The Australian Dairyfarmer

SEPTEMBER
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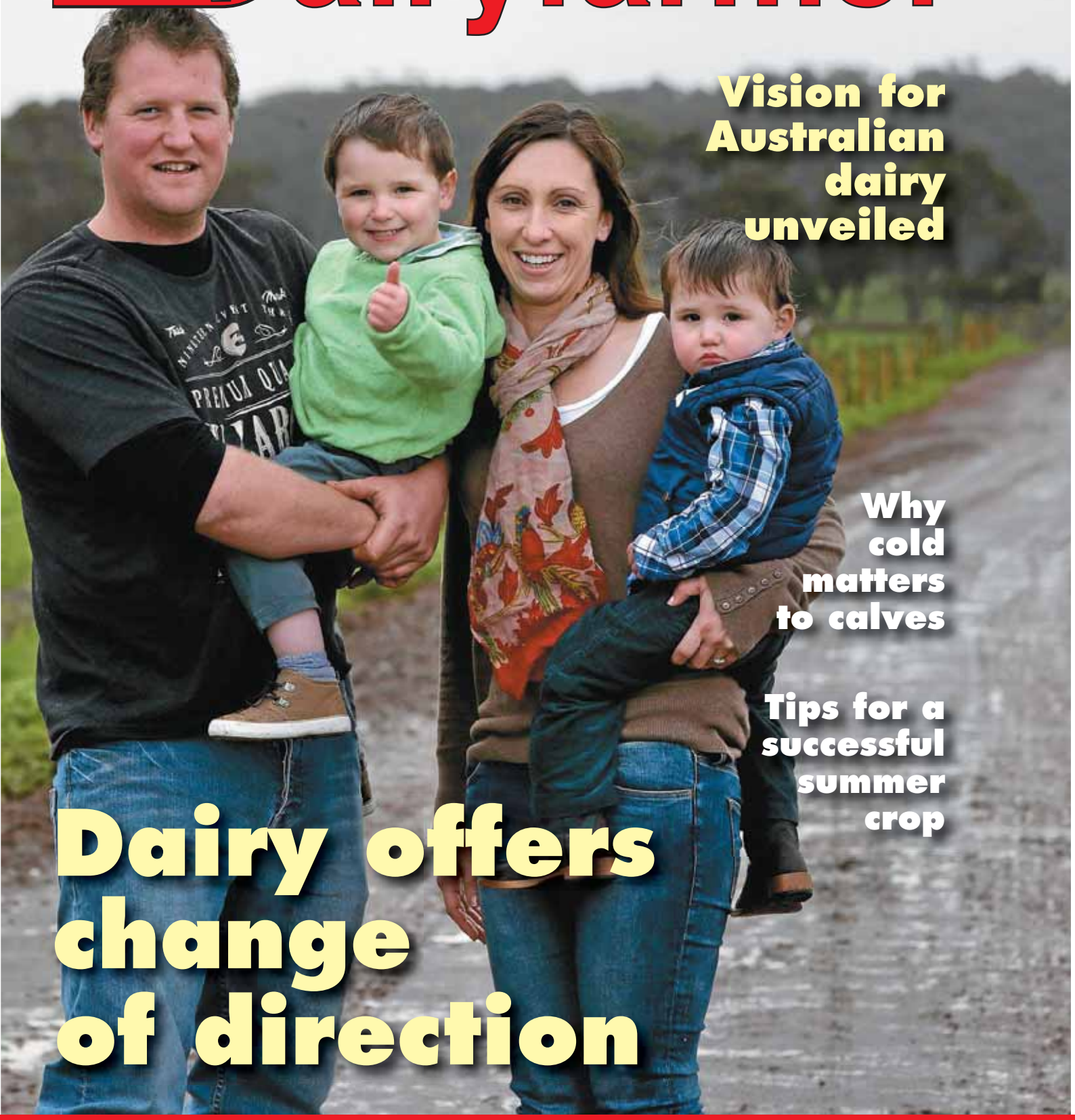
2014



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The Australian Dairyfarmer

Vol 29, No. 5 September-October 2014

OUR COVER

Adam Rowe and Kylie Annett with sons Royce, 3, and Lincoln Rowe, 20 months old, on their Simpson, Vic, farm. The pair are part of a new group of young people moving back to dairying after experiencing careers elsewhere. Picture: DAMIAN WHITE

See story page 36

NEWS

ATTRACTING AND DEVELOPING PEOPLE

PROMOTING & PROTECTING DAIRY

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BETTER CALF REARING

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Science finding the answers

THE advances in the science of genetics in the past two decades never cease to astound me.

I can remember in the 1990s the focus was on cloning and what that could offer to animal breeders. Genetics Australia was involved in some of that early work and cloned one of its elite bulls, Rameses, in 2001, just six years after Scottish researchers created history with the first cloned farm animal, Dolly the Sheep.

But the limitations of cloning technology — problems with the health of some cloned animals and, more importantly, that clones by definition could not be genetically better — saw the focus move to other opportunities.

Genetic modification (GM) was also a huge focus in the 1990s and continues to be important in the plant sciences today. But it, like cloning, has been mired in controversy with often hugely emotional public campaigners questioning the safety of the technology. The dairy industry is yet to really face the battle on this science, but with the development of GM ryegrasses promising higher yields and higher milk production, it will be important to have discussion about it.

But the real advance in genetics science has come about from the ability to do DNA sequencing of animals and plants.

This technology was enormously expensive, even six years ago. But the cost has come down, opening the door to many opportunities.

The dairy industry worldwide was an early user of this type of technology because it had been using artificial insemination and breeding values for animals for so many years.

Initially this work looked at genetic markers — a gene or sequence of DNA on a part of a chromosome — to identify key differences between animals, in this case sires. This could then be used to identify the best animals in progeny-test programs or to put into progeny-test programs.

The technology has had a huge impact around the world in only a few years. The Australian Breeding Values list in this issue of the magazine show that most bulls now have genomics included in their proofs and we are already seeing the impact as new bulls come through the system and to the top of the lists.

The focus now is on complete DNA sequencing of animals.

As we report in our Focus on Breeding feature, a global collaboration initiated and led by Victorian scientists has created the world's largest collection of bovine DNA sequence data.

Department of Environment and Primary Industries Victoria scientists Associate Professor Ben Hayes and Dr Hans Daetwyler began the Dairy Futures CRC's 1000 Bulls Genome Project in 2012. By initiating collaboration on a global scale, the project aimed to create a high-quality library of entire DNA sequences of bulls that figure prominently in the family tree of Australian dairy cattle. The team initially aimed to get 200 bulls sequenced but has moved quickly and now has nearly 1000 sequenced through the work of 20 international research partners.

And this data promises to be a gold mine for researchers. European researchers have already used it to find a gene mutation that causes embryonic death in dairy cattle. Australian researchers are working on identifying the genetic mutations — good and bad — associated with production, fertility and longevity.

And with the dairy industry already using genetics to shape its breeding values, this will be able to flow through quickly to farmers.

I don't think we can underestimate just how important this science will be in helping find the answers to produce herds of the future that will be healthy, productive and fertile.

Associate editor

Carlene Dowie

@DowieDairyEd

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The Australian Dairyfarmer

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EDITORIAL

Editor: ALASTAIR DOWIE
Associate editor: CARLENE DOWIE
PO Box 59, Carisbrook, Vic, 3464
Email: <carlene.dowie@fairfaxmedia.com.au>
Phone/fax: (03) 5464 1542
Mobile: 0418 553 282

ADVERTISING

Advertising manager: PETER ROACH
GPO Box 257, Melbourne, Vic, 3001
Email: <peter.roach@fairfaxmedia.com.au>
Telephone: (03) 8667 1127
Fax: (03) 8667 1141
Mobile: 0417 371 364

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MILK MATTERS

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Australian Dairy Farmers

China-Australia FTA must be the dairy deal

By NOEL CAMPBELL
ADF Chair

THE dairy industry cannot overestimate the importance of the bilateral trade relationship between China and Australia. With Minister for Trade Andrew Robb's personal commitment to secure a "New Zealand plus" deal, our industry is in a good position to gain fairer access to China's burgeoning dairy market and place us on a commercially equitable platform with our global competitors.

By virtue of its enormous population and rapidly growing middle-class with a taste for all things dairy, China is Australian dairy's number one trade policy goal.

In 2012, China imported 1.375 million tonnes of dairy products. By 2013, that had grown to more than 1.9 million tonnes — a staggering increase of 40% on the previous year.

This level of demand is likely to continue, with more than 16 million babies born in China last year, and with the relaxation of the one child policy, that figure is projected to increase beyond 20 million annually in future years.

The Australian dairy industry is well-positioned to help meet this demand, however to fully realise this potential, Australia needs a Free Trade Agreement (FTA) with China like our major trade rival, New Zealand.

After achieving an FTA with China in 2008, NZ has seen an eight-fold increase in the total volume (tonnes) of dairy exports to the Chinese market while Australia has experienced only modest export growth across the same period.

What the Australian dairy industry seeks is a "New Zealand plus" deal that would, upon implementation, see tariffs on dairy exports fall immediately to the same level as NZ.

Such an agreement would provide unprecedented new opportunities for Australian dairy and save the industry at least $31.5 million, based on current China exports, as well as removing our competitive disadvantage with NZ.

As remaining safeguard volume limits on some specific dairy products are lifted, it is estimated that in 10 years, the value of NZ's preferential access will grow to at least US$630 million per annum.

China is Australian dairy's number one trade policy goal.

Importantly, while the Australian dairy industry would be keen to leverage growth opportunities off the back of a China FTA, it is not our intention to do so at the expense of Chinese domestic dairy production.

Australian dairy instead seeks to meet a growing demand and a need for diversity of supply through value-added products such as infant formula.

Our industry seeks to continue and build upon a positive spirit of co-operation with China in the context of exploring new and mutually beneficial market opportunities.

Any free trade negotiation involves trade-offs, and in the case of a China-Australia FTA this will invariably involve discussions around foreign investment.

Australian Dairy Farmers (ADF) does not oppose foreign investment in the dairy industry.

A close examination of the facts on foreign investment show that foreign ownership of farmland and key agricultural assets in reality, is quite low.

Recent data from the Australian Bureau of Statistics (ABS) shows that more than 99% of Australian dairy farm businesses are fully Australian-owned and just under 98% of dairy farmland is fully Australian-owned.

This is not to suggest that foreign investment in Australian agriculture should be provided a blank cheque. What it is, however, is an argument in favour of a reasoned and thoughtful public discussion based around an assessment of the facts involved.

As free trade negotiations progress, we have the opportunity to secure a more competitive and prosperous future for Australian dairy, which will also benefit China and Chinese consumers.

We acknowledge that reaching a comprehensive deal with China that delivers significant new commercial opportunities will not be easy — it never has been.

However, the dairy industry recognises and supports the Australian Government's efforts to secure the best possible outcome on its behalf.

I am proud to say that ADF is continuously working with the government to ensure the best possible deal for our industry. There is still much work to be done, but I am sure the outcome will be a positive one for our important national industry.

ADIC endorses vision for Australian dairy

THIS first ever Australian Dairy Vision, endorsed by the Australian Dairy Industry Council (ADIC) in July, is a statement by the Australian dairy industry aspires to be known and proud of into the future.

Underpinned by five elements, Australian dairy aims to be valued, innovative, responsible, preferred and unified by 2025. Each of these equally weighted elements contain a set of priority areas for collective industry action.

ADIC Chair, Noel Campbell, said the vision marked an important step towards collectively establishing a unified future for dairy.

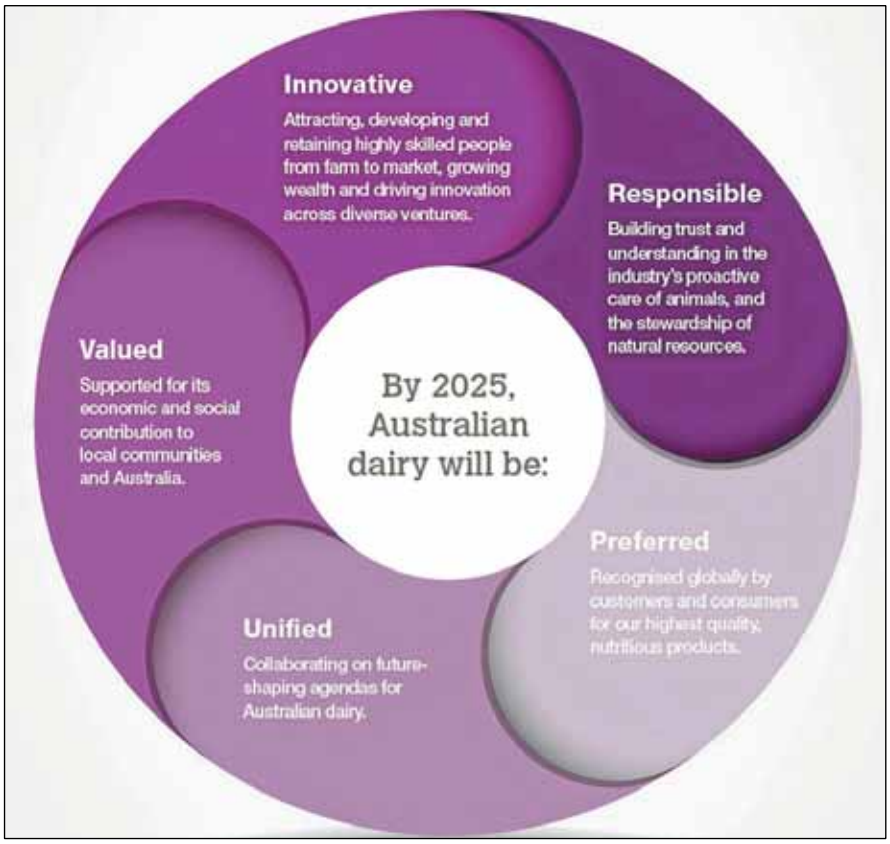
"The Australian Dairy Vision will help us to work together in order to grow in confidence and prosperity throughout our industry," Mr Campbell said.

With demand for Australian dairy exports being higher than ever, Mr Campbell said the vision has been announced at an opportunistic time.

"The vision's priorities will ensure our industry is better equipped to meet the challenges facing Australian dairy and capitalise on the opportunities through growth," he said.

The Australian Dairy Vision was born out of an extensive consultative process which began with the inaugural Australian Dairy Farmers (ADF) National Dairy Farmers' Summit in March.

Carrying forward the summit's heavily grassroots-driven priorities, an ADIC Strategic Forum was held in May where key industry leaders from across the supply chain workshopped the vision statement and specific areas for industry action.



The five elements that underpin the Australian Dairy Vision statement.

The Australian Dairy Vision, signed off by the ADIC Board, will formally be presented to the Federal Government at the ADIC Dairy Dinner in Canberra, on October 1.

For more information and to obtain a copy of the Australian Dairy Vision, visit website <www.australiandairyfarmers.com.au/australian-dairy-vision>.

ADIC welcomes carbon tax repeal

THE Australian Dairy Industry Council (ADIC) has welcomed the repeal of the carbon tax following the vote in the Senate in July.

ADIC Chair, Noel Campbell, said while the dairy industry was not immune to a change in climate, the passage of the Federal Government's Carbon Tax Repeal Bill through the Senate was positive news for Australian dairyfarmers.

"The dairy industry is committed to reducing the industry's carbon emissions under the Australian Dairy Industry Sustainability Framework," he said.

"Farms and factories are taking up new technologies and methods such as energy efficient and clean energy alternatives."

The carbon tax added to the cost of production for dairyfarmers and processors, which in turn made the Australian dairy industry less competitive compared with it key international competitors.

The dairy industry faces competition into key markets like China and needs government policy that helps dairy to be as cost-effective and competitive as possible, while still reducing emissions.

Mr Campbell said the carbon tax needed to be replaced by a credible and effective mechanism to reduce carbon emissions in line with Australia's international obligations and its international competitors.

The ADIC expects the Federal Government to meet its commitment to reduce emissions and to make sure its investment in progams such as Direct Action achieves this outcome.

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Shine put on milk quality

DAIRY Australia's (DA) Milk Quality Awards have taken a different tack this year with the introduction of gold plaques for the nation's 100 top-quality milk producers.

The 2014 winners of the popular annual awards, revealed in early August, were based on Bulk Milk Cell Counts (BMCC) data supplied to the Australian Dairy Herd Improvement Scheme by dairy companies across the country. To be eligible dairy farms had to have data for a minimum of nine months in 2013. Monthly averages were then used to calculate the annual average BMCC for each farm and the winners were the top 5% of farms with the lowest BMCC.

"The Australian Dairy Quality Awards celebrate the great job being done by dairyfarmers up and down the country to keep milk quality at a consistently high standard," program manager for animal health and fertility at DA Dr Kathryn Davis said.

"A low cell count means that mastitis is being kept at bay, and there is a financial imperative as farmers achieving a low cell count are rewarded with more milk and financial incentives from their processors," Dr Davis said.

Australia has consistently high milk quality and recognition of that fact gains the Australian industry a premium for its dairy products internationally.

The winning 5% of farms receive a metal plaque for their gates and those in the top 100 get a newly designed gold plaque, replacing the paper certificates of previous years.

"The gold plaque has been introduced this year because we wanted to give farmers in the top 100 something that could make them feel proud of what is a significant achievement," Dr Davis said.

The full list of 2014 winners can be found at the Dairy Australia website <www.dairyaustralia.com.au>.

Dairy Australia's project leader for Countdown 2020, Mark Humphris, with the new gold plaques.

Investment Forum's dairy focus

The inaugural Australian Dairy Farm Investment Forum, scheduled to take place on Monday September 15, in Melbourne, will provide an opportunity for anyone interested in the industry to gain a deeper understanding of the operating environment, outlook and innovations shaping the industry's future, according to chair of the Australian Dairy Farm Investment Forum organising committee and a Dairy Australia (DA) director John McKillop.

During the past year, the industry — both DA and individual industry participants — has received an increasing number of inquiries seeking information regarding potential investment in Australian dairy.

"It is in direct response to this growing level of interest that DA decided to host the event," DA manager of strategic initiatives Paula Fitzgerald, said.

"People are reading about the Asian dairy boom and the 10%-plus growth we are seeing in our exports to China, about the prospects for greater free trade, and about the optimism and confidence that are beginning to really characterise farmers' outlooks," she said.

"The forum will bring people together across the industry, whether they come from the boardroom perspective or straight from the paddock, and really flesh out what the dairy investment landscape is for a growing and profitable future."

Federal Minister for Trade and Investment, Andrew Robb, will open the event.

Follow the forum with DA's live Twitter updates. Go to website <http://www.dairyaustralia.com.au/dairyinvestmentforum> for further information.

Healthy Bones Action Week a success

The 20th annual Healthy Bones Action Week ran nationally from August 3-10.

Ten of Australia's leading bone health experts backed the Dairy Australia initiative by issuing a call for all Australians to take action during the week with three clear messages to improve bone health: milk, cheese and yogurt for calcium; weight-bearing exercise; and safe sun exposure for increased vitamin D intake.

Primary schools across the country registered to hold their own creative event to celebrate the week, with ideas including building a car out of milk bottles, dress-up days, dairy-rich lunches, milkshake days and dairyfarmers visiting schools to chat to kids.

Simultaneously, women from dairy regions used local media to encourage other rural women to get behind the week and celebrate the contribution of dairy to the regions and to the health of Australians. Community health centres, dietitians and workplaces also joined in, including Murray Goulburn, which targeted its 2000-plus employees with bone health activities.

Dairyfarmers get social

A Dairy Australia-supported social media workshop is being delivered around the country to introduce dairy people and the broader dairy community to the world of social media from scratch.

An initiative of DairySA, the workshop begins with the basics of how to set up Facebook and Twitter accounts and how to use them to communicate, engage and connect with others. Active dairy industry social media users also talk with participants about how they use social media in the agricultural community.

Other topics include safety and privacy and how to use social media for a business presence or a cause.

Farmers interested in attending a social media workshop in their region should contact their regional development program. D

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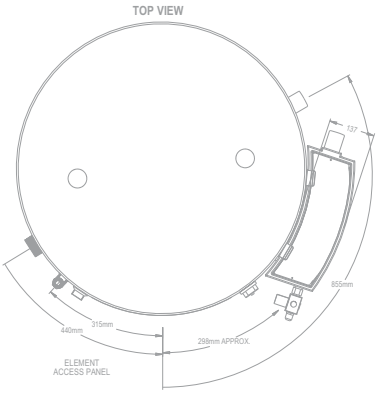

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Russian bans to hit world prices

WORLD dairy prices are tipped to fall after Russia's ban on many food imports from Western nations, including Australia, the United States, the European Union, Canada and Norway.

Moscow's trade sanctions are expected to wipe $200 million off Australia's $38 billion food export industry, but commodity analysts say the full effect will be more far-reaching.

Rabobank dairy analyst Michael Harvey said the food bans could prolong a weak dairy market, which has already fallen by between 20% and 30% this year.

"Russia is the world's second-largest importer of dairy products so it will have a significant impact on the balance of global supply and demand," he said. "We need to ascertain if they will impose the ban for the full year, like they said they would, and if it will be strictly enforced."

Russian President Vladimir Putin banned food imports in retaliation for Western countries' sanctions on Russia's defence, oil and financial sectors for the country's support for rebels in eastern Ukraine. The stronger-than-expected measures aim to isolate Russian consumers from world trade to a degree not seen since the Cold War.

Industry research firm IBISWorld said the greatest challenge to Australia's agriculture industry would be stronger competition from Europe and the US as players searched for new markets for their products and thus put pressure on commodity prices.

Europe supplies Russia with most of its cheese and butter, and dairy exports amount to about 500,000 tonnes a year. Australia exported about 22,000 tonnes of dairy products (83% as butter) to Russia last year, which Australian Dairy Farmers says was worth about $112 million. Russia is ranked as Australia's 10th and 12th largest dairy export market by value and volume respectively.

IBISWorld said global dairy price falls could be limited if New Zealand, which was omitted from the sanctions, sent more products to Russia. This could help offset price falls. "As dairy markets are flooded with EU produce previously destined for Russia, one of the largest dairy importers, diversion of trade from a large exporter such as NZ could stem price declines in other markets," an IBISWorld report said.

Before Moscow announced the food ban, Mr Harvey had said Rabobank expected the global dairy market to remain weak for the rest of the year before recovering in early 2015. "Our view hasn't changed much but the Russian ban remains a risk," he said.

The Australian Dairy Industry Council (ADIC) has expressed its disappointment that Russia has imposed the trade sanctions on Australian dairy products for a year. "Russia is an important market for the Australian dairy industry," ADIC chairman Noel Campbell said. ADIC is also concerned about the potential broader global market implications of the ban.

ADIC recognises the sensitivity of matters regarding Malaysia Airlines flight MH17 and the Ukrainian conflict. "We hope the Australian and Russian governments can remain in open dialogue and resolve these matters quickly," Mr Campbell said.

But Mr Campbell said although it was a blow, Australia no longer relied on Europe to buy its dairy produce. "If there is some good news sitting alongside the bad, it is that Australian dairy products heading to Asia are fast becoming one of this country's export success stories," he said.

"So while Russian sanctions are not welcome, Asian- and Middle East-based consumers are more than capable of making up for the bad news. This primarily comes down to the greater Asian and Middle Eastern regions' middle class wanting more and more protein and higher quality food."

The Russian sanctions will leave NZ in a strong position as the one of the few major butter exporters not affected by the ban.

But Dairy Australia's trade and industry strategy group manager Charles McElhone said although Moscow's decision may have volatile market consequences, given that only 10% of global dairy production was exported, flow-on impacts could also include new markets opening up.

"NZ has not been affected by the sanctions and is likely to increase its focus on Russia, potentially leaving other markets open to absorb more from Europe," Mr McElhone said.

Milk used for butter or cheese production for the Russian market may now be processed into other products. "It's a bit early to tell what will happen to the dynamics of the dairy trade but from an industry perspective in Australia there's no panic," he said. D

Mastitis control in lactating dairy cows

The intramammary that floats for a better mastitis result.

Ask your Vet about it

Real farmers feature in branding push

By ANDREW MARSHALL

REAL farmers are in the spotlight in new push to win back consumer loyalty to major milk company brands whose markets have been savaged by the $1-a-litre milk war.

Murray Goulburn (MG) kicked off its debut in the New South Wales market with a branding drive linking images of its newly recruited NSW supplier members to the product inside the bottle.

Labels on Devondale's new chilled milk range, now selling for the first time in Coles supermarkets in NSW and Victoria, will feature up to 200 farmer-shareholders and their families.

Devondale also launched a new television commercial poking fun at off-shore-owned corporate rivals such as Lion, Parmalat and Fonterra, depicting executives in suits haplessly failing to operate a dairy farm.

The advertisement features the tagline "Some businesses have no business making your milk".

At the same time Lion's long-established Dairy Farmers (DF) brand has been relaunched in Far North Queensland with a provincial Malanda Original Milk label featuring some of its Atherton Tableland producers.

Dairy Farmers Japanese parent company Lion said its local Malanda brand was recognition of regional differences in its milk market and responded to feedback from North Queensland suppliers and consumers.

"We all want to have a vibrant local dairying industry here for years to come so we're encouraging the local community to get behind Malanda Original Milk," Lion's dairy and drinks managing director Peter West said.

Malanda milk, processed at Malanda, Qld, will be in stores from Cape York to Mount Isa in the State's west and as far south as Mackay.

The drinks and brewing giant is also assessing the wider milk market to judge how, and if, it may follow up with more regional branding initiatives.

DF's retail milk sales strength has taken a caning since Coles cut the price of its own house-brand regular milk to $1/litre in January 2011, prompting other retailers to follow its savage discounting lead with their own private labels.

Murray Goulburn and Lion have introduced brands featuring farmers in recent months.

Although DF has promoted a few of its farmer-suppliers on its bottled milk, the big eastern States processor has also lost many suppliers as a consequence of the milk war — down to more than a third at about 320 in NSW and Queensland.

Lion also lost contracts to supply house-brand milk to Coles and Woolworths in the past few years, prompting it to adopt a hard line on farmgate milk payments and crank up milk transport costs for some suppliers, souring relations in many NSW and Queensland dairy districts.

MG, traditionally a cheese, butter and powder producer, launched into the fresh NSW and Victorian milk market with its own brand on July 1.

The range includes two- and three-litre full-cream and light bottled milks retailing for $2.99 (two litres) and $3.99 (three litres) each.

The launch co-incided with the start of a 10-year contract to also supply Coles's $1/litre house-brand milk (previously bottled by Lion).

"As a co-op it makes sense to feature our farmers (on the label) so consumers can make a connection with the people who work so hard to make their milk," MG's communications general manager Lynn Semjaniv said.

The farmers represent key dairy supply regions for MG's Devondale brand in both States.

The co-operative now has 163 NSW suppliers, most of whom defected from Lion's supplier, the Dairy Farmers Milk Co-operative, in the past 18 months.

Dairy Connect NSW executive officer Mike Logan said the big milk companies were trying to break the cheap generic milk mood in the market by encouraging consumer loyalty to support brands which identified the "real farmers and real farms" behind their milk products.

Woolworths played the same "provenance" card last year, launching its premium house-brand milk, Farmers' Own, which features NSW Mid North Coast farmer-suppliers on the label.

"But I'm a bit surprised more isn't being done to demonstrate how the brands care about the consumer rather than asking the consumer to care about the farmers," Mr Logan said.

"The A2 milk brand has been the most successful in the business of late and its message only talks about the consumer — it never mentions farmers."

When you suffer a calf scours outbreak the future looks a little bleak. You'll not only experience productivity losses such as reduced income, additional expenses and genetic setbacks, you and your family will also face the emotional toll of scours. Stressful work hours, endless days managing sick calves and the disappointment of mortalities can be tough on everyone when scours hits. A serious case of scours can even make some farmers question their farming abilities. Ultravac Scourshield helps you prevent scours and gives you and your family peace of mind.

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Investors queue for dairy

By MATTHEW CRANSTON

MORE than half the guest list for the inaugural Australian Dairy Farm Investment Forum in Melbourne this month are corporate or Chinese investors, but with the dismal level of dairy farm funds on offer they may miss out on deploying their capital.

The forum's chairman, Dairy Australia director John McKillop, confirmed the overweight enrolment of such investors, who are seeking to be matched with advisory groups to find dairy land investments.

"We have had a lot of brokers call us up asking why there are not enough dairy farm vehicles for them to hold an initial public offering (IPO)," Mr McKillop said.

However, he said that until now mainstream investors such as Australian super funds had found it too difficult to invest because of their own governance constraints. Without such investors, starting up dairy land companies was almost impossible.

"Dairy has been a difficult play ... for super funds who have to report their earnings quarterly, but as they seek further investments in the alternative asset class, agriculture has to be part of that," he said.

Now, in the sudden realisation of demand for dairy production, especially from China, premiums are being paid for processors Warrnambool Cheese & Butter, Pactum Dairy Group and Harvey Fresh. That has led investors to start demanding positions in new vehicles that own the land underlying such production.

Bell Potter Securities' Darren Craike has been raising money for the Australian Dairy Farms Group, which will be listed on the Australian Stock Exchange in October. The fund will own two dairy farms near Warrnambool in South West Victoria and plans to buy 14 more.

Premiums are being paid for Australian dairy processors tempting investors to look for investing in farms.

"There has been an increase in demand for agricultural land companies but in the past five to 10 years the options have diminished significantly because of takeovers and mergers and aquisitions," Mr Craike said.

He said many investment-grade agricultural land companies had bought property at the wrong time in the cycle and there were other challenges in creating land vehicles because of the stigma attached to managed investment schemes.

"Another challenge is properly aligning vendors' interests with shareholders' interests," he said.

However, Mr Craike said he was optimistic about the fund's future. "It is clear institutional investors share our view that there is a significant opportunity to consolidate Australia's fragmented dairy sector," he said.

Other investors are not too sure. Kidder Williams managing director David Williams says he still has considerable doubts when it comes to agricultural land companies. "It is common for property trusts to trade at a discount to asset backing," Mr Williams said. "Let's see now: how will a rural property trust go with low yields, subject to weather, labour, world commodity prices and all the other difficulties of making money on the land? That is a tough ask."

A number of other dairy farm companies have been quietly building up portfolios. ACE Farming Company, formerly owned by Valad Property Group and run by Jeremy Bayard, expanded its portfolio in northern Victoria again this year.

That company now has 11 farms, including nine in Gippsland, and is currently owned by an investor represented by Singapore-based Duxton Asset Management.

Other difficulties in gaining access to farms include strong family ownership and the co-operative model.

Norco chief executive Brett Kelly said anyone could own dairy assets but the crucial thing to get right was the management of the farms.

"You have to be very careful when you corporatise farms," he said, "Co-ops are a lot better model. With co-ops you can get volume and good prices, and then all the members can go to their banks and talk about growth and expansion." D

Article courtesy of Australian Financial Review

Norco lifts fresh exports

NORTHERN New South Wales co-operative Norco has a relatively simple plan to capitalise on Asia's fast-growing middle class. While some dairy manufacturers are focusing on exporting high-margin and high-value-added products such as infant formula, Norco has pinned its hopes on dairy's most basic ingredient: milk.

The company has begun flying fresh milk directly to Shanghai, China, where it is fetching $8-$9 a litre. It is exporting about 16,000 litres a week to China after a 1000-litre trial in March — and demand is growing.

Roughly every two weeks, the co-operative gains on average another four Chinese customers. "Some of the numbers that are being put to us are like telephone numbers in terms of potential," Norco chief executive Brett Kelly said.

"The market we are targeting is the middle class. They're pretty well educated, quite financially well off and very, very focused on quality of products."

Norco hopes to increase fresh milk exports to China to 20 million litres a year in the next 12 months, which would account for about 10% of the co-operative's total production.

From there, things then become a little tricky. Norco sends its milk to China prepackaged on commercial passenger aircraft. Once it hits 20 million litres it will have to start filling entire planes with milk.

"Our objective in the next 12 months is to build up slowly and very carefully," Mr Kelly said. "In the long term we want to create a viable, sustainable market where we can get a fair price for our milk."

The Chinese shipments come four years after Coles started selling milk for $1/litre, which Woolworths and Aldi quickly matched, igniting the supermarket price wars that led to strong discounting on a range of household staples.

Agriculture Minister Barnaby Joyce has applauded Norco's efforts and said it could trigger the end of $1/litre milk in Australia because more farmers would sell their milk to export rather than domestic markets.

Although Mr Kelly does not support the supermarket discounting, he said Norco had a good relationship with Coles. It recently signed a five-year supply contract with the supermarket chain which has allowed the co-operative to invest $6.4 million in upgrading its factory at Labrador on the Gold Coast.

Northern NSW dairyfarmer Warren Gallagher with his children Caitlin, 9, and Reece, 10, is excited about Norco's push into Asia. The Northern Rivers milk producer, based at Clunes, NSW, has hosted Asian visitors who were potential dairy customers on his farm.

It is not alone. Australia's biggest dairy company, Murray Goulburn, struck a 10-year supply deal with Coles which has also allowed it to invest in processing operations.

"When you sign a contract and you have a fair position in terms of rise and fall price mechanisms ... the co-operative is in a position where we can go to our bank and we can actually invest in our sites for the future," Mr Kelly said.

The fresh milk exports came after year-long negotiations between Norco's partner, export consultancy PGS, and Chinese officials. Until April this year, lengthy testing and quarantine rules made exporting fresh milk to China impossible.

The milk needed to be tested in Australia before departure — which took about seven days — and tested again on arrival in China — another seven days — by which time the milk had begun to turn.

"What we do now is we parallel test so we send the milk over to China and we test it there at the same time as we do the testing that's required in Australia. What that does is cut it back, so from the farm to the supermarket shelf it's about eight days," Mr Kelly said.

PGS owns the fresh milk "pipeline" and its managing director Peter Verry said the company was working with other milk processors to send products to China.

But Mr Verry said while the milk appeared to be selling for a premium, that was not completely the case, adding that the profit margin was slightly higher than for domestic sales.

He said it cost about $1/litre to fly milk to China, then a 15% tariff was added as well as 17% value-added tax (the equivalent of GST).

"Then there is a distributor, a sub-distributor and the retail outlet," Mr Verry said.

"The best outcome is that it allows the industry to grow. There are opportunities with milk powder and infant formula but NSW doesn't have the processing plants yet."

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Mastitis can affect conception rates

FARMERS already know that mastitis is a costly disease. It results in loss of milk production, increased costs in drugs and treatments as well as higher culling rates.

But what many forget is that there is also an economic loss associated with reproductive failure in cows with elevated Individual Cow Cell Counts (ICCC).

Israeli research

Funding for research projects is getting scarce in all fields of agriculture. This means that we cannot always find the answers we need in work that is done in our own dairy environment in Australia and we need to keep an eye on research done in other countries.

Not long ago, a very interesting study was published in the *Journal of Dairy Science,* which is a publication of the American Dairy Science Association, and the world's leading source of dairy research papers.

The study was the work of four Israeli scientists whose aim was to evaluate the effects of mastitis, determined by the pattern and level of somatic cell count (SCC) around first artificial insemination (AI), on conception rate (CR).

Data from 287,192 first AI and milk records covering a seven-year period were obtained from the Israeli Herd Book.

The analyses examined the association of probability of conception with SCC elevation relative to timing of AI. In this research, a SCC threshold of 150,000 cells/millilitre of milk was set to distinguish between uninfected cows and cows with mastitis.

The researchers used specific definitions to group cows relative to the time of AI. Table 1 shows how cows were sorted into one of four groups.

Interesting results

Compared with the Uninfected group, all the other three groups showed reduced conception rates to AI.

In the Chronic (subclinical) group the probability of conception was lowered by 14.5% in the lower/mild SCC sub-groups and by 20.5% in cows with high SCC elevations compared with the Uninfected group.

A single high elevation of SCC (above one million cells/ml) lowered the probability of conception by 23.6% when it occurred during the 10 days immediately before AI, but not when it occurred earlier.

Therefore, these results indicate that SCC elevation around the time of AI, which is typical in subclinical mastitis, was associated with a significant reduction in the probability of conception, and that even relatively mild SCC elevation reduced conception rates.

The researchers concluded: "Mastitis is associated with a significant reduction in probability of conception.

"The degree of the reduction in conception rate is related to mastitis type (clinical or subclinical), to the level of SCC elevation in response to the different bacteria and to the exact timing of the elevation relative to AI."

Herd testing important tool

Bulk milk cell count (BMCC) is a measure that all dairyfarmers monitor. But while this is an indicator of a mastitis issue in the herd, it cannot pinpoint the exact cows that are contributing most to the high cell count.

This is the primary motivation for dairyfarmers to herd test — getting an ICCC on every cow in the herd is a great way to find problem cows, especially the subclinical ones that are difficult to detect in the shed.

Knowing that elevated SCC levels can have a significant effect on conception rates means that farmers who herd test have a distinct advantage at joining time.

Herd testing turns individual cell count data into knowledge and information that farmers can use for best advantage. For more information, contact a local herd test centre.

Reference

Lavon, Y, E. Ezra, G Leitner and D Wolfenson. 2011. Association of conception rate with pattern and level of somatic cell count elevation relative to time of insemination in dairy cows. J Dairy Sci. 94:4538-4545.

Table 1: How cows were defined in the mastitis study.

Group	Definition
Cured	cows with high SCC before AI and low SCC after AI.
Newly infected	Cows with low SCC before AI and high SCC after AI.
Chronic (subclinical)	Cows with high SCC both before and after AI.
Uninfected	Cows with low SCC both before and after AI.

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Education in agriculture opens up great outdoors

FROM a young age Ben Vagg was drawn to a career in agriculture because it offered a chance to work outside.

After growing up on his family's dairy farm at Leongatha, Victoria, Mr Vagg completed a Certificate II in Agriculture through the National Centre for Dairy Education Australia (NCDEA) while in Years 10 and 11 at school. He wanted to continue on to further education but was undecided on what avenue to pursue so when the opportunity arose for him to study a double-degree Bachelor of Agricultural Science and Bachelor of Business it was decided. "I had to take it and I am glad I did," he said.

As part of his studies Mr Vagg completed a 12-week practical component, which saw him working through the university holidays at agricultural businesses across the country.

"For the first placement I was employed on a cattle station in the Northern Territory, at Tortilla Plains, roughly 15 kilometres north of Adelaide River. That was an eye-opener," he said.

Mr Vagg also gained experience working on a sheep and beef operation at Tarwin Lower, Victoria. "I was exposed to the nature of sheep and beef farming and gained experience in sheep husbandry," he said. "As a dairyfarmer's son I had no prior experience or knowledge in this area at all.

"I also participated during hay harvest and summer holiday periods on my family's dairy farm and relief-milked in my local area for a few family friends to increase my knowledge and exposure to different operating dairy plants and farm systems."

Mr Vagg was also encouraged to gain work experience with agribusiness firms.

Ben Vagg is completing a master's degree looking into supplementary feed systems.

He worked at a local bank to get his head around farm financials and bank lending processes and criteria. "I also engaged Frank Tyndall, a dairy consultant in the Macalister Irrigation District near Sale, East Gippsland," he said. "This experience was crucial in understanding my need to further develop my pasture management and farm business productivity knowledge."

In 2012, while working as an agronomist with Landmark Hamilton, Vic, Mr Vagg successfully applied for a Dairy Australia Farm Business Management Scholarship, which supported him to spend one year at Massey University, New Zealand, to complete a Postgraduate Diploma in Agricommerce. (See separate article page 116-117.)

"I focused my studies around farm business management, dairy production, resource management, co-operatives and agribusiness," Mr Vagg said.

"Agribusiness management covers the issues and strategies of the international agribusiness environment: the dynamics of trade, environmental issues, food and fibre markets and supply chains, while the other core subject, advanced farm management, is related to the principles of farm management using case study farms and businesses for risk analysis and management, personnel management, development of business plans, financial management and opportunity analysis.

"The Australian and NZ dairy industries are not that dissimilar. We can take cues and ideas from each other in regard to several issues.

Even with a double degree and post-graduate diploma under his belt, Mr Vagg has not stopped learning. This year, the 25-year-old started a master's degree looking into supplementary feed systems in NZ and the profitability that can be leveraged from their use. Once he has completed his studies he is considering roles in farm services, focusing on the dairy industry.

"I definitely want to be involved in farm services in one capacity or another, particularly in the dairy industry, and with this additional study and qualification I feel more confident that I can service farmers' requirements for advice and information better," he said.

Helping hand

BEN'S advice for young people considering a career in the dairy industry:

"If you are interested in travelling, working outside and meeting new people from different regions and countries, have a fair dinkum crack in your final two years of high school and enrol in a tertiary agricultural pathway."

Thinking about a career in dairy?

DAIRY provides countless education and development opportunities for those interested in building a career in the dairy industry. From farmers and veterinarians to agronomists and cheesemakers, the dairy industry provides many different career pathways.

The National Centre for Dairy Education Australia (NCDEA) is the Australian dairy industry's provider of accredited learning and development. NCDEA offers a range of industry-endorsed training opportunities and pathways to degree levels, ranging from Certificate II through to Advanced Diplomas, short courses and customised industry programs.

Contact: website <www.ncdea.edu.au> or call 1300 0 NCDEA (1300 0 62332).

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ESKi proves its worth

WITH more than 1000 kits already distributed to dairy farm employers across the nation, Dairy Australia's (DA) Employment Starter Kit initiative — or ESKi — has received a positive response since its launch one year ago.

The user-friendly employer kit details all of the mandatory requirements for dairy businesses that employ staff, plus has tips for improving the employment experience on-farm.

In mid-2014, one year on from the initial pilot program, DA surveyed all registered ESKi users to monitor the uptake, use and effectiveness of ESKi, with the results being positive.

"We've received great feedback since launching ESKi," DA industry workforce planning and action project manager Bill Youl said.

"The survey found that 78% of the respondents had used ESKi and 86% of those respondents indicted that ESKi had helped to improve their employment practices, which was great feedback in the first 12 months."

Mr Youl said that in less than 12 months 1000 ESKis had been distributed to dairy farm employers across the nation, with the recipients of the celebrated 1000th ESKi being dairyfarmers Wayne and Rachael Van Der Meiracker at Camperdown, Victoria.

After hearing about ESKi from other dairyfarmers in the region, Mr Van Der Meiracker collected the folder from the WestVic Dairy office where his details were registered, officially making him the lucky 1000th ESKi recipient.

Operating a 250-cow farm, the Van Der Meirackers employ permanent casuals for relief milking as well as additional contractors for the harvest season. They said clear roles and responsibilities for employees should be a priority, and with the help of ESKi they planned to implement systems and procedures that could be sustained easily on-farm.

Mr Van Der Meiracker said ESKi was an excellent reference to ensure their business was legally compliant and he planned to use the resource to investigate and implement farm safety recommendations and policies, especially for staff with young families who visited the farm.

The 1000th ESKi folder recipient, dairyfarmer Wayne Van Der Meiracker.

DA co-ordinated workforce planning and action steering committees at WestVic Dairy and DairyTas with a primary focus on developing actions and supporting the industry to attract and retain the skilled workforce it required. ESKi was the first action to be delivered by the committees and was developed with direct input from farmers.

A draft of ESKi was piloted by more than 30 dairyfarmers and was then trialled in the regions of WestVic Dairy and DairyTas before being launched nationally in late 2013.

"DA has received a great response to ESKi from across the nation's dairy regions," Mr Youl said. "We look forward to working with the dairy industry to further develop and deliver user-friendly resources for dairyfarmers"

The ESKi folder is available nationally to dairy farm employers through DA's regional development programs. ESKi folder updates and an online version of the resource are available at website <http://www.thepeopleindairy.org.au>.

Important updates to pay rates

EACH financial year Australia's Fair Work Commission conducts annual wage reviews. The commission is responsible for reviewing and setting minimum wages for employees in the national workplace relations system, and as part of this annual review it has announced a number of decisions that effect pay rates as of July 1 this year.

The changes include:

- minimum wages increase by 3% from the first full pay period on or after July 1, 2014;
- the new pay rates apply from the first pay period that starts on or after July 1, 2014 — for example, if a pay week is Wednesday to Tuesday, the new minimum wages start to apply from Wednesday, July 2;
- transitional pay rates no longer apply: pay rates, penalty rates and loadings are the same in every State and can be found in the Pastoral Award 2010;
- pay rates in the Pastoral Award 2010 apply to all national system employers across Australia, regardless of award coverage before January 1, 2010; and
- the high-income threshold is $133,000 per annum.

For further information on the recent changes visit Dairy Australia's The People in Dairy website, which has been updated to reflect the new pay rates.

Award update online

TIP: The Pastoral Award 2010 has been significantly updated since the Dairy Australia ESKi folders were produced.

To update the ESKi folder visit the People in Dairy website to:

- download and print the updated Pastoral Award 2010 and replace the version in the folder; and
- download the ESKi Update (July 2014) that briefly explains what and where information has been updated.

Visit: Website <http://www.thepeopleindairy.org.au/announcements/payrateupdateJuly2014>.

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Cows create learning opportunities

LIFE on the Bellarine Peninsula seems an unlikely starting point for a dairy career. Yet 20-year-old Monique McMahon-Hide has achieved just that.

Ms McMahon-Hide attended Bellarine Secondary College, Victoria, where her first introduction to dairyfarming was when a calf was brought into her Year 9 agriculture class through Dairy Australia's Cows Create Careers program.

The six-week program educates secondary school students in a very hands-on way through rearing two three-week-old calves at school. Ms McMahon-Hide admits that after growing up on a housing estate with no farming experience she was initially confronted by the drooling calves but she then became hooked.

In Year 12 Ms McMahon-Hide once again had the chance to participate in Cow Create Careers through a school-to-industry program. Designed to reconnect to the Cows Create Careers project, the program enables interested secondary students to gain dairy industry work experience with a network of dairyfarmers and industry advocates.

Through the program, in the school holidays Ms McMahon-Hide travelled to South Gippsland working and learning first-hand about large animal veterinary practice, genetic applications in dairying, milking and pasture management systems, and food technologies. The experience helped cement her career plans.

"I'd been studying biology at school and just never realised the vital role genetics plays in both plants and animals," Ms McMahon-Hide said. "It helped me make sense of things — I discovered it's in everything and wanted to learn about it."

In early 2013 Ms McMahon-Hide was offered a place at La Trobe University to study a Bachelor of Bio-Science. She also successfully applied for a Geoffrey Gardiner Dairy Foundation scholarship worth $5000 per year for three years, with the funds to go directly towards her tertiary education.

In the second year of her three-year degree, she applied for La Trobe University's exchange program, which offers students a unique opportunity to learn abroad. Ms McMahon-Hide was chosen with two other students to complete five months of her bioscience degree at Washington State University in the United States, starting in August this year.

"The opportunity to do a semester of my degree overseas presented itself through the university's exchange program so I thought 'The opportunity's there — why not go for it?' " she said.

"The experience of completing a semester at Washington State University — it's a great opportunity."

Ms McMahon-Hide has not yet decided on a particular job when she finishes university but there is one thing she is sure about: "I'd definitely love to work in the dairy industry."

For more information on Dairy Australia's Cows Create Careers program visit website <http://www.dairyaustralia.com.au/People-and-skills/Careers>.

Learn about dairy industry courses and training at <www.ncdea.edu.au> or call 1300 0 NCDEA (1300 0 62332).

DairyTas launches stepping stones

STEPPING Stones — a new Dairy Australia (DA) guide to industry careers and pathway planning — was launched at DairyTas on June 30.

DA managing director Ian Halliday and State Minister for Primary Industries and Water, Jeremy Rockliff, officially launched the Tasmanian version of Stepping Stones to 80 people in attendance.

Career progression and pathway planning are key to reaching career goals in the dairy industry. Stepping Stones is a guide that highlights the many career pathways from entry level to senior farm roles that are available within Australia so people can set their own career goals and plan their own pathways in the industry. The practical guide features case studies and planning tools to show how people can enter the dairy industry, build their equity and assets and progress to more senior farm positions.

DairyTas executive officer Mark Smith said farmer feedback at the launch confirmed that Stepping Stones was a valuable resource for providing clarity for both new entrants and people currently working in the dairy industry.

"By providing job outlines and requirements at each level, Stepping Stones gives people a better roadmap for their future in dairying, and this is backed up by farmer profiles showing how real people have progressed," Mr Smith said.

"Dairy has to open itself up to show what can be achieved and how different people have done it. Stepping Stones will help to attract more people into the industry and help to retain people who might not be aware of how they can prepare themselves to take on other roles in the industry."

DA and workforce planning and action steering committees based at WestVic Dairy and DairyTas have worked with industry to develop the new resource. The committees are working to develop and deliver Stepping Stones in other dairy regions across the country; further launches are expected to take place in late 2014.

Ian Halliday, Jeremy Rockliff, Nigel Brock and Karen and Stuart Burr at the DairyTas Stepping Stones launch.

The Tasmanian version of Stepping Stones is available from DairyTas. An online version of the resource is available from the People in Dairy website <http://www.thepeopleindairy.org.au/stepping-stones/overview.htm>.

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DairySage revived

DAIRY Australia (DA) has recently refreshed DairySage Mentoring through the Young Dairy Network Australia (YDNA).

DairySage was originally developed in 2006 by DA's The People in Dairy and WestVic Dairy with funding provided by the Geoffrey Gardiner Foundation. This year the program has been adapted, funded and delivered by YDNA in the regions of Western Dairy and Dairy NSW.

The two-day workshop provides a framework to establish mentoring relationships by matching experienced mentors with individuals from all sectors of the dairy industry. Through the program, mentors and mentees connect to establish a personal development plan for the mentee, allowing them to gain advice and learn directly from the experiences of their mentor.

Carissa Wolfe participated as a mentee in the DairyNSW program and said she found DairySage to be an invaluable experience.

"As a mentee, everyone has some area in their life that they feel 'stalled out' in or a situation that they are having a hard time seeing from the outside," Ms Wolfe said. "I would recommend participation to anyone regardless of experience or age — the value of the program is ongoing, and it's not simply 'something learnt at a seminar'."

Ms Wolfe said the program was valuable because the mentees could nominate their desired mentor with whom to work.

"Mentees were able to 'vote' for their mentor rather than the administrators choosing who would be a good match or the mentors picking a mentee they wished to work with," Ms Wolfe said. "This made me feel more like it was something I was doing for myself, pro-actively, rather than receiving a benefit or advice."

DairySage participant Carissa Wolfe with mentor Jenny Hurrell.

Executive officer for Western Dairy, Esther Price, was involved in organising Dairy Sage in Western Australia. As an organiser Ms Price had the task of matching the program's mentees with their desired mentors but she soon moved from being a program organiser to a participant.

"I was involved in DairySage at two levels," Ms Price said. "Firstly, in my capacity as executive officer for Western Dairy, I had the task of finding a team of mentees. Secondly, I matched the mentees with their desired mentors.

"I encouraged all mentees to take advantage of the section on their nomination form that allowed them to 'dream' who they'd like their mentor to be — I encouraged them to think high, wide and long.

"The next step was almost as much, if not more, fun: I rang the people who had been nominated by the mentees as their desired mentor. One of the mentees put me down as their desired mentor — wow! Suddenly I moved from program organiser to a participant."

Ms Price said that participating as a program mentor provided her with a whole new experience.

"I am customarily the organiser, leading and cracking the whip," she said. "Suddenly I had to stop and think about how I could be an effective mentor for the beautiful woman who had requested my support.

"Thankfully, the program deliverers, Bevan Bessan and Jenny O'Sullivan, have a fantastic and dedicated component to skilling the mentors. With my fellow mentors I was challenged to think about how I could be an effective mentor and at the same time I had to think about my own goals and ambitions. It was a challenging process and I'm sure the other mentors felt the same; I think we were all humbled and energised by the experience."

Six months after completing the program the mentors and mentees will attend a networking function to reconnect and conclude the program.

Contact: YDNA program co-ordinator Di Gresham, email <dgresham@dairyaustralia.com.au>.

Future dairy leaders conclude in Canberra

POLICY development, regulation and advocacy have been on the agenda for 15 aspiring dairy industry leaders who have concluded the 2014 Developing Dairy Leaders Program (DDLP). The program concluded in Canberra, where participants had the opportunity to represent themselves and their dairy communities at a dairy industry breakfast held at Parliament House.

Developed by Dairy Australia (DA) and Australian Dairy Farmers (ADF), DDLP aims to build the leadership skills of people who are committed to the future of the Australian dairy industry and who have been identified as having the potential for future industry leadership roles.

Through the program, participants increased their understanding of the dairy industry and its political environment, learnt to articulate, present and debate ideas, and developed their policy development skills.

Owner operator of a 400-cow dairy farm at Denison, Victoria, participant Rachael Finch said she participated in the program to learn more about dairy industry policy and advocacy.

"DDLP benefits my personal development by providing me with additional skills and knowledge to be an advocate for the dairy industry," Ms Finch said. "It is an awesome way to extend our skills and knowledge. DDLP learnings will help me to promote the dairy industry and all the wonderful opportunities it can provide."

This year's program aligned to the leadership programs of dairy organisations Bonlac Supply Company/Fonterra and Dairy Farmers Milk Co-operative and involved a diverse group of people from across Australia's dairy regions.

Delivered by the National Centre for Dairy Education Australia (NCDEA), DDLP started in March with a five-day residential course in Melbourne with State and national industry leaders. The next phase of the program involved a regionally based project with the support of an industry mentor and concluded with a two-day residential unit in Canberra, where participants learnt about advocacy and policy development at a national level.

At the conclusion of the program, the 15 participants were awarded a certificate of completion and gained some subjects toward the NCDEA Advanced Diploma of Agribusiness Management — Leadership stream.

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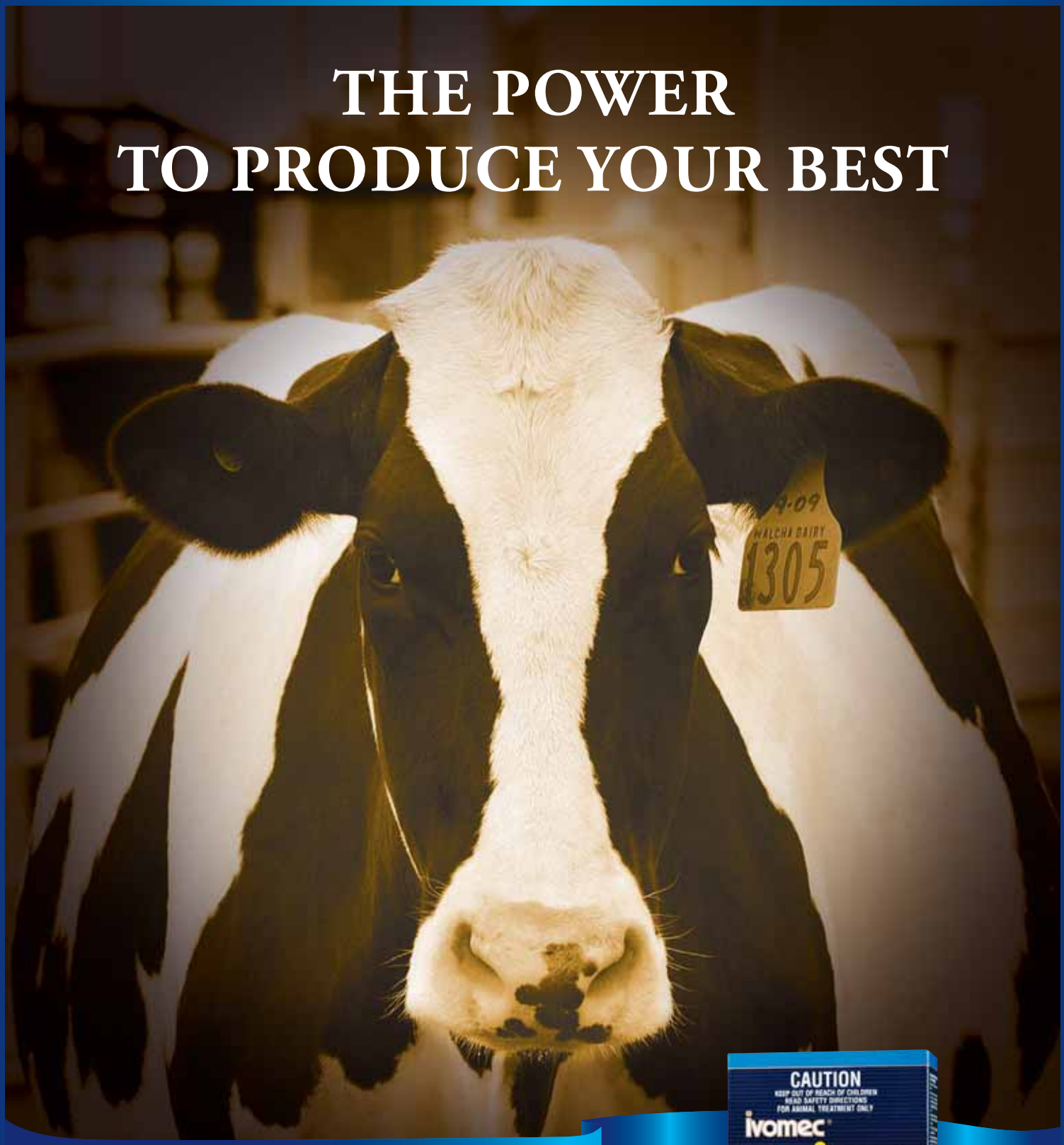

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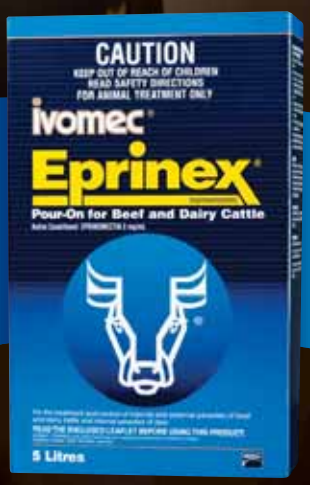

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THE POUR-ON WITH MORE GRUNT

Finding a new way to talk with dairy women

By MICHAEL PORTEUS

KEY POINTS

NETWORKING OPPORTUNITIES

- ✔ New Women in Dairying Australia group formed
- ✔ Broad focus including farm business
- ✔ Takes different approach to communication

THE founders of a new group for women in dairying want to update the view of women's roles in dairy family businesses. The group, known as WIDA (Women in Dairying Australia), says its members are "businesswomen".

The group wants its events to go beyond traditional dairywomen's concerns (such as calf rearing) and share information on topics including personal development, computerised bookkeeping, staff management, succession planning, animal health and dairy business.

However, WIDA recognises that dairy businesswomen also prioritise their farm families, and its activities will support that.

This means that men can attend WIDA workshops on topics when they share concerns with the businesswomen on their farms.

And WIDA events are more than work — the founders say women tend to communicate differently to men, and having a coffee and a chat is an important way to swap ideas and build networks. A recent WIDA Pamper Day at Casino, New South Wales, included both hand pampering and information about how to access outside support.

The WIDA representatives visit a farm at Taupiri in New Zealand.

The idea for WIDA emerged after Kyogle, NSW, dairyfarmer Nicole Nicholls visited farm families on the NSW North Coast. She found that many women — including Grafton, NSW, dairyfarmer Ali Duckworth — wanted more ways to support each other.

"Ali and I had an instant bond over the desire to connect dairy women from all around the country," Mrs Nicholls said. "Ali is the IT expert and she has designed the WIDA web page at <www.wida.info>."

Mrs Duckworth said she had felt ill-prepared and isolated as a "newbie" marrying into the dairy industry. "I believed that dairying women had so much to teach each other and I was desperate for a way to connect them," she said. "After chatting with Nicole, the idea was born and we ran with it."

Mrs Nicholls and three other North Coast women — Donna Darley and Jo Cook from Dorrigo, NSW, and Donna Clarke from Kempsey, NSW — gained their dairy community's Winston Sweeney scholarship for dairy travel and research to attend this year's conference of the Dairy Women's Network in New Zealand.

They were inspired by the way the NZ group had started with four women chatting over coffee in a farm kitchen. It grew in 15 years to have 5000 members.

"The Dairy Women's Network conference was a great experience — it gave us the encouragement we needed," Mrs Nicholls said. "The members there are recognised as being a huge and influential part of their dairy businesses. We would love to emulate that success over here."

Mrs Nicholls said the NZ conference was not just about women. "It was about the dairy industry and business: looking after yourself and your team, succession planning et cetera. Check out the Dairy Women's Network site at <www.dwn.co.nz>."

The WIDA web page lists sponsorship ▶

A WIDA event at Casino this year combined a hand pampering with talks on how farms could access Centrelink and Medicare support and apply for drought assistance.

Nicole Nicholls at the WIDA Pamper Day at Casino, NSW.

Maxine Armstong, Old Bonalbo, NSW; Coral Rose, Goolmangar, NSW; and Eileen Waddell, Bex Hill, NSW, at the WIDA Pamper Day at Casino, NSW.

by Dairy Australia (DA), Legendairy and Norco. WIDA also has a Facebook page.

"DA and Legendairy have been extremely supportive of our project," Mrs Nicholls said. "They understand that dairying is a family business and that all members of the family need to be supported."

WIDA has already organised events including a welcome day at which participants were asked to say what they would like to get out of WIDA gatherings.

Mrs Nicholls said these ideas included communication training and information on topics including succession planning, men's health and business management. Women also wanted friendships with other women in dairying.

WIDA has organised a day with a communications specialist and the recent pamper days at Casino and Grafton. After pampering their hands and sharing lunch, they heard advice on how to complete new Centrelink and Medicare forms and apply for drought assistance.

Donna Clarke, Donna Darley, Nicole Nicholls and Jo Cook wore Legendairy gear to the conference of the Dairy Women's Network in New Zealand.

WIDA members have also been in touch with other women's dairy groups in Victoria and Western Australia.

Upcoming events include first-aid training days, which will also discuss mental first aid and sessions on basic computer and form-completion techniques.

Mrs Nicholls said the group aimed to eventually hold a national conference of women in Australian dairying but also wanted to meet needs as they emerged from local WIDA groups.

The WIDA founders are prepared for their organisation to grow slowly like its cousin in NZ. WIDA is now seeking people who would like to co-ordinate activities in their areas — more information is on the website. WIDA has a grant from DA to bring these co-ordinators together for a planning meeting.

The WIDA website says it's a dynamic group of women who are committed to supporting and networking dairyfarming families across Australia.

"We aim to provide the facilities to bring people together, educate and generally provide assistance to all our dairy families out there who need a helping hand," it says.

"Our goal is to provide support to women and their families in the dairy industry by providing a friendly and trusting environment in which we can share information in a non-judgmental and encouraging way."

The WIDA mission statement says it wants to empower women to achieve greatness in their chosen fields, which could include leadership roles within the dairy industry or the community.

It wants to innovate by distributing information on all areas of the dairy business, including ideas and information from its members.

"Our goal is to value the contribution of every woman that is included in the group ... to be supportive, friendly, trustworthy and empathetic to all of our members," the mission statement says.

And Mrs Nicholls said the group's mission would continue to grow as the varying needs of WIDA members were identified.

"For us to be successful, we need to be adaptable, and we're thus constantly looking for new goals," she said.

Mrs Nicholls said many dairywomen from all over Australia had joined WIDA via its Facebook page and website at <www.wida.info>. She said the group hoped to reach many more people so women were welcome to phone her on mobile 0427 354 155.

Targeted approach to improving milk quality

By ALEXANDRA DE BLAS

Department of Environment and Primary Industries

State Government Victoria

MANAGING milk quality is of critical importance to the Australian dairy industry — it increases farm profitability, improves animal welfare and protects dairy export markets.

The Australian Milk Quality Steering Group (AMQSG) was established three years ago to improve milk quality across the industry. Its members have broad-ranging expertise in the field and have worked hard to set targets that are worthwhile, measurable and achievable.

Milk quality is based on three key criteria:

- white blood cell count, which is the cow's response to pathogens such as mastitis;
- bacterial contamination, measured as plate count, from sources such as milking machines and milk vats; and
- presence of residues such as antibiotics.

High white cell and bacterial counts have implications for milk's keeping abilities, its taste and the ability to process it into high-value products such as yoghurt and cheese.

Stuart Griffin, the steering group's chairman, and a Westbury, Victoria, farmer representative on AMQSG, said: "We don't drive RD&E (research, development and extension) in the industry because we don't have a budget for that but we do prioritise it. We identify gaps in the industry's knowledge relating to milk quality and point to the projects required to fill them. The majority of our focus is pre-farmgate, delivering benefits for farmers, on farm."

The group is a community of interest within the Dairy Moving Forward Framework and for the past three years was supported by funding from the Gardiner Foundation and Dairy Australia, with Harris Park Group acting as convenor.

The group has met nine times and is aiming to keep Australia at the forefront of milk quality standards. To achieve this, farmers need access to the most up-to-date national and international information with results of new R&D made available as soon as possible.

Patrice Marshall, apprentice at Paynter Farms, Ellinbank, Vic, checks the temperature of the milk vat to ensure milk quality is maintained.

INSET: Premium quality milk awaiting collection on farm.

Targets have been set across all themes in the milk quality portfolio, which provide a framework for determining investment priorities.

One aim is that by 2020, 80% of farms should not exceed the Countdown trigger points for clinical cases of mastitis. Those triggers are five cases per 100 cows in the first month after lactation and two cases in the subsequent months.

Milk with a cell count of above 400,000 per millilitre is considered unfit for human consumption by the European Union.

The current average annual bulk milk cell count (BMCC) in the Australian dairy herd is 232,500/ml (*The Australian Dairy Herd Improvement Report 2012*). By 2015, the steering group's target is that 96% of farms will have an average annual BMCC of less than 400,000/ml and 65% of farms will have less than 250,000 cells/ml. In 2020 these targets become more stringent.

To help achieve this target, the group recommended a research project examining the value of new molecular techniques for identifying mastitis pathogens in milk (see boxed article).

On the training front, to ensure that farmers and advisers in mastitis management are up to speed, the group has set a goal to increase the number of people who attend the National Centre for Dairy Education Australia's Cups On Cups Off courses across five years and to make Countdown Adviser training available annually.

Since the first meeting the issue of the availability and training of milking machine technicians has been a major concern, particularly in regions where dairy farm numbers are small or declining.

The AMQSG's goal is that "all Australian dairy farms have access to suitably qualified and competent milking machine technicians by 2020".

GARDINER FOUNDATION

Dr Lauren Clyne, from the Maffra Vet Clinic, collects a milk sample from a cow with mastitis.
INSET: Close up of milk sample collection.

Maximising benefits of molecular mastitis testing

AS any dairyfarmer knows, mastitis in the herd can be a costly business, causing distress for cows and farm workers alike.

A number of different bacteria cause mastitis in dairy cows and it is important to identify the correct pathogen to ensure the most appropriate treatment and control methods can be applied. Any new tool to reduce the incidence of this disease is worth careful consideration.

Australian dairyfarmers have had access to a milk PCR (molecular test), via Dairy Technical Services Ltd, since 2011. PCR stands for polymerase chain reaction and it is a type of test used in agriculture, science and medicine to assess a biological sample for the presence of specific types of DNA.

Compared with the more traditional methods, which require growing a microbe in the lab, the PCR test is more rapid and specific. However, its greater sophistication means the findings can be more difficult for farmers and vets to interpret.

To ensure the benefits of the new tests could be realised under Australian conditions, a team of scientists with a long association with Dairy Australia's (DA) Countdown 2020 program undertook a large research project, which was completed in 2013. Primarily funded by the Gardiner Foundation, it was a collaboration between Harris Park, DA, Dairy Technical Services and the University of Sydney.

The research team used its findings to develop clear, evidence-based recommendations for the industry on how to best utilise the new technology.

This information should soon be publicly available through Countdown 2020.

One version of the milk PCR test has the ability to identify 11 different mastitis-causing bacteria. However, the researchers have concentrated on the value of the milk PCR test for preventing and controlling *Streptococcus agalactiae* (*Strep ag*) and *Mycoplasma bovis* (*M. bovis*) in Australian herds.

Only these two pathogens — *Strep ag* and *M. bovis* — can be claimed to have originated inside the udder since the other nine bacteria may have come from other sources. This means that when *Strep ag* or *M. bovis* is detected it has almost certainly originated inside the udder of one or more of the cows in the herd and they are almost certainly causing udder health problems.

Although the other nine target organisms might have originated from an infected udder too, it is also possible they have entered the milk supply via contamination of teat skin, as the environment is the primary source of those organisms.

Therefore, a second version of the milk PCR test, which covers only four pathogens (*Strep ag, M. bovis, Staph aureus* and *Strep uberis*) seems more suitable for Australian dairyfarmers.

The researchers developed decision process tools to effectively use and interpret results in a range of scenarios. They include:

- taking biosecurity measures to reduce the risk of buying in new cows with *Strep ag* or *M. bovis*;
- investigating elevated Bulk Milk Cell Counts (BMCC) and/or high incidence of mastitis;
- segregating or treating cows infected with *Strep ag*;
- segregating or culling cows infected with *M. bovis*; and
- carrying out herd surveillance in numerous circumstances.

While conventional bacteriology takes about 24-28 hours, the milk PCR test takes fewer than four hours to run. The rapid test costs about $45 per sample.

Contact: website <www.gardinerfoundation.com.au> or phone (03) 8621 2900.

—ALEXANDRA DE BLAS

A happy return to the land

By MADELEINE MCNEIL

Leeanne Donohue and Adrian Parkinson are bucking the trend of young people leaving the land.
Picture by AARON SAWALL

KEY POINTS

GENERAL KEY POINTS

- ✔ Right lifestyle
- ✔ Good time to return to dairy
- ✔ Opportunities from China

THE mass exodus of young people from regional farms for city education or employment is talked about often. But there's less said about those who go away, gain their qualifications and life experience and return to to live on the land.

Adrian Parkinson and his brother, James, opted to pursue trade qualifications before recently returning to the family dairy farm in the Kirkstall/Warrong district in south-west Victoria.

The pair returned to the dairy full-time in February when the family farm expanded to include a 365-hectare property that the men run together.

Adrian, 26, worked as an electrician in Warrnambool for the past eight years while helping his parents Shirley and David on the farm casually. "I was getting a bit itchy to (get back onto the farm)," he said. "Growing up here I was pretty keen to get back.

"I was doing a fair bit of weekend work filling in holes, that sort of stuff. It was the opportunity and it's a really good lifestyle.

"At the minute there's about 500 (cows) and that will build up to about 700 to 750. All the calving is done on the main farm and then the cows slowly migrate up here piece-by-piece.

"Once we build to that number we'll hold that until we start drying them out, then they're ready to calve later on."

He said now was a good time to return to the industry. "Everything's picking up," he said.

"Well, it's picked up and it's holding at the minute. Prices are all pretty solid. China's got a lot to do with it and the same with the demand from the export heifers."

The brothers are enjoying working together on the farm and their change of career. The farm is also where Adrian met his Irish partner, Leeanne Donohoe, who was working on his parents' property as part of a three-month working holiday visa to encourage international travellers to work in rural areas.

Ms Donohoe arrived in Kirkstall in February last year and with the help of Irish Koroit, Vic, resident Oonagh Kilpatrick, she was placed to work on the Parkinson family farm, after randomly choosing the area.

"In regional Australia there's a few postcodes that qualify so I just happened to come down here and that was it. I actually like the spot," Ms Donohoe said.

Ms Donohoe came from Cavan, Ireland, with limited farming experience from time spent on her grandfather's small farm.

"The most I had ever really done on the farm was stand in gaps and help move cows, so it was a big experience to come out for the three months and do farming," she said.

Ms Donohoe hopes to settle in the south-west where she has made friends and works in a Warrnambool cafe, as well as helping out on the farm.

"I fitted in nicely. I think I slotted in well into Kirkstall," she said.

Article courtesy of Warrnambool Standard

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Dairy offers change of direction

By MADELEINE MCNEIL

KEY POINTS

BUILDING DAIRY

- ✔ Return to family dairy
- ✔ Lifestyle for family important
- ✔ Industry future looks positive

A CHANGE of career from massage therapist to milking cows has seen Kylie Annett now working side-by-side with partner Adam Rowe in their Simpson, Victoria, dairy.

The pair look as if they have been dairy-farming together for years, not a matter of months. They work together easily with friendly banter between them.

The couple is bucking the trend that sees young people leaving the family dairy farm for a life off the land, with a steady job, regular working hours and predictable fortnightly salaries.

The couple had established careers and a rental home in Ballarat, but were looking for a change when about 12 months ago they toyed with the idea of sharefarming with Adam's parents, Norm and Dianne Rowe.

Adam Rowe and Kylie Annett with sons Royce, 3, and Lincoln Rowe, 20 months-old, on their Simpson farm. Picture: DAMIAN WHITE

Adam who grew up on the family farm at Simpson — only about five kilometres from where they are now living — had been away for more than 10 years, completing an apprenticeship as a fitter.

They chose to give up their Ballarat lifestyle earlier this year and moved to their Simpson dairy farm with sons Royce, 3, and Lincoln, 20 months-old.

Each morning and afternoon Adam and Kylie milk 270 cows together and have recently reared 200 calves.

Their farm, on 180 hectares, has a rotary dairy and a three-bedroom home with plenty of land for the boys to run, play and jump in puddles with their pet dogs. The couple said lifestyle, as well as finding the right farm, played a part in their decision.

Kylie had an established massage career, operating her own successful businesses in Colac, then Ballarat. She later worked at Ballarat TAFE teaching massage and massaging in the clinic two days a week, while also raising their two sons.

"I feel like I'd achieved everything out of massage so I was happy for a change," she said.

MG establishes herd lease program

MURRAY Goulburn Co-operative has announced a $5 million partnership with CowBank that will further strengthen its support of young farmers entering the dairy industry.

Next Generation Herd Start is an innovative program designed to assist dairyfarmers to establish a commercial dairy herd even if they have limited capital.

The program allows young farmers to lease-purchase a herd from CowBank with support from Murray Goulburn.

Murray Goulburn's executive general manager Shareholder Relations, Robert Poole, said the development of Herd Start was representative of the company's commitment to supporting the next generation of Australian dairyfarmers.

"We are often asked how young farmers can get their start in a dairy business," he said.

"To support the next generation of dairyfarmers, we are partnering with CowBank to provide talented and passionate dairyfarmers with an opportunity to grow their herd and establish their own dairy business even if they have limited capital."

CowBank managing director, Rod Banks, said the initiative would benefit young farmers who might not have the capacity to receive herd finance due to lack of equity.

As part of a pilot program, Devondale Murray Goulburn will support between 12 and 15 Herd Start farmers during the next year.

Those interested are encouraged to speak with a member of the Murray Goulburn field services team or contact CowBank.

Subject to the success of the pilot program, Murray Goulburn and CowBank expect to provide the Herd Start program as an ongoing opportunity for talented and motivated farmers to progress to dairy business ownership.

Contact: <www.mgc.com.au/innovation/next-generation/>.

Simpson is a good dairy area where Adam's father and uncle have farmed for years.

Adam said: "It was more the opportunity. If it happened it happened, if it didn't it didn't. We were looking for a change from the job I was doing.

"I was working seven days on and seven days off and nightshift (working) underground as a break-down fitter at the (Castlemaine) mine."

Kylie has taken an active role in the business, milking, doing the paperwork and finances, helping with calves and other odd jobs, as well as caring for the boys.

"It's funny: you say to people 'we're thinking about going dairyfarming'. Everyone's got a negative point of view and that made it hard for me because nobody says a good thing about it," she said. "But now I'm amongst it, it's fine. It's quite nice. It's funny how people perceive it."

Adam experienced a similar response when he told people their plans. "(They said) 'don't do it, you're mad. What the hell are you doing that for?'," he said.

"I think they were saying it jokingly, but I think they were half serious. There's good sides to it, but it can be hard. It's a grind. It's a constant job."

Kylie said: "But, in saying that, it's a challenge and it's rewarding."

The couple said the move was appealing, with a young family, and it was good timing.

"We're doing our own thing which we weren't before," Adam said. "Everything's looking quite positive in the dairy industry, so that makes it an easier decision too.

"Things were tough. If you have a bad milk price and then tough weather conditions, you're going to find it tough. That's the other thing with this: there are so many other factors that have got to all come together.

"The ones that aren't (in your control) you've got to allow for, give yourself that buffer. Everyone's going on about the Asian side of it and the dining boom so I think the demand's there, but we'll just have to see what happens with all the other factors that come into it."

Adam said factory upgrades at Murray Goulburn and the re-opening of the Camperdown factory, as well as increased interest and investment from internationals were all promising.

Midfield Meat's diversification into dairy processing and the construction of a milk powder production facility in Warrnambool were other pluses.

"There's also rumours around here as far as other conglomerates looking to buy farms as well, so all those things look good," Adam said.

"That's what you want. You don't want it going the other way, that's for sure. We've said we'll do it for five years and then re-evaluate where we are after five years." D

Article courtesy of Warrnambool Standard

Bega's future farming

By RODERICK MAKIM

BUILDING DAIRY

KEY POINTS

- ✔ Giving presentations at local schools
- ✔ Using social media to promote industry
- ✔ Advocating for reassessment of regulations

BEGA, NSW, district dairyfarmer Tom Pearce is reluctant to talk about himself, but get him on to the topic of the dairy industry's future and it's another story.

The young, fourth-generation dairyfarmer is not content to let dairying fade away in NSW and has tried to tell as wide an audience as possible that young people in the milk industry can make a go of it on a farm.

"There has long been a perception that you had to move to the city for uni and to get a job," Mr Pearce said. "I suppose I was lucky I found out what I wanted to do at an early age."

What he wanted was to follow in his father's footsteps and keep the Warwick Farm dairy in operation, as his family has done for 100 years.

He is now the herd manager for the family's stud, Progressive Holsteins, run by his parents Norm and Narelle.

More than just being on the farm, however, Mr Pearce wanted to let others know they didn't have to leave the country for a rewarding job and lifestyle. "You might get a lot of money in the city but I think this (life on the dairy) is more rewarding than being stuck staring at tonnes of concrete," he said.

Through a series of presentations at primary and high schools and an astute use of various social media platforms, Mr Pearce is gradually getting that message across.

"It's good to educate kids about rural life," he said of his school presentations," he said. "The last two talks (at the Eden primary and high schools) went really well. There was good interaction and questions from the kids.

"Getting young people inspired feels like I'm giving something back to the industry. It feels like the message is getting across."

Mr Pearce isn't shy about spreading his message via social media, either. His Facebook and Twitter profiles for Progressive Holsteins have a combined total of more than 1000 likes/followers and he uses those platforms to promote not only his own herd but the interests of the dairy industry in general.

An example had him conversing on Twitter with NSW and federal politicians about problems caused for farmers by the National Bovine Johne's Disease (BJD) plan.

Under this plan, dairy producers must supply a declaration of the dairy BJD assurance score with every consignment of cattle they sell, establishing the risk of those cattle carrying BJD.

Already frustrated by his own battles with the BJD plan, when he heard about another producer having to postpone a sale due to them having bought a suspect cow four years earlier — despite many tests on that cow having proven negative for BJD since then — Mr Pearce decided it was time for answers. A tweet fired off to MPs Katrina Hodgkinson and Barnaby Joyce received an immediate response from Ms Hodgkinson, who said the matter would be examined.

Mr Pearce is also tackling other ongoing problems for the dairy industry such as the challenge presented by low milk prices.

One way to try to combat this challenge was to look for ways to keep costs down at Warwick Farm.

Mr Pearce and his father Norm recently installed a new K-Line irrigation system, which will cut costs by reducing both water run-off and power usage.

Tom Pearce at work in the Warwick Farm dairy.

Feed efficiency would also be something to investigate, he said, with plans for a concrete feedpad being given consideration to save money to limit wasted grain or hay currently lost under cows' hooves in the paddock.

Aside from improving efficiencies at Warwick Farm, Mr Pearce is enthusiastic about show judging for dairy cows.

He also likes looking outside Australia for ways to improve the dairy industry, having visited the World Dairy Expo in Wisconsin in the United States a number of times.

With his enthusiasm for the industry stretching from international dairy experiences to improving his family's farming business and campaigning on social media, Mr Pearce is leaving no stone unturned to make sure Warwick Farm will be a profitable dairy to hand on to yet another generation.

Article courtesy of The Land

Earlier detection of LDA

KEY POINTS

RUMEN RESEARCH

- ✔ Rumination changes in cow with LDA
- ✔ Picked up by activity monitors
- ✔ Monitors may detect other diseases

RESEARCH conducted by the FutureDairy team has identified the potential to use a device that monitors activity and rumination for early identification of left displaced abomasum (LDA) in dairy cows.

A metabolic disease in recently calved cows, LDA is associated with high intake of carbohydrates in combination with a relatively empty rumen. This can occur with illnesses such as mastitis and metritis, which tend to reduce feed intake. With cases having increased in recent years, LDAs incur significant costs through surgery, milk loss and cow deaths.

A cow developed LDA during a study conducted by postgraduate student Saranika Talukder to evaluate the use of activity and rumination sensors (SCR HR LD tags) for heat detection. The tags were mounted on neck collars worn by the cows.

The LDA diagnosis was confirmed by a veterinarian and surgically corrected. The surgery also revealed the cow had metritis.

"Because the cow was wearing the activity monitor when she developed the LDA we had the opportunity to analyse differences in the data between the LDA cow and her healthy herd mates in the study," Mrs Talukder said.

"The cow with the LDA had reduced rumination activity from six days before the clinical diagnosis and was less active from three days before the diagnosis.

"It is possible that the cow developed metritis first, which resulted in reduced rumination and activity, which caused the LDA. If the cow had been assessed by a veterinarian based on the initial drop in rumination, the LDA may have been avoidable.

"This suggests it could be possible to use real-time data collected by commercially available activity monitors to identify an LDA in a cow at least five to six days earlier than the actual date of clinical diagnosis.

"While there is still more research to do, the ultimate aim would be for earlier diagnosis and treatment to result in fewer deaths, less milk yield loss and lower-treatment-cost cows, which would be a significant financial benefit to the farmer."

Mrs Talukder said the devices that recorded activity and rumination in real time may have the potential to be used for early identification and management of a number of health issues.

"The case of the LDA cow has shown us a new potential application of these devices," she said. "What we need to do now is build up a bank of data to be able to compare the profiles between a large number of healthy cows and those with LDA or other disorders that depress well-being and productivity, such as lameness, mastitis, ketosis, dystocia and milk fever. These data could be used to develop models for early detection of disorders based on real-time rumination behaviour in cows.

"Our work provides an additional way to get more value from data collected by sensors."

Collars that monitor cow activity and rumination have the potential to be used for early identification and treatment of left displaced abomasum (LDA).

Contact: FutureDairy Associate Professor Kendra Kerrisk, mobile 0428 101 372, email <kendra.kerrisk@sydney.edu.au>.

FutureDairy's major sponsors are Dairy Australia, DeLaval and the University of Sydney.

Red-headed cockchafers a mystery no more

KEY POINTS

PADDOCK PESTS

- ✔Red-headed cockchafers prey on pasture
- ✔Correlation between rain and infestation
- ✔Identification the key to control

A GROUND-BREAKING report into red-headed cockchafers has given Victorian dairyfarmers a clearer picture of the problem.

The report, titled *Cows, Cockies and Cockchafers: A Systems Approach to the Cockchafer Problem*, is seen as a key tool in the long-term battle to control the highly damaging insect pest.

Red-headed cockchafer (RHC) infestation costs an average of $115,500 per annum for farmers in years in which they are the unwilling hosts of the tiny beetle, the larvae of which destroy pasture by eating grass roots.

GARDINER FOUNDATION

This adds up to many millions of dollars lost to the industry whenever widespread infestations occur.

The study, which ran from September 2011 to May of this year, brought together some of Australia's most respected researchers.

GippsDairy, the Gardiner Foundation and the Victorian Department of Environment and Primary Industries (DEPI) funded the project, which was delivered on time and within budget, with input also from LaTrobe University, CSIRO, Dairy Australia and Gippsland dairyfarmers.

Key findings from the report were:

- RHCs tend to prefer lower altitude regions such as West and South Gippsland;
- rainfall data two or three months before sampling could potentially be used as a predictor of RHC abundance;
- proper identification is a key to appropriate treatment: a pocket booklet was produced to help farmers correctly identify pasture insects.

Larvae of the red-headed cockchafer.

Innovation program manager for the Gardiner Foundation, Dr Aaron Gosling, said the study would have an immediate

effect on farm profitably, with even greater gains to be made down the track.

"This project conducted both extension and basic research, and both should result in decreased economic impact of red-headed cockchafer pasture infestation in different ways," Dr Gosling said.

"Field guides were published and training was given to service providers, which should help correct information flow to landholders in the short term.

"Research on the fundamental biology of red-headed cockchafers should yield a 'best bet' guide to where to look for RHCs before pasture is damaged in the future."

GippsDairy project director Annette Zurrer said the study was never going to produce a "silver bullet" solution to the cockchafer problem but was a huge step towards effective control of the insects.

"We now have a baseload of information that will form the foundation of the ongoing management of cockchafer infestation," Ms Zurrer said.

"Previously, we had been working somewhat in the dark in trying to deal with the issues, so now we have a data set that will be the platform of further breakthroughs.

"To have the calibre of researchers we had backed by some of the most respected organisations in Australia has been a great result for dairyfarmers."

Four Victorian regions (South, West and East Gippsland and western Victoria) were surveyed during the project, with the data set collected across a wide variety of farms at multiple dates.

The data represents 893 records, making it one of the largest data sets reporting on the relationships between RHC and in-paddock sensor measurements.

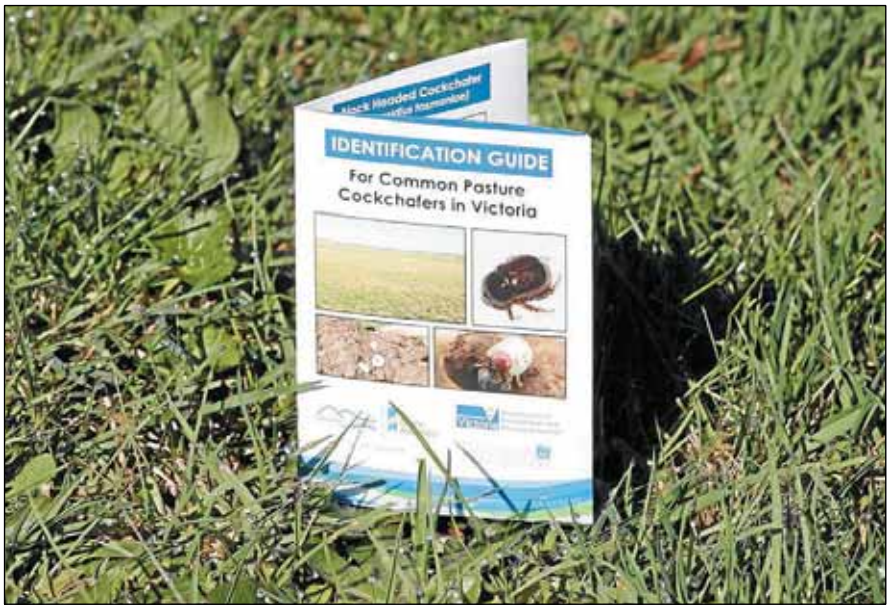
A promising study into RHC light traps proved disappointing when both standard and purpose-built traps failed to attract the insects. The reason for the RHCs' reluctance to be lured into the traps was not clear, although only one season's sampling was conducted.

The production of a pocket-sized booklet with close-up photos of RHC and black-headed cockchafers, as well as the African black beetle, was a key achievement of the project.

Enlarged images in the booklet show the points of difference that can help farmers correctly identify and appropriately treat the insects.

The African black beetle and RHC, for instance, are very similar in appearance, with head shape and fine lines below the wings being some of the key differences between the two insects. Larvae of the insects can be equally difficult to differentiate.

In a significant breakthrough, high RHC numbers have been linked to both altitude and rainfall in the months preceding sample collection.



The identification booklet has proven a winner with farmers.

Over a broad geographic range RHCs appear to favour lower-altitude regions (for example, West Gippsland and South Gippsland) but within individual paddocks they may prefer higher ground.

Rainfall data two or three months before sampling could potentially be used as a predictor of RHC abundance. Heavy rainfall in November-January may reduce egg and larval survival in February and April.

With marked differences in regional infestations, future management of RHC could be done on a a region-by-region basis, with farmers targeting certain parts of their property where outbreaks were more likely.

"It is more complicated than we might have hoped and we might have to develop a localised strategies to deal with future infestations," Ms Zurrer said.

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New kikuyu to cut reliance on ryegrass

By SHAN GOODWIN

KEY POINTS

KIKUYU RESEARCH

- ✔ Yellows-resistant variety research
- ✔ Cold-tolerant kikuyu could replace ryegrass
- ✔ Huge savings possible

LABORATORY work aimed at developing a variety of the widely used dairy pasture kikuyu that is resistant to the fungal disease yellows and has improved digestibility, tolerance to low temperature and increased yield potential is under way.

Investigators say they are hopeful that within three years they will have been able to screen kikuyu types for those traits of economic importance to the dairy industry and farmers say the work could revolutionise NSW's pasture-based milk production. The work would also be applicable in other areas including Queensland, Western Australia and northern Victoria.

The possibility of removing the need to plant ryegrass in autumn to fill a feed gap and bulk up winter feed could offer cost savings in the tens of thousands of dollars per annum, farmers say.

The project — initiated by the Far North Coast Dairy Industry Group (DIG), which also chipped in to get it under way — has Dairy Australia funding for the first year at least and will be run by Dr Mark Callow, senior research agronomist with the Department of Agriculture, Fisheries and Forestry in Queensland.

It is hoped a commercial partner will also come on board.

Norco milk supply officer Bill Fulkerson, who prepared the funding submission on behalf of DIG, said because kikuyu pastures were oversown with annual/short-rotation ryegrass in autumn, there was a feed gap due to the establishment phase required for ryegrass and the low temperatures and practices needed to reduce the competition from kikuyu.

"If kikuyu could be more cold-tolerant and grow further into winter, it may be possible to do away with the ryegrass phases, taking out the high costs of ryegrass in terms of seed and sowing practices," Mr Fulkerson said.

Researchers plan to obtain stolons of ecotypes from the three collections of kikuyu plants available, one of which is in South Africa.

Mr Fulkerson said kikuyu was the highest-quality tropical grass available when managed well and had become naturalised along the entire east coast.

Irrigated dairy pastures in Western Australia were also mostly kikuyu-based.

In NSW it was estimated 70% of milk in summer was produced from kikuyu, Mr Fulkerson said.

New research hopes to develop more productive kikuyu pastures.

"However, the area of kikuyu-based dairying has been in decline over the past few decades due to infestation of kikuyu yellows," he said.

See 'Improved kikuyu welcomed' next page.

Vigorous kikuyu is thriving under relatively mild winter conditions at Don Shedden's Goolmangar property in northern New South Wales.

Improved kikuyu welcomed

NORTHERN Rivers milk producers Don Shedden and Leigh Shearman planted close to 70 hectares of ryegrass this year from mid-March.

It's now on its second grazing and, courtesy of small amounts of timely rain, is growing well despite competition from vigorous kikuyu.

With the first frosts at their 200-milker Holstein, Jersey and Brown Swiss Goolmangar dairy, Lee's Crossing, having arrived only in the last week of June, it is the best they've seen their kikuyu paddocks in winter.

It's something of which they'd love to see more. "A variety of kikuyu with resistance to yellows, higher ME (metabolisable energy) and yield potential, and tolerance to winter conditions would provide enormous leaps in productivity," Ms Shearman said

Mr Shedden said: "Ryegrass planting is a significant cost in seed, not to mention fertiliser, and to cut even part of that, and the work involved, out of the equation would add up to a lot."

They opted to plant more oats this year, mixed in with the ryegrass, in an attempt to counter the forecast dry spring.

Their milk goes to Norco at Lismore.

—SHAN GOODWIN

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Research demystifying endophytes

By PAT BLOYE*

KEY POINTS

PERENNIAL PARTNERS

- ✔ Endophytes live in perennial ryegrass/tall fescue
- ✔ Provide benefits to plant including insect resistance
- ✔ Can cause animal health issues

GIVEN the high productivity and nutritive value of perennial ryegrass, it comes as no surprise that it is the most commonly sown pasture species in the temperate zones of Australia. However, one of the bigger issues facing plant breeders in recent times is the development of more persistent cultivars.

This has also led to heavy research around the role of endophytes. Unfortunately, many farmers are confused by the various names and terminology surrounding endophytes and what they can/can't do and why they even exist in plants.

Figure 1: Root aphids and typical white exudite seen where root aphids are present.

What are endophytes?

Endophytes are fungi that form a symbiotic relationship with perennial ryegrass (including some hybrids) and tall fescue, with the fungus growing in between the cells within the plants.

The lifecycle begins with a seed infected with endophyte and remains in the growing point at the base of the plant.

During the vegetative (leafy) stage of growth, small amounts of endophyte can live in the leaf sheath at the base of the plant. When the plant matures during spring, the endophyte will travel up the stem and into the seed head, where the cycle will begin again in the next generation. Endophytes do not cross-pollinate between seeds; however, seed companies using various techniques can introduce appropriate strains into different grass species. This is a space to watch in future years.

What do endophytes do?

Somewhere along the evolutionary line, the host plant and the endophyte decided to make a deal: the plant would provide the endophyte with nutrients and a place to live and reproduce, and the endophyte would give the plant a degree of both biotic (insect pests and plant diseases and grazing pressure on leaf area) and abiotic (low rainfall/drought) resistance. The endophyte does this through the production of unique compounds, known as alkaloids.

Some of these alkaloids can adversely affect animal health, such as when grazing through summer and autumn, causing ryegrass staggers and exacerbating heat stress. However, some of the alkaloids provide resistance against potentially very damaging insects such as Argentine stem weevil, pasture mealy bug, root aphid (see Figure 1) and African black beetle, not all of which are present in Australia.

Most older perennial ryegrass pastures carrying the natural endophyte are often referred to as standard-endophyte (SE), wild-type or high-endophyte (HE), although some ryegrass varieties carry no endophytes, adding to the confusion for farmers.

Although the wild-type provide the plant with some protection from insect pests, they also produce alkaloids that can have adverse effects on grazing animals, causing ryegrass staggers. Ryegrass staggers is an attack of the nervous system of the animal caused by certain alkaloids of the endophyte. The endophyte is more concentrated at the base of the plant.

Under water stress and high soil nitrogen levels, endophyte levels in the plant often increase substantially. Furthermore, through late summer and early autumn the pastures will often be grazed closer to the base of the plant due to a reduction in growth rate. A combination of this is generally why cattle develop ryegrass staggers through summer and autumn.

Fortunately, newer cultivars containing selected (or novel) endophytes such as AR1, AR37, NEA2 and Endo5 have been developed, meaning that only selected alkaloids are produced from the endophyte. This is aimed at reducing the health risks associated with animals grazing the pastures and/or to increase the insect pest and plant disease resistance. Table 1 contains the more commonly used endophytes in ryegrass and the alkaloid they produce.

Making the most of the new endophytes

As the endophyte is transferred between plants via infection of the seed, to minimise the potential of animal health risks and maximise the insect resistance, when sowing new cultivars containing novel endophytes it is important that the existing wild-type perennial ryegrass seed bank in the soil is depleted. This will ensure the endophyte in the new cultivar will be fully utilised to best advantage.

A practical strategy to ensure depletion of the old seed bank is to sow a forage that does not form a symbiosis with endophytes. ▶

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◀This may be an Italian or annual ryegrass (be careful not to select an endophyte-containing hybrid), or a winter forage cereal or brassica.

This will cause a significant reduction of wild-type endophyte remaining within the old seed in the soil. To be most effective it is recommended that this protocol be followed for two years, but for practicality purposes one year would most likely be adequate.

Keep in mind also that the feeding of hay made from older ryegrass pastures will most likely contain the wild-type endophyte in the seed. If possible, try not to feed this hay onto newly renovated paddocks. The key message here is that successful pasture renovation with novel endophyte will depend on preventing recontamination of new pasture with old perennial ryegrass seed.

Endophyte viability in seed

Correct storage by seed companies, wholesalers and suppliers, and rural stores and on farm of seed containing endophyte is critical to maximising endophyte survival rate. As endophyte is a living organism, storage in warm to hot humid conditions or for long periods of time will significantly reduce the viability proportions of the endophyte.

Be sure to check with the local supplier regarding the conditions and period of seed storage. Seed advertised as "containing endophyte" should have a viability proportion of 70 or greater, with "low-endophyte" seed around 10%. Ideally, seed containing endophyte should be stored in a dark room under about five degrees Celsius at 30% relative humidity or lower.

The reputable seed suppliers retest the endophyte viability of seed regularly and re-label bags accordingly if endophyte level decreases below 70%.

Table 1: Summary of the alkaloids produced by the endophyte options

Endophyte*	Alkaloids produced by endophytes			
	Lolitrem B	Erogvaline	Peramine	Epoxy-janthitrems
Standard	Yes	Yes	Yes	-
AR1	—	—	Yes	-
Endo5	—	Yes**	Yes	-
AR37	—	—	—	Yes
NEA2	Yes***	Yes	Yes***	-

Source: PGGWrightson Seeds
*Actual endophyte levels are cultivar-specific and may vary under changing environmental stresses.
**Cultivars containing Endo5 have been specifically bred to produce less ergovaline than cultivars containing standard endophyte.
***Levels have been described as much lower compared with that of the standard endophyte.

What do the different endophytes mean for me?

It is important to understand the advantages and disadvantages of the different endophyte cultivars. When selecting seed cultivars, make sure individual needs are identified and discuss these with a trusted local agronomist.

For example, if someone is having an issue with ryegrass staggers in the herd but are not situated in a root aphid-prone area, then an AR1 cultivar would suit better than an AR37 cultivar.

Realistically, plant persistence is a result of a combination of factors that together reduce the impact of biotic and abiotic stresses.

However, understanding the barriers to the farming system and selecting suitable endophyte cultivars based on those limitations is a step in the right direction.

When used correctly, these novel endophytes can improve animal performance and/or provide improved grass yield and persistence. D

**Pat Bloye is a dairy extension officer — agronomy at the Victorian Department of Environment and Primary Industries, Ellinbank Centre.*

Table 2: Summary of the endophyte options and their level of control of key pests

Endophyte options	Level of pest control by endophyte options			
	Argentine stem weevil	Pasture mealy bug	Root aphid	African black beetle
Ryegrass with no endophyte	—	—	—	—
Standard (HE, SE or wild-type)	++++	++++	++	+++
AR1	++++	++++	—**	+
Endo 5	+++*	++++	+++	+++
AR37	++++	++++	++++	+++

Source: PGG Wrightson Seeds

+ = Poor to ++++ = Excellent, — = No control

*These endophytes control Argentina stem weevil larvae (caterpillars) but not adults. While larvae cause most damage to adults can damage emerging grass seedlings, so use of an appropriate seed treatment is recommended in stem weevil situations.

**AR1 plants are more susceptible to root aphid than plants without endophyte.

Sustainable farm practices in the spotlight

SUSTAINABLE farm practices will be in the spotlight at the New Generation Dairy Farmers Forum to be held at Coffs Harbour, NSW, from October 21-23. The popular forum is held every two years at the Opal Cove Resort on the beachfront.

A Commonwealth Government Caring for our Country — Community Landcare Grant is helping to fund this year's forum.

Dairy Australia's manager sustainability including food safety and integrity Helen Dornom will set the scene at the forum with a presentation about the Australian Dairy Industry Sustainability Framework. This initiative aims to ensure Australia's dairy industry can continue long into the future and can meet the increasing global demands for a sustainable industry. The framework will also help drive practice change where necessary for farmers and processors.

The New Generation forum has always aimed to get farmers thinking. It's approach is to have an industry speaker set the scene for discussion on an issue, sometimes followed by a technical speaker with information that maybe of use on farm and finishing with a farmer explaining how they manage that issue on their own farm.

This year's forum aims to provide impetus for the continued uptake of sustainable farm practices among dairyfarmers and to increase their capacity for the integration of natural resource management and food production. Innovative and sustainable agricultural practices will be showcased by industry experts along with fellow farmers.

Guest speakers have been invited (final confirmation still to come) in these topic areas:

- Robotic milking technology — NSW Department of Primary Industries development officer robotic milking systems Nicolas Lyon will lead the discussion to be followed by two dairyfarmers. Greg Dennis from Queensland has several automatic milking stations and a tourism venture to raise community awareness, while the other local farmer installed their first robotic milker this year.
- Gippsland dairyfarmers Gillian Hayman and Graeme Nicoll have long been involved in sustainability work on their farm and at an industry level. They are also proactive in promoting dairy to consumers through social media.
- Dr Bruce Hamilton will share his research into 'feeding cows for the future'.
- Compost is on the agenda with a local green waste company invited to speak about their product.
- 'Women in Dairy' groups are gathering momentum in the Subtropical Dairy region and will discuss their recent trip to New Zealand.
- The Young Dairy Network has been developing northern dairy

Resilience key to sustainability

TWO of the farmer speakers at the New Generation Dairy Farmers Forum will be Rod and Jo Madden from the Big River Dairy, near Grafton on the NSW north coast. The Maddens have gone from strength to strength since starting in the dairy industry only nine years ago and are an inspiring example of the forum theme 'Innovation and Sustainability'.

In 2006 the Maddens bought an old 120-hectare dairy farm at Southgate. For two years they ran beef cattle while both continued to travel away to work.

As milk prices hit 63 cents a litre, they crunched the numbers and set about constructing a new dairy on the farm. Mr Madden suffered a heart attack during the construction in October 2008, but despite this the dairy was completed in December 2008 and the first cows went on the platform December 6, 2008.

Neither of them were from a dairy background so it was a steep learning curve. The Maddens then had to battle

The Madden farm was under water nine times in five years.

floods — three in May 2009, then further floods in January 2011, January 2012, January 2013 (three floods). All up they were totally under water nine times in the first five years.

After the 2013 flooding, the Maddens had almost decided to walk away from dairying. Instead they pursued their dream to make process their own milk to sell directly to consumers. They are now producing 20,000 litres of milk a week and about 50% is now being sold in a bottle.

Nicolas Lyon has extensive experience in the dairy industry both here and in Argentina.

Integrating robotic milking

NSW Department of Primary Industries development officer robotic milking systems Nicolas Lyons will lead the discussion about dairy robotics.

Mr Lyons is originally from Argentina and holds a degree in agricultural engineering and a PhD in veterinary science, with a strong orientation towards dairy production in both of them.

These formal qualifications, combined with his international experience in dairy production, have allowed him to work directly with farmers and in close relationship with researchers, farm consultants, milk processors and service providers, both in private and public organisations.

His main responsibilities have always involved active communication with the wider dairy industry to understand and analyse current on-farm and industry situations, conduct research in an effective and appropriate manner; but primarily developing, delivering and monitoring effective ways of transferring that body of knowledge to the wider industry.

Industry farmers since 2006 and provides a link for farmers with similar interests, in an environment where they can share ideas and experiences. Membership typically is made up of young innovative farmers who are adopters of change and seekers of information. The YDN is now national and the forum will hear about Young Dairy Network Australia.

- Local dairyfarmers going from strength to strength have been invited: one farmer is totally self sufficient with feeding cows, one farmer has started producing a2 milk, one farmer has launched a non-homogonised milk and one farmer won the 2013 Dairy Innovators Award.
- Mental Health is always a topical topic. This year the forum plans to hear more about 'The Glovebox Guide to Mental Health'.
- Local Land Services North Coast has been invited to speak on two local projects that aim to help sustain the environment — an effluent re-use project and a soil erosion project.
- Farmers who are successfully farming in 'fragile environments' from Wilson's Promenetary to the Great Barrier Reef have been invited to speak.
- The *Australian Dairyfarmer* magazine trivia night is always fantastic highlight.

The cost of the forum is just $200 for dairyfarmers and accommodation packages are also available. Registration forms are available from the forum co-ordinator. D

Contact: Forum co-ordinator Traci Gordon, mobile 0406 781 553, phone (02) 6653 5614, email <tracig007@bigpond.com>.

Aus dairy takes sustainability lead

AUSTRALIA is the world's fourth largest exporter of dairy with an enviable reputation for the high quality and safety of its products. Dairy consumers, domestic and international, increasingly require assurance that the food they eat is safe. Underscoring this desire is the requirement for dairy to be produced sustainably.

Recognising the urgency of these requirements, the Australian dairy industry has signed onto an Industry Sustainability Framework, an approach fully aligned with the Global Dairy Sustainability Framework (GDSF).

The New Generation Dairy Farmers Forum will feature a session on the Australian Dairy Industry Sustainability Framework. Dairy Australia's manager sustainability including food safety and integrity Helen Dornom will lead this session and explain why sustainability is so important to the industry.

Australian dairy fully endorses the GDSF, and being a member means it allows the industry to demonstrate its sustainability credentials and commitment on a global platform as well as promoting collaboration and benchmarking best practice.

"For Australia's dairy industry, values around sustainability and profitability are at the core of everything we do," Ms Dornom said. "We undertake many programs on our farms and in our factories that build profitably farms while contributing to sustainability. But we recognise the need to work together as a sector and with our international affiliates, to enhance our industry's sustainability credentials.

"Sustainability is part of a future-looking strategy. Not only does it focus on generating cost savings, profits and efficiencies across the industry, it also makes Australia's dairy products even more attractive to customers and consumers nationally and internationally."

There are three main planks to the Sustainability Framework: enhancing livelihoods, improving (community and animal) wellbeing, and reducing environmental impact. It is endorsed by the whole dairy industry through the Australian Dairy Industry Council (ADIC) and supported by Dairy Australia. The industry has demonstrated its commitment to the framework by setting targets, performance measures and action plans, and reporting against these in its first *Progress Report* released publicly in November 2013. (Copies of the report can be obtained from the Dairy Australia website). The regular assessment and measurement of these set targets shows a determination to make sure the strategy engenders positive change that brings tangible results. A further Progress Report will be produced at the end of 2014.

Australia's Sustainability Framework is an example of how the Global Dairy Sustainability Framework (DSF) operates at a national level. The key focus areas for the Australian Dairy Industry's Sustainability Framework are similar to those outlined in the Global DSF.

Unilever recognition

The benefit of having a national dairy industry Sustainability Framework was also demonstrated in November 2013 by confirmation that Australia had become the first dairy industry in the world to be recognised as meeting international company Unilever's exacting sustainability standards for milk production.

Unilever agreed to work with Dairy Australia after recommendations from Australian dairy companies including Murray Goulburn and Fonterra.

"We have worked hard with Dairy Australia during the course of the past year to benchmark the Australian dairy industry's milk production standards against our exacting SAC standards," Unilever Procurement vice-president of sustainability and ingredients Dirk Jan deWith said.

The company's benchmarking revealed Australia's dairy industry is 100% compliant with the mandatory requirements of the Sustainable Agriculture Code. Three specific gaps (soils, biodiversity and waste) against the must do requirements were identified.

To remedy this, Dairy Australia, together with Murray Goulburn, Fonterra and several other dairy companies, agreed to implement a project involving nearly 100 farms across the country's eight dairy regions.

The Sustainability Framework is comprehensive in scope and considers the extended dairy industry value chain — from use of inputs, such as animal feed and fertilisers, through to disposal of dairy products and packaging. However, immediate action has been focused on areas where dairyfarmers and processors have direct control, on farms and in factories.

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New labelling approved

FOOD labelling has been in the headlines lately following Australian and New Zealand Government approval in June this year of a new Front of Pack Labelling (FoPL) scheme for all packaged foods sold in the two countries.

But what is it and what does it mean for dairy foods and the dairy industry?

FoPL is a scheme developed by food industry, government, public health and consumer representatives that uses a calculator based on five nutrients to rate the healthiness of the food, awarding stars from zero to five for the healthiest choices. A new star rating logo will be displayed on the front of food labels to help consumers make healthier food choices.

In earlier discussions of the planned FoPL scheme, this nutrient-based approach was not favourable for dairy foods, and particularly healthy and nutritious milk, cheese and yogurt, which are categorised in the Australian Dietary Guidelines as 'core' parts of the diet.

However, dairy industry groups including Dairy Australia (DA), the Australian Dairy Industry Council and dairy manufacturers collaborated closely with FoPL stakeholders to ensure these core dairy foods were rated in line with Australian Dietary Guidelines at three stars and above.

An example of the new labels to be introduced under the Front of Pack Labelling scheme.

As a result of these efforts, separate calculator categories were developed for core dairy foods to improve the scores to be more in line with dietary recommendations.

"These calculators don't address all dairy industry concerns and anomalies still exist," DA health and nutrition policy advisor Helen Mair said. "However, a process to deal with anomaly foods has been developed and we're confident it will ensure all milks, cheeses and yogurts score a minimum of three stars to make sure consumers know these products are healthy foods."

It is not yet clear what this process involves so the industry is continuing to engage with FoPL stakeholders to secure the minimum three stars for all core dairy foods.

In line with dairy industry advocacy objectives, the new labelling is able to be implemented voluntarily across Australia and NZ by manufacturers across a five-year period. It also provides flexibility for manufacturers to choose to display just the star rating and energy icon without the extra information icons on saturated fat, sodium and sugar, which were proposed in an earlier model of the scheme. This is a better communication of the healthiness of core dairy products than the full icon scheme.

The dairy industry advocacy process has been a long and complicated journey but an excellent example of what can be achieved through industry collaboration to improve the outcome for Australian dairy products.

Dairy career prolongs football passion

BARRY Clarke has many reasons to be thankful for being part of the dairy industry. Dairy has given him a profitable career and a job he enjoys — and it's helped to prolong a football career into his 50s.

While most men Mr Clarke's age are thinking about low-impact sports, every second Sunday, the South Australian dairyfarmer and milk processor dusts off his old football boots and lines up in the local super rules football competition.

And it doesn't end there. Three times this year he's helped his old team, Myponga-Sellicks, when they've been short on numbers in the B-grade division, adding to his remarkable record of more than 550 A-grade games until he was 47 and another 100 B-grade since then.

"I never got many injuries and I think dairyfarming was probably part of that," Mr Clarke said.

"As I got older I got stiff and sore but you have to get out of bed and milk the cows, walk around, climb up and down the steps and carry buckets of milk. It made me better. I had to move around and get rid of that stiffness and soreness.

"I'm sure it helped more than sitting around on the couch all day."

Mr Clarke's dairy career has been equally impressive.

Ten years ago, an off-the-cuff comment while on holiday with local farming mates led to a successful business partnership between Mr Clarke and his wife, Merridie, Geoff and Louise Hutchinson, and Chris and Karen Royans.

Dairyfarming and footy are passions for South Australia's Barry Clarke.

"We were at Geoff's place at Wallaroo and there was a general conversation about the crap milk prices and high input costs and as a throw-away line I said to Geoff 'We ought to bottle and sell our own milk'.

"Geoff rang me back on the Monday morning and said he'd given Chris a ring and we should have a crack."

They did have a crack, and two years later the first bottles rolled off the production line.

Promoting and protecting dairy

A decade after that first discussion, the Fleurieu Milk Company continues to thrive. The partners own three farms that supply milk for the processing plant and have recently added a new supplier to the mix and increased production to process milk Monday to Friday and make yogurt on Mondays and Thursdays.

The business has been built around a successful domestic market but is getting Australian Quarantine and Inspection Service accreditation for potential exports.

"We've had inquiries from China, Singapore and Hong Kong, and because the farms are growing and we've taken on another milk supplier, we're interested in having a look, but I wouldn't want export to be any more than 20% of our income," Mr Clarke said.

"There's still a good domestic market for us. People obviously like the product."

Mr Clarke describes the products as fresh from the cow and pasteurised and packaged on the farm.

"We don't do anything to standardise it," he said. "At different times of the year it will taste a bit different; that's just the way it is.

"The people who buy it like to know where it comes from and that we treat our calves and cows well."

The Clarkes' Roslyn Vale farm runs about 280 Jerseys that contribute to the Jersey Premium brand.

The Holstein-Friesian stock from the Windy Vale Holstein stud are used to manufacture the Fleurieu Farm Fresh Range produce.

While most in the outside world might think getting up at 4.30am to milk cows is tough, that's a late start for Mr Clarke.

"I get out of bed about 2am and jump in the truck and take a couple of loads of milk to the factory so the guys can get started at about 3am," he said. "I'll grab another load of milk and come home about 4am to milk and the day just goes from there."

His working day normally finishes at about 6pm but Mr Clarke isn't complaining and he still gives priority time to his family of three children.

"The guys who do the day-to-day running of the factory do a damn good job but it's our factory and I like to be involved," he said.

"I've always enjoyed dairyfarming and I like the cows. Geoff's the same. We both enjoy being in the dairy milking the cows in the morning.

"You don't have to talk to anybody if you don't want to; you can just listen to the radio and milk the cows."

Mr Clarke admits the Fleurieu Peninsula is a tough area to farm and that moving into processing protected their future.

"We might not be milking cows without it but we still consider ourselves dairyfarmers," he said.

"Since we've started the factory we've been able to pay ourselves good money for the milk so the farms are quite profitable now and the factory still makes good money."

The company also gives back to the local community, supporting causes like Little Heroes, and the partners are active in local dairy discussion groups and promoting the Legendairy communication initiative to enhance the industry.

Mr Clarke sees a bright future for dairy.

"The industry is as good as it has been for quite some time," he said. "With exports and world prices it seems likely to be okay for a while. You want the industry to be buoyant and young people to come into it."

He still enjoys being a dairyfarmer and milk producer — and still enjoys his football.

"I filled in three times in the B-grade this year just to help out when they were short but I still play super rules every second Sunday. You can have a good laugh and joke in the super rules. We're past being dead serious at our age."

For more Legendairy stories, visit <legendairy.com.au>.

Legendairy: one year on

IT HAS been an action-packed 12 months since Dairy Australia launched Legendairy to the Australian public at a sold-out Melbourne Victory versus Liverpool FC match at the Melbourne Cricket Ground in August 2013.

A mass media campaign of eight television commercials, radio, print, outdoor and online advertisements, events, regional activities, sponsorships, partnerships and conferences followed to raise awareness of the Australian dairy industry and connect audiences with consistent messages to help change their attitudes and conversations they are having about dairy.

From assuring Australians they can enjoy dairy foods without gaining weight to demonstrating the multi-skilled nature of dairyfarming and the contribution dairy makes to communities, these creative executions told a holistic dairy industry story.

At the end of year one, Dairy Australia has used independent tracking, along with its annual Dairy Monitor, farmer surveys and health professional tracking, to measure Legendairy's success to date and help shape ongoing activities.

According to Dairy Australia's group manager for industry promotion and product innovation, Isabel MacNeill, year one results are encouraging. "Our tracking studies and conversations with stakeholders tell us that we've captured the right tone, messages and attitude, and we're confident that the Legendairy platform is able to really connect with our audiences and create behavioral change," she said.

In the consumer space, independent market research on the short television campaign showed the commercials were well-recalled and equally likeable, believable and easy to understand. Among the primary consumer audience, mothers with children, there was a 24% prompted recall of one or more of the commercials specifically developed for them, an encouraging response in line with the campaign's limited spend.

As anticipated, most of this awareness was driven by television.

Broader tracking showed Legendairy also reached other key audiences: 25% of adults aged 18-34 years and 18% of adults older than 50 recalled Legendairy.

Research in March 2014 showed a substantial increase in the proportion of farmers who spoke positively about the industry.

"Of the 92% of farmers surveyed who had conversations about dairying with people either in or outside the industry, 40% spoke only positively — up from 11% in 2013," Ms MacNeill said. "Positive farmer sentiment about the industry's future is also on an upward trend for the first time in six years."

Ms MacNeill said that while many factors impact on farmer confidence, the generation of positive news and messages has certainly contributed to this positive shift in sentiment.

Legendairy's focus on key opinion leaders such as health professionals was also helping to change public attitudes.

"We're also seeing positive results in our ongoing work to reposition dairy fat and its effect on health outcomes such as weight and heart disease," Ms MacNeill said.

Caring for our cows: new animal welfare standards

AUSTRALIAN farmers know well that caring for their cows is central to effective business management, as well as being quite simply the right thing to do.

Nonetheless there is growing public interest in Australia and globally about the way cattle and other livestock are raised for food and fibre.

After several years of joint work by livestock industries, government and community representatives, new Animal Welfare Standards are set to be introduced to further safeguard the welfare of cattle on all farms across Australia.

Chair of the Australian Dairy Farmers (ADF) animal health and welfare policy advisory group Terry Toohey said the standards were consistent with the recommended practices Australian dairyfarmers currently used.

It is important, however, that all dairyfarmers and staff working on the farm become aware of these

Dairy Australia
Your Levy at Work

DairyTas executive officer Mark Smith and DairyTas director and dairyfarmer Simon Bennett with new mobile Legendairy billboards.

The number of GPs telling their patients that dairy is high in fat and cholesterol is declining significantly, and this change is being reflected in people's purchasing behaviour. More milk drinkers say they are choosing full-fat milk and eating butter at least once a week. "Attitudinal change takes time, but the results show that even in a short-time it's possible to contribute to a more positive story about the Australian dairy industry," Ms MacNeill said. "We're making inroads into meeting the 2016 Legendairy objectives.

"The results and feedback to date highlight how we can better target our future activities, such as increasing the focus on mums as the biggest influence of household eating habits, while still influencing other consumers."

Year two is focused on increasing farmer participation to share the industry story and increase consumer consumption with a new call to action: 'start and end your day with dairy — Legendairy'.

This new creative will be in field around September-October, so stay tuned.

A full report on year one of Legendairy is available at website <dairyaustralia.com.au>.

new laws in order to comply with the requirements and continue to meet community expectations.

The standards cover the full range of on-farm management practices for cattle, and their welfare considerations. Meanwhile the guidelines identify additional recommended practices to achieve desirable livestock welfare outcomes. These voluntary guidelines are designed to complement the standards.

It will take time to to incorporate the standards in state legislation, but they are based on the Model Code of Practice for Cattle and are consistent with the dairy industry animal welfare strategy.

Dairy Australia will soon be distributing materials for farmers to help navigate the new standards and guidelines and clarify associated responsibilities.

"Animal welfare practices naturally underpin the reputation and integrity of the Australian dairy industry," Mr Toohey said. "We have done well in the past, but should never become complacent about striving for best practice."

A wide range of information on animal welfare issues is available on the Dairy Australia website.

Mixed outlook for 2014/15

By GLEN FISHER*

Dairy Australia
Your Levy at Work

IT TOOK until the last month, but Australian milk production exhibited some modest year-on-year (YoY) growth for the 2013/14 season. Favourable seasonal conditions across most of the country's south-eastern dairying regions were reflected in double-digit growth from Tasmania and Victoria that lifted national June production to 659 million litres and took the season total to 9.238 billion litres, 0.4% up on 2012/13's 9.200 billion litres (see Figure 1).

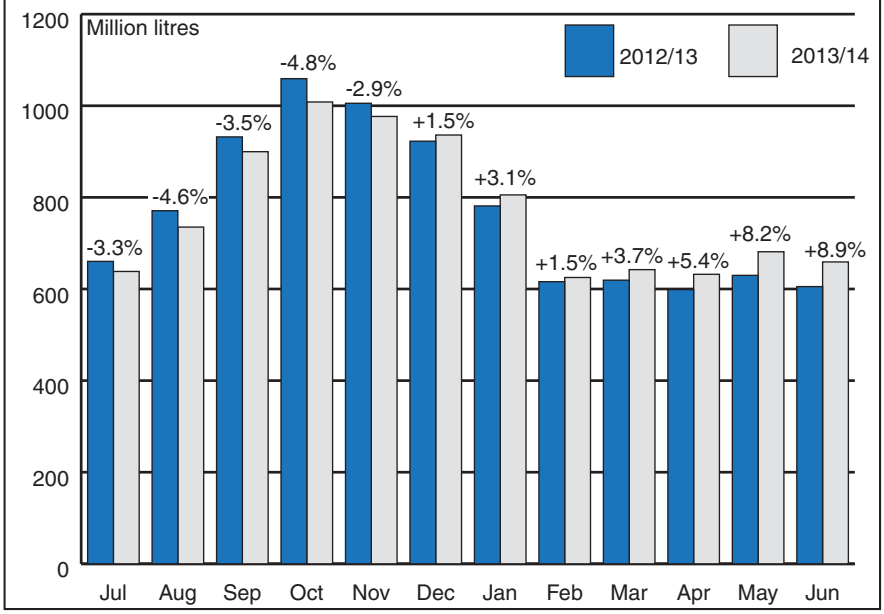
Consecutive months of excellent conditions in the Victorian regions supported strong gains on prior season's monthly production levels: leading Western Victoria to more than 2.1 billion litres (-0.5% YoY) just 10 million litres shy of the prior year; taking Gippsland to 1.9 billion litres (+3.2% YoY) and the northern region to more than 2.0 billion litres (+1.7% YoY).

Tasmania achieved a seasonal record of 804 million litres (+2.1% on the previous record of 788 million litres from the 2011/12 season), boosted by strong farmer sentiment and several months of favourable conditions on top of some modest growth in the Tasmanian herd.

In stark contrast, Queensland and New South Wales experienced record low production levels: Queensland finished -5.3% down year-on-year, while NSW finished with a -3.4% decline, as adverse conditions including drought and rainfall deficiencies combined with challenges around the availability and costs of feed and persisted for many across the northern and inland regions. Despite improved conditions towards the season close, production in South Australia and Western Australia also finished down on prior year, -3.8% and -2.7% respectively.

At the time of writing, conditions in drought-affected parts of Queensland and NSW remain extremely challenging. Despite pockets of Tasmania and Gippsland experiencing an overabundance of water, however, farmers elsewhere across Australia's dairying regions report generally favourable conditions supporting a good start to season 2014/15. Announced average opening farmgate prices have remained at relatively high levels in export regions, despite softer international commodity prices and greater uncertainty and downside resulting from the flow-on effects of Russian bans (see article on the facing page). Meanwhile, in drinking milk regions, the balance between supply and demand has required re-assessment of farmgate pricing.

Figure 1: Australian Milk Production by Month



On the domestic market front, available Aztec data covering supermarket retail sales (for the 12 months to June 29) suggests some slight slowing of drinking milk sales, with the milk category's volume and value up 1.2% and 0.6% respectively. Though the Aztec data indicates that supermarket dairy spreads sales volume is up by 6.9% and retail value up by 6.7% for 2013/14.

Turning to the export front, the latest Australian Bureau of Statistics (ABS) data shows that total export value for Australian dairy exports in 2013/14 was up 16.7% (from 2012/13's $2.75 billion) to $3.21 billion, despite lower total export volume (down from just under 800,000 tonnes to about 740,000 tonnes). Higher average prices across all product groups boosted value.

ABS export data for 2013/14 also confirmed that the Australian industry has reached something of a turning point in that Greater China (including mainland China, Hong Kong and Macau) overtook Japan as the top destination for Australia's dairy exports in terms of share of total value and volume. Greater China now accounts for 19% of Australian dairy exports by volume and value.

Although there is growing interest and activity in fresh milk exports, increased volumes of commodity powders (China-bound WMP volumes up 80% and SMP up 113%) not milk drove China's ascendancy up the export destination rankings.

Yet, with all the focus on East Asian markets, it bears remembering that demand from South East Asia's TIMPS (Thailand, Indonesia, Malaysia, Philippines and Singapore) also remains strong. These important traditional dairy export markets for Australia again took five of the top 10 positions in terms of volume and value.

Looking ahead, the preliminary outlook for milk production in 2014/15 is for growth of about 2%, taking total volume to between 9.350 and 9.400 billion litres, based on farmer herd expansion intentions and assuming favourable seasonal conditions. With many farmers having consolidated their positions after the more challenging 2012/13 season and receiving improved returns during the 2013/14 season, the farm level outlook had brightened somewhat, although it is now tempered by greater risk and uncertainty in international markets.

Contact: Glen Fisher, industry analyst, email <gfisher@dairyaustralia.com.au>.

International markets rattled by shocks

By JOHN DROPPERT*

Dairy Australia
Your Levy at Work

INTERNATIONAL dairy markets have been rattled recently by a combination of surprisingly negative results on the GlobalDairyTrade (GDT) auction platform and the announcement of a Russian embargo on dairy imports from several major suppliers, including Australia.

Although the direct impacts of Russia's sanctions for Oceania are manageable (especially given New Zealand was excluded), the indirect effects associated with a wholesale change in Russian dairy suppliers are difficult to quantify.

To illustrate the supply changes required, consider cheese — Russia's biggest dairy import (51% by volume). The current ban applies to countries that supplied more than 80% of this cheese in 2013, the European Union, US, Australia, Canada and Norway, with Ukraine banned since late July. Butter comprises a further 12% of Russia's dairy imports; 79% coming from now-banned sources in 2013.

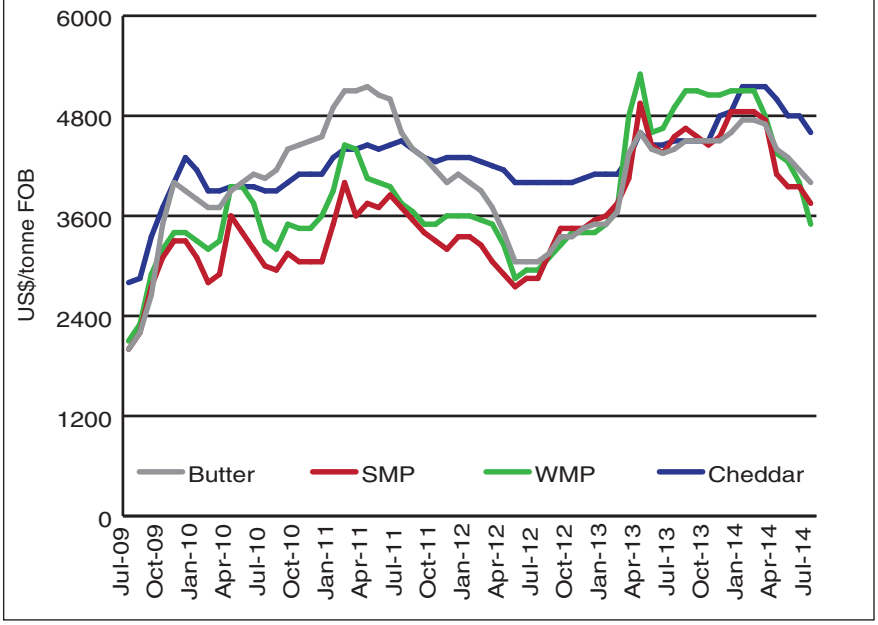
Uncertainty surrounds both Russia's ability to secure product from alternative exporters (without price inflation dampening consumer demand) and the likely destination of the product that would otherwise have gone to Russia — most notably about 260,000 tonnes of EU cheese.

European milk production is declining seasonally, with a corresponding decrease in export availability. 2014 has been a very strong season for EU milk output, with growth of more than 5% in the year to May. The European Commission's latest *Short Term Outlook* forecasts a slowing in production through the second half of the year — especially compared with the strong second half of 2013. European farmgate prices remained surprisingly strong through the season, given the level of production, however even modest decreases, coupled with penalties for countries breaching quota limits, are expected to put financial pressure on some farmers.

Milk production in the US is showing slow but steady growth compared with 2013 — 1.3% in the year to June.

Corn crops across the Midwest (including the second largest milk-producing state, Wisconsin) are reportedly looking extremely healthy, despite some areas of emerging moisture deficit.

Figure 1: Global dairy commodity prices



Local analysts suggest the transition from old crop to 2014-harvested corn in coming months will see a further boost to milk production, due to the superior quality of this year's crop.

In any case, retention of cows (evidenced by a sharp drop in culling rates) and declining feed prices are likely to see US supply expand 2% for the full year. This will place further downside pressure on prices in the months ahead, despite the ongoing drought in California (the largest milk-producing state).

In the southern hemisphere, the 2014/15 New Zealand season is rapidly gathering pace, with a more modest rate of growth expected relative to the 2013/14 season that saw a 9% expansion from a drought-affected 2012/13.

Recent cuts to milk price forecasts by Fonterra and the second largest processor, Westland, are likely to temper the appetite for increases in supplementary feeding and on-farm capital expenditure, however the lower prices are still profitable for most farmers.

Fonterra has indicated that its forecast of NZ$6/kg MS (about A$5.80/kg MS) is based on the expectation of a recovery in commodity prices in the latter half of the season, leaving open the possibility of further downward revisions should this fail to eventuate.

With little prospect of an immediate correction in milk supply, a recovery in demand is the main hope for stabilising commodity prices in the near term. The key market is, of course, China, with a resumption of Chinese buying likely to spur increased demand from other regions. This is something milk powder manufacturers will be particularly keen to see, given the likelihood of the Russian ban seeing more EU milk directed to powders, rather than cheese.

At the time of writing, there have been some reports of increased interest out of China, however it is too soon to tell when this will translate into firm orders. EU and US demand has kept internal market prices in those regions above international benchmarks — especially for butterfat products.

A combination of renewed Chinese demand, together with a modest southern hemisphere spring flush, would more than likely see the international market readily absorb the fallout from Russia's embargo. In the meantime, the uncertainty that will persist as these factors play out is more likely to prolong the current commodity price malaise than curtail it. D

Contact: John Droppert, Dairy Australia analyst, email <jdroppert@dairyaustralia.com.au>.

Australian dairy genomics recognised

KEY POINTS

DNA SEQUENCING

- ✔ International collaboration
- ✔ Identifies significant mutations
- ✔ Improves genomic breeding values

A GLOBAL collaboration initiated and led by Victorian scientists has created the world's largest collection of bovine DNA sequence data. The novelty and importance of the work has been recognised in a paper published in the prestigious international journal Nature Genetics.

Department of Environment and Primary Industries Victoria scientists Associate Professor Ben Hayes and Dr Hans Daetwyler began Dairy Futures CRC's 1000 Bulls Genome Project in 2012. By initiating collaboration on a global scale, the project aimed to create a high-quality library of entire DNA sequences of bulls that figure prominently in the family tree of Australian dairy cattle.

The article in *Nature Genetics* demonstrated the power of global collaboration to collect and analyse more than 200 bull DNA sequences. The project team has moved quickly since the article was written and is now rapidly approaching the target of 1000 DNA sequences with 20 international research partners.

In the article, the researchers demonstrate that the existence of the collection of sequences enables researchers to rapidly identify mutations with severe health impacts and deploy the information in breeding programs to reduce or eliminate problems.

The project leader, Assoc. Prof. Hayes, who is also leader of Dairy Futures CRC's Animal Improvement research program, said the sequence data was now being used in different ways by different research groups.

"For example, some European institutes have located a gene mutation that causes embryonic death in dairy cattle," he said.

"We know this particular mutation is already present at low frequency in Australian dairy herds. Locating the mutation means we can test for it and avoid matings between animals that both carry the mutation, to keep it from becoming a problem in the future."

Assoc. Prof. Hayes said that Dairy Futures CRC was now using the sequence data to design improvements to the routine use of DNA to predict the genetic merit of Australian dairy cows.

"The ultimate challenge in making genomic selection more robust is to find the variants that are considered to be causative — the small fraction of all known variations that are responsible for major changes to function of important genes," he said.

"We now have data for the entire DNA sequences, including mutations, affecting traits dairyfarmers are most interested in. We are tracking down the causative genes for fertility, longevity and meat production to equip farmers to make more informed breeding decisions and boost the quality of their herds."

Dairy Futures CRC's chief executive officer, Dr David Nation, commended the project team for its global leadership.

"This work is central to Dairy Futures CRC's ability to increase the reliability of DNA-based assessment of genetic merit, and is already showing real promise," Dr Nation said.

"The *Nature Genetics* article is well-deserved recognition of the global leadership by Assoc. Prof. Ben Hayes, Dr Hans Daetwyler and colleagues for their substantial roles in making this global initiative possible.

"It also demonstrates the foresight of the Victorian government in creating AgriBio, the Centre for Agribioscience: an institution that has the capacity to host and analyse a global repository of high-value information. AgriBio is a major research asset for Victoria and Australia."

Dairy Futures Co-operative Research Centre (CRC) is a large scale partnership between dairyfarmers, pasture and cattle breeding companies, government and researchers, and is the largest single research program for the Australian dairy industry. Dairy Futures CRC was established and is supported under the Commonwealth Government Cooperative Research Centre program is an Australian Government Initiative. Further information about the CRC program is available from<www.business.gov.au>.

Polly Wolly shines at Winter Fair

By CARLENE DOWIE

CHRIS and Mary Gleeson, Elm Banks Holsteins, Crossley, Victoria, took out the supreme champion cow title at the inaugural Victorian Winter Fair at Bendigo, Vic, in July.

The Gleesons won the top award with Elm Banks Polly Wolly, which as a five-year-old had won the supreme interbreed cow award at 2013 International Dairy Week (IDW).

Mr Gleeson said the achievement was even more rewarding as the cow had just come out of a flush program.

The cow calved in October and was on track to produce 12,000 litres this lactation, he said.

"She looks better than she did at IDW, which just shows how well she's developed," he said.

Mrs Gleeson said the Winter Fair — being held in the school holidays — was a great opportunity for the whole family to get involved in showing.

The family attended the Winter Fair as they were selling a heifer at the 100 Years of Excellence Centenary Sale, held the night before.

"We decided to show her because she was in form," Mrs Gleeson said.

Judge Mike Deaver, from the United States, said the supreme champion cow was a big stylish six-year-old cow.

The cow was structurally sound, had a strong topline, was good through the rib and had a strong udder.

"She's a tremendous representative of Australian breeding," he said.

The supreme senior exhibit Elm Banks Polly Wolly with judges Ben Govett and Mike Deaver and owner Chris Gleeson, Crossley, Vic.

Junior champion Bluechip Finalcut Marion being led by Dean Malcolm.

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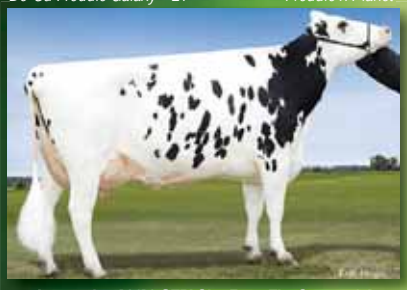
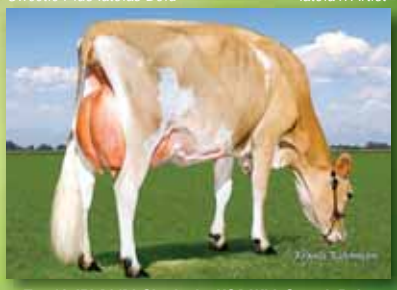
GALAXY
De-Su Freddie Galaxy - ET *Freddie x Planet*



Impressive A2/A2 GTPI Sire From The Successful "De-Su" Cow Family With High Type, Production & Positive Components

PLUS
Sweetie Plus Iatolas Bold *Iatola x Artist*



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Georgia Sieben, Torrumbarry, Vic, was all smiles after being named winner of the junior handlers under 12 years of age class at the Winter Fair.

Victorian Winter Fair

Supreme senior exhibit: Elm Banks Polly Wolly, C&M Gleeson, Crossley, Vic. **Reserve:** Murribrook Goldwyn Verbena, MJ Sowter, Moss Vale, NSW.
Supreme best udder: Heartland Goldwyn Patsy, Gorbro Holsteins, Cohuna, Vic.
Supreme intermediate champion: Paringa Windstorm Ezra, Bluechip Genetics & Phil Malcolm, Zeerust, Vic.
Reserve: Lightning Ridge Contender Jane 4-Red TI, Bluechip Genetics, Zeerust, Vic.
Intermediate champion black-and-white Holstein Paringa Windstorm Ezra, Bluechip Genetics & Phil Malcolm.
Reserve: Murribrook Talent Robina, MJ Sowter.
Intermediate champion red-and-white Holstein: Lightning Ridge Contender Jane 4-Red TI, Bluechip Genetics.
Reserve: Ryanna Contend Black-rose-Red ET, Bluechip Genetics & Next Generation Holsteins.
Junior champion: Bluechip Finalcut Marion, Peter Hurley & Debbie Palmer, Shepparton, Vic.
Junior champion black-and-white Holstein: Bluechip Finalcut Marion.
Reserve: Bluechip Windbrook Noni ET, Bluechip Genetics.
Junior champion red-and-white Holstein: Bluechip LR Windbrook Dancer-Red Imp ET, Bluechip Genetics & Kailey Dairies (NZ). **Reserve** Bluechip Contender Sugar-Red Imp ET, K&R Anderson, Cobram, Vic.
Junior champion youth show Bluechip Alexander Connie, Lincoln Sieben, Torrumbarry, Vic **Reserve:** Gorbro Damion FC Shimmer, Erica Quinn, Cohuna, Vic.
Premier Breeder: Bluechip Genetics
Premier Exhibitor: MJ Sowter

◀ The intermediate and junior events were dominated by Bluechip Genetics, Zeerust, Vic.

The intermediate champion was two-year-old Paringa Windstorm Ezra, owned by Bluechip Genetics and Phil Malcolm, while another Bluechip Genetics cow, three-year-old Lightning Ridge Contender Jane 4-Red TI, took out the intermediate red-and-white cow award.

The supreme junior exhibit was Bluechip Finalcut Marion, owned by Peter Hurley and Debbie Palmer, from Shepparton, Vic. They bought the calf at the Bluechip sale a month earlier and it is housed at Bluechip Genetics. Bluechip Genetics also picked up the premier breeder award.

The premier exhibitor award went to Murray Sowter, Murribrook Holsteins, Moss Vale, NSW, who also picked up the reserve senior champion and reserve intermediate champion awards.

Determination wins out in Holstein bidding battle

BY LOUISE PREECE

KEY POINTS

HOLSTEIN CENTENARY SALE

- ✔ 41 lots to $12,750, av $5460
- ✔ Higher prices than expected
- ✔ Positive and balanced sale

BRENT and Kim Mitchell confessed a "last ditch" effort was required to secure the top-priced heifer at the Holstein Centenary Sale at Bendigo, Victoria, held as part of the Victorian Winter Fair.

The Bamawm, Vic, dairyfarmers, who milk 260 cows, were extremely keen to buy Clydebank Shottle Leona ET and as a result shelled out $12,750 at the auction.

"It was really a 'last gasp' bid," Mr Mitchell said. "Her mother (Clydebank Allen Leonie EX 94 2E) is an outstanding cow and she is by one of the best bulls in the world (Picston Shottle)."

Although the 15-month-old heifer is yet to milk, it is from a cow line that boasts nine out of 10 EX generations. The foundation dam of the family, Clydebank Gay Lass, is a 40-star brood cow.

Clydebank Shottle Leona ET goes under the hammer at the sale. The heifer made the highest price at $12,750.

"She is the highest Australian-bred star brood cow ever," he said. "We are rapt."

The plan now is to flush the cow before it is joined. "We want to get as many daughters out of her as possible," Mr Mitchell said.

"Buying and breeding stud cows is really a long-term investment. I see them as our superannuation to a certain extent."

The couple's stud, Mitch Holsteins, was established 15 years ago and now has 40% of its cows registered.

They have tried to buy from recognised cow families, with a focus on deep pedigree families with consistent breeding. This is an attribute the Mitchells recognised in the top-priced heifer, which was offered by Ross and Linda Somerville, Timmering, Vic.

The vendors were also more than happy with the price, which they said was slightly higher than expected.

"She is one of our best heifers, and we put her forward because it was a real opportunity to showcase our cows in the 100 Years of Excellence Holstein sale," Mr Somerville said.

The couple have been breeding black-and-white cows since 1972.

"We won't be selling any more daughters from her," he said. "We want to keep rest for ourselves. I'm pleased to see she's gone to a good home."

The second-top price was $12,000 for lot 13, Aberfeldie Talent Susa EX-92. The five-year-old cow was offered by Phil Malcolm, Gippsland, Vic, and sold to the Clark family.

The cow is due to calve in November to Brokaw, with production results at two years of age comprising 10,135 litres, 319kg protein (3.15%) and 365kg fat (3.6%).

Other results saw Misty Brae Bradnick Della, 15 months, make $9200, offered by the Misty Brae stud, Myponga, South Australia, while Carenda Gunnar Vinita made $9400 for Kitchen Farms, Boyanup, Western Australia.

Patrick Glass, of Kerrick Park Holsteins, Gundowring, Vic, was on the Centenary Sale committee.

He said the auction was organised to celebrate the trading of Holstein genetics in the past 100 years, which had significantly contributed to improving black-and-white herds.

Later this year, Holstein Australia will be holding a special function at Toowoomba, Queensland, to officially mark the anniversary.

Dairy Livestock Services conducted the sale.

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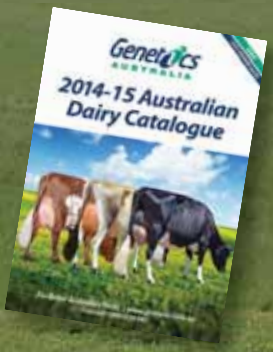
Health	★★★
Type	★★★★
Production	★★★★★



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Judge John Gardiner with wife Cherie, Coal and Allied Community relations officer Kylie Devine, and Cameron Yarnold, Wingham, NSW, with the supreme champion cow, Strongbark L Barbie.

Oxley Vale under 12 encouragement award winner Abbey Chesworth, Singleton, NSW, with junior champion heifer Diamond Park Jeeves Mary.

Barbie's a Fair winner

By MARG HINE

IN A popular decision, the supreme champion title at the NSW Holstein Winter Fair was awarded to Jim Strong's four-year-old Strongbark L Barbie from Albion Park, NSW. More than 100 Holstein exhibits were presented to Victorian judge John Gardiner, from Fiveways outside Melbourne.

Senior champion Strongbark L Barbie had earlier won Mr Gardiner's vote for the senior best udder title. He said the clean-boned, wedge-shaped cow, displayed "tremendous strength through her medial suspensory ligament and height and width to her rear udder".

Mr Gardiner noted the quality of the line-up in the senior class was a credit to the breed and exhibitors, saying cows of this calibre should inspire Holstein breeders to keep doing what they have been doing well for another 100 years.

The premier breeder's award of the Winter Fair went to ASR Shearer and Son's Russell and Janelle Wenham, Singleton, NSW, who were also the show's most successful exhibitors.

The Oxley Vale encouragement award winner in the under 12-years category was Abbey Chesworth, Singleton, NSW, who had started the day also winning the 10-years and under junior parader judging. The under 17-years encouragement award winner was Joseph Clarke, Maitland, NSW.

The Oxley Vale awards are a regular feature of NSW event, judged throughout the show to recognise participants whose conduct and commitment in preparing, maintaining and showing their exhibits has been exemplary.

Winner of the Graham Simpson Memorial Trophy for the all-Australian calf class for a heifer under 12 months of age and a parader aged under 17 was the six- to eight-months-old Oxley Vale Atwood Cressy handled by Ruby Polson, Oxley Island, NSW.

Junior champion heifer, Diamond Park Jeeves Mary, exhibited by Brendan Shearer, Singleton, was "the epitome of style and balance" according to Mr Gardiner, who also commented on the balance of those heifers in the final judging.

Intermediate champion female was Jim Strong's Strongbark Atwood Candy, on her second calf, and also the intermediate best udder winner.

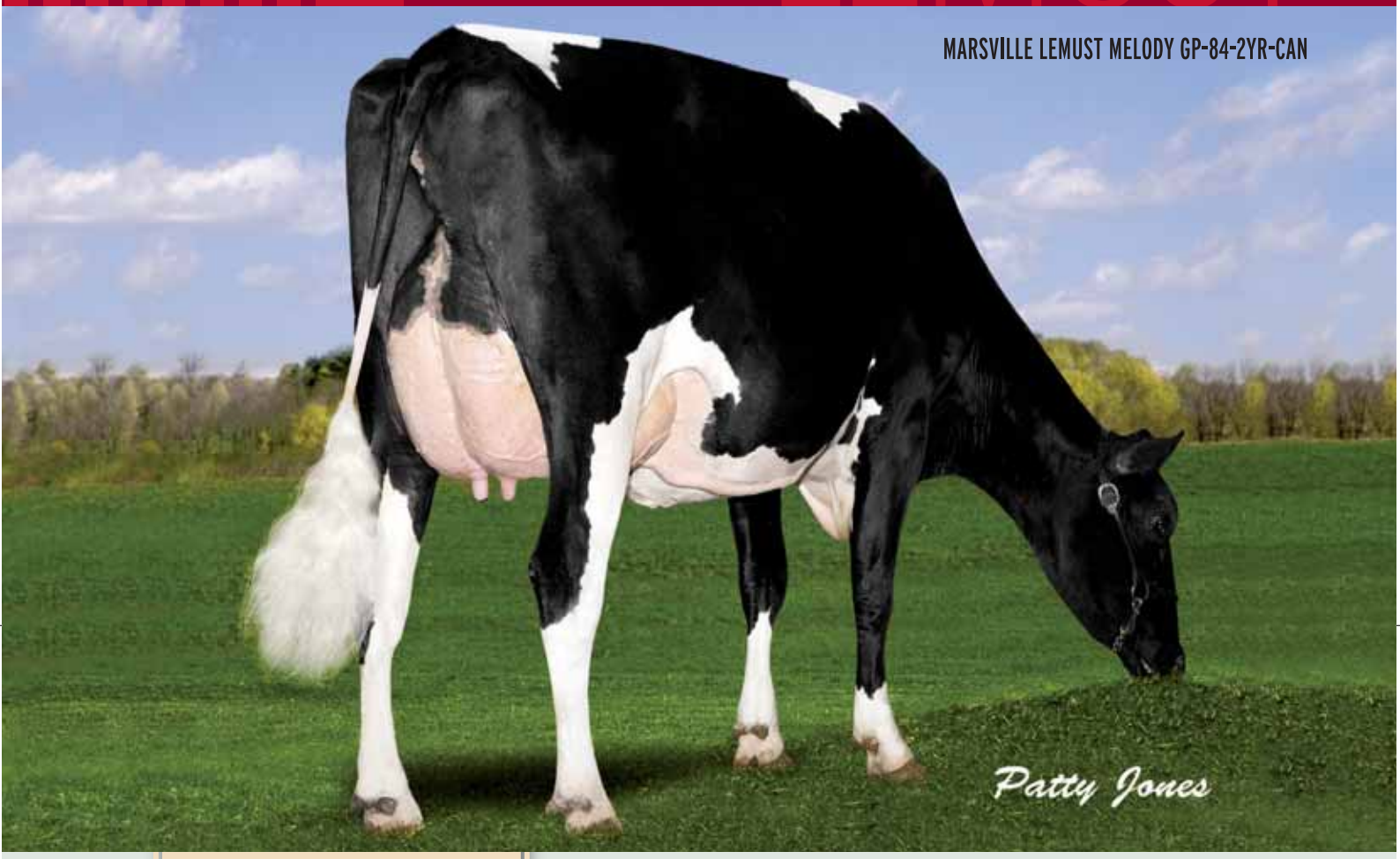
In the senior in-milk classes Wyoming Abigail Mavis, shown by ASR Shearer and Son, took out the hotly contested mature cow seven-years-and-older title, adding the production award to her tally.

In a telling demonstration of the strength of this cow family, her daughter Wyoming Bolton Mavis won the three- to four-year class and the class production award.

This year marks the centenary of Holstein Australia, the dairy industry's largest dairy breed society.

As part of its anniversary celebrations the breed's Hunter Valley sub-branch hosted a successful NSW Winter Fair at Maitland Showground followed by a centenary dinner attended by about 130 guests.

NEW RELEASE
LEMUST



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Dairyfarmers were consulted through a series of events called Australia's Longest Farm Walk about the industry's national breeding objective.

Review recommends new breeding indexes

THREE new breeding indexes have been recommended by the taskforce reviewing Australia's national breeding objective. Balancing the various traits in cows that dairyfarmers value is at the heart of the recommendations by the National Breeding Objective (NBO) Review taskforce.

After carefully considering farmer and industry feedback and the results of a rigorous research program, the taskforce has recommended three new breeding indexes:

• Primary Index — a balanced index that aligns to the highest priority traits outlined in the NBO survey and maximises net profit through production, fertility and type;

• Two alternate indexes;

• a type index that focuses on improved type at the expense of production and slower improvement in fertility, and

• a functional index that focuses on improved fertility and survival (longevity) at the expense of production and slower improvement in type.

KEY POINTS

BREEDING REVIEW

- ✔ Recommends new indexes
- ✔ Primary index to maximise profit
- ✔ Alternate indexes for type or function

Michelle Axford from the Australian Dairy Herd Improvement Scheme said the combination of a well-balanced primary index as well as two customised indexes (specifically aligned to type-focused and functionality-focused farmers) are a good match for the range of breeding philosophies the taskforce heard through the project's activities.

A full report will soon be available, with the new indexes to be included in the April 2015 release of Australian Breeding Values (ABVs).

Contact: Michelle Axford at ADHIS, phone (03) 8621 4240 or email maxford@adhis.com.au.

Reliable fertility breeding values

MANY dairyfarmers will welcome the improved selection of bulls with fertility breeding values and semen fertility values in the August release of Australian Breeding Values (ABVs).

Michelle Axford from the Australian Dairy Herd Improvement Scheme (ADHIS) said that compared with two years ago, the latest *Good Bulls Guide* had more than double the number of bulls with Daughter Fertility ABVs.

"For example, in August 2012, less than 400 Holstein bulls had Daughter Fertility ABVs in the *Good Bulls Guide* compared to 807 in the August 2014 edition." Mrs Axford said.

Additionally, this release includes 25% more bulls with Semen Fertility ABVs.

"This will give dairyfarmers who want to include fertility in their breeding decisions, more information and more choice of potential sires," she said.

"Most dairyfarmers want to improve the fertility of their dairy herds, and considering it in their breeding decisions is one of several things they can do. However, the reliability of fertility breeding values (both daughter fertility and semen fertility) has been limited in the past by a lack of data."

The improvement in reliability in the past two years has been due to a better fertility ABV model and the addition of one million fertility records in the ADHIS data base. The additional records were sourced through the Fertility Data Project, which was a collaborative effort between ADHIS, the Dairy Futures CRC and farm software providers.

The project also delivered improvements in the reliability of calving ease ABVs and workability ABVs.

Contact: *The Good Bulls Guide*, available at website <www.adhis.com.au>.

The latest issue of the Good Bulls Guide contains more bulls with semen fertility values.

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- APR 231
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- Daughter fertility 110

Production

ASI	kgP	P%	Milk	kgF	F%	Rel%
137	16	+0.23	129 L	26	+0.29	68

Workability

Milking Speed	Temperament	Likeability
101	100	N/A

Health Traits

Cell Count	Survival	Liveweight	Dtr Fertility	Calving Ease
154	102	100	110	103

ABV(i) from April 2014

Prices quoted are ex GST and offers are valid until 30/11/2014 or while stock last.

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Production

ASI	kgP	P%	Milk L	kgF	F%	Rel%
123	20	0,06	626	25	-0,03	70

Workability

Milking Speed	Temperament	Likeability
102	103	N/A

Health Traits

Cell Count	Survival	Liveweight	Dtr Fertility	Calving Ease
118	108	104	108	N/A

ABV(i) from April 2014

Prices quoted are ex GST and offers are valid until 30/11/2014 or while stock last.

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AUSTRALIAN BREEDING VALUES — AUGUST 2014

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email: <dabernethy@adhis.com.au>
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THE Good Bulls GUIDE

Australian Dairy Herd Improvement Scheme

Key Source	Company		
ABS	ABS Australia	RAG	Raging Bulls
AGR	Agri-Gene	RED	AUSRED Genetics
ALT	Alta Genetics	SEM	Semex Australia
CRV	CRV Australia	VIK	Viking Genetics
GAC	Genetics Australia	WAS	Woodlands Ag Services
LIC	Livestock Improvement	WWS	World Wide Sires
		WYA	Wyatt AB

Dairy Australia
Your Levy at Work

Good Bulls Guide for Holstein — Profit — Aust Proven Only

						Profit		Production				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		
Rank	Bull ID	Bull Name	Genetic Codes	Gen Inc	Aus Prov or Int	APR $	APR Rel	ASI	ASI Rel	No. Dtrs	No. Herds	Survival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Source
1	CANBEE	COUNTRY ROAD ROUMARE CANBEE		g	A	**370**	79	332	86	91	36	106	64	108	104	76	104	103	102	76	94	64	122	75	ALT
2	SOLACE	ECLIPSE ROUMARE SOLACE	CVF	g	A	**309**	72	227	78	39	19	106	58	102	95	64	103	102	101	69	103	66	116	71	GAC
3	29HO12772	BALLYCAIRN OMAN PELLO		g	A	**308**	82	160	87	59	25	106	71	96	94	81	100	101	102	77	112	72	183	80	ABS
4	GOLDCREST	TOPSPEED GOLDYN-ET	A12,CVF	g	A	**296**	75	220	81	55	28	104	62	101	103	71	103	100	103	70	101	64	142	70	GAC
5	SHOLTZ	ST. CLAIR SHOLTZ-TWIN			A	**290**	74	200	82	49	27	105	59	104	103	72	100	104	104	65	102	62	154	72	ABS
6	29HO12470	INDIJKS BABYLON	A22	g	A	**286**	88	196	94	219	70	103	75	103	100	83	100	101	101	88	105	75	166	85	ABS
7	ROUFECTOR	BUNDALONG ROUFECTOR		g	A	**281**	81	229	87	87	36	107	67	110	108	77	105	103	104	79	98	69	104	78	ALT
8	REALM	ECLIPSE ROUMARE REALM	A22,BLF,CVF	g	A	**272**	77	260	84	67	34	105	63	96	100	72	104	102	101	74	96	67	66	75	GAC
9	WESTGATE	GALLRAE JOCKO 3438	A22,BLF,CVF,DPF	g	A	**269**	84	175	89	94	47	109	70	110	107	78	103	103	103	84	99	75	125	81	GAC
10	USEAGE	KAARMONA CALEB	A12,BLF,CVF,DPF	g	A	**263**	86	186	92	120	50	107	73	101	109	78	102	100	103	81	101	79	129	85	GAC
11	CHRISTMAS	EMU BANKS CHRISTMAS-ET	A22,CVF	g	A	**256**	80	220	86	97	32	104	67	108	101	80	102	101	101	77	100	67	124	73	GAC
12	DELSANTO	MANNA FARM DEL SANTO	A22,BLF,CVF,DPF	g	A	**255**	88	233	95	324	95	100	73	105	105	75	99	101	102	89	102	76	123	88	GAC
13	JIFFEY	RENGAW SHOTTLE JIFFEY		g	A	**255**	79	93	85	68	26	109	64	100	102	72	102	103	102	76	105	71	183	76	AGR
14	BUDDHA	BUSHLEA PERFECTOR BOLD-ET	A12,BLF,CVF,DPF	g	A	**252**	84	175	90	103	49	105	71	107	104	79	102	102	102	81	101	71	148	83	GAC
15	DEANCOX	MANNA FARM DEANCOX	A22,BLF,CVF,DPF	g	A	**250**	83	205	88	87	43	105	69	107	103	77	101	102	103	82	97	72	104	81	GAC
16	7H8081	ENSENADA TABOO PLANET ET	A22,RDF,BLF,CVF	g	A	**250**	96	132	98	520	111	110	89	105	111	96	100	103	104	94	102	91	136	97	GAC
17	DOLBY	GUM RIDGES ROUMARE DOLBY	A22	g	A	**247**	75	146	81	54	28	107	60	103	106	68	102	102	102	74	105	65	139	71	GAC
18	LAIDLEY	GLOMAR LAIDLEY	BLF,CVF	g	A	**246**	73	180	80	46	21	106	58	100	96	67	100	101	100	70	103	60	118	68	GAC
19	MOTOWN	ECLIPSE ROUMARE MOTOWN	CVF		A	**235**	76	177	81	68	34	103	67	101	100	74	101	101	102	79			140	66	GAC
20	LAZZARO	GLOMAR LAZZARO	A22	g	A	**228**	76	151	84	82	25	106	58	107	106	66	104	100	101	75	105	63	107	73	ABS
21	CURIO	COUNTRY ROAD ROUMARE CURIO	A12,BLF,CVF	g	A	**225**	77	176	83	55	30	105	63	104	102	70	101	100	101	78	99	68	130	74	GAC
22	CARMARE	KAARMONA CARMARE	A22,BLF,CVF	g	A	**221**	78	140	84	60	31	106	64	106	103	74	103	103	102	76	106	68	105	75	GAC
23	SHOTTLE	PICSTON SHOTTLE		g	A	**217**	98	66	99	2812	456	110	97	108	106	99	100	105	104	98	106	98	169	99	ABS
24	DELJARDIN	BUNKERS HILL DELJARDIN	A22	g	A	**216**	74	141	80	53	23	103	60	99	104	69	102	102	100	73	104	64	117	72	GAC
25	CHICO	CARENDA CHICO	A22	g	A	**213**	80	128	86	83	37	108	65	106	104	76	103	104	102	80	99	68	119	75	GAC
26	ROLLBAR	EMU BANKS ROUBAR		g	A	**212**	78	152	84	74	35	103	65	102	105	78	102	102	101	78	102	66	132	71	GAC
27	DEALMEIN	ECLIPSE ROUMARE DEALMEIN	BLF,CVF	g	A	**209**	77	224	83	66	21	103	63	104	98	74	102	100	100	77	98	64	72	70	GAC
28	STOLJOC	STOL JOC	A22	g	A	**209**	92	185	95	153	45	104	86	106	104	91	100	103	103	87	98	87	113	94	AGR
29	PERMAN	WILARA PERMAN	CVF		A	**206**	73	155	79	56	25	101	64	98	92	73	103	101	102	70			112	64	GAC
30	DECORUM	INVERWOOD DONANTE DECORUM 955	A22,CVF	g	A	**205**	78	173	84	71	34	105	63	110	114	70	100	102	102	81	95	67	139	73	GAC
31	COPIER	CURRAJUGLE COPIER-ET	A22		A	**205**	82	115	89	95	44	108	65	105	105	73	102	101	101	82	104	70	127	81	GAC
32	EUROSTAR	ECLIPSE EUROSTAR	A22,BLF,CVF,DPF	g	A	**204**	84	105	91	121	61	104	68	105	108	73	101	100	101	84	107	74	142	84	GAC
33	GONZO	CURRAJUGLE GONZO		g	A	**202**	81	87	89	128	54	108	64	98	106	78	102	100	103	78	107	64	117	74	ABS
34	ABSTENNYSON	BURLANE TENNYSON		g	A	**200**	98	116	99	1951	314	104	94	104	102	96	100	103	103	98	103	96	144	98	ABS
35	QUARTERMILE	ECLIPSE ROUMARE QUARTERMILE		g	A	**199**	77	140	84	63	24	105	61	106	104	69	105	101	101	76	103	66	97	74	GAC
36	HOTAYLORMADE	TAHORA TAYLORMADE		g	A	**197**	85	113	91	90	43	105	72	106	113	79	101	99	101	70	109	75	125	90	SEM
37	GOLDSMITH	TOPSPEED H POTTER	A22,BLF,CVF	g	A	**196**	99	209	99	3534	436	102	97	94	90	97	101	100	101	99	99	98	67	99	GAC
38	SKETCH	DELL ROY ROUMARE DREW-ET		g	A	**195**	76	155	82	58	28	105	61	102	104	68	101	102	100	77	100	66	108	72	GAC
39	DURIS	ADLEJAMA JARDIN DURIS		g	A	**195**	80	122	86	95	36	102	65	101	109	76	100	101	101	83	103	62	145	73	GAC
40	QUINTY	KAARMONA CARBASAR	A12,BLF,CVF,DPF	g	A	**192**	86	154	91	133	47	100	73	105	105	83	100	102	102	85	103	75	121	84	GAC
41	NZGMILLER	GLENMEAD MILLER	A12,BLF,CVF,CNF	g	A	**192**	87	133	94	154	32	99	76	95	96	78	101	100	98	75	105	81	142	87	LIC
42	ALTAIOTA	REGANCREST ALTAIOTA	BLF,CVF		A	**192**	93	94	98	878	152	107	78	107	109	91	102	101	102	91	106	88	152	93	ALT
43	POTBLACK	BUNDALONG BULLBAR POTBLACK			A	**190**	70	130	77	50	25	102	55	107	109	64	100	102	102	69			140	62	GAC
44	BARBADOS	WANDILLA ROUMARE BARBADOS	A22	g	A	**190**	78	112	84	77	24	105	62	111	111	73	102	103	101	76	103	65	134	74	GAC

AUSTRALIAN BREEDING VALUES — AUGUST 2014

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THE Good Bulls GUIDE

Australian Dairy Herd Improvement Scheme

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ABS	ABS Australia	RAG	Raging Bulls
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GAC	Genetics Australia	WAS	Woodlands Ag Services
LIC	Livestock Improvement	WWS	World Wide Sires
		WYA	Wyatt AB

Dairy Australia — Your Levy at Work

Good Bulls Guide for Holstein — Profit — Aust Proven Only

						Profit		Production				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		
Rank	Bull ID	Bull Name	Genetic Codes	Gen Inc	Aus Prov or Int	APR $	APR Rel	ASI	ASI Rel	No. Dtrs	No. Herds	Survival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Source
45	29HO13053	GRAN-J OMAN MCCORMICK		g	A	**190**	97	54	99	3525	428	107	90	100	98	97	101	100	100	98	112	96	141	98	ABS
46	THROTTLE	ELMAR THROTTLE	A22	g	A	**188**	86	37	91	135	59	107	73	104	109	82	100	103	103	82	110	75	160	83	ABS
47	DITTMAR	MANNA FARM DITTMAR	A22,CVF	g	A	**187**	79	169	85	84	36	102	64	101	108	75	101	101	101	79	101	68	77	74	GAC
48	CARLIN	KAARMONA CARLIN	A12	g	A	**185**	77	102	84	78	41	105	63	99	104	74	104	102	102	78	101	64	134	70	GAC
49	ARCHILLES	COOMBOONA ROUMARE ARCHILLES	CVF	g	A	**184**	74	107	79	44	21	106	61	102	103	67	103	100	101	69	103	66	111	72	GAC
50	GGJARDIN	JARDIN		g	A	**182**	98	173	99	1383	173	102	94	96	103	96	99	101	100	97	99	96	90	98	ABS

Good Bulls Guide for Holstein - Profit - Genomic ABV(g)s

						Profit		Production				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		
Rank	Bull ID	Bull Name	Genetic Codes	Gen Inc	Aus Prov or Int	APR $	APR Rel	ASI	ASI Rel	No. Dtrs	No. Herds	Survival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Source
1	JUMPON	RENGAW KMA JUMPON	A22	g	A	**307**	58	253	67	0	0	105	42	105	104	44	100	101	102	54	99	42	128	54	GAC
2	JUSTLE	RENGAW MOM JUSTLE		g	A	**305**	56	169	65	0	0	108	39	101	102	42	100	102	103	54	108	38	134	54	AGR
3	JANEK	RENGAW JARDIN JANEK	A22	g	A	**304**	67	255	76	18	9	103	49	101	105	50	99	104	103	63	99	48	125	64	ABS
4	ROYALMAN	HINDLEE GOLDWYN OMANROYAL 121003	A12	g	A	**300**	63	160	71	0	0	108	49	104	105	52	101	102	102	62	110	49	148	59	GAC
5	CRVBOU-WROCKY	BOUW ROCKY		g	A	**299**	51	158	62	0	0	109	34	105	104	36	101	101	102	45	111	34	149	46	CRV
6	DIMAGGIO	BUNDALONG JETSTAR CANBEE DIMAGGIO	A22	g	A	**294**	60	226	69	0	0	106	44	104	102	47	104	103	103	59	99	44	127	55	GAC
7	GEEMCEE	RENGAW MANOMAN HUMMER-ET		g	A	**292**	60	220	69	0	0	104	42	102	102	45	99	103	103	56	103	42	142	57	GAC
8	PICOLA	ADLEJAMA DELSANTO PICOLA	A22	g	A	**292**	60	195	68	0	0	104	43	103	105	45	102	102	102	58	106	44	135	56	GAC
9	WRANGLER	RENGAW MANOMAN WRANGLER-ET		g	A	**291**	60	188	69	0	0	105	43	100	102	45	99	102	103	57	108	42	137	58	GAC
10	CRVTOTILLAS	BARNKAMPER TOTILLAS		g	A	**287**	50	158	58			108	34	104	107	36	100	102	102	46	107	34	147	47	CRV

Good Bulls Guide for Red Breeds - Profit - Aust Proven

						Profit		Production				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		
Rank	Bull ID	Bull Name	Breed	Genetic Codes	Aust-Prov or Int	APR $	APR Rel	ASI	ASI Rel	No. Dtrs	No. Herds	Survival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Source
1	ATOSIKKO	ASMO TOSIKKO	U	A22	A	**262**	83	174	90	102	15	106	64	108	106	84					100	78	144	89	VIK
2	FASTRUP	R FASTRUP	U		A	**202**	82	113	88	79	13						97	101	100	84			116	87	VIK
3	VRSOLERO2851	VR SOLERO	U		A	**200**	72	168	83	34	10	99	41										128	82	VIK
4	ARBBONJOVI	BOSGOWAN BON JOVI	U	A22	A	**194**	90	146	96	447	125	103	73	102	102	79	101	102	102	93	106	79	94	90	GAC
5	ARBPOTSIE	GRAZIN POTSIE	U	A12	A	**189**	84	133	91	122	52	104	66	94	92	65	98	100	100	83	106	74	126	84	GAC
6	ARBLEVER	LOUVIC LEVER	U	A12	A	**166**	74	120	84	74	33	103	51	106	106	56	98	97	99	77	101	56	140	72	GAC
7	ARBHILLY	BEAULANDS HILLY	U	A12	A	**165**	53	114	60	21	9	104	37	108	107	40	101	100	103	59			132	47	GAC
8	RANDERSDAVID	R DAVID	U		A	**155**	86	58	91	104	22	111	74	104	103	78	102	100	99	85	103	83	115	89	VIK
9	ARBBOBDOWN	LODEN BOB	U	A12	A	**146**	95	163	99	1647	238	104	85	104	100	86	96	98	100	98	96	93	96	96	GAC
10	ARBLIPPMAN	BOSGOWAN LIPPMAN	U	A11	A	**146**	82	116	91	123	40	103	60	106	107	51	100	99	99	84	98	71	112	83	GAC

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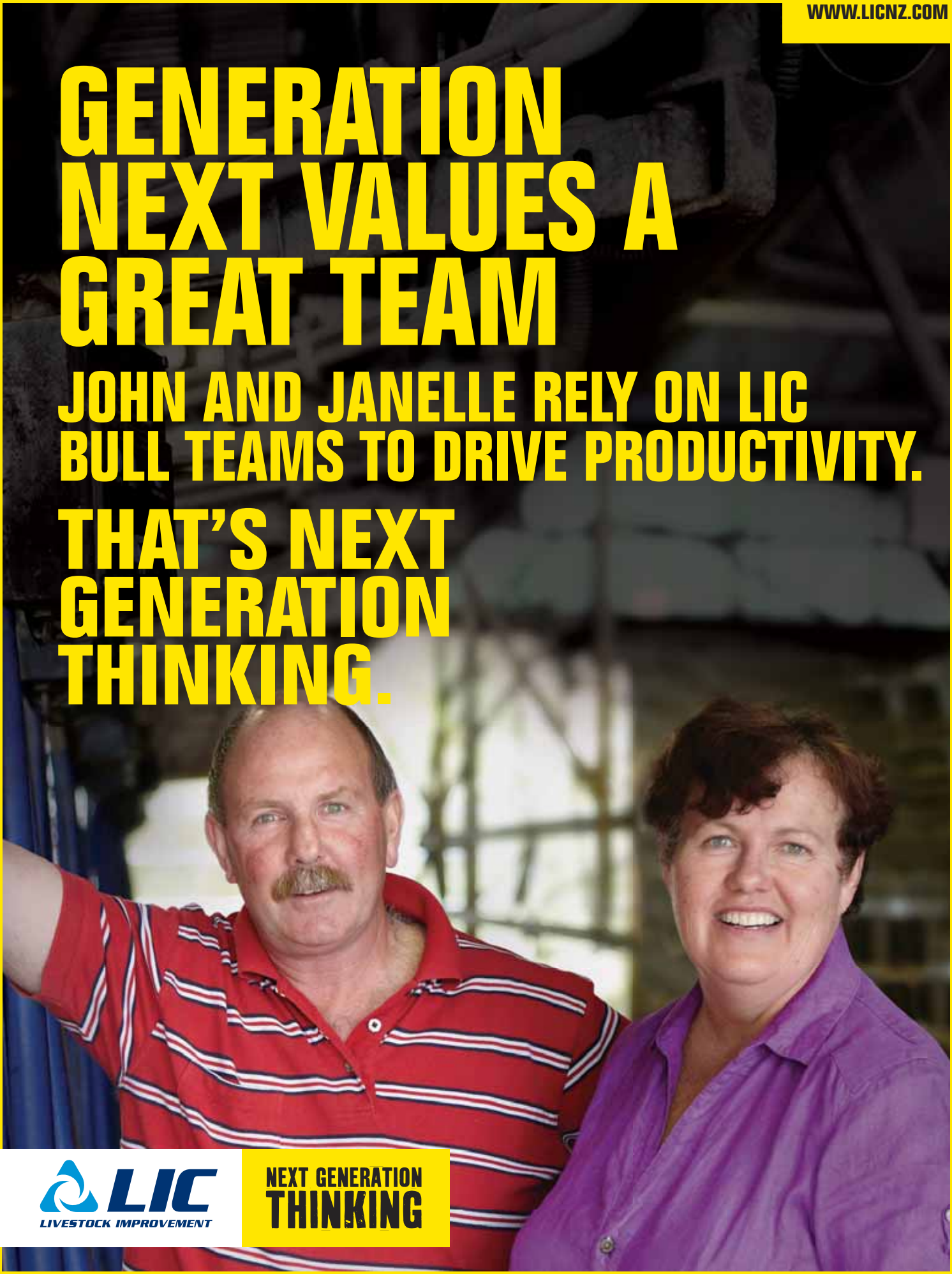

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Orraryd x Torp 882

ARB BONJOVI APR 194/90%

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Production	★★★★
Daughter Fertility	★★★★

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ARBNICK – Orana Nick

Juby1617 x Orraryd

ARB NICK APR 219/47%

Health	★★★
Daughter Fertility	★★★
Production	★★★★★

ARBLEX – Beaulands Lorry

Orraryd x Christiansborg

ARB LEX APR 133/83%

Type	★★★★
Daughter Fertility	★★★★

A22

ARBFROSTY – Meriben Park Jack Frost

Botans x Skole

ARB FROSTY APR 141/79%

Health	★★★
Daughter Fertility	★★★

A22

August 2014 ABVs

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email: <dabernethy@adhis.com.au>
website: <www.adhis.com.au>

THE Good Bulls GUIDE

Australian Dairy Herd Improvement Scheme

Key Source	Company	Key	
ABS	ABS Australia	RAG	Raging Bulls
AGR	Agri-Gene	RED	AUSRED Genetics
ALT	Alta Genetics	SEM	Semex Australia
CRV	CRV Australia	VIK	Viking Genetics
GAC	Genetics Australia	WAS	Woodlands Ag Services
LIC	Livestock Improvement	WWS	World Wide Sires
		WYA	Wyatt AB

Dairy Australia
Your Levy at Work

Good Bulls Guide for Jersey - Profit - Aust Proven Only

						Profit		Production				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		
Rank	Bull ID	Bull Name	Genetic Codes	Gen Inc	Aus Prov or Int	APR $	APR Rel	ASI	ASI Rel	No. Dtrs	No. Herds	Survival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Source
1	NAVARIAN	COLNARCO NAVARIAN	A12	g	A	**330**	74	268	82	60	32	104	56	107	109	63	101	101	103	78	101	60	128	74	GAC
2	TBONE	RICHIES JACE TBONE A364	A22	g	A	**271**	90	194	95	229	59	108	80	115	112	90	104	106	105	88	100	83	112	84	AGR
3	ELTON	CAIRNBRAE JACES ELTON		g	A	**267**	97	216	99	2431	327	105	89	113	107	95	104	104	103	98	99	95	114	97	ABS
4	CSCAMBITION	RIVERSIDE AMBITION		g	A	**262**	73	213	79	47	22	103	59	105	110	69	104	100	102	74	104	59	90	70	ABS
5	SANDBLAST	NOWELL SANDBLAST	A22	g	A	**261**	88	209	94	268	74	98	73	101	108	83	100	104	105	89	106	74	106	88	AGR
6	RACEWAY	ABERDEEN VALERIAN SANDOWN-ET	A22	g	A	**249**	81	207	86	93	37	106	67	110	113	81	104	104	105	84	99	66	83	73	GAC
7	TENGEN	MOROKA TENGEN	A22	g	A	**234**	75	195	83	63	26	103	57	100	103	65	102	102	103	78	103	58	84	73	GAC
8	MAXAPPEAL	RIVERSIDE MAXIMUM APPEAL	A12	g	A	**232**	71	173	78	37	21	106	53	105	101	61	102	102	103	67	100	60	109	70	ABS
9	LOCKSMITH	WHITE STAR LOCKSMITH	A22	g	A	**223**	74	167	81	57	28	103	60	101	94	71	99	104	103	73			135	68	GAC
10	VANAHLEM	PANNOO ABE VANAHLEM		g	A	**214**	88	152	94	324	95	107	73	116	110	87	102	107	107	85	95	69	112	84	ALT
11	ROUNDHILL	ABERDEEN VALERIAN ROUNDHILL-ET	A22	g	A	**213**	73	150	80	58	29	105	56	108	106	65	103	102	102	73	103	61	111	69	GAC
12	BOSMURMUR	OKURA LIKA MURMUR S3J	A22		A	**210**	89	164	95	270	46	102	73	96	95	87	99	102	102	89	101	69	142	93	CRV
13	BROADSIDE	BROADLIN 2420 SPIRITUAL	A22	g	A	**206**	75	165	81	56	35	104	61	105	105	73	100	101	102	73	98	58	113	70	GAC
14	LARFALOT	LIGHTWOOD LUCRATIVE	A22	g	A	**202**	97	171	99	1781	280	105	90	110	104	95	100	102	103	98	97	94	117	96	GAC
15	VASILIS	KAARMONA VASILIS		g	A	**196**	73	180	81	57	21	105	55	104	100	60	103	102	103	70	97	62	79	72	AGR
16	VAVOOM	ROCKLEIGH PARK VALERIAN VAVOOM	A22	g	A	**191**	77	170	84	70	27	104	58	99	97	65	101	103	103	76	100	63	81	77	ABS
17	ARIES	NOWELL ZODIAC		g	A	**189**	74	146	80	52	18	102	59	96	98	69	103	101	102	74	102	64	117	70	CRV
18	SOVANN	KAARMONA SOVANN-ET	A22	g	A	**188**	82	145	88	120	52	104	68	104	98	81	102	103	103	85	102	64	119	74	GAC
19	TAILBOARD	NOWELL TARSAN	A12	g	A	**186**	97	152	99	1397	253	102	93	105	103	90	100	101	101	97	98	96	133	98	GAC
20	GAINFUL	KAARMONA GALEAO	A12	g	A	**182**	83	146	89	89	48	104	69	112	112	72	100	103	102	84	95	75	133	81	GAC
21	AMBMANHATTEN	OKURA MANHATTEN-ET SJ3		g	A	**175**	98	196	99	1827	261	100	96	97	93	95	101	100	100	98	97	97	99	98	CRV
22	VALERAGAY	BROADLIN 2429 VALERIAN	A12	g	A	**154**	77	116	84	68	30	104	59	101	97	66	102	102	102	76	99	64	101	76	GAC
23	DELIAN	LOXLEIGH DELIAN	A22	g	A	**149**	78	136	85	78	44	105	60	113	107	66	102	99	102	79	99	65	79	77	GAC
24	SARATOGA	BERCAR SARATOGA	A22	g	A	**134**	95	64	98	477	153	106	88	102	101	85	99	101	99	94	103	92	126	95	GAC
25	BETAHEAD	KINGS VILLE OUTDO	A12	g	A	**132**	85	108	90	117	46	102	71	106	98	73	99	101	102	86	97	77	118	83	GAC
26	BARTPOWER	DARAWAY FLOWERPOWER SATIRA	A22	g	A	**129**	95	46	98	794	208	107	89	114	115	89	101	100	102	97	102	93	131	94	GAC
27	ALTAGALAXIES	GALAXIES CELEBRITY		g	A	**122**	94	20	98	680	110	108	82	118	116	92	103	102	104	96	101	88	148	91	ALT
28	PASSIVE	BERCAR PASSIVE	A12	g	A	**120**	98	80	99	1172	240	105	94	103	101	92	101	100	100	97	100	96	100	98	GAC
29	BAKARI	MELDAN BAKARI	A22	g	A	**117**	80	118	88	91	46	100	62	97	102	63	102	100	102	82	94	69	143	80	GAC
30	BADGER	BEULAH TARANAK BADGER	A12	g	A	**115**	99	56	99	3629	511	106	98	108	102	97	99	102	101	99	99	99	132	99	GAC

Good Bulls Guide for Jersey - Profit - Genomic ABV(g)s

						Profit		Production				Survival		Conformation Traits			Workability				Daughter Fertility		Cell Count		
Rank	Bull ID	Bull Name	Genetic Codes	Gen Inc	Aus Prov or Int	APR $	APR Rel	ASI	ASI Rel	No. Dtrs	No. Herds	Survival	Rel	Over Type	Mam Syst	Type Rel	Milk Spd	Temp	Like	Rel	Dtr Fert	Rel	CC	Rel	Source
1	DOUBLEUP	BROADLIN DOUBLEUP	A22	g	A	**332**	44	307	54	0	0	104	26	101	101	29	102	101	102	37	100	24	99	38	GAC
2	CAIRNBONE	CAIRNBRAE TBONE ENSIGN		g	A	**292**	66	223	74	16	6	106	49	108	113	56	102	104	103	66	101	43	117	61	ALT
3	CSCEDISON	CAIRNBRAE TBONE EDISON		g	A	**289**	59	256	68	12	7	102	41	101	103	46	103	104	104	54	99	39	110	57	ABS
4	LEVIGENES	BROADLIN LEVI	A12	g	A	**280**	52	235	60	0	0	106	35	109	104	39	102	104	105	49	97	34	100	47	GAC
5	SANDSTORM	KADDY ELTON SANDSTORM	A22	g	A	**272**	60	243	67	0	0	102	46	101	100	49	104	106	105	57	96	45	112	55	
6	CRVBRAX	PANNOO BRAX	A22	g	A	**266**	49	196	59	0	0	109	32	120	112	36	102	106	107	47	97	31	104	44	CRV
7	BORAT	BROOKBORA TBONE BORAT	A22	g	A	**265**	52	202	61	0	0	106	36	106	104	40	104	106	105	50	98	35	112	47	GAC
8	STACKER	BROADLIN STACKER	A12	g	A	**253**	47	219	56	0	0	103	31	107	105	34	100	100	102	39	101	30	113	41	GAC
9	CRVVOYANT	MERSEYBANK CLAIRVOYANT		g	A	**252**	47	190	58	0	0	105	29	106	105	31	102	102	103	37	102	29	118	41	CRV
10	KEVIN	WHITE STAR KEVIN	A22	g	A	**249**	54	194	62	0	0	106	39	102	100	43	103	103	105	52	100	37	92	50	GAC

SPRING AHEAD WITH CRV'S HOTTEST NEW SIRES

New additions and strong genomic sires after the August sire evaluation have just what your herd needs this spring.

TOPS FOR APR

ETAZON **STEFANO**

Daughter of Stefano, Lucinda, Netherlands

- New High APR(i) Sire for 2014 at $294 APR
- +108 Overall Type & +105 Mammary System
- Calving Ease (+103), High Daughter Fertility (+105), Lower Cell Count (+164)

NEW HEALTH & EFFICIENCY EXPERT

DELTA **TITANIUM**

(Dam of Titanium, Etazon Renate, Netherlands)

- +107 Overall Type & + 107 Mammary System (NLD)
- Medium statured cows, high Daughter Fertility (+112)
- Components, Longevity, Calf Vitality & great Locomotion

NEW BY VALENTINO

MERSEYBANK **CLAIRVOYANT**

(Dam of Voyant, Merseybank Eltons Claire, Tasmania)

- +1239 L Milk +32 Kg Protein $252 APR
- +102 Daughter Fertility, +118 Cell Count
- More production and size from your Jerseys

SUPERB TYPE AND PRODUCTION

PANNOO **BRAX**

(Maternal line - Daraway Flowerpower Vanessa, Australia)

- $266 APR(g) Australian sire with +30 Kg Protein
- +120 Overall Type & +112 Mammary System
- Adds size & production performance

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BETTER COWS | BETTER LIFE

Once-in-a-lifetime bull

THE August 2014 Australian Breeding Values (ABV) release confirmed what the people at Alta already knew — Canbee is a once-in-a-lifetime bull.

With more than 90 daughters in its production proof, Canbee lifted an amazing 150 litres of milk to 1550 litres, four kilograms fat to 61kg and 4kg protein to 53kg (+0.21%).

Canbee's APR also saw a lift of 22 points and at 370 APR is 20% higher than the next best bull.

Canbee is also a staggering 13kg protein above the next best daughter-proven bull. For raw production, unequalled profit with great workability ratings, great feet and legs as well as shallow, strongly attached fore udders with strong ligaments and ideal teat placement — there is no bull in the system that can come close to, let alone match Canbee.

Canbee is also rated at +3.11% for semen fertility with more than 3700 observations.

AltaKool is a new release sire from the United States. Kool, a noted fertility specialist has debuted with a good type and udder composite rating. Altakool is a Concept Plus semen fertility sire. Its APR(i), which includes genomics, rates Altakool at 226 APR(i) with a somatic cell score (SCS) rating of 176, daughter fertility 109 and 108 for survival. Its first Australian daughters are impressive and have generated high return usage by their owners.

AltaCaliber is another fertility specialist that offers breed leading type. With an APR(g) of 176, type 109 and mammary 111, great SCS and above average workability traits, AltaCaliber offers a great package. Caliber is also rated at 102 calving ease, 106 daughter fertility and 4.41% semen fertility rating making it a must-use sire for fertility-conscious farmers.

TboneKen is a new sire from the Jersey Land Sires program in North America. Tbone x Barkly x Paramount, Ken has debuted with an APR(i) of 199. A positive milk transmitter, Ken also noticeably improves component yields. Ken also offers great type with an ABV(i) for type of 113 and mammary 110, especially excelling for frames, feet and legs and shallow, well-attached udders.

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

CRV Sires build healthy, efficient herds

The August 2014 sire evaluations for CRV identified exciting new Holstein and Jersey sires and daughter-proven graduates with the foundation to build healthier, more efficient herds.

Top bloodlines from Australia, the Netherlands, the United States and New Zealand are the basis for the sires.

Etazon Stefano (Goldwyn x Oman) is the highest new Australian Profit Ranking international (APR(i)) graduate for CRV Australia. At a huge APR(i) of 294, Stefano also offers a balanced type profile of +108 overall type and +105 mammary score. It offers strength and capacity, plus higher production, coupled with super daughter fertility (+105) and calving ease (+103).

HSS R Stravaganza (Roumare x Pierre) continues to hold its top five APR(i) spot at an impressive 307. This positive daughter fertility (+102) Roumare son drives higher profitability through increased protein scores. Strava is A2A2 and remains a popular choice for sexed heifer programs and farms driving for efficiency from pasture production.

Delta Titanium is from a super-proven cow family and also has reliable dual-country-tested genomics. With already high genomics in Europe, Titanium hits Australia as the third-highest international Holstein sire on Australian Holstein genomics. Its son, Totillas, is one of Australia's 10 highest genomic Holsteins as well. Titanium offers more medium-statured daughters, higher milk flow and positive component levels. It is the complete package with functional type, huge daughter fertility (+112), production with components, calving ease and excellent calf vitality rates. It is also A2A2. ▶

In the Jerseys, Pannoo Brax (Vanahlem x Larfalot) continues to dominate the Australian Jersey genomics. It remains the highest type (+120) and mammary system (+112) Jersey genomic sire. Now an internationally used Australian Jersey, Brax is a popular choice for breeders wanting increased frame size and production from their animals. Brax offers higher type and excellent production with breed-leading udders ratings.

Merseybank Clairevoyant (Valentino x Elton) has become one of Australia's hottest new Australian-bred genomic sires. This Valentino son comes directly from the well-respected Merseybank in Tasmania. Its dam, considered to be Elton's best daughter, is Merseybank Elton Claire EX 94. Clairevoyant offers an impeccable type profile combined with higher production and excellent daughter fertility (+102).

Article supplied by CRV, contact Mike Huth, phone 0409 555 042, website <www.crv4all.com.au>.

Two new-release sires from ABS

A combination of super sire Dorcy and standout Australian bull Sholtz, backed by two new Jersey releases, packs a powerful punch for ABS Australia in the August sire summary. ABS Australia and New Zealand general manager James Smallwood said the company was focused on offering Australian dairyfarmers world-class genetics for fertility, type and production.

Mr Smallwood said the impressive sire battery was led by fertility favourites Levi, McCormick, Largess, Stonewall, Throttle, Ponder, Premier and Ambition. These were complemented by type leaders Zelgadis, Dorcy, Cancun, Vindicate, Gunnar and Elton.

Production powerhouses include Picardus, Sholtz, Levi, Soto, Volcano, Visionary, Elton and Ambition.

In the solid August sire summary, proven sire Dorcy continued to excel with age as its US ranking on the Total Performance Index (TPI) increased again. Dorcy is the number two available TPI sire in the US and remains the highest living sire in the official Holstein US top 100 list.

A bull ranking well in Australia with an Australian Profit Ranking (APR) of +271 is Soto (Jet Stream x Shottle x Oman). This high TPI sire provides more options for Australian dairyfarmers looking to improve production-based traits. It is a sire for lowering pins and producing quality udders.

Heading the fertility charge is the Buckeye x Oman x Durham son, Levi, one of the world's elite APR and TPI sires. Breeding fertile daughters and increasing solids production, Levi is the number three APR(i) (APR international) sire with a 303 gAPR (genomic APR) and is ranked as Australia's number one fertility bull.

A Sholtz daughter owned by the McKie family, P irron Yallock, Victoria.

ABS Primetime genomic bull Silver has seen improvement to its already-sky-high genomic proof and is on track to be the highest-ranked bull for GTPI (genomic TPI) in the entire dairy genetics industry.

ABS Australia national sales manager Paul Quinlan said Silver was an immediate global mating sire when launched in June. "Silver is poised to deliver a return on customer investment like no other through the sale of embryos, daughters and sons," Mr Quinlan said.

"Silver has a higher GTPI than any other bull on the list — the first shipment of semen sold out quickly but more will be available in September."

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

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Extensive genomic breeding program

BREEDING specialist for Auzred XB, Steve Snowdon, is excited about the strong lineup of new Coopex Montbeliarde sires and what they offer to Australia's commercial dairy producers.

"These sires represent the strongest lineup of Montbeliarde sires available to date in Australia and embrace the strengths that our clients have been asking for, particularly the exciting new world number one and two rated Montbeliarde genomic sires in Harper ISU 164 and Guisseny ISU 162, and two Urbanitse-sired genomic sires Fetard ISU 157 and Faucitre ISU 154," Mr Snowden said.

These young genomic sires are the product of an extensive genomic breeding program by Coopex Montbeliarde in which more than 15,000 heifers are now genotyped each year and more than 3000 male calves are then genotyped to end up with 80 young bulls to genomic-progeny-test each year.

This extensive program is also reaping the benefit of the high value Coopex Montebeliarde has placed in its breeding for the past 25 years on key areas that commercial dairyfarmers now demand in the modern dairy cow, including fertility, health, mastitis resistance, survival, production, type and genetic body condition.

Coopex Montbeliarde distributes its young genomic sires in the same way as it previously distributed its progeny-test sires to ensure reliable unbiased proofs. These genomic sires are not made available to the public until they have calves on the ground. This process also ensures that the Coopex genomic sires' calving ease and calf vitality scores are highly reliable. D

Article supplied by AusRed XB, phone Steve Snowden 0417 138 508, website <http://www.auzredxb.com.au/>.

Good legs essential

TOBY and Lyn Leppin, together with their son Nick, milk 400 Aussie Red cows in Bena, Gippsland. The farm is located on many steep hills, making good feet and legs a priority for survival in these conditions.

However, Toby wouldn't have it any other way, as he said the soil profiles on the hills was ideal for growing grass. The Leppins' herd is ranked in the top three Australian Profit Ranking (APR) red herds in Australia, and is a testament to their breeding program and high fertility in their cows.

The herd is managed under a strict seasonal calving regime, calving down all the cows in August to benefit from the spring pastures to coincide with peak production.

They are adamant the higher fertility in Aussie Reds, matched by strong milk solids production, allows them to operate a successful business. To achieve a high genetic herd average, the Leppins have used the top-ranked red bulls based on profit, and a range of Aussie Red progeny test bulls.

As well as profit, strong, functional udders are a priority in their breeding decisions.

This herd has also been named in the top 100 herds for the lowest average cell count in Australia on numerous occasions. The Leppins also breed young bulls to be a part of the Aussie Red progeny test program.

This August has been an exciting ABV release for a bull they have bred, ARBNick, which is the latest graduate from Genetics Australia's Horizon progeny test program, as has come up with an exceptional APR of 219 and joined GA's proven sire line up. Its initial proof shows its daughters will give plenty of production, with good fertility and low cell counts. D

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

Viking making inroads

VIKING has taken the plunge into supplying genomic data for all of its proven Holstein sires under the Australian Breeding Values (ABV) system. The results have been satisfying as it is ranked third for artificial breeding companies with a number of sires in the top 30 on the Australian ABV profit listing for Holstein.

Four sires have recorded impressive increases since the April proofs: Vikhgrafit increased from 266 to 286 Australian Profit Ranking (APR), Vikhoyvind from 231 to 275 APR, Vikhstrong from 266 to 275 APR and Vikhmogens from 208 to 259 APR.

Atosikko remains the number one sire for Red breeds, with more daughters added to its April proof for an APR of 262 — up from 234 in April. Viking holds the top three positions and seven of the top 10 on profit in the Reds.

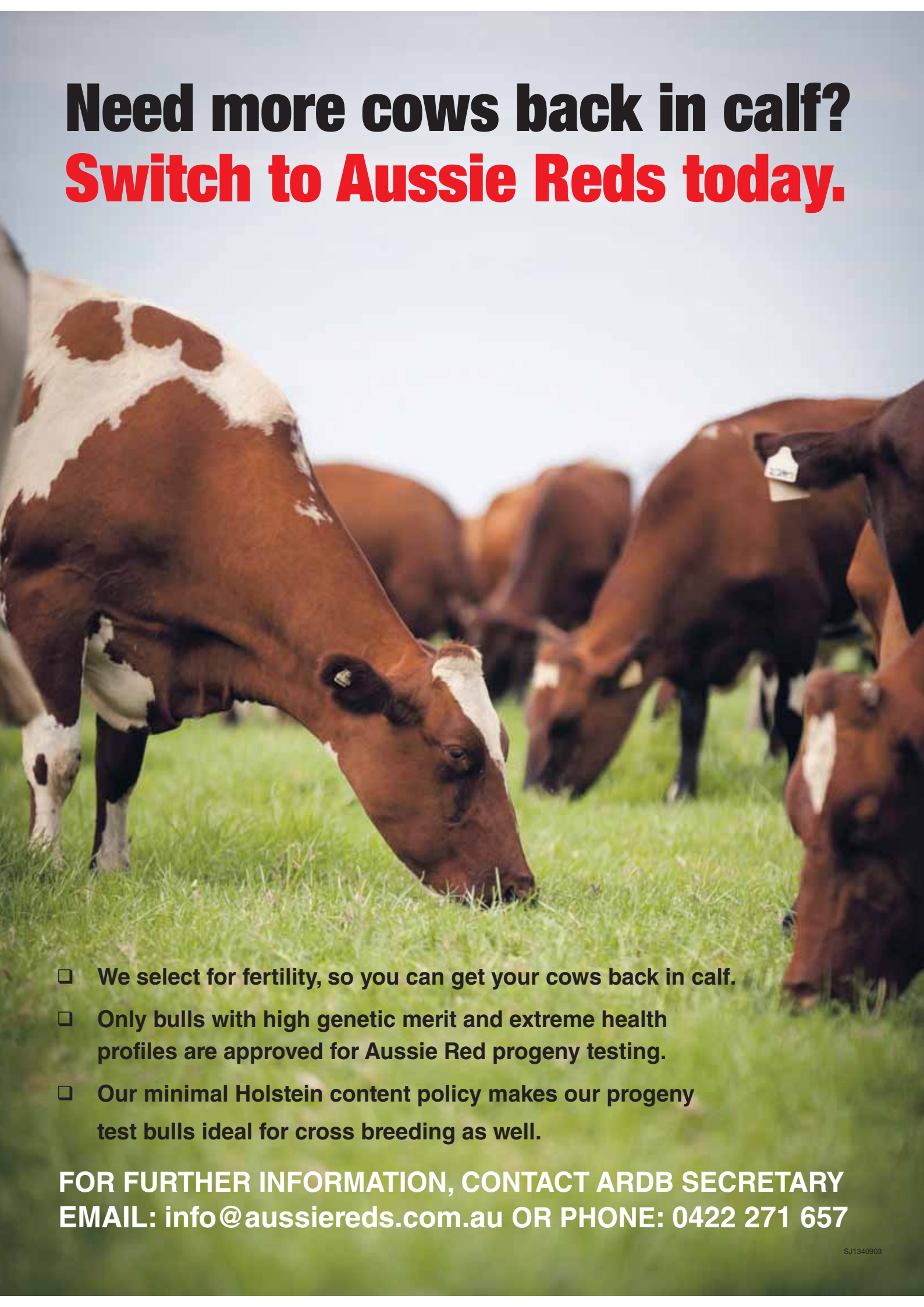
Fastrup was another strong performer, with more daughters added to its proof — up from 174 to 202 APR.

Vfoske is a popular sire and enjoys a small increase as well, with Australian farmers impressed by its performance in the dairy as well, and an Australian proof surely is not far away. Vfoske now has close to 5000 daughters in the Viking population and is one of the most heavily used Red sires worldwide.

Viking Jerseys are particularly strong in the mastitis resistance category, with four of the top five sires being Vikings. Two of the top five sires for daughter fertility are Danish Jersey sires. As Viking gets more daughters into the Australian system, it hopes to rise in the production and type and mammary areas as well. D

Article supplied by Viking Australia, phone (02) 6071 3007, email <ertho@vikinggenetics.com>, website <www.vikinggenetics.com.au>.

Need more cows back in calf?
Switch to Aussie Reds today.



- We select for fertility, so you can get your cows back in calf.
- Only bulls with high genetic merit and extreme health profiles are approved for Aussie Red progeny testing.
- Our minimal Holstein content policy makes our progeny test bulls ideal for cross breeding as well.

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SJ1340903

Holstein line-up success continues

THE release of the August 2014 dairy proofs has seen the continued success of the Agri-Gene Holstein line-up, which is sourced from all parts of the globe. The highlights from the Australian Breeding Values (ABV) release was the performance of genomic sire Rengaw Mom Justle-ET, which crashed through the +300 Australian Profit Ranking (APR) barrier and now sits at number two on the Australian APR(g) rankings.

Other proven performers to impress were health and fertility leader Badger-Bluff Fanny Freddie, which once again increased for APR and maintained its excellent ranking for daughter fertility, cell counts and calving ease. Now with milking daughters in Australia, Freddie's fitness traits are matching what it has been doing in the United States for years where it now has more than 13,000 milking daughters and remains a fixture among the top US Total Performance Index (TPI) and Net Merit Sires.

Double Dutch DT Benito-ET, which has been a popular sire for the past few seasons, also maintained its high APR(i) ranking. It is an easy-to-use sire that has a great blend of type, production and health traits and is one of the best for lowering cell counts and adding teat length.

Elite US sire Co-Op Bosside Massey-ET, which now has more than 3000 milking daughters and held its position in the US top 10 TPI sires, also ranks high for APR(g) while Australian sire Rengaw Shottle Jiffey-ET continues to be a breed leader for cell counts and APR with good survival and fertility traits.

Agri-Gene has released some exciting new genomic sires for 2014. From Europe they are led by German bull Boss, which is one of the leading Bookem sons from an outstanding cow family. It has been used as a sire of sons globally and has the added attraction in Australia of a high Australian APR(g) to go with his outstanding German proof.

In the Jerseys the release of the August ABVs has seen farmer favorite Richies Jace Tbone A364 maintain its number two APR ranking at +271. It transmits high type at +115, which ranks it among the top five sires for overall type. It is the breed's number two sire for improving temperament and likeability at +106.

It will improve components, longevity and will drop cell counts and most impressive is its faultless type linear with more than +110 for no less than 10 individual type traits including type, mammary, stature, angularity, pin width, centre ligament, front and rear teat placement, teat length and loin strength. D

Article supplied by Agri-Gene, phone (03) 5722 2666, website <www.agrigene.com.au>.

Semex adds valuable sires

THE discovery of high immune response (HIR) and Semex's release of Immunity+ sires continues to be a game-changer for the bovine industry. With 25% heritability, Immunity+ sires can help improve a herd's overall health and longevity.

Regardless of herd size or management style, Immunity+ sires are a valuable tool for breeding a healthy herd of profitable and efficient cows.

The HIR technology was developed by Dr Bonnie Mallard and her colleagues at the University of Guelph and spans decades. It shows that HIR cows have 19-30% lower disease incidence compared with herd averages.

These cows also respond better to commercial vaccines and produce higher-quality colostrum. As a result, they are more profitable by bringing in more revenue, lowering costs and wasting less time.

A new addition to the Immunity+ lineup in August 2014 is 0200HO02653 Misty Springs Tribute. Like all Semex sires, Tribute hails from a prolific maternal line. It is by the popular Man-O-Man from a VG-89 Goldwyn cow from five more VG, high-producing dams.

Like Semex's April 2014 addition of 0200HO06198 Gen-I-Beq Halak to the

Immunity+ lineup, Tribute is also proven in the United States. Field reports are that its daughters will work in any environment, being medium to tall daughters that are dairy and angular.

Their mammary systems are their best trait, with high, wide rear udders and firm fore udders. They have strong median suspensory ligaments, are milking extremely well and excel in components.

Also added to the Holstein lineup is an A2/A2 bull, 0200HO06183 Comestar Lemust. Lemust hails from the Laurie Sheik family and is a HealthSmart and Calving Ease sire. Its daughters have wide and capacious udders with good texture. With no Goldwyn, Shottle or Oman in its pedigree, it is a good mating for many popular bloodlines.

"We're excited to add two more great-pedigreed, valuable sires to our lineup," Semex Australia general manager Jim Conroy said. "Both offer the health traits and functional traits our clients are demanding, with the added bonus of being Immunity+." D

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

Genetics Aus maintains dominance

THE August 2014 Australian Breeding Value (ABV) release has seen the continued dominance of Genetics Australia (GA) bulls across all three major dairy breeds: Holstein, Jersey and Aussie Red.

Atley is one of GA's genomic bulls.

More reliable data on bulls, with many adding second-crop information, saw a number of increases in ABVs on many bulls. The release also coincided with the unveiling of a new Mastitis Resistance Index (MRI) developed by GA to give those farmers placing emphasis on milk quality another tool to use when making bull selections.

GA has developed the MRI to assist farmers to identify bulls to sire daughters that will be less susceptible to clinical mastitis. There have been a number of independent studies around the world that have identified traits that are correlated with clinical mastitis. The strongest relationship is with somatic cell count but the type traits fore udder attachment, udder depth, rear leg rear view and milking speed (negative correlation) all influence clinical mastitis.

The MRI combines these key traits and weights them to provide farmers with a list of bulls that will contribute to reducing the incidence of clinical mastitis cases in their herd.

In the ABV release, Christmas — the best new Holstein graduate for GA from the 2014 April ABVs — lifted significantly in the August release. Christmas combines a high APR with a well-balanced production ABV, excellent health and workability traits and an ideal blend of power and dairy strength.

Existing proven sires Delsanto and Medallion added a large number of second-crop milking daughters and continue to impress. Delsanto is now in the top 1% of Holsteins on profit ranking while Medallion continues to be in the top 1% for mammary and remains the first choice for udder improvement. Buddha continues to tick many boxes and also moves into the top 1% for profit and remains one of the easiest sires to use.

The release of the genomic breeding values [ABVg] is also dominated by GA, which has 15 of the top 20 APR bulls based on their ABVg and 14 of the top 20 on type.

Royalman (sire Goldwyn), Dimaggio (sire Canbee) and Picola (sire Delsanto) are the best of the FutureGen team following the August ABVs and offer a combination of high Australian Profit Ranking (APR) with excellent health and workability traits. D

Article supplied by Genetics Australia, phone 1800 03 904, website <www.genaust.com.au>.

Figure 1: Chicory ready to graze.

Figure 2: Chicory plus fescue undersown.

Farmers look to alternative species

By FRANK MICKAN*

MORE dairyfarmers are investigating and or trialling alternative species to complement ryegrass pastures in the marginal and even high rainfall dairying areas of Victoria. Although ryegrass is a robust, highly nutritious forage for much of its growing season, there are still feed gaps in summer, autumn and winter and, understandably, decreases in quality as it matures.

KEY POINTS

ALTERNATIVES

- Plant selection and breeding
- Change in management
- Not a silver bullet

Can other species be used to fill the gaps and overcome some of the ryegrass weaknesses?

Seed companies are continually trying via plant selection and breeding to further improve ryegrass cultivars for the dairying areas.

Alternative species are also being developed to better complement ryegrass and despite having their own constraints, some farmers in Victoria have bucked tradition by sowing a certain proportion of their milking area to a range of alternative species of pastures and crops.

This may be to complement the ryegrass pasture to help fill feed gaps but, equally important, these certain areas have often been flats that flood each year or lighter soil types where ryegrass does not persist and require frequent resowing.

Some farmers have also selected a specific species, chicory, to help combat the effects of severe redheaded cockchafers on ryegrass pasture production, particularly in the drought years. These farmers have persisted with it for its other advantages.

The introduction of new species means a major change in management. Several years of trialling and learning by experience is required to successfully establish and manage any new or alternative species species before getting the best out of them.

There is usually a large gap between the "known" knowledge at the time of sowing and the "unknown" practical knowledge needed to make the best use of new species in individual farming systems. Close scrutiny of the "what happened" and "why or why not" are valuable learning experiences for the long-term and effective use of these alternative cultivars.

However, they are not for everyone and they are not a silver bullet.

This article will touch on some of these species and why they are being used on farms in Victoria for different reasons.

Chicory

Chicory is a deep-rooted (tap root), summer active perennial herb/forb and highly nutritious throughout most of its life (Figure 1). It can tolerate lower pH, higher aluminium, higher soil salinity and more waterlogging than lucerne, but not as well as ryegrass.

However, it can be prone to pests such as red-legged earth mite, lucerne flea and slugs while it is being established.

Its main Achilles heel, once established, is that damage to its hollow stem or crown followed by wet conditions can render it prone to fungal diseases caused by *Sclerotina spp*. Longer-term (two to four year) chicory pastures are winter semi-dormant, but are more persistent compared with the short-term (one to two years) chicory pastures, which are more winter-active.

Although it should be grazed sparingly in late autumn and winter to allow root reserves to be replenished, its deep (greater than 50 centimetre) root system allows it to produce well during the drier summer months without the pest and animal health issues of many brassicas.

Recent research at Terang, Victoria, has shown chicory performs similarly on a kilogram-for-kilogram feed basis to ryegrass, but it can do so when ryegrass is struggling to grow during summer, as would chicory itself in an extremely dry summer. Some summer rain or effluent application to chicory results in very good production responses.

Tall Fescue

Tall fescue can produce more during summer, persist longer than perennial ryegrass and has similar nutritive value. It can handle hot and dry conditions better than perennial ryegrass due to its deeper root system and higher temperature ceiling.

Tall fescue can grow in less-fertile soils, is adapted to a wider range of pH and more tolerant of waterlogging conditions than ryegrass. Another advantage of tall fescue is its ability to tolerate salinity up to 10 deci Siemen per metre (dS/m) electrical conductance (ECe), whereas the limit for ryegrass is under about 6dS/m ECe.

Figure 3: Prairie Grass going to head.

These characteristics have resulted in some farmers replacing some or even all ryegrass with tall fescue in irrigated areas with temperatures well above the ryegrass comfort zone and may be a potential species in low rainfall regions. Equally, some farmers are having success with tall fescue on some flats in the higher rainfall areas of Gippsland that regularly become waterlogged necessitating replacement of ryegrass each year. Its much deeper rooting system allows tall fescue to tap into the water table on these flats during summer and allows more efficient use of water and nitrogen. It will not perform well if moisture is lacking.

Make no mistake, tall fescue does have its drawbacks, but careful and altered management can alleviate these and result in a worthy complementary feed with ryegrass pastures. Tall fescue is very slow to establish and if sown in soils under about 10 degrees Celsius, will take twice as long to geminate compared with only a few days behind if sown on soils above 11-12°C. Later sowing will allow weeds to outcompete the fescue leading to extra expenditure for weed control and sometimes even resowing.

A slow-establishing companion species sown with the fescue, such as a white clover or chicory (Figure 2), can help to combat weed growth and provide a high quality pasture.

Although fescue is best grazed at the four leaf stage, it does require tighter grazing in spring (about 15-day rotation, leaving about four centimetre residual) as it approaches maturity to maintain its quality and to prevent the leaves from becoming a bit coarse.

Thanks to continued breeding and selection new cultivars will soon be available with leaves much more akin to ryegrass than the older cultivars. In the meantime, grazing tall fescue correctly during spring will provide pastures that can fill some ryegrass feed gap and overcome some of its weaknesses.

Tall fescue has higher nitrate-N concentrations in its leaf and stem than perennial ryegrass, but this is negated when N fertiliser is applied. There is a greater risk of nitrate-N poisoning of animals if high rates of N fertiliser are used on tall fescue. To avoid nitrate poisoning, plants should not be grazed until the plant has had time to convert the nitrate to protein in the plant. However, it is not yet clear exactly how long this should be.

Prairie Grass

Prairie Grass is an annual to short-term perennial. It is best suited to well-drained, fertile soils and will not tolerate waterlogged soils, those of low pH level nor those high in aluminium. It has a similar growth pattern to perennial ryegrass, but being more heat-tolerant than ryegrass, will grow further into summer. It can provide good quality feed in late summer, autumn and late winter to early spring. ▶

◀ It has been used to good effect on north-facing sandy loams in Gippsland and other similar situations where ryegrass has persistence issues.

Stock prefer Prairie Grass at all stages of growth, even the seed heads are palatable (see Figure 3), compared with perennial ryegrass and it has the ability to recover from hard grazing. It should be grazed after the four-leaf stage. It is a short-lived plant that requires new recruitment to maintain its density. Consider allowing some seed-set in October-November to re-establish seedlings next autumn.

Being an upright grower, it can be sown with red and white clover in pure swards with legumes or in mixtures with other grasses.

There are various new cultivars within all the above species, with a wide range of characteristics such as different winter cold requirements (vernalisation), dormancy periods and summer versus winter activity.

There are other species that may be more suited to a particular farming system so before sowing new alternative species, always seek advice from trusted seed company representatives or local farmers who have successfully integrated these species into their own farming systems. D

Contact: Further technical information is available on tall fescue and Chicory at <http://www.dairyaustralia.com.au/Pastures-and-Feeding/Pastures-forages-and-crops/Forage-and-crops/Project-3030-V2.aspx>.

**Frank Mickan is a pasture and fodder conservation specialist at the Victorian Department of Environment and Primary Industries, Ellinbank Centre*

Maize and fodder beet trialled in Tassie

THE results of trials conducted on different varieties of maize and fodder beet were presented by Serve-Ag at a field day in Tasmania earlier this year. The four-hectare maize trial is being conducted on the property of Sandra and Nathan Bennett.

The Bennetts milk 150 cows on their 100-hectare Ringarooma, Tas, property. The maize was sown in early November 2013 to investigate the potential advantages and limitations of five varieties.

The first variety is Maximus, which has been the benchmark variety in southern Australia for the past five years. It is a quick maturing plant, which is suited to the temperature and conditions of north east Tasmania.

According to Serve-Ag agronomist Rob Wilson, Maximus is a variety that finishes well, producing good silage both in quality and quantity and a good quality cob.

The other varieties being trialled are:

- MFY 139 SM — is being investigated as a fast maturing maize for Tasmania, potentially giving farmers a greater window for sowing their crops;
- Pioneer P9400 — has a maturity rate of 94 days and a denser cob;
- Pioneer P0021 — has a maturity rate of 100 days and has produced good yields in southern Victoria; and
- MFY 136SM — also a quick maturing plant which, according to Mr Wilson, may possibly be suited to the conditions of north west Tasmania.

Mr Wilson discussed the benefits of maize and what is needed to produce a successful crop.

Maize was a good converter of water into dry matter and a successful maize crop should produce 27+ tonnes dry matter/ha in comparison to 11-12 tonnes DM/ha for ryegrass for the same period, he said.

The highest yielding crops should have one cob per plant and have well-formed cobs with 18-20 rows of kernels. The cob of the plant contains the energy and the stalk contains the fibre.

Mr Wilson said maize was high in energy and low in protein, which worked well with feeding in autumn when pastures were lush and high in protein.

He and the group discussed how ground preparation and sowing rates are very important in producing a high yield. "The better seedbed you have, the better the yield," he said. The ground needs to be as even as possible and the seeds should be 15 centimetres apart, equating to about 95-100 seeds per hectare.

If a plant is yielding more than one cob, Mr Wilson suggests increasing the plant density when sowing.

Seeds should be drilled during the first week of November if possible, as a soil temperature of 12 degrees Celsius and rising is ideal for sowing a maize crop. Sowing the crop earlier means the soil temperature will be too cold and there is a greater risk of being damaged by frost. Making sure the crop has sufficient water and fertiliser is also crucial to producing a high producing yield.

"Maize has a good yield potential, feed it properly and don't underdo it," he said.

Water is the most expensive input with the Bennetts' crop (estimated cost of $300/megalitre). The maize was irrigated every nine days, with water consumption expected to be around 3-4ML per hectare.

Mr Wilson said timing of irrigation was crucial for a successful yield. Water is needed during the early stages of a maize crop, particularly until the crop is knee height and at the flowering stage.

He said that nitrogen was also required early and should be applied until the crop is waist height. Symptoms of nitrogen deficiency include paler colour, senescence of lower leaves and the end of the cob missing rows of kernels.

Accordingly, leaves that are green all the way to base of the plant indicate sufficient levels of nitrogen.

The maize crop at Bennetts was top-dressed three times with nitrogen. The last application of nitrogen was applied in early January. A fertiliser blend, 14-8-24, was applied at and before sowing.

The paddock, which was previously annual ryegrass, was limed with Dolomite and a trace mix of copper and zinc.

Rob and Sandra Bennett also emphasised that weeds could be a critical limiting factor and therefore need to be managed from sowing to harvest.

As maize is a sub-tropical plant, frosts could also be a limiting factor to a successful yield.

The Bennetts are also growing fodder beet as an alternative forage crop. This is a high water, high energy, low fibre feed, which has a yield potential of about 30 tonnes of dry matter per hectare. This is a 120-200 day crop, which requires one ML of water per seven tonne of dry matter.

The Bennetts crop was sown in late October.

It is recommended that cows are fed a maximum of five to six kilograms dry matter per day.

Mrs Bennett said: "This is a great forage crop for weight gain and the cows love it. It has very high utilisation because the cows eat everything."

She estimates that their fodder beet costs 18c per kilogram of dry matter.

Contact: Sandra Bennett, email <sbennett@serve-ag.com.au>.

— Heidi Broun, Tasmanian Institute of Agriculture dairy centre.

Article courtesy of Tassie Dairy News

Daryl Kennedy in a paddock of Hayman soybeans he planted late last year.

First time planting of soybeans on dairy farm

PRODUCING as much feed as possible, with the best nutritional value, prompted the decision to grow soybeans for the first time at the Kennedy brothers' Northern Rivers milk operation last year.

Three consecutive seasons of numerous floods has left their conserved feed stores empty. Oats had to be bought in last winter and the milking herd is down from 200 to 150 Holsteins and Jersey-cross cows.

Daryl and Mick Kennedy and their families are the second generation to run Dunbible Dairy at Stokers Siding, supplying more than a million litres to Norco annually.

In the last week of November, they planted 12 hectares of the new soybean variety Hayman at 75 kilograms a hectare in a heavy clay soil paddock that grew ryegrass for grazing this winter.

In trials on farms similar to the Kennedys', Hayman has produced 11 tonnes a hectare dry matter, which is 25% more biomass than other soybean varieties, while maintaining the same feed values of up to 27% crude protein and 10 megajoules of metabolisable energy per kilograms of dry matter.

Daryl Kennedy said he was hoping to make 10 bales a hectare from the paddock without the use of fertilisers.

"We need to get as much feed as possible from a small area and soybeans are less cost and work to grow than other options like corn," he said.

"Also, there are good agronomic benefits for the soil, which will help with next winter's ryegrass."

Tips for a successful summer crop

By BRENDAN LEY AND FRANK MICKAN*

IT is that time of the year again when dairyfarmers may be thinking about how to fill their summer feed gap. Usually, the cheapest source of feed is from direct grazing an actively growing pasture or summer forage crop.

What farmers can afford to grow over the summer period depends on factors such as accessible irrigation water (either allocated or available for temporary purchase), the amount of effluent available and the likelihood of useful summer rainfall.

Milk price and the cost of purchased feed are also factors that are front of mind. Whichever summer forage option or combination is grown, the final utilised crop has to be cheaper than buying bought-in feeds (typically, grain).

This article may contain information that is already known but occasionally a gentle prod about some of the basic concepts of preparing and growing a summer forage crop might be useful. Even if a farmer picks up only one small point, it may mean a big difference in the success and profitability of their crops.

Crop selection

When selecting which crop to grow, it is important to understand the growing characteristics of the range of crops available. A summer crop growing actively in April, when the farmer is wanting to sow an annual ryegrass in March in that same paddock, will be an issue unless they are willing to compromise on total yield.

Conversely, it is worth considering not growing a long-season Italian ryegrass (IRG) that might finish grazing or being conserved in late November, if in early October millet should be sown in that space unless willing to spray out that IRG early at a time when it might be achieving its maximum growth rate.

Having a good understanding of the nutrient requirements, pest pressures, water and temperature requirements, grazing management strategies and whether the crop is likely to be conserved all forms part of the selection process.

Are there new crops that may be suitable for specific areas of the farm? Chicory and alternative pasture species are being used successfully by some farmers for various reasons but they are not for everyone. Any new species to be tried requires a thorough review of its fit in any given farming system, and its management quirks need to be taken into consideration to ensure it succeeds. Sometimes other farmers in the area who have successfully or even unsuccessfully grown a new crop or pasture species can provide valuable insight.

KEY POINTS

SUMMER FEED

- Home-grown pasture generally cheapest option
- Choosing complementary varieties vital
- Correct establishment routine needed

Preparation before sowing

Depending on the paddock preparation needed for the species to be sown (full cultivation, direct drilling, spraying and drilling etc), it is vital to allow enough time to complete what is necessary. This could range from around one to four weeks out from sowing.

For example, it may be necessary to spray out the current forage with a knockdown herbicide (or herbicides) and then graze and/or cultivate. Farmers should ensure they strictly follow the label instructions of any herbicide or insecticide used. Also, it is important to adhere to grazing withholding intervals and plant-back periods if a pre-emergent spray is used.

It is advisable to consult an agronomist or chemical supplier early, especially if in doubt. Many farmers using their own spray equipment do not have a full understanding of the range of spray nozzle types and sizes for use in specific circumstances.

Beware of compromising nozzle types when tank-mixing herbicides with fungicides or insecticides. Many people don't realise there is sometimes a specific order of adding adjuvants, wetters and chemical etc that can greatly affect the effectiveness of the mix.

Adjuvants can either enhance product efficacy or improve the ease of application so it is vital to know which to use with specific herbicides.

Farmers should also be aware of the many factors that can constrain the effectiveness of herbicides, such as stress on plants caused by dry periods, waterlogging, poor nutrition, high or low temperatures, low light intensity and disease or insect attack. Good quality water should be used, preferably from a rainwater tank.

Sowing

Depending on the crop, pre-irrigating may be required; this is sometimes advisable if sowing maize. If pre-irrigating using effluent water, be aware that it may have a higher salt load, which may adversely affect seedling emergence. If weed competition during the crop establishment phase may be a problem, investigate the use of a suitable pre-emergent herbicide, but be careful.

Research and experience by agronomists and farmers recommend sowing seed with fertiliser, even if the soil contains the optimum level of nutrients. Roots of new seedlings can more easily access nutrients from a nearby fertiliser granule compared with nutrients from the soil. Ensure there is good soil-to-seed contact — in most instances, rolling behind the seeder or immediately afterwards is enough. Ensure the drill slot is not smeared if drilling into wet soil (see Figure 1), particularly in soils with high clay content that may 'cook' hard in heat, preventing root penetration.

Fertiliser

If unsure of the soil fertility, consider carrying out a soil test well ahead of any sowing date to allow test results to be returned and recommended fertilisers to be ordered and delivered. Apply the appropriate nutrients — usually superphosphate, MAP (mono-ammonium phosphate) or DAP (di-ammonium phosphate) — at the rates suggested. However, do not apply potassium — a salt — with the seed, nor at greater than about 20 kilograms of nitrogen (N) per hectare. Post-establishment, nitrogen is usually applied after the first grazing and at various times when moisture will not be limiting.

Effluent water is a good source of nitrogen and other nutrients as well as moisture itself, but to calculate the most accurate application rate, it is suggested to take a sample and assess the nutrient levels. If using effluent water and nitrogen together, calculate the applied amount of nitrogen from the effluent and reduce the nitrogen fertiliser rate accordingly. Another aspect of nitrogen fertiliser use is the timing: ensure the crop is not grazed for at least three weeks after application to allow full utilisation of the applied N but also to avoid the potential risk of nitrate poisoning in cows. ▶

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Figure 1: Seed in smeared slot.

Establishment phase

Once the crop is sown, this phase to first grazing is most critical. Hopefully, good pre-sowing preparation will have reduced the risk of weeds competing within the crop. However, if weeds have become a problem, investigate which post-emergent herbicide options are available that can selectively control specific weed species. Do so early as the most efficient and cheapest control occurs with weeds in the early stages of growth, but timing may also be dictated by the leaf stage of different species (weeds and sown species).

In some regions invertebrate pests such as various mites, aphids, lucerne flea and slugs can decimate new seedlings. Constantly monitor for pests, as many crop failures are due to these, unbeknown to the farmers until it is too late.

Do not solely rely on seed treatments to control these pests in the first few weeks, and if an insect pest problem is observed, act early. If a decision to act is made once half the crop has been damaged, the horse will have bolted and any spray now will treat only the remaining half of the crop, effectively doubling the cost. Generally, well-fertilised crops with no water or heat stress will often outgrow the pest problem, but it is worth monitoring anyway. For both pesticides and herbicides, swap between chemicals with different active ingredients to minimise the potential for pesticide resistance.

Irrigation

Before any sowing, whether using effluent and/or irrigation water, consider doing a water budget based on the most likely scenario for available irrigation water, effluent and expected rainfall. Ideally, effluent use is suggested across all regions to be applied in the summer period to reduce the potential for effluent leaving the property. Effluent or irrigation water should be applied in accordance with soil moisture and crop requirements.

If the summer is predicted to be drier than average, a smaller area of land can be devoted to a summer forage crop or a larger area with less pasture grown since a summer forage will be more efficient in water use, especially if it is a poorer-producing pasture.

If within an irrigation district, the economics of buying additional allocation would be a sensible outcome. A significant amount of water is not saved by stretching out irrigation intervals as once the crop is visibly wilting, some production has already been lost and the crop can take a few extra days to reach optimum growth rates once water has been applied.

First grazing

With some crops such as brassica and chicory, introduce the cows to the crop over several days to allow the microbes in each cow's rumen to adapt to the change in diet. For the first grazing, plants must be able to pass the 'twist and pull test' or 'pluck test' to discern that grazing will not result in plants being pulled out of the ground.

Generally, though, it is safe to use the same grazing concepts at the first grazing as would be applied at any other grazing event as grazing the particular summer forage crop at its recommended height and down to its recommended residual maximises plant persistence, quality and milk production. For example, millet's ideal range is to graze at about 25-30 centimetres, with a grazing residual of about 10cm for Japanese and Pearl millets but 15cm for Pennisetum millets.

If a large area of the farm is devoted to summer crops, consider sowing a variety of crops with a range of maturity dates so not all crops are ready or needing to be grazed at the same time.

Be aware that some crops can cause some animal health issues, such as nitrate poisoning and photosensitisation (rape scald) in brassicas, kale anaemia (red water) in bolted or flowering brassicas in spring, prussic acid poisoning in most but not all sorghums etc.

Most issues can be avoided by properly understanding issues around grazing management with any summer forage crop. Slow introduction, avoiding grazing stressed crops and not allowing hungry cows into crops will minimise or avoid most problems.

Supplementary feeding

Every summer forage crop has different nutritive characteristics and farmers may need to balance the grazing of the crop with extra supplementary feeding of grain concentrate or fodder. It is worth consulting a valued nutritionist if there are diet imbalances as these can lead to lower milk production.

Summary

- Do a water budget.
- Select a crop that will not impede the establishment of the next crop/pasture, or be aware of the impacts if this path is chosen.
- Prepare paddocks well to aid good establishment.
- A smaller area grown correctly is more beneficial than a larger area grown poorly.
- Effluent water used to grow crops is beneficial; avoid using in the germination period.
- Apply nutrients as determined by a soil test.
- Sow seed with some P and N.
- Continually monitor for pests and treat if necessary, before damage occurs.
- Graze optimally to increase persistence and quality.
- Balance the diet with a good use of supplements.

**Brendan Ley is a Victorian Department of Environment and Primary Industries (DEPI) dairy extension officer and Frank Mickan is a DEPI dairy specialist.*

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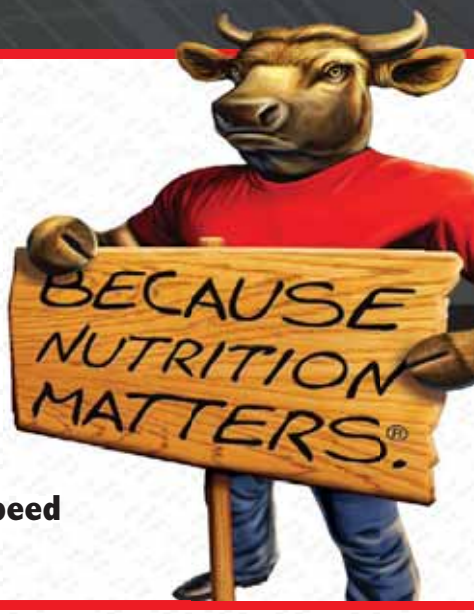

TWIN AUGER

5650

SAVE $12,000

NOW ONLY
$95,995 + GST
$105, 595 INC. GST

18.4 – 22.1m³ Capacity
Min. 115 HP at the PTO / 540 PTO Speed

5750

SAVE $12,000

NOW ONLY
$95,995 + GST
$105, 595 INC. GST

18.4 – 22.1m³ Capacity
Min. 115 HP at the PTO / 1000 PTO Speed

*Based on Jaylor recommended retail pricing 8/2014. Price valid until 30/9/2014. Conditions apply.

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NSW:	Bill Pocklington	0427 433 473

9410126

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	✔		SARDI
	10	SARDI Ten Series 2	✔	Heritage Seeds	P		SARDI
	10	SF Force 10	✔	Seed Force			Forage Genetics, USA
	9	Australis	✔	Seed Genetics International	✔		Seed Genetics International
	9	Blue Ace	✔	Seed Genetics International	✔		Seed Genetics International
	9	Cropper 9.5	✔	PGG Wrightson Seeds		✔	Forage Genetics, USA
	9	CUF 101		Many			
	9	Hallmark	✔	PGG Wrightson Seeds	✔		QLD DPI
	9	L91		Seed Distributors		✔	Pasture Genetics
	9	MultiFoli-8	✔	PGG Wrightson Seeds		✔	Forage Genetics, USA
	9	Multileaf ML99	✔	Seed Distributors		✔	Pasture Genetics
	9	Pegasis	✔	Heritage Seeds	✔		NSW DPI
	9	Sequel		Many			
	9	Sequel HR	✔	PGG Wrightson Seeds	✔		QLD DPI
	9	Siriver		Many			
	9	SuperCharge	✔	Seed Genetics International	✔		Seed Genetics International
	9	SuperNova	✔	Seed Genetics International	P		Seed Genetics International
	9	SuperSonic	✔	Seed Genetics International	✔		Seed Genetics International
	9	SuperStar	✔	Seed Genetics International	✔		Seed Genetics International
	9	Titan 9	✔	AusWest Seeds, Stephen Pasture Seeds			University of Queensland
	9	WL 925HQ	✔	PGG Wrightson Seeds		✔	Forage Genetics, USA
	8	Magna 801FQ	✔	Valley Seeds			Dairylands USA
Winter active	8	Magna 804	✔	Valley Seeds			Dairylands USA
	8	Silverado		Upper Murray Seeds			Ian Kaehne
	7	Flairdale	✔	Alfagreen	✔		Lehmann EE & MR
	7	Genesis II	P	Heritage Seeds	P		NSWDPI
	7	L70	P	Seed Distributors	P	✔	Pasture Genetics
	7	L71	P	Seed Distributors	P	✔	NSW DPI
	7	Q75	✔	Seed Distributors	✔		Pioneer, USA
	7	SARDI Seven series 2	✔	Heritage Seeds	P		SARDI
	7	SARDI Seven	✔	Heritage Seeds	✔		SARDI
	7	SF 714QL	✔	Seed Force			Forage Genetics, USA
	7	SF Force 7	✔	Seed Force			Calwest, USA
	7	Silverosa GT		Upper Murray Seeds			Ian Kaehne
	7	Titan 7	✔	AusWest Seeds, Stephen Pasture Seeds			University of Queensland
	7	Trifecta	✔	Many			
	7	UQL 1	✔	PGG Wrightson Seeds	✔		QLD DPI
	6	Aurora	✔	Many			
	6	Haymaster 7	✔	PGG Wrightson Seeds			Forage Genetics, USA
Semi dormant	6	Hunterfield	✔	Many			
	6	Icon	✔	Seed Genetics International	✔		Seed Genetics International
	6	SARDI-Grazer	✔	Heritage Seeds	P		SARDI
	6	Stamina® GT6	✔	PGG Wrightson Seeds		✔	Calwest, USA
Winter dormant	5	Hunter River		Many			
	5	L56		Seed Distributors		✔	Pioneer, USA
	5	SARDI Five	✔	Heritage Seeds	✔		SARDI
	5	Stamina 5(STM)	✔	PGG Wrightson Seeds	✔	✔	Calwest, USA
	5	Venus	✔	Heritage Seeds	✔		NSW DPI
	3	Q31		Seed Distributors		✔	Pasture Genetics
FORAGE BRASSICA							
Forage Rape		Ace		Agricom			Forage Innovations Ltd.
		EMX 1.6	✔	PGG Wrightson Seeds			Forage Innovations Ltd.
		Goliath (Swift Utility)	✔	PGG Wrightson Seeds		✔	Forage Innovations Ltd.
		Hobson	✔	Valley Seeds			Advanta

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
		Interval	✔	Heritage Seeds			Advanta
		Maxima Plus	✔	PGG Wrightson Seeds			Forage Innovations Ltd.
		SF Evergreen	✔	Seed Force			Joordens, NED
		SF Greenland	✔	Seed Force			Joordens, NED
		Stego	✔	Heritage Seeds			Joordens, NED
		Subzero		Seed Distributors		✔	Pasture Genetics
		Titan	✔	PGG Wrightson Seeds			Forage Innovations Ltd.
		Winfred	✔	Agricom			Joordens, NED
Kale		Caledonian		Heritage Seeds			SCRI
		Coleor	✔	Cropmark Seeds		✔	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		Seed Distributors		✔	Pasture Genetics
		Hunter		Agricom			Forage Innovations Ltd.
		Pasja	✔	PGG Wrightson Seeds			Van Dyke Semo, NED
		SF Pacer	✔	Seed Force		P	Vandyjke, NED
Swede		Aparima Gold		PGG Wrightson Seeds			Forage Innovations Ltd.
		Dominion		Agricom			Forage Innovations Ltd.
		Highlander	✔	PGG Wrightson Seeds			Forage Innovations Ltd.
		Invitation		Heritage Seeds			SCRI
		Major Plus	✔	PGG Wrightson Seeds			Forage Innovations Ltd.
		Winton	✔	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		✔	Eurograss Holland, NED
		New York		Agricom			Forage Innovations Ltd.
		Polybra	✔	Valley Seeds			Advanta
		Rival		Agricom			Forage Innovations Ltd.
		SF Envy	✔	Seed Force			Joordens, NED
		SF G2	✔	Seed Force			ILVO, Belgium
		SF Samson	✔	Seed Force			Joordens, NED
HERBS							
Chicory	Short term	Commander		Heritage Seeds			Suba & Unico, Italy
	Short term	Grouse	✔	Agricom			Grasslands Innovations Ltd
	Perennial	Balance		Seed Distributors		✔	Pasture Genetics
	Perennial	Chico		Cropmark Seeds		✔	Suba & Unico, Italy
	Perennial	Choice	✔	Agricom	✔		Grasslands Innovations Ltd
	Perennial	Lacerta	✔	Valley Seeds	✔		Fadisol
	Perennial	Puna	✔	PGG Wrightson Seeds			Grasslands Innovations Ltd
	Perennial	Puna II	✔	PGG Wrightson Seeds	✔		Grasslands Innovations Ltd
	Perennial	SF Punter		Seed Force		P	Suba & Unico, Italy
Plantain	Perennial	Ranger		Seed Distributors		✔	Pasture Genetics
	Perennial	SF Boston		Seed Force			
	Perennial	SF Endurance		Seed Force			
	Perennial	Tonic	✔	Agricom	✔		Grasslands Innovations Ltd

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 defintions 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.**
****PBR: Australian Plant Breeders Rights Granted ***TM Registered Trade Mark® Granted ✔ = Granted P = Pending**

SOUTH GIPPSLAND

Dairy Expo

$10 entry
Under 16s FREE

Wednesday 24th & Thursday 25th September 2014 from 9am-3.30pm

Korumburra Showgrounds, Cnr South Gippsland Hwy & Charles St Korumburra

Visit our Major Sponsor

DEVONDALE
MURRAY GOULBURN

Be sure to visit our major sponsor, Devondale Murray Goulburn, as well as the team from MG Trading at their hospitality area.

YDDP

Young Dairy Development Program

Wednesday 24th & Thursday 25th September at 1pm

Come along and watch East, West and South young farmers from Gippsland go head to head in a challenge that will involve flexibility, skill, practical knowledge and team work.

Don't miss out on a hilarious event!

Special Features

Wednesday 24th & Thursday 25th September

Proudly sponsored by Burra Foundation

BURRA FOODS AUSTRALIA

LADIES PAVILION

This pavilion promises to have something of interest for all the ladies.

KIDS ACTIVITY PAVILION

Plenty of fun for all the kids can be found in the Sanders Pavilion.

Matt Harms - ONFARM Consulting

11am Wednesday, 24th September

2013 Celebration or Hangover?

GOOD MEMORIES OR IS IT JUST A BLUR?

Panel members: Leo & Karen Argento (Wooreen), Neville & Sherrie Beveridge (Mt Eccles), Tim & Grit Cashin (Leongatha South) and Russell Mann (Rabobank)

2013/14 presented the Victorian dairy industry with the highest milk prices ever seen. For some it was a bonanza and cause for celebration, while others were suffering from a large hangover with the great milk price merely providing a hangover cure for the horrendous year in 2012/13. Come along to the dairy expo panel session to hear how some managed the 13/14 celebration and others used the year to remove the memory of a hangover they'd rather forget.

Sponsored by the South Gippsland Shire Council and Rabobank.

The Udder Truth!

WIN $3,000 CASH!

SOUTH EAST ORGANIC FERTILIZER

The Udder Truth! SHOWBAG

Thank you to the following exhibitors who are the Dairy Expo's proud sponsors of the *'The Udder Truth'* showbag initiative...

- Coopers Animal Health
- Cutting Edge Electrical
- DeLaval Pty Ltd
- Easy Dairy Automation Systems
- Gendore Tractors & Machinery Pty Ltd
- GippsDairy
- Maxum Animal Nutrition
- ProviCo
- Phibro Animal Health
- Rabobank
- Reid Stockfeeds
- Rural Finance
- Semex
- Vic Feeds (Chapman Grain Services)
- WOPA Australia

Visit our Gold Sponsors & Exhibitors

As always the Expo Gold Sponsors and Exhibitors promise to have plenty of exciting new products, services and innovations.

REID STOCKFEEDS
NOTMAN PASTURE SEEDS
DMS afimilk
Dairy Australia
gotafe
GippsDairy
Dairy Australia
Rabobank
ADF milking

Come and see the Latest Products & Services

Support those who support the industry!

Devondale Murray Goulburn & MG Trading

Devondale Murray Goulburn is Australia's largest dairy company and is a co-operative of Australian dairy farmers.

- Suppliers lounge with Devondale products.
- Meet the Devondale Murray Goulburn Field Services team.
- MG Trading stores advice and services on display.

Rabobank

- Rabobank is a major rural lender in Gippsland.
- Highly regarded and experienced rural manager team.
- The whole team will be available, so please call in for a chat.

Dairy Management Solutions

- Dairy Management Solutions offer a range of products and services to help you achieve cost efficient milk production and herd management resulting in higher profit margins.
- Come and talk to us at the Dairy Expo about our; Heat detection system, sort/weight gates and electronic cup removers.

Reid Stockfeeds

- Discuss market information, new season grain prices and expected trends.
- Find out about feed quality and security.
- Information and ideas on feeding efficiency.

GippsDairy & Dairy Australia

- Find out how your milk levy is invested.
- Dairy Australia and GippsDairy staff will mingle with local farmers at the Expo.
- Call in for a chat at site 67!

ADF Milking

- ADF Milking's clusters apply teat dip directly to the cows teats immediately when milking finishes.
- The cluster is then flushed to eliminate cross contamination between cows.
- Visit www.adfmilking.com or phone 1800 233 283 for information.

NCDEA GOTAFE

- NCDEA GOTAFE is the industry preferred trainer for primary producers.
- Visit our site and chat to the team about your training needs.
- NCDEA GOTAFE prides itself on; experienced and passionate trainers, best practice techniques, flexible delivery and innovative training solutions.

Notman Pasture Seeds

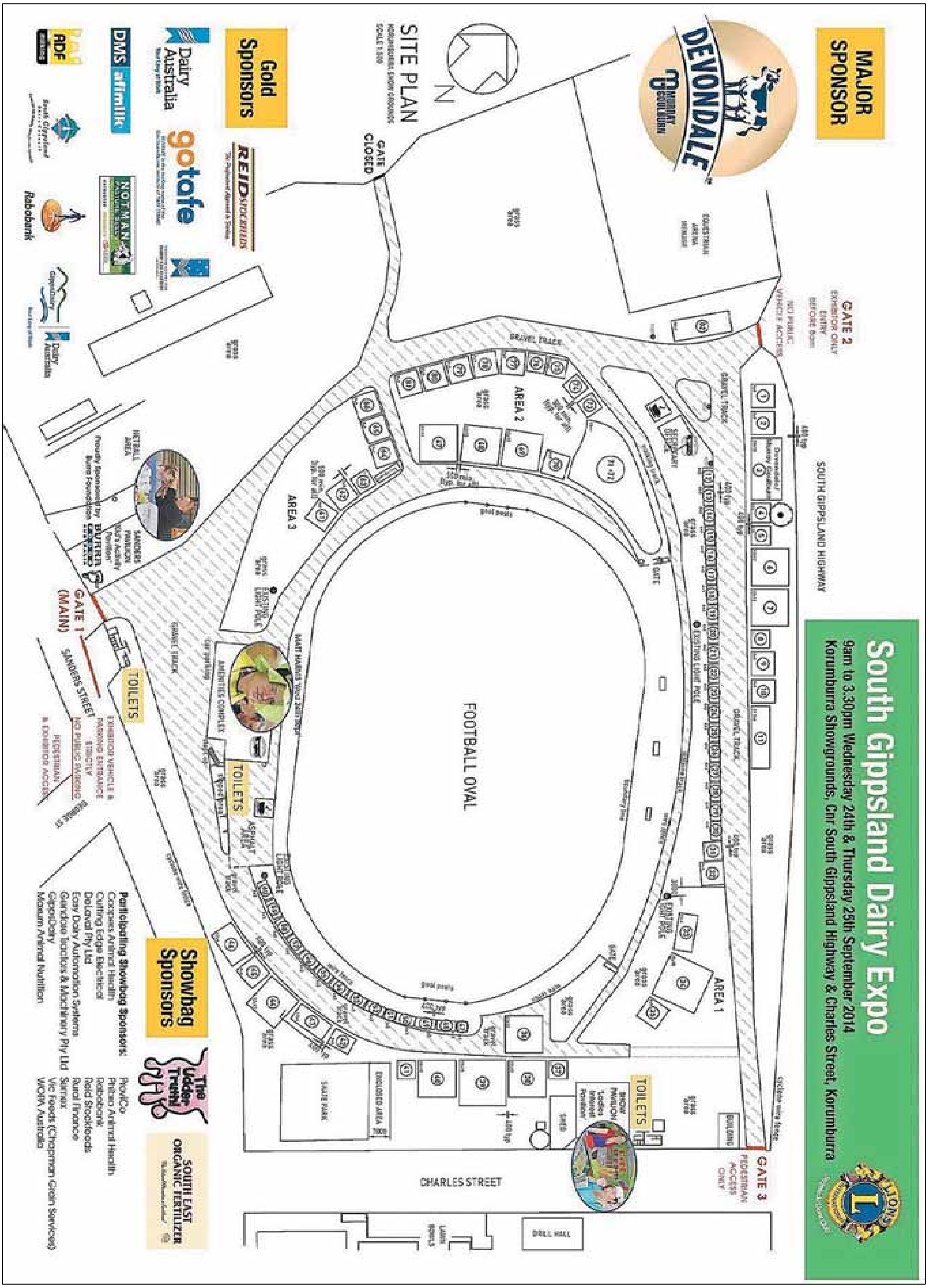
- Gippsland's independent seed company providing real farm value and know how.
- Come meet with Adam Fisher & Peter Notman to discuss topics such as yearly feed plans, new seed varieties, pasture trial results from replicated local trial sites throughout Gippsland plus Spring & Summer cropping option.
- Over 40 years of farming knowledge and seed industry experience, so join us for a coffee and a chat.

South Gippsland Shire Council

- Recognise that the dairy industry makes a significant contribution to the regional community.
- Council is committed to supporting the agricultural industry and its essential support businesses and services.
- Come along to the Matt Harms session -

2013 Celebration or Hangover?

GOOD MEMORIES OR IS IT JUST A BLUR?


South Gippsland Dairy Expo
9am to 3.30pm Wednesday 24th & Thursday 25th September 2014
Korumburra Showgrounds, Cnr South Gippsland Highway & Charles Street, Korumburra
MAJOR SPONSOR
DEVONDALE
Gold Sponsors
SITE PLAN
GATE CLOSED
SOUTH GIPPSLAND HIGHWAY
FOOTBALL OVAL
AREA 1
AREA 2
AREA 3
GATE 1 (MAIN)
GATE 2
GATE 3
TOILETS
SANDERS STREET
CHARLES STREET
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Pfizer Animal Health
Rabobank
Reid Stockfeeds
Rural Finance
Semex
Vic Feeds (Chapman Grain Services)
WOPA Australia

Sth Gippsland Dairy Expo celebrates 15 years

KEY POINTS

DAIRY EXPO

- ✔ What: South Gippsland Dairy Expo
- ✔ Where: Korumburra Showgrounds
- ✔ When: September 24-25

THE South Gippsland Dairy Expo, organised by the Strzelecki Lions Club, will take place on Wednesday, September 24, and Thursday, September 25, at the Korumburra Showgrounds, Korumburra, Victoria.

The South Gippsland Dairy Expo will be celebrating 15 years of providing the local dairying community with an event that showcases the latest in innovation, products and services available to the dairy industry.

In the past 14 years, the Strzelecki Lions Club has distributed more than $315,000 to the community from this event. This achievement would not have been possible without the involvement of loyal sponsors who have continued to support the expo and the community.

A new facet of the Dairy Expo this year will be the Udder Truth Showbag, supported by South East Organic Fertiliser, which will see one lucky farmer win $3000 in cash.

The participating showbags sponsors are Vic Feeds (Chapman Grain Services); DeLaval Pty Ltd; Easy Dairy Automation Systems; GippsDairy; Gendore Tractors and Machinery Pty Ltd; WOPA Australia; Rural Finance; Semex; Rabobank; Maxum Animal Nutrition; Reid Stockfeeds; Provi-Co; Phibro Animal Health; Coopers Animal Health; and Cutting Edge Electrical.

Visitors can find out how to win the prize at the expo's front gate.

The South Gippsland Dairy Expo panel session is always popular. Panel members at last year's event were Hans van Wees, Tinamba, Vic; Matt Harms, from Onfarm Consulting; Toby Leppin, Bena, Vic; Trent Crawford, Binginwarri, Vic, with his daughter Charlotte; Leongatha branch manager of Rabobank Australia Russell Mann; and Paul and Louise Sherar, Loch, Vic, with sons Zach and Blake. Mr Harms was dressed as a leprechaun while facilitating the session and gave the participants three wishes.

The Dairy Expo will hear from Matt Harms from Onfarm Consulting on the theme '2013 celebration or hangover? Good memories or is it just a blur?' Panel members will be made up of local dairyfarmers Leo and Karen Argento, Wooreen, Vic; Neville and Sherrie Beveridge, Mt Eccles, Vic; and Tim and Grit Cashin, Leongatha South, Vic, as well as Russell Mann, from Rabobank. The session will be held at 11am on Wednesday, September 24, and is supported by the South Gippsland Shire Council and Rabobank.

Major sponsor Devondale Murray Goulburn (MG) will have an extensive presence at the Dairy Expo and welcomes current supplier-shareholders and all other visitors to enjoy its hospitality. Members of MG's regional field services team will be on hand to discuss a variety of dairy-farm-related topics, including milk supply, sharefarming, income projections, milk quality and farm productivity.

The company's retail division, MG Trading, will also be available with expert agronomists on hand to provide advice and to showcase a range of new products available in-store. Refreshments will be available on the day, including samples of some of the ▶

The expo traditionally has a great range of dairy equipment on show. Milk Aware CEO Bradley Doak had a swingover herringbone operational system with Larsen Pneumatic Stalling on display last year.

◀ great-tasting and high-quality products from Devondale and Liddells.

Dairyfarmers should also book into the Devondale MG and Reid Stockfeed breakfast on the morning of Thursday, September 25. Bookings are essential. Phone MG on (03) 5662 9666 or Reid Stockfeeds on (03) 5633 2222.

The Young Dairy Development Program (YDDP) will be hosting a farmer challenge for East, West and South Gippsland young farmers. Watch them go head to head in a challenge that will involve flexibility, skill, practical knowledge and teamwork at 1pm on both days of the expo.

Once again there will be something for women, too, in the show pavilion.

The Rotary Club of Korumburra will be in charge of the Kids' Activity Centre in the Sanders Pavilion, making the expo a day out for the whole family. The Kids' Activity Centre is sponsored by the Burra Foundation, which was set up in 2013 and receives contributions from both Burra Foods and its customers.

As always, expo sponsors promise to have plenty of exciting new products, services and innovations on show. Expo-goers are encouraged to make time to call in and support the exhibitors who support the community. Gold sponsors and exhibitors include Devondale MG and MG Trading, Reid Stockfeeds, Rabobank, Notman Pasture Seeds, the National Centre for Dairy Education Australia/GOTAFE, GippsDairy, Dairy Australia, Dairy Management Solutions, ADF Milking and South Gippsland Shire Council.

The gate charge will be $10 per person with under-16s admitted free. The opening hours will be 9am-3.30pm daily. D

Contact: Deanne Kennedy, phone (03) 5659 4219 or email <deanne@jaydee.net.au>.

Full list of exhibitors

Machinery on show

THE latest farm machinery will be on show at the South Gippsland Dairy Expo. Among new releases this year will be hay balers from Case IH.

The company has unveiled a new generation of hay balers with the Australian release of the RB5 Series round baler. Redesigned for the toughest crops and conditions, the RB5 Series features a superior bale shape and density.

With modern best-in-class styling, the RB455 and RB465 offer advanced features compared with their RB-4 Series predecessors.

Case IH product manager for hay and harvest Geoff Rendell said the variable-chamber round balers were the result of three years' rigorous worldwide field testing.

The RB455 and RB465 produce bales of up to 1.5 metres and 1.8m diameter respectively.

Both models also feature a new dual-cylinder hydraulic density system.

EXHIBITOR	SITE
Farm machinery & equipment	
Lely Center Traf and Maffra (Traf Tractors & Machinery)	34
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Motorbike dealerships & power equipment	
Wonthaggi Motorcycles and Power Equipment	41
Marriotts Motorcycles and Power Equipment	66
Media	
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The Gippsland Farmer	Mobile
South Gippsland Sentinel Times	Mobile
The Australian Dairyfarmer	Mobile
The Great Southern Star	Mobile

EXHIBITOR	SITE
Media Marquee — provided by Lions Club	Expo Site
Milk companies	
Devondale Murray Goulburn & MG Trading	3
Organic Dairy Farmers of Australia	17
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Stephen Pasture Seeds	13
Graham's Seeds	79
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Mt Eliza Seeds, Seedlings & Plants	24
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Dumac Pumps	62
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Dairy-Tech Refrigeration/Packo Milk Tanks	9
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Belpard Australia Pty Ltd	57
Silos, sheds & shelters	
Solid State Igloo (Gippsland Rural)	19
Vic Engineering & Silos Pty Ltd	42
Bairnsdale Engineering	47
Weweld Steelworx/Bale Up Hayfeeders	81
Stockfeeds & supplies	
Irwin Stockfeeds	1
Brown Wigg	1a
Browns Stockfeed Pty Ltd	10
Ridley AgriProducts Pty Ltd	32
Vic Feeds (Chapman Grain Services)	46
Logan Contracting	49
CopRice Stockfeeds	63
Reid Stockfeeds Pty Ltd	68
Soils	
Soil Management Systems	59
Support groups	
Caffe Alfresco	Coffee
Department of Human Services	25
South Gippsland Shire Council Matt Harms	Amenities Room
Poowong Kindergarten	Catering
GippsDairy/Dairy Australia	67c

From China to South Gippsland

LEFT: The dairy at the new Chinese farm.

A COMPANY that will be exhibiting at the South Gippsland Dairy Expo has successfully installed its system on a 3000-cow dairy farm in China this year.

TianNing farm, a new dairy project in China's Ningxia province, is off to an impressive start, thanks to Afimilk technology.

The design was co-ordinated by Afimilk and equipped with Afimilk's milking system and herd management system for the farm that will house 6000 cows and 4000 heifers.

The results have been striking: presently, more than 3000 cows are in milk – their first lactation – and daily average production is 30 litres milk/cow. Yearly milk production is more than 9400 litres/cow.

The Afimilk milking system is working well, while AfiFarm software provides all information required for effective herd management: heat detection, scheduling veterinary visits, preventive health monitoring.

At the same time, TianNing's managers have attended a two-month course in Israel on advanced dairy farming.

Planned and organised by Afimilk, the course focused on AfiFarm herd management software, and subjects including management of large herds, large dairy farm organisation, milking practices, nutrition and fertility.

"The new dairy farm in China is rising rapidly with the help of Afimilk's system and the company's professional support," general manager of the TianNing Company Mr Feirui said.

Ningxia province, in north-central China, has a continental, semi-arid climate, suitable for dairy farming.

Conditions here are appropriate for growing good quality forage, corn silage and alfalfa.

The project's underwriter, Chongqing (TianNing) Agriculture Investment Co, is currently seeking to replicate this project in other Chinese provinces. D

See Dairy Management Solutions on site 70 at the expo for more information about AFimilk system.

Calves are moved outside at 1-2 weeks of age on the Brock property — with shelter and plenty of space.

Linda Hansen feeding calves on her farm at Flowerdale, Tas.

Raising healthy calves and heifers

By HEIDI BROUN*

KEY POINTS

HEALTHY CALVES

- ✔ Different approaches with similar principles
- ✔ Clean facilities vital
- ✔ Colostrum management important

RAISING health calves and heifers was the focus of a recent Tasmanian Institute of Agriculture (TIA) Dairy Centre Dairy Smart Ladies day. The day featured a calf-rearing panel discussion with Rachael Brock, Montana, Tas, MaryAnn Hortle, Moriarty, Tas, and Linda Hansen, Flowerdale, Tas.

The panel discussion was complemented by a talk by Jeanette Fisher of Heifermax with some advice on management of calves from weaning to calving.

Panel discussion

Each of the women involved in the panel discussion shared some information about their calf-rearing system and what they felt was critical for them to get right when raising calves.

Cleanliness of the calf-rearing facilities has been a focus for Rachael and Nigel Brock in recent years. They have a calving shed with a cement area built at the front so calves have to step off their bedding to feed. This has reduced the soiling of the bedding material and helped maintain cleanliness.

Once the calves are one to two weeks old and feeding well, they are moved to an outside rearing facility with a shelter shed and about one hectare of pasture. Calves are kept in groups of 30 and fed on a calfateria.

Being outside and having access to a relatively large area per calf helps to maintain a clean environment for the calves.

Since moving from their system of rearing the calves in sheds to rearing outside, and with the improvements made to the shed, Mrs Brock reported they had achieved significant improvements in calf health and growth.

"It is about giving our calves the best start possible, good-quality colostrum, having hygienic conditions, knowing the calves, keeping an eye on them and treating them straight away when needed," she said.

MaryAnn Hortle, who has been farming with her husband, Ian, for 37 years, spoke about the value of testing the quality of colostrum using a refractometer.

Refractometers are a cheap (cost $30-$60) and accurate tool to assess the quality of colostrum and determine whether it will supply sufficient antibodies to newborn calves.

"Not all colostrum is the same so we use a device to check," she said. "The better job you do with your calves, the more you reap the benefits. They are paying us through longevity and milk production."

Linda and Wayne Hansen raise their calves in a 30-metre-by-9m open-front shed. They have found that straw laid in compacted biscuits is an effective bedding for their calves.

The Hansens top the straw up with another layer of biscuits as required through the calving period while calves are in the shed. The shed is then cleaned out at the end of calving. They have found this to be effective in minimising disease in the calf shed.

Mrs Hansen also spoke about the importance of consistent practices when raising healthy calves. "Consistency is the key to healthy calves — the same person doing the same thing every day," she said.

From weaning to calving

While getting the calves off to a good start is critical, it doesn't stop there.

Jeanette Fisher focused on the management of the weaning process and heifer nutrition to ensure that heifers achieved good production and longevity in the herd.

"It's about hitting the ground running," she said. "If heifers haven't reached 550 kilograms (or 85% of mature weight) with a condition score of 5-6 at calving, they are going to spend the first half of their lactation trying to catch up."

In Australia, 30-48% of heifers do not make their second lactation due to dying before weaning, failing to get in calf, not producing milk effectively or failing to get back in calf after their first lactation.

Alongside striving for the obvious financial gains, Ms Fisher said farmers had an ethical obligation to look at their management practices to ensure their heifers received the best possible start to life and consequently ensured their long-term productivity in the herd.

"We need to look at management to make sure each year we are doing something a bit better," she said.

"The genetic gain that can be delivered (through breeding) can be negated by poor rearing practices.

"If you limit growth, they can never get back to their potential. Compensatory growth is never done. Effective management can give four to eight times more milk than genetic selection."

Ms Fisher said that to maximise produc-

Jeanette Fisher explains why good heifer rearing is so important.

Linda Hansen, MaryAnn Hortle and Rachael Brock spoke about their calf-rearing systems.

tion potential, calves needed high-quality colostrum, sufficient milk to double their birthweight by eight weeks, plenty of water and concentrates to ensure adequate rumen development.

The post-weaning transition should also be as smooth as possible to avoid future drops in growth and production.

Ms Fisher suggested removing only milk from their diet and keeping other feeding routines the same.

"It is important to make sure calves are consuming 1kg of concentrate a day before milk can be removed from their diet," she said. "Post weaning, the calves should be checked daily and concentrate feeding levels should remain high until at least six months or 150kg."

She recommended calves and heifers be weighed regularly to ensure they were reaching their target weights.

This includes weighing calves at birth and again at two, four and eight weeks. Heifers should then be weighed every month until they calve.

"Ensuring solid growth rates mean an increase in their lifetime milk production and greater retention in the herd as well as higher conception rates, lower vet costs and overall happier staff," she said.

"Feeding your calves and heifers well all the way through is very important."

For more information on calf rearing and heifer management, go to the Dairy Australia website <www.dairyaustralia.com.au>.

**Heidi Broun is with the TIA Dairy Centre.*

Article courtesy of *Tassie Dairy News*

A matter of degrees – comfort matters

Dr SARAH CHAPLIN*

KEY POINTS

COLD STRESS

- ✔ Provide warm, dry bedding for young calves
- ✔ Provide extra warmth for sick calves
- ✔ Watch calves' behaviour such as shivering

Watch the behaviour of young calves to determine if they are suffering from cold stress.

LIKE humans, cattle are warm-blooded animals and can keep their body temperature constant even when the environmental temperature varies. Within a certain temperature range they can do this without expending extra energy but at temperatures that are too low or too high, cattle will need to use energy to keep warm (cold stress) or to cool down (heat stress).

Very young calves are not as good as adult cattle at regulating their body temperature within this range. They have a larger surface area relative to their bodyweight and they produce less body heat that could keep them warm so they are less tolerant of low temperatures.

Newborn calves cope with relatively low temperatures by producing body heat through shivering, burning the brown fat they are born with and using the energy they get from colostrum. Very young calves are the most susceptible to cold stress but their ability to regulate their body temperature improves over the first three weeks of life.

Thermal comfort is not defined by a set range of temperatures but is affected by lots of different factors including air temperature (at calf level), wind or draughts, sunlight, the calf's body insulation, hair depth and bedding, and the posture of the calf. The temperature at which cold stress starts depends very much on bedding surface, whether the coat is wet or dry, how well fed the calf is and the age of the calf.

For example, while a newborn calf will start shivering below 13 degrees Celsius, a dry, healthy, well-fed month-old calf can tolerate temperatures down to 0°C. However, a poorly fed, young calf less than three weeks old with a wet coat and subjected to draughts will start shivering at 19°C. In fact, young calves start to shiver at 8°C when they are exposed to draughts, even if their coat is dry and they are well fed. Sick calves are less able to regulate their temperature and therefore need special care.

When calves lie on wet surfaces (such as damp bedding) they lose more heat and are less able to tolerate low temperatures. Calves lie down for 70-80% of the day and lying behaviour can tell us a lot about how comfortable calves are feeling. Calves in very cold conditions will have their legs tucked underneath them and their head tucked into their flank to reduce heat loss. If the bedding surface is not comfortable — for example, if it is too wet — they will lie down less.

Now consider this: under the same environmental conditions, a six-day-old calf that is standing will start shivering at 17°C compared with 13.5°C for the same calf lying down. So if the bedding is damp and the calf lies down less, it is less able to tolerate cold temperatures. The calf will use more energy from its feed to keep warm than a calf on deep dry bedding.

Several research trials (but not all) have shown that when calves lie down for longer, their growth rates are improved. This may be because the reduced activity allows more energy to be used for growth.

Also, sleep is linked with growth hormone production so more rest may result in better-quality sleep that leads to improved growth hormone secretion and better growth. Remembering also that cold-stressed calves will use energy to keep warm, these are three good reasons to provide warm, dry bedding for young calves to achieve better growth rates.

Which is the best bedding surface for young calves? A variety of bedding types has been investigated. Several studies have shown that calves prefer dry bedding and will avoid bare concrete if they have a choice. Long straw is the warmest bedding surface for calves, followed by rice hulls and wood shavings. Sand does not provide enough thermal insulation where calves need to be kept warm but may be suitable in hotter conditions. Interestingly, though, sand bedding has been associated with more scouring than deep straw bedding.

Whichever bedding type is chosen, in cold conditions — less than 10°C — calves should be able to nestle deeply into the bedding so that their legs are not visible. In summary, susceptibility to cold stress is increased by draughts, damp or uncomfortable bedding.

Sick, poorly fed or very young calves are also more susceptible. Therefore it is important to provide extra warmth for sick calves (coats or heat lamps) and make sure newborn calves get sufficient colostrum.

A calf rearer should check the bedding surface is dry and comfortable and there are no draughts by dropping to their knees and staying down at calf height. If that old sports injury means their knees are not up to it, watch the calves' behaviour. They will soon show if they are not warm and comfortable enough. D

Contact: Dairy Australia, website <www.dairyaustralia.com.au/healthy-calves>, or Dr Sarah Chaplin, mobile 0439 275 896, email <sarah.chaplin@depi.vic.gov.au>.

**Dr Sarah Chaplin is a development specialist in animal performance with the Victorian Department of Environment and Primary Industries.*

Managing calf scours

By DR JEFF CAVE*

KEY POINTS

CALF SCOURS

- ✔ Various contributing factors
- ✔ Highly infectious
- ✔ Hygiene important

CALVES are the future of the herd so keeping them in good health is essential. Overall, calf scours is the most significant health risk in dairy calves.

There is usually no single cause of calf scours; rather, it arises from a combination of effects associated with the calf's management, diet, environment and exposure to different germs.

The germs involved include certain types of bacteria, viruses and protozoa. While the germ's actions vary, their effects are consistent: a loss of fluid and electrolytes associated with diarrhoea leading to dehydration, weakness and in some cases the death of the calf.

To successfully treat a scouring calf, supportive therapy is needed to counteract the effects of diarrhoea. The most important aspect of supportive therapy is to give an adequate quantity of fluids and electrolytes to replace what is lost in the diarrhoea.

The use of antibiotics may be appropriate but only under veterinary advice. A key to the success of treatment is to start it promptly.

The affected calf should also be isolated to prevent the infection spreading to healthy calves. The pen in which the calf was housed will now be contaminated and any calves that were housed with the infected calf may have contracted the infection. Therefore the pen should be spelled and mixing other calves with the calves that are potentially infected should be avoided.

Prevention is better than cure, and the most effective protection against the germs that cause calf scours comes in colostrum. Colostrum helps give the newborn calf immunity against the various diseases that are present in the environment.

In addition, good hygiene will reduce exposure to the germs that cause calf scours.

Factors to avoid include:

- the use of the same calf rearing area for an extended period;
- housing young calves with older calves;
- overcrowding;

To help keep young calves free from scours, it is advisable to avoid overcrowding their pens.

- the use of unclean buckets, troughs and other feeding utensils; and
- the introduction of calves from unknown sources.

To avoid stress due to adverse environmental conditions, calves need a warm, dry, draught-free environment. Calves also need consistent management to avoid stress. D

Contact: local veterinarian or Department of Environment and Primary Industries (DEPI) veterinary or animal health officer.

**Dr Jeff Cave is a district veterinary officer with DEPI.*

Get calf-rearing facilities ready

By BRENDAN LEY*

KEY POINTS

FACILITIES

- ✔ Multiple system available
- ✔ Ensure set up right before calving
- ✔ Review operational practices

Calves need to be raised in a clean and comfortable environment.

BEFORE calving starts is the ideal time to start thinking about updating calf-rearing facilities. The last thing any farmer needs is to lose sleep over sick or dying calves in the middle of the calving season, when both time and energy are at limited supplies.

There are multiple systems available for raising healthy heifer calves, and many have proven successful.

Some farmers house calves in a purpose-built shed (or converted hayshed) until weaning. Others prefer to house calves for their first week of life before raising them in semi-sheltered paddock systems.

The use of individual calf hutches is another alternative with reasonable success.

Regardless of whichever system is chosen, calves need to be raised in a clean and comfortable environment.

Five general concepts that should be considered with the design of a calf-rearing system include:

• **Space:** Enough space is required for each calf this season, taking into consideration future potential growth in herd size. Allowance for shelter from wind, rain and sun effects needs consideration.

Accessibility of facilities to handle calves and ease of cleaning is important, particularly in regard to sick calves and whether there will be a suitable quarantine area or isolation pen.

• **Orientation, ventilation and drainage:** Ample ventilation and air circulation in the shelter or shed and the ability to minimise draughts (especially from ground level) is important.

Satisfactory drainage requires the calf-raising area to be isolated from potential dairy runoff. Shelter areas in particular need to be located so that waste drains away unassisted or can be easily collected and removed.

• **Bedding:** The bedding materials of the shed or shelter areas should have good insulation abilities and provide general comfort. Risks of calves ingesting pathogens from chewing bedding need to be kept to a minimum.

• **Feeding:** Sufficient space allowance is needed for all calves to have adequate access to feeders, especially milk feeding systems.

These need to be located far enough away to ensure minimal contamination of the bedding area.

• **Cleaning:** The focus of cleaning should be around the ability of hard surfaces in pens to be regularly cleaned and bedding to be easily replaced.

When problems arise with any calf-rearing system, sometimes the design of the system can be the cause of the issue.

If the above design concepts have been appropriately considered, then reviewing operational practices is the next step.

Ideally, to be able to put best management practices in place, any problems that arose in the previous calving period should be identified and fixed well before the next calving period begins.

The following is a suggested list of elements regarding calf-rearing facilities and procedures that can be checked off against and added to suit the individual system:

- general repairs and maintenance completed;
- breaks or wearing of parts of shelters, walls, fences, gates and feeding equipment repaired and or replaced;
- drainage points operational and unblocked;
- bedding cleaned/new and area sterilised;
- good ventilation present and drafts minimised;
- feeding system sterilised and clean;
- milk feeding equipment sterilised and in good working order and hay and concentrate feeding equipment working;
- animal health equipment such as ear-tag applicators, needles and syringes, thermometer and disbudding equipment clean and or working;
- adequate supply of general suitable animal health products on hand, including broad-spectrum antibiotics, electrolytes, anti-diarrhoeal products, navel cord disinfectants, needles and syringes;
- disinfectants such as bleach, iodine and lime and batteries (if required) on hand; and
- personal protective supplies such as waterproof clothing and disposable gloves close by.

A calf-rearing system that takes into consideration the above design and operating concepts will greatly reduce the risk of having sick and dying calves.

Contact: Dairy Australia has an online manual called *Rearing Healthy Calves* that provides good practical advice. For the online manual and more information in general around raising calves go to <http://www.dairyaustralia.com.au/Animal-management/Animal-welfare/Calf-welfare.aspx>.

*Brendan Ley is with the Department of Environment and Primary Industries, Tatura, Vic.

Article courtesy of The Dairy Bulletin

Batch calving makes rearing easier

By MICHAEL PORTEUS

AKYOGLE, New South Wales, farm has found that twice-a-year batch calving has advantages including increasing production to meet higher autumn milk prices.

Subtropical Dairies board member David Binney built a special 200-head calf shed to manage calving of his 340 milkers in batches in February and September.

Mr Binney said this protected young calves from weather extremes, enabled better use of spring pastures and allowed the farm to have two three-month breaks from calf-raising each year.

The batch calving also helped group other farming tasks, including mating and bringing cows into the milking herd.

Most dairy farms in northern NSW calve year-round. But Mr Binney said he used the opportunity after he set up his own farm 13 years ago to reconsider some traditions. He designed the calf shed and built a 350-cow feedpad and 1500-tonne silage bunker.

The farm uses artificial and natural insemination to calve in two six-week periods starting in late summer and early spring. Each batch produces up to 80 heifers. These are kept in the controlled environment in the calf shed for up to 12 weeks, during which time they feed ad-lib on pellets.

KEY POINTS

BATCH CALVING

- ✔ Herd calves in February and September
- ✔ Raise 200 calves twice a year
- ✔ Waves of replacement heifers ready

Mr Binney is a former director of Norco. He farms 280 hectares on the banks of the Richmond River just north of Kyogle, about 100 kilometres west of Byron Bay. The area averages 1270 millimetres of rain a year and has volcanic-derived black alluvial soils. His herd is about 60% Jersey, 30% Holstein and 10% crossbred.

"We built the calf shed in 2009 and haven't looked back since," Mr Binney said. The farm last year produced 130,000 kilograms of milk solids from about 1.6 million litres of milk. It also exported 90 dairy heifers to China and Russia.

Mr Binney is a third-generation farmer who grew up on a property he later managed just south of Lismore. His wife Sandra is from the fourth generation of the Hewitt family of Jersey breeders at Bentley, west of Lismore. The couple met at Richmond Young Farmer events. They now have four young children, including a set of twins. Mrs Binney is a partner in a Kyogle law firm but still manages the calf-raising.

Mr Binney said he did many hours of internet research before designing a shed 30 metres long by 16m wide. "The ends are closed and the sides are at a 45-degree angle," he said. "They have a foot gap at the top to allow air to rise and exit. And it's open by a metre at the bottom to create really good airflow. Everybody who visits ▶

The Binney children Jack, 9, Thomas and Lauren, both 5, and Ellie, 7, with calves released onto pasture after 12 weeks in the farm's calf shed.

Sandra and David Binney with their children Ellii, 7, Jack, 9, and five-year-old twins Thomas and Lauren.

◀the shed says how nice the air is to breathe while the calves are in there."

The batch calving means the shed is only used for six months of the year.

"After every batch, the shed is pulled down," Mr Binney said. "All the internal structure is removable. We thoroughly clean the shed and bring in all new sand and woodchips to rebuild the flooring and then put it back together.

"We do things just that little bit differently and we think it works really well here. Not only do we make a lot of milk when the price is at its highest but the second batch also calves when we have our most feed on the ground." He said benchmarking with other local farmers showed his farm had low average feed costs.

"It's a fully controlled shed," Mr Binney said. "We don't want to burden the calves with any excess challenges like worms or anything that outside conditions will bring them. Before they leave the shed, they get vaccinated and drenched." Jerseys left the shed when their weight reached 80kg and Holsteins at 110kg, he said.

"This might sound silly, but I don't like rearing calves," Mr Binney said. "I don't like doing the job every day — that was one of the main drivers. If you are going to feed one calf, you may as well feed a hundred. That's why we designed the shed to accommodate up to 200 calves. We can feed a lot of calves quickly and it just makes the job easier.

"We have six months a year off from feeding calves. The other six months of the year are quite intensive. When we are feeding calves, we are doing it, and when we are not, we are having a break. We like it that way. Sandra likes it that way.

"You can really focus on getting the calves all up and together. And all the calves are all at the same stage when you are mating.

"You don't have a sprinkling of heifers coming into the herd over the year. You can mate one group and bring that entire group into the herd. Under our system, you can actually focus on all the jobs at once."

Mr Binney said Holsteins were easier to rear than Jerseys. "Holsteins are born big calves and their growth rates are far superior," he said. "Everything about a Holstein calf is just easier and quicker. Jerseys are very pedantic calves. The Holsteins generally meet our target growth rate in about nine weeks and the Jerseys take a full 12 weeks."

Mr Binney said the farm had found that the February calves just did a little bit better than those from the September batch. "Maybe because it's getting cooler, they tend to put on more weight in that period than the spring-born calves do," he said. He estimated that the farm now lost only 1% of its calves.

Mr Binney said the facilities would also allow him to raise beef calves in the two three-month windows when they were not used by dairy heifers.

"I expect that the beef market at a point in time will change from its current doldrums," he said.

"I run a business — the outcome for us is to have a profitable and sustainable business. "We have infrastructure that allows us to chop and change for short periods of time to follow the markets and follow the money.

"And that's exactly what we'll do."

Making the most of colostrum

By SARAH CHAPLIN*

KEY POINTS

COLOSTRUM

- ✔ Ensure adequate quantity within 6 hours
- ✔ Use good quality colostrum
- ✔ Use a management plan

EVERYBODY knows calves need to receive adequate quantities of good-quality colostrum soon after birth.

But what exactly does this mean and how can it be achieved on-farm?

Adequate quantities

The amount of colostrum a calf needs depends on the size of the calf, the quality of the colostrum and how much time the farmer has to get it into the calf.

Assuming that calves get their first drink within six hours of birth (which means collecting calves twice daily), Table 1 on the next page shows how much colostrum quality and calf size influence the amount of colostrum that needs to be fed in order for the calves to receive sufficient antibodies.

In practice, only the volumes for high-quality colostrum are likely to be achievable.

Quality

Good-quality colostrum has more than 50 grams per litre of the antibody Immunoglobulin G (IgG).

There are so many factors that affect colostrum quality that the only certain way to know the quality of colostrum is to test it.

Good-quality colostrum is also clean colostrum so it is important to make sure it is not contaminated with cow manure and always use clean buckets and feeding equipment.

Soon after birth

The calf's ability to absorb antibodies through its gut wall drops off rapidly after birth. Ideally a calf should get its first meal in the first six hours after birth.

After 24 hours there is very little, if any, absorption of antibodies.

Colostrum management plan

To make all of these above elements work in practice, a colostrum management plan needs to consider the following three elements:

- Testing: Although colostrum can be visually assessed on the basis that thicker colostrum is sometimes better quality, this is not always true and it is far better to use a colostrometer or a Brix refractometer to measure the quality of colostrum.

The colostrometer is readily available but easily broken and needs larger quantities of colostrum (a jug or a bucket) to work.

The Brix refractometer is cheap and robust and works with just a few drops at a time so a cow could be tested before collecting its colostrum. ▶

BETTER CALF REARING

◀ Testing for quality gives more control over colostrum feeding.

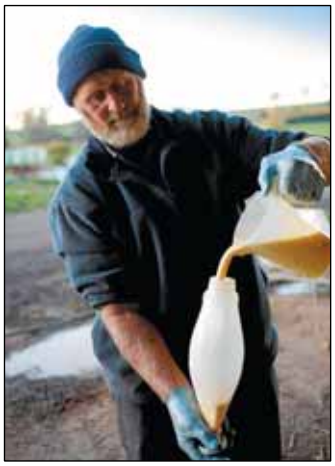
If the calf rearer knows all their colostrum is only medium-quality, they can plan to feed larger quantities.

Alternatively, they could choose to store only high-quality colostrum.

• Storage: Room temperature — when colostrum is left standing at room temperature, the quality will start to deteriorate, so it needs to be used the same day.

Fridge — colostrum that is stored at 5°C in the refrigerator will last three to four days.

Freezer — frozen colostrum can be stored for up to 12 months without deteriorating.



The amount of colostrum a calf needs depends on the size of the calf, the quality of the colostrum and how much time the farmer has to get it into the calf.

Don't defrost colostrum with boiling water as this damages the antibodies.

Instead, use warm water (less than 60°C) and thaw it slowly. This requires planning ahead. If the rearer knows their heifers don't produce good-quality colostrum and they calve before the mature cows, freeze some at the end of each calving season to have colostrum on hand to supplement the heifers' calves.

Although two-litre plastic milk containers are a convenient size and pack easily into a fridge or freezer, it may help to store colostrum for freezing in sealed freezer bags on flat trays. This way it will defrost more quickly.

When storing colostrum make sure each container is clearly marked with the date and the colostrum quality. Avoid pooling colostrum of mixed quality as this dilutes the good stuff.

• Feeding: Work out a system for bringing in calves and feeding colostrum.

If new calves are collected only once daily there is a risk that many will not get a drink in their first 12 hours.

If there are limited supplies of high-quality colostrum prioritise so it is given to calves with the greatest need.

Medium- or poor-quality colostrum is just not up to the job as it will be very difficult to get five litres of colostrum into a 30-kilogram calf within six hours of birth.

In practice this means aiming to feed four litres of high-quality colostrum to calves as soon as possible unless they are very large or very small. D

Contact: See Dairy Australia manual *Rearing Healthy Calves* or visit the website <www.dairyaustralia.com.au> (search for "colostrum") or contact Sarah Chaplin, phone (03) 5833 5273 or email <sarah.chaplin@depi.vic.gov.au>.

**Dr Sarah Chaplin is a development specialist in animal performance with the Victorian Department of Environment and Primary Industries.*

Article courtesy of the Dairy Bulletin

Table 1: The volume of colostrum needed for calves of different sizes, depending on colostrum quality.

	Colostrum quality (grams per litre)		
Calf size	**High (50g/L)**	**Medium (40g/L)**	**Poor (30g/L)**
Small (30kg)	2.7L	5.0 litres	6.7L
Large (40kg)	3.6L	6.7L	9.0L
50kg	4.5L	8.4L	11.2L

September 14-16: **Royal Melbourne Dairy Show**
Melbourne, Vic — Victoria's supreme show
Contact: Phone (03) 9281 7416 , fax (03) 9281 7592, website <www.rasv.com.au/dairy>

September 16: **Queensland Dairyfarmers' Organisation mini-conference and AGM**
Toowoomba, Qld — Queensland industry premier event
Contact: Kylie Dennis, phone (07) 3236 2955, email <kylie@dairypage.com.au>

September 24-25: **South Gippsland Dairy Expo**
Korumburra, Vic — Featuring seminars, activities and exhibits for dairyfarmers.
Contact: Phone (03) 5659 4219, email <jaydeeevents@dcsi.net.au>, website <www.dairyexpo.org.au>

October 7-9: **Elmore and District Machinery Field Days**
Elmore, Vic — General farming field days for northern Victoria
Contact: Phone (03) 5432 6176, email <info@elmorefielddays.com.au>, website <www.elmorefielddays.com.au>

October 22-24 **New Generation Conference**
Coffs Harbour, NSW — Focus on sustainability in dairying
Contact: Traci Gordon, phone (02) 6653 5614, email traci@dairyinfo.biz

November 19: **Queensland Dairyfarmers' Organisation mini-conference and AGM**
Gympie, Qld — Queensland industry premier event
Contact: Kylie Dennis, phone (07) 3236 2955, email <kylie@dairypage.com.au>

November 28: **Dairy Australia's 2014 annual general meeting**
Melbourne, Vic: — The AGM for Australia's peak dairy organisation
Contact: Dairy Australia, phone (03) 9694 3777, website <www.dairyaustralia.com.au>

Diary dates **To have dates for a major event included in the diary, send information to Carlene and Alastair Dowie. Phone/fax (03) 5464 1542, email <carlene.dowie@fairfaxmedia.com.au>.**

Volatility – here we go again

By KERRY RYAN*

think again!

THE recently announced reductions in milk prices for New Zealand dairy operations are a stark reminder of volatility being a constant companion for modern farming. As market corrections kick in they also highlight the importance of effective planning and budgeting systems. Timely and accurate monitoring and forecasting are fundamental to identifying how to get cost structures right to protect profits and sustainability.

Recent positive returns have meant some businesses have taken their focus off this process as they have allowed boom times to mask fundamental weaknesses in capital and cost structures. Now is the time to reinstate disciplines and get clarity around business outlook.

Changes like this are undoubtedly frustrating but their silver lining is the opportunity to revisit strategy and farm policies. Greater urgency around time and cost efficiency will create an environment in which improvements can be made.

The priority must be to ensure that when the next upturn comes the business is in the best possible shape to capitalise on it.

So what are the keys to achieving this?

The first step is to recognise that effective forecasting is as much fundamental to farmer well-being as it is a contributor to sound business decisions. This is likely to be something on which many still have to work.

Industry comment for New Zealand farming suggests that there may still be up to 80% of farmers who do not have in-house budgeting in place. I find this a surprising figure and one that I believe needs to change quickly.

Effective budgeting systems ensure more effective strategy selection and increase the confidence of business owners. They provide a roadmap against which change can be evaluated so when volatility occurs there is a more measured response. Their greatest benefit is that they ensure decisions are made on facts rather than fiction.

I've seen too many situations in which farmers have become stressed by uncertainty and their decision-making has become less effective because it is based on sentiment driven by imagination rather than calculation. Confirming the impact of price changes creates greater certainty about how big the challenge will be in reality. While this is left undefined there is real potential for knee-jerk reactions.

The NZ agribusiness sector is seeing considerable growth in technologies to support on-farm financial monitoring and forecasting. New options are emerging to better link information required for financial accounts with forecasting and stock-recording systems. Existing technology providers are responding with positive improvements to their programs by developing even more farmer-friendly budgeting and analytical systems.

When these advances operate alongside credible industry benchmarking systems, the combination of internal and external evaluation of the business provides real confidence.

Given these developments there is no excuse for lack of commitment to forecasting. Highly automated and time-effective systems are available for everything from "entry-level" cashbook recording and forecasting through to quite sophisticated systems that give in-depth analysis of farming policies, development options and assessment of restructuring opportunities.

Such systems also enable proactive management of another key cost area: tax management. The strong profits achieved from record milk prices in the past 12 months contrast with modest returns likely to be generated if current milk price forecasts come to fruition. With timely accounting advice and effective forecasting there will be real payback from proactive tax management.

Driving profit requires businesses to again focus on time-proven techniques for challenging times. The priority must be to cut fat rather than muscle. It's important to protect farming infrastructure and resources while capitalising on reserves that may have been achieved from recent fertiliser policies, spending on maintenance and infrastructure.

If this is supported by a proactive approach to protecting morale and keeping people focused on learning from these challenges, this environment can still deliver job satisfaction and ensure momentum to capitalise on the inevitable upturn. D

**Kerry Ryan is a New Zealand-based agribusiness consultant available for face-to-face or online for advice and ideas. Contact him at <www.kerryryan.co.nz>.*

Bovine viral diarrhoea – the disease

By DR SHERRI JAQUES*

WHAT are BVD and pestivirus, and who are these PIs?

Bovine viral diarrhoea (BDV) is a common and widespread pestivirus infection in cattle. It can have a devastating effect on reproduction and health within a herd and can be a difficult disease to understand, diagnose and manage.

BVD decreases reproductive performance, leading to lowered conception and increased abortions and stillbirths. It also has an immune suppressive action that increases the illnesses seen in the herd (particularly mastitis and respiratory disease). Immune suppression affects young claves in particular and will make any other calf illnesses, scours, illthrift and respiratory disease worse in that individual or affected group. Infected animals are a source of infection, shedding (or excreting) the virus in all body fluids: saliva, nasal discharge, urine, tears, semen and faeces.

What happens following infection depends on the age at which infection occurs. Cattle that are infected after their birth will have a few days of diarrhoea, often not requiring treatment in adults.

They will mount an immune response over the next 10 to 14 days and then become immune. They will still show immune suppression with increased levels of other disease. Young calves (unless they are a PI — see below) also mount an immune response and may be protected by colostral antibodies for the first two to four months, depending on colostrum quality and quantity, but will also suffer from depressed immune systems.

The most important period of BVD infection occurs in the unborn calf and depends on at what stage of pregnancy/development that infection occurs:

- If the cow is in its last trimester, the calf's immune system is developed and there appears to be no effect on the calf once born, although some studies have shown an increase in post-natal infections in these calves.
- If the foetus is in the second trimester, then abortions, deformities or non-viable calves usually result. The deformities are usually of the brain, nervous system and eyes.
- If infection occurs between mating and about day 30, abortion or failure to conceive occurs. This will be seen as increased return to service, both of a normal cycle length and late returns.
- If the foetus is at between 30 and 125 days, the virus integrates itself into the foetus before the immune system has developed. The virus is then seen by the developing immune system as part of the foetus or self. This results in a calf that will never be able to produce antibodies or fight off the infection as the immune system does not recognise the virus as an infection.These animals are persistently infected animals (PIs) and they are a major source of infection for the herd as they excrete, almost continuously, huge amounts of virus in all body fluids. As BVD causes immune suppression these are usually sickly and poorly grown animals and many will die before they are 18 months old.

Some do survive to breed and it is important to note that their calves will inherit BVD as part of themselves and will not fight off the infection with antibodies.

The calves of a PI will all be PIs. If the BVD virus mutates to attack the PI, then ulcers occur from the mouth through the intestinal tract and persistent diarrhoea develops.

The name of this is mucosal disease. Only a PI can die from mucosal disease.

How BVD virus is transmitted through a given herd and the extent of the economic impact for that herd depends on three main factors:

- how many PIs are in the herd;
- how closely and effectively they come into close contact (yarding and social behaviour); and
- the level of existing antibody protection in the herd.

Manipulating these factors, combined with testing options, will follow in part two of this article BVD — diagnosis and management options in the next edition of *The Australian Dairyfarmer*. Happy milking.

**Sherri Jaques is a practising veterinarian and reproduction adviser in the West Gippsland region of Victoria.*

All comments and information discussed in this article are intended to be of a general nature only and may not be suitable for individual herds. Farmers should consult their veterinarian for herd health advice, protocols and/or treatments that are tailored to their herd's particular needs.

ADHIS AUSTRALIAN DAIRY HERD IMPROVEMENT
The dairy industry's independent genetic evaluation service
Australian Dairy Herd Improvement Scheme

Secrets to long-lasting cows

EVERY dairyfarmer wants to breed cows that have long, productive lives in the herd. While 30% of the national herd is at least six years of age at their most recent calving, other cows are not particularly long-lasting. Every now and then an exceptional cow comes along that survives many more lactations; in fact 2% of cows are more than 10 years old at their last calving.

The Australian Dairy Herd Improvement Scheme (ADHIS) asked researcher Jennie Pryce from the Department of Environment and Primary Industries (DEPI) Victoria to investigate records for long-lasting cows to see if there were traits common to those exceptional survivors.

Dr Pryce's findings give us some insights into the secrets of long-lasting cows.

The study drew on data from about two million Holstein cow records and 300,000 Jersey records born from 1990 to 2003. The study compared cows that were culled after six or more lactations with those culled in the first lactation.

"Longevity is a complex trait that is influenced by a large number of environmental and genetic factors," Dr Pryce said.

Dr Pryce identified 23 traits (production, type and workability) that were associated with survival in Holsteins and 10 for Jerseys (see table).

Table 1: Traits associated with longevity in Australian dairy herds

(The key type traits are highlighted in red)

Trait	Holsteins	Jerseys
Fat yield	✓	✓
Protein yield	✓	✓
Milk production (L)	✓	✓
Fertility	✓	✓
Somatic cell count	✓	✓
Temperament	✓	
Likeability	✓	✓
Overall type	✓	✓
Angularity	✓	
Body condition score	✓	
Body depth	✓	✓
Muzzle width	✓	
Pin set	✓	
Pin width	✓	

Alnor Prue Judge, owned by Lynette Greenwood, turned 20 in August. Now retired, the cow milked for 18 lactations, remaining in the herd because it produced well, consistently got back in calf and never had mastitis.

Obviously, production, fertility and cell count are important traits in determining longevity, but Dr Pryce was interested in narrowing down the key type and workability traits involved.

Her analysis identified, following production, fertility and cell count, the five type and workability traits that were the next best predictors in Holsteins: udder depth, likeability, body condition score, pin set and overall type.

The best type and workability predictors for Jerseys were likeability, overall type and mammary (a composite of several traits).

"The Jersey data set is smaller, which could explain why we identified only 10 traits rather than the 23 for Holsteins," Dr Pryce said.

Currently the survival Australian Breeding Value (ABV) is based on actual survival of a bull's daughters and their ABVs for udder depth, likeability, pin set and overall type.

"This study confirmed that the prediction model we are currently using for the survival ABV is on the mark for Holsteins," Dr Pryce said.

"The only trait not currently included is condition score. While it is a good predictor, body condition is not essential in the ABV — most of the information is covered in the other traits.

"Further work is needed to determine whether the difference between Jerseys and Holsteins is large enough to warrant breed-specific breeding values."

The analysis also revealed that fore-udder attachment had an important influence on longevity in Holsteins. ADHIS is currently considering including fore-udder attachment in the survival ABV and other results from this study as part of the National Breeding Objective review process.

Contact: ADHIS extension and education manager, Michelle Axford, phone 0427 573 330, email <maxford@adhis.com.au> or website <www.adhis.com.au>.

Dairy Australia
Your Levy at Work

Time to update business plans for the year ahead

By NEIL LANE*

AS THE new financial year progresses, the operating environment, in terms of milk price, input prices and seasonal conditions, are starting to fall into place.

Whether favourable or challenging, farmers should update their 'operational' business plan.

This is essentially comprised of:

- feed budget and not only for milkers but for dry cows and replacements; and
- the information generated by feed and milk production budgets should then feed into updated income and expenditure cashflow budget.

Where possible farmers should work with their trusted support network — accountant, consultant, factory field services team, discussion group members, farming peers to develop a plan in response to the prevailing conditions in their area.

If the profitability and cash flow of the business is challenged, decide what livestock are crucial for the ongoing viability of the business and consider the following:

- serious consideration should be given to culling cows that have been identified as potential culls early in the season;
- selling excess young stock;
- reducing milker numbers; and
- selling bulls for beef cattle.

Farmers should discuss their situation with their bank; if they are armed with a sound operational plan, it is a much easier discussion. There may be opportunities to ▶

Learning how to maximise pasture consumption

FARMERS in New South Wales have been learning about getting the most out of their homegrown feed through the Feeding Pasture for Profit (FPFP) course.

In an industry collaboration between Dairy Australia's Regional Development Program Dairy NSW, North West Local Land Services and Hunter Local Land Services, the course has been offered in the northern and Hunter regions and will be extended to South Coast NSW in February 2015.

Led by consultant Phil Shannon, FPFP helps farmers increase the use of homegrown feed by growing more grass and promotes the profitable use of pasture and crops and the efficient use of supplements by using simple and practical tools.

Farmer Mitch Scott said every farmer would benefit from attending the course.

The 26-year-old works on his parents' farm at Muswellbrook in the Hunter region.

"My motivation in participating was to really learn more about rotation and understand how much you need to strip a paddock, how to know when your cows are full or if you need to feed them grain or not," Mr Scott said.

"Phil is really good at making sure everyone understands what he is talking about so people don't get left behind. I just learned so much I would recommend it to anyone — it was excellent."

Tamworth, NSW, farmer Paul Gibb said he had attended the FPFP course as it was an opportunity to increase skills and knowledge to ensure his operation was getting the most from homegrown feed.

Farmer Mitch Scott listens as consultant Phil Shannon explains pasture principles at a seminar at Muswellbrook, NSW.

"The cheapest and most effective way of feeding is what you can grow yourself and get down cows' throats without relying on bought-in feed," Mr Gibb said.

"If you are to survive in this game you need to get the most out with the least in — that's what this course is about."

Mr Gibb has been farming at Tamworth for six years after moving from the Hunter Valley. His operation will be on track to milk 500 cows by the end of the year.

He said the FPFP principles involved the use of the Rotation Right Tool, a spreadsheet combined with numbered paddock areas to give a simple but very effective method of allocating pasture to a herd.

"There is a lot of good science behind it," he said. "It's fairly straightforward to use for the staff, and as a consultant Phil challenges you, making you think about what you want to do on your farm and how you want to do it.

"It also gives you all the information about leaf principles and residual management which is just crucial," Mr Gibb said.

To attend the upcoming FPFP course on the NSW South Coast in February 2015, contact South Coast and Inland DairyNSW extension co-ordinator Greg Duncan, email <gduncan@dairyaustralia.com.au>, phone 0477 044 047.

Contact local regional development programs for further information in other regions.

◀ defer repayments or to go onto interest-only for a period. This may allow more resources to be directed towards maintaining the integrity of the business and allow farmers to remain in a position where they can capture the upside when conditions improve.

While the timing of selling non-core or excess livestock may not be ideal, it is a relatively easy decision compared with selling core replacements and/or milkers. Selling core livestock during tough periods is always a last resort and needs to be weighed up against the longer term needs of the business. D

Neil Lane is Dairy Australia's program manager farm business capability and farm profit.

Neil's tips for maximising profits this spring season

IN **southern states** with good conditions:

- Focus on maximising pasture growth and ensure genuine surpluses are captured.

In northern states in drought:

- Develop a plan starting with a feed budget not only for the milkers but for all classes of stock and then look at how this impacts on the cash-flow budget.
- Prioritise spending and expenditure.
- Eliminate non-essential repairs and maintenance, capital investment and farming running costs from the business.
- Ask the question: What expenditure can be cut that won't have a negative impact over the medium to longer term? Can fertiliser, semen costs, herd health costs, labour costs be reduced?
- If there are no big ticket items where significant savings can be made, look at making smaller savings across the business.

DA scholarship to NZ a boost for Aus dairy

TWO young Australian dairy professionals have been building their farm business management (FBM) skills thanks to Dairy Australia (DA) and are now taking their careers to a new level.

Roisin Dunne of Queensland and Benjamin Vagg of Victoria (see separate article page 21) completed their one-year post-graduate farm business management studies last year in New Zealand at Lincoln University and Massey University at Palmerston North respectively.

They were the first DA scholarship recipients in a trans-Tasman development with the NZ Centre of Excellence for Farm Business Management.

The pair are taking different paths, with Miss Dunne starting a new role as a field services officer for Murray Goulburn at Maffra, Vic, while Mr Vagg will continue for another year at Massey University to obtain a master's degree.

Mr Vagg, a La Trobe University agricultural science and business graduate, is from a dairyfarm near Leongatha.

"With all the expertise and support here I've been taken to a whole other level," he said. "I can think on a much larger scale now and not just in a farm sense but also business direction and governance and I have a more business management frame of mind now.

"I came back to really solidify what I had learned last year and make it a strength."

Miss Dunne, from Beaudesert, worked in Brisbane for a stock feed company after graduating from the University of Queensland with an agricultural science degree. She said being based at a university at the forefront of dairy research was an exciting opportunity.

This year's scholarship recipient Tim Cassegain with one of last year's recipients Benjamin Vagg.

"For NZ, dairy is so important and dairyfarmers are held in high regard," she said. "That's encouraging for us in the Australian industry.

"I found the course very informative. There was lots of opportunities based around farm management and we also learned about international business and marketing — it was a great industry overview."

The students also had one-on-one interactions with farmers, facilitated by the universities, to gain a greater understanding of the individual dairyfarming systems and financial positions of the operations as part of their advanced farm business management paper.

Miss Dunne said her role with Murray Goulburn would see her connect directly to dairyfarmers and would be another excellent learning experience with the long-term goal to return to home to help the dairy industry in Queensland.

Mr Vagg said his study this year would focus on a research paper around the supplements industry in NZ and he would also learn about markets and risk and financial and business practices.

"My future plan is to continue building my knowledge and skills in the dairy industry — learning a new production approach in NZ and making it relevant to Australia," he said.

This year the scholarship recipient is Tim Cassegrain, who will study a Postgraduate Diploma in AgriCommence at Massey University. Mr Cassegrain comes from a dairy farm in the Hastings Valley of New South Wales and studied a Bachelor of Agriculture and Bachelor of Business in 2012.

To apply for the scholarship go to <www.dairyaustralia.com.au/fbm-scholarship> or contact Neil Lane, email <NLane@dairyaustralia.com.au>. Applications close on October 17.

Dairy Australia
Your Levy at Work

Is pre-milking teat preparation worthwhile?

RECENT Australian research has found that pre-milking routines may assist with controlling mastitis and maintaining teat condition although there are practical aspects to consider before introducing teat preparation practices into milking routines.

A carefully controlled field trial was conducted on five commercial dairy herds in south-eastern Australia in 2012-13 funded by Gardiner Foundation and supported by Dairy Australia.

A halving of the clinical mastitis rate was assumed to be the minimum benefit required to justify the additional cost of labour, disinfectants and other resources involved in the pre-milking hygiene routine.

When the combined results across all five study herds were looked at, there was no evidence that the pre-milking treatment reduced the incidence of clinical mastitis or the new infection rate.

However, in one of the study herds, clinical mastitis was significantly reduced by the pre-milking preparation treatment. In this herd, which had the highest milk production in the study, the environmental conditions were more challenging (lots of dirt and mud).

Conclusions of the study were:

- Routine pre-milking teat preparation and disinfection is unlikely to cause a worthwhile (economic) reduction in the number of clinical cases when teats are relatively clean and dry and the incidence of clinical mastitis is low (less than three clinical mastitis cases per 100 cows per month).
- The practice may be worthwhile on Australian dairy farms during periods when the risk of clinical mastitis due to environmental bacteria is high. This could include periods when:
- teats are heavily soiled (due to wet conditions or very hot spells);
- using feed/calving pads or housing cattle, especially in high-producing herds;
- teat skin condition is poor, especially around the teat-end.
- Better pre-milking hygiene increased average milk flow rate per cow and reduced milking time (by about one minute/cow), ▶

Preparation procedure

- Teats were washed with low pressure water to remove any dirt or manure.
- Teats were disinfected with the only registered product available in Australia.
- Teats were then left for a minimum of 30 seconds.
- Teats were then wiped dry with disposable paper towel (1 per cow).
- Cups were applied.

◀ but had no significant effect on milk production per cow.

Two core principles behind Dairy Australia's Countdown 2020 recommendations for mastitis control are to minimise the number of bacteria on teat skin and to maintain and improve teat end health. Controlling these factors can be challenging under the range of conditions seen on Australian dairy farms.

If the rate of clinical mastitis (mainly caused by environmental bugs like *Strep uberis* or *E. coli*) is above 6-8% per month (that is more than six cows with mastitis per 100 cows being milked per month), then introducing pre-milking teat preparation in consultation with an adviser could be considered. Note that this practice does not take the place of post-milking teat disinfection.

On farm application

There are other teat preparation options to consider, depending on the level of mastitis risk eg washing and drying teats for part of the herd, or at certain high risk times of the year.

Some farms already use pre-milking teat preparation routinely when milking. Putting cups on clean, dry and plump teats (a sign of good milk let down) is a core Countdown principle.

Putting clusters on wet teats is not advisable, whether they are damp with water or a pre-milking teat disinfectant. This poor practice increases mastitis risk, leads to cup crawl and slower milking times, and any disinfectant residues will end up in the milk.

Introducing pre-milking routines and making them work on farm requires careful planning and consideration of the farm system. Seek advice from an experienced Countdown Adviser if concerned whether a pre-milking routine is suitable and achievable for the farm.

The adviser can also help set up a practical and consistent pre-milking routine and monitor the benefits in terms of udder health and milking ease.

Potential benefits of pre-milking teat preparation include:

• reduced environmental bacteria at the teat end to lower the risk of clinical mastitis and potentially lower Bulk Milk Cell Counts;

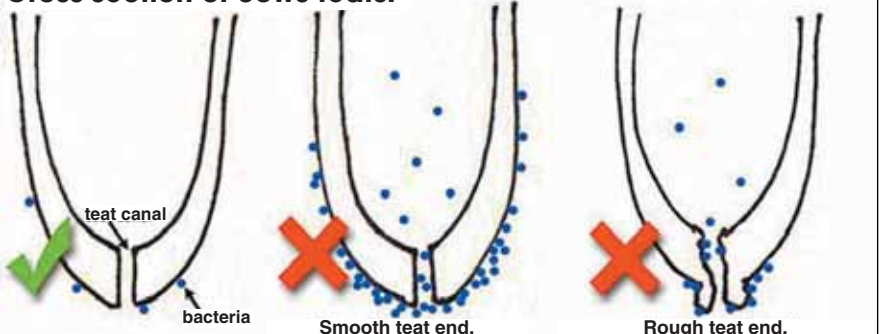
• improved milk let down increases cow comfort, milking speed and completeness of milking;

• reduced Bactoscan counts in bulk milk;

Easier and more rapid detection of mastitis.

Contact: Mark Humphris, Countdown 2020 project leader, email <mark@themilkroad.com.au> or local Countdown advisers.

Cross-section of cows teats:



Smooth teat end. Not many bacteria. Reduced risk of mastitis.

Smooth teat end. Lots of bacteria, overcome teat canal defences. Increased risk of mastitis.

Rough teat end. Many places for bacteria to hide, easier for them to enter teat. Increased risk of mastitis.

Costs of teat preparation

• Extra teat disinfectant (must be registered for pre-milking use) — 5c/cow/milking
• Paper towel — 3c/cow/milking
• Additional labour costs need to be considered against the potential savings from prevention of clinical mastitis, which Countdown conservatively estimates at $277 per case

Updated mastitis guidelines available

AN essential reference tool for all dairyfarmers tackling mastitis in their herds has been updated by Dairy Australia (DA) and is now available to order.

The *Countdown 2020 Farm Guidelines for Mastitis Control* have been updated to include new evidence-based science and to support both the Cups On, Cups Off farmer training course and the recently released Countdown Mastitis Toolkit App for smartphones.

The new guidelines incorporate relevant information from both the Dairy NZ SmartSAMM program and the Animal Health Ireland Cell Check program. Both programs utilised the Countdown resources towards their own development in recent years.

Australia's guidelines were first published in 1998. The publication encompassed all of the evidence-based best practice for mastitis control available at the time and has been widely used by farmers and advisers. About 11,000 copies of the original publication were circulated.

DA's animal health and fertility program manager, Kathryn Davis, said the guidelines had been a crucial resource in helping dairyfarmers improve their bottom line by reducing new mastitis infections and lowering bulk milk cell counts in their herds. This in turn has had beneficial effects for cow welfare.

"The updated guidelines work with the Countdown Mastitis Toolkit App that was released last year," Dr Davis said.

"They are a must-have if you are in the dairy industry because they are the recommendation for best practice, milking management and mastitis control and it's a great resource that farmers can have to read up in their own time."

Dr Kathryn Davis says the updated mastitis guidelines are a must-have for people involved in the dairy industry.

The new guidelines are available from DA free of charge for dairy levy payers at <www.dairyaustralia.com.au/farmguidelines>, with details including postcode and DA enterprise number required.

The publication can also be bought by calling 1800 655 441. The cost is $25 per copy (including postage).

Dairy Australia
Your Levy at Work

Dairy webinars for key Dairy Australia programs

DAIRY Australia (DA) is offering farmers the chance to update their skills in managing herd fertility and mastitis from the comfort of their homes via a series of live online webinars.

DA's animal health and fertility program development manager, Erika Oakes, said the topics presented at the InCalf and Countdown 2020 farmer workshops held around Australia in autumn were being offered online so farmers who couldn't get off the farm could become involved.

"The webinars are easy to register for through the DA website," Ms Oakes said. "You will then be sent a link to allow you to log in to the webinar and participate — all you really need is a computer or tablet and an internet connection with reasonable speed."

The webinars will also be recorded as a resource that can be accessed later via DA's website.

What is a webinar?

• Short for web-based seminar, a webinar is a presentation, lecture, workshop or seminar hosted by an organisation and broadcast to a select group of individuals through their computers via the internet.

• A key feature of a webinar is the interactive elements that allow all participants to give, receive and discuss information.

• A webinar allows a speaker from the hosting organisation to share PowerPoint presentations, videos, web pages or other multimedia content with audiences that can be located anywhere. The audio feed is one-way, coming from the presenter.

• Participants in the DA webinars can communicate with the presenters by typing in questions that the presenters will answer. The audience can also participate in real time via online polls.

• Dairy Australia webinars generally range between 45-90 minutes in length.

What do you need?

• All you need to attend a webinar is your computer or a tablet, an internet connection and a compatible web browser

• Pre-registration is essential. To sign up for an InCalf or Countdown 2020 webinar go to the DA website <www.dairyaustralia.com.au/webinars> for registration and login details.

The next DA webinar will be a Countdown 2020 presentation for farmers on pre-milking teat preparation on Wednesday, September 24, at 12.30pm-1.30pm EST. Further dates will be available on the above webpage as they are confirmed.

Decision-making guide on renewable energy

DAIRY Australia has created a pamphlet to guide dairyfarmers through the decision-making process when investigating renewable energy systems for their farms.

Amy Fay from Dairy Australia said the idea for the pamphlet came out of a farmer workshop held at Tatura, Victoria, in January.

"Farmers told us they wanted something that they could use, that's not a super-technical document, that assists their decision-making around what certainly can be a big investment, especially as we are now seeing more options becoming available," Ms Fay said.

"The pamphlet goes through the type of questions you need to ask if you are approached by a consultant to work out if the technology or deal offered is one that meets your needs."

Ms Fay said before renewable energy was even a consideration, farmers needed to ensure their dairy was as energy efficient as possible with the current equipment used.

"You also need to make sure you are on the tariff that suits your system or energy use," she said

"The best way to make sure that you have these things in order is to have an energy assessment," she said. "Once you have gained an understanding of what is happening and you are optimising your energy use, then you can look at offsetting your bill with renewable energy usage."

Amy Fay: Efficiency is key before renewable energy investment.

To view the digital version of the pamphlet visit website <frds.dairyaustralia.com.au/events/smarter-energy-use/>.

Solar hot water system makes savings

JOHN Bourchier, a dairyfarmer in the Murray region, installed a solar hot water system for the dairy on his family farm 15 years ago and says it was a great decision that has saved the operation thousands of dollars.

"The hot water system has paid for itself many times over in that time," Mr Bourchier said. "The primary motivation to do it was to save money but also to use renewable energy and help save the planet.

"I always go back to the saying by David Suzuki that 'You can't be green if you are in the red', so to me it has to pay for itself, but that may not be everyone's motivation."

Mr Bourchier said at the time the solar unit cost $4000; he calculated it had paid for itself within three years.

"Since then I would say we have been saving $2000 per year minimum," he said.

"In total we have six solar panel units on the farm and they are good in the summer, but in the winter, while they do take some of the edge off, they are not as efficient so evacuated tube systems is what we are going to be investigating next."

There was no negative impact on milk fat concentration when chicory was offered as the sole forage.

Feeding chicory did not reduce milk yield or adversely affect milk composition irrespective of the feeding systems used.

Strategic seed setting can be used as a management tool in dry summers to encourage seedling recruitment.

Chicory confirmed as alternative forage

CHICORY is a useful summer and autumn forage option for dairy cows, researchers in south-west Victoria have confirmed.

Department of Environment and Primary Industries (DEPI) researchers in the south-west have completed a project funded by Dairy Australia looking at chicory as alternative forage source for dairy.

The project confirmed that:

• when the feedbase is changed from a perennial ryegrass base to chicory only or a mixture of the two species there is no impact upon milk yield or composition;

• there was no negative impact on milk fat concentration when chicory was offered as the sole forage with an energy based concentrate despite the low neutral detergent fibre concentrations in chicory;

• when an energy-based concentrate was added in increasing amounts to a chicory-only diet, the marginal milk responses (milk/kilogram concentrate) were similar to those previously observed with a perennial ryegrass based diet;

• careful grazing management of chicory using known principles can ensure a stable plant density during at least a three-year period;

• strategic seed setting can be used as a management tool in dry summers to encourage seedling recruitment;

• feeding chicory did not reduce milk yield or adversely affect milk composition irrespective of the feeding systems and practices employed during this project; and

• chicory can be fed as the sole forage, without negatively impacting on milk yield or milk composition.

Dairy Australia's group manager farm profit and innovation, Chris Murphy, said the findings provided further evidence for the integration of such species into dryland dairy systems to offer farmers greater flexibility within the on-farm forage supply.

Some farmers in the study's reference group were already using chicory on up to 30% of their farms.

DEPI researcher Dr Joe Jacobs said the research challenged the previous understanding of feeding chicory, which suggested that chicory should be fed as a "break" crop in conjunction with pasture or with the inclusion of an added source of dietary fibre, in a similar way to a brassica crop.

All four experiments in the study were based at DemoDAIRY near Terang, Victoria. The first and second experiments were designed to compare dry matter intake (DMI), milk yield and milk composition when cows in mid (late spring) and late lactation (summer) were offered chicory, perennial ryegrass or a mixed sward of chicory and perennial ryegrass as the sole source of dietary forage.

Building on the outcomes of those experiments, the third and fourth experiments aimed to examine the milk yield response to increasing levels of concentrate offered in conjunction with chicory. Those experiments were undertaken in late spring (mid lactation) and summer (late lactation).

While the chicory used in the project was grown during a period of consecutive dry summers, it still performed at a similar level to perennial ryegrass, Dr Jacobs said.

However, due to the lack of moisture, the chicory in the study was unable to show its growth potential (DM yield) or display the known high nutritive characteristics, particularly during summer.

Dr Jacobs said further studies could be undertaken on feeding strategies including the amount and timing of chicory fed, irrigated chicory to exploit full growing potential and first year chicory stands, which are typically higher quality than the second and third year stands used in the research. D

For more information about chicory view the Project 3030 factsheet at <www.Project3030.com.au> or <www.dairyaustralia.com.au/project3030>.

Chicory factbox

• Chicory provides high-quality forage for grazing from late spring to autumn when ryegrass struggles under dryland conditions.

• The valuable home-grown fodder excels in hotter and drier months due to its deep tap-root system.

• Because of it high metabolisable energy, high crude protein and low NDF (fibre) content chicory can be a valuable component in the diet of lactating cows.

• A short-term (two to four years) perennial herb, chicory does not pose a major risk to animal health and can be grazed as part of a rotational grazing system or strip grazed like a crop.

• Chicory is less susceptible to insect damage than forage brassicas and is adapted to a broad range of soil types.

• It is recommended that chicory is sown before October 1 when there is adequate soil moisture to ensure good germination, establishment and better yields.

Dairy Australia
Your Levy at Work

Getting repro right

A DAIRY Australia initiative upskilling dairy professionals to deliver higher quality reproduction services to farmers is helping to lift performance in Australia's dairy herds.

The first Repro Right course was completed last year with 13 advisers from around Australia taking part including vets, herd managers and extension field staff.

Repro Right is an intensive 10-month professional development program that improves the advisers' ability to provide intensive problem-solving and whole herd reproductive management services to dairy farmers.

The program incorporates a mixture of on-line learning, multi-day group sessions, assignments and practical tasks on all the important elements of reproductive management in Australian dairy systems.

Queensland vet, Carl Hockey, was one of the participants and said Repro Right gave a complete holistic approach to understanding how reproduction fits into a farming system.

"The advantage for vets is that you look at reproduction from the perspective of the farm operation rather than just piece-by-piece so it's just not animal-centric, it's farm-centric," he said.

"It's not just the case of looking at insemination or conception but, for example, how cows are managed in the dry period to the beginning of calving. We also focus on the way calves are reared and replacement heifer growth rates, as early nutrition and animal management can play a big part in subsequent reproduction."

Dr Hockey, a vet for 12 years providing advice and support to dairyfarmers in south-east Queensland, also found understanding the limits of the latest knowledge an advantage.

"There is also a lot of value from the course for farmer clients as it creates a network and allows you to form relationships with other advisers across Australia, so I can now draw on that greater range of expertise and offer this to my clients, " he said.

GlenEagle, Queensland, dairyfarmer Geoff Kleinschmidt said an industry move to upskill reproduction advisers was extremely valuable for all farmers and he had seen the results on his own operation.

Reproductive performance on his 350-cow operation had improved significantly after the introduction of a new reproduction management system on the year-round calving farm that was led by Dr Hockey.

The new strategy included automatic drafting, introducing a synchrony program and better use of artificial insemination (AI). The cows are pregnancy-tested or blood-tested for pregnancy at 28 days.

"The result is we have had some good success and we have seen less problems with things like cysts," Mr Kleinschmidt said. "It wasn't easy to set up a new system and it was hard work but well worth it."

"We have a good relationship with Dr Carl and are very happy with the work that he has been doing with us. He always shows a lot of concern."

Dairy Australia's animal health and fertility program manager, Kathryn Davis, said the first group of Repro Right trained advisers had links to more than 1000 farms and had provided individual herd consultancy services to about 186 clients since completing the course. They have also been active in the delivery of farmer extension with most involved in the recent series of InCalf farmer workshops held around Australia last autumn.

To locate a Repro Right adviser, visit the Dairy Australia website <www.dairyaustralia.com.au/reproright>.

Working on positive farm changes

GREG Duncan recently joined Dairy NSW as an extension co-ordinator and will use his skills to link dairyfarmers in the South Coast and inland region with relevant and quality programs to help improve their bottom lines.

Mr Duncan comes to the position from animal health company Zoetis Australia (formerly Pfizer Animal Health) where he worked across the business for eight years primarily working directly with farmers in reproduction and animal health roles.

Mr Duncan said he was looking forward to continuing to work with dairyfarmers and he had been connecting with regional groups to determine their needs.

"What I really enjoy is seeing the positive changes in a farming business from working with farmers, building their awareness and knowledge and linking them with groups they can learn from," he said.

Greg Duncan: linking NSW farmers with relevant programs.

Nowra-based, New South Wales, Mr Duncan also managed the Charles Sturt University dairy farm herd at Wagga Wagga, NSW, and ran his own relief milking business in the past. He is also a qualified InCalf and Countdown adviser.

Mr Duncan said seasonal challenges due to the dry autumn and winter and availability of feed were top of mind for farmers. Dairy NSW was closely monitoring the situation, he said.

"There are also challenges around profit in the region for a number of reasons including an increasing cost of production, access to skilled labour and the ability of farmers here to access extension and research through the withdrawal of extension services by the NSW Department of Agriculture," he said. "There is also a broader focus on reproduction and mastitis issues."

Mr Duncan said there were a number of valuable programs that he would be involved in delivering to farmers including Feeding Pastures for Profit, discussion groups and focus farms.

See back page for Mr Duncan's contact details.

Regional Development Programs and Extension Coordinators

WestVic Dairy
Ph: 03 55571000
www.westvicdairy.com.au

Ian Linley
ilinley@dairyaustralia.com.au
M: 0422 814 579

Murray Dairy
Ph: 03 5833 5312
www.murraydairy.com.au

GippsDairy
Ph: 03 5624 3900
www.gippsdairy.com.au

Tony Platt
tplatt@dairyaustralia.com.au
M: 0477 440 339

Dairy NSW
Ph: 0412 825 466
www.dairynsw.com.au

South Coast region
Greg Duncan
gduncan@dairyaustralia.com.au
M: 0477 044 047

Hunter region
Sheena Carter
scarter@dairyaustralia.com.au
M: 0427 434 412

DairySA
Ph: 08 8766 0127
www.dairysa.com.au

Mount Gambier
Liz Rymill
erymill@dairyaustralia.com.au
M: 0409 919 564

Central
Nerida Ewart
newart@dairyaustralia.com.au
M: 0409 825 938

Subtropical Dairy
Ph: 07 3396 6229
www.dairyinfo.biz

Western Dairy
Ph: 08 9525 9222
www.westerndairy.com.au

Rob La Grange
rob@westerndairy.com.au
M: 0448 939 344

DairyTas
Ph: 03 6432 2233
www.dairytas.com.au

Liz Mann
lmann@dairytas.com.au
M: 0428 121 655

www.milka-ware.com.au

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(03) 9768 2323 fax
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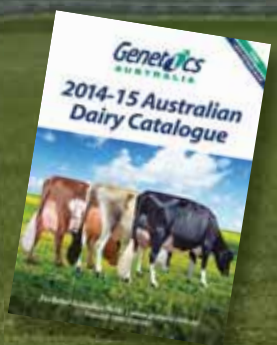

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