services had increased 167 per cent.

No wonder dairyfarmers feel squeezed when every bit of effort in the past century to increase efficiency hasn't been rewarded with a higher margin, but simply that of staying afloat.

Lucky for us all, the game isn't over yet. We have healthy margins to capture yet. There is, as alluded to earlier, healthy margins to be made and quickly by simply focusing on pasture management. Yes, you heard right, that area that extension has pumped millions of dollars into in recent decades.

The old adage 'you can't manage what you don't measure' is loud and clear when it comes to pasture management. We measure everything else in our dairy farm businesses. Why do the majority of us not measure pasture?

This is a question that extension has tried answering and not one I can answer in this short piece.

A recent study by Beukes et al. (2018), a group of New Zealand researchers, modelled the difference between actively managing pasture with measurements as opposed to using visual judgement showed measurement could yield about $40,000 to $60,000 extra profit on 100 grazeable hectares.

This is great news for our dairy industry, as it is strikingly blunt in its message. In other words, farmers need to manage grazings with pasture measurements or face a significant lost opportunity.

'With more information, there is less uncertainty.'

Measuring pasture hasn't been easier since the advent of tools such as the C-Dax pasture meter and the Ellinbank pasture reader. Perhaps we're all scarred by the idea of walking our farms with plate meters and do not allow ourselves to trust the numbers presented by the tools available. Or maybe we have never fully understood how to utilise the numbers we collect.

Whatever it is, it doesn't matter. What matters is that we use any tool that gives a consistent measurement from week to week whether it is from a rising plate meter or satellite imagery. From here we can make valuable decisions that are directly linked to our profit margins and our operational risk.

With more information, there is less uncertainty. This is to say that by measuring pasture, we can manage one of our biggest risks and that is feedings cows. By developing a greater picture of our pasture management, we can foster resilience during lower milk prices and capitalise on higher milk prices.

Being a dairyfarmer myself and riding the shockwaves of the 2009 Global Financial Crisis after purchasing a neighbouring farm, I know the pain all to well. Even the recent clawback of prices in 2016 by the two largest milk processors came as a huge shock to our operation.

The underlying survival mechanism for us was and still is that we have control of our pasture management, which makes up our biggest cost of feed. This is core to the Pasture.io management platform, which was born on my family's dairy farm in northwest Tasmania.

My story is one of many and is growing in commonality. This is to say that many farmers are now focusing on pasture management, giving it time, letting the weekly task become the norm. All helping to reduce risk to take greater control of price volatility.

To show the on-farm impact of measuring pasture, one of my Pasture.io customers (Stuart Burr) says: "We've calculated we're making between $60,000 to $80,000 extra a year by getting it right."

**Ollie Roberts is the managing director of Pasture.io found at the website <https://pasture.io>.*

References

ABARES 2001, Prices in Australia at the Beginning and End of the 20th Century, viewed June 6, 2018, at <http://www.abs.gov.au/Ausstats/abs@.nsf/Previousproducts/1301.0FeatureArticle482001>.

Beukes, P, Mccarthy, S, Wims, C, Gregorini, P & Romera, A 2018, 'Regular estimates of herbage mass can improve profitability of pasture-based dairy systems', *Animal Production Science*.

Dairy industry loses icon

Key points

- ✔ Western Victorian dairyfarmer John Harlock dies
- ✔ Former chair ADHIS, Genetics Australia and Western Herd Improvement
- ✔ Founding member of Datagene

By **Everard Himmelreich**

THE Australian dairy industry lost one of its major contributors to the development of improved farm practices when John Harlock died in July. Tributes flooded in from national and local dairy industry leaders following Mr Harlock's death.

Mr Harlock, 71, from Warrnambool, Vic, was inducted into the Western Victorian Dairy Industry Honour Board only the week before his death for his outstanding contributions. He was unable to attend the ceremony because of illness.

Mr Harlock was a strong advocate for the adoption of improved dairyfarming practices and his contributions included time as chairman of the Australian Dairy Herd Improvement Scheme, Genetics Australia, Western Herd Improvement and as a founding member of Datagene.

His brother, Andrew, said Mr Harlock was often asked why he gave so much to agriculture and his reply was because he got so much from agriculture.

"He loved what he did," Andrew Harlock said. "He was also a good mentor to a number of people."

Dairy Australia managing director David Nation said Mr Harlock "was a really remarkable man who has been a big contributor to so many parts of the dairy industry as well as supporting so many people in their careers, including myself". "He has been a rock for so many," Mr Nation said.

"A great example of that is how he represented farmers as the herd improvement industry built a new strategy and created DataGene."

Anne Adams, who worked with Mr Harlock when they were involved in the local United Dairyfarmers of Victoria branch, said he understood the value of good science to agriculture.

"He was also a real people person," Mrs Adams said.

WestVic Dairy chair Simone Renyard said Mr Harlock and his wife Shirley were "icons" of the regional dairy industry.

"He (Mr Harlock) had milk running through his veins," Mrs Renyard said. "He was extremely passionate about our industry, about young people in farming and breeding.

"He knew what had to be achieved and he had a plan."

Mr Harlock is survived by his wife Shirley, is a father to Scott, Matthew and Blair (dec.) and a grandfather to Ella. D

The late John Harlock (at right) with his wife Shirley, who were described as "icons" of the Western Victorian dairy industry.

'John Harlock had milk running through his veins.'

Article courtesy of the Warrnambool Standard.

Navigating farming family landmines

Key points

- ✔ Families torn apart by the conflict between generations
- ✔ Rebuilding trust takes time
- ✔ Issues not going to go away without a conversation

By **Susanne Bransgrove***

Family decisions cannot and should not be made by one generation or one person alone.

FARMING families are at a higher risk than other businesses from losing the very land asset that they have been fighting so hard to preserve during difficult times, due to landmines that they themselves planted over many years. These landmines are the product of unspoken conversations, unmet expectations and incorrect assumptions.

During of May and June of this year, I was asked by the Queensland Dairyfarmers' Organisation to talk about the importance of communication when it comes to succession planning for farming families.

My talk was part of two workshops, including presentations on finance, retirement and other succession-related advice, and I was the last person to present.

Listening to the earlier presenters, I couldn't help but notice how perfectly placed my presentation was, as every person highlighted the importance of the decisions that needed to be made by a farming family to ensure that succession runs smoothly and reflects what is in the best interest of each member of the family.

As with QDO's recollection of the day, many attendees shared that they were good at talking about operational farming decisions, including decisions that needed to be made about feed, how to deal with staff or other practical day-to-day farm management topics. However, when it comes to conversations about the future of the family and the farm, they openly admitted they struggled to start probably the most important conversation to ensure that the family farm will be managed sustainably for generations to come.

The feedback shared by these dairyfarming families is not dissimilar to the experience I have had with beef farmers in Central Queensland or families in NSW. I have listened to families who were torn apart by the conflict between generations because they did not know how to overcome the chasm that has been created by the silence on this topic.

How many times have I heard from parents who feel the responsibility to carry on the family legacy and keep valuable land assets and the family homestead safe? Or from their children, who are worried that they have been investing their life into the family farm without any guarantee that their expectations to own this asset will be met one day?

'I have listened to families who were torn apart by the conflict between generations ...'

There is no quick fix to help farming families who find themselves in this situation. No one-day workshop can help families to articulate, reflect and decide on how to best build a foundation for the entire family to move forward from.

Rebuilding communication, which includes important decisions for each individual family member as well as the entire family, and creating a foundation of renewed trust takes time, positive intent and a long-term commitment to make decisions that have the best interest of every generation at heart, including the generations to come.

Succession planning decisions regarding future ownership, how this should be structured, how the overall estate should be split to be fair to various family members or how to deal with tax consequences are certainly important but should not be the starting point. These decisions are outcomes of a good communication foundation that allows an equal voice to all, even those family members who are not actively involved in the farming operation.

Anybody in the family who has grown up on the family property will have an emotional attachment to the land and will be impacted by the decisions made. Not allowing their perspective to be heard might lead to a decision that could cause an irreparable family rift.

What the outcome of any finalised succession plan looks like might be different for each farming family — however, the need to be inclusive and open with communication that has an impact on so many family members is the same for every farming family. Family decisions cannot and should not be made by one generation or one person alone.

Matthew Trace's words in closing his QDO summary of the workshops say it perfectly: "The best advice I can give any farmer, regardless of whether they are in dairy or another type of farming where there is a very valuable land asset that's integral to the success of the business, is to start the conversation now. These issues are not going to go away without a conversation."

Don't let the lack of communication be the landmine that sees your farming family legacy destroyed and leaves only pain and frustration, rather than joint family assets, for future generations. D

Susanne Bransgrove is the director of Liquid Gold Consultants and has a long history working with farming families across regional Australia. To find out more, visit her website <www.liquidgoldconsultants.com.au>.

Robotics could provide milking edge

Key points

- ✔ New project to support farmers investing in automatic milking systems
- ✔ Will develop tools to help assess impact of technology
- ✔ Modern communication platform to be developed

THE Australian dairy industry is committed to supporting investment and successful operation of Automatic Milking Systems (AMS). A three-year project known as 'Milking Edge' is a joint initiative of the NSW Department of Primary Industries, Dairy Australia and DeLaval.

Built on a decade of successful research and development led by Future Dairy, as well as the experience of almost 50 commercial farms around Australia who have decided to invest in the technology, the project will enable better decision-making around the consideration, purchase and implementation of AMS.

The project leader is NSW DPI development officer for dairy Dr Nicolas Lyons. Dr Lyons has an extensive knowledge around farming systems, technology and robotics. Upon finishing his PhD with FutureDairy at the University of Sydney, he has spent the past four years actively engaging and communicating with farmers, service providers and industry around technology adoption and optimisation of robotic dairies.

The project will draw on the experience of almost 50 commercial farms around Australia who have decided to invest in the technology.

The project will develop tools, resources and networks for farmers and service providers, specifically interested in AMS. This will include the creation of topic-based modules for farmers and advisers to understand how implementing AMS can impact different on-farm management practices and routines.

A dynamic interactive tool will allow farmers, in conversation with their advisers, to better understand the impact of adopting AMS from a management, performance and financial point of view. These will also be part of a tailored training program to help build wider industry capacity.

'It is great to see industry supporting a national collaborative project aiming to accelerate the uptake and successful operation of technology...'

The success of the project will also rely on the delivery of an innovative communication and engagement strategy. Along with the traditional field days and discussion groups, the project will implement a modern communication platform, using social media and an online community of practice (eXtensionAUS that has already been successfully implemented in the cropping industry).

"It is great to see industry supporting a national collaborative project aiming to accelerate the uptake and successful operation of technology as an enabler to build a productive and sustainable dairy industry into the future," Dr Lyons said.

Dr Lyon will be working with NSW DPI project officer dairy — robotic milking Jessica Maloney and a postgraduate student based at University of Sydney Juan Gargiulo, who is supported by NSW DPI and the Dairy Research Foundation. D

Contact: Dr Nicolas Lyons, email <nicolas.lyons@dpi.nsw.gov.au> or mobile 0401 650 073. Follow the NSW DPI Dairy Facebook Page to receive the latest news and updates about precision dairyfarming.

Plea for farm safety follows accident

Key points

- ✔ Child injured when helping with farm work
- ✔ Takes an enormous toll on family
- ✔ Plea for farmers to be aware of potential for accidents

By Carlene Dowie

A QUEENSLAND dairyfarmer has made an impassioned plea for farmers to take more care with children in their workplaces after his son was seriously injured in a farm accident.

Jim Watts, who milks 80 cows year round at Queen Mary Falls, near Killarney, Qld, said the accident had been devastating for his family.

And although he accepts that children will always have a role to play in helping on the farm and learning about what it involved, he pleads with farmers to always have eyes on their children when they are in the workplace.

Mr Watts's nine-year-old son Mitchell was injured in April in an accident in the feed storage area on the farm.

Mitchell was standing on a platform on a small storage shed for minerals while Mr Watts backed the feed mixer up to it, accidentally bumping the shed with the tractor.

Mitchell was dangling one of his feet outside the shed, which became jammed between the mixer and the side of the shed when the tractor bumped it. He broke five bones in his foot and ripped the muscle from the bone in the accident. He required 24 stitches and a skin graft and has undergone numerous surgeries since to fix his injured foot.

The accident has turned the family's lives upside down.

Mr Watts's wife Sharon was forced to stop working at her job off-farm for months to look after Mitchell and take him numerous times to hospital in Brisbane. Mitchell missed many months of school and still faces regular hospital visits and physiotherapy so he can walk properly again.

Mr Watts said the accident happened so quickly, and although he thought he knew where Mitchell was standing, he could not see him.

The accident had made him more conscious of safety. "You don't think about it until something happens," he said.

He now insists that his three other sons — aged 15, 12 and 7 — are careful on the farm.

His oldest son sometimes helps with the tractor work and Mr Watts has made a rule that anyone driving a tractor is not to move it if the younger children are helping but are not in sight.

He also insists that if the younger children are helping, they work alongside him, but if they want to play, they return home and not play in the workplace.

The accident has also taken a toll on Mr Watts emotionally.

"It got me down a fair bit — when you think you are the cause of what happened," he said. "I have ongoing nightmares about the accident."

Mr Watts said the accident had also taken a financial toll on the family.

It had cost them at least $30,000 in lost wages, the cost of driving to and from Brisbane and lost production, as Mr Watts had been unable to devote the time he normally did to farm tasks.

That type of accident hit a small farm that did not have employees particularly hard, he said.

Mitchell Watt was seriously injured in a farm accident earlier this year.

Mr Watts said he decided to speak out about the accident because he did not want to see anyone else go through a similar incident. "It only takes a split second for something to happen," he said. D

Nurse turned farmer safety plea

Key points

- ✔ Every farm needs dedicated safety plan
- ✔ Use Dairy Australia tools to develop safety program
- ✔ Vehicle accidents on farm highlighted importance

FORMER nurse and current south-east Queensland dairyfarmer Sara Bucher has seen first-hand how accidents destroy lives. Now she's determined to make sure every farmer and farm worker goes home safely at the end of the day.

Mrs Bucher is supporting a new Dairy Australia safety program that gives farmers the tools they need to create a safe work environment. The industry is committed to leading the way in workplace safety and is determined to eliminate deaths and serious injuries.

Mrs Bucher learned the hard way that every farm needs a dedicated farm safety plan after she and husband Markus went into dairyfarming four years ago near Kenilworth on the Sunshine Coast.

Several significant accidents involving farm vehicles made the couple realise the importance of preventing accidents, particularly on high-risk quad bikes.

"Farmers are the safest operators in many ways but we needed a formal systematic approach that made our expectations crystal clear," Mrs Bucher said. "By doing that we've improved quality, farmer confidence and staff retention, and we've stopped the major incidents repeating themselves."

Mrs Bucher said injury prevention needed to be the cornerstone of every farm.

Legendairy farmers the Buchers were already well connected to the dairy industry when they took over the farm in 2014. Mr Bucher grew up on a farm in Switzerland and trained as a cheese maker. Fourteen years ago, they opened cheese and yoghurt factory Maleny Cheese.

Markus and Sara Bucher have applied work safety principles from their experience in business to their farm operation.

They run the farm with a team of seven staff and a school-based trainee. Mrs Bucher, who manages people and culture on the farm, said safety was a vital part of its success. "My background as a nurse and our success with the other business highlighted the importance of managing risk through proper farm safety systems," she said.

They accessed every available course and opportunity for assistance to develop a farm safety system. "It opened up a whole understanding of how important it is to employ professionally-minded people and to support them in doing their job safely," Mrs Bucher said. "If farmers need a quad bike for a job they need it to be well maintained and they need to be trained and understand their safety." Wearing a helmet on all mobile vehicles became a major symbol of the farm's culture change.

The Buchers continue to work closely with staff to hear any concerns and to keep safety front-of-mind, including monthly meetings and using WhatsApp to spread safety messages.

Mrs Bucher recommends all farms use Dairy Australia's new program.

"We've taken on the tools and are developing it to our program," she said. "It's a great gift that this program is available at no cost so it makes sense to tailor it to your own farm.

"Farmers sacrifice so much of themselves. It's their passion and determination that feeds our country, why should they risk their lives doing it?" D

Farmers can access the Farm Safety Starter Kit at <https://www.dairyaustralia.com.au/farm/people/farm-safety>.

Farmer sets good safety example

Key points

- ✔ Farm Safety Manual workshop highlights risks
- ✔ Farmers need to take responsibility for themselves, their family and their staff
- ✔ Risks of ignoring safety plans too great

HELPING to develop a new dairy farm safety program has inspired Rachael Napier to think about her own farm safety.

It seems obvious now, but after attending a Farm Safety Manual workshop Ms Napier was quick to make an important change on the farm she shares with partner Craig Gallpen at Blighty in southern NSW.

"We had three quad bikes but no one wore helmets," Ms Napier said.

"I came home from the Farm Safety Manual workshop and that really bothered me. I had to start somewhere and that was the biggest hazard we hadn't addressed.

"We now have 100 per cent compliance from the staff."

Ms Napier and Mr Gallpen milk about 200 cows on 150 hectares between Finley and Deniliquin.

The farmers have an excellent safety record and aim to keep it that way, hoping to set a good example for all farmers.

Ms Napier is the region's farmer representative on Dairy Australia's planning group to develop the new farm safety program that gives farmers the tools they need to create a safe work environment. The industry is committed to leading the way in workplace safety and is determined to eliminate deaths and serious injuries.

Rachael Napier says every farm should have a dedicated farm safety plan.

Every dairy farm should have a dedicated farm safety plan and Ms Napier says it's a matter of common sense and following basic principles.

She said farmers needed to take responsibility for on-farm safety for themselves, their family and their staff.

"You need a plan with logical things like doing risk assessments on all potential hazards and being clear with staff about issues such as chemical hazards, safety in the dairy and using heavy machinery," she said.

Despite the obvious benefits, Ms Napier said there's still some reluctance to embrace safety plans.

She said she'd heard all the excuses, but the risk of ignoring safety plans was too great.

"Some farmers say it's going to take time, it won't happen to me, I only employ one person," she said.

"People don't want to engage because they fear they may have to change and it might be costly, but thankfully a lot of people are starting and finding it's easy.

"We haven't had a terrible accident on this farm but we know some who have, and it has been life-changing."

Ms Napier's interest in farm safety snowballed when she was employing backpackers.

"Not everyone understands English 100 per cent and you have to be quite clear about things," she said. "A lot of farmers have the same issue."

Ms Napier encourages all farmers to develop a Farm Safety Plan, especially with templates being readily available and easy to use.

"They're things we do anyway; it doesn't take long and we've got to think about it and make a record of it," she said.

She is actively involved in local farm discussion groups and has previously hosted a two-day workshop on quad bike safety.

"Every day is a different day on the farm; we just have to make sure they're all safe," Ms Napier said. D

Farmers can access the Farm Safety Starter Kit at <www.dairyaustralia.com.au/farm/people/farm-safety>.

How genetics contributes to business

Key points

- ✔ Higher genetic merit cows contribute more profit
- ✔ Sexed semen creates excess heifers
- ✔ Stock sales provide 25 per cent of income

By **Sam McCluggage***

Genetics makes a significant contribution to Sam and Christine McCluggage's farm business.

WE farm at Allansford in Western Victoria and milk 700 Holstein cows. Our home farm, Ballyvernstown, is 319 hectares. We also have two run-off blocks — Clonleigh at 210ha and Rosyth Park at 100ha — that are used to grow out young stock.

I've been dairyfarming for 20 years and started with 180 Holstein, Jersey and crossbred cows on 100ha. We've slowly grown our herd for 15 years and kept the number stable for the past five years. We've chosen to have a closed herd so we rely on breeding our own replacements. Keeping a closed herd has been an important biosecurity tool and also means we have full histories on all our cows.

We run our milkers as one herd and have a seasonal calving pattern because we are totally dependent on rainfall. Last season, our herd averaged 8100 litres/cow and 590 kilograms of milk solids.

Our herd has used only Holstein genetics for the past 18 years. We are big users of artificial insemination and sexed semen. We have used 100 per cent AI on the cows for the past five years. I don't like having bulls in the milking herd for occupational health and safety reasons and as the herd has grown we had to run more bulls.

BPI means business

Our ImProving Herds results have clearly shown that high genetic cows — based on Balanced Performance Index (BPI) — contribute more to the farm business than the cows with the lower BPI figures in our herd.

The top 25 per cent of our herd, based on BPI, are producing an extra 377 litres of milk, 31kg protein and 46kg fat than the 25 per cent of cows with the lowest BPI figures.

The top 25 per cent of cows produce $356 a year more milk income/cow after feed and herd costs compared with the cows in the bottom 25 per cent. They also last three months longer in the herd, which is equivalent to a third of a lactation more.

'We always believed using genetic indexes and general herd improvement tools were profitable...'

When you consider those differences across a herd of 700 cows, it adds up to a significant benefit in having cows with high BPI and selecting high BPI bulls to breed replacements. We need to be breeding and keeping heifers with higher BPI figures.

Our breeding program

Our key criterion when selecting bulls is production. We want bulls to be positive for fat and protein percentages and have good daughter fertility. I look at the all the key traits, but we particularly want good udders and type.

We use DataGene's Good Bulls app to get a short list of the bulls I will consider for using over the cows and the heifers. Once I have a list of suitable bulls, I will talk to both Tim Sedgely and Graeme Heaver as these semen reps have been working with our herd for a number of years.

Our cow breeding program uses 600 doses of sexed semen and 800 doses of conventional semen with a synchronisation program using prostaglandin (PG). We put our heifers through a Fixed Time AI (FTAI) program on the run-off blocks, but we don't do them all at the same time; we run them through in small mobs.

Most of the fresh sexed semen is used in our heifer AI program. We get the best conception rate with fresh sexed semen, but the number of bulls available for sexed semen can limit bull choices and the selection pressure for traits such as BPI.

We weigh and monitor our heifers regularly once they get to about 200kg and we grow them out on the run-off blocks in groups of 60-75. We have found the heifers do better in smaller groups and are easier to monitor. We keep the heifers in these mobs for synchronising and joining because one mob is a comfortable day's work between milkings and we want to make sure we minimise stress.

With a FTAI program, the heifers will go through the yards four to five times so I want them to be relaxed. By handling the heifers in batches, we end up joining 250-300 heifers in the different

Table 1: McCluggage farm stats (April 2018)

Herd size	700 cows in a closed herd
Breed	Holstein
Farm size	Home block Ballyvernstown 319 ha plus two run-off blocks: Clonleigh 210ha and Rosyth Park 100ha
Calving pattern	Seasonal with calving in March, April and May
Dairy	40-unit swingover
Staff	5 full-time, 2 part-time and 1 casual labour units
Feeding system	Average grain feeding at 2.4 tonnes/cow/year to supplement dryland perennial ryegrass and clover pastures. Cut own silage and hay and buy in hay when needed

mobs over four separate days.

We then use Jersey bulls as mop-up bulls for the heifers. Sexed semen is expensive so if I use it in the main herd, I:

- Only use sexed semen for the first two rounds of joining, i.e. the cow has to have calved in the first month of calving.
- Only use sexed semen on younger cows, i.e. second and third calvers.
- Only use on cows that have no history of calving issues before or after calving.
- Only use it in cows that will be in the herd for the next 12 months.

We Metricheck all cows soon after calving to make sure they have cleaned up. We don't want to waste sexed semen on a cow if it has a reduced chance of conception. We don't have the option of carrying a cow over because we are a seasonal herd.

Last season we joined 280 replacement heifers. We sold 60 and calved down 220; 140 calves were heifers. In the mature cows, we calved down 460 cows and had 310 heifer calves.

All up, we had 450 heifer calves from 680 calvings. Of 450 heifer calves born last year, we will sell the late calves that are sired by conventional semen (in the cows) or by mop-up bulls (in the heifers), which leaves about 300 heifer calves that we genomically tested as part of ImProving Herds. We have recently been accepted as a Ginfo project herd and will be testing every heifer every year from now on. We use genomic testing as a tool to help make decisions earlier on which heifers to cull, which can be invaluable if we have a dry season or there are strong export prices if we have surplus heifers.

This season we started calving on March 2, and by April 18, we had calved down 510 cows for a total of 375 heifer calves. That included 160 maiden heifers joined to sexed semen (140 heifer calves, 10 bull calves and 10 losses). Another 220 calved after mid-April.

Genomic testing gives us a prediction on a number of key traits even before the heifer milks. If we have a surplus, we can sort out who to sell and who to keep at a younger age, which has helped pay to run our heifer blocks and cover the cost of genomic testing.

Genomic testing has also proven to have real value in verifying the parentage of calves. We can all make mistakes when cows are joined in big numbers and then there is always a degree of mismothering when cows calve down in big numbers. Genomic testing gets rid of these errors.

Our herd size can vary from 630 to 730 cows depending on the season. We drop herd numbers back in a dry season, which then gives us an opportunity to put a lot more selection pressure on the herd. Having a large number of heifer calves also means we can ramp up cow numbers quickly if we need to.

Ideally, we want 220-230 heifers going into the herd each year to keep the age of the herd down and genetic progress heading in the right direction.

Financial gains with sexed semen

Having 150 surplus heifer calves to sell has made a big difference to our income streams in the business with stock sales now making up 25 per cent of the farm income, while milk accounts for 75 per cent. It's been a big change — we traditionally relied on 90 per cent of our income from milk sales and 10 per cent from livestock sales based on cull cows and low-value bobby calves.

Making stock sales a growing part of the business has also been a valuable tool to manage income risk, which has been particularly important given the recent falls in the milk price.

We have reared our bull calves for the past six years to sell to local farmers for use as commercial bulls. There is also scope for us to identify some genetically superior bulls as potential mop-up bulls for use in our heifer joinings, which, in turn, could generate more heifer calves.

Increasing our income from the sale of surplus heifers and improving the value of our bobby calves has helped pay to run our heifer blocks and cover the cost of genomic testing. D

**Sam McCluggage was one of the 34 ImProving Herds Focus Farmers.*

For more information, contact DataGene, phone (03) 9032 7191 or email <abv@datagene.com.au>

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 of 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 per cent for the BPI in a herd outperform cows in the bottom 25 per cent for production, fertility, longevity and contributed on average an extra $300 to farm margins.
- 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.

Funded by the Gardiner Dairy Foundation, the project was a collaboration of Dairy Australia, the Victorian Government, DataGene, Holstein Australia and the National Herd Improvement Association of Australia (NHIA).

Dairy Australia
Your Levy at Work

Educating Chinese about Aussie dairy

Key points

- ✔ 16 participants learn about Australian dairy industry
- ✔ Reinforces message about clean and safe products
- ✔ Helps build growing market

DAIRY Australia's scholarship program for Greater China is continuing to educate participants from Australia's largest dairy export destination on the value of Australian dairy as a supplier of clean and safe dairy products.

The program this year engaged 16 participants, who had the opportunity to learn firsthand about the Australian dairy industry.

The aim of the program, which has been running for more than 20 years, is to foster relationships between the Chinese and Australian industries, facilitating international trade on behalf of the Australian dairy industry.

The cheesemaking session took place at a pilot factory of CSIRO Werribee.

Dairy Australia's international market manager, Sarah Xu, said participants were industry professionals from China working in roles such as marketing, research development, ▶

manufacturing and food safety. "Participants gain a vital understanding and new appreciation of what makes Aussie dairy the best in the world, including Australia's quality assurance and food safety systems, and they leave the country with a solid understanding of the entire dairy supply chain," Ms Xu said.

Participants visited three farms in Victoria in July, as well as processor facilities Chobani, Burra Foods, Saputo, Freedom Foods, Bega and That's Amore.

They also had the opportunity to meet with representatives from Lion, Fonterra Australia and Bulla.

This firsthand knowledge gives the scholarship participants credibility when they talk about Australian dairy back in their home marketplace.

Australian Consulate-General in Shanghai business development manager Kevin Wang, who was one of the participants, said the program was a valuable experience.

"Australian dairy is premium — that is the key message I'll bring back to my work for the Australian Consulate-General in Shanghai," he said.

'In 2017-18, Australia exported $1.19 billion of dairy produce to China.'

"When I'm back at work, I'll be getting the message out about the variety of Australian dairy products so we can keep highlighting this to the Chinese market."

Mengniu Dairy Cheese's research and development supervisor, Qingquan Yan, said he regarded the program as both professionally and personally rewarding.

"I have a passion for cheese and I want to build the cheese market in China. Dairy Australia's program was a good opportunity for me to step up and work further toward this goal," he said.

For Food Fashion chief chef Roy Yu, the program was an opportunity to learn more to build his customer base.

"I am a chef and before this program, I was not that familiar with cheesemaking processes and methods," he said.

"It could be very difficult to explain to my customers. Through Dairy Australia's scholarship program, I learned a lot about different aspects of cheese to communicate to my customers."

In 2017-18, Australia exported $1.19 billion of dairy produce to China. This equates to 35 per cent of total Australian export values for the year.

Ms Xu said the China dairy scholarships had created a powerful alumni network of past participants who had contributed to Australian dairy export success.

"The value of the reciprocal insights gained in the markets where Australia is selling dairy and the strengthening of established business links cannot be underestimated," she said.

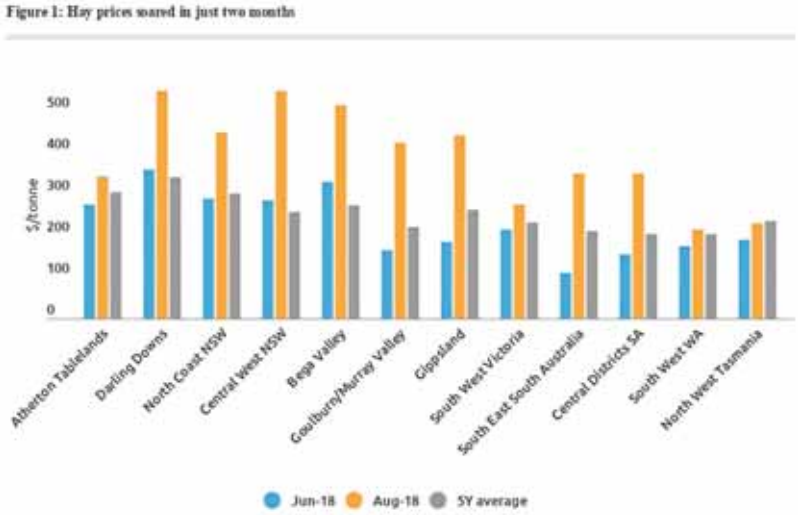
Dairy Australia also co-ordinates scholarships groups annually from Japan and Southeast Asia. D

High input costs create strain

By **Sofia Omstedt**
Industry analyst
Dairy Australia

Key points

- ✔ Farm costs uncertain across Australia
- ✔ European drought could hurt dairy production there
- ✔ Below-average rainfall predicted for spring



WITH dairy commodity markets relatively stable and farm inputs markets across the country under sustained pressure, farm costs are the most uncertain element in the profitability equation. As spring approaches, the short-term challenge in covering feed requirements is moving to the longer-term seasonal balancing act of growing, buying and using feed through spring and into next winter.

Rainfall for the year to date has been well below average in most of southern and eastern Australia and across the country in July. The Murray Darling Basin has experienced the driest January-June in 32 years and all of New South Wales is declared in drought. Some rainfall across the south in August provided some relief, however, soil moisture is below average across most of mainland Australia. The dry weather continues to make access to feed difficult and expensive, putting serious strain on balance sheets as the season unfolds.

Following an exceptionally dry autumn, demand for hay increased. Since the start of winter, continued dry conditions have resulted in a surge in demand and hay prices have consistently been ticking upwards all across the country. Inventories of hay from previous seasons are all but sold out and fodder has been freighted increasingly large distances to satisfy demand. Trucks have been a common sight on all main highways, delivering feed to regions in need.

The price impact has been dramatic. In southeast South Australia hay prices have increased 218 per cent in the past two months, in the Goulburn/Murray Valley 158 per cent, Gippsland 139 per cent and central South Australia 126 per cent. Compared with the five-year average, prices are elevated in all regions except for northwest Tasmania.

As winter continues, pasture growth is slow, hay demand is forecast to remain strong and supply remains difficult to source. This may add further pressure to already constrained cash balances this season.

At the same time as hay demand surged, grain prices continued to edge upwards. Dry conditions in major exporting countries have resulted in downward revisions for this year's wheat crop, which in turn led to global price growth. The United States Department of Agriculture revised its global production forecast downwards in the middle of August, partially due to dry conditions in Europe, Black Sea region and production concerns in the US.

> ***'In Australia many growers are holding onto grain due to the lack of rainfall.'***

Global wheat consumption has increased and wheat stocks are set to decrease for the first time in six years. Trade tension between the US and China remains a pressing issue for grain trade and is making many nervous.

Meanwhile, in Australia many growers are holding onto grain due to the lack of rainfall. The current weather outlook remains grim; and if realised prices are expected to end the year higher.

After six months of limited rain and high feed prices, culling rates have increased while cull cow prices fell below the five-year average. In the first six months of 2018, culling rates increased 2.1 per cent compared with last year. Although it is difficult to determine exactly how many dairy cows have been culled this year, data from the National Livestock Reporting Service indicate that in July close to 7000 cows passed through saleyards, an increase of 14 per cent compared with last year. Despite the slight increase in culling rates, overall slaughter was down 19 per cent in 2017/18 on last year's figure.

Australia isn't the only country struggling with dry conditions. In Europe, a hot and dry summer continues to cause headaches for dairyfarmers. The remarkably cold winter delayed pasture growth and resulted in cows being housed for longer. Fodder shortages developed in Ireland and caused significant financial stress. Following the cold winter, an exceptionally hot and dry summer emerged.

The hot weather has affected the fodder and grain outlook and Europe looks set to produce the smallest grain harvest for six years. Fodder shortages in several key producing countries could restrict milk production if current conditions continue, offering some hope of higher milk price here.

The Bureau of Meteorology predicts rainfall will be well below average across most of the country for the next three months.

Continued dry conditions are likely to push fodder and grain prices even higher and risk offsetting any gains from stronger global dairy markets. D

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110 OT

CODE	NAME	RRP	BPI	A2
14HO07328	MOOKIE	$26	385	A2
250HO01118	PEPPER	$25	375	A2
7HO14174	LATROBE	$28	348	
14HO07768	NOAH	$25	331	
7HO12724	WIGGINS	$24	329	A2
7HO12876	POWER TOOL-P	$24	302	

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Luke, Amy and John Gardiner, Avonlea Holsteins, with the senior supreme champion Cairnsdale Sid Anastasia.

Avonlea takes top winter fair award

SENIOR CHAMPIONS

- ✔ Supreme Senior Champion: Cairnsdale Sid Anastasia, JH & CJ Gardiner
- ✔ Reserve Senior Champion: Mitch Aftershock Irene, Mitch Holsteins
- ✔ Red Senior Champion: Willow Crossing Contender Sallie Red, RJ's Holsteins
- ✔ Reserve Red Senior champion: Bluechip EV Sweet Apple Imp ET Red, C Hallyburton, B Salmon & J&J Jennings
- ✔ Supreme Senior Udder: Cairnsdale Sid Anastasia
- ✔ Premier Breeder: Bluechip Genetics
- ✔ Premier Exhibitor: JH & CJ Gardiner

By **Carlene Dowie**

JOHN Gardiner, from Avonlea Holsteins, Cardinia, Victoria, knows what it takes to achieve at major dairy shows.

He proved that again at the Victorian Winter Fair at Bendigo, Vic, in July taking the supreme senior champion ribbon, as well as the premier exhibitor award for the second year running.

He bought the supreme senior champion, rising five-year-old Cairnsdale Sid Anastasia, from renowned NSW breeders Stewart and Hayley Menzies in August, after the couple decided to concentrate solely on their Jersey herd.

Mr Gardiner had spotted the cow the previous year at the Nowra Show when it was reserve intermediate.

When he saw it in August, "she was very stale, towards the end of her lactation but because I already had in my mind what I knew the cow could be... I bought her".

"She's had a tremendous udder on her, I liked the long stretchiness about her and the open rib and the hard top on the cow," he said. "And she had good legs and feet, and I just thought she was a cow that was really going to develop in time."

'We really admire this four-year-old cow's udder, she's got an extremely squarely attached udder.'

Judge Justin Burdette and associate judge Henry Bevan awarded the cow, which came from the youngest class in the senior show, the supreme award and supreme udder award.

"We really admire this four-year-old cow's udder, she's got an extremely squarely attached udder," Mr Burdette said.

"We like the length of the fore udder and a cow that when you get behind her she's got that beautiful rear udder veination."

The reserve, Mitch Aftershock Irene, exhibited by Mitch Holsteins, Bamawm, Vic, which was intermediate champion at International Dairy Week in 2017, also came from the four-year-old class.

Mr Burdette said the judges really loved the pair of four-year-old cows.

"These cows are beautifully balanced," he said. "They've got width, capacity, dairy strength, beautiful feet and legs and tremendous mammary systems.

"They have the capacity to give a lot of milk, and they look like they do it easy."

Mr Gardiner said Cairnsdale Sid Anastasia, which calved in February to Doorman, was producing about 45 litres of milk per day

It started in an embryo flushing program immediately after the show.

The cow was one of a team of nine cows and three heifers Avonlea brought to the show.

Mr Gardiner said it was a huge thrill to win the premier exhibitor award. "It just makes it worthwhile with what you do at home working towards it because it just doesn't happen overnight," he said.

"These cows have been pulled out for at least two months ... from the herd to get them right.

"A lot of credit must go to the guys at home Josh Norton and Kane Hildred ... and the crew at the show. Without them, it wouldn't have happened."

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- ✔ Reserve Intermediate Champion: Mario Park Atwood Midas, MD & JE Polson
- ✔ Red Intermediate Champion: Budgeree AA Jodie ET Red, JH & CJ Gardiner
- ✔ Supreme Intermediate Udder: Fairvale Bradnick Josie 118, Bluechip Genetics & Fairvale Holsteins

By **Carlene Dowie**

Associate judge Henry Bevan, judge Justin Burdette and part-owner Dean Malcolm with the intermediate champion Fairvale Bradnick Josie 118.

DEAN Malcolm, the owner of the Victorian Winter Fair supreme intermediate champion Fairvale Bradnick Josie 118, says it is "one of the best-uddered cows I've seen in this country".

And Mr Malcolm should know. With his wife Dianna, he established Bluechip Genetics, which took home a swag of ribbons and premier breeder and exhibitor titles at shows throughout Australia, before the stud was dispersed in 2016.

Mr Malcolm saw the intermediate champion last year at the first stage dispersal of Fairvale Holsteins.

He and Fairvale had owned the cow's dam, EX 94 Baxter Josie 64, which had enjoyed success at International Dairy Week. Mr Malcolm bought Fairvale Bradnick Josie 118, in conjunction with Fairvale, for $12,500, one of five he picked up at the sale.

But he knew it was special. Although he had had only dry heifers on his Zeerust, Vic, property since the stud dispersal, he decided to milk Fairvale Bradnick Josie 118, rather than send it to another dairy, where he could not oversee its preparation.

"She is a project cow, I've been milking her at home for the last three months by myself — just one cow — but I knew how good she could have been if she did everything right, so it's pretty exciting," he said.

"I just love her. Her frame is phenomenal and her udder is unbelievable."

Victorian Winter Fair judge Justin Burdette, Pennsylvania, United States, and associate judge Henry Bevan, Queensland, agreed.

Mr Burdette said the cow had excellent size and scale, a "beautiful dairy frame and a tremendous udder".

"She's a cow that when you get behind her, she has height and width and fullness right to the top of her rear udder," he said.

"She has that beautiful turn to her rear udder. You certainly admire the lovely quality she carries through to the fore udder."

The winter fair, where Bluechip Genetics also took out the premier breeder award, mark the end of the stud as the Malcolms have put their property on the market and plan to move to Mrs Malcolm's homeland New Zealand.

The couple is already involved in the industry in NZ and will undertake several ventures there. D

Top cow on multiple fronts

MARIO Park Sid Alicia Ex-92-2, owned by Oxley Vale, NSW breeder, Murray Polson, has taken out the award for the top Balanced Performance Index Holstein cow at the 2018 Victorian Winter Fair. The cow also came third in the six-year-old class, proving it is a top performer on multiple fronts.

Of all the females entered in the Winter Fair, Sid Alicia had the top BPI calculated by DataGene in the April 2018 genetic evaluations.

The Balanced Performance Index (BPI) Highest Female Award was presented by DataGene in collaboration with Holstein Australia and the Winter Fair Committee.

With a BPI of 334, Sid Alicia is well above the Holstein breed average, putting it in the top one per cent of Australian herd recorded Holstein cows based on genetic merit for profit. It is also among the best in the country for health and type with a Health Weighted Index of 231 and Type Weighted Index of 301.

Dr Matt Shaffer from DataGene said Sid Alicia was the sort of cows many Australian dairyfarmers aspired to breed.

"Most dairyfarmers want to breed cows that will have long, productive lives in their herd," Dr Shaffer said.

"To do this they need a combination of traits for profitable production and strong conformation and the genes to produce the next generation of great cows.

"We congratulate the Polson family on their success in breeding outstanding cows and presenting them at the Winter Fair."

Jane Polson said that while the family was passionate about breeding, genetics was increasingly important to their business.

"The pleasure we get from breeding helps us get through dark times and the cash flow from the sale of embryos, bulls and heifers has helped us get the loans to buy the property of Murray's parents," she said.

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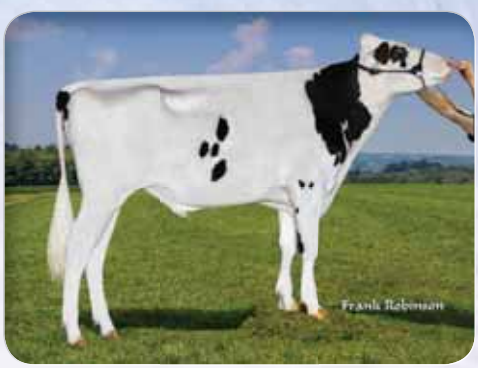

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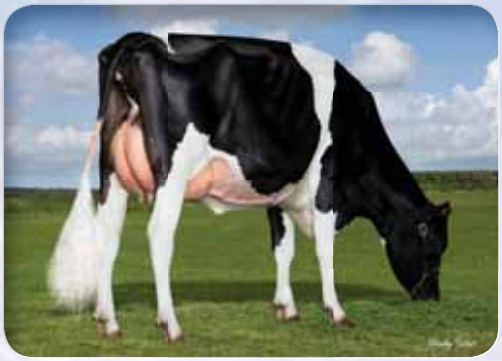

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Commitment to breeding rewards

JUNIOR CHAMPIONS

- ✔ Supreme Junior Champion: Mario Park Solomon Midas, MD & JE Polson
- ✔ Reserve Junior Champion: Paringa Solomon Applepie, Pam Malcolm
- ✔ Red Junior Champion: Eclipse BC Red August Red, Eclipse Genetics & Bluechip Genetics
- ✔ Reserve Red Junior Champion: Sun Vale Awesome Jodie Red, B & J Gavenlock
- ✔ Youth Junior Champion: Hawova Solomon Tamie, Shaw, Clarke & Sieben
- ✔ Reserve Youth Junior Champion: Wyena Bmac Caboose, Cally O'Shannassy
- ✔ Senior Handlers, Over 16 years: Bridget Liebelt
- ✔ Intermediate Handlers, 12-15 years: Rebekah Love
- ✔ Junior Handlers, Under 12 years: Sienna Ross

By **Carlene Dowie**

Jane Polson, junior champion heifer Mario Park Solomon Midas, leader Cameron Yarnold and Murray Polson at the 2018 Victorian Winter Fair.

A COMMITMENT to genetics and dairy cattle breeding has rewarded the owners of the 2018 Victorian Winter Fair junior champion.

Jane and Murray Polson's yearling heifer Mario Park Solomon Midas was named the supreme junior champion at the fair at Bendigo, Vic, in July.

The winning heifer, which is owned by the couple's eight-year-old son Lachy, is from Mario Park Atwood Midas, which was also shown at Bendigo.

Atwood Midas's dam is Diamond Sid Midas, a daughter of the famous Coral Hill Roy Midas, and was bought by the Polsons for $7500 at the Globull Fusions sale at Berry, NSW, in 2013.

"I was worried we paid too much for the heifer — she was the second top-priced at the sale," Mrs Polson said.

"She's a prolific breeder, a beautiful cow to work with, goes in calf every year, great to milk, and we've just recently flushed her."

Mrs Polson said the stud side of their farm business had been a key factor that had allowed the couple to buy their Oxley Island, NSW, farm from Murray's parents.

The cashflow from the sale of embryos, bulls and heifers from a cow the couple imported had been important in allowing them to get the loans to buy the multi-generational property.

The breeding side of the business also brings other rewards.

"We are very passionate about breeding and genes," Mrs Polson said.

"It is something that pays bills but it is also a real love for us — it gets us through dark times when milk price drops. So its great to see rewards for the hard work."

'It is something that pays bills but it is also a real love for us — it gets us through dark times when milk price drops.'

It's been a tough few years for the Polsons. Three consecutive dry seasons has meant they have depleted all their fodder stocks and have been forced to buy in hay from Victoria and NSW and cottonseed from Queensland for their 320-head herd.

And the milk price for their farm, which supplies Saputo's Sydney factory, has not been great.

Mrs Polson said they needed a better milk price. "I'd like to see confidence back in the industry, just from a sustainability point of view," she said.

"We've paid a lot for the farm, we've got three children ... we want to be profitable to keep the younger generation in our business."

The Polsons breed for type and longevity — good feet anad legs were essential on their farm, where cows sometimes had to walk 3-4 kilometres a day to pastures.

Mrs Polson said cows also needed good udders.

"Murray is just a natural cow man, he just loves it and has since he was a boy, and our son is the same," she said.

Judge Justin Burdette, from the United States, said the champion was a lovely balanced heifer.

"A no-holds heifer, a heifer that's got a beautiful head and neck, she's got a tremendous mid section," he said. "She's a heifer that's extremely comfortable on her feet and legs, as you watch her move around the ring today."

The reserve was Paringa Solomon Applepie, exhibited by Pam Malcolm, Invergorden, Vic. D

Calving Ease

Sire Calving Ease (SCE) is the percentage of a sire's calves born during difficult calvings.

Calving Ease leads to Healthier Cows

Easier calving lessens the probabilities for:

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- RP (Retained Placenta)
- Metritis

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- Cows delivering female calves suffer fewer birthing complications than those delivering males.
- Cows that birthed two consecutive females in their first two lactations produce 981 lbs more milk than those calving two males or a male and a female. (Hinde, K et al., 2014)

Healthier Calves from Easier Calving:

- Decreases rates of stillbirth
- Lowers risks of respiratory disease
- Speeds up weight and growth
- Leads to earlier productive life; conceive younger at 1st service as heifers
- Heifers born without assistance will become higher producing animals

Replacement of stillborn calves is a substantial cost to the dairy industry at more than $125.3 million per year.

Source 2001 (ncbi.nlm.nih.gov/pubmed/11233037)

Name	A2A2	BPI	TPI	Milk	SCS	PL	DPR	TYPE	UDC	SCE
Delta-Gamma		234	2656	1290	2.70	6.5	2.9	1.89	2.40	4.1
Samite		227	2620	687	2.81	4.2	2.8	3.11	2.99	4.9
Lancaster	A2A2		2488	412	2.80	7.0	6.6	0.76	1.33	5.0
Bill	A2A2	266	2469	172	2.46	5.1	1.1	1.59	1.24	5.1
Goodwhone		221	2260	-456	2.80	3.1	1.0	1.52	2.34	5.1
Milo	A2A2	196	1899	-478	2.83	1.2	0.7	0.02	0.62	5.1
Revival-Red		218	2511	181	2.68	5.6	3.0	1.25	1.56	5.3
High Noon		241	2770	1238	2.83	7.2	4.5	1.74	1.67	5.4
Ledoux	A2A2	187	2590	769	2.91	5.0	4.1	2.20	2.51	5.4
Neal			2742	1259	2.58	7.4	3.5	1.59	2.02	5.7
Dyson		225	2597	1405	2.83	6.3	1.3	1.34	1.81	5.7
Hoorah			2638	872	2.85	5.2	4.2	2.59	2.92	5.8
Aladdin Red		230	2435	483	2.55	5.0	3.2	1.23	2.52	5.9
Dynamo		229	2849	2131	2.76	5.9	1.7	1.87	2.11	6.0
Hondo	A2A2	155	2556	1496	2.87	3.0	2.6	1.90	1.94	6.0
Kings Reserve	A2A2		2619	532	2.89	5.3	2.4	2.27	2.33	6.0

THE Good Bulls GUIDE

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AXB Auzred XB
CRV CRV Australia
ECL Eclipse Genetics
GAC Genetics Australia
GGI GGI Australia
IRG Ireland Genetics
LIC Livestock Improvement
SEM Semex Australia
SHG Shamrock Genetics
SXT ST Genetics Australia
TLG Total Livestock Genetics
VIK Viking Genetics
WWS World Wide Sires
TBA To BE Advised

Good Bulls Guide for Holstein — Balanced Performance Index (BPI) — Australian Proven

			Indices				Production Traits				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		Feed Saved		Source
Rank	Bull ID	Bull Name	BPI $	BPI Rel	HWI	TWI	ASI	ASI Rel	No. Dtrs	No. Herds	Sur-vival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Feed Saved	Rel	
1	29HO16888	SEAGULL-BAY MVP-ET	340	89	261	353	202	98	525	97	110	81	110	112	92	103	104	105	90	108	87	116	91	-109	45	ABS
2	MAEBULL	CALISTER MAEBULL	335	81	301	334	134	94	114	31	110	67	104	103	76	101	100	103	74	112	75	193	79	66	39	GAC
3	TRICKIN	JET STAR MANOMAN TRICKIN	305	80	235	280	169	90	53	32	108	74	104	100	80	106	101	100	74	114	80	126	85	-57	39	GAC
4	29HO16714	DE-SU 11236 BALISTO-ET	292	85	227	307	176	94	81	22	107	79	105	106	87	101	102	104	78	104	87	164	90	-47	43	ABS
5	GEEMCEE	RENGAW MANOMAN HUMMER-ET	290	78	206	223	188	92	59	27	104	65	98	100	76	100	102	102	69	110	72	154	74	-110	39	GAC
6	29HO16667	DE-SU 11228 TOPSY-ET	289	86	201	296	229	96	163	32	105	79	105	105	86	101	99	102	83	102	87	150	89	-98	42	ABS
7	ROYALMAN	HINDLEE GOLDWYN OMANROYAL 121003	273	90	231	262	117	99	904	132	106	78	104	105	95	101	102	102	93	111	87	94	92	-27	46	GAC
8	CARLITION	KAARMONA CARLITION	270	80	257	237	59	93	88	31	110	66	102	100	75	102	102	102	73	116	75	164	80	29	39	ABS
9	0200HO07450	AMIGHETTI NUMERO UNO	269	89	237	274	76	98	238	71	110	84	105	109	93	103	102	104	81	114	91	160	95	-72	45	SEM
10	JANEK	RENGAW JARDIN JANEK	262	82	228	245	129	95	145	43	108	69	104	104	75	101	103	103	76	106	78	154	85	51	38	ABS
11	COGENTTWIST	COGENT TWIST	257	91	193	242	136	99	597	96	108	88	106	100	93	101	104	103	92	107	93	139	96	-114	45	SXT
12	011HO11138	COOMBOONA SUPERSTITION REGAL	256	87	201	283	122	98	315	68	108	80	105	105	86	102	104	104	79	107	87	182	90	-116	43	ALT
13	JAKOVICH	RENGAW CROWN JAKOVICH	255	76	208	238	139	93	82	22	107	59	103	102	60	103	101	103	67	106	70	133	74	8	32	AGR
14	CHRISTMAS	EMU BANKS CHRISTMAS-ET	251	90	154	237	223	99	1439	227	102	82	106	102	96	101	101	102	96	102	89	122	93	-140	46	GAC
15	WRANGLER	RENGAW MANOMAN WRANGLER-ET	251	78	184	231	159	91	60	34	107	65	105	103	76	100	102	102	68	106	73	139	74	-84	39	GAC
16	FULLTHROTTLE	CURRAJUGLE FULL THROTTLE-IMP-ET	251	82	188	221	138	94	110	46	106	69	103	103	78	102	101	102	76	111	76	150	83	-119	40	ABS
17	0200HO06480	VAL-BISSON DOORMAN	248	88	192	282	134	97	190	59	109	83	108	111	93	94	102	105	78	106	89	195	93	-106	45	SEM
18	7H9420	FUSTEAD GOLDWYN GUTHRIE	248	92	236	304	82	99	1943	256	110	92	109	113	97	101	102	104	95	104	95	141	96	40	46	GAC
19	29HO12772	BALLYCAIRN OMAN PELLO	247	86	194	190	139	95	132	42	106	82	97	95	84	101	100	102	84	108	88	160	92	-30	42	ABS
20	OTTMAR	DILEE BUDDHA OLLIE 751	246	78	209	184	177	92	73	32	98	65	94	98	78	100	102	102	71	102	65	147	70	161	40	GAC
21	HOMANIFOLD	MAINSTREAM MANIFOLD	246	91	178	230	170	99	733	64	107	92	102	103	95	99	99	103	89	109	95	128	97	-104	46	SEM
22	29HO16909	LARCREST COMMANDER-ET	243	87	178	287	134	97	239	62	108	80	108	110	90	105	105	105	84	105	86	148	89	-190	44	ABS
23	7H11351	SEAGULL-BAY SUPERSIRE	243	90	191	206	125	98	199	44	108	85	100	101	94	99	105	105	87	104	90	162	95	-86	45	GAC
24	7H11163	TIGER-LILLY LADD P-RED	240	84	220	279	62	93	53	24	109	80	108	108	85	101	101	100	74	110	88	168	90	-29	42	GAC
25	VIKBENTO	VH BENTO	235	87	172	218	173	98	362	59	106	80	102	100	82	101	102	103	85	108	87	130	90	-15	41	VIK
26	NADAL	JET STAR MANOMAN NADARL-ET	234	81	160	194	175	94	84	34	103	68	103	103	79	102	99	100	77	105	76	134	79	-97	40	GAC
27	29HO17573	SEAGULL-BAY SILVER-ET	229	82	176	268	119	92	81	28	110	76	108	111	84	105	102	104	73	103	82	125	88	-132	41	ABS
28	DELSANTO	MANNA FARM DEL SANTO	228	93	178	253	169	99	3502	377	102	97	106	110	98	101	102	102	98	98	98	114	99	25	47	GAC
29	0200HO06267	GEN-I-BEQ LAVAMAN	227	87	190	198	127	96	164	43	104	83	103	108	87	102	97	102	81	110	90	133	95	33	43	SEM
30	7H10176	MR REGELCREEK SHOT AL	226	88	214	217	65	98	335	56	109	84	102	101	87	101	102	103	85	107	91	161	94	63	43	GAC
31	WARRADYN	WARRAMONT PALERMO DYNASTY	218	80	184	205	122	93	80	29	108	67	102	100	80	102	102	102	77	101	72	139	77	55	40	GAC
32	CRGALAXY	DE-SU FREDDIE GALAXY - ET	214	88	183	217	98	97	279	61	107	80	102	109	88	100	102	102	86	105	88	169	91	-40	43	AGR
33	MRSASS	JET STAR MRSAM SASS-ET	211	85	174	163	136	96	117	49	104	73	101	101	85	101	99	101	83	105	80	142	86	40	42	GAC
34	SHOLTZ	ST. CLAIR SHOLTZ-TWIN	210	88	127	172	172	98	450	96	104	78	101	99	89	98	104	104	90	103	86	150	91	-174	44	ABS
35	GVLIQUIDGOLD	GENERVATIONS LIQUID GOLD	209	85	144	179	146	95	140	39	103	77	102	101	85	101	97	101	77	105	84	168	88	-84	42	WWS
36	JESSOP	CLEVELAND PALERMO JESSOP	209	78	169	194	130	91	61	31	105	65	100	100	75	102	102	102	73	108	71	117	75	24	38	GAC
37	BUDDHA	BUSHLEA PERFECTOR BOLD-ET	209	93	168	178	122	99	4483	472	104	97	101	101	99	100	102	102	99	105	98	145	99	-5	47	GAC
38	CHOCOLATE	MIDWAY PARK TENNYSON CHOCOLATE	209	80	190	212	105	94	89	32	106	68	103	106	71	102	103	103	70	109	77	92	82	84	37	ABS

continued next page

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from previous page

39	CHALLENGER	RENGAW MANOMAN CHALLENGER-ET		209	78	187	201	68	91	54	26	108	64	105	106	73	101	103	103	67	108	72	154	75	-35	38	GAC
40	7H9264	LIRR DREW DEMPSEY		209	91	194	247	55	99	547	116	109	89	108	110	96	101	101	102	86	105	93	165	95	-11	46	GAC
41	ARMAND	HILL VALLEY O ARMAND		207	79	132	155	176	92	64	25	104	65	98	98	76	103	100	101	73	99	71	135	75	-98	39	GAC
42	JOPPA	KANDES M40-ET		207	76	137	144	160	90	68	25	102	64	96	100	76	101	102	102	67	102	67	118	70	-92	39	GAC
43	GOLDCREST	TOPSPEED GOLDYN-ET		207	84	175	173	146	96	217	61	102	72	96	100	83	103	101	103	78	97	76	133	83	119	42	GAC
44	JIFFEY	RENGAW SHOTTLE JIFFEY		207	85	196	205	33	97	256	62	110	73	99	101	75	100	102	102	82	106	84	177	89	-8	38	AGR
45	0200HO05592	CRACKHOLM FEVER		206	92	204	238	11	99	1761	248	111	95	106	105	98	102	104	105	94	107	96	163	98	-15	47	SEM
46	7H8081	ENSENADA TABOO PLANET ET		205	93	180	212	67	99	891	172	109	98	104	109	99	100	102	103	96	102	99	132	99	-78	47	GAC
47	JAGGS	ADLEJAMA JETFINN JAGGA-ET		204	77	192	192	78	90	53	29	107	64	100	106	75	102	103	104	72	106	67	120	69	83	39	GAC
48	PICOLA	ADLEJAMA DELSANTO PICOLA		203	91	153	173	138	99	1218	161	103	84	100	103	97	101	102	103	96	99	90	131	94	-21	46	GAC
49	PICARDUS	PINE-TREE-PICARDUS-ET		203	85	159	198	105	95	141	48	106	77	102	104	86	102	102	103	80	104	85	118	87	-90	42	ABS
50	MENCHOV	CARENDA PALERMO 270		203	80	163	210	86	94	119	34	108	66	104	102	79	102	103	104	78	108	71	150	74	-95	40	GAC

Good Bulls Guide for Holstein — Balanced Performance Index (BPI) — Genomic ABV(g)s

			Indices				Production				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		Feed Saved		Source
Rank	Bull ID	Bull Name	BPI $	BPI Rel	HWI	TWI	ASI	ASI Rel	No. Dtrs	No. Herds	Sur-vival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Feed Saved	Rel	
1	29HO18698	ABS JERONIMO-P-ET	407	58	346	358	200	72	0	0	110	42	102	102	43	102	102	102	54	120	41	161	55	56	25	ABS
2	GGIHOTSPOT	WIL HOTSPOT P	372	60	313	330	184	74	0	0	111	44	102	103	46	102	102	103	56	113	43	155	57	17	26	GAC
3	CHAIRMAN	ST GEN DIRECTOR CHAIRMAN-ET	364	60	296	316	200	75	0	0	109	44	100	102	45	102	102	102	56	115	43	149	57	7	26	AGR
4	011HO12161	PEAK ALTAAROLDIS-ET	356	58	287	338	203	73	0	0	110	42	103	103	43	101	103	104	54	108	37	146	55	-2	25	ALT
5	011HO12163	PEAK ALTAANCHOR-ET	354	59	300	325	167	74	0	0	112	44	101	103	45	101	101	102	55	112	43	136	56	10	26	ALT
6	0200HO10777	WESTCOAST PERSEUS	349	64	284	300	189	77	0	0	108	50	101	104	52	100	102	103	62	116	49	173	64	-3	29	SEM
7	7HO14174	OCD ALLTIME LATROBE-ET	348	59	288	300	181	74	0	0	109	43	100	104	45	100	101	102	55	115	43	162	57	-2	26	WWS
8	29HO18794	BOMAZ ACCOLADE-ET	346	61	268	310	203	75	0	0	107	46	103	101	48	100	102	102	58	116	44	154	58	-38	27	ABS
9	WOOKIE	WILARA ROOKIE JO	344	62	240	313	269	77	0	0	106	48	100	100	50	102	101	102	59	102	46	145	61	-48	28	GAC
10	KADE	WILARA HERO KADE-ET	344	61	267	317	181	75	0	0	110	47	104	103	50	101	103	103	58	115	46	152	59	-104	28	GAC

Good Bulls Guide for Red Breeds — Balanced Performance Index (BPI) — Australian Proven

			Indices				Production				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		Feed Saved		Source
Rank	Bull ID	Bull Name	BPI $	BPI Rel	HWI	TWI	ASI	ASI Rel	No. Dtrs	No. Herds	Sur-vival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Feed Saved	Rel	
1	ARBSCAREBEAR	JOHVILLE PARK SCAREBEAR	274	75	228	221	171	92	73	29	101	58	97	101	67	103	102	105	74	105	58	122	71	75	33	GAC
2	ARBABBOTT	BEAULANDS ABBOTT	272	76	189	230	274	93	80	26	95	56	95	96	65	100	100	103	72	97	58	70	72	95	32	GAC
3	VFOSKE	V FOSKE	268	91	201	259	162	99	1542	128	108	90	104	105	91	101	102	104	96	105	96	111	97	-109	42	VIK
4	ARBCYGNET	BEAULANDS SWANNIES-ET	226	73	189	192	131	92	72	29	101	52	101	105	61	103	102	103	63	104	56	113	66	13	30	GAC
5	ARBBONJOVI	BOSGOWAN BON JOVI	182	91	138	164	112	99	2166	247	103	93	100	104	89	102	100	102	98	105	97	82	98	-42	42	GAC
6	ARBDIMAX	LOUVIC D IMAX	175	79	96	88	177	94	127	41	99	62	94	90	63	91	101	98	78	103	73	110	82	-71	31	GAC
7	VIKFLAME	VR FLAME	173	80	151	152	83	92	73	16	104	68	100	103	68	97	98	98	79	105	76	132	88	20	34	VIK
8	VIKBALFA	VR BALFA	170	80	92	193	179	93	85	16	102	66	105	108	64	103	102	104	80	99	79	114	88	-151	33	VIK
9	ARBDAIRYWEEK	BEAULANDS DAIRY WEEK	164	73	141	148	74	91	79	29	102	50	102	106	53	100	100	102	74	101	60	106	69	-6	26	GAC

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AMC	Agrimilk Consulting
AXB	Auzred XB
CRV	CRV Australia
ECL	Eclipse Genetics
GAC	Genetics Australia
GGI	GGI Australia
IRG	Ireland Genetics
LIC	Livestock Improvement
SEM	Semex Australia
SHG	Shamrock Genetics
SXT	ST Genetics Australia
TLG	Total Livestock Genetics
VIK	Viking Genetics
WWS	World Wide Sires
TBA	To Be Advised

Good Bulls Guide for Jersey — Balanced Performance Index (BPI) — Australian Proven

			Indices				Production				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		Feed Saved		Source
Rank	Bull ID	Bull Name	BPI $	BPI Rel	HWI	TWI	ASI	ASI Rel	No. Dtrs	No. Herds	Sur-vival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Feed Saved	Rel	
1	0200JE00183	SUNSET CANYON DAVID	351	84	286	405	178	95	130	35	114	77	112	114	85	104	104	106	67	101	86	110	90	-98	40	SEM
2	7J1038	ALLLYNNS LOUIE VALENTINO	266	92	223	347	92	99	1216	142	113	90	115	116	97	103	106	107	95	100	94	142	98	-166	45	GAC
3	CSCMELVARA	WALLACEDALE MELVARA	241	84	218	271	93	96	190	61	109	72	108	114	80	101	104	104	80	104	80	131	87	-4	38	ABS
4	7J1163	ALLLYNNS VALENTINO IRWIN	225	87	207	308	55	97	274	47	112	80	112	113	90	103	106	105	86	98	87	157	91	-60	42	GAC
5	CSCAMBITION	RIVERSIDE AMBITION	222	83	212	186	89	96	116	45	104	71	100	103	77	102	97	99	80	104	78	98	84	131	37	ABS
6	7J1151	BUTTERCREST GALVANIZE	206	84	160	278	90	95	139	33	110	77	110	110	84	102	105	105	77	96	85	129	85	-142	39	GAC
7	CRVMARVARIE	WALLACEDALE MARVARIE ET	202	80	158	221	115	93	95	34	104	67	111	106	71	101	105	102	78	101	76	105	80	-62	34	CRV
8	AUSSIEGOLD	BROADLIN AUSSIEGOLD P-ET	197	87	135	242	103	98	351	85	107	77	110	107	85	101	103	104	91	101	84	133	91	-202	40	GAC
9	011JE1118	ALLLYNNS VALENTINO MARVEL	193	86	182	245	56	97	191	45	109	78	108	108	81	102	105	104	83	100	86	140	91	22	38	ALT
10	BOSMURMUR	OKURA LIKA MURMUR S3J	190	91	160	176	86	99	732	98	102	92	98	97	90	99	100	100	93	103	95	148	96	16	42	CRV
11	BARTPOWER	DARAWAY FLOWERPOWER SATIRA	182	91	190	234	26	99	1041	244	106	93	110	114	91	101	100	102	96	102	96	135	96	49	42	GAC
12	LEVIGENES	BROADLIN LEVI	180	79	137	205	120	97	184	43	105	57	105	106	64	101	105	105	76	103	67	91	77	-35	30	GAC
13	VOYAGEDALE	WALLACEDALE MELS VOYAGE	178	78	139	155	142	93	97	40	101	60	104	103	63	101	101	101	78	103	69	127	77	44	31	GAC
14	TAHBILK	BEULAH TAHBILK	177	82	112	220	137	96	129	38	105	66	109	109	76	105	106	106	79	98	72	87	80	-144	37	GAC
15	29JE3762	ALLLYNNS LEGAL VOLCANO-ET	176	82	145	222	78	92	70	28	107	74	107	104	81	103	103	104	71	99	84	142	84	-55	38	ABS
16	CAIRNBONE	CAIRNBRAE TBONE ENSIGN	171	86	155	232	45	98	335	81	105	73	111	114	84	99	101	101	87	102	78	103	86	-51	39	ALT
17	BOSGREGSTAR	WHITE STAR GREG	168	88	115	108	129	98	448	96	100	82	97	95	84	101	102	102	91	101	89	108	94	-29	40	CRV
18	CSCEDISON	CAIRNBRAE TBONE EDISON	161	82	77	190	153	95	147	51	102	70	105	104	75	102	102	101	81	96	77	88	83	-208	36	ABS

Good Bulls Guide for Jersey — Balanced Performance Index (BPI) — Genomic ABV(g)s

			Indices				Production				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		Feed Saved		Source
Rank	Bull ID	Bull Name	BPI $	BPI Rel	HWI	TWI	ASI	ASI Rel	No. Dtrs	No. Herds	Sur-vival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Feed Saved	Rel	
1	PUBLICAN	WHITE STAR PATRICK	325	52	246	349	220	67	0	0	107	38	107	109	38	103	105	105	49	102	36	98	48	-40	19	AGR
2	NZGCRESMISTY	CRESCENT EXCELL MISTY ET	318	60	210	315	215	74	0	0	106	42	100	98	61	100	98	98	44	101	41	156	75	-171	31	LIC
3	NZGLARSON	EVLEEN INTEGRITY LARSON	305	66	174	239	282	78	11	1	104	50	96	91	60	102	101	99	48	99	54	133	91	-179	32	LIC
4	DOBSON	WHITE STAR DOORMAN	298	54	236	317	179	68	0	0	109	39	106	107	42	102	103	104	47	102	41	112	53	-31	20	GAC
5	DOUGGAN	WHITE STAR DOUGLAS	296	56	230	290	178	68	0	0	108	41	102	104	45	101	102	103	50	104	46	132	54	-42	21	GAC
6	CRVWALKER	PUKEROA GUN WALKER JG	289	54	209	259	215	71	0	0	106	37	99	99	32	101	100	101	38	100	38	127	65	-26	16	CRV
7	CRVTRIPLSTAR	BRAEDENE PAS TRIPLESTAR	275	63	180	263	238	75	0	0	101	47	100	100	59	105	101	101	49	101	47	105	76	-64	30	CRV
8	NZGBELFLOYD	BELLS OI FLOYD S3J	272	63	165	257	212	75	0	0	106	44	100	96	63	100	101	99	44	98	49	134	86	-202	32	LIC
9	SANDBANK	ARALUEN PARK HATIVIAN SANDBANK	272	58	198	286	185	72	0	0	107	44	107	106	45	101	101	103	56	102	42	89	54	-78	22	GAC
10	MANLY	BROADLIN 179 GLENFERRIE-ET	264	52	213	274	145	65	0	0	108	39	105	107	39	103	103	105	50	102	37	101	48	-35	19	GAC
11	0200JE00230	BUTTERCREST GAMEDAY	264	70	214	299	128	78	2	1	111	64	109	108	71	102	102	104	51	101	72	108	79	-86	34	SEM
12	NZGINTEGRITY	OKURA LT INTEGRITY	262	71	173	249	217	80	28	3	105	56	102	98	65	96	100	99	53	100	78	114	92	-73	34	LIC
13	ALGERNON	BROADLIN HILUX	258	55	195	262	178	71	0	0	106	39	104	108	41	102	101	104	53	102	37	88	50	-40	20	GAC
14	0200JE07756	GOLDEN GDK VIVALDI	255	67	191	283	162	77	5	2	106	57	105	103	58	101	101	99	44	101	74	125	80	-46	28	SEM
15	CSCBANDANNA	ARALUEN PARK BANDANNA	254	60	186	270	165	75	1	1	108	47	107	107	48	102	101	104	57	103	45	88	57	-89	23	ABS
16	NZGWILLANDMO	WILLAND LT DYNAMO	254	66	195	271	149	78	0	0	106	50	102	102	59	103	102	100	48	99	54	120	91	-49	31	LIC
17	RIOT	ARALUEN PARK BANDIT	252	60	185	266	161	74	0	0	108	47	105	106	48	102	103	104	58	100	46	86	57	-84	23	GAC
18	VALENBLAST	WHITE STAR VALENBLAST	252	58	209	294	120	72	0	0	108	46	109	114	44	103	105	105	55	104	50	132	54	-71	21	GAC
19	VALIN	KINGS VIEW VALIN 4697	248	58	207	315	104	71	0	0	110	48	112	113	46	103	104	106	56	100	52	126	55	-88	22	GAC
20	NZGOKURAINDX	OKURA GOLDIE INDEX	245	63	177	193	201	76	1	1	104	48	97	93	60	100	99	100	47	100	48	130	77	38	31	LIC

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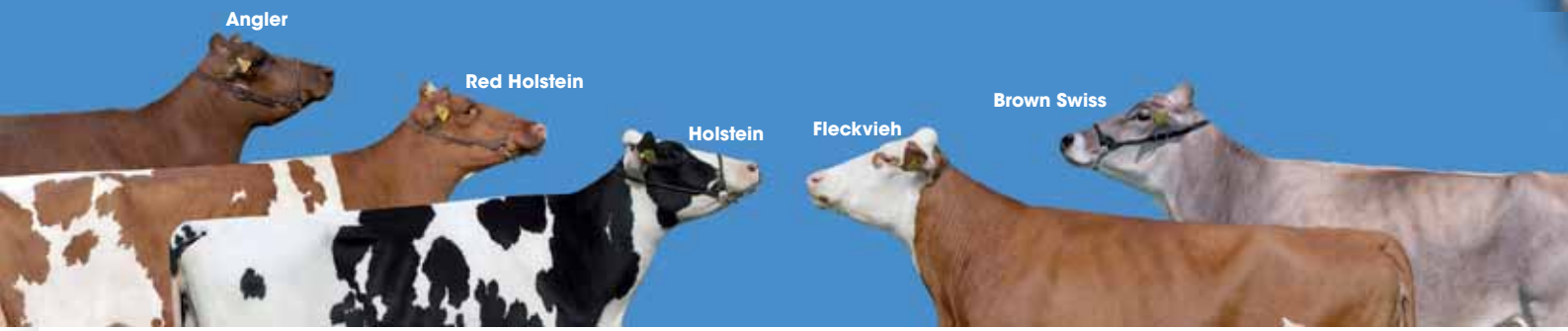

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High BPI cows contribute more

Key points

- ✔ High BPI cows contribute $300 more each year
- ✔ Good Bulls logo shows bull meet minimum criteria
- ✔ Lists readily available online and in app

WITH DataGene's latest release of Australian Breeding Values (ABVs) in August, dairyfarmers have one more good reason — worth about $300 per cow — to focus on Balanced Performance Index (BPI) when selecting bulls.

The BPI is a blend of ABVs for the traits that influence a dairy cow's contribution to the farm business: production, fertility, functional type, survival, cell count, workability and feed saved.

In a major study, the ImProving Herds project used actual data from commercial dairy herds to determine the contribution of genetics to dairy farm businesses. The results showed that on average, the top 25 per cent of cows in a herd (based on BPI) produce a margin over feed and herd costs of $300 per cow more than the bottom 25 per cent.

Michelle Axford from DataGene said the findings held across different dairying regions and feeding systems. "The message is clear: the daughters of high BPI bulls perform better under Australian conditions," she said.

"A simple and effective way to put this into practice is to breed replacements from bulls that carry the Good Bulls logo and meet your breeding priorities. You can be confident that using Good Bulls will improve the Balanced Performance Index of your herd."

'The message is clear: the daughters of high BPI bulls perform better under Australian conditions.'

Bulls that carry the Good Bulls logo meet DataGene's minimum criteria for BPI and reliability and are available for purchase.

"There is a wide range of Good Bulls, giving farmers plenty of choice for Good Bulls that meet their priorities for specific traits, budget and company preferences," she said.

The August ABV release includes 1039 Holstein Good Bulls, 134 Jersey Good Bulls and a selection of Red Breed and Guernsey Good Bulls.

Lists of Good Bulls are available in the Good Bulls App or the Good Bulls Guide, which is available in pdf or excel format from DataGene's website, and on pages 44-48 of this magazine.

The August issue of the Good Bulls Guide contains the latest Australian Breeding Values, published by DataGene.

Visit <www.datagene.com.au> for the latest ABV results and more information about results from the ImProving Herds project.

Alta Genetics bulls continue to perform

WITH daughter-proven favourites improving greatly on Balanced Performance Index and new genomic superstars emerging, Alta Genetics had an extremely strong Australian Breeding Values run in August.

Its high genomic bulls from the April run, AltaAnchor, AltaZone and AltaGilmore made slight gains for BPI to 354, 340 and 331 respectively, while newcomers AltaAroldis 356 and AltaStafford 330 blasted to the top, filling number four (highest type bull in the top five) and equal 22nd.

In all Alta has eight of the top 25 including the number four, number five (number two and three positive for milk) and number 12 bulls.

Daughter-proven performers continue to strengthen with the addition of Australian daughters. Full brothers AltaRoble and AltaRabo made great gains to 252 and 242 BPI improving for all production traits. AltaRoble is the number one mammary bull in the Good Bulls Guide at 116, with AltaRabo no slouch at 108 type and 112 mammary. AltaRoble is a known female fertility improver and can fast track improved pregnancy rates. AltaRabo is A2A2 and is considered a genuine CE bull. Daughters of both bulls are impressing their owners with their style, will to milk and quiet nature.

AltaHotrod continues to improve each proof round. Now up to 240 BPI, AltaHotrod has improved to 24 kilograms protein, 25kg fat and 804 litres milk. Rated at 110 type and 110 mammary, AltaHotrod is also highly rated for all dairy frame traits and noticeably lowers rumps. A high female fertility improver, AltaHotrod is a perfect choice to add dairy frames, production, fertility and udders to the herd.

AltaSpring adds global daughters and has cemented itself as true transmitter of progeny under any condition. With early Australian daughters now milking, reports of impressive udders, moderate, open dairy frames and high production are starting to be the norm. With an increasing BPI of 238, AltaSpring improved for all production traits and now rates at 26kg protein, 30kg fat and over 850 litres milk, good for an Australian Selection Index of 148. Add in 106 type, 110 mammary and 109 daughter fertility and it is easy to see why AltaSpring is performing everywhere.

AltaLeaf, the outcross top 10 in the United States Total Performance Index, also made great improvements on ABV with 30 Australian daughters now milking. Offering 34kg protein, 29Kg fat with 1364 litres, AltaLeaf has an impressive ASI of 147. Increases in somatic cell score, survival and daughter fertility saw an increase in BPI of 52 to 218. Type and mammary virtually remained unchanged at 105 and 103.

Article supplied by Alta Genetics Australia, website <http://australia.altagenetics.com>.

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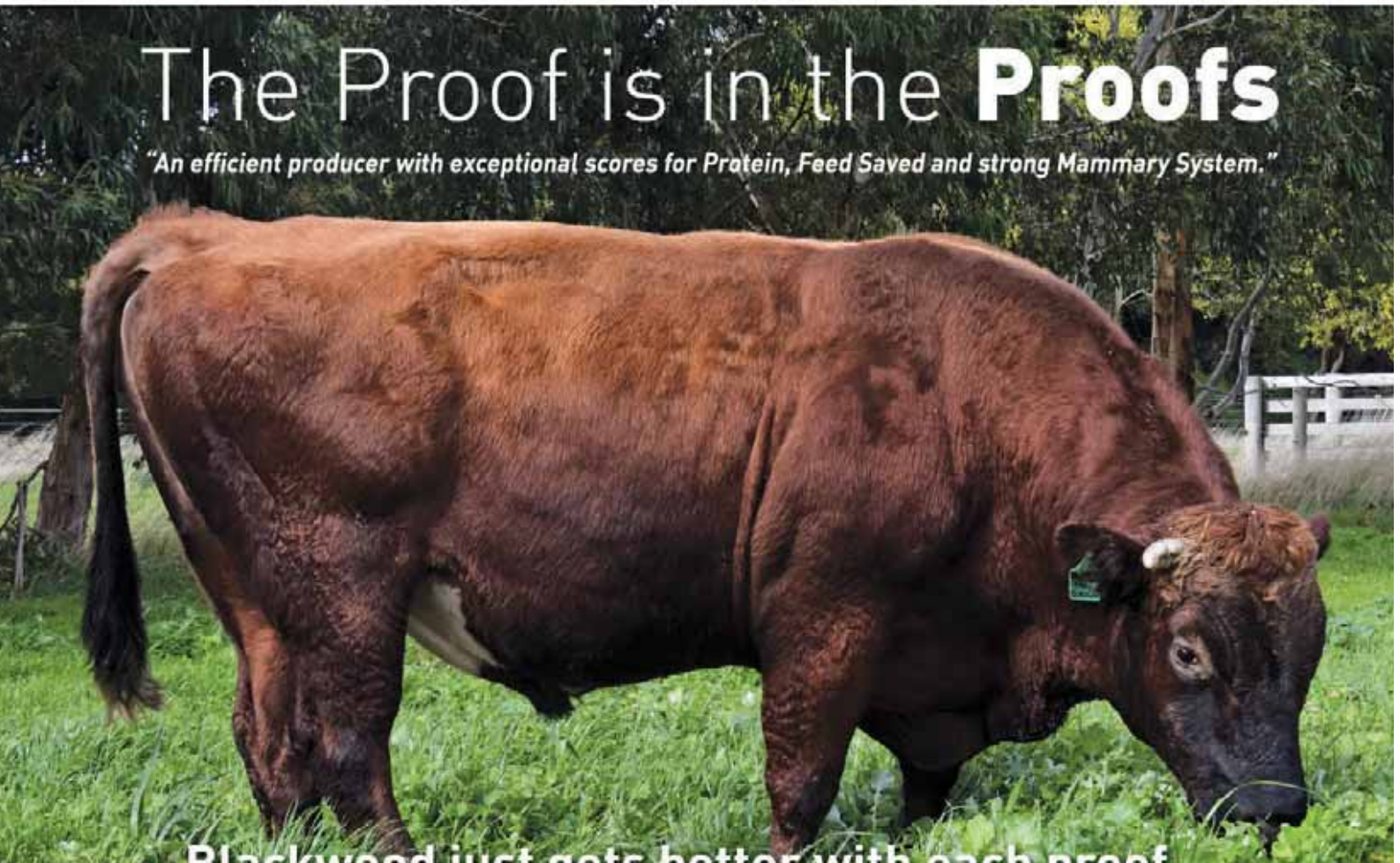
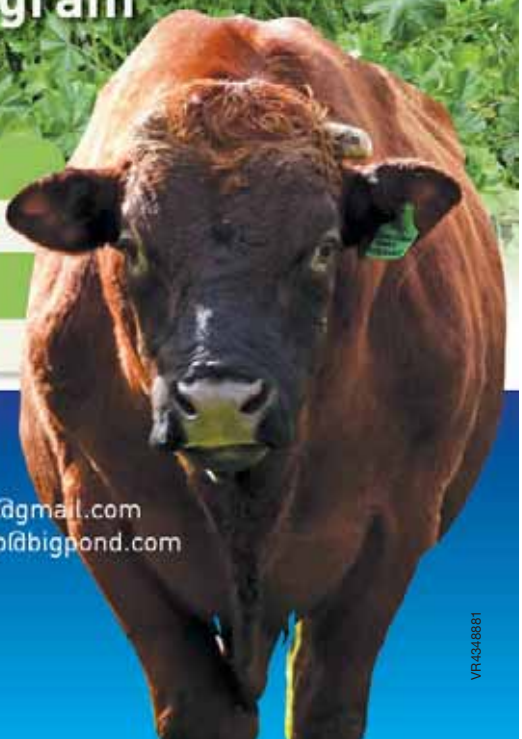


Blackwood just gets better with each proof, include him in your breeding program this season.

BPI	273 65% rel	HWI	242 57% rel	TWI 253 64% rel
Production	ASI 161	Prot 32 Kg	Fat 18 Kg	Milk 939 Ltr
Workability	MS 103	Temp 102	Like 103	
Feed Saved	ABV 111		Mammary System	108



AUZRED xb

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Maebull leads August ABV charge

CALISTER Maebull has taken a lift in its August Australian Breeding Value and is now a clear choice for dairyfarmers looking for reliable, modern genetics. Maebull's balanced proof combines solid yields of protein and fat with positive deviations with strong ratings for health and fertility traits. Its 112 for daughter fertility, 193 for cell count and 110 for survival, make it one of the best-proven sires in the breed for these important traits.

"He is the kind of bull that exemplifies our breeding program, and we are looking forward to seeing some sons enter our genomic program in the coming months," Genetics Australia chief executive officer Anthony Shelly said.

The August ABV run also sees the emergence of several new genomic "hotshots". "Our ongoing relationship with many of Australia's top Holstein breeding herds is paying dividends," Mr Shelly said. "We have a solid group of Australian bred young sires that are the equal of the best genetics we can source anywhere in the world."

New genomic sires, Wookie, Superdave, Kade, Terraine and Bookdream make their debut on top of the BPI list.

With an Australian Selection Index of 269, Wookie is an elite A2A2 production sire with extreme deviations. Kade is a Superhero son from a Silver dam and is an excellent choice to improve daughter fertility with his rating of 115. Terraine is an Alltime son from a Supersire dam and is a protein specialist at 28kg. These three bulls were bred by Trevor Henry and family of Wilara Holsteins at Tinamba, Victoria.

Superdave was bred by David and Trudy Fiebig of Mt Gambier and is Genetics Australia's highest BPI newcomer. It comes from the same family that produced breed great Donor.

Bookdream, bred by John and Vicki Lillico of Smithton, Tasmania, is a son of the popular sire Royalman and is a great production transmitter.

Genetics Australia has a fantastic line-up of German sires that sit high in the BPI rankings. The group is led by GGISemino, a Silver son with 330 BPI.

GGIBajou is an elite protein sire at +25kg and also has a strong udder rating at 107. GGIBasement is a son of the highly rated Balisto, which provides high fertility, calving ease, longer teats and high production.

Another sire that has proven to be popular is the PP bull GGIPaletti. This polled Powerball son will sire 100 per cent polled calves while excelling for fertility and mammary system.

Genetics Australia's North American partners World Wide Sires and Jetstream Genetics are also contributing to its elite BPI sires. From World Wide Sires comes 14HO13980-Fedora, a product of the high-powered Sandy Valley breeding program. This Bandares son has already been used to breed the next generation of sons and comes with great ratings for fertility, cell count and production. MRMastermind is a new sire from the Jetstream Genetics. A high protein, fertility and health sire, MRMastermind is a teat length and udder improver.

"This is the most complete group of high BPI profit driven sires we have delivered to the marketplace for some time," Mr Shelly said. D

Article supplied by Genetics Australia, website <www.genaust.com.au>.

Immunity+: the trait with no equal

IN August, Semex sires continue to top lineups, offering top Balanced Performance Index, A2A2, calving ease and Immunity+ bulls.

Immunity+ is a unique trait reducing every major disease in dairy cattle. At 30 per cent heritable, with health data collected from more than 30,000 cows and 75,000 heifers, the results range from 5-20 per cent improvements in Immunity+ sired animals. Biggest improvements were seen for mastitis, lameness and reduced mortality.

0200HO07450 Amighetti Numero Uno is an Immunity+ sire that is leaving a positive impact across the globe. It makes tremendous cows that get better with age — exceptional udders, with great shape and attachments, balanced frames, and correct feet and legs.

With more than 17,000 daughters milking worldwide, this same breeding pattern is now being seen in Australia with 160 cell count, 110 survival and 114 daughter fertility. When combined with high fat at 35 kilograms and 0.61 per cent, 103 milking speed, 104 likeability and with strong type, Numero Uno will continue to deliver healthy cows for today's dairyfarmers.

"Worldwide dairymen are frustrated with how to best manage disease," Semex Australia product manager Tyson Shea said. "They want to know that what they're using as a method to improve their herd's health is working. The difference is that bulls with the unique Immunity+ trait make them even more valuable for breeding a healthier herd."

0200HO10867 Progenesis Kristoff is an Immunity+ sire at more than 300 BPI while also providing A2A2 genetics. With 305 BPI, 585L milk, 22kg and +0.12 per cent protein, 112 daughter fertility, 102 overall type and 104 mammary system, Kristoff provides the whole package to breeding healthier cows.

0200HO10777 Westcoast Perseus continues its high BPI ranking with 349 BPI combining high fat 26kg, 0.40 per cent, and protein 20kg, 0.39 per cent, with 116 daughter fertility and 173 cell count. This A2A2 bull will prove easy to use for all dairyfarmers.

Featuring in the top 20 proven BPI rankings are two A2A2 calving ease 0200HO02870 Mr Lookout P Enforcer sons, 0200HO10229 Velthuis B Force and 0200HO10220 Leothe Dark Vador.

Force provides 316 BPI, is a high production sire with 555L milk with 30kg and 0.28 per cent protein. At 105 mammary system from its outstanding 111 rear udder height. Dark Vador provides exceptional components with 0.39 per cent protein and 0.49 per cent fat combined with 158 cell count, 111 daughter fertility and a solid 102 overall type.

In the Jersey breed, 0200JE00183 Sunset Canyon David remains the number one sire with a BPI of 351. It continues to breed highly pleasing daughters with outstanding type with figures of 104 milking speed, 104 temperament, 106 likeability, 112 overall type and 114 mammary system.

0200JE01015 Ahlem Ratcliffe is an Immunity+, A2A2 Genomax sire that can transmit many great qualities while providing an outcross to Valentino and Vanahlem bloodlines. Sired by Sunset Canyon Dazzler, its dam is a VG88 Tbone daughter from a strong breeding line of great cows.

Immunity+ offers a true genetic solution to health traits answering the call from dairyfarmers everywhere to breed healthier cows. The Semex Australia lineup has no equal when it comes to breeding for disease resistance. D

Article supplied by Semex, website <www.semex.com.au>.

The Australian Red Dairy Breed.

*Breed average for Aussie Red Bulls Fertility is over 102. (August 2018 ABV's).

FOR FURTHER INFORMATION, CONTACT ARDB SECRETARY
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ABS takes number one spot

ABS continues to lead the way in dairy genetics, delivering another crop of superior sires suited to Australian dairy systems. 29HO16888 Seagull-Bay MVP leads the way in the August Australian Breeding Values proofs with more than 500 milking daughters in nearly 100 herds under herd test in Australia. MVP is proving to be the 'next big thing' since iconic sires such as Goldbullion and Shottle.

"This sire just keeps on getting better," ABS national sales manager Paul Quinlan said. "In my 30 years in genetics, I can count on one hand the few that have been as influential as MVP has been in such a very short period.

"He is the standout number one proven Australian sire, with a reliability of 89 per cent. He is a must-use sire in any breeding program."

MVP's iconic dam Ammon-Peachey Shauna EX-92 has transmitted it exceptional qualities, bringing outstanding consistency to MVP's progeny. It delivers a near flawless overall package of moderate-sized daughters with high fertility, outstanding udders and A2A2 gene — all the characteristics demanded by Australian dairyfarmers.

Earlier this year ABS introduced the highest ever ABV sire to Australia, 29HO18698 ABS Jeronimo P. It has improved on its April genomic Balanced Performance Index and still remains as the only sire above 400 gBPI at 407 gBPI.

"We've been overwhelmed by the interest in this sire and we're equally excited that our breeding program bred his dam, ABS 7726 Jazlyn-P," Mr Quinlan said.

Still holding down the number one Holstein genomic sire position and highest sire to ever come into Australia, Jeronimo P offers production, A2A2 and polled (heterozygous) genes.

ABS has the available number one Holstein Australian daughter-proven and genomic sires and still maintains five of the top 10 proven Holstein sires with a strong line up of genomic sires coming through as well.

These include the popular brothers 29HO16714 De-Su 11236 Balisto in the number four position and 29HO16667 De-Su 11228 Topsy at number six.

High-ranking 29HO17747 Cookiecutter Harper, which came through the ABS genomic program some years ago has been popular year on year since it Australian introduction.

Harper sits on the Australian Interbull list at number five and 342 BPI.

Globally, ABS continues to push the boundaries of genetic improvement, seeking out the best genetics from around the world and domestically. The company has a high ranking Net Merit (NM — US profit ranking) group of females as well.

Leading the proven US Total Performance Index team is 29HO17553 Uecker Supersire Josuper at number two on the US TPI list.

Another elite US TPI and NM sire available in Australia is 29HO18611 Bomaz Skywalker, which delivers an impressive +1008 NM, 2891 TPI and 309 BPI.

The ABS St Jacobs breeding facility continues to show the way with high type. 94HO17739 Walnutfarm Blake impresses. It leads the world of daughter-proven sires with +3.72 Predicted **T**ransmitting Ability for Type.

Not to be left behind is the number one Australian type sire 29HO17503 Pen-Col Merrick. Not only do its rear udder height and width have staggering numbers, it's also a sire that has extreme semen fertility and the A2A2 gene.

Homozygous polled bulls are gradually moving up the rankings and none is better positioned than 29HO18639 ABS Joppolo PP (half-brother of Jeronimo P, from the same dam). Joppolo PP is the number one homozygous sire in Australia coming in at 305 BPI and the only PP above 300.

The ABS De Novo partnership with De-Su Holsteins has also delivered, with the new sire 29HO18777 De Novo 7876 Swayze-PP coming in at 262 BPI.

The ABS partnership with Central Sires Co-operative continues to bring a balanced group of quality Jersey sires to breeders. Wallacedale Melvara (CSCMelvara) is the highest ranked daughter-proven sire for fertility at 104. Coming in at number three on the ABV rankings its impresses with excellent mastitis resistance and udders and carries the A2A2 gene.

Murray Brook Shadowman (CSC-Shadowman) is another high demand CSC sire, featuring excellence across all traits while adding frame, stature and is positive milk with components.

In delivering healthy, profitable cows, the ABS proprietary Transition Right selection system is a key driver. "We select the healthiest and most profitable sires to breed generation after generation," Mr Quinlan said. "Genetic selection is so critical because it's permanent."

ABS also offers Sexcel sexed genetics to breeding programs giving herds an opportunity to accelerate their breeding. "Sexcel sexed genetics is like pressing down on the accelerator of your car," Mr Quinlan said. D

Article supplied by ABS Australia, website <www.absglobal.com/au>.

GGI and Spermex merge in Germany

GERMANY'S two largest semen-selling companies GGI German Genetics International and Spermex have merged to form a new company named GGI-Spermex.

Both companies have been operating successfully in the field of international semen marketing for decades.

The newly founded company GGI-Spermex with branch offices in Cloppenburg (northern Germany) and Ottobrunn (southern Germany) expands the offering of cattle breeds in their portfolio and strengthens the marketing potential of their international distributors and clients.

The new company started operating on July 1. GGI-Spermex unifies 13 German breeding and artificial insemination organisations that offer the entire genetic variety of all cattle breeds present in the country.

The member organisations of CGI-Spermex with more than 1500 employees carry out more than 8 million inseminations per year across Germany.

The company is now in the position to offer internationally all key breeds, namely Holstein, Red Holstein, Fleckvieh and Brown Swiss through just one supply channel. Germany is home of the largest populations of registered cows worldwide in all four breeds so the available potential is enormous.

Another 20 cattle breeds, including the Angler and Jersey as well as several dual-purpose and beef breeds, completes the GGI-Spermex offering. More than 5 million doses are annually exported from Germany to more than 70 countries around the world.

GGI-Spermex is closely connected with the German umbrella organization BRS, Bundesverband Rind und Schwein as well as committees of cattle breeding and research institutions in Germany. D

Article supplied by GGI-Spermex, website <http://www.ggi.de/en/home/>.

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VR4384759

Crossbreeds are more feed efficient

By **Steve Snowdon**

MOST dairyfarmers now recognise that crossbred cows are healthier, breed back faster and are more profitable due to hybrid vigour. A recently completed study by Jo Coombe at Melbourne University into crossbreeding in Australia clearly shows the economic advantages of crossbreds over Holsteins.

What most dairy farmers may not realise is that hybrid vigour might also be helping the crossbreds be more efficient at converting feed into kilograms of protein and butterfat.

Understandably, there's some scepticism about this from farmers because crossbred dairy cows typically carry more body condition and look less "dairy" than purebred cattle.

In a three-year trial at the University of Minnesota, crossbreds were shown to be more feed efficient and more profitable than their Holstein herdmates.

Dr Brittany Shonka-Martin completed her Ph.D degree in dairy cattle genetics at the University of Minnesota. Her research project used cows from the university campus dairy herd, that has both crossbred and Holstein cows.

All of the crossbreds used were three-way crossbreds using the rotational mating system of Montbeliarde, Viking Red and Holstein. They were compared with the pure Holsteins for feed conversion efficiency, weight, production, body condition and economic difference between the two groups.

The Montbeliarde and Viking Red breeds have both selected for greater fertility than the Holstein and, unlike the Holstein breed, neither breed has selected against body condition. It is now known maintenance of baseline body condition is important for the fertility, health, mobility and survival of cows.

Feed intakes of individual cows are laborious and expensive to collect. For Dr Shonka-Martin's research, 123 first-lactation cows (63 crossbred and 60 Holstein) and 80 second-lactation and third-lactation cows (43 crossbred and 37 Holstein) were compared for dry matter intake, body weight, wither height, body condition score, milk volume, and fat plus protein production over a three-year period. All cows were fed the same total mixed ration twice daily in tie-stalls with partitions in the mangers. Feed samples were collected twice weekly to determine dry matter content. Feed intakes were recorded from days 4 to 150 of lactation. During the same lactational period, body weight, height, and body condition score were recorded for each cow.

Fat plus protein production (kg) wasn't different for the two genetic groups during first lactation or during second and later lactations. However, the crossbred cows had higher percentages of fat and protein in their milk than the Holstein cows. The milk volume, which is mostly water, was lower for the crossbred cows than the Holstein cows. However, despite equal fat plus protein production (kg), the crossbred cows had significantly lower dry matter intake than the Holsteins, and the difference was 141kg less dry matter intake (-4.8 per cent) during the 147-day study period in first lactation and 232kg less dry matter intake (-6.5 per cent) in the second and third lactations.

Feed efficiency is evaluated with alternative measures. Some of them are:

- Fat plus protein production divided by dry matter intake.
- Energy-corrected milk divided by dry matter intake.
- Dry matter intake divided by body weight.
- Residual feed intake (currently used for genetic evaluation of dairy cattle).

For all four of these measures, the crossbred cows were significantly more feed efficient than the Holstein cows.

Based on this new research, improved feed efficiency can be added to the list of advantages of crossbred cows over Holstein cows. D

**Steve Snowdon is a crossbreeding specialist and breeding adviser with Auzred Xb. Phone 0417 138 508 or email <steve.auzredxb@bigpond.com>.*

Article supplied by Auzred XB, website <www.auzredxb.com.au>.

Aussie Reds help produce quality milk

THE Harrison family from Mt Kilcoy, are one of only five farms to supply Woolworth's Farmers Own brand in Queensland and need to produce quality milk year round to ensure they meet their milk contract specifications.

Their 120-cow mixed herd is made up of Holsteins (50 per cent), Aussie Reds (25 per cent) and Holstein x Aussie Red (25 per cent) crossbreds. The milking herd is grazing off 40 hectares of pasture, which annually uses about 110 megalitres of deep bore irrigation water. The average rainfall in this region is 1200 millimetres.

They began the dairy farm 11 years ago with a Holstein herd. A year later they bought a dozen Aussie Reds to bring into their herd. They were immediately impressed with the growth of the Aussie Red calves, and the ability of the Aussie Reds to hold body condition in dry conditions.

Ashley Harrison impressed with heat tolerance shown by Aussie Red cows.

The fertility of the Aussie Reds have ensured the Aussie red component of their herd has grown, and they have used Aussie Red genetics over their Holsteins that have been difficult to get in calf with pleasing results.

The lower cell count and less frequency of mastitis amongt their Aussie Red cows has helped them to achieve their milk quality goals.

The Harrison family have selected high Balanced Performance Index proven bulls and progeny test bulls to help their herd maintain a strong genetic base.

When their son, Ashley, 26 returned to the farm six years ago, he was impressed with the heat tolerance of the Aussie Reds, who were out grazing while other cows were seeking shade.

Herd recording data also showed their Aussie Red cattle and crossbreds consistently giving higher milk components and equal milk solids to their Holstein herd mates.

They have also been able to save on grain costs, as the Aussie Reds do not need as much supplement feed as larger Holsteins. D

Article supplied by Australian Reds, website <www.aussiereds.com.au>.

Calving Ease
Sire possesses A2A2 gene
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Mission to find most profitable cow

By **Bev Phelan***

TOM, Leo and I began our Viking journey in 2006 when we were inspired by Steve Snowdon to consider three-way crossbreeding and using red genetics. Why? We were experiencing fertility challenges in our mainly Friesian seasonal calving herd. So, improved fertility was the carrot. Hybrid vigour, feed conversion efficiency, and similar kilograms of milk solids production also appealed.

The breeding strategy has evolved over time. I have been sidetracked by Red/Friesian cross, Monty cross and pure Reds. Now I am settled on the three-way cross using Friesian, Reds and Jersey.

However, given my passion for Reds, I do put some of my best Red crosses back to Reds. The three-way cross gives me a cow that suits our system and drives profit — medium frame and benefits of hybrid vigour, particularly in the early years.

With crossbreeding, the kilograms of milk solids per cow may have dropped slightly compared with our straight Friesians, but they don't need as much feed, and the not-in-calf (NIC) rates are significantly better. A few years ago, I broke down our 14 per cent rate and found the Friesians contributed 28 per cent and the Red cross contributed only 5 per cent.

Why Viking? In 2006 I was impressed by the quality of the bulls and by Viking's rigorous and reliable testing and recording regimes. Twelve years later I am still impressed by the quality of their bulls and the reliability of their Nordic Total Merit (Scandinavian) breeding value system. During my quest to find the most profitable cow I've dabbled with products from four other semen companies. However, when I compare stats on paper, the Viking cows are consistently the top of the class.

This season the milking herd is 30 per cent by Viking sires. The breed breakdown is 40 per cent Red, 36 per cent Jersey, 22 per cent Friesian and 2 per cent Montbeliarde. Our three-way cross now make up a third of our herd.

With the focus on the three-way cross in recent years, I have found Viking bulls from each breed, Red, Friesian and Jersey to suit my needs. Backed by their health traits, they are the ideal choice. A healthy cow is a fertile cow that has longevity and is a cow producing optimal kilograms of milk solids and profit.

Bev Phelan is happy with the three-way crossbreeding system used on her Tasmanian farm.

Until two years ago, I individually matched each cow with a particular bull. The aim was to correct faults in the cows e.g. frame, high pins, udder, components, etc.

Although time-consuming, it has been worthwhile as we now have a more even herd (even though they are crossbred), with sound health status and are great producers. We have also corrected high pins, tall narrow cows, and similar related traits.

Now with more than 1000 cows, and for staff well-being at joining, I choose less bulls and have a "bull of the day" in each breed, but still match around 60 of my best Reds to individual bulls. I also individually match around 20 other cows if a fault needs to be corrected.

Involving staff in the process, whether it be bull selection or their feedback on the herd, adds value to the breeding process. Leo and staff have identified the need to prioritise udders in bull selection of late. Interestingly, a couple of bulls that have thrown cows with poor udders weren't Viking bulls.

Crossbreeding continues to be a challenge. Some of our lovely Foske cows and heifers are larger than I would like in our herd, but they are performing. The majority of our three-way cross is based on using a bull of the breed that, on paper, the cow should be joined to. Occasionally I may put a cow that isn't of typical size for its breed back to another breed of bull.

Given we are all interested in fertility, health, longevity and production, I wanted to share with you where the Viking calves born in 2009 are today. This is a group of cows we still talk about. They were by Peterslund, OBrolin, Bjurist, Krejstad and Torp. Healthy, robust calves, good "doers" who grew into heifers that came into the milking herd in excellent condition. I have followed this group through the seasons, comparing them to non-Viking sired cows also born in 2009.

Their percentages each year, relating to deaths, culls, treatments, fertility and production, has always been significantly better than the rest. Looking at these 900s by Viking in the herd today: 27 per cent are milking i.e. 20 out of the 75 that calved down in 2011, 15 of these are in calf for spring this year, beginning their seventh lactation. They are in-calf to artificial insemination as for the past two seasons we have not used herd bulls. Herd testing stats from February 2018: 26 litres milk, 3.7 per cent protein, 5.5 per cent fat, 158 individual cow cell counts.

Lessons that we have learnt over the years include:

- Be generous in the budget for bulls. The majority of bulls I have used over the years have been the top proven bulls. It may seem like a lot of money at the time, but it represents true value for money if you get the results you want.
- Focus on the farm system and develop a herd to optimise the system.
- Consider the cows (on paper and in the paddock) and which bulls they need to improve their progeny and create or maintain a cow and herd for the system.
- Learn from others, including staff and the AI reseller. As a breeding novice, I have found the willingness to share information and knowledge among the Red and crossbreed fraternity an incredible support.
- Do your homework. Study the herd/cow records and statistics. It can be boring, and averages can be deceiving, but it's an important part of the planning process.

In conclusion, I have no hesitation in recommending Viking bulls to any dairy breeder committed to improving their cows and herd. I have every confidence in their NTM breeding values system. D

**Bev Phelan, in partnership with her husband Tom and their son Leo, run Dalmore Dairy in Tasmania.*

Article supplied by Viking Genetics, website <www.vikinggenetics.com.au>.

Last year's maize crop. Photo Scott Lumsden.

Maize a water-efficient alternative

By **Keith Den Houting**

MAIZE has been grown over centuries and has been proven a beneficial grain for humans as well as cattle. With a strong return on the investment for labour, water and other costs, this crop is popular for inclusion in the dairy ration as chopped silage.

It requires special machinery to harvest and cut the plants into smaller portions to create a manageable material. The development of growing maize and other summer forages in northern Victoria came about as the crops offered better use of irrigation water and could be fed more easily to the herd as farms moved to using feedpads rather than free-range grazing of summer pastures.

Changes to irrigation water allocations have seen an evolution in the northern Victorian irrigation district. Where herds of cows once roamed and grazed large tracts of green pastures, these days most dairy farms now partially confine their herds to set areas and bring the feed to the herds.

Dairyfarmer numbers have reduced over time, and those remaining are working hard and milking more cows to maintain a milk supply that will retain manufacturers in the region.

'We can't cheat on the process and there is a defined recipe to grow a maize crop.'

Bernice and Scott Lumsden farm near Leitchville, Vic, and grow maize to harvest the whole plant for silage. Contractors are used to do this, and a portion of their Torrumbarry irrigation water entitlement is used to grow the crop.

The couple has done so for some years now. "We found it a worthwhile crop to include in our mix especially as we feed out a large portion of our feed on the feedpad," Mr Lumsden said.

The Lumsdens are part of a large family enterprise with Mrs Lumsden's parents, Noelene and John Smith. The Lumsdens oversee the business and milk 700-800 cows in a 80-unit rotary. The farm has a large covered feedpad, capable of handling 1200 cows.

The dairy portion is a 600-hectare holding split by the upgraded main channel for the Torrumbarry irrigation system and the Murray Valley Highway. The channel is crossed with a bridge and the highway by an underpass within 100 metres of each other.

The business employs three permanent labour units and seasonal backpackers.

The Lumsdens became interested in maize via their consultant and nutritionist. On an Alta Genetics trip to the United States, they viewed the process and benefits of feeding corn to dairy cows. During the trip, they were able to concentrate on learning about maize as a supplement in their feeding system. ▶

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- where pasture renovation is undertaken, planned and progressively;
- to reduce the overall cost of supplements;
- an efficient use of irrigation;
- to manage the surplus in late spring.

Summer forages may be used tactically, in various applications:

- to break to life-cycle of a specific weed or pest in a problem paddock;
- generate feed over summer in identified as under-performing or damaged paddocks
- assist in recouping the cost of lifting the fertility and performance of a poorer pasture.

Tips for success:

- Prepare a good seed-bed, strike and kill weeds
- Pre-water, especially if flood irrigating
- Only use seed from a reliable source
- Use pre-emergent herbicide where possible
- Allow good N, P, K nutrition
- Monitor for pests and treat without delay
- Graze when the crop is at optimal nutritive value.

Summer crops can be a highly productive and cost-effective pasture supplement. Growing costs are typically in the range of 10-15 cents/kg of dry matter. If you are feeding grain at $400 - $450 per tonne, 90% dry matter, then that is costing 45-50 cents/kg DM. To optimise summer forages, they should be treated like a specialty crop, and it's advisable to engage a competent advisor to help with costing, planning, establishing and monitoring.

There are excellent traditional crop types, but a consider some of the newer options that have been bred for improved performance and quality. The table below describes some of the attributes of the various forage options.

Advice given here is meant purely as a general guide and may not be suitable for all situations and locations.

	Forage rape	Turnips	Leafy turnip	Chicory	Millet	Forage sorghum
Yield potential	High	High	Med-high	Med-high	Med-high	High
Energy - ME	High	High	High	High	Low-med	Low-med
Protein - CP	High	High	Med-high	High	Low	Low-med
Fibre - NDF	Low-med	Low	Low-med	Low	Med-high	Med-high
Re-grazing	Possible	No	Readily	Readily	Readily	Possible
Hay/silage	Possible	No	No	Yes	Yes	Yes
Pros	Fairly drought hardy	Highest WUE, quality and yield in shortest time	Fast to first feed, easily managed for re-grazing	Few pest problems, highly palatable	Cheap, reliable yield	Few pest issues, easy post-em weed control
Cons	Limited weed control options	Grub control essential.	Sometimes slow initial stock acceptance	Few post-em weed control options	Quickly becomes fibrous if let go	Short growing season in southern Australia
Other considerations	May need to wait 8-12 weeks for crop to ripen	Good paddock clean up, ready for re-sow	May bolt after 10-14 weeks if not fed off on time	May be oversown in autumn with new pasture	Mix with brassicas or chicory	Manage for Prussic acid issues
kg/ha (sole stand)	3-4	2-4	3-6	6-10	10-20	15-30
kg/ha (in a mix)	1-3	n/a	2-3	2-4	4-8	n/a

Notes: Feed quality information is a guide with relation to good quality pasture silage

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Mr Lumsden said they were impressed with the quality and appearance of the mostly corn-fed cows in the US. It was a next logical step to start growing maize on their property, as they already had in place the feeding system of wagon and feedpad.

They have grown maize for four years. They work on a principle of three years of maize on the same area and then a new area is used, with the previous land rejuvenated with an alternate crop.

The maize is sown by precision drilling into a bare seedbed in spring on flood irrigation bays. Nitrogen is applied at 350 kilograms/ha of "green" urea and disced into 150mm, with the area then multi-disced with 240kg/ha di-ammonium phosphate (DAP) and then another 400kg urea applied.

In the first season, sowing density was 90,000 seeds/ha. Since then, this has fluctuated between 90,000 and 100,000 grains/ha. Mr Lumsden said this year they would be likely to sow at 92,000 seeds/ha.

The precision drill is accurate and allows the sowing rate to be calculated as all seed bags are seed numbered.

Mr Lumsden keeps accurate records, with his whiteboard and diary all show excellent recording of facts related to growing and feeding the cows.

Water use on the maize is 7.5 megalitres/ha. The growing period is about 124 days to harvest, which occurs at milk line four in the grain in the crop. The milk line is defined by shelling individual grains with the fingers and then viewing the milk line and getting the indication of the starch content of the grain to determine harvesting.

The feed wagon has a capacity of 5.75 tonne. Picture Keith Den Houting.

Scott and Bernice Lumsden incorporate maize into their operation at Leitchville, Vic. Picture Keith Den Houting.

Contractors harvest the three-metre-high standing crop by cutting and chopping into 25-30mm long portions. This is then put into earth-walled bunkers on top of the ground and covered by multilayered sheeting.

Mr Lumsden said the new orange sheeting had improved the storage since they started this type of operation. The yields have varied but last season 3000 tonnes of green matter with a 34 per cent dry matter content was put into the pits from 40ha of crop.

Mr Lumsden said this was a worthwhile return on investment and he would consider continuing with the process.

"We can't cheat on the process and there is a defined recipe to grow a maize crop," he said.

He quoted a neighbour who once advised him "you cannot be arrogant growing maize".

The process is not always straightforward. In the first three years, the maize was grown on bays with good reuse water collection. It made for more efficient water use. The next plot did not have this feature so Mr

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◀ Lumsden decided to grow the maize in only three-quarters of the bay with sorghum grown at the ends of the bays as a sacrifice crop if overwatering occurred.

However, he conceded that during the process, nature decided to water the sorghum also and issues arose with water use. Birds, too, have created problems, with cockatoos and corellas being a nuisance but Mr Lumsden said the crows were the worst. These would not be scared off, especially at seeding time.

The crop was also affected by excessive November and December rainfall last year. When growing maize again, a close watch will be kept on weather forecasts, slightly higher fertiliser rates will be used and seeding rates and pest control will be more rigorously implemented.

Mr Lumsden said there were also issues with the outside boundaries of the crop maturing earlier than the middle of the rows due to sunlight and air circulation. He feels that spacing between rows and spacing between seeds in the rows also play a part, and this year will use 25-centimetre row spacing with probably the same in the seed placings.

The farm has an 80-unit rotary dairy. Picture Keith Den Houting

The Lumsdens' priority is to fully feed their herd. Mrs Lumsden said: "At the moment we're feeding silage in the 5.75-tonne capacity Keenan wagon with 2 tonnes of maize, 1 tonne of hay, 1.5 tonnes of lucerne silage, 0.25 tonne of grain and 1 tonne (1000 litres) of water added together.

"We are also feeding the cows a grain and canola ration, including a buffer, on the milking platform." The amount is computer monitored and varies per individual cows, depending on the stage of lactation, production and condition score.Their preference would be to feed on the feedpad and provide the cows with some green pasture all year round. However, at the moment there are times during the season when the herd is on pasture full time or on mixed rations full time. Their challenge is to find that balance.

The facilities are excellent with a solid roofed feedpad and good access to all parts of the farm. So some time into the future the ideal will be achieved. D

Corn variety takes nitrogen from air

Key points

- Researchers discover how Mexican corn variety grows without fertiliser
- Could open way for other cereals to be able to produce nitrogen

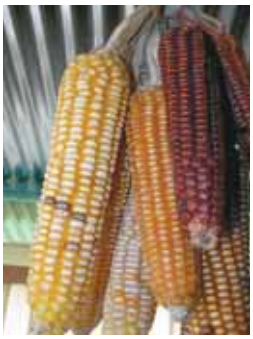
RESEARCHERS at the University of California, Davis, have described a newly identified corn variety that acquires nitrogen by feeding its sugars to beneficial bacteria, which can in turn take up nitrogen from the air and pass it back to the plant in a usable form. The variety of corn was initially observed in the 1980s by Howard-Yana Shapiro, now Chief Agricultural Officer at Mars, in a nitrogen-poor field near Oaxaca, Mexico.

With the emergence of metagenomics in the mid-2000s, Mars and UC Davis partnered with the local indigenous community to investigate the corn. The research team was led by Alan Bennett and Allen van Deynze at UC Davis.

The study describes the unusual corn variety, which obtains 29 to 82 per cent of its nitrogen from the air, rather than through fertilisers. The plant produces a sugary 'goo' that oozes from aerial roots that grow from above the ground, and which attracts bacteria that can transform nitrogen from the air into a form that the plant can use. If this trait could be bred into conventional varieties of corn, it may reduce the need for added fertiliser and increase corn production in regions with poor soils.

Beans and other legumes have established beneficial relationships with communities of bacteria that provide them with nitrogen, but corn and other cereal crops traditionally lack these relationships. The commercial fertilisers required to grow corn and their energy-intensive production uses an estimated 1 to 2 per cent of the global energy supply. Scientists have been eager to devise a way for corn to take advantage of these nitrogen-producing communities. Professor Bennett and his colleagues are interested to see whether other cereals, such as sorghum, can also use their aerial roots for a similar function.

"The idea that isolated local varieties of maize might associate with nitrogen-fixing bacteria is not new, but it has been difficult to identify such a variety and demonstrate that this nitrogen-fixing association actually contributes to nitrogen nutrition of the plant," Professor Bennett said. "Our interdisciplinary research team has been working on this for nearly a decade."



Sierra Mixe corn variety found in Oaxaca, Mexico. Picture by Alan B. Bennett

The full article first appeared in the open-access journal PLOS Biology, and can be viewed at <http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.2006352>.

Agronomic Selection Criteria		Market Information			Intellectual Property Status		Background Information
Type Species	Winter activity or flowering activity	Brand Name	Variety *	Australian Marketer	PBR**	TM***	Plant Breeder
LUCERNE							
Highly winter active	11	SF Force 11®	✔	Seed Force			Forage Genetics, USA
	10	SARDI Ten®	✔	Heritage Seeds	Y		SARDI
	10	SARDI Ten® Series 2	✔	Heritage Seeds	Y		SARDI
	10	SF Force 10®	✔	Seed Force			Forage Genetics, USA
	9	Australis	✔	Seed Genetics International	Y		Seed Genetics International
	9	Blue Ace	✔	Seed Genetics International	Y		Seed Genetics International
	9	CUF 101		Many			
	9	Hallmark	✔	PGG Wrightson Seeds	Y		QLD DPI
	9	L91®		Pasture Genetics		Y	Pasture Genetics
	9	L92®	P	Pasture Genetics	P		NSW DPI
	9	Multileaf ML99	✔	Pasture Genetics		Y	Pasture Genetics
	9	Pegasis	✔	Heritage Seeds	Y		NSW DPI
	9	Sequel		Many			
	9	Sequel HR	✔	PGG Wrightson Seeds			QLD DPI
	9	Silverado	✔	Upper Murray Seeds	Y		Ian Kaehne
	9	Siriver		Many			
	9	SuperCharge	✔	Seed Genetics International	Y		Seed Genetics International
	9	SuperNova	✔	Seed Genetics International	Y		Seed Genetics International
	9	SuperSonic	✔	Seed Genetics International	Y		Seed Genetics International
	9	SuperStar	✔	Seed Genetics International	Y		Seed Genetics International
	9	Titan 9	✔	AusWest Seeds, Stephen Pasture Seeds	Y		University of Queensland
	9	Haymaster®9	✔	PGG Wrightson Seeds		Y	CalWest
	8	Magna 801FQ	✔	Valley Seeds			Dairylands USA
	8	Magna 804	✔	Valley Seeds			Dairylands USA
Winter active	7	Flairdale	✔	Alfagreen	Y		Lehmann EE & MR
	7	Genesis II	P	Heritage Seeds	P		NSWDPI
	7	Haymaster 7®	✔	PGG Wrightson Seeds			Forage Genetics, USA
	7	L70®	✔	Pasture Genetics		Y	Pasture Genetics
	7	L71®	P	Pasture Genetics	P	Y	NSW DPI
	7	Q75®	✔	Pasture Genetics	Y		Pioneer, USA
	7	SARDI Seven series 2®	✔	Heritage Seeds	Y		SARDI
	7	SARDI Seven®	✔	Heritage Seeds	Y		SARDI
	7	SF 714QL®	✔	Seed Force			Forage Genetics, USA
	7	SF Force 7®	✔	Seed Force			Calwest, USA
	7	Silverosa GT	P	Upper Murray Seeds	P	Y	Ian Kaehne
	7	Titan 7	✔	AusWest Seeds, Stephen Pasture Seeds	Y		University of Queensland
	7	Trifecta		Many			
	7	UQL 1	✔	PGG Wrightson Seeds	Y		QLD DPI
	6	Aurora		Many			
	6	Hunterfield		Many			
	6	Icon	✔	Seed Genetics International	Y		Seed Genetics International
	6	SARDI-Grazer	✔	Heritage Seeds	Y		SARDI
	6	Stamina® GT6	✔	PGG Wrightson Seeds		Y	Calwest, USA
Semi dormant	5	Hunter River		Many			
	5	L56®	✔	Pasture Genetics	Y	Y	Pioneer, USA
	5	SARDI Five	✔	Heritage Seeds	Y		SARDI
	5	Seed Force 5	✔	Seed Force			Calwest, USA

Agronomic Selection Criteria		Market Information			Intellectual Property Status		Background Information
Type Species	Winter activity or flowering activity	Brand Name	Variety *	Australian Marketer	PBR**	TM***	Plant Breeder
	5	Stamina® 5(STM)	✔	PGG Wrightson Seeds	Y	Y	Calwest, USA
	5	Venus	✔	Heritage Seeds	Y		NSW DPI
	5	Titan 5	✔	AusWest Seeds, Stephen Pasture Seeds	Y		University of Queensland
Winter dormant	3	Q31®		Pasture Genetics		Y	Pasture Genetics
FORAGE BRASSICA							
Forage Rape		Goliath®(Swift Utility)	✔	PGG Wrightson Seeds		Y	Forage Innovations Ltd.
		Hobson	✔	Valley Seeds	Y		Advanta
		Interval	✔	Heritage Seeds			Advanta
		Pillar	✔	Cropmark Seeds	P	Y	Cropmark Seeds
		Evergreen	✔	Upper Murray Seeds			Joordens, NED
		SF Greenland	✔	Seed Force			Joordens, NED
		Stego / Leafmore	✔	Heritage Seeds			Joordens, NED
		Subzero®		Pasture Genetics		Y	Pasture Genetics
		Titan	✔	PGG Wrightson Seeds			Forage Innovations Ltd.
		Winfred	✔	Agricom			Joordens, NED
		Mainstar	✔	Agricom	P		Forage Innovations Ltd.
Kale		Caledonian		Heritage Seeds			SCRI
		Coleor	✔	Cropmark Seeds		y	Agri Obtention
		Gruner		PGG Wrightson Seeds			Forage Innovations Ltd.
		Kestrel		PGG Wrightson Seeds			Forage Innovations Ltd.
		SF Voltage	✔	Seed Force			Oseva Uni, Czech
		Sovereign	✔	Agricom			Forage Innovations Ltd.
Leafy turnip (hybrid)		Appin		PGG Wrightson Seeds			Forage Innovations Ltd.
		Bouncer®		Pasture Genetics		Y	Pasture Genetics
		Hunter		Agricom			Forage Innovations Ltd.
		Pasja II	✔	PGG Wrightson Seeds			Forage Innovations Ltd.
		SF Pacer	✔	Seed Force		P	Vandyjke, NED
		Falcon / Avalon	✔	Heritage Seeds		Y	Joordens, NED
Swede		Aparima Gold		PGG Wrightson Seeds			Forage Innovations Ltd.
		Domain		Agricom			Forage Innovations Ltd.
		Highlander	✔	PGG Wrightson Seeds			Forage Innovations Ltd.
		Invitation		Heritage Seeds			SCRI
		Major Plus	✔	PGG Wrightson Seeds			Forage Innovations Ltd.
Turnip		APT		Agricom			Forage Innovations Ltd.
		Barkant	✔	PGG Wrightson Seeds			Barenbrug, NED
		Dynamo		Heritage Seeds			SCRI
		Marco	✔	Cropmark Seeds		Y	Eurograss Holland, NED
		Polybra	✔	Valley Seeds			Advanta
		Rival		Agricom			Forage Innovations Ltd.
		SF G2	✔	Seed Force			ILVO, Belgium

This Pasture Variety Database is sourced from the Australian Seeds Federation and its members and is intended for information purposes only.
* Variety Confirmation: Confirms if a brand of a species qualifies for the use of the term 'variety' by way of meeting one or more of the definitions for a 'variety' as nominated by the International Union for the Protection of New Varieties of Plants, Organisation for Economic Cooperation and Development or Plant Breeders Rights.
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Silage Mycotoxins – The Hidden Risk

Dr Tim Jenkins, BIOMIN

Mycotoxins are often thought to be a grain issue but silage too is at risk. In fact with silage we need to take care of the mycotoxins that have formed in the crop in the field as well as the ones produced by moulds that can invade the silage.

Mycotoxins are produced by a wide range of fungi. Some of these fungi are plant diseases such as the Fusarium maize ear rots and cereal head blight fungi that are responsible for some of the main grain mycotoxins like deoxynivalenol (DON), zearalenone (ZEN) and fumonisins (FUM). Those same fungi are able infect more than just the grains, commonly producing mycotoxins in the stems and leaves of maize, small cereals and grasses. Other fungi within the plants such as wild endophytes in the shoots of some grass species, ergots in the seeds and Alternaria fungi on the forage also contribute to the field mycotoxin load. The mycotoxins produced in the field continue to pose a risk when a forage is made into silage. An additional risk comes from mould fungi that can grow on silage, producing some of the well-known mycotoxins like aflatoxin as well as a wide variety of other toxins. Good silage management such as correct dry matter content, fast packing, adequate compacting and timely airtight sealing is crucial to reducing the silage mould risk. A good silage inoculant, tidy silage face management and avoiding obviously mouldy parts of silage is also important to help avoid the risk.

Despite good silage management, the risk of mycotoxins from the field, the ensiling and the feeding out can easily pass unnoticed. For countering diverse mycotoxins in the animal, a comprehensive approach is required. Mycofix® addresses this with three complimentary strategies of adsorption (effective on aflatoxins, ergot alkaloids, and some of the frequent silage mould mycotoxins), biotransformation (necessary for some of the most common mycotoxins that are not easily bound), and bioprotection to safeguard the vulnerable cells of the gut wall, liver and immune system.

Testimonial

A dairy farm in Eastern Australia consisting of 350 cows recently used Mycofix® Plus to address the issue of mycotoxins in corn snaplage. The cows graze kikuyu through summer and rye grass through winter. In addition, cows were fed each day of soybean silage and cereal hay as well as corn silage and corn snaplage with an addition of canola meal in the dairy. Dry matter intake for the cows was approximately 16.5 kg per day.

By June there had been a performance drop across the herd. Non-pregnancy rates rose from 10% to 19% and peak milk yield was poor. Assessment of the corn used for the snaplage indicated visible white fusarium mould on many of the cobs and further analysis confirmed the presence of mycotoxins at dangerous levels. Due to a very dry winter it was necessary for the silage to be fed shortly after cutting and so a premix containing Mycofix® Plus was mixed with the silage on the feed pad and introduced a week prior to mating and around the peak yield of the autumn calving herd. The cows were fed approximately 16 g of Mycofix® Plus per day based on an average weight of 480 kg. Following the incorporation of Mycofix® Plus into the herd's diet, several improvements were noted. The non-pregnancy rate fell significantly from 19% to 12%. Milk yield also improved after the second week and continued to increase steadily. After eight weeks, the average yield had increased by 3.5 L per cow per day. Somatic cell counts (SCC) reduced and remained at an A grade premium after the introduction of Mycofix® Plus.

In the previous edition (July/August 2018) BIOMIN omitted to acknowledge this research was carried out by Dr Bruce Hamilton from Ruminant Nutrition Australia.

For further enquiries on the report please contact

Dr Bruce Hamilton, Ruminant Nutrition Australia

0428 875 055

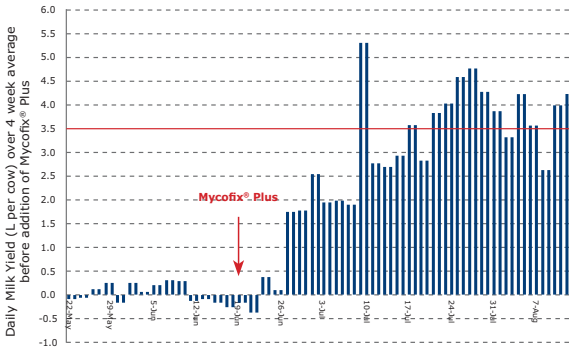

Figure1. *Effects of Mycofix® Plus on milk production*

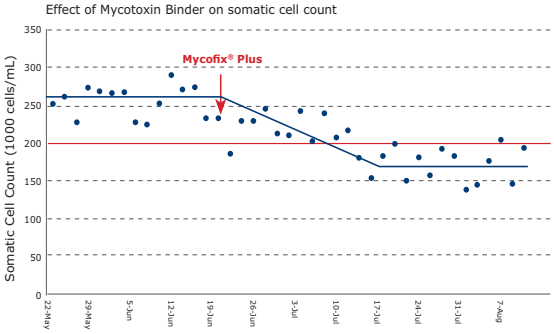

Figure2. *Effects of Mycofix® Plus on Somatic Cell Count*

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The true cost of calf deaths

Key points

- ✔ For every dead calf, there will be a number of sick calves
- ✔ Losses should be less than 1%
- ✔ Sick calves are a significant financial burden on farm enterprise

By **Jeanette Fisher***

UNACCEPTABLY high calf mortality rates on Australian dairies cause significant financial loss to individual enterprises. The extent of this financial loss is often not appreciated because it is hard to assess.

On many dairies, losing a few calves a year is not regarded as a big financial loss and that, in fact, is probably right. The things which are costing the enterprise money are the related but unseen financial effects of clinical and subclinical disease in the surviving calves.

When farmers are asked to estimate the cost of dead calves, most will list the obvious losses:

- Farmgate value of the calf.
- Value (if any) of the feed the calf consumed before death.
- Labour costs to rear them to the time the calf died.
- Veterinary costs, including drugs.

My experience and that of other large-scale calf rearers is that, as a generalisation, for every dead calf, there are about five sick ones. In this context, I would define a sick calf as one which needs or receives supportive therapy of some sort — tube feeding, isolation, electrolytes or drugs.

For every five sick calves there are probably 25 diverting nutrients from growth into immune system function to defend their bodies against infection, i.e. staying healthy but in doing so have reduced weight gains/kilogram of feed consumed.

It is the related illness, poor feed conversion efficiencies and sub-optimal growth rates in surviving calves that cost far more money than the value of the dead calves.

For example, it is quite possible that a group of calves under stress will consume double the amount of grain to reach a target weight when compared with a group of unstressed calves. This alone is an unnecessary cost but when coupled with the other unseen costs linked to poor early life growth rates, such as reduced lifetime feed conversion and failure to reach genetic potential for milk production, the financial impost associated with the cost of dead calves can be huge.

The figures I have given are not graven in stone; they will vary from farm to farm and year to year. The point is that by scrimping on rearing costs, calf health and growth rates will be jeopardised and the long-term financial losses will far outweigh any money saved in the short term.

Long-term productivity will certainly be compromised and animal welfare outcomes will not meet consumer expectations.

Often farms have no easily accessible factual record of the number of deaths that occur in a particular year. Guesstimates of losses are often later proven to be under-estimates.

'For every dead calf, there are about five sick ones.'

The death of only 2 per cent of heifers reared is often viewed as a really good result. If one takes the approximate figures I have given above, two dead calves are linked to 10 sick calves and 50 that are not ill but which have enough of an immune challenge to decrease their feed conversion efficiency.

It is important to remember that I am not using these figures as facts. They are just approximations of what may be happening; on some farms, the results will be more favourable, on others the results will be much worse.

What I am trying to illustrate is that the actual cost of any dead calves can be a drop in the ocean compared with the real, on-going losses sustained, but not seen, by the enterprise.

Which calves should be included in the mortality statistics? From the point of view of improving calf management, it is generally accepted that if a calf is brought in from the calving area to the rearing area and is expected to live, i.e. it is tagged and treated normally for the first few hours of life but subsequently dies, that is should be counted as a dead calf.

Usually counting would cut off at 12 weeks, once a calf has been weaned but since some farms still have 12-week-old heifers on milk, maybe those farms should use a timeframe of weaning plus four weeks as the cut-off point for inclusion in mortality statistics.

Whatever upper age limit is chosen, it is important to be consistent from year to year. It is also important to include a few weeks post weaning in the statistics as poor weaning practices can result in post-weaning deaths, which still relate to poor calf management practices.

Stillbirths and calves that are obviously ill or deformed at birth should not be counted. A note should be kept of these deaths, though, as they may be a result of herd health problems.

Now, let's consider what is an acceptable mortality rate. In an average beef herd in southern Australia, and I have managed several, it is pretty unusual to lose more than 1 per cent of calves, particularly in the first 2-3 months of life. This is what nature can do — 1 per cent or less.

Therefore, if dairy calves are to be removed from their natural mothers and raised by human surrogate mothers, those surrogates should have less than 1 per cent deaths as the goal. Achieving this will have a positive financial impact on the business and will allow the farm to meet consumer expectations.

Money spent on raising heifers does not give a return until those heifers enter the herd. It is important to remember that, providing the money is spent proactively on raising healthy calves, not reactively on treating sick calves, the greater the investment, the greater the return will be.

Attempting to save money by reducing the costs of calf-feeding inputs will result in calves that do not achieve recommended growth rates and that are more likely to become ill and die.

Calves that are limit-fed will achieve low growth rates and will be on feed for much longer to achieve a target weight. Their efficiency of gain will be lower than calves that are fully fed (i.e. it will cost more to grow calves out to a target weight) and they will be far less productive cows when they enter the herd.

Add together the:

- Direct costs of increased mortality.
- Direct costs of increased sickness.
- Extra costs per kilogram of weight gain.
- Lower lifetime milk production.
- Lower lifetime feed conversion efficiency.
- Poor animal welfare outcomes.

This reveals the enterprise has a significant financial burden as well as not meeting welfare expectations.

In times of low milk prices, it is a nor- ▶

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◀ mal survival tactic to try to cut back on every expense. The best way to economise in the area of heifers is to do a really good job.

Sick calves mean that somewhere, something is not being done well; this only adds to the costs of rearing heifers. Raising healthy calves is not any more expensive up front than doing a bad job — it just means money is spent in different areas.

Raising healthy calves may mean spending less money for a better result and it is far more satisfying than dealing with sick and dying calves.

Doing the most effective and economical job with pre-weaned calves means having:

- Excellent colostrum collection, storage and administration practices.
- Farm-specific sanitation protocols that are followed to the letter.
- Milk and grain feeding schedules that allow calves to grow at the recommended rates.
- The ability to weigh calves and to monitor the success of the calf management program.

Failure to acknowledge that an enterprise has a calf management problem will not make the problem go away; the problem will continue to drain resources from the enterprise until it is addressed.

Increasingly, high death rates are becoming not just an economic issue, which farmers can choose to ignore if they are prepared to accept the financial loss, but an issue of customer expectations. A pile of dead calves outside the calf shed is not something which the average customer would be happy about.

The good thing is that making management changes to meet consumer expectations only involves changes that reduce morbidity and mortality rates and increases growth rates and health outcomes, that is, changes that are beneficial to the enterprise.

At times when farmers are looking for ways to improve profitability, improving calf management is an area that delivers multiple benefits. D

***Jeanette Fisher is principal of HeiferMax, website <www.heifermax.com.au>, phone 0428 867 551.**

Dairy vitality starts with calves

Key points

- ✔ Measure calf-rearing cost per kilogram of weight gained
- ✔ Develop calf to express genetic potential for growth and lactation
- ✔ Smart calf-rearing systems offer benefits

By **Carlene Dowie**

THE future vitality of the dairy industry depends on getting calf rearing right, world-renowned calf-rearing expert Dr Bob James told the Dairy Research Foundation's 2018 Symposium.

Dr James, professor emeritus of Dairy Science at Virginia Tech University, challenged farmers to stop thinking about how much calf rearing costs overall but to think about it in terms of cost per unit of weight gain.

He also challenged farmers to think about the overall lifetime production and performance of the cow in the herd when assessing calf-rearing success.

He outlined some of the latest research to provide a thought-provoking address. Dr James spoke about:

- Getting the environment right.
- The importance of colostrum.
- Feeding regimes and its impact on weaning weights and lifetime performance.
- Group housing.
- The use of automatic feeders.
- Facility and people management.

Right environment

Dr James said doing the right job with calf rearing started with the environment in which the calf was born.

When a calf was born in a poor, dirty environment, it became a race between the bacteria from that environment and the antibodies in the colostrum to see which would be absorbed by the calf first.

Dr Bob James says he has changed his recommendations around feeding calves.

Dr James said farms needed an optimum calving area. "When I go to a farm, the first thing I want to see ... is where your cows freshen," he said. "I want to see something that is the cleanest place on your farm.

"I want all of you to think about that calf the same way you think about your child — because biologically they are no different. And would you let your child be born and exposed to an environment like that?"

Importance of colostrum

Dr James said colostrum contained a raft of components that were important to the calf and should be fed for longer than previously recommended. All the focus had been on one component in colostrum — Immunoglobulin G or IgGs or antibodies. These were important and the transfer of those particular antibodies needed to happen quickly.

But the other components in colostrum, including second and subsequent milking colostrum, particularly when it was compared to whole milk (see Table 1) played an important role, which research was starting to unlock.

These other components included cytokines, which are small molecular proteins involved in cell signalling, immune system and growth, and hormones, which are involved in metabolism, growth and cell function.

"We are just discovering the role of these two in the development of the intestine of that young calf," Dr James said.

European research showed calves fed colostrum for the first four days of life had significantly higher long-term glucous absorption and better developed small intestine villi than calves fed calf milk replacer for the same period.

Dr James said he liked to see transition milk fed to the youngest calves for as long as possible. Farmers needed to work out a way to do that that fitted into their calf-rearing management system.

If the farm or herd had a risk of infectious disease, colostrum should be pasteurised. But he did point out that would reduce the transfer of immunity from the cow to the calf. Research at West Virginia Tech had shown calves fed fresh colostrum had a higher immune response to vaccinations than those fed defrosted colostrum that had been flash pasteurised before being frozen.

"If you just can't (feed unpasteurised colostrum because of disease risk), that's a compromise you have to make," he said.

But regardless of disease risk, it was ▶

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◀ vital to ensure milking equipment and storage vessels used for colostrum were clean.

"Again, think about the milk that you ship, if it had a high bacteria count, it would be taken off the market," he said.

"The same thing applies to this colostrum. If fresh cows are milked into dirty pails, it is going to grow bacteria every 20 minutes, the bacteria count is going to double at temperature. Pretty soon, you have bacterial soup.

"I want to cool that colostrum or feed it as soon as possible to minimise that bacterial growth, and that doesn't mean taking the bottle and putting it in an old refrigerator you have at the barn, because it may take eight hours to cool."

Putting a bottle of frozen water into the bucket of colostrum would cool it within 20 minutes.

Dr James said good dry cow nutrition was also important for producing quality colostrum. It was also vital to milk fresh cows as soon as possible after calving. If farmers chose to milk fresh cows only at certain times of the day, that might fit into their management system but they needed to realise they were making a sacrifice on the colostrum quality.

Feeding regimes need to change

Dr James called for farmers to completely rethink their approach to feeding calves.

He challenged them to think about what they fed, how much they fed, how often they fed it and how they assessed the success of their calf-feeding systems.

Dr James said he wanted farmers to feed calves to their biological potential for growth. "That means feeding a higher quantity of high-quality solids," he said. The research was conclusive that what happened pre-weaning had a huge impact on the health and later performance of cows.

It was vital to feed calves high-quality milk or calf-milk replacer. Some waste milk was not suitable for feeding. "Is this something you would feed to your children — some of it is not too bad, some of it is pretty nasty," he said.

He also counselled against assessing calf-milk replacer solely on cost. Cheaper products might contain vegetable proteins or lower levels of protein and energy, which meant calves would not gain weight as readily when fed them.

It was also important to use a quality calf starter. "If you have a really good textured starter that's great, if you have a good quality pellet that doesn't fall apart, that's great," he said.

He also advised including some chopped straw in calf starter — something he said he would never have recommended five years ago. But recent research had shown a small amount helped promote cud chewing.

Table 1: Components in colostrum and whole milk

	Colostrum	Whole milk
Solids %	**15-25**	**12.5**
Protein %	4-14	3.3
IgG %	5.2-9.2	0.04
Lactoferrin %	0.15	0.002
Il-1B	840ug/1000ml	3 ug/1000ml
TNF	926ug/1000ml	3.3ug/1000ml
IGF-1	100-2000 ug/1000ml	<25ug/1000ml

Good facilities are one critical component of successful calf rearing.

Farmers also needed to rethink the quantities of milk fed to calves. "Why did we feed four litres a day," he said. "Well in the US, we had gallon (4L) jugs."

But Dr James said looking at research with beef animals, it was clear calves needed more than that. "An Angus calf will drink six litres by the end of week one, and Angus are smaller than Holsteins," he said. "They (Angus calves) will drink 10 litres by the end of week six."

Whole milk contained high levels of nutrients, particularly fat and protein. "So why does the cows' milk have so much fat and protein — is mother nature countering for changes in the environment with a margin of safety?," Dr James said.

He also dismissed the idea of restricting milk intake to force young calves to eat more concentrates or calf starter to aid early rumen development. "Our industries and universities have supported the idea of limited feeding and early weaning and some still do — I used to teach this," he said.

But research showed there was no lifetime benefit to early rumen development. Calves fed a restricted milk diet consumed more grain before eight weeks of age but by 12 weeks of age, they were consuming less grain and were smaller than calves fed a higher milk diet.

Calves fed higher quantities of milk were also healthier. Dr James said body condition was important to calves. "I like to look at a four-week-old calf and see them start to deposit body fat over their hips," he said.

When a calf became sick, it stopped eating but its energy requirements increased. If the calf had no reserves of fat, it started breaking down protein to survive, compromising critical organs.

He also challenged the idea that feeding more milk or calf-milk replacer caused calves to scour.

"Calves don't have well-formed stools," he said. "If you feed calves more milk, there's going to be more coming out the other end — then people say that calf's got diarrhoea. No, it doesn't. It is probably fairly normal."

Farmers also needed to think about how often calves were fed. A calf fed only at 8am and 4pm was going to be really hungry at 3am, Dr James said.

Dr James said farmers needed to follow the same logic for feeding calves that they followed with cows. They needed to plan the calf diet taking into account the nutrient requirements for maintenance, body weight gain and environment.

Calves needed to be fed more when it was colder — their feed requirements for maintenance increased as temperatures fell (see Table 2).

Feed cost needed to be assessed per unit of production. "So what is unit of production for calves — it is their weight gain," Dr James said.

Farmers needed to measure the weight gain to assess the effectiveness of their system.

Dr James said there would be little gain in week one, but in weeks 2-4, there should be gains. "I don't want to see four weeks where they hardly gain at all and if they are still alive, then they start growing. That's not what I want," he said.

The aim was to achieve a low cost per kilogram of gain and optimum lifetime profit with higher production from those calves when they entered the herd.

Dr James said he did not like the term accelerated feeding. "I want to banish that from your memories — I like to call it biological normal feeding," he said. "This is the way it supposed to be — it is not accelerated, it is not intensive, it is normal."

Automatic feeders

Dr James said smart calf-rearing systems with automatic feeders provided the opportunity to mimic nature. They also provided a raft of data to help management and assess performance.

He said he originally had some doubts about automatic feeding systems. "I remember the first day I walked out to the pad when we had our automatic calf feeders, and all the calves were laying there and I looked at them and I said 'oh gosh what have we done'," he said.

"Then I realised they were just sleeping. Some of them woke up and meandered over and started eating. Very different behaviour.

"It is not normal behaviour for calves to get excited when you come out to them in the morning — they are doing that because they are looking for food."

Automatic feeders allowed calves to be fed regular amounts of milk more frequently. They allowed the farmer to work out a feeding plan — the amount per meal, the amount per day and the percentage solids for each calf. They also allowed for gradual weaning.

Dr James said automatic feeder provided reports on how much each calf was eating and the number of visits it made to the feeder. Some also measured drinking speed. These were indicators for calves there were getting sick.

Many had automatic or semi-automatic cleaning and calibration.

Research was showing major benefits of more natural calf-feeding behaviour that appeared when those animals entered the milking herd. Slug feeding type behaviours might be learned — so teaching a calf to eat twice a day could lead to more slug feeding later in life.

Other options for smart calf-rearing systems that were being developed or available now included:

- Activity boxes on automatic feeders that showed how aggressively a calf was feeding.
- Neck bands that measured activity.
- Water stations that measured water intake and incorporated weighing stations.
- Flashing lights on calves that are triggered by certain alarms so the farmer can easily locate any calf that requires treatment.

Table 2: Amount of milk required for calf maintenance at different temperatures

	Temperature (degrees Celsius)		
Body weight kg	**0**	**10**	**20**
45	4	3.3	2.6
59	4.9	4.1	3.2

Group housing

Dr James said group housing of calves in smart calf-rearing systems also created benefits. Although some veterinarians were concerned about the disease risks with these systems, Dr James said housing calves individually still involved risks. "There are risks in everything we do — we have to manage them," he said.

Calves housed in groups showed less indication of stress, showed improved immune function, were more docile and were an earlier age at first breeding. It also promoted solid intake — as the calves taught each other where the calf starter was located.

They also showed improved lactation performance. "It is a delayed response, but I can tell you in the field trials I have done with dairy producers they can tell you when those first group-fed animals came into the milking system because they notice the productivity difference," he said,

Dr James said the key to achieving optimum calf management was getting the facility and people management right.

Facility planning meant looking at the flow of animals, milk and people and ensuring that these were connected. It meant planning to milk fresh cows as soon as possible and having a commitment to sanitation.

The right people were critical. "I want people committed to that process," he said. "This is where it all begins — if you don't get this right you are always playing catch up. "You need the right people and protocols. You have some people who should never be close to a calf — they wouldn't know a calf was sick if it died right in front of them.

"Having people who can detect some changes in behaviour are priceless." D

Nita McRae with calves.

Good systems key to success

Key points

- ✔ 1000 calves raised last season with six deaths
- ✔ Clear procedures for all staff
- ✔ Calves fed fortified milk

By **Jeanette Severs**

WITH 800 calves on the ground in a short timeframe, management, planning and record keeping are critical to the health of the animals and people involved on the McRae dairy farms in Gippsland.

For Nita McRae, losing six calves out of a total 1000 last year is a testament to her hands-on oversight of the calving operation at Nambrok, Vic.

Stewart and Nita McRae operate three dairy farms at Nambrok, Sale, Vic, and Fulham, Vic, milking 1100 cows. They have an outpaddock at Stradbroke, Vic, to raise heifers and steers.

The main herd is milked in a 50-bay rotary dairy at Nambrok. The balance of the herd is milked on the other farms in a 30-a-side swingover and a 14-a-side swingover. All the dairy sheds have automatic cup removers.

'I train everyone for their jobs. Training is also about forward planning on where you want to get to.'

The herd comprises mostly Friesian-cross cows and incorporates a Holstein stud. The cows are artificially inseminated using the Holstein semen sourced from the stud, along with Friesian, Jersey, Normande and Montbeliarde semen. The McRaes also use embryo transplants in select milking cows from their Holstein stud herd.

Nita and Stewart McRae expect progeny on the ground from late July — with 80 per cent of the Nambrok herd calving in spring and 20 per cent in autumn and all the cows on the other two farms calving in spring.

Mrs McRae raises all the calves. In 2017-18, she reared 1000 calves, with six deaths.

"I traditionally raise all the heifers and steers," she said. Non-replacement heifers are sold at point-of-calving.

Steers are sold at 14-months to two years of age, depending on the season, normally directly to a feedlot at 400 kilograms.

Last year Mrs McRae diversified her marketing. "The last spring-drop, I raised them to 250kg and sent some small lots to Koonwarra saleyards to sell to local grass-finishers," she said. "I just wanted to catch smallholding farmers to see how that went."

Financially it was worthwhile until the market prices dropped. "It was a good venture, but then the season turned poor and the market was flooded with young cattle," Mrs McRae said.

"It costs $350 to get a calf to 100kg, their weaned weight. That includes $70 costed as labour, all the milk out of the vat valued at the autumn price and fresh bedding each year."

The process to raise the calf to weaned weight is quite methodical, although hands-on. It is also a well-oiled machine, with everyone cognisant of their roles and responsibilities

Teaching the calves to feed involves giving them two bottles of two litres of colostrum in the first day.

— from the trainee calf rearer to the seasoned workers.

That understanding is because of the team approach taken by Mrs McRae, with well-briefed and trained employees, supplemented by methodical record keeping.

Mr McRae takes observations recorded in paddock and in the calf shed and puts them into a comprehensive computerised database.

Training is encouraged. Mrs McRae and the other two members of her calf-rearing team have undertaken Dairy Australia calf-rearing courses.

"The DA workshop made me realise procedures are important," Mrs McRae said.

"I train everyone for their jobs. Training is also about forward planning on where you want to get to.

"Because we all did the workshop, it put us all on the same page."

A diary is used to plan and record all activity and as a way of passing on messages. This information is then distilled into the farm's computerised management system by Mr McRae.

Systems help records

The heifers are synchronised for calving. All heifers and cows receive rota corona vaccination, with an annual booster given six weeks before calving is expected to begin.

"Because I rear so many calves, rotavirus is a risk; but since we've been vaccinating, I don't get it any more," Mrs McRae said. ▶

◀ The business implements a twice-a-day round up of calves in the paddock.

"When the cow has a calf in the paddock, we put a collar on the calf," Mrs McRae said. "That collar stays on the calf until it is ear tagged and permanently identified and clearly connected to the cow in our records system."

The pick-up man also records information including where and how he found the calf, if he saw it born and how it was born, if a breech birth, what it looked like, if there were multiple births to the one cow, any deformities on the calf, the size of the calf, and the mother's ear tag. "Even a dead calf gets a collar on it," Mrs McRae said.

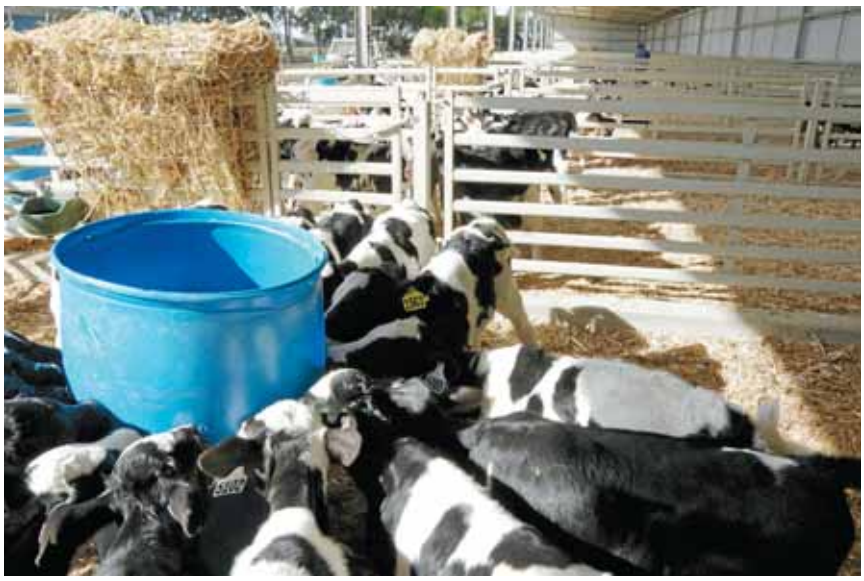
The batch of calves is delivered to the shed and their umbilical cords are sprayed. The trailer is hosed out every day with hot water.

"Everything at this stage is about infection control, identification and teaching the calf to drink," Mrs McRae said.

The calf receives two drinks of two litres of colostrum. After each drink, a piece of hay bale is used to record the event. This year, after the first colostrum was given, a pink hayband was tied loosely around the calf's neck. After the second colostrum, a red hayband was used as a record in the same way.

"I use a refractometer to check the milk," Mrs McRae said. "Every cow goes on a bucket for her first milkings and this milk is used for the calves. It's very fiddly but it pays off."

The colostrum is fed via a bottle. "We've got to teach the calf to drink, so we might as well begin at the start," Mrs McRae said. "The earlier the calf comes into the shed, the easier it is to teach them to drink."



Calves in the purpose-built calf rearing shed.

Any treatments are recorded on a clipboard, hanging from the front of each pen. A yellow collar is also utilised to indicate that a calf is in a treatment program.

"It usually simple, like an infected naval, requiring penicillin," she said. "Or pneumonia-like symptoms.

"But every one of us can see visually that a calf is being treated for something and the record is there to follow and implement and update."

There are also isolation pens for sick calves, where the calf remains until it is well. "Then they return to the group they came out of," Mrs McRae said.

The two purpose-built calf sheds include a sunny aspect during the day, with wind protection, good ventilation with 12 metres from ground level to the roof, a cement floor that slopes to enable urine and wash runoff and installed water points.

The bays — at nine metres deep and four metres wide — are sized to enable a tractor to enter and pick up the used bedding. The side fences and gates can be dismantled from each pen. There is a purpose-built hayrack on each pen and adlib water is supplied by a bore.

Four truck trailer loads of wood shavings are brought in to provide bedding.

It has taken considerable investment, planning and patience to

achieve the purpose-built sheds, but Mrs McRae is pleased with the design.

"Crypto is manageable in this system, but adlib water makes a difference," Mrs McRae said.

"If a calf gets a fever, they dehydrate pretty quickly. If we provide adlib water, we've noticed they'll drink."

By the time the calf is four days old, it should be drinking with the rest of its group. From day three, the calves start drinking fortified milk: four litres of vat milk mixed with up to 125 grams/day of powdered milk for each calf.

"I add the slurry in with the vat milk, so it mixes in well," Mrs McRae said.

Feeding the calves is very hands-on, which is why the dedicated team makes a difference to the system.

"It's important to eyeball the calves every day, make sure they all get on the teat and make sure the milk is going up the tube," Mrs McRae said.

The calves start eating muesli on day two. Once established, the muesli is mixed with pellets. Adlib cereal hay, locked in preharvest in a normal season and feed tested, is available at each calf pen from day one.

This year Mrs McRae is trialling a probiotic. "It's an all-natural product and I put a good dollop of it in their milk. I'm actually pretty happy with it," she said.

Calves in the paddock with adlib grazing and hay.

Sick animals receive 100 millilitres of the probiotic in their bottle of milk.

At four weeks of age, the calves at disbudded — done under a local anaesthetic and performed by HiCo technicians. A hair sample is taken from each calf and is genetically tested.

By this age, the first seven-in-one vaccination and Baycox to offset the risk of coccidiosis have been administered.

Each calf is expected to be eating one kilogram of standard baby calf pellets.

At four to six weeks, the calves are shifted into paddocks where they have access to adlib cereal hay, pellets, grazing and water. From 10 days old until the calves are 100kg, they receive milk once a day. At 100kg, they are weaned and taken to the out-paddock at Stradbroke.

Cleaning is a priority for the business and a woman is employed specifically for this role each day. During the week, every piece of feeding apparatus is cleaned and the pad at the front of the shed is hosed daily.

Every day, the woman has to spray the bedding, troughs and pen rails with Activate and clean the water troughs. "We've found Activate wasn't harmful to the animals," Mrs McRae said.

Once the calves are in the paddock, the shed bays are cleaned out of mulch and washed with hypo.

Nita McRae is the lynchpin in the system. "I rear the calves well because I love them and value them," Mrs McRae said. "The reason it works here is because one person is here all the time." D

Mastitis vaccine research shows promise

Key points

- ✔ Novel approach to developing mastitis vaccine
- ✔ Successfully proven in mice
- ✔ Next step to test in ruminants and then field trials

By **Carlene Dowie**

Dr Jully Gogoi-Tiwari won the Emerging Scientist prize at the Dairy Research Foundation's Symposium for her presentation on her mastitis vaccine research.

A GROUP of Western Australian scientists have made a promising start to developing a vaccine for mastitis. One of the group, Dr Jully Gogoi-Tiwari, from Curtin University, presented results of the research at the Dairy Research Foundation's 2018 symposium at Camden, NSW, in July.

Dr Gogoi-Tiwari said mastitis was a major problem for the Australian dairy industry costing farmers about $130 million a year. The only treatment option was antibiotics, but overuse of these had led to the development of antibiotic-resistant bacteria, resulting in reduced cure rates.

Previous attempts to develop a vaccine against the predominant mastitis-causing bacteria *Staphylococcus aureus* had failed because of the nature of the bacteria.

Dr Gogoi-Tiwari said *Staphylococcus aureus* could grow in two different forms: the free-living form and the biofilm form.

"The free-living form when it enters into the mammary gland of a cow starts forming a slimy layer all around it," she said.

"That slimy layer is known as biofilm. Biofilm acts like a shield for the bacteria.

"It protects the bacteria from cow's own immune system, the protective mechanism and from antibitoics."

This led to antibiotic failure, allowing the infection to become chronic.

Dr Gogoi-Tiwari said previous unsuccessful attempts at creating the vaccine had used only the free-living form of the bacteria.

The WA researchers took a new approach, incorporating both the biofilm and live bacteria, to produce a vaccine called BOSA 51. They had tested the vaccine on mice and it had been successful, producing an immune response in the mice and preventing mastitis.

Dr Gogoi-Tiwari and her team are processing a patent application for their research.

They are also applying for funding to then test the vaccine in a ruminant model, either goats or cows, and would then look to do field trials in dairy cows.

They are hopeful the vaccine would be effective in preventing both clinical and subclinical mastitis.

Dr Gogoi-Tiwari said although the vaccine would only be effective against *Staphylococcus aureus*, the vaccine-development method might be successful with other mastitis-causing bacteria.

She said another group of scientists in the Netherlands was working on developing a vaccine using biofilm only.

Dr Gogoi-Tiwari won the Emerging Scientists prize at the sysmposium for her presentation. D

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November 9-12 Gold Coast	**Australian Biological Farming Conference** Website: <https://www.australianbiologicalfarmingconference.org/>
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November 30 Melbourne, Vic	**Dairy Australia's 2017 annual general meeting** Contact: Dairy Australia Phone: (03) 9694 3777 Website: <www.dairyaustralia.com.au>

Hunt for the smartest dairy app

CALLING dairy tech heads. The Australian Dairy Conference is on the hunt to find the smartest farm apps being used on Australian dairy farms and it wants farmers' help.

Technology has a significant impact on the Australian dairy industry. The ADC programming committee wants to know what farmers use, how they use it and how it has changed or improved the way they operate their farm business.

Nominated apps will be tested rigorously with the top five selected to be demonstrated at conference by members of the Young Dairy Network Australia.

Conditions apply (see entry form). Entries close October 10.

Just by nominating a favourite farm app, farmers can go into the draw to win full conference registration to ADC to be held in Canberra from February 19-21.

Go to web link <http://bit.ly/BestDairyApp> to lodge a nomination.

This is the first time ADC has descended on Canberra and the location will set the scene to prompt a range of dairy leadership discussions given the political environment and proximity of key policy-makers.

Canberra will also be used as a base to explore the dairy regions of NSW with pre-conference plans underway for delegates to tour Central New South Wales including a visit to one of the largest dairy operations in the country.

To find out more about the conference, head to website <http://www.australiandairyconference.com.au/>.

Haplotypes affect herd fertility

By **Ee Cheng Ooi***

Key points

- ✔ Haplotype discovered in Jersey cows
- ✔ Can cause early embryonic death
- ✔ Results in lower conception rates

THE latest round of Australian Breeding Values (ABVs) has been released, and with the use of genomics, the dairy industry is moving towards the 'perfect cow' faster than ever before. Scientific breakthroughs in genetics not only help farmers to achieve their goals faster, but they can also help everyone understand how to get there safely. Risk management is a less glamorous topic than accelerated progress, but it has always been one of the foundations of profitable farming.

With this in mind, I want to talk about haplotypes. In 2011, scientists discovered a sequence in Jersey DNA that significantly affects fertility — something they called the JH1 haplotype. Haplotypes are groups of genes that are inherited together from a single parent. In this case, the JH1 variety is defective. It can't produce an important protein that is needed for life.

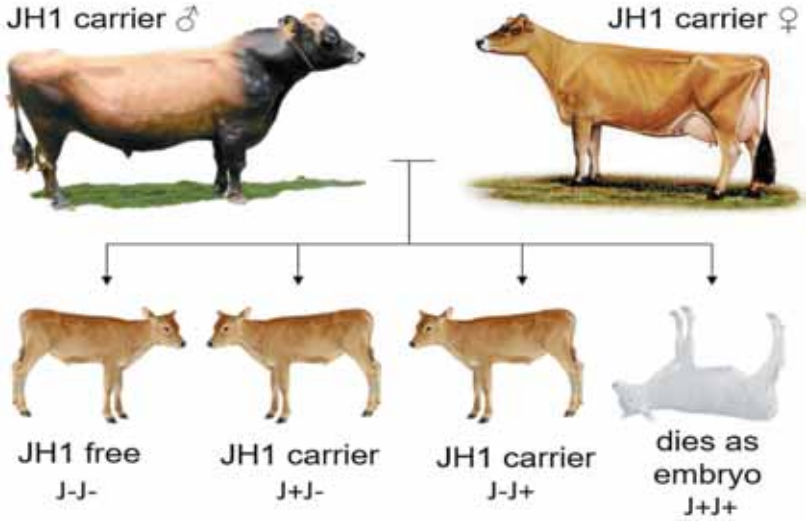
Luckily, most animals (including humans) have two copies of each gene, with one inherited from each parent. So if an animal is a carrier for the JH1 haplotype, it still has one working copy, which is able to compensate. This means that there is little impact on that animal's performance.

The problem occurs when a carrier is joined to another carrier. Copies of the genes recombine randomly in the embryo and there is an equal probability for one of four possible combinations — two where the copies are different (Aa or aA — known as 'heterozygous') and two where they are the same (AA or aa - 'homozygous').

If the embryo is homozygous for the non-JH1 haplotype — that's great news, the calf is in the clear. If it is heterozygous, it becomes a carrier — which won't affect that animal's performance.

But if it is homozygous for the JH1 haplotype, the embryo will die. This means a quarter of these pregnancies are lost within 60 days of insemination, which show as lower conception rates.

Figure 1: What happens when two animals carrying the JH1 haplotype are joined.



If a farmer has been unknowingly using JH1 positive bulls for many years, the frequency of the JH1 gene in their cows will have risen steadily. A calf with two carrier parents has a 66 per cent chance of being a carrier itself and only a 33 per cent chance of being JH1-free. Even if a calf has one non-carrier parent, it has a 50 per cent chance of being a carrier.

How significant is this problem within the Australian dairy industry?

The good news is that a study done by Australian scientists in 2011 showed that the frequency of the JH1 haplotype in Jersey bulls was only 6.5 per cent, with 35 out of 540 bulls testing positive. The bad news is that a study done in the United States found that the frequency was 23.4 per cent, and in the past seven years, the number of bulls imported from the US has been rising. Individual farms also tend to use a large number of straws from a small number of bulls, so the frequency in the sire population does not necessarily reflect the frequency in calves born on a particular farm.

The ugly news is that another haplotype that affects fertility (JH2) was discovered in 2014.

Holstein-Friesians aren't exempt either, with six known haplotypes (HH1 to 6). However, these haplotypes occur at a lower frequency than JH1 at present.

How can a farmer tell if this affects them?

If farmers are seeing cows mysteriously come back on heat within two months of a seemingly successful joining, or if they have an unexpectedly high percentage of cows tested in-calf early that then calve late, it may be worthwhile checking the herd's pedigrees for carriers.

How do farmers know which animals are carriers?

Animals can be directly checked for carrier status using genomic testing. For AI bulls, haplotype status can be seen using Displayabull on the Datagene website. Or alternatively, ask a breeding consultant to check sires.

What can farmers do next?

To reduce the frequency of haplotypes in their herds, farmers should look at only use bulls with a JH1-free status. However, it can still be tempting to use high-performing bulls that are carriers. If these are used, it would be a good idea to join them to non-carrier cows. Conception rates for that joining will not be reduced, but half of the offspring will be carriers whose future joinings will need to be carefully managed. D

- **For more information, see Technote 16 on the Datagene website or have a friendly chat with a breeding consultant and/or AI technician.**

**Ee Cheng Ooi is a dairy veterinarian and fertility researcher in Northern Victoria. All comments and information discussed in this article are intended to be of a general nature only. Please consult the farm's vet for herd health advice, protocols and/or treatments that are tailored to a herd's particular needs.*

DataGene
Solutions for Herd Development

Good bulls on a budget

Key points

- ✔ Buy catalogue specials
- ✔ Plan ahead to take advantage of specials
- ✔ Ask for only Good Bulls within set budget

LOCKINGTON, Northern Victorian dairyfarmers, Jared and Courtney Ireland, haven't let a limited budget stop them breeding one of Australia's highest genetic merit herds.

"As sharefarmers our herd is our biggest asset and we've built it from scratch," Mr Ireland said. "We started off with a budget of $16/straw. Nowadays our budget for the milking herd averages $20 a straw, and we use more expensive sexed semen over the heifers. But we are still very budget-conscious."

In the past 10 years, the average Balanced Performance Index (BPI) of the Irelands' 420-cow herd, Redmaw Holsteins, has increased from 18 to 118 and it now averages 8000-8500 litre/cow and 3.45 per cent protein.

"Our breeding objectives are very focused on BPI, type, cell count and fertility," Mr Ireland said.

The Irelands were one of 27 dairy farms across Australia that recently underwent detailed analysis by the ImProving Herds project to investigate the contribution of genetics to dairy businesses.

The study showed that even in a high genetic merit herd like the Irelands, the higher BPI cows contribute far more to the farm business than the lower BPI cows.

ImProving Herds found that the top 25 per cent of the Irelands' cows (based on BPI) each contributed $585 more income/cow/year after feed and herd costs than the bottom 25 per cent.

The top cows produced an extra 1338 litres (104kg milk solids) and lasted an extra nine months in the herd.

Mr Ireland said the Good Bulls App made it easy to choose bulls on a budget.

"We use the app to create a short list of bulls based on BPI and our priority traits, then we filter for traits such as milking speed and temperament," he said.

"We make the final selection by looking at catalogues, price and pedigree.

"You don't need a big budget to build the genetic merit of your herd. The high price is often driven by fashion, high demand and low availability; wait six months and the price often drops."

Jared Ireland says his breeding objectives are focused on BPI, type, cell count and fertility.

Each proof run, the Irelands make a list of bulls they are interested in. Storing semen on farm allows them to buy any time of the year.

"We often pick up bulls on special that would normally be out of our budget, but you need to keep an eye out for them," Mr Ireland said.

Mr Ireland's tips for buying Good Bulls on a budget include:

- Buy catalogue specials.
- Plan ahead to take advantage of specials.
- Ask the adviser for a package that includes only Good Bulls within the set budget.
- If the farm has plenty of replacements, consider using cheaper, beef straws over the bottom quarter of the herd.

A recent analysis by DataGene confirms Mr Ireland's experience that it's possible to buy semen on a budget without compromising genetic gain.

Michelle Axford from DataGene recently reviewed the relationship between genetic merit, based on BPI and the recommended retail price of straws. It included more than 500 Holstein bulls with easily accessible recommended prices. While the elite BPI bulls (BPI higher than 300) were more expensive on average ($31/straw), the average price of the remaining bulls is $27/straw, regardless of BPI (see table).

Table 1: Recommended retail price of Holstein bulls grouped by Balanced Performance Index (BPI)

Group	Average retail price ($/straw)	Retail price range ($/straw)
1. Elite bulls (BPI > 300)	31	18 -150
2. BPI 250-300	27	14-50
3. BPI 200-250	26	12-100
4. BPI 170-200	27	12-90
5. BPI -100-170 (BPI below Good Bulls criteria)	27	12-80
Av all bulls	28	12-150

"Higher BPI bulls don't always cost more," Ms Axford said.

"Even among the top 100 BPI bulls, the price ranged from $14 to $150 a straw."

Ms Axford said a simple and effective approach was to look for bulls in the budget price range that carry the Good Bulls icon and meet the breeding priorities.

"By using Good Bulls to breed replacements, you can be confident they will improve the Balanced Performance Index of your herd," she said.

Bulls that carry the Good Bulls logo meet DataGene's minimum criteria for BPI and reliability and are available for purchase.

"There is a wide range of Good Bulls, giving farmers plenty of choice for Good Bulls that meet their priorities for specific traits, budget and company preferences," she said.

For more ideas, refer to DataGene's fact sheet: Controlling herd improvement and AI costs or email <abv@datagene.com.au>.

Dairy Australia
Your Levy at Work

Feed shortage: Make spring matter

Key points

- ✔ High demand for fodder leading to widespread feed shortage
- ✔ Dairy Australia mobilises industry
- ✔ RDPs deliver on the ground

DAIRYFARMERS navigating the feed shortage can now access a new Dairy Australia campaign, Feed Shortage 2018, as the fodder market continues to be tight.

High demand for fodder in some regions is causing a feed shortage across the east coast of Australia, while water prices and availability are adding uncertainty for irrigators.

In response, Dairy Australia's Feed Shortage 2018 offers:

- Resources, tools, advice and support to maximise homegrown feed in late winter and spring.
- Assists farmers to determine ongoing feed requirements and plan ahead with feed budgeting tools.
- Ensures farmers have access to the latest regional and national feed, fodder and water market information to support key decision-making on farm.
- Guides to relevant government support available

Dairy Australia's Neil Webster said the most important message for farmers was to be prepared and act now to best prepare for the coming year.

"RDPs (Dairy Australia Regional Development Programs) are increasing regional extension activities about feed options, planning and optimisation," he said. "These activities will be promoted through industry networks and communications directly to dairyfarmers.

'I encourage farmers to reach out to the support around them.'

"To navigate these tough times, I encourage farmers to reach out to the support around them, contact their RDP and tap into resources available in their region."

Mr Webster said while farmers in drought-affected parts of the country have been working through a feed shortage for some time, the impact of higher fodder and water prices had become more widespread. "The indications are that all farmers will be impacted to some extent over the next 12-18 months, either directly by poor conditions, or through the availability and price of bought in feed, particularly fodder," he said. "It's really important for farmers to optimise spring and conserve as much fodder as possible, where they have the opportunity."

Farmers in some regions had already moved to develop feeding plans that include managing alternative feed and fibre sources, and constructing feed rations, Mr Webster said.

To assist this Dairy Australia is providing technical, nutrition and animal health information to manage the implications and risks of different feeds. D

For more information visit website <www. dairyaustralia.com.au/feedshortage>.

Key resources

- Feed budgeting tool. This is an Excel-based tool that will help farmer review their feed supply and demand over three, six, nine and 12-month periods, so they can make strong tactical decisions around feeding cows.
- Feed budgeting video. Watch dairy feed and nutrition expert Steve Little talk through how to prepare a feed budget for the herd.
- Dairy FeedTools. Plan and track the farm's feed requirements costs and other resources using this complete feed management toolset. It has data from each region and helps with on-farm tasks including creating feed plans and setting up inventories. Sign up to start using Dairy Feed Tools online now.
- Murray Dairy Business Tool. Helps dairyfarmers manage current seasonal conditions through informed decision making. An Excel-based spreadsheet where farmers can enter their own farm business data to realistically test the impact different water allocations, milk price and grain and fodder costs may have on their business.
- Dairy Cash Budgeting Tool. A simple Excel-based spreadsheet that assists farmers to plan and manage their cashflow.
- Hay and Grain Reports. Provide up-to-date information on hay and grain supply, demand and pricing by region.
- Production Inputs Monitor. Report provides information about key farm inputs including water, hay, grain, fertiliser and weather.

Dairy Australia offers several tools to help farmers with feeding management.

Spring grazing and silage guides ready

Key points

- ✔ Guides released to help farmers in spring
- ✔ Grazing management key to full-season production
- ✔ Pasture silage key source of supplementary feed

WHILE conditions are variable across the country, spring grazing management and silage are top of mind for dairyfarmers as they work to conserve as much quality feed and fibre as possible.

Dairy Australia has two resources to help in the decision-making needed in the spring flush where conditions are favourable.

The resources *Ryegrass — Spring Grazing Management* and *Quality Pasture Silage, Five Easy Steps* offer simple and straight-forward guidance to assist farmers in making profitable daily and seasonal decisions.

Dairy Australia's Cath Lescun said at this time of year optimising the amount of pasture grown, eaten and conserved was key.

"With farm businesses facing a feed shortage at the moment, understanding the principles of grazing management are very important and impacts on annual dry matter production and pasture quality," she said.

"Spring grazing management decisions also have a crucial impact on the amount and quality of pasture grown later in the season.

These two guides are available to help dairyfarmers make the most of spring pasture.

'Spring grazing management decisions also have a crucial impact on the amount and quality of pasture grown later in the season.'

"The perennial ryegrass guide covers ryegrass identification, identifying growth stage based on leaf appearance, pre and post-grazing measures and tools to assist in using this information and getting a good balance between pasture and animal performance."

The silage guide complemented the spring grazing management resource, Ms Lescun said.

"We know that pasture silage is an important source of supplementary feed and that the better the silage quality the better the cow performance," she said.

Tasmanian-based dairy farm manager Wolfie Wagner said the guides were great for staff to have on the dashboard in the ute or in the dairy to review spring grazing principles.

"While there are dry conditions in parts of the country down here in Tassie it's been wet," he said.

"The challenge now is to plan ahead and not damage our pastures, because if we do that it sets us back and puts back our recovery into spring. It pushes spring further away.

"You can't just hope for the best. You can't just assume you'll be right in spring. The reality is we won't see spring until October down here and you need to think about your fodder sources now and plan ahead." D

Download electronic versions of the guides at website <dairyaustralia.com.au/feedshortage>.

In spring, optimising the amount of pasture grown, eaten and conserved is key.

Dairy Australia
Your Levy at Work

Maximising spring feed with nitrogen

Key points

- ✔ Using nitrogen to grow more homegrown feed
- ✔ Calculate cost and compare with cost of grain and bought-in fodder
- ✔ Follow best practice to boost response rate

NITROGEN can be a cost-effective way to grow extra feed this spring and beat high bought-in feed prices, providing soil moisture is right.

University of Melbourne nitrogen expert, Professor Richard Eckard said ryegrass growth was strong in warmer temperatures at 18-21 degrees Celsius.

A typical response to nitrogen in those conditions is 10 kilograms of dry matter for every 1kg of N.

"That's a typical response and if the soil moisture is there you can get responses 15kg-18kg DM to 1kg N as temperatures increase," Mr Eckard said

Gippsland-based consultant Matt Harms said nitrogen boosted pasture could be significantly cheaper than imported fodder right now.

"With urea at $600/tonne and then nitrogen at $1300/tonne, if we can grow and harvest all that response that means the cost is around $130/tonne DM," he said.

"That's pretty valuable fodder going down the throat of cows when you look at grain concentrates at $500/tonne."

Mr Eckard said applying nitrogen could be useful until the end of October. "If the prediction is for a drier, late spring, you'd keep going as long as soil moisture was there, and as long as the grain price is high and other feed sources are high it's cost-effective," he said.

How much does nitrogen grown grass cost?

This will depend on the cost of urea, the response rate and the utilisation (how much of the extra growth is used). Table 1 shows, even at below average response rates e.g. 10:1, additional pasture grown compares favourably with current costs for purchased feeds (particularly purchased hay and silage).

Applying nitrogen in spring can help boost stocks of home-grown fodder.

When purchased feed prices are high, below average response rates will be profitable.

Pasture conservation

In the case of pasture conservation, it is recommended to apply N at a higher rate (up to 60kg of N/ha in later spring), after grazing when the pasture is closed up for conservation.

Results from using split applications of N, for example after grazing and again partway through regrowth, are more variable, and this practice isn't recommended.

What influences the response rate to nitrogen?

The amount of pasture grown in kg DM/kg N applied is the 'response rate'. For example, where 30kg N/ha is applied and an additional 300kg DM/ha of pasture is grown, the response rate is 10kg DM/kg N fertiliser applied. The response rate is dependent on:

- Amount of available N in the soil — the greater the deficit, the higher the response.
- Soil temperature — the warmer the soil, the greater and more immediate the response.

Dairy Australia
Your Levy at Work

Key messages about nitrogen

- Nitrogen-boosted pasture can be significantly cheaper than imported fodder.
- Even at low responses of 5:1 or 3:1 (refer to Table 1), nitrogen application could be worthwhile this season
- Apply N at rates of 20-50 kg N/ha per application, no closer than 21 to 28 days apart when the pasture is actively growing and can utilise the N.
- Ensure soil moisture is adequate to sustain the regrowth and temperatures are conducive to good pasture growth.
- Once soil moisture content is about 20 per cent, plant growth is likely to be limited for most soil types.

'If the prediction is for a drier, late spring, you'd keep going as long as soil moisture was there...'

- Plant growth — the higher the growth rate potential, the greater and more immediate the response. Also better species composition means better responses.
- Moisture — too much or too little water will lower the response. The best response is from a full profile.
- Rate of N applied per application — there is a diminishing response at high application rates, but also an unreliable response at low rates, therefore stick to rates between 20 and 50kg N/ha per application depending on the additional growth required.
- The availability of other plant nutrients and soil pH.

General guidelines for N management

- Apply N strategically, rather than by fixed recipe: Before each N application estimate the likely N response (i.e. from look up tables, experience, and farm consultants) and compare the cost of additional pasture produced to other purchased feed options.
- Only apply N when the pasture is actively growing and can utilise the N. Ensure soil moisture is adequate to sustain the regrowth and temperatures are conducive to good pasture growth.
- Apply N at rates of 20-50 kg N/ha per application, no closer than 21 to 28 days apart.
- Ensure that the extra pasture grown is utilised either through grazing or as harvested forage, as utilisation has a big impact on the economics of using N. To get the most out of N application on ryegrass, graze as close to 2.5 leaves to canopy closure as possible.
- Do not graze perennial pastures for 7 to 14 days after nitrogen application, as this is when nitrate levels are highest. Other forage types and weedy paddocks may need to be left longer.
- Cloudy or overcast days will increase the time needed before paddocks can be grazed after nitrogen application. D

Learn more at website <www.dairyaustralia.com.au/feedshortage>

Table 1: Variation in the cost of additional pasture consumed when urea is about $600/tonne. Utilisation column assumes this is the utilisation of the extra pasture produced. 100 per cent utilisation is achievable.

Extra response kg DM/kg N	Utilisation	Cost $/T DM
High response 20:1	100%	$65/T DM
	75%	$87/T DM
Average response 10:1	100%	$130/T DM
	75%	$175/T DM
Low response 5:1	100%	$260/T DM
	75%	$350/T DM
Very low response 3:1	100%	$435/T DM
	75%	$580/T DM

Table 2: Estimated pasture response to N based on existing growth rate

Pasture growth rate	Pasture growth (kg DM/ ha/day)	Response (kg DM/ kg N)	Pasture quality	Climate
Slow	10	5–8	Poor/open sward/ high weed content	Cold/moisture limited/ waterlogged
Moderate	20–40	10–15	Ryegrass pasture	Typical late winter/ early spring
Fast	50–70	15–20	Well-managed ryegrass pasture	Typical mid spring

Table 3: The best time to apply nitrogen

Too early	2–3 days pre-grazing	1–3 days post-grazing	3–7 days post-grazing
Applying N more than 3 days before grazing can result in pasture taking up N and cows grazing it off before a growth response can be seen. It can also cause serious animal health issues.	Pre-grazing application can be used to reduce ammonia loss in hotter weather.	Best responses occur applying N soon after grazing.	For every day delayed in applying N post-grazing there is about 1% loss of the potential extra growth.

Dairy Australia
Your Levy at Work

Tool helps plan feed with accuracy

Key points

- ✔ Dairy Feed Tools web-based resource
- ✔ Allows feed plan to be formulated to meet herd requirements
- ✔ Can be easily shared with farm team members

WHETHER farmers have pastures to manage or are feeding concentrates and purchased fodder, Dairy Australia's Dairy Feed Tools is key to developing and managing feed plans.

Dairy Feed Tools helps farmers plan their year's feed and nutrition strategy as well as staying up-to-date on what the cows are consuming and what is left in the pit, shed and silo.

The management toolset is backed by Australian feed and pasture data to most accurately reflect the needs of the herd.

Dairy Australia's Cath Lescun said the web tool would help farmers check their current feed rations and planning and enable sharing of information among farm managers and employees.

'It also looks at the energy, protein and starch levels of the ration and alerts you if they are not meeting cow requirements.'

Currently, feed options for dairyfarmers vary widely from region to region, however, the Dairy Feedtools is applicable to all.

"It's making sure your ration meets your herd feed requirements, and it provides a method to communicate with farm team members," she said.

The Dairy Feed Tool allows farmers to input customised data that will take into account animal size and feed type to accurately formulate a ration.

"It also looks at the energy, protein and starch levels of the ration and alerts you if they are not meeting cow requirements," Ms Lescun said.

The feed planner web tool also enables farmers to develop a feed plan for up to a year for milkers, early dry cows or transition cows.

A key feature of the tool is allowing users to develop a feed plan based on diets formulated to meet cow's daily energy and protein requirements.

It will also allow every person working with the herd to access information to ensure feeding regimes are not only well planned but are also accurately implemented.

"That communication between farm team members is crucial," Ms Lescun said.

"This tool will help keep everyone on the same page when it comes to feeding, which means planning can be done with more confidence and results can be more accurately appreciate." D

Dairy Feed Tools can be accessed at website <www.dairyaustralia.com.au/feedtools>.

Farmer uses reports to track prices

Key points

- ✔ Farmer uses hay and grain reports to keep tab on prices
- ✔ Vital as season tightens in different regions
- ✔ Information is provided by market experts in hay and grain.

AS feed prices increase across Australia, dairyfarmer David Kuhl relies on Dairy Australia's Hay and Grain Reports to keep an eye on pricing, availability and help plan ahead.

Mr Kuhl milks a peak of 180 cows on his year-round calving farm at Mt Gambier, South Australia, and relies on homegrown feed supplemented with grain.

"Now more than ever, dairyfarmers should be looking at the Hay and Grain Reports and taking advantage of any new information they can gather," Mr Kuhl said."Whether you use all the information or not, the reports are there and they offer insights that can help you plan ahead."

The reports are an invaluable resource for dairyfarmers, offering the latest hay and grain market information on pricing, supply and demand across the dairy regions.

As farmers in many regions along the east coast of Australia look to make strategic feed decisions on farm, Mr Kuhl said it is important to keep an eye on where fodder is available.

Mr Kuhl's farm is affected significantly by fluctuating grain prices and a competitive market for buyers.

"We will be using these reports as we look to the year ahead, because a lot of the grain regions are struggling and prices are going to be pretty big heading into next year," he said.

Hay and grain reports

- Dairy Australia generates two reports to help farmers make informed decisions when buying hay and grain.
- Provides information about potential quality issues
- Reports provide an independent and timely assessment of hay and grain markets in each dairying region.
- Reports are updated 40 weeks per year.

"Dairyfarmers really need to check out these reports regularly because if they're looking to secure fodder, it's going to be a bit of a fight out there to try and get it.

"From what I've heard, in dry crop-

'Dairyfarmers really need to check out these reports regularly...'

ping areas, fodder mightn't be good enough for silage but they'll sell it anyway, so it's important to keep across those trends."

Dairy Australia's Industry Analyst Sofia Omstedt is providing regular video updates of the Hay and Grain Reports that can be viewed at website <www.dairyaustralia.com.au/feedshortage>.

Dairy Australia's industry analyst Sofia Omstedt is providing regular video updates of the Hay and Grain Reports.

Easing the pain of disbudding

Key points

- ✔ Disbudding calves using pain relief
- ✔ Reduces pain and recovery time
- ✔ Boosts calf growth rates

DISBUDDING calves using pain relief has proven to be a cheaper, safer and more effective alternative to dehorning for NSW dairyfarmer Brad Smith.

There has been a noticeable increase in the use of pain relief for disubudding calves in Australia.

This trend is backed up by research that shows pain relief for disbudding not only reduces pain and recovery time in calves, but also boosts growth rates.

Mr Smith, who milks around 150 cows at his farm at Brogo, just outside Bega, was tired of the dangerous process of dehorning heifers and was keen to take up an offer from a local vet to disbud his young stock with pain relief.

'I have to say, after the disbudding, the bounce back of the calves is phenomenal.'

Mr Smith said he saw the benefits from a process that was less painful and less disruptive than dealing with much larger, older animals.

"We used to do them when they were about six to 12 months, because they had a bit of horn to work with," he said.

"We would get thrown around and it was ending up hurting us as well as the animals."

Mr Smith said he had read about research that showed calves that received pain relief before disbudding went on to achieve higher growth rates.

Research by Massey University (New Zealand) in 2015 and 2016 found calves that received pain relief before disbudding went on to achieve higher growth rates.

They gained an average of 0.09 kilograms more per day for the next month, meaning they reached weaning weight about five days earlier than calves that didn't receive pain relief.

"I have to say, after the disbudding, the bounce back of the calves is phenomenal," Mr Smith said.

"They are up within an hour of the procedure, looking for a feed. It's also more convenient to do it when they are younger, because when I go out to round up my heifers, I don't have to be working with horned cattle."

Dairy Australia has been working with farmers to encourage the disbudding of calves at six to eight weeks of age.

For more information on disbudding of calves go to website <www.dairyaustralia.com.au>.

New pain relief product post-disbudding

A NEW pain relief spray gel has been approved for use on dairy calves following disbudding or dehorning, giving farmers a cheaper and easy-to-access option for treating calves following husbandry procedures.

The spray gel can be purchased over the counter, meaning farmers can get it from their rural resellers and apply it on farm without needing a vet present.

Tri-Solfen is the first of its kind and has pain relief, antiseptic and blood-clotting properties lasting about 24 hours, helping to manage the "pain cascade" effect that follows heat cautery.

Tri-Solfen can be applied immediately after disbudding or dehorning and is best used alongside longer-lasting pain relief options.

Dairy Australia will continue to monitor the market and provide updates as other over-the-counter pain relief products are approved for use on dairy cows.

Dairy Australia
Your Levy at Work

What's happening in your region?

Contact your Regional Development Program

Dairy NSW
Ph: 02 9351 1737
dairynsw.com.au

Murray Dairy
Ph: 03 5833 5312
murraydairy.com.au

DairySA
Ph: 08 8766 0127
dairysa.com.au

Subtropical Dairy
Ph: 0431 197 479
dairyinfo.biz

DairyTas
Ph: 03 6432 2233
dairytas.com.au

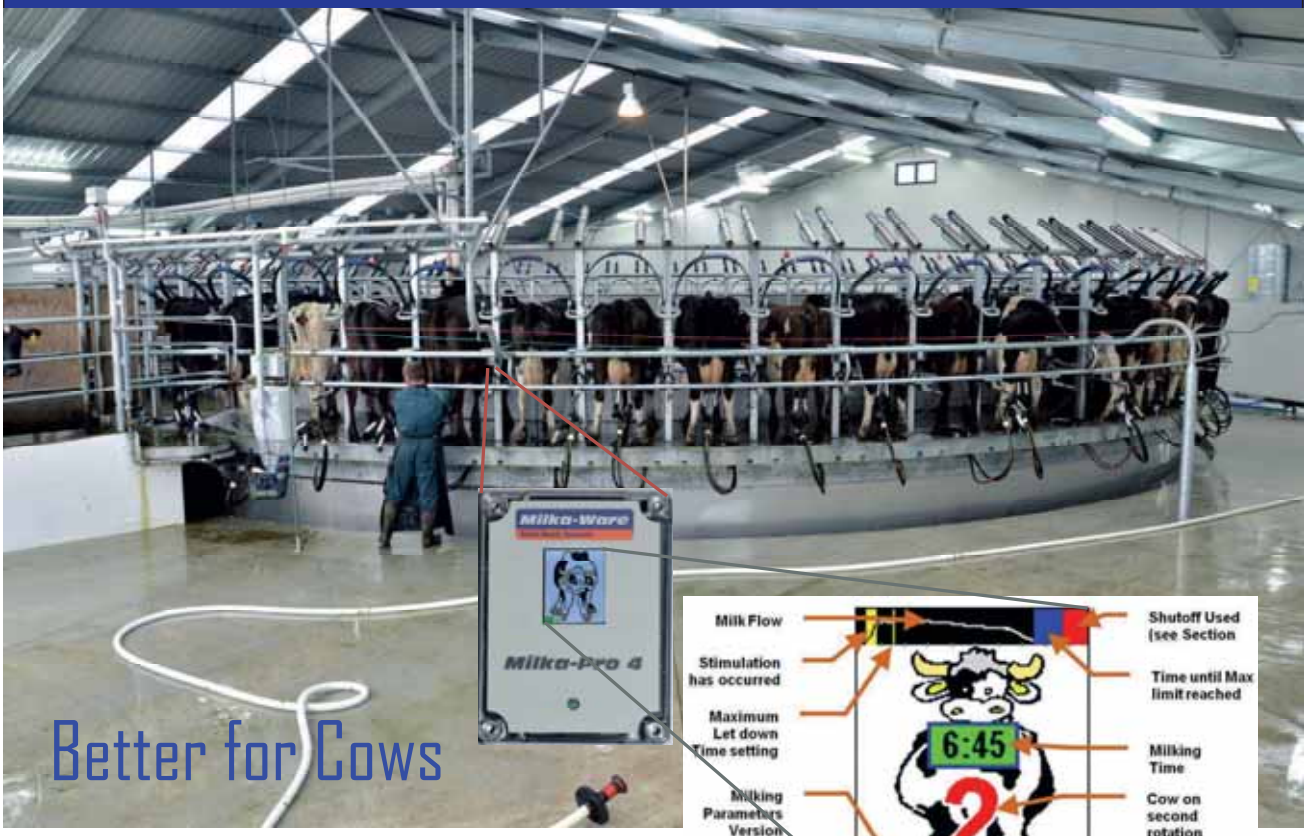
Western Dairy
Ph: 0418 931 938
westerndairy.com.au

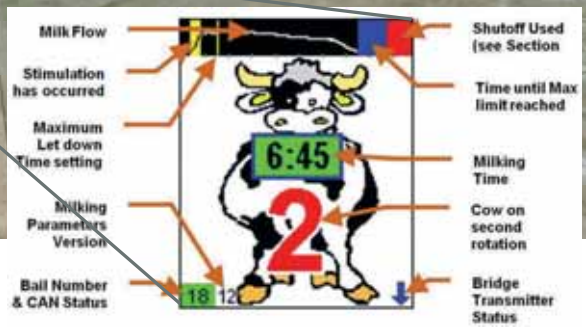
GippsDairy
Ph: 03 5624 3900
gippsdairy.com.au

WestVic Dairy
Ph: 03 55571000
westvicdairy.com.au

To find out more about Dairy Australia visit **dairyaustralia.com.au**

Lower cell count, improve udder health and Reduce labour costs!





Informative for milkers

Milka-Ware's Milka-Pro 4 ACR system improves milking for cows and for milkers. It's advanced microprocessor enables it to analyse and adapt to each individual animal's milking profile in real time. This means that the cups will be removed at the optimum time for each and every animal, every milking. This ensures complete and clean milking in the minimum time without the need to compromise settings for fast or slow milkers.

Designed and manufactured in Australia for Australian dairying conditions the Milka-Pro 4 puts key milking information in the bail, right where you need it.

Did she let down well? How long did she take to milk? What is her milk flow profile like? Is she a good producer? At a glance of the in-bail display these questions and more can be answered so you can better understand your cow's milking performance.

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