

INSIDE

**Award presentation**

Excitement abounds for Australian  
& Victorian Comp winners

**Raw-milk cheese**

Behind the long journey

+ dairy science, new products  
globally, market report  
... and more

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AUSTRALIAN

# Dairy Foods



Official magazine of the  
Dairy Industry Association of Australia

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# Valuing our achievements

**T**his year, we have been confronted with drought, bushfires and the first pandemic in over a century. I am especially proud of how our association met the challenges of COVID-19 and worked so well with the entire industry to keep functioning in lockdown.

Our teams implemented projects and initiatives that enhanced our membership experience, fostering local initiatives. Our new normal is educating people and holding meetings online, with a rapid uptake of the DIAA's social media presence that actively promotes our industry.

### Product competitions and awards

This issue has extensive coverage of our national 2020 awards. Format aside, award recipients were ecstatic, with a number of winners yielding local media coverage. In my humble opinion, Australia has the best and highest quality dairy products in the world. Some award recipients only have one or two employees, others



Image: Irina Fainberg

**Darryl Cardona**  
National President,  
Dairy Industry  
Association of  
Australia

have hundreds, and our largest have over a thousand.

### The Way Forward

Valuing Value is the President's theme for 2020, and I believe that we were able to achieve value for our membership in new and different ways, whilst new sayings – "hit the mute button" and "social distancing" – along with temperature checks upon entering premises and wearing facemasks being the new new.

During November, and in keeping with all things being turned upside down in this most extraordinary year, we took the opportunity to continue this momentum to make the DIAA

relevant for 2021 and beyond, by facilitating a forum "The Way Forward" involving each State to develop a two to five-year plan.

### Goodbye to the past

The old adage "if it ain't broke..." doesn't hold anymore – the whole world broke. We have proven that we can be agile and make positive changes to traditional structures and ways of functioning. The DIAA Board and State committees have worked hard to ensure 2020 has been the opportunity to modernise our association.

I would like to thank each State committee member for volunteering their time and commitment to the DIAA, as well as the Board and our staff for ensuring this year worked as smoothly as possible. The Board has re-elected me as President for 2021, and hopefully I will be able to traverse the country and meet up with you all.

*Have a great Christmas  
and enjoy the end of 2020.*

“

*“What if Christmas, he thought, doesn't come from a store.  
What if Christmas ... perhaps ... means a little bit more!”*

– Dr. Seuss

### The DIAA thanks its 2020 national partners

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# Dairy News

## Extra \$8.5m clicks over for Victoria

Online campaign and website “Click For Vic” has received an extra \$8.5 million funding from the Victorian Government. The campaign, which showcases small producers across the State, was devised to help them trade through the COVID-19 pandemic by connecting consumers with local producers, creators and businesses.

Essentially, the Click for Vic website is a directory that allows consumers to click directly through to an individual business’s websites.

DIAA members work in or own two of the businesses featured in campaign marketing – **Yarra Valley Dairy** and **Gippsland Jersey**. Coincidentally – and happily – highlighting the high quality products, Yarra Valley Dairy’s Persian Fetta and its Hubert’s Cow’s Milk Washed Rind both won a gold medal in the 2020 DIAA Australian Dairy Product Competition, with both products featuring on the front of the “Click for Vic” booklet, while Gippsland Jersey won two silver medals in the same competition. (See coverage of the 2020 DIAA Australian Dairy Product Competition beginning on page 26.)

The new website has been backed by a major new campaign that’s been



The ‘Click for Vic’ booklet featuring Yarra Valley Dairy’s winning produce on the cover. Above: Sallie Jones of Gippsland Jersey.

rolled out across television, print, radio, digital and social media channels.

In just its first month, the website and associated marketing campaign had generated more than 200,000 leads for the businesses featured.

Yarra Valley Dairy’s brand manager, **Catherine McCarthy**, said, “The campaign was a wonderful show of support for so many Victorian businesses, but especially those of us that oddly fell into the Melbourne CBD catchment during the lockdown periods. Having never previously offered delivery of our cheeses, it opened up a door of opportunity to reach not only our loyal customers, but a whole host of new ones.

“Customers were incredibly enthusiastic about having our cheeses delivered to their doors, and were really encouraged by knowing they were able to show support at a time when they felt a little helpless. And they discovered some great new cheeses in the process! It was a time of connecting in a unique new way with some keen cheese lovers.” ■



Caroline Simmons (L) and husband Tim Marwood (centre) with their children Isobel, Lilliana and Thomas.

## Timboon Fine Ice Cream refreshes brand for 21st birthday

Timboon Fine Ice Cream celebrated its 21<sup>st</sup> birthday by refreshing its brand, rolling out the new look across six premium ice-cream flavours.

DIAA member and co-founder of the Victorian Western District business, **Tim Marwood**, said the refresh came after some self-reflection around where the brand had come from and where it was headed.

"While the old tubs were a fun design, they were a little unsophisticated for the quality of our product, so we knew it was time for a refresh. We wanted to really focus on our provenance, being farm fresh and deliciously creamy."



Tim says the gold trim give the tubs a premium feel, without being elitist.

The third-generation farmer and his wife **Caroline Simmons** founded the ice-creamery in 1999. Their product is sold through more than 80 gourmet-food stores and IGAs across Victoria, five mobile event vans and two regional own-brand retail stores.

They plan to open new scoop shops in Geelong and Ballarat (both Victoria) and further expand into South Australia and NSW. Tim and Caroline are also talking with a Middle Eastern importer with a view to expand into other regions. ■



## Organic milk opportunity for processors

Former DIAA Victorian Branch president **Sandra Jefford** is one of the dairy farmers working to get milk from those affected by the liquidation of Organic Dairy Farmers Australia (ODFA) processed as organic.

Ms Jefford, who held the DIAA post from 1995-96 and also worked at CSIRO's Dairy Research Lab, is one of the dairy farmers affected by the group's collapse.

She said, "Following the liquidation of ODFA, and sale of their Geelong site and brands, more than 30 family farms – among them some of the most experienced organic producers in the state of Victoria – have joined the Australian Dairy Farmers Corporation [ADFC] to find the right homes for their milk.



"These farmers are committed to the regenerative, holistic health of their soil, pastures and animals, and are proud of the quality milk they provide. With exciting stories to share about their family farming systems and a growing movement of organic consumers hungry for these stories, the farmers and ADFC are happy to hear from any processors who want to be part of this story and bring it to the market shelves.

This is a unique opportunity for manufacturers keen to provide premium organic dairy products to their customers."

Interested processors can contact **Scott Sieben** at ADFC, [scott.sieben@adfc.org.au](mailto:scott.sieben@adfc.org.au) ■



## ACCC calls for input into Saputo-Lion bid

The Australian Competition & Consumer Commission is asking dairy processors, along with farmers and supermarkets, for input into Saputo Dairy Australia's bid for Lion Dairy & Drinks.

The corporate regulator wants to know if the bid will "substantially lessen competition". ACCC analyst **Nicholas Wellfare** said Saputo was proposing to acquire Lion, including its 10 dairy-processing plants, various retail brands (including Big M, Farmers Union and Dairy Farmers) and other Australian assets.

The ACCC sent a letter to dairy farmers, asking about milk production, operations and which processor they supplied. Questions included:

- What impact do you think Saputo acquiring Lion D&D will have on your business and the milk price you can obtain?



- Will it reduce the number of potential buyers of your raw milk?
- Could you supply to a processor that does not have a processing plant in your region?

Federal treasurer **Josh Frydenberg** blocked the proposed \$600 million sale of Lion (which makes Pura milk, Dare iced coffee and Yoplait yoghurt) to China's Mengniu Dairy, stating it was "contrary to the national interest".

Japanese beverage giant Kirin, which owns Lion, announced the sale to Mengniu nearly a year ago. In a recent statement, Kirin said given the approval is now "unlikely to be forthcoming

at this time, Lion and Mengniu Dairy have mutually agreed to cease the current sale process".

A Saputo spokesman said the company was consulting with the ACCC as part of its process.

United Dairyfarmers of Victoria president **Paul Mumford** said, "Now it's important that, as an industry, we have milk processing capacity here, in Australia and we don't lose it completely. It's extremely important the ACCC do their job appropriately, because we already have Saputo operating here, in Australia and it's important we look at all aspects of any possible market dominance that may eventuate over time. On the flip side, we need to make sure we can keep the capacity of Australian factories." ■



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## Food manufacturers' national plan to tackle plastic

The Australian Food and Grocery Council (AFGC) is developing the nation's largest industry-led plastic recycling scheme. It aims to collect and recycle nearly 190,000 tonnes of plastic packaging annually by 2025.

The Australian Government has announced the AFGC will develop the National Plastics Recycling Scheme (NPRS), supported by funding from the Government's National Product Stewardship Investment Fund.

The scheme will initially focus on increasing the diversion of soft plastics from landfill, and support the increased recycling of other plastics that are currently difficult to collect and/or recycle. As an industry-led and funded scheme, the NPRS will co-



ordinate and focus the efforts of well-known food brands to significantly increase the recycling and reuse of plastic packaging.

It builds on existing soft-plastics recycling initiatives, including the industry-funded REDcycle program and the soft-plastic kerbside collection trial run by Nestlé, as well as projects and research by the Australian Packaging Covenant Organisation.

AFGC CEO **Tanya Barden** said, "Brand owners have invested in packaging innovations that reduce food waste and have moved to using lighter-weight plastics with a lower carbon footprint. Continuing the focus on packaging sustainability, the NPRS will increase the recycling rates of identified plastics and reduce the amount of virgin plastic used in packaging, helping to meet Australia's National Packaging

## Kyvalley signs long-term agreement with a2 Milk Company

Kyvalley Dairy Group has extended its long-standing supply and processing alliance with The A2 Milk Company (Australia) Pty Ltd (a2MC), signing a new agreement.

DIAA member **Michelle Sonnenschein**, Kyvalley Dairy Group's CEO said, "This is an exciting outcome for our business and provides security into the future for both our valued employees and our suppliers."

The new alliance includes a long-term supply agreement for sourcing, processing and packing of a2MC products and a sale and lease-back arrangement from Kyvalley to a2MC. Additionally, a2MC will fund the expansion and upgrade of the processing facility in Kyabram (to be managed by Kyvalley Dairy) under a lease and revised long-term supply agreement. The upgrade will benefit both businesses, providing

additional capacity and improved facilities that will create factory efficiencies and ensure the continued delivery of high-quality products to consumers.

**Peter Nathan**, Asia Pacific CEO of The A2 Milk Company, said, "We have had a very strong and long-term relationship with the team at Kyvalley Dairy Group and this alliance, and our significant investment into the facility in Kyabram, demonstrates our confidence in the a2Milk™ brand, the strength of our partnership with KVDG and the economic benefit a2 Milk™ continues to have for regional Australia."

The new alliance and the upgrade of the Kyabram facility will provide employment opportunities in the region, and support dairy-farming families with secure long-term supply opportunities. The upgrades are expected to begin in early 2021.



A foundation supplier to The A2 Milk Company since 2003, Kyvalley Dairy Group, co-owned by DIAA member **Wayne Mulcahy**, supplies approximately 55% of the a2 raw milk, and packs 100% of a2 milk products sold in Victoria, South Australia and Tasmania.

*Kyvalley Dairy Group won the Process Partners Award for the highest-scoring flavoured milk – coffee, in the 2020 DIAA Australian Dairy Product Competition for its Kiewa Country Coffee Flavoured Milk. Competition results coverage begins on page 22. ■*



Targets. We're excited about developing a circular economy."

The National Packaging Targets include a goal of recycling or composting 70% plastic packaging and incorporating an average of 50% recycled content across all packaging by 2025. ■

## PPP wins inaugural Ocean Impact pitch fest

Planet Protector Packaging has won the inaugural Ocean Impact Organisation's Pitchfest 2020. The packaging company, which uses waste wool to create insulated packaging solutions that replace expanded polystyrene, was chosen from more than 200 applicants from 38 countries.



Globally renowned conservationist **Dr Sylvia**

**Earle** announced the winner and two runners up in early November saying, "We are beginning to see ... that what we do to the ocean is not just having an impact on our health, it's also having an impact on the economy."

PPP received a \$15,000 cash prize from sponsor Bank Australia and \$50,000 in support from the Pitchfest Partner Network.

DIAA member **Joanne Howarth**, CEO of Planet Protector Packaging, said, "Winning the inaugural Ocean Impact Pitchfest is an absolute honour for the whole Planet Protector Packaging team, and we'd like to thank Ocean Impact Organisation for supporting us as we strive to eliminate polystyrene from the ocean. Around 42% of the estimated eight million tonnes of plastics entering the ocean each year, emanates from the packaging industry."

She said despite the devastating environmental effect, polystyrene is still the most used material in the supply chain, with an \$18 billion global market.

**Zoe Davidson**, PPP's marketing & social media manager, said, "We have removed 6.5 million polystyrene boxes from supply chains. If that polystyrene was crushed ... it would fill almost 40 Olympic-sized swimming pools.

"This was a big win for us."

PPP was also the 2020 Australian Business Awards winner for Eco Innovation. ■



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## Plan for first organic a2 infant formula in March

Australian Dairy Nutritionals Group is developing Australia's first home-grown organic infant formula based on a2 protein, after 18 months of development.

The processor will begin commercial production of the specialty infant formula range, Tummy Health, early next year.

Australian Dairy Nutritionals Group chief executive **Peter Skene** said the formulation complemented the changes in a baby's digestive capability in its first two years of life and he had not seen a range focused on infants' needs in this way before.

He said the processor had planned to produce the infant formula at its new processing plant in Camperdown in Victoria's south-west but had now



found a contract manufacturer to produce the range, meaning Tummy Health should be in the market in March 2021. The Camperdown plant was expected to be commissioned a few months later in June.

The company is in the process of converting its farms to organic milk production; a farm with a2 cows will reach organic certification in March, ready for the infant-formula plant commissioning.

Mr Skene said Australian Dairy Nutritionals Group shifted its infant formula focus from organic to the more lucrative organic a2 market

– one where it has a competitive advantage.

He said they will still produce organic products, but will focus on organic a2, which is “the premiumisation of our organic brand”.

Australian Dairy Nutritionals Group is building an infant formula plant with a small, second-hand spray dryer bought overseas, with provision to upgrade to a bigger dryer once capacity had been reached. Mr Skene said the processor also had future plans to house its own canning equipment.

### Supply chain control

With the company's farms so geographically close, they can focus on a “farm-fresh” marketing advantage, rather than relying on base milk powder from Europe or New Zealand.

“We can put our products out within a day.”

He said controlling their supply chain, and having a range of existing organic products, meant the processor could nimbly switch to products in response to the market. ■

## Bubs feels China sales drop

Fewer Chinese visitors to Australia has impacted Bubs Australia's goat milk powder sales.

Founder and CEO **Kristy Carr** said the falling daigou trade to China as a result of the coronavirus pandemic had hit the company's core business – mainly regarding adult milk powders.

However, she said Bubs Australia's social media strategy had begun to counter the downturn. The company's gross revenue for the first quarter of FY2020-21 of \$9.4

million was 34% lower than the previous corresponding period, which was mostly due to disrupted daigou sales channels.

She said they addressed the significant disruption to the daigou channel due to sudden border closures and increased international freight costs, by working “alongside corporate daigou partners to continue to actively support social marketing with their customers via live-streaming and social e-commerce”.

China is a key export market for Bubs Australia, but 65% of its first quarter revenue came from the

Australian market. Goats milk infant formula sales to major Australian grocery and pharmacy outlets increased 29% from the previous corresponding period.

Ms Carr said consumer sales in major Australian retailers showed strong growth year-on-year, “despite the very challenging conditions that prevailed in the wake of the COVID-19 global pandemic”.

“Bubs is now ranked number-one goat formula brand in Coles and scan sales of Bubs' goat formula in Woolworths have increased 172% in the past 13 weeks.” ■

## Brownes wins ‘business Oscar’

Brownes Dairy and Multiplier Media have received international recognition for their efforts to keep the West Australian community connected and informed during the COVID-19 pandemic lockdown.

One of Australia’s oldest dairies worked with the Perth marketing agency to publicise its coronavirus-driven revival of the “Milko”, drivers home delivering dairy products.

The team effort was awarded a gold trophy in the Stevie Awards® for Women in Business, an offshoot of a globally recognised series of honours, known as the “Oscars of the business world”.

The Brownes Milkos have also just won Social Idea of the Year in the annual Mumbrella Awards (which cover marketing), and were awarded “best COVID Pivot” by the Australian Financial Review, which also



named the dairy in the top 10 most innovative companies for consumer goods and manufacturing.

Natalie Sarich-Dayton, Brownes sales & marketing director, said, “It has really struck a chord of nostalgia amongst the people of Perth. We have had a huge level of demand for the service, so much so that we are continuing the Milko service indefinitely.” ■

“  
... keep[ing] the West Australian community connected and informed during the COVID-19 pandemic lockdown.”



# AWARDS OF EXCELLENCE

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### Norco's good news \$5.4m operating profit

Dairy co-operative Norco has gone against expectations, boosting operating profits fourfold compared with the previous financial year through the troublesome FY2019-20.

Norco chairman **Michael Jeffery** said the combined value of higher milk price payments to farmer members and better returns represented a \$21.3 million improvement in value for Norco farmers throughout the year.

"Like many industries, the past year has posed immense challenges for the dairy community but I am pleased to say that we have been able to support our farmers with record payments," Mr Jeffery said.

Norco's turnover reached more than \$680m during FY2019-20, with annual milk intake at 214 million litres.

Norco chief executive **Michael Hampson** said the remarkable result came despite coronavirus restrictions and the subsequent recession.

"By delivering change and empowering our people, we have been able to record a large increase in value for our farmers and lay the foundation for further success."

*Norco won the Ecolab Award for the highest-scoring white milk and the Ecolab Award for the highest-scoring modified milk in the 2020 DIAA Australian Dairy Product Competition. Competition results coverage begins on page 22. ■*

### Fonterra buys RFG's Dairy Country business

Fonterra Brands (Australia) has bought Dairy Country, the dairy processing and manufacturing subsidiary of Retail Food Group Limited (RFG).

RFG executive chairman **Peter George** said the move is part of the café and restaurant franchise company's 18-month restructure and transformation program, focusing on its core franchising and coffee businesses. He said RFG is applying a

new franchise system across its eight brands.

In July, the Australian Competition & Consumer Commission concluded an investigation into RFG over potential breaches to the *Corporations Act*, having been referred by a parliamentary committee into the franchising sector last year.

Mr George said, "Net proceeds from the sale will be applied to the extinguishment of Dairy Country's working capital facility [around \$13.7 million] and the balance will be used

to pay down debt. This will free up cash in the short to medium term and provide RFG further capacity to respond to the challenges of COVID-19."

The deal includes Dairy Country's Victorian processing and packaging plants in Campbellfield and Tullamarine, and related services, intellectual property and the trademark for the Dairy Country brand. Most of permanent employees will be transferred to Fonterra facilities.

Business News Australia reported that the RFG, which was singled out by a parliamentary inquiry into Australian franchisors for damaging "the reputation of franchising", made several positive changes during FY20 to improve its losses from \$142.5 million last year to just \$4m at 30 June 2020. Mr George told the publication that the year of hard work included "refinancing the balance sheet and paying off debt, [and] the group was in a position to begin repairing its relationships with franchisees". RFG had racked up losses of \$456 million over the past three years. ■

### Union Dairy Company pays ACCC fine

The Australian Competition & Consumer Commission has issued Union Dairy Company (UDC) with a \$10,500 infringement notice for failing to comply with Dairy Code obligations.

The ACCC alleged that rather than publishing exclusive supply agreements on its website – as required by the Code – Riddoch Trading Pty Ltd, trading as the UDC, had dairy farmers fill in an online form with data that included herd size and current processor before they could access the UDC agreement.

The ACCC also alleged UDC also did not publish a non-exclusive agreement until well after the June 1 deadline.

ACCC deputy chairman **Mick Keogh** said, "Processors must make their milk supply agreements publicly

available, rather than putting them behind a portal or other barrier. In failing to properly publish its agreements by the time required by the Dairy Code, UDC may have made it more difficult for farmers to quickly access key information and identify the best supply agreement and milk processor for their circumstances."

He said the watchdog was "also concerned that UDC's delay in publishing a nonexclusive agreement may have sent the incorrect message to farmers that UDC is not obliged to offer such agreements, and that farmers may have missed out on the option to consider a UDC non-exclusive agreement".

"It's very important that processors and farmers understand the requirements of the Dairy Code and comply with them."

Mr Keogh said the Dairy Code was legally binding and breaches may result in the ACCC taking enforcement action.

Payment of a penalty specified in an infringement notice is not an admission of a contravention of the Dairy Code. ■

## Dairy features in Aussie cooking skills

New research has shown that "making fondant" has become Australians' most-searched cooking skill during the COVID-19 pandemic, with over 77,000 searches a month.

The research, released by English-based online cake shop Jack & Beyond, showed 61,960 Aussies a month went online for help with buttercream, while the classic custard was sixth (33,950) and shortcrust pastry 10th (24,900). The kitchen skills least-searched included making soufflé at 15,630 monthly searches, which came in at 20th and is where the research stopped.

Tips and hacks on TikTok for making fondant, among other skills, were increasingly popular. ■

## News Environmental



### Nestlé joins US Dairy to reduce carbon emissions

Nestlé has joined the Net Zero Initiative, a US dairy-industry effort to help US dairy farms implement new technologies and adopt economically viable practices.

The initiative is a critical component of that country's dairy industry's environmental stewardship goals endorsed by dairy industry leaders and farmers to achieve carbon neutrality, optimised water usage and improved water quality by 2050.

Innovation Center for US Dairy chairman **Mike Haddad** said US processors, cooperatives, farmers and retailers had been working to provide the world with responsibly produced, nutritious dairy foods.

The centre also made a US\$10 million investment and a multi-year partnership with Nestlé to support the Net Zero Initiative and scale access to environmental practices and resources on US farms.

Nestlé USA chief supply chain officer **Jim Wells** said Net Zero Initiative could transform the dairy industry. "Scaling up climate-smart agricultural initiatives is key to Nestlé's ambition to achieve net-zero greenhouse gas emissions by 2050 and will help reduce the carbon footprint of many of our brands." ■

### KitKat urges 'break for planet'

In a push to encourage and educate Australians on recycling soft plastics correctly, KitKat has used its well-known "break" tagline, temporarily replacing the logo on its four-finger milk chocolate bar pack.

The new campaign, called "Give the Planet a Break", uses limited-edition bars featuring a KitKat-inspired recycling symbol and an call to action to drop off soft plastic wrappers at REDcycle collection bins, which are located in most major supermarkets.

**Joyce Tan**, Nestlé's head of marketing confectionery, said putting soft plastics in REDcycle diverts them from landfill, enabling them to be used as a valuable resource to make useful items such as benches and fences.

The campaign launched with new research commissioned by KitKat, revealing Australians' attitudes and behaviours to recycling soft plastics. The research found that while Australians show a strong desire to recycle correctly, 48% were actually getting it wrong.

"Together, we want to work with Aussies to help them 'Give the Planet a Break' and recycle their soft plastics right. We know Australians have great intentions when it comes to recycling, but our research shows that unfortunately 37% either forget to drop off our soft plastics at the supermarket, say we can't be bothered to take them back to store, or don't have anywhere to store them at home."

At the Australian Institute of Packaging Australasian Packaging Conference, Nestlé Oceania's **Margaret Stuart** said the campaign aimed to highlight recycling, and teach consumers that the wrappers are recyclable.

"When you're prepared to give up your logo for a recycling logo, it's a big day," she said. ■

# New consumer habits are impacting domestic dairy demand

As Victoria heads out of lockdown and a more open border policy has been foreshadowed for the end of the year, consumer optimism is picking up across Australia.

Following the unveiling of the federal Budget in October, the Westpac-Melbourne Institute index of consumer sentiment rallied 11.9%, to its highest level since 2018. With warmer weather and the festive season upon us, many have been quick to leave their homes and isolation behind. This newfound freedom is supportive of a recovery in demand for dairy from the foodservice sector – i.e. cafés and restaurants. However, as the COVID-19 pandemic forced consumers to fundamentally change their purchasing habits during 2020, some of these new behaviours carry implications for domestic dairy demand.

Through the roller-coaster that was the first wave of COVID-19 infections, dairy demand remained relatively resilient, in part supported by the industry's ability to quickly adjust. In many instances the supply chain was flexible and able to adapt, for example by shifting products destined for foodservice channels into the retail sector. This helped to mitigate revenue loss when foodservice demand was virtually wiped out overnight.

Data from Dairy Australia's domestic sales database shows that sales of cheese through grocery channels surged during the first three months



Image: Supplied

**Sofia Omstedt**

Industry analyst,  
Dairy Australia



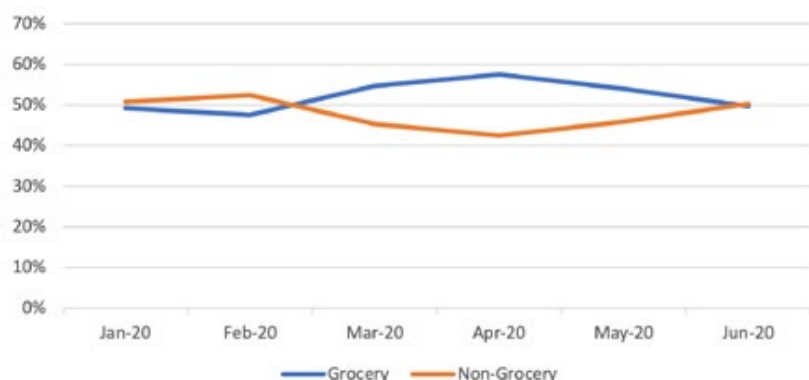
of the pandemic. This increase did not manage to fully offset the decrease in non-grocery sales, which plummeted over the same period. From May onwards, as different states eased lockdown restrictions, sales reverted back to longer-term averages; however, venue-level customer limits have continued to weigh on overall demand from the foodservice sector.

The strength in domestic demand for dairy has also helped to protect sales, as consumers proved willing to change where they bought a product. As people no longer travelled to work or school, sales dropped for products usually purchased on-the-go, in convenience stores or service stations, such as flavoured milk. Fortunately, many consumers turned to supermarkets for their flavoured-milk fix, which increased retail demand over the year.

## Warming to home cooking

While flavoured milk has been one product where a significant shift in consumer-buying behaviours between channels largely protected sales, there have been winners and

Share of domestic cheese sales





losers from the COVID-19 pandemic. Not surprisingly, as consumers spend more time at home, restaurant revenue has fallen. Although restaurants and cafés have reopened in many states, sales remain considerably weaker than last year.

In comparison, takeaway sales have surged to account for most foodservice demand. Traditionally, takeaway outlets tend to utilise more dairy in their menus, supporting demand for products such as cheese, used on pizzas. Food ordering apps may have been a go-to for many in this time of reduced freedom, however, the home kitchen is also receiving a solid workout.

As consumers eat more meals at home, dairy products used in cooking (and baking) are the ones that have grown the fastest since the start of the pandemic. Sales of butter, everyday-style cheese, shredded cheese and plain yoghurt

“  
*Sales of butter, everyday style cheese, shredded cheese and plain yoghurt have surged.*”

have surged. Demand for larger pack sizes of these products especially increased, as consumers appear to be stocking up fridges at home. Before the pandemic, premium dairy products, usually sold in individual or small pack sizes, were a major growth driver for the industry. This included sales of single-serve yoghurts or single-serve cheese packs that consumers grabbed on-the-go.

As people have settled into new habits, working from home and moving around less, convenience has taken a back seat. A key focus instead

seems to be buying products to be consumed at home.

It is encouraging that dairy is a key ingredient in many recipes since consumers are cooking and baking more than ever before. This helps support domestic demand for dairy and shows growth opportunities available for the industry. Even though consumers will be moving around more as restrictions ease, lingering capacity restraints on foodservice venues weigh on dairy demand from non-grocery sales channels. As people have become used to cooking and baking more at home, some of these new habits will likely become permanent lifestyle changes. If realised, the industry's ability to capitalise on new growth trends will be key to ensure strong ongoing demand for Australian dairy, as we settle into a new normal. ■



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## Victorian raw-milk cheese breaks the mould

Victoria's first producers of raw-milk cheese in decades say the process and the paperwork is not for the faint-hearted – nor for the “get rich quick” dreamers. As for the challenges of producing raw-milk cheese, well that includes “everything about it”. As explained to *Australian Dairy Foods*.

**B**urke and Bronwyn Brandon own Prom Country Cheese at Moyarra – 10 kilometres from Korumburra – in South Gippsland. They have just begun selling the first legal raw-milk cheese in Victoria in decades.

The inaugural batch of *Moyarra Reserve* – a semi-hard pressed unpasteurised sheep milk cheese encased in a natural smear-rind – was cleared by Dairy Food Safety Victoria in March this year. It was sold online through the Prom Coast Food Collective in August. (See box story.)

It is the only commercial cheese in Victoria to be uncooked at any stage of the process.

Burke says, “Raw milk has a much broader flavour, with a longer after-taste. I think it’s a different and more

interesting tasting experience than pasteurised cheese. It’s not necessarily better, it just depends on the customer, and what they want in a cheese.”

In fact, their customers responded with a resounding, “yes please” and were quick to click, “buy now”.

It has made the Moyarra Reserve a popular addition to the rest of the couple’s annual 14,000-kilogram cheesemaking business – which includes running their farm, their cellar door eatery (when COVID-19 clears), their farmers’ market production orders, and the rest of their pasteurised cheesemaking with their sheep herd, and cow milk; buying in the latter at a premium price from a neighbouring 50-cow herd.

Burke and Bronwyn have now had some time to reflect on their industry

breakthrough, and they say the next test will be to build the momentum that the “notoriety” their raw-milk cheese has afforded the Prom Country Cheese brand.

### The nuts and bolts

Burke and Bronwyn milk 160 mainly East Friesian sheep (with a mix of Coopworth, Romney and Cheviot) twice a day through a 12-a-side swingover herringbone on 81 hectares (200 acres), half of which is suitable for the milking ewes.

The ewes’ peak production between September and November is 2.5 litres a day. It takes approximately five minutes to get that milk, which means milking consumes around five hours a day. However, Burke puts the production numbers into perspective

when he shares that each sheep produces their bodyweight (70kg) in cheese every year.

"Our production figures compare favourably to what sheep are producing overseas, like in Italy, where I have worked," he says. "And the Italians have been breeding milking sheep for centuries. So, we're pretty happy with that."

Another telling statistic is that sheep milk is extremely high in milk solids, with 6-10% fat and 5% average protein. It translates into an average 20% yield of cheese from the milk; this is double the yield achieved by goat milk, even though the milks have similar properties. Cow milk yields approximately 13%.

In the past, Burke and Bronwyn have hand-reared their lambs. This year

“

*Raw milk has a much broader flavour, with a longer aftertaste. I think it's a different and more interesting tasting experience than pasteurised cheese.*

they left the lambs on their mothers in the milking herd, and share-milked the sheep. It meant that every milking, the lambs had to be drafted off at the dairy, and fed chaff and grain, while their mothers went to work.

While it impacted slightly negatively on production, with the lambs taking

a little more than if they were bottle fed, and changed the workload – although lessened it – it has meant that they weaned the lambs earlier and weighing 20kg rather than 13kg.

"It's was a bit of a nightmare in the dairy at the beginning of the season," Burke says. "But the lambs have been fantastic once we got all that sorted. And, after five or six weeks we have heavier lambs that are already trained onto pasture and hard feed by their mothers. It gives them a great start."

### What goes in, must come out

Burke and Bronwyn's heavily grass-based farming practices (no silage is fed) are all geared towards the final product. They have to pre-dip and wipe each sheep before

## Collectively making money

The Prom Coast Food Collective is now returning 90 cents in the dollar to its 39 suppliers every week.

The Collective was pushed from a leisurely monthly run, into a busy co-ordinated weekly order, as the reality of COVID-19 hit the South Gippsland community.

Burke and Bronwyn Brandon, who own Prom Country Cheese (see main story), have been part of the movement for three years. The couple milks 160 sheep, producing 14,000 kilograms of cheese every year. They also own a cheesery cellar door and kitchen where – before coronavirus hit – Bronwyn's skills as a chef showcased their produce and created conversations.

When many of their Collective's shop fronts were closed down, the Collective – which offers curated organic goods including honey, flowers, bottled milk, meat, bread

and cider – decided to up the ante on the Open Food Network ([openfoodnetwork.org.au](http://openfoodnetwork.org.au)) and use fellow producers' refrigerated trucks to make the weekly deliveries into and around Melbourne.

Burke says the decision has been a revelation.

"We used to do monthly drop-offs for the customers and they would meet us to collect them. But, within that first week of restrictions, we went from monthly to weekly, and from meeting up with our customers to home delivery.

"All our customers order online, and we put it all together in one box and deliver all around Melbourne. It's replaced a lot of what we did through our shop. It's so good when local producers can work together."

Although it has changed things slightly, it's also kept many of them in business.

"We share the costs and put some money aside for the administration, expenses and to pay the producers who use their vehicles. I think it's a tremendous achievement to be returning 90c in the dollar to our fellow producers.

"And, because it's all producer-run, we're can be very flexible, efficient and keep the costs low. It's a bit of a first in the style we've set it up.

"We love that our story links all the small producers together from our area, and that we all work with each other."

And, while those cogs of industry have kept turning, Burke and Bronwyn have taken the opportunity to renovate their shop's kitchen, with customers being able to see a fresh look when they can finally return to visit for onsite tastings. ■





“

*I like that raw-milk cheese is expressing the origin of the milk from one particular farm at a particular time of year.*

milking, which demands another person in the dairy during the raw-milk cheese season.

Five weeks before raw-milk cheese production begins, Prom Cheese's milk has to pass a testing criteria, which includes its bulk milk cell count being under 500,000, the total plate count being less than 25,000, less than 10 units of *E.coli*, under 100 units of *Staphylococcus*, and no *Listeria* or *Salmonella*.

"One of the things we also have to do is go through the process of guaranteeing that no animals have any disease. To the point where if any

## Aussie microbiologist helps US raw-milk producer lead the way

**Dr Ron Hull has long been an advocate of raw milk. Here, the long-term DIAA member talks to *Australian Dairy Foods* about his experience and his views on raw-milk cheese.**

**Dr Ron Hull** helped US dairy farmer **Mark McAfee** defend his right to continue to produce and sell raw milk in the United States.

Today, Organic Pastures Dairy Company, based in California, milks 500 cows for an annual turnover of US\$12 million. It is the USA's largest organic raw-milk dairy, supplying more than 900 stores across the nation. More than 50,000 families in Mr McAfee's home state of California alone have it in their fridge.

Mr McAfee is the founder of the Raw Milk Institute, which helps others through the process of gaining accreditation to produce raw milk. He is also working with doctors and researchers exploring the positive health impacts of raw milk.

These days, he has the full attention of regulators – after 16 years of swimming (mostly)

upstream on the subject. The Fresno dairy farmer has described his ride towards the commercial acceptance of raw milk as "being on the head of a missile flying through space". Mr McAfee fought for advance – often in court – to keep the US federal Food and Drug Administration (FDA) off his business's back. He has always argued that consumers drive demand for raw milk.

### Australian link

Ron Hull, who worked for the CSIRO for two decades – including time as its principal research scientist in dairy – helped Mr McAfee compile risk assessments early in his quest. Today, Dr Hull, who is based in Melbourne, is the principal consultant microbiologist for Ron Hull & Associates.

For years, Dr Hull has consistently said Australia lags behind in raw-milk conversations, and he cites Mr McAfee as a shining example that there is good health and profitable farming within raw milk and the products made from it.

Raw milk – banned in Australia for two decades – is available in New Zealand, the UK and many states of the USA. It is also widely available in Europe. While Australia has now legalised raw-milk cheese production in limited instances, the practice is still uncommon.

### Victorian first

The recent news that Prom Country Cheese has become the first legal producer of raw-milk cheese in Victoria was music to Dr Hull's ears.

"I've almost given up hope on the dairy industry in Australia on this subject – and I've been involved for 50 years," Dr Hull told *Australian Dairy Foods*. "This is great news.

"I appreciate we're talking about raw-milk cheese in this conversation, but raw milk is also perfectly safe. I don't believe raw milk should have ever been banned, and I drink it whenever I get the opportunity to.

"This is why people say Australian cheese has no flavour or life to it when they compare it to a French

have any health issues at all, we have to run a second herd and keep the milk separate, and we do now have a higher cull rate because of it.”

### Raw challenges

The challenges of producing raw-milk cheese includes everything about it.

“It doesn’t suit all cheesemakers, because of the control you have to have over the milk quality,” Burke says.

“You really have to have your own animals to do everything Dairy Food Safety Victoria needs you to do. It’s

more about what happens in the dairy, and the quality of the milk than the actual cheesemaking. Testing and record keeping are next level compared to regular milk.

“You can’t make cheese unless the milk meets the criteria. And, I haven’t met a dairy farmer yet who could be bothered doing the things we need to do to make raw-milk cheese.”

To make the Moyarra Reserve, instead of the milk and curds being pasteurised, the potential pathogens in the milk are de-activated using moisture content, salt, natural lactic acid, temperature – and time.

It means the cheese has to be matured and temperature controlled for more than five months, and pass extensive tests to guarantee it is safe to eat. It is labour intensive, and naturally hikes the cost of production.

“But we believe the resulting cheese is worth all the extra effort,” Burke says. “The diverse biology and complex chemical reactions within the cheese produce a cheese unlike any other. The initial aroma and flavour is vibrant – like caramelised summer hay. The middle palette is robust, filling and lingering in the sinuses with a spicy finish.”

cheese, for example. Because our cheese made with pasteurised milk tends to be pretty bland.

“And, I think that’s what a lot of our artisan cheesemakers strive for because they go to France and eat the cheese and they say, ‘Wow, this is great stuff’.”

### Back to the basics

Dr Hull said pasteurising was first mandated for Australian cheese when the industry needed consistency for bulk sales to Japan in 1968.

“In order to get a very consistent product, pasteurising was very effective at evening out the quality of the cheese. They wanted long-lasting, very bland cheese, which is what they got.”

But Dr Hull says there is goodness within Australian agriculture – which Australia would do well to get back in touch with.

### ‘White blood’

In fact, at the 2015 Raw Milk Symposium in the USA, the president of the Weston A. Price Foundation, **Sally Fallon Morell**,

“...it includes a built-in protective system called *Lactoperoxidase*, which some countries are now considering as an alternative to pasteurisation.’

said that raw milk was often referred to as “white blood”, because it included all the components of blood that built and supported immune systems – with the exception of red blood cells.

Among other compounds, it includes a built-in protective system called Lactoperoxidase, which some countries are now considering as an alternative to pasteurisation.

“This is why children in Victoria have the highest level of allergies in the world,” Dr Hull says.

“Because they’re not getting the beneficial microbes from organic food which contribute to a healthy microbiome [the totality

of micro-organisms, bacteria, viruses, protozoa, fungi and their collective genetic material present in the gastrointestinal tract].

“These factors all help trigger innate immunity [non-specific defence mechanisms that include chemicals in the blood, and immune system cells which attack foreign cells in the body]. And, innate immunity represents half of our immune response,” Dr Hull said.

He believes the Australian industry has righted a wrong by approving the production of raw-milk cheese in Victoria.

“To be honest, the argument against raw milk never involved science.” ■

#### Background:

Now the principal consultant microbiologist at Ron Hull & Associates, Dr Ron Hull was head of CSIRO Dairy Microbiology, including Curator of the CSIRO Starter Culture Collection from 1974–1994, and research associate of molecular oncology in the Pathology Department at Stanford University Medical Centre, in California, USA, from 1971–73. He holds a BSc and PhD.

### ‘Did it because we could’

Bronwyn – who trained as a chef – had some reservations about rocking the boat with the additional work raw milk involved.

Burke says, “But it’s something I’ve been wanting to do for a long time, and she wanted to give me the chance to have a go and make the dream a reality. I wanted to do it just because we can, and we’re also in a good position to do it because we’re milking our own herd.

“We will be aiming to make most of the raw-milk cheese through the spring and early summer when we peak, because we have to process the milk within 24 hours. So, to be honest 300 litres a day is as big a batch as we can make right now.”

He says having full control of the production and understanding the farm and the animals has been the difference for them.

“I like that raw-milk cheese is expressing the origin of the milk from one particular farm at a particular time of year. Our spring cheese will be quite a different cheese to what we made in autumn, because the fat

“

*It’s really about learning how to talk the language that your regulators do.*

in the milk is a lot lower then. So it should suit a hard cheese better.

“The last cheese we made was a raw-milk cheddar, which we released in early October. It was really smooth and creamy for a cheddar. It could be even better with a more typical texture with our spring milk.”

### Beating the paperwork

Burke’s parents **Trevor and Jan Brandon** founded the family cheesemaking business 20 years ago. With Trevor a microbiologist, Red Hill Cheese was a pioneer of specialist cheese, creating concepts to match Mornington Peninsula wines.

In this light, the raw-milk cheese precedent was not as big a departure for Burke as it might first have appeared.

Burke and Bronwyn pulled Trevor in from retirement to help get through the documentation. Burke said his father’s understanding of the process and “regulator speak” was invaluable during the two-year process.

“We did put it off for a while,” Burke says. “The regulators set up the regulations for it in 2015, but hadn’t thought it through properly and ironed out the bugs, and we had enough going on, so we weren’t ready to challenge them.

“We had thought about it for a while. We wanted to do something different to everyone else with a bit of an edge. Part of that was going into milking sheep, which required us to start up our own dairy.

“We got some advice from a French cheesemaking consultant. One thing led to another, and we finally thought the time was right.”

Burke says they would do it again.

“Yes, probably. It’s really about learning how to talk the language that your regulators do, and being in the industry for 20 years you get to learn that language a little bit.

“They [regulators] don’t think the way we do. The day-to-day cheesemaking is not about science, it’s about the cheese. The regulators are being extremely conservative right now in what they’ve allowed us to produce.

“That may change over time as we compile data. But, we understand that for now we are well and truly under the spotlight, and we are being very careful.”

### Favourites and burgeoning ideas

Burke says he enjoys making their blue cheese the most. He has also been working with some new ideas, incorporating some of the raw-milk starters into the pasteurised milk to make the flavours more interesting.

Venus Blue is a delicate, creamy-blue mould sheep cheese; it has a





creamy, soft finish which is typical of sheep milk cheese.

"Venus Blue is a really fun and easy cheese to make. It works so smoothly in our system. Raw-milk cheese is an extension of what we were already doing with our indigenous starters, but we're just going all in with the raw-milk cheese influence.

"It's got that diversity in it, but it's going into pasteurised milk. Our milk was analysed, and it has over 50 bugs which are useful for cheesemaking. They can influence the colour and texture, but not necessarily the flavour."

### Raw-milk production reserves

Burke says they are planning to set aside a quarter of their production for raw-milk cheese production.

"There was a lot of interest in the trial stock, and we had to say 'no' to some

“  
...the type of customers we have who are looking for a local product with a story behind it that respects the milk ...

people, who didn't put their hand up early enough," Burke said.

"But, we now have the confidence to make more commercial volumes.

"It's worked out as well as I could have ever imagined for a first year. Because you really don't know until five months later. Being a chef, Bronwyn likes more instant results – and this does take patience."

The Brandons say their raw-milk cheese contributes to a bigger story

– and none of it has anything to do with money.

Burke says, "It's more the ideology, and that overall it will be good for our business in terms of visibility.

"Given that it's only a small portion of our business, we still have a dozen other pasteurised cheeses for our bread and butter, and that will always be the case.

"A lot of the cheese we make here we will never be allowed to do with raw milk.

"The raw-milk cheese enhances what we already do, it works for our farm, and the type of customers we have who are looking for a local product with a story behind it that respects the milk and the environment." ■

– Dianna Malcolm

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# High-pressure homogenisation – is it useful for dairy?

HPH has considerable use potential in dairy processing. Its effects bactericidally and on proteins, along with micro and nano-emulsification capabilities, will no doubt find favour with new product developers, as **Emeritus Professor Hilton Deeth** explains.

**H**omogenisers are used widely in the dairy industry, mostly for producing homogenised milk and yoghurt. These normally operate at pressures of around 25 megaPascals (MPa), with some as high as 40MPa. They reduce the size of milk-fat globules from an average diameter of around three microns to  $\leq 1\mu\text{m}$  and coat these small globules with milk proteins – mostly caseins – so they become denser and do not rise to the surface of milk and cause a cream layer. They have little effect on bacteria or the chemical components of milk.

Homogenisers are now available which operate at much higher



Image: Nigel Welch

**Hilton Deeth**  
Emeritus Professor  
of Food Science,  
University of  
Queensland

pressures, from 100 to 450MPa. At these pressures, they can have significant effects on chemical components and bacteria in milk as well as physical effects on fat globules. Homogenisation by this equipment is known as High-Pressure

Homogenisation (HPH) or, at pressures  $> 200\text{MPa}$ , Ultra-High-Pressure Homogenisation (UHPH) (Dumay *et al.* 2013).

HPH should not be confused with High-Pressure Processing (HPP), which commonly operates at pressures of 300-600MPa but is a completely different technology. A comparison of the two technologies is given in Table 1. A major difference is that HPH is a continuous-flow process, while high pressure processing is a batch operation with a maximum capacity per batch of ~525 litres. Because of this difference, HPH is sometimes referred to as Dynamic High-Pressure Processing.

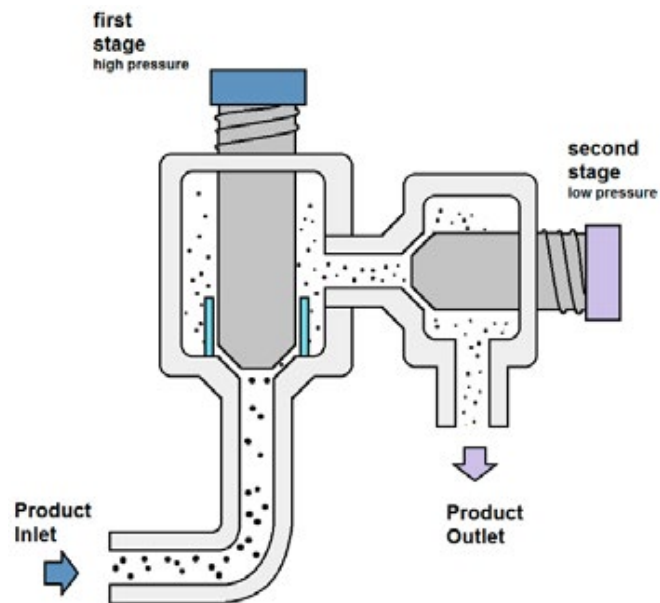
**Table 1.** Comparison of high-pressure homogenisation and high-pressure processing

Characteristic	High-Pressure Homogenisation	High-Pressure Processing
Mode of operation	Continuous flow	Batch and semicontinuous
Operating pressures	100-350 MPa	300-600 MPa
Time under pressure	$\ll 1\text{ s}$	2-30 min
Capacity	Up to 5000 L/h at 150 MPa	Pressure vessels up to 525 L
Physical forces	Shear, turbulence, cavitation	Compression
Heating effect	$\sim 17\text{-}23^\circ\text{C}$ per 100 MPa	$\sim 4^\circ\text{C}$ per 100 MPa
Bactericidal mechanism	Rupture of the cell and release of contents	Protein denaturation, membrane damage
Emulsification effect	Extensive	None
Colour of treated milk	Little effect on colour	Milk becomes clear due to casein micelle dissociation
Filling and packaging	In-line filling and sealing of packages post-treatment	Pre-packaged products can be treated directly

### Types of HPH

There are two major types of high-pressure homogenisers: one operates via **valves**, similar to those in conventional homogenisers while the other type, **microfluidisers**, operate on a completely different principle. Homogenisers of the first type usually have two valves in series, a primary and a secondary, with the secondary operating at 10-20% of the pressure in the primary valve (see Figure 1). They exert their effect through cavitation, shear, impact and turbulence. Some laboratory and pilot-scale high-pressure homogenisers are capable of operating at pressures up to 450MPa but usually operate at less than 300MPa. Industrial-scale high-pressure homogenisers operate at up to 150MPa (GEA, 2016).

In a microfluidiser, the liquid feed stream is split into two streams,



**Figure 1.** The valve assembly in two-stage high-pressure homogenisers

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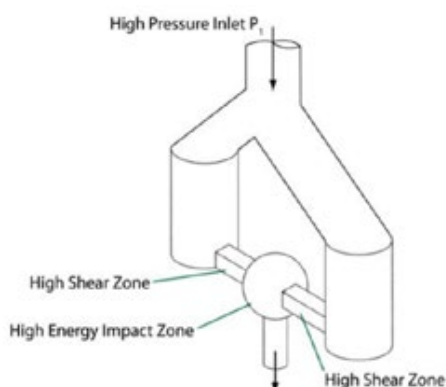




which are collided with each other at velocities up to 50 metres per second in an interaction chamber (see Figure 2). The pressure used in microfluidisers is normally in the range 100 to 200MPa. The physical effects of microfluidisers are due to cavitation and the impact of the collision of the two feed streams in the interaction chamber (Paquin 1999; Hardham *et al.* 2000).

HPH by both types of homogeniser causes an almost instantaneous temperature rise in the treated product of ~17 to 23 degrees Celsius per 100MPa. The extent of the rise depends on the composition of the product, with the rise increasing with fat content. This temperature rise can be exploited in some applications; since the product is at the highest temperature reached for a very short time, the heating at this temperature will have little effect on the chemical components of the product but will have a significant effect on bacteria.

High-pressure homogenisation has considerable potential for use in the dairy industry but to date has found limited application. However, it has been used commercially in the chemical, pharmaceutical and biochemical industries for some time. To date, it has been most suited to processing relatively small-volume products due to the capacity of the available equipment. However, larger-capacity valve-type machines such as



**Figure 2.** Flow path of a Microfluidiser™ (From Microfluidics 2015)

the GEA Ariete Homogeniser 5400 are now available; this homogeniser has a maximum flow rate of 10,000 litres per hour at 100MPa and 5,000L/h at 150MPa (GEA 2016). Industrial microfluidisers operate up to 900L/h at 69MPa and 300L/h at 200MPa (Microfluidics 2020).

The major applications of HPH are homogenisation, emulsification, microbial inactivation, cell disruption and recovery of intracellular components, modification of food biopolymers, enzyme inactivation, nano-encapsulation of bioactives, and production of stable nano-emulsions, nano-suspensions and liposomes (Comuzzo and Calligaris 2019; Microfluidics 2020).

The following are some applications in dairy.

### Pasteurisation and sterilisation

High-pressure homogenisers cause destruction to some extent of a wide range of organisms (Diels and Michiels 2006). The effect is due to both the physical forces and the heat generated in the homogeniser. Greater bacterial destruction occurs at higher homogenisation pressures and higher temperatures. Product composition can also affect inactivation. For example, inactivation of *E. coli* is greater in whole milk than in skim milk, possibly because the temperature rise during HPH increases with product fat content. HPH treatment of milk at 300MPa with an initial temperature of 30–40°C reduced the bacterial count by about 3.5 logs. The treated milk had a shelf-life of 14–18 days at 4°C, approximately equivalent to thermally pasteurised milk (Perada *et al.* 2007).

Because of the instantaneous temperature rise, HPH has the potential to produce extended shelf-life (ESL) and even shelf-stable sterile milk, equivalent to UHT milk. For example, Amador-Espejo *et al.* (2014) produced sterile cow milk using UHPH at 300MPa and an initial temperature of 85°C. The temperature reached was 139°C and the residence time was estimated to be 0.5s. They also produced conventional UHT milk and found that the UHPH and UHT-treated milks were not significantly different in colour, particle size, buffering

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capacity and plasmin proteolysis, but the UHPH samples had less cooked flavour than the UHT samples.

The use of UHPH for producing shelf-stable milk is equivalent to direct thermal processing. The milk is preheated to 75–85°C and then heated (by the homogenisation process) very rapidly to sterilisation temperature and then cooled very rapidly back to 75–85°C. The UHPH treatment has the potential to also homogenise the milk. Unfortunately, at high pressure such as 300MPa, HPH causes clumping of fat globules and hence an unstable fat emulsion. This could be avoided by using HPH at <200 MPa and increasing the initial temperature.

#### Homogenisation/emulsification

With a valve-type high-pressure homogeniser at 100–200MPa, the size of milk fat globules can be reduced from an average of about 3µm to as low as 0.12µm. However, as

“  
...those powders with the smallest droplet size (< 200nm) can be transparent, which presents opportunities for novel new products.”

indicated above, at higher pressures, aggregates of fat globules form and the homogenisation efficiency is reduced. Homogenisation with a microfluidiser produces a finer emulsion with a narrower size distribution than homogenisation with a valve-type high-pressure homogeniser. Hardham *et al.* (2000) working at CSIRO found that thermally processed UHT milk homogenised by microfluidisation was more stable during storage

than UHT milk which had been conventionally homogenised.

When using HPH on raw milk, care must be taken to ensure the temperature increases to ~80°C to ensure the native milk lipase is inactivated. Otherwise lipolysis occurs and the milk becomes rancid. HPH of raw milk at 200MPa with an initial temperature of 40°C did not result in lipolysis as the temperature rose to 79.6°C, whereas HPH at 200MPa and an initial temperature of 30°C (outlet temperature 73.6°C) resulted in considerable lipolysis (Serra *et al.* 2008).

A major application of HPH is in production of nanoemulsions, emulsions with very small droplet sizes (< 1µm). These are prepared with oils and emulsifying materials such as sodium caseinate and whey protein isolate. They can be prepared by valve-type high-pressure Homogenisers (Håkansson

## Proven performance combining Cabinplant and Multivac



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- Dosing of spices

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2018) or microfluidisers (Jafari *et al.* 2017; Villalobos-Castillejos *et al.* 2018). Nanoemulsions have several applications, including foods, pharmaceuticals, healthcare products and agrochemicals. They are also used to produce nano-encapsulated powders by spray drying. Interestingly, those with the smallest droplet size (< 200nm) can be transparent, which presents opportunities for novel new products.

### Effect on proteins

Both casein micelles and whey protein particles are altered by HPH. The size of casein micelles in milk is decreased by HPH at 200MPa but increased at higher pressures such as 350MPa. The decrease in size of casein micelles at  $\leq$  200MPa is accompanied by an increase in non-sedimentable casein, that is, some

casein is displaced from the micelle and becomes soluble.

HPH at temperatures lower than about 70°C cause little or no denaturation of whey proteins. At higher temperatures denaturation occurs but this is a thermal effect and not an effect of homogenisation.

HPH markedly reduces the particle size of whey proteins in whey protein isolate (WPI) solutions. At >200MPa, HPH with a valve-type homogeniser reduced the size so that 90% were <1 $\mu$ m compared with 9% of <1 $\mu$ m before homogenisation. The HPH treatment increased the foaming ability and stability of the whey proteins (Bouaouina *et al.* 2006). In work carried out at VUT, microfluidisation of whey protein solutions at 140MPa with five passes caused an increase in heat stability,

solubility and foaming capacity (Dissanayake & Vasiljevic 2009).

Microfluidisation at 150MPa substantially increased the solubility of whey protein which had been heated at 90°C for 10 minutes by reducing the size of the protein aggregates; interestingly, a similar effect is caused by ultrasonication. This has practical implications for improving the stability of products containing heat-denatured whey proteins.

### Conclusion

HPH has capabilities which could find applications in the dairy industry as they have in the chemical and pharmaceutical industries. In particular, its bactericidal effect, its effects on proteins and its micro and nano-emulsification capabilities will no doubt find favour with new product developers in the near future. ■

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# Congratulations...

Over these next few pages you'll find winners from the 2020 DIAA Australian and Victorian Dairy Product Competitions.

A big thank you to members from various DIAA State Branches who took the time to make these presentations as special as possible for the recipients. In a year where things were "topsy turvy", the values of the DIAA shone through, highlighting members' commitment to the highest possible levels of achievement in the dairy industry.

Our coverage begins on this page with the three Platinum winners in the DIAA Australian Dairy Product Competition.



## Process Partner Award

Most outstanding show exhibitor small-scale producer

**Berrys Creek Gourmet Cheese**

**Tarwin Blue**

Presenter: Darryl Cardona Recipients: Barry Charlton, Cheryl Hulls



## BVQA Award

Most outstanding show exhibit large-scale producer

**Norco Foods – Labrador**

**Norco Lite Milk**

Presenter: Allan Box

Recipient: Shane Welsh



## NAB Agribusiness Award

Most successful exhibitor

**Dooley's Ice Cream**

Recipients: Harold Milner, Alyciandra Milner





## DIAA Australian Dairy Product Competition



**Sopura Award**  
 Champion cheesemaker  
**Burrata Cheese**  
**Fabio Portella – Burrata Cheese**  
 Presenter: Darryl Cardona  
 Recipient: Fabio Portella



**Ecolab Award**  
 Highest scoring white milk  
**Norco Foods - Labrador**  
**Norco Lite Milk**  
 Presenter: Brad Campbell  
 Recipient: Shane Welsh



**Amcor Flexible Award**  
 Highest scoring cheese  
**Berrys Creek Gourmet Cheese**  
**Tarwin Blue**  
 Presenter: Darryl Cardona  
 Recipient: Tom Nye



**SACCO Award**  
 Highest scoring Italian-style cheese  
**Florida Cheese**  
**Florida Burrata**  
 Presenter: Darryl Cardona  
 Recipient: Mauro Montalto



**Piber Plastics Award**  
 Highest scoring frozen product  
**Fritz Gelato**  
**Fritz Gelato Hazelnut**  
 Presenter: Darryl Cardona  
 Recipient: Andrew Johnston



**ABB Australian Award**  
 Highest scoring dairy dip  
**The Provedore Group**  
**Smoked Salmon Dip**  
 Presenter: John Rieusset  
 Recipient: Fernando Machado



**Chr Hansen Award**  
 Highest scoring cultured dairy product  
**Procal Dairies**  
**Procal Natural Yoghurt**  
 Presenter: Darryl Cardona  
 Recipient: Laney Quinn



**DSM Award**  
 Highest scoring cream or dairy dessert  
**Lactalis Australia**  
**Pauls Milk Chocolate Dairy Dessert**  
 Presenter: Allan Box  
 Recipient: Adam Christensen



**Roha Award**  
 Highest scoring product containing natural flavourings  
**Lactalis Australia**  
**Pauls Milk Chocolate Dairy Dessert Milk**  
 Presenter: Allan Box  
 Recipient: Mandy Illot





## AWARDS

*DIAA Australian Dairy Product Competition continued*



### **Foss Award**

Highest scoring flavoured milk

**Hunt & Brew**

**Hunt and Brew Cold Brew Coffee Colombia**

Recipient: Tony Girgis



### **GEA Powder Award**

Highest scoring powder

**Australian Consolidated Milk**

**ACM Skim Milk Power**

Presenter: Janos Kaldy

Recipient: Jason Harris



### **Chr Hansen Award**

Most innovative product in show (Judges' choice)

**Ashgrove Cheese**

**Cheddar Amazeballs**

Presenter: Rick De Sousa

Recipient: Richard Bennett



### **IOXM Award**

Highest scoring pasta filata

**Cottage Cheese Farm**

**Cottage Cheese Farm Mozzarella**

Recipient: Domenic Cristiano (left)



### **WR&D Wells Award**

Highest scoring flavoured cheese

**King Island Dairy – Saputo**

**Stokes Point Smoked Cheddar**

Recipient: Chris Malamidis



### **FMS&CG Award**

Highest scoring organic product

**Picnic Dairy Foods**

**Sahara Kefir Bush Honey**

Presenter: Darryl Cardona

Recipient: Ibrahim Ozdemir



### **Chr Hansen Award**

Highest scoring Greek-style yoghurt

**Procal Dairies**

**Coles Finest Indulgent Greek Style Yoghurt**

Presenter: Darryl Cardona

Recipient: Pratik Patel



### **Cheeselinks Award**

Highest scoring non-bovine product

**Meredith Dairy**

**Goats Milk Yoghurt**

Presenter: Darryl Cardona

Recipient: Craig Dunn



#### IXOM Award

Highest scoring blue cheese (Class 27)

**Berrys Creek Gourmet Cheese**  
**Tarwin Blue**

Presenter: Darryl Cardona  
Recipient: Tenille Kennedy



#### IDEXX Award

Highest scoring semi-hard cheese

**Florida Cheese**  
**Casalinga**

Presenter: Darryl Cardona  
Recipient: Lisa Galati



#### Sopura Australia Award

Highest scoring very hard cheese

**Florida Cheese**  
**Pecorina Pepato**

Presenter: Darryl Cardona  
Recipient: Rose Portella



#### Dupont Award

Highest scoring stirred yoghurt

**Village Dairy Products**  
**Village Honey Yoghurt**

Presenter: Darryl Cardona  
Recipient: Omer Huseyin



#### Sensient Technologies Award

Highest scoring ice-cream

**Bulla Dairy Foods**  
**Reese's Peanut Butter Tub**

Presenter: Darryl Cardona  
Recipient: Andrew Noisette



#### Amcors Flexibles Asia Pacific NZ Award

Highest scoring consumer pack cheddar

**Bega Cheese**  
**Bega Strong and Bitey**

Presenter: Philip Tatzenko  
Recipient: Steven Olds



#### Jasol Award

Highest scoring brie/camembert style

**Hunter Belle Dairy Co**  
**Ashed BrieBelle**

Recipients: Jason & Annie Chesworth



#### Savanah Bio Systems Award

Highest scoring non-cheddar cheese

**Berrys Creek Gourmet Cheese**  
**Tarwin Blue**

Presenter: Darryl Cardona  
Recipients: Rebecca Oxlee, Kate Holder



#### Ecolab Award

Highest scoring modified milk

**Norco Foods - Labrador**  
**Norco Lite Milk**

Presenter: Brad Campbell  
Recipient: Anthony Best





## AWARDS

### DIAA Australian Dairy Product Competition continued



#### RISQ Resolution Award

Highest scoring club cheese

**Maffa Cheese Company**

**Maffa Pickled Onion + Chilli Club Cheddar**

Presenter: Darryl Cardona

Recipient: Ferial Zekiman



#### The Beca Award

Highest scoring premium gelati

**Fritz Gelato**

**Fritz Gelato Hazelnut**

Presenter: Darryl Cardona

Recipient: Andrew Johnston



#### GEA Award

Highest scoring UHT milk

**CERES Natural Foods**

**Just Organic UHT**

Presenter: Darryl Cardona

Recipient: Michael Ockerse



#### Additive Solutions Award

Highest scoring set yoghurt

**Procal Dairies**

**Procal Natural Yoghurt**

Presenter: Darryl Cardona

Recipients: Pratik Patel, Laney Quinn,  
Eve Vafiadis



#### Merieux NutriSciences Award

Highest scoring unmodified full-fat milk

**Bannister Downs Dairy**

**Full Cream Unhomogenised Milk**

Recipient: Suzanne Daubney



#### 4 Site Engineers Award

Highest scoring flavoured milk other than chocolate or coffee

**Bannister Downs Dairy**

**Bannister Downs Dairy Mango Smoothie**

Presenter: Andrew Weinert

Recipient: Suzanne Daubney



#### Pact Group Award

Highest scoring frozen yoghurt

**Serendipity Ice Cream**

**Serendipity Blueberry Ripple Yogurt Greek**

Presenter: Kathy Day

Recipient: Sarah Mandelson



#### Cheetham Salt Award

Highest scoring fetta cheese

**Yarra Valley Dairy**

**The Yarra Valley Dairy Persian Fetta**

Recipients: Mary Mooney, Catherine McCarthy



#### The Product Makers Award

Highest scoring flavoured milk – chocolate

**Lion Dairy & Drinks – Malanda**

**Classic Chocolate**

Recipients: Sherrie Hall, Susan Barton,  
Paul Jones, Kevin Colless



**Tate & Lyle Award**

Highest scoring flavoured milk – coffee

**Hunt & Brew****Hunt and Brew Cold Brew Coffee Colombia**

Recipient: Natalie Sarich-Dayton; Tony Girgis; Julian Amistad

**Australian Awards - Part A****Arthur E. Hacquoil Memorial Gold Medalion**

Highest scoring bulk butter

**Fonterra Australia – Cobden****Bulk Salted Butter****Jonathan Proud and JJ Ryan Shield plus Award**

Highest scoring consumer pack butter

**Bega Cheese – Koroit****Farmers Table Salted Butter****TetraPak Award**

Highest aggregate score for cheddar cheese

**Fonterra Australia – Wynyard****Chr Hansen Cup and Award**

Highest scoring cheddar cheese

**Fonterra Australian – Wynyard****Fonterra Vintage Cheddar****Pictures from judging earlier in the year**

**L-R:** David Manser (DIAA Treasurer, competition admin.), Neil Willman (chief judge), Michael Rammer, Kristine Manser (DIAA National Secretary, competition admin.), Bruno Johansen, Gina Dal Santo, Ray de la Motte, Murray de la Motte, Chris Rolls (chief steward), Tuna Dincer, Leigh Norrie, Janos Kaldy.



**L-R:** Helen Ritchie, Doug Eddy and Justine McCarthy.



**L-R:** Murray de la Motte, Leigh Norrie and Katrina Stanley.



## AWARDS

### DIAA Victorian Dairy Product Competition



#### Merieux Award

Most successful exhibitor

**Picnic Dairy Foods**

Presenter: Janos Kaldy

Recipient: Ibrahim Ozdemir



#### Cheetham Salt Award

Overall cheese champion

**Berrys Creek Gourmet Cheese**

**Tarwin Blue**

Presenter: Janos Kaldy

Recipient: Niki Curtis



#### Ixom Award

Most outstanding show exhibit

**Berrys Creek Gourmet Cheese**

**Tarwin Blue**

Presenter: Janos Kaldy

Recipient: Barry Charlton



#### Ingredion Award

Most innovative product

**South Gippsland Dairy**

**100% Australian Bio Colostrum Powder**

Recipients: Krista Evans, Shelley Walker, Neil Walker



#### Amcor Flexibles Asia Pacific NZ Award

Highest scoring vintage cheddar

**Saputo Dairy Australia Cobram**

**MG Cheddar UK Sweet Vintage**

Presenter: Darryl Cardona

Recipient: Marisa Singh



#### Amcor Flexibles Asia Pacific NZ Award

Highest scoring semi-matured cheddar

**Saputo Dairy Australia Cobram**

**MG Cheddar UK Sweet**

Presenter: Darryl Cardona

Recipient: Marisa Singh



#### WR&D Wells Award

Highest scoring club cheese

**Saputo Dairy Australia**

**Crackerbarrel Infused Maple & Toffee Cheddar**

Presenter: Darryl Cardona

Recipient: Chris Malamidis





#### Aggreko Award

Highest scoring cheese with blue mould  
**Berrys Creek Gourmet Cheese**  
**Tarwin Blue**

Presenter: Janos Kaldy  
 Recipient: Danny Palles



#### Dupont Award

Highest scoring yoghurt  
**Procal Dairies**  
**Procal Natural Yoghurt**

Presenter: Janos Kaldy  
 Recipient: Laney Quinn



#### Additive Solutions Award

Highest scoring soft/fresh cheese  
**Florida Cheese**  
**Florida Cheese Stracciatella**

Presenter: Janos Kaldy  
 Recipient: Daniel Montalto



#### Cheelinks Award

Highest scoring very hard cheese  
**Florida Cheese**  
**Florida Cheese Pecorino Pepato**

Presenter: Janos Kaldy  
 Recipient: Daniel Montalto



#### RISQ Resolution Award

Highest scoring non-bovine product  
**Meredith Dairy**  
**Meredith Dairy Goats Milk Yoghurt**

Presenter: Janos Kaldy  
 Recipient: Craig Dunn



#### QENOS Trophy

Highest scoring modified milk  
**Camperdown Dairy Company**  
**Organic Low Fat Milk**

Presenter: Darryl Cardona  
 Recipient: Peter Skene



#### Sensient Award

Highest scoring novelty ice-cream  
**Bulla Dairy Foods**  
**Bulla Murray St Ice Cream Caramelised Peanut Brittle**

Presenter: Janos Kaldy  
 Recipient: Andrew Noisette



#### ESKO Food Process and Pack Award

Highest scoring milk powder  
**Australian Consolidated Milk**  
**ACM Skim Milk Powder**

Presenter: Janos Kaldy  
 Recipient: Ian Oldham



#### Tate & Lyle Award

Overall champion milk  
**Camperdown Dairy Company**  
**Organic Low Fat Milk**

Presenter: Darryl Cardona  
 Recipient: Peter Skene





## AWARDS

### DIAA Victorian Dairy Product Competition continued



#### Pact Group Award

Highest scoring thickened cream

**Bulla Dairy Foods**

**Aldi Farmdale Double Cream**

Presenter: Janos Kaldy

Recipient: Andrew Noisette



#### ProAnalytics Award

Highest scoring cream

**Bulla Dairy Foods**

**Aldi Farmdale Double Cream**

Presenter: Janos Kaldy

Recipient: Andrew Noisette



#### The Product Makers Award

Highest scoring premium ice-cream/gelati

**Bulla Dairy Foods**

**Reese's Peanut Butter Tub**

Presenter: Janos Kaldy

Recipient: Andrew Noisette



#### Aggreko Award

Highest scoring cheese,  
white mould ripened

**Remarkable Milk Company**

**True Organic Double Brie**

Recipient: Michael Thomas



#### Tetra Pak Award

Highest scoring UHT milk

**Lactalis Australia – Rowville**

**Farmdale Lactose Free Milk Low Fat UHT**

Recipient: Daisy Dai



#### Process Partners Award

Highest scoring flavoured milk – coffee

**Kyvalley Dairy Group**

**Kiewa Country Coffee Flavoured Milk**

Recipients: Emily Gayle, Isabella Hart



#### ABB Australia Award

Highest scoring standard ice-cream other than vanilla or chocolate

**Gundwring Fine Foods**

**Gundwring Finest Ice Cream Ginger**



#### DIAA Award

Highest scoring cheese, smear ripened  
or washed and mixed rind

**Apostle Whey Cheese**

**The Grotto**

Recipients: Dianne Benson, Megan Finlayson, Amy Loorham

# What's New: Fridge & Shelf



## Symrise Award

Highest scoring flavoured milk  
– chocolate

**Lactalis Australia – Bendigo**  
**Farmdale Rambert Chocolate**

Recipient: Rohan Adams



## Ecolab Trophy

Highest scoring flavoured milk  
**Lactalis Australia – Bendigo**  
**Farmdale Rambert Chocolate**

Recipient: Rohan Adams



## FDPI Spares & Maintenance Award

Highest scoring flavoured milk flavours  
– other than chocolate/coffee

**Lactalis Australia – Bendigo**  
**Farmdale Rambert Strawberry**

Recipient: Rohan Adams

## Vic Stafford Perpetual Cup & Trophy

Highest scoring salted butter  
**Fonterra Australia – Cobden**  
**Fonterra Bulk Butter Salted**

## Jasol Award

Highest scoring consumer pack  
butter pats/tubs

**Bega – Koroit**  
**Farmers Table Salted Butter**

## Chy–Max Cup

Highest scoring cheddar cheese  
**Fonterra Australia – Stanhope**  
**Fonterra Cheddar Cheese Matured**

## Tetra Pak Award

Highest scoring cheddar cheese  
– matured  
**Fonterra Australia – Stanhope**  
**Fonterra Cheddar Cheese Matured**

## Aggreko Award

Highest scoring consumer pack cheddar  
cheese  
**Fonterra Brands Australia Pty Ltd**  
**Westacre Tasty Cheddar Block Cheese**

## FOSS Award

Highest scoring fetta cheese  
**Riverina Dairy**  
**Riverina Dairy Fetta**

## Ecolab Trophy

Highest scoring pasteurised (homogenised)  
milk  
**Fonterra Australia – Cobden**  
**Woolworth Full Cream**

This selection of the latest dairy products from around the world and locally will help you stay up-to-date with product ideas, packaging and presentation. Sometimes RRP, sizes and claims are not listed. Products are grouped in type and have been selected for their location, interesting claims, packaging or ingredients. Some look “curious”, while others look downright delicious. Enjoy!

## GLOBAL

### BUTTER

#### Ghee in plastic jar

##### Govind Pure Ghee

India

Govind Milk And Milk  
Products / Govind

RRP: US\$7.55

**Description:** Pure ghee in  
a 1L plastic jar.

**Claims:** 100% vegetarian.  
Fssai certified. Made from  
100% cow milk. Inner  
packaging is recyclable.



### CHEESE: SOFT CHEESE DESSERTS

#### Raspberry cottage cheese

##### Good Culture Simply Raspberry Cottage Cheese

USA

Good Culture / Good Culture

RRP: US\$1.49

**Description:** Cottage cheese with simply  
raspberry flavour, comes in a 142g plastic tray.  
“Ripe  
raspberries tucked under a pillow of good  
culture cottage cheese.”

**Claims:** No added sugar. Real food ingredients.  
Nothing artificial. Keto certified. **Ingredients**  
**include:** Monk fruit juice concentrate, black  
carrot, purple carrot and blueberry juice (for  
colour).



## CHEESE: FRESH & CREAM

### Organic set curds

**Akshayakalpa Artisanal Organic Set Curd**  
*India*

Akshayakalpa Farms And Foods / Akshayakalpa

**RRP:** US\$1.23

**Description:** Artisanal organic set curd in a plastic tray.

**Claims:** 100% vegetarian. No preservatives added. Every time you buy Akshayakalpa products you are encouraging farmers to produce organic food.



## CHEESE: PROCESSED

### Fondue cheese

**Meg Snow Brand Hokkaido 100 Cheese Fondue**  
*Japan*

Megmilk Snow Brand / Meg Snow Brand

**RRP:** US\$5.41

**Description:** Cheese fondue in a plastic packet.

**Claims:** Megmilk Snow Brand "has been walking along with the history of dairy farming and cheese making in Hokkaido, using 100% raw milk from Hokkaido. It is a cheese that suits your taste. A rich cheese fondue made from Hokkaido gouda cheese".



## CHEESE: SEMI-HARD & HARD

### Hand-milk goats

**Natural Valley Goat Cheese Monterey Jack**  
*USA*

Pasture Pride Cheese / Natural Valley

**RRP:** US\$8.99

**Description:** Monterey jack cheese in a plastic vacuum packet.

**Claims:** Traditional Wisconsin Monterey Jack cheese created from milk produced from goats on Southwest Wisconsin, hand-milked by Amish farmers, delivered to our plant in chilled milk cans, the old-fashioned way.



### Wind-popped cheese

**Cheese Pop 100 Percent Popped White Cheddar Cheese**  
*Germany*

Cheesepop / Cheese Pop

**RRP:** US\$2.69

**Description:** Popped cheese balls from white cheddar cheese, comes in a plastic tray.

**Claims:** "Surprisingly crunchy. Popped with 100% wind energy." 100% cheese. Green Dot Certified. No carbs. Gluten free. Vegetarian.



## DRINKING YOGHURT

### Raspberry Greek drinkable

**Pillars Drinkable Greek Yogurt: Raspberry**  
*USA*

Pillars Yogurt / Pillars

**RRP:** US\$4.99



Raspberry-flavoured Greek yoghurt drink in a plastic bottle.

**Claims:** No added sugar; convenience (packaging; time saving); prebiotic; high source of protein; probiotic.

### Kiwi bifidus drink

**Reina Bifidus Fresa Kiwi: Bifidus Drink with Strawberry (Kiwi Flavor)**

*Spain*

Postres Y Dulces Reina / Reina

**RRP:** US\$2.13

**Description:** Four bottles of strawberry and kiwi-flavoured Bifidus drink held within a cardboard sleeve.

**Claims:** Gluten free. 0% fat content. 0% added sugar. Contains active ferments and it is an easy to digest product.



## ICE-CREAM & FROZEN YOGHURT

### Sweet potato ice-cream

**Haagen Dazs Limited Edition Mitsu Imo Honey Sweet Potato Ice Cream**

*Japan*

General Mills / Haagen Dazs

**RRP:** US\$3.13

**Description:** Honey sweet potato-flavoured ice cream in a 110ml cardboard tub.

**Claims:** Limited edition. Recyclable packaging.



### Peach Melba

**Iceland Peach Melba Ice Cream**  
*UK (Made in Italy)*

Iceland / Iceland

**RRP:** US\$2.26

**Description:** Peach-flavoured ice-cream with raspberry-flavoured sauce and freeze-dried raspberry pieces. Comes in a plastic tub.



## MODIFIED MILK

### Foamable barista milk

**Weihenstephan Barista Milch: Barista Milk**  
*Germany*

Molkerei

Weihenstephan / Weihenstephan

**Description:** Perfectly foam-able milk in a Tetra Brik Edge Aseptic.

**Claims:** Perfectly foam-able. FSC certified package. 3% fat. UHT. Homogenised.



## FLAVOURED MILK

### Milk tea for women

**Meiji Savas For Woman Milk Protein Drink With Milk Tea Flavor**

*Japan*

Meiji / Savas

**RRP:** US\$1.11

**Description:** Milk-tea flavoured milk protein drink for women. Comes in a brick liquid carton pack with straw.

**Claims:** FSC certified. Contains 12.5g protein, milk and soy protein. Non-fat plus soy.



The information in this section was supplied by Innova Market Insights. For more, visit [Innovamarketinsights.com](http://Innovamarketinsights.com) or contact Glen Wells on 0407 262 838 or [Glen.Wells@InnovaMarketInsights.com.au](mailto:Glen.Wells@InnovaMarketInsights.com.au)



**UNFLAVOURED MILK****RTD milk in a can****Nagos Ready to Drink Milk**  
*Indonesia*

Fraser And Neave / Nagos

**RRP:** US\$0.71**Description:** RTD

100% fresh sterilised cow milk in an easy-to-open aluminium can.

**Claims:** Certified halal. HACCP, GMP, FSSC and ISO 22000 certified.**Growing-up milk****Yili QQ Xing Discovery Growing Up Milk for Children***China*

Yili / Qq Star

**RRP:** US\$7.32**Description:** Milk drink for growing-up children. Comes in 20 Tetra Brik Aseptic carton packs held in a carton box.**Claims:** Certified halal. No added sugar. With ARA and DHA. Added with dietary fibre.**AUSTRALIA****MILK POWDER****Powder in a pouch****Wattle Health Uganic Skim Milk & Whole Milk**  
*Australia*

Wattle Health / Wattle Health

**RRP:** US\$11.29

Premium organic whole &amp; skimmed milk powder in a plastic packet.

**Claims:** 100% certified Australian organic milk. Naturally gluten free. Makes 5.7L (WMP) and 8L (SMP) of milk. ACO and NASAA certified organic. "Through our partnership with Australia's organic dairy farming community, we are striving towards best practice in sustainability and traceability to deliver more premium products." Quick and easy. Suitable for vegetarians.**CHEESE: SEMI-HARD & HARD****Haloumi burgers****Lemnos Haloumi**

Lemnos Foods / Lemnos

**RRP:** US\$5.66**Description:** Two burger slices of haloumi cheese in a plastic vacuum packet.**Claims:** Proudly made in Australia from at least 99% Australian ingredients. Suitable for vegetarians. No preservatives. Mediterranean lifestyle.**CHEESE: SOFT & SEMI-SOFT****Smoked brie****Tasmanian Wicked Smoked Brie**  
The Wicked Cheese Company / Tasmanian Wicked**RRP:** US\$7.08**Description:** Smoked brie in a 200g plastic wrapper.**Claims:** "Very, very wicked cheese." Made in Australia from 99% Australian ingredients.**iPAC SOLUTIONS** | Instrumentation  
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### SMC's PF3A Series, Energy Conservation Group

Compressed air energy is a significant cost to dairy processors. Analysing existing energy consumption is a key strategy to reduce this waste.

Paul Grantham, SMC Corporation Australia New Zealand's dairy industry key account manager, said many factors can lead to wasted energy, including higher-than-necessary flow rates, excessive pressure leading to higher pressure drops and high leakage rates.

SMC's helps dairy processors realise energy saving opportunities through working with baseline data to identify waste, analysing where the most significant energy savings can be realised and implementing techniques (such as through monitoring components, *i.e.*, flow meters and pressure sensors for improved visibility and feedback).

Paul said SMC's PF3A series, which is perfectly suited to the dairy industry, offers an IO-Link digital flow switch complete with two-screen display. It is compact in size and offers improved display visibility, a built-in temperature sensor, enhanced energy savings and is IP65 compliant.

"Recently, SMC established the SMC Energy Conservation Group, which works with customers globally to provide initiatives and solutions that are delivering efficiencies, process improvements and reduced costs. More than just identifying efficiencies, SMC takes a long-term approach working with customer sites to also identify management and control solutions; to retain the value achieved."

Contact: SMC, [AUsales@smcanz.com](mailto:AUsales@smcanz.com) or [NZsales@smcanz.com](mailto:NZsales@smcanz.com)

### Linear InnoPET BloFill ABF aseptic block

KHS Group's **Thomas Redeker** said PET bottles are ideal for the new sensitive-beverage trend, and are fully recyclable, provide reliable product protection and have good pouring properties. "PET bottles lend themselves to exclusive design. The cap and label can be perfectly tailored to the brand, with a positive effect on the brand positioning at POS."

KHS's linear InnoPET BloFill ABF aseptic block combines the rotary InnoPET Blomax Series V stretch blow moulder with the linear Innosept Asbofill ABF 712 aseptic filler. The block takes up less space than individual machines and doesn't require an air conveyor, cutting down on energy consumption.

"By blocking the machinery and including a continuous clock module, we also minimise the risk of soiling, with a positive impact on hygiene and line availability."

Ten-minute changeovers reduce downtime; performed under aseptic conditions eliminates additional cleaning and sterilisation. The linear aseptic block is designed to fill milk, mixed milk beverages, juice, smoothies and iced tea into PET bottles (250ml to 2L). Output is up to 12,000 1L bottles and 15,000 500ml bottles per hour.

The dry aseptic block's modular design enables the filler to be expanded; *e.g.*: operators can retrofit their block with a chunk filler or additional filling and capping unit, allowing beverage producers to react more flexibly to changing market demands. The filling machine for sensitive products is available in both a standard aseptic and ESL version.

### Recovering high-value products

Potential loss value during processing is particularly noticeable with large quantities of viscous, valuable products such as creams, sauces and soft cheese. Instead of the need for traditional "pigging" to physically push product through key parts of a system, the HRS R Series of heat exchangers empties itself of produce before the cleaning cycle. This range of tube-in-tube heat exchangers uses a scraper bar within each inner tube to enhance product flow, prevent fouling and minimise pressure drop. A helical screw rotating at high speed can be run in reverse, effectively emptying the heat exchanger tubes of product without damaging it or changing its characteristics. The R Series can be configured for horizontal or vertical operation, so gravity can also help recover product from tubes.

Contact: HRS, **03 9489 1866**

### Deep cleaning to-dos after facility shutdown

The COVID-19 pandemic has caused site shutdowns for many food & beverage manufacturers. With a legal obligation to produce safe food & beverages, it is essential that routine sanitation practices continue and that additional sanitation is undertaken after a period of shutdown. Employers also have a legal obligation to ensure the safety of their workforce, including minimising their risk of COVID-19 infection. **Vikan AS's Department of Hygiene** lists these points to note.

Review Sanitation Standard Operating Procedures (SSOPs) to ensure you have the right tools for the job.

- Discard any tools that are damaged or in poor condition
- Clean brand new tools before their first use
- Even new tools could be contaminated with allergens, microbes, or foreign bodies
- Clean existing tools
- Clean the nooks and crannies

### Sanitation for COVID-19 control

This cleaning should be done ongoing and frequently when the plant is back in operation:

- Surfaces that are commonly touched by employees should be cleaned more frequently
- Consider adding a unique colour to your colour-coding plan to specifically clean these non-food contact surfaces
- Tools should also be cleaned between use by different people to reduce the chance of spreading COVID-19

Train staff on the importance of food safety and COVID-19 safety plans

Training is an important step in building and maintaining a food safety culture. This applies to general food safety plans and enhanced COVID-19 safety plans.

Contact: Wells, [wrdwells.com](http://www.wrdwells.com)

## CSL launches new certified organic probiotic range

With over 70 years of probiotic R&D, CSL Centro Sperimentale Del Latte is launching FLORGANIC™ Probiotics, a certified organic product range. FLORGANIC™ Probiotics offers well-documented lactobacillus strains, such as Synbio® blend, *Lactobacillus rhamnosus* CRL1505 and *Lactobacillus rhamnosus* SP 1. These strains are backed by science with numerous clinical studies in immune health, gut health, oral health, skin health, respiratory health and sports health.

**John Goebel**, CEO of CSL Centro Sperimentale Del Latte Asia Pacific, said, "We see a rising consumer awareness and demand on probiotics across the globe. Our FLORGANIC™ Probiotics can enable our clients' brands to expand their healthier options in various products, such as infant formula, milk powder, nutritional supplements, yoghurt, chocolate, etc."

He said a 2019 Innova survey showed more than half of consumers believe that organic products are healthier than products that are not organic. This poses opportunities for innovative producers to expand their offering in a changing market.

"Our multi-functional global team has worked tirelessly over the past year, utilising expertise from all departments to ensure every aspect of the stringent organic certification process has been met." ■



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## MEMBER SPOTLIGHT



**Peter Adamo, MD and co-owner**  
**Golden North Ice Cream**  
**Age bracket:** 56-65  
**DIAA member since:** 2000  
**DIAA Position held:**  
**Current:** SA President  
**Previously:** SA Treasurer & Committee member  
**Qualifications:** Accountant and registered tax agent

### How does DIAA membership benefit you?

#### Why did you join the DIAA?

I joined the DIAA to increase my knowledge of the dairy industry and make connections across the dairy supply chain.

#### What is your career background?

My career began at Farmers Union in South Australia, which later became National Foods. I had various accounting and finance roles during my 23 years of working at National Foods, ending with my final two years in the Melbourne head office as a financial analyst for the Supply Chain Group. In 2005 I started working at Golden North Ice Cream, where I am now the managing director and co-owner. The business has become South Australia's favourite ice-cream brand and is known for having a great reputation for producing premium ice-cream.

### How has being a DIAA member helped your career and/or industry understanding?

Having access to DIAA members who have vast dairy knowledge and experience has provided me with great insight into the dairy industry.

#### What's a highlight about being a member?

Networking opportunities and friendships made along the way.

### Why is the DIAA good for dairy-industry professionals of your career stage? And what about for young members fresh into the industry?

DIAA provides a great platform to achieve your career goals by gaining valuable insights from proud and passionate members. I would encourage young members to take the time and speak to existing members to enhance their connections within the dairy industry. ■

## Wattle Health loses 2nd chief in a year

**Tony McKenna** resigned as MD of organic milk infant formula manufacturer Wattle Health Australia (WHA) just last month after less than a year in the role. He had replaced co-founder and major shareholder **Lazarus Karasavvidis**, whom the board dumped in January.

Dr McKenna resigned in early November, with the company advising the Australian Securities Exchange a week later. Chief financial officer **George Karafotias** replaced him, taking on the new title of executive director.

Dr McKenna was to lead WHA through its planned vertically integrated milk processing program, focusing on producing organic milk infant formula for the Chinese market. This involved using milk supplied by Organic Dairy Farmers

of Australia (ODFA) to the Geelong North spray dryer factory owned by joint venture company Corio Bay Dairy Group (CBDG).

However, the \$55 million spray dryer plant ran out of funds a few months ago, with relations then souring between WHA and ODFA, followed by ODFA going into receivership in May. In September, WHA then placed CBDG into administration.

In November, WHA said as a result of that "significant change, Dr McKenna indicated to the board that his contribution and interests would be less aligned with the company's future direction".

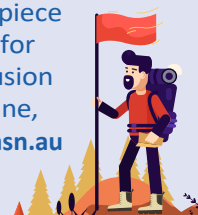
Dr McKenna CBDG going into administration had "taken the heart out of the area where I was most keen on in driving forward for both CBDG

and Wattle Health", with WHA "just becoming a brand and a market".

See "What's New: Fridge & Shelf" for two new products released by WHA in October; begins page 35. ■

### Do you have 'people dairy' news?

If you've moved companies, been promoted, won an award, or have any other exciting news about your dairy career, please send a short piece to the editor for possible inclusion in the magazine, [editor@diaa.asn.au](mailto:editor@diaa.asn.au)



## DIAA Queensland Conference



Two things COVID-19 could not dent at the 2020 DIAA Queensland Conference in November were learning and safely distanced networking. And, of course, hearing results from the 2020 DIAA Queensland Dairy Product Competition. With the theme “Valuing Value – How We Interpret This”, delegates heard from a line-up of fantastic speakers.

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# Dairy Diary



## Important!

While COVID-19 restrictions are continuing to ease after the global COVID-19 lockdown, some events are being rescheduled but others have been postponed. Please check the website of any event you wish to attend to see if location has changed (eg: AUSPACK is now in 2022 in Melbourne, not 2021 in Sydney, while foodpro 2021 is the reverse). Double check the date before making any bookings or travel arrangements!

### 17-20 December

#### Food Taipei

Taiwan

[www.foodtaipei.com.tw](http://www.foodtaipei.com.tw)

### 25-28 January 2021

#### IDFA Dairy Forum

virtual (select "Dairy Industry Association of Australia" rate from the registration fee list to receive a member discount)

[www.idfa.org/events/dairy-forum-2021](http://www.idfa.org/events/dairy-forum-2021)

### 25 Feb-3 March

#### Interpack 2021

Düsseldorf, Germany

[www.duesseldorf.de](http://www.duesseldorf.de)

### 1-4 March

#### FHA Food & Beverage

Singapore

[www.fhafnb.com](http://www.fhafnb.com)

### 4-6 March

#### 2021 Asia Dairy Expo

China

[www.ade-asian.com/index.php?lang=en](http://www.ade-asian.com/index.php?lang=en)

### 13 April

#### Foodtech Packtech 2021

Auckland, NZ

[www.foodtechpacktech.co.nz/](http://www.foodtechpacktech.co.nz/)

### 25-28 July

#### foodpro 2021

(DIAA stand SL10)

Sydney, NSW

[www.foodproexh.com](http://www.foodproexh.com)

### 6-7 September

#### Specialty & Fine Food Fair

London, UK

[specialityandfinefoodfairs.co.uk](http://specialityandfinefoodfairs.co.uk)

### 6-9 September

#### Fine Food Australia

Sydney, NSW

[finefoodaustralia.com.au](http://finefoodaustralia.com.au)

### 2022

### 17-20 May

#### AUSPACK 2022

Melbourne

[auspack.com.au](http://auspack.com.au)

### 26-27 September

#### Bakery Showcase Toronto

Canada

[www.baking.ca/bakery-showcase-toronto/about/](http://www.baking.ca/bakery-showcase-toronto/about/)

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To join the Dairy Industry Association of Australia, or if you have any questions about the dairy foods industry, contact the officers listed here or visit [www.diaa.asn.au](http://www.diaa.asn.au)

**National:** Kristine Manser, DIAA National Office, Private Bag 16, Werribee, Victoria 3030; 671 Sneydes Road, Werribee, Victoria 3030; ph: 03 8742 6600, fax: 03 8742 6601, [Info@diaa.asn.au](mailto:Info@diaa.asn.au)

**New South Wales:** David Wong, FMCG Industry Solutions, ph: 1300 628 104, [David@fmcgis.com.au](mailto:David@fmcgis.com.au)

**Queensland:** Philip Kerridge, Lactalis Australia, ph: 07 3840 0988, [Phil.kerridge@au.lactalis.com](mailto:Phil.kerridge@au.lactalis.com)

**South Australia:** Karen McIntyre, Lion Dairy & Drinks, ph: 0400 800 356, [Karen.mcintyre@lionco.com](mailto:Karen.mcintyre@lionco.com)

**Tasmania:** Rod Wyker, Southern Sky Cheese Company, [rod@southernskycheese.com.au](mailto:rod@southernskycheese.com.au)

**Victoria:** Darryl Cardona, ph: 0421 888 263, [Darrylcardona@outlook.com](mailto:Darrylcardona@outlook.com)

**Western Australia:** Colin James, ph: 0419 969 223, [cwj101@my.nlv.com.au](mailto:cwj101@my.nlv.com.au)



# Advertiser Index

## DIAA Events

Keep an eye on this page and the DIAA website for dates and registration details.

### 2021

- January** – DIAA Aus & Vic Dairy Product Competitions open
- 25-28 Jan** – IDFA Dairy Forum (virtual) (select “Dairy Industry Association of Australia” rate from the registration fee list to receive a DIAA member discount)
- 3 Mar** – DIAA WA Dairy Product Competition receival
- 4 Mar** – DIAA WA Dairy Product Competition judging
- 15-17 Mar** – DIAA Aus & Vic Product Competition judging
- 18-19 Mar** – DIAA DSWS Dairy Sensory Training Course, Melb
- 22-23 Mar** – DIAA DSWS Cheese Training Course, Melbourne
- late April** – DIAA DSWS Dairy Factory Engineering Short Course, Melb
- 27-28 May** – DIAA Victoria Conference
- 28 May** – DIAA Awards of Excellence Gala Dinner
- 25-28 Jul** – foodpro 2021 (DIAA stand SL10) Sydney, not Melb
- 23-25 Aug** – DIAA DSWS Ice Cream Short Course, Melbourne

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# Final Washup

## In the spirit



**2020** will go down for probably all of us as one of the oddest years in our memories. Face masks, physical distancing and hand sanitising became the norm. As did online schooling and working around Lego, while instead of searching online for funny cat videos, many people were starring in their own while in Zoom meetings.

Meetings aside, I'm not sure how many of us have ever partied online before, but it's an experience. And a good one, because it allows you to chat, laugh and say hi to people other than those in your own four walls (who, depending on their age and species may not actually be able to converse with you – something that's hit many people during lockdown).

The Victorian Branch gave this a go in November, holding its Christmas party online with a trivia game followed by wine & cheese matching. Like our online webinars and meetings this year, it allowed people



**Samantha Schelling**  
Editor,  
*Australian Dairy Foods*

spread far and wide to see each other's faces and interact with their peers. And who knew that parmesan paired perfectly with a 2019 Pinaz?

### Congratulations abound

With every conference and awards night except Queensland forced into cancellation this year, some exceptionally dedicated DIAA members hand delivered (where safe, and posting where not) trophies and awards for the DIAA Australian, Victorian and NSW Dairy Product Competitions (with WA, of course, having been delivered earlier this year and unfortunately South Australia not being able to hold their competition). A huge thank you to

every member who did this. It was a fantastic effort and brought many, many smiles.

This issue you'll find pictures galore of the cream of the crop in the Australian and Victorian competitions, beginning on pages 26 and 32 respectively. Where awards had to be posted, recipients have taken their own photos and sent them in. It's been a massive undertaking, but I'm sure all involved would agree with me it's been fun and certainly worth it. Congratulations to everyone.

We'll have a spread of winners' photos from NSW and Queensland in the next issue of *Australian Dairy Foods* magazine.

### Merry Christmas

On behalf of all the National Office staff – **Kristine Manser, Janos Kaldy, David Manser and Doug Eddy** – we wish you the very best of the season.

Merry Christmas and a Happy New Year. The Kelpie Who Lives Under My Desk and I will see you in 2021! ■

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**EDITORIAL:** Samantha Schelling, The Word Co. Pty Ltd (ABN 54 916 974 160) www.thewordco.com.au, PO Box 7039, Shepparton, Vic, 3632. Ph: 0431 015 904; email: editor@diaa.asn.au

**ADVERTISING:** Janos Kaldy, DIAA Business Development Manager, Private Bag 16, Werribee Vic 3030. Ph: 0417 348 229; fax: (03) 8742 6601; email: janos.kaldy@diaa.asn.au

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