

AUSTRALIAN MeatNews

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Insects – the new protein
The refrigeration budget

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Telephone (03) 9421 2855

Toll Free 1800 621 631

PRODUCTION TEAM

Publisher/Editor: Athol Economou
athol@ausmeatnews.com.au

Managing Editor: Deborah Andrich
deborah.andrich@gmail.com

Layout & design: Jocelyn Harvey

Find-a-Word: Jo Edwards

CONTRIBUTORS

Stephanie Flynn

Deborah Andrich

Susan Webster

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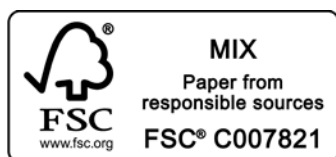
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World first – 3D printing of equipment parts for Aussie red meat processors

The Australian Meat Processor Corporation (AMPC) together with Markforged and Konica Minolta are working together to establish a world-first, industry-owned additive manufacturing (3D printing) service model to help red meat processors across Australia to print equipment parts, revolutionising equipment maintenance to help ensure continuous supply of meat products.

Additive manufacturing, also known as 3D printing, has been around for about a decade; however, new uses for the technology are constantly being discovered. This led AMPC to investigate its potential in meat processing facilities.

In a high-volume environment like a processing plant, parts such as bolts and rollers can wear or break. As in any industry, time is money, and if a part fails the result is lost productivity and expensive down-time until the part is sourced and replaced. With 3D printing, the industry can benefit from part replacement, creation, and refinement.

AMPC CEO, Chris Taylor, said, “Meat processors rely on a multitude of equipment, with multiple components. Even a small component failure can be a costly exercise. The ability to simply print a replacement part could drastically reduce downtime and minimise the need to wait for parts, reducing the chance of supply being at risk.”

Matthew Hunter, Innovation Product Marketing Manager, Konica Minolta, said, “The need for sovereign capability for the Australian supply chain coupled with Australian government support for local food and beverage manufacturing has resulted in organisations looking to adopt innovative practices. Konica Minolta Australia is proud to partner with AMPC in getting this world-first capability off the ground.”

Richard Elving, Director of Sales Asia-Pacific, Markforged, said, “We are very excited about bringing Markforged’s Digital Forge to AMPC and members to support maintenance, repair and operation needs. Supply chain issues can be costly and time-sensitive, and with these tools in place, AMPC will provide a competitive advantage to its members that enables processing facilities to react quickly to solve problems right on the manufacturing floor.”

The collaboration between AMPC, Konica Minolta and MarkForged involves a three-year, multifaceted program so that these benefits can be realised at meat processing plants across Australia. The program will see two mobile non-metal industrial 3D printers (Markforged X7 carbon fiber 3D printers) shipped to Australian processing plants. Processing staff will be trained to use them so they can assess whether buying a permanent unit would be a good investment. The units will remain on site for four to eight weeks before rotating to another plant. These units can create pre-metal prototypes for assessment as well as producing non-metal parts. Konica Minolta will provide on-site support to help meat processors understand and leverage the technology.

As part of the program, a metal printing 3D industrial unit (metal X system) will be set-up at Konica Minolta’s Sydney location dedicated for red meat processing part manufacturing. Plastic prototypes made at each processing location can be sent to this hub to be made out of stainless steel and other metals in as few as 24 hours. A red meat 3D parts database library will ensure all parts are quality controlled.

Matthew Hunter said, “When it comes to meat processing, there are a number of challenges for equipment maintenance. This includes the use of old equipment with limited spare part availability and the need to produce custom parts. 3D printing helps address these challenges. Through the database, AMPC’s member organisations will have access to intellectual property to expediate and streamline their repairs processes.”

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With the ability to rapid prototype with 3D printing and produce one-off 3D parts, meat processors will also be able to modify equipment and/or equipment components to suit their own specific needs by making changes to tooling, fixtures, brackets, and actuators. Currently many of these modifications, customisations, and consolidations simply cannot be done.

Chris Taylor said, “The processing sector is part of an ecosystem that performs best when all parts are optimised. Although established and dedicated for Australian red meat processors, AMPC will make the 3D printing hub available for other Australian food, agriculture, and manufacturing sectors to evaluate their needs and opportunities for 3D printing within their supply chains.” ■

What farmers feed lambs could help extend the in-store shelf-life of meat

Australian researchers are investigating ways to maintain meat redness by using different lamb -feeding systems and antioxidant supplements.

They have found that feeding lambs lucerne hay instead of grain saw their meat retain redness for longer, during a simulated retail display.

Lead scientist Eric Ponnampalam from Agriculture Victoria said: “There was an indication that feeding lucerne to sheep might improve vitamin E concentration in the meat tissue – and higher vitamin E concentrations have been linked with improved colour stability.”

The research suggested a target vitamin E concentration of more than 3.5 mg/kg in muscle meat to maintain a desirable colour stability of meat during storage.

Working with Frank Dunshea and Robyn Warner from the University of Melbourne, he found that finishing lambs on lucerne produced meat that remained colour-stable over 96 hours of simulated retail display.

He undertook further research on vacuumed-packed muscle samples. “When vitamin E concentration of meat was below the optimum level of 3.5 mg/kg, meat stored for six weeks at 20C had a significantly reduced colour stability and was well below the threshold for consumer acceptance,” he said.

Other scientists who contributed to this research were Tim Plozza from Agriculture Victoria, Surinder Chauhan from the University of Melbourne and David Hopkins from the NSW Department of Primary Industries.

The work was jointly funded by the Victorian Government’s Department of Jobs, Precincts and Regions, Meat and Livestock Australia and the Australian Meat Processing Corporation. ■

Beef Sustainability Framework Scorecard

Released at Beef2021 in May at Rockhampton, the latest update on how the beef industry is performing against key targets has revealed some highlights, despite much of the industry in herd rebuild.

Of note, the Australian beef industry CO2e emissions have shown a reduction since 2005 of more than 51% up to 2018, while the amount emitted per tonne of hot standard carcass weight has seen a drop of 8.1% for beef, and water usage dropping by 7.9%.

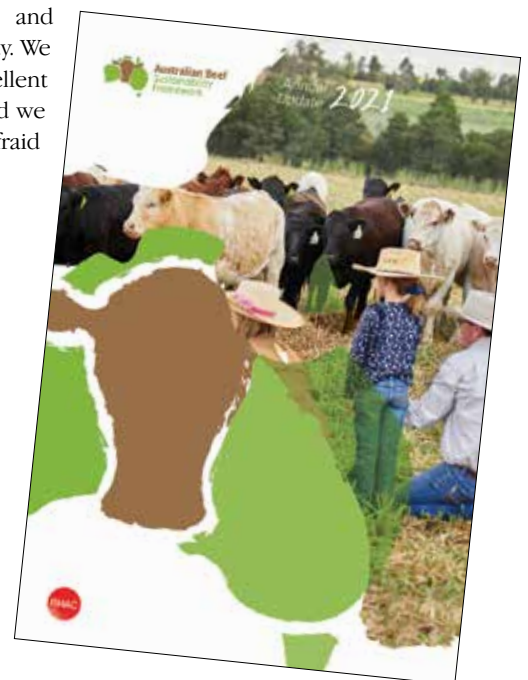
The Framework targets four main themes: Animal Welfare, Economic Resilience, Environmental Stewardship and People and Community.

Animal handling, livestock transport, animal husbandry and humane processing are the priorities under the Animal Welfare umbrella, and the most significant improvement was in the use of pain relief for veterinary procedures.

Improvements in farm equity improved, however total farm productivity declined while the cost of beef production has been well reported as increasing in recent times.

The metrics for Environmental Stewardship are not fully developed in areas such as soil and water health, or tree and grass cover across the country. Many of the priorities under People and Community have flatlined such as the percentage of consumers who consider beef to be healthy; workforce statistics (eg men and women in the workforce, age).

According to John McKillop, independent chair of Red Meat Advisory Council, “Our industry is at the forefront of setting global benchmarks for animal health, welfare, environmental management, and product integrity. We have an excellent story to tell, and we should not be afraid to tell it.” ■



Wedderburn celebrates 125 years in Australia

Reaching the 125 year milestone is an enormous achievement for any business, yet alone a family-owned Australian business. The Wedderburn family attribute their success to the loyalty and support of their staff, customers and suppliers. "We wouldn't be here today without them. We're very grateful for their ongoing support and contribution", said Kate Wedderburn, a fifth generation family member and one of three who still work in the business.

For generations, Wedderburn has been a family business. It all began when Jabez Wedderburn trained as a scale maker in London in the early 1800s, he was apprenticed to a blacksmithing company that specialised in manufacturing scales. After several years, Jabez decided to use his knowledge to open his own business and the Wedderburn scale making business began. He opened Scale Makers & Adjusters in Peckam, south London.

His son, Jabez II, eventually took over the business and it continued to grow under his leadership. When he died, his entire estate went to his eldest son. But it seems the entrepreneurial spirit was alive and well in the Wedderburn family with Jabez III immigrating to Australia, opening the Wedderburn business in Sydney.



The Wedderburn business has never stood still and now, what began as a simple mechanical scale making company has evolved to meet the needs of customers and legislative requirements. Yet some things have remained unchanged like the importance of staff, customers and suppliers.

Currently, there are hundreds of thousands of pieces of Wedderburn equipment in use across Australia and New Zealand. Every day, Wedderburn Australia prints over 7 million labels for their customers from their production facility in south west Sydney. There are 18 offices located in key centres in Australia and a further 10 offices in New Zealand. In total, Wedderburn employs over 400 people.

In addition, their product range has grown to include:

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- Packaging Equipment
- Food Equipment
- And complete POS Solutions

There is no doubt Wedderburn will continue to look to the future, evolving and adapting to whatever comes. So here's to the next 125 years! ■

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Kilcoy Global Foods buys Hardwicks

Victoria's Kyneton-based beef and lamb processor Hardwicks Meats and Queensland based billion dollar global beef processor, Kilcoy Global Foods (KGF), have joined forces.

The exciting, historic deal which has been approved by the Foreign Investment Review Board (FIRB) promises to create significant growth opportunities for Hardwicks Meats and the Victorian livestock industry, while delivering industry-leading product, packaging, environmental and technology advantages to customers around the world.

The KGF and Hardwick agreement, which promises to realise the full potential of the Victorian processing operation, will see joint managing directors, Luke and James Hardwick, remain with the company during a transition period.

"Our parents Gary and Vikki founded Hardwicks Meats almost 50 years ago and today we are excited to join the Kilcoy Global Foods family," said Luke Hardwick.

"We are two complementary businesses, with similar values and goals, uniting under the global KGF banner. KGF will facilitate a capital injection to modernise our Kyneton plant leading to increased production, and from that an increase in the local workforce, which is great news for Kyneton and Victoria.

"Hardwicks is excited to be part of KGF's \$1.5 billion global nature-to-plate food solutions operation that supplies food service and retail customers across Australia, the United States, Asia Pacific and the Middle East.

"It's an exciting time for our business and together with the senior KGF team, we have been briefing industry and supplier stakeholders, with the highest priority given to the 400-strong workforce at the Kyneton processing plant, all of whom will be retained," Luke said.

KGF President Australian Division, Jiah Falcke said KGF identified Hardwicks as an ideal partner for its existing operations in Australia and overseas, due to its offer of high-quality products, service excellence and established national and export markets.

"There's a lot of synergies between both businesses, Hardwicks is a tier 1 plant and Kilcoy is a tier 2 plant and both businesses sell 100% Halal and MSA operations with KGF a premium beef processor while Hardwicks processes beef, lamb and goat.

"Over the last five years KGF have invested over \$150 million upgrading the Kilcoy plant, and have hired an additional 700 team members taking the workforce to nearly 1,700 staff who operate two shifts a day 7 days a week on the processing floor.

"KGF enjoys a strong relationship with its workforce and we will work with Luke and James and their management team to ensure a smooth transition across all levels of the business," Mr Falcke said.

Mr Falcke confirmed KGF has no immediate plans to change the Hardwick name, with similar subsidiaries across the world continuing to operate under founding names.

"Like KGF, Hardwicks is instantly recognisable and highly respected both by producers and customers who equally stand to benefit from the new partnership. We've reinforced that all jobs will be maintained and we'll look to employ more staff as we expand. Hardwick's commitment to existing local community partnerships will also continue," said Mr Falcke.

KGF exports 75% of its Australian product to over 35 global markets and its vision is to expand into value added processing with meal solution products across both retail and food service channels. Mr Falcke paid tribute to the Hardwick family who started a small business that grew into a multimillion-dollar operation with export markets around the world.

"For Victoria's economy, the Hardwicks Kyneton team and the producers that supply the operation, this is the next step in their successful journey as we grow the business and feed the global community.

"We are also fully committed to be an industry leader in sustainability and waste management with 80% of electricity used at Kilcoy self-generated through waste bio generation and services 100% of hot water demand on site," Mr Falcke added.

Hardwicks will also benefit from KGF's commitment to research and development, including a patent pending labelling system that allows scanners to read data tagged on product inside the box, a breakthrough for the export market which is seeking trackable data on the nature and origin of product. ■

Winners May 2021 Find a Word



Congratulations to the winners and thank you to our sponsor BUNZL. Bunzl will contact all winners and make arrangements to deliver your prize.

Simitar Steak Knife and Lesnie's Steel

Troy Jones, Mountain View Meats, Woonona NSW

Victory Narrow Curved Boning Knife

Annie Hill, Thornby Fine Meats, Tanunda SA

Patrick McDonald, Freddy's Meats, Condell Park NSW

Hasim Ghaus, Ikhwan Butcher, Bentley WA

Hayden White, Penrose Meats, Tamworth NSW

Charlotte James, Carina North Quality Meats, Carina Qld

Collinson's Packaging launches new showroom and brands

Collinson's Packaging is excited to share an expanded, state of the art showroom and warehouse with industry.

Specialists in end-to-end packaging solutions for abattoirs, processors and retail outlets including butchers and delis, the family-owned company has supported customers across Australia with machinery, pouches, trays and films for more than 40 years.

"Moving to a new, much larger premises has allowed us to significantly expand the machinery side of our business," said director, Chris Collinson.

"People know us as Sealedair's (Cryovac®) largest Australian distributor. We're now also an exclusive reseller of Henkovic vacuum packaging machines and Aged. dry-aging cabinets, both premium European-made brands.

"Before our move, we didn't have space to stock and display a full range of machinery. Our customers are loving that they can see, try and buy a variety of vacuum packaging machines, dip tanks, thermoformers and dry-aging cabinets from us and have them delivered immediately."

Four times the size of their previous warehouse, the Keilor Park site lets Collinson's hold more stock and a larger range



of Cryovac® shrink, vacuum pouches, trays and film. They've also expanded their range of APCO-certified environmentally friendly, recyclable high barrier packaging materials.

The Collinson's team pride themselves on working with customers to create tailored packaging solutions – from custom printing to simple, reliable and cost-effective machinery options.

"Our new dry age cabinet range is also on display, and operating, so clients can see how it works in action. We have also included a few new more environmentally friendly, recyclable high barrier packaging materials to choose from as well.

"We want our clients to know that we can offer more packaging options as well as the Sealed Air Cryovac products."

Visit Collinsons Packaging at 39 Translink Drive, Keilor Park, Victoria. ■

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EQUIPMENT

8 x elastic truss bands

INGREDIENTS

8 x 200g rindless, frenched pork cutlets
600g Spanish-style chorizo sausage mince
8 sprigs fresh thyme
160g caul fat

METHOD

1. Place pork cutlets on a board with the medallion facing up.
2. Evenly divide the Spanish-style chorizo mince into 8 portions, one portion per cutlet.
3. Spread the Spanish-style chorizo mince portion over the face of each cutlet.
4. Place a sprig of thyme on top of the mince.
5. To seal the mince and thyme onto the cutlet wrap, place caul fat over the top and tuck the edges behind the bottom of the cutlet.
6. To secure the caul fat, use an elastic truss on the underside of the rib bone and around the side of the cutlet.

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"NOT BEING VERY
CREATIVE IT GIVES US
IDEAS AND INSPIRATION."

Des & Nicole,
Barritt's Butchery, QLD

Do what you know and do it well

The resurgence of interest by shoppers to buy their meat from the local butcher means that more than ever, bricks and mortar retail with a butcher on hand are a valuable part of the shopping experience.

The Butcher Club, with more than 20 retail outlets across Melbourne mostly in shopping centres, has perfected the formula of providing customers with quality product and service, more often than not within metres of a major supermarket.

The branding, product offering and reputation has given the group a standing in the Melbourne shopping profile that is recognised by the likes of Westfield, Vicinity and QIC.

The Docklands precinct in Melbourne's inner west, has had a slow rate of progress, with its fair share of troubles to attract shoppers and retail outlets. In the past few years, it has gained a level of acceptance that means that stores such as Costco, H&M, Woolworths and Dan Murphy's have signed on.

Approached more than two years ago, The Butcher Club also signed onto a retail outlet within the Docklands fresh food area to complement a selection of fresh food retailers.

"We opted to build The Butcher Club Epicurean, which is more of a pick and go style of retail outlet instead of the traditional butcher shop," said managing director, Peter Robinson.



The Butcher Club, Docklands Melbourne



The Butcher Club, Docklands Melbourne

"The foot traffic through Docklands is fine during the weekend with families coming to Melbourne Star or restaurants, but we always knew that weekdays would be a challenge and a traditional butcher shop wouldn't work."

"The Epicurean was a new concept for us, where everything is supplied from our Williamstown store in pre-packaged servings and weights, but it is a struggle to keep it going."

On offer from The Butcher Club was a range of meats – beef, lamb, pork and poultry – as well as ready meals, dry aged, smallgoods, cheeses, nuts and complementary grocery items. In an open plan layout with the distinctive The Butcher Club branding, where products are displayed in refrigerated cabinets and fridges based on product type. The plus for this style of retail is a lower staff overhead. One or two staff members who are knowledgeable and passionate about food is all that is needed.

At the grand opening of the fresh food market at Docklands, on offer were a fishmonger, fruit and vegetables, a chicken shop and Woolworths giving what was hoped a good cross section of fresh food options.

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The Butcher Club bricks and mortar style store.

Within a year, the fruit and veg shop had gone. Since then, a deli has opened and a nut retailer, meaning that Epicurean had to delete these lines.

Peter concedes that the concept of the Epicurean might work in a different location where regular high volume foot traffic is available, but it is not something The Butcher Club are keen to replicate again.

“Our strength is in traditional bricks and mortar butcher shops, with a butcher spruiking out the front. We specialise in operating in shopping centres and it works well for us.

“Shopping centres like what we do, and we understand what they want. We recently opened a store in Frankston in the refurbished Bayside Shopping Centre fresh food precinct, which promises to be really successful and we will open another later in the year in North Blackburn. We have also signed on with Westfield to open a shop at the end of 2022 in the revamped fresh food complex at Knox Shopping Centre. An Epicurean style is not our strength, and not something we will try again, we will stick with what we know.” ■

World Butchers Challenge: The battle is back on

The World Butchers' Challenge, widely regarded as the 'Olympics of Butchery', will now take place on 2 & 3 September 2022 at the Golden 1 Center – the home to the NBA's Sacramento Kings – in Sacramento, California.

The competition was originally slated to take place in September 2020 but, like many events, fell victim to COVID-19 disruption.

World Butchers' Challenge Chair, Rod Slater was thrilled that a new date had been agreed and the international butchery community had something to look forward to.

“There is no doubt the last year or so has been tough for our competition, so to be able to secure dates at the Golden 1 Center and to give butchers a target to aim at again is just the motivation we all needed.”

16 teams from across the globe will be competing for the Friedr. Dick Golden Knife Trophy and will have three hours to transform a side of beef, a side of pork, a whole lamb and five chickens into a themed display of value-added cuts.

Danny Johnson, captain of the Butchers of America team, and the driving force behind Sacramento securing

the hosting rights for the World Butchers' Challenge echoed Rod Slater's excitement that the competition was back on.

“The World Butchers' Challenge is representative of Sacramento's ethos around farm-to-fork and we can't wait to welcome those across the globe who are passionate about butchery head to our food mecca to celebrate what's great about food.”

After the year we've all had, can you think of anything better than cheering on close to 100 butchers battling it out in an amphitheatre fit for a King – or Kings.”

The World Champion Butcher Apprentice & Young Butcher Competition takes place on 2 September, prior to the main event. These two categories, modelled on the same concept as the World Butchers' Challenge, are individual competitions which recognise and reward upcoming talent in the industry.

For more information on the competition, proudly sponsored by Friedr. Dick and Devro, including the full history and team bios, visit worldbutcherschallenge.com ■

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Paddock to Plate traceability needs high-tech

The most vulnerable step in the integrity of the red meat supply chain is when cartoned product is prepared for retail sale, according to a new MLA report.

Trimming, portioning or handling off-cuts can see product misnamed – even after meat has left processing plants fully labelled and carrying a unique barcode.

Consultant Natasha Wing reported that primals, trim and offal that left processing plants compliant with traceability requirements could still fall foul of intentional or unintentional mis-labelling in the cutting room.

“It is apparent that one individual system will most likely not result in full traceability, that the system needs to include various aspects such as blockchain network systems combined with secure digital markers,” she said.

“One of the biggest hurdles that the industry faces when implementing new technology is the lack of understanding that processors are experts in the production of quality-assured meat products, (but) they are not necessarily technological experts, especially in areas like distributed ledger technology.

“And in turn, technology experts do not necessarily understand the various supply chains in the meat industry and how to control the variables.”

Her report recommended a government-implemented uniform approach, offering universal baseline technology, to identify Australian meat. With that protocol established, Australian

marketing could focus on educating overseas consumers on methods for identifying Australian meat, offering a guarantee for all Australian meat, she added.

The industry has done something similar before, she said: 1999 saw NLIS introduced to satisfy EU access requirements.

“The Australian livestock industry went to great lengths to enable traceability of animals for disease control and other biosecurity measures,” she said. “Unless a national government approach was initiated, the system would not be fully implemented.”

What happens now?

In Australia, all properties where livestock are held – including feedlots – must have a registered Property Identification Code (PIC) and all sheep, goats and cattle must be identified with an National Livestock Identification System (NLIS) device which displays which PIC the device is registered to.

For cattle and some sheep and goats, the NLIS device is fitted with a Radio Frequency Identification (RFID) which includes an individual identification number for each animal.

All livestock slaughtered must be traceable back the source PIC with the use of an NLIS device. If the animal loses its original NLIS breeder tag and then requires a post breeder tag, the lifetime traceability of this animal stops unless the producer updates the NLIS database with the replacement tag details.

When animals are slaughtered in Australia, a body number is applied to the carcass which correlates back to the source PIC and, where available, RFID. This information remains with the carcass usually up until the point of boning. At that point carcasses or carcass parts are broken down into primals, sub-primals and trimmings and thereafter traceability on individual pieces will depend on the processes implemented in the boning room.

Traceability on the carton leading back to the individual RFID or PIC is optional for processors. However, traceability must be maintained back to a list of source PICs, for example, a range of PICs supplying carcasses into a boning room in a defined period or batch.



“Where the processor chooses to provide traceability details to the customer – back to the source PIC or even breeder PIC – the more source PICs boned in a single day, the harder this can be,” the MLA report said.

“Ideally, when transmitting information from a supplied meat product to a label on a value-added meat product, all identification information should be available on the new label to enable full traceability.”

However, there is a risk of labels and security devices being copied. Armed with a mobile-phone camera, a counterfeiter can capture a brand image and turn it into a sticker.

The consultant recommended that, while all the information might not be able to be transferred from one label to the next, the initial production date and establishment number should be transmitted on all labels through each point in the supply chain up to the final.

“Similarly, detailed ledger technology should include traceability information from each step in the supply chain on all products used to create the finished consumer-ready product,” she said. “Finished information on a corned roast or beef and lamb meatballs, for example, should include traceability for all ingredients used.”

What's ahead?

Barcode information on labels usually follows the global standard (GS1) labelling method, allowing for electronic information flow along the supply chain. Australian carton label barcodes can be verified and traced with the industry-owned electronic MeatMessage program, a web-based application which collects, processes and reports on meat product information.

Shelf-ready packs such as thermoform packs and oven-ready packs are advantageous for maintaining traceability as they do not require businesses to bone and slice meat and meat products, reducing the risk of substitution.

Companies are often updating their visual image to stay ahead of copy-cats, although changing branding risks losing buyer recognition. The report added: “And some consumers will continue to choose the product with the original image as they believe new labels can be the fraudulent label.”

Alternative responses include technologies include secure digital markers on labels, token-driven systems and blockchain technology. “Other companies are working with supply chains to provide collaborative networks across the entire supply chain to guarantee provenance,” the consultant reported.

Some meat brands are using QR codes that link back to source PICs, however individual PICs are not always available,

and QR codes are sometimes not available on all value-added packaging.

Accounting firm Pricewaterhouse Coopers has developed an electronic etching procedure for beef using an edible ‘fingerprint’.

When implementing blockchain technology the data must link back to the original label which identifies the carcass or carcasses within the carton. Then, if products are value added along the supply chain, any subsequent label data and traceability information such as ingredient batch numbers should be included within the blockchain.

However, due to the range of labels, customers may not always be able to scan them into their electronic inventory systems, requiring a separate audit.

Meat exports present even greater challenges. There is a ‘significantly increased risk of substitution’ when Australian meat is mixed with other-source at a value-add facility, according to the MLA report.

“If a carton of rump is exported, the usage of this rump will vary depending on the consumers demand, and therefore the weight of waste will vary ... in the case of injected products this can be an increase of around 30%.”

Where weights are used to determine allowable outputs, the system needs to be robust and, ideally, automatic, to verify compliance, it suggests. ■



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Members in focus

**We're here for
the long haul,**
says Teys Office Manager.

Terri Wolfe



Meet Terri Wolfe. Terri is the Office Manager at the Teys Charlton Feedlot in North Western Victoria, approximately 2½ hours drive from Melbourne. She started there almost 16 years ago as a weighbridge operator, and has steadily advanced her career through roles in administration, workplace health and safety, and compliance which has led her to her current position.

Celebrating 75 years in the beef industry this year, Teys delivers the best of Aussie beef to its customers domestically and around the world. This year also marks the Charlton feedlot's 50th anniversary. Teys has been a part of the landscape in Charlton since 2014, acquiring the feedlot and providing a sustainable future for its employees, communities and customers.

Over the years, Terri has seen many changes at the Charlton feedlot, and has performed many roles.

"Working with Teys means that you can choose from a range of diverse opportunities across processing, manufacturing, trades, feedlots, livestock, admin and environmental management. Teys also provide career opportunities, support for the long term to gain experience and additional qualifications to help you advance your career," Terri said.

The ebb and flow of country life in a predominantly livestock and cropping area of Victoria is something that Terri and her husband, Mick, both relish. Terri's mother-in-law also lives with them on their property and they wouldn't have it any other way.

"With these strong local community connections, I am definitely here in Charlton, and at the feedlot for the long haul, that's for sure. I have held a number of roles over the years with Teys, and as Office Manager, I enjoy my work assisting staff and supporting the smooth running of the Teys feedlot".

Terri and Mick met at the feedlot and both still work together.

"Over the years, we have both enjoyed the opportunities that Teys has provided us, and they are a big part of the community here.

"We both have many years of working life ahead of us and one day, would like to retire somewhere near the ocean," Terri said.

Terri knows that as they grow older, their focus will be to ensure they can reach their retirement goal.

"We are both members of AMIST Super and have found that they really are catering to our needs," she says.

AMIST Super's Client Services Managers, Royston Bennett and Glen Pearson, visit the Teys Charlton Feedlot on a regular basis (COVID-19 restrictions permitting) to assist all staff on site.

"They are always available to help with any questions we may have and ensure that we understand our needs for the future," she says, "which is very much appreciated."

"Regular updates and bulletins from AMIST Super keep us informed of changes too," Terri said, "and the hands on, personal approach we get from Royston and Glen makes you feel like they care and that you aren't just a membership number to them."

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The 'Old Boys' share their perspective

By Stephanie Flynn

As global economic data begins to reflect rising inflation as a consequence of unprecedented Government stimulus since the onset of the COVID-19 pandemic, leading international banks are warning of a significant inflationary period ahead not seen since the 1980's.

Already butchers in regional Queensland are noticing the difficulties of rising prices and the effect on their customers, meat supply chains and a shortage of young people available to enter the trade.

Australian Meat News spoke with three of Queensland's longest serving butchers, all of whom are 60 something, in the regional towns of Hervey Bay and Maryborough and who have survived the last major inflationary period of the 1980's.

They share their views and on-the-ground experience as they near the end of their long careers in the industry.



Whale City Wholesale and Bulk Meats' Gary Richards (right) and his team on the factory floor.

Whale City Wholesale and Bulk Meats – Hervey Bay, Queensland

At 65, Gary Richards has been at the helm of Whale City Wholesale and Bulk Meats for nearly 37 years and is Hervey Bay's longest serving butcher.

Born in Nanango in Queensland, he has spent a lifetime in the meat industry working in the Northern Territory, where his grandfather built three buffalo abattoirs in the 1950's, before he moved back to his home state eventually opening three stores in Hervey Bay when it was just a small fishing town.

Today, Gary has narrowed his business operations to one freehold factory that services the aged care homes, retirement villages and hospitals in the region as well as a shop front for direct bulk buy sales to the public.

"Hervey Bay went from a small fishing town to a big city now with internal migration from the cities and that has brought with it a lot of problems among them crime and drugs," Gary said.

"Most concerning though is that unprecedented level of migration from the big cities, buoyed by low interest rates and high property prices, has put undue pressure on things across the board.

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Whale City's factory and Bulk Meats shop front is located out of town in Queensland's Hervey Bay.

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"This situation is also preventing young people from relocating to take up work opportunities in our agricultural industries. An ageing population means there is a price ceiling, and it is becoming difficult for ageing residents to make ends meet.

"Prices of everything are going up and up and so many people in Australia cannot afford basic needs, we see it here in our shop front all the time where people do not have enough money to buy food, being at the 'coal face', butchers see the on-the-ground reality of things," he said.

Having lived through previous economic downturns, Gary believes that these are ominous signs for the near future as more and more disposable income is taken up with rising prices for food, rents and mortgages.

And it is not just the retail side that is coming under pricing pressure, according to Gary the hardest thing he has faced in his life as a butcher is the difficulty of sourcing supply to keep his business going over the last 18 months.

He cites the closure or reduced operation of abattoirs around the country due to the short supply of cattle for slaughter as well as the orientation of abattoirs for high export demand as the key factors driving up prices on the supply side for butchers.

"I spent hours this week trying to source lamb from Western Australia as an example and you cannot buy mutton these days and if you can it is as expensive as lamb and this is all due to exports," Gary said.

"It is the older customers, which are the majority in regional towns who love their mutton, and we cannot even supply them with their needs, it is very disappointing for me as a butcher to see this situation," he said.

Currently employing 12 people for his operations, Gary is complimentary of the Government's current programme that supports business for the hiring of apprentices, and he has elected to



Mark and Fay Sengstock have owned Fairfield Butchery in the historic town of Maryborough in Queensland for 21 years.

take on a mature age apprentice in his 30's under that wage subsidy programme.

He says that his decision to hire an older apprentice comes after having had more than 50 young apprentices in his business over the many years, he has found that education today, while developing capabilities in handling technology, is lacking in real world and life skills as well as basic necessities of spelling and arithmetic, which means on the job training needs to be expanded.

Whereas once upon a time, butchers would get lots of young people come in to their shops looking for work, these days it is not common.

"I do believe that young people need to focus on getting a trade of some kind and be prepared to work at it to succeed," Gary said.

"It is hard to attract young butchers in regional areas and the mining industry has not done our industry or any other trade a favour in paying such high incomes, the problem is compounded by the current increases in the costs of living and lack of affordable rental properties that preclude potential workers relocating.

"I do believe that, as an industry, we need to address this concerning issue, launching some kind of campaign to

attract young people into the industry which would be very helpful on the ground," he said.

Fairfield Butchery, Maryborough Queensland

The town of Maryborough, 30km south of Hervey Bay, is also experiencing a boom in property prices and sales but this is mainly driven by investors from Sydney and Melbourne buoyed by low interest rates and, in some cases, the Government's \$25,000 cash grant for renovations over \$150,000 rather than a surge in internal migration from those cities.

Nevertheless, the town is experiencing an explosion of new housing estates as 'refugees' from Brisbane and Queensland's Sunshine Coast are forced to relocate to more affordable areas.

Mark Sengstock was born and bred in Maryborough and has run Fairfield Butchery, a stand-alone store on one of the town's main streets for 32 years, which he managed for previous owners before he and wife Fay purchased the store 21 years ago.

Mark has also noticed that the rising cost of living is hitting the small town hard as the residents of the lower socio-economic region deal



Fairfield Butchery is a stand-alone store on a main road leading into Maryborough's town centre.

with the reduction in JobSeeker payments and higher rents substantially reducing their capacity to buy necessities.

"Rents are going up and people are finding it tough which is a big shame and what the outcome will be is anybody's guess, people have only so much to go around and, if this continues, the rents will take up all available monies and effect consumer spending in small businesses dramatically," Mark said.

"We are already noticing a big difference in what our customers purchase, when people were getting the higher rates of welfare benefits, they were buying more beef and more lamb but now they are purchasing lower cost cuts or proteins like chicken and pork," he said.

Mark emphasises the need for butchers in regional towns to buy local for supplies in part because customers demand it and because he sees it as a social responsibility to support producers in the region who work hard to produce quality products.

Mark sources his quality products from Biggenden Meatworks one of the only local processors left in the region as well as Nolan's Meats in the town of Gympie some 80 km south of Maryborough.

"It is my main priority to buy local, we get absolutely fantastic service from these local companies and when I arrive at work the carcasses are hanging in the shop ready for us to breakdown," Mark said.

In keeping with his 'buy local' emphasis he also has a focus on keeping the 'old fashioned' level of customer service for which country butchers have historically been famed.

The success of his approach is evident with some of his customers having frequented the store for 32 years and now their families, whom he has

watched grow from young children to become parents themselves continue to come to his store.

"My oldest customer would now be close to 90 and I have watched them grow old and because I have lived and worked here all my life and after serving them for over a quarter of a century," he said.

As with many regional towns Maryborough has a high population of elderly for whom heat and serve value-added lines become increasingly popular. Mark keeps his value-added lines simple with crumbed lines like chicken Kiev or marinated Italian meatballs, quality but simple fare which appeals to the older generation.

Being a stand-alone store as opposed to being in a major shopping centre, Mark says that efforts need to be made to attract customers and he sponsors local sports, mainly hockey with which he has keenly been involved or occasionally does printed flyers which are distributed into the local letterboxes.

"My advice to young people entering the industry is that you have to work very hard these days to make a good living from this business, the supermarkets can sell meat at the same price that we butchers buy it for while marking up other products in-store for their profit," Mark said.

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Pat Saver (Right) and his qualified butcher Brodie Stewart run Baddow Butchery in Maryborough.



The Meat Room

James Mele is the owner of The Meat Room, a small-batch salami specialists, bespoke butcher and artisan deli, located in Victoria's beautiful countryside town of East Kilmore, only an hour-long drive from Melbourne.

James began his butcher career at an early age, working alongside his father at their family butcher shop on Saturday mornings. Being immersed in the butchering industry in both Italy and Australia, he spent many holidays with his father and uncle going to saleyards and honing the art of traditional Italian sausage and salami making.

Throughout the years his knowledge of traditional Italian cooking and produce expanded, mastering passata, pizza, sourdough bread and winemaking.

Constantly seeking to master and build on his skills, whilst striving to innovate. He frequently travels both locally and internationally to Italian food festivals to uncover new ways of preserving, preparing and cooking.

James is passionate about sharing his knowledge and The Meat Room has been offering classes since 2015 on Italian sausage and salami making. Designed for small groups and including a lunch feast of home-made wood fire pizza.

He prides himself on customer service and providing great experiences for everyone that comes through The Meat Room door.

"I like dealing with like-minded people" James said when discussing his relationship with Unox.

"Milos (UNOX VIC Active Marketing Chef) was fantastic from the word go, he showed an interest in what we do at The Meat Room, I cannot speak highly enough of him" James continued.

UNOX Australia offer Individual Cooking Experiences, where the general public can receive a free no-obligation demonstration at their place of business with their own products or are welcome to visit the UNOX Cooking Academy located in Ringwood, Victoria.

James uses his UNOX BAKERTOP MIND.Maps™ combi oven for an array of products, such as; baked goods to compliment the providore, foccacias, roasting, grilling and preserving produce from his garden.



His Fennel Salami and Zingara Salami have been awarded silver medals at the Australian Food Awards in 2019.

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The Meat Room has grown in leaps and bounds with James continuously expanding the scope of the business through passion and innovation.



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“Efforts need to be made in the local community to get customers to make a special trip to a stand-alone store and you also need to focus on customer service and a quality product range to encourage them to buy more, so it is very hard,” he said.

Baddow Butchery, Maryborough Queensland

Pat Saver, born and bred in Maryborough purchased his first store, Baddow Butchery, 21 years ago after working for other butchers in town since leaving school and he has built and maintained the store ever since.

He runs his store with one qualified butcher and has also recently hired a new apprentice since the Government's subsidy scheme was introduced.

Pat sees the influx of new residents from Brisbane and south east Queensland as a boost for Maryborough given its ageing population providing a replacement population and potentially new customers for retail butchers.

He has noticed that customer buying habits have changed in the face of the rising cost of living with people buying less in quantity but continuing to buy high quality products.

“COVID-19 was a boon to retail butchers with home cooking and family life replacing going out to dine or takeaways and it is a change that has stayed with us,” Pat said.

“Another change has been the increase in sales of value-added lines mainly due to the nation of ‘easier’, easier if you are older, easier if you are working, easier because it is simply heat and serve.

“We spend a lot of time and effort developing new value-added lines and being open to good direct open feedback on these lines, we do not mind if it is not a winner in our customers' eyes, we value the feedback because it is of great importance to the success of a small stand-alone shop,” he said.



Pat has owned Baddow Butchery a stand-alone store in Maryborough for 21 years

As with his counterparts, buying local produce is especially important to Pat, his main supplier is Nolan's Meats in Gympie and local processor Biggenden Meatworks, only his lamb comes from states other than Queensland.

His advice to young people buying their first store is to ensure the previous owner stays for the first month to introduce customers and provide a brief on their particular requirements.

“This customer handover is vitally important, if you do not develop a

rapport with customers early on, they will walk away and leave the business,” Pat said.

“The previous owner of my store did this for me and I have customers that have stayed with me ever since and when I eventually sell the store, I will ensure to do the same for the new owner,” he said.

Pat's oldest customer, who has been with him since the day he purchased, is now 102 and his homage to her is that she is only one who receives a home delivery. ■

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The Australian Butchers Conference

Meatstock Toowoomba – 6 & 7 April 2022

For the first time ever, the team at Meatstock will be hosting the Australian Butchers Conference at Meatstock Toowoomba on the 6th & 7th of April 2022. It will be an exciting and educational experience specifically designed for members of the Australian butcher industry.

The conference will take place in the lead up days to the Meatstock Toowoomba Festival and will feature keynote sessions by guest speakers and industry heavyweights from all over the country.

It will be an amazing opportunity to take your business to the next level and learn from a line-up of the most experienced butcher industry identities in Australia.

From the tools of your trade to the procedures involved at processing plants, we'll have everything covered to make your conference experience the best it can be.

"We've always been big supporters of the butcher industry in Australia and this conference will be our chance to offer something special outside of the regular festival activities," said Meatstock promoter Jay Beaumont, "the industry is full of personalities who are always willing to offer help and advice. This is a fantastic opportunity to learn from the best."

The keynote sessions are designed to invigorate your business by providing insights to new practices, new product showcases as well as new ideas and marketing strategies to bring the excitement back to your butcher shop.





You'll be motivated to challenge the way you look at your business and be introduced to new and exciting techniques that will lead to a better customer experience and ultimately better profit margins.

Toowoomba is one of the largest processing regions in Australia. To enhance your experience, feedlot and abattoir tours will also be available as part of the conference. Plus, there will be dedicated networking sessions to allow you to follow up with any advice or questions you have for the keynote speakers.

In addition to the conference we'll be holding all of our regular competitions including The Butcher Wars, which is one of the most popular events at Meatstock. Shannon Walker, butcher, educator and one of the great personalities behind The Butcher Wars says "I can't wait to get up to Toowoomba for the first Queensland Meatstock. The Butcher Wars is such an amazing event, the butchers, the crowd, it's packed full of excitement! Queenslanders are going to love it!"

Also for the first time in Australia, Meatstock will be holding another one of a kind competition, The Australian Boning Wars. Teams of butchers will compete for the chance to win over \$3000 in cash and prizes.

Competitors will be judged on their knowledge, experience and skill with a blade as they break down and portion a hindquarter of beef in front of a live audience.

Entry is available to teams of two people, a boner and slicer, so if you think you have the skills to compete, email jay@meatstock.com.au for registration forms and more info.

Butcher Wars, Barbecue Wars, Boning Wars, King of the Grill and the Australian Butchers Conference all happening at Meatstock Toowoomba 2022. So save the date and keep your eyes on our social media channels for updates and speaker announcements. Tickets will be available soon at www.meatstock.com.au. @meatstockfestival ■



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UK butchers supporting community through COVID

By Erin Conroy

In March 2020 as the severity of coronavirus was becoming evident, butchers wondered how it was going to affect them and their businesses. A month later it was clear to see that butchers were paramount in the food service industry at this crucial time. With a lot of speculation surrounding on whether the shops could open, there was doubt on whether the business would continue. This doubt was thrown out when it was decided that butcher shops were essential, and they could carry on trading if they wanted to do so. For some the doubt vanished and they threw themselves into serving their communities, for others there was a level of fear surrounding the virus and what it would mean to pass the virus onto vulnerable loved ones.

Immediately butcher shops around the country, set up delivery services for their local areas, this would be free if you stayed in the area and a small charge if you were out with the delivery boundaries. At this time shops were closed to the general public with allowances of some click and collect. This changed how businesses took in money, with a lot having to adapt an online shop for people to place their orders and pay online, to stop the handling of cash from person to person. Most shops were already on this system but for the smaller village butchers who were cash only, reverted to taking payments over the phone via card.

A common occurrence around the country was that people were turning to traditional butcher cuts and meat, and opting for the likes of mince, stew, chicken fillets, diced chicken etc as opposed to the ready meals or value added products that are available, of course a lot of people were spending more time at home and could maybe afford to spend more time on meals and preparation.

This concept was great for butchers as people seemed to know what they wanted and the butchers could keep up with the demand, there were fears of a meat shortage, but nothing ever came of it and the biggest fear was still not having any toilet roll. Although there were fears of a meat shortage due to COVID, the focus was on Brexit and our trading. Brexit seemed to be forgotten about during the pandemic, but it happened, and the butchers are still thriving, the only concern has been price increases, and this has not brought any significant problems so far.

At this time butchers were working extremely hard to serve their communities, keep themselves, their staff members and families safe in the beliefs that it was only going to be a short-term arrangement. The increase of business was compared to the usual week before Christmas rush, were



Erin Conroy is a well respected butcher and consultant based in Glasgow, Scotland. With more than 5,000 followers on social media. She travelled to Australia to participate in Meatstock's Butcher Wars and worked in renowned butcher shops around the country. She started in the meat industry at the age of thirteen working alongside her gran in a fishmongers and then progressed on to become a fully qualified butcher by the age of 19. Erin has recently finished a bachelors degree in food safety and uses her knowledge to help butchers out with their health and safety protocols and dealing with the local authorities on behalf of the butchers.



The Cross Butchers are typical butchers in the UK, where Erin Conroy works.

you worked anything up to 24-hour days to keep your customers happy for their beloved Christmas dinner. Unfortunately for the UK, this lockdown was not a short-term arrangement.

The UK officially went into lockdown on the 26th of March, this was proposed for a month. On the 16th of April the lockdown was extended for a further three weeks. On the 30th of April the prime minister said we were past the peak of the pandemic. On the 10th of May, there was a conditional plan for lifting the lockdown, using the slogan, hands, face, space. Meaning wash your hands, cover your face and give people space, this was along with the 2-metre social distancing rule. On the 23rd of June, Boris stated we would be looking to ease lockdown restrictions and get back to our usual lives. Mid July and all local authorities had placed their regions in complete lockdown again without even leaving the first lockdown.

Although still in lockdown the UK Government released a scheme called, eat out, to help, offering a high discount on food and drink if you were to support the hospitality industry on its reopening. For the butchers this meant that there was a drop in sales for 3 weeks while this scheme was carried out, however not a massive drop because overall the UK was still in lockdown and there was a lot of fear for people who had been in the house from March. Come September all lockdown restrictions were put back in place and the

butchers found themselves in the same situation they were in during March. This was no problem for them, and they took it in their stride, knowing that Christmas was the next hurdle to get over during these tough and busy times.

Just like they had dealt with the rest of the year, the butchers worked tirelessly to accommodate all for their Christmas and New Years feasts, although in smaller quantities due to not being allowed to socialise with other people like we all usually would do.

Lockdown restrictions were eased slightly during November and December but this may have not been the best decision because come the first week in January, the UK was again placed into full lockdown with full restrictions applied yet again, supposedly lasting four weeks, but as the UK has been in lockdown since the following March there was no belief that we would be out of lockdown within four weeks. Usually in January time our butchers would have slowed down however trade was still roaring.

Although the butchers lost their wholesale trade due to hospitality industry shutting down, the customers who would usually dine out were spending their money on more food for home. The butchers excelled here as to not only offer their food services, they would get all other shopping in for people if it was required, such as toilet paper and other

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Free delivery, safe customer service and hygiene have all been part of the COVID response for butchers in the UK.

essentials. Making them local heroes, helping those in times of need even after nearly a year of back breaking work trying to support their communities.

From March 2021 onwards, restrictions have eased slowly but surely, however with restrictions being lifted and more freedom allowed, we are now tallying the same amount of new cases each day as what we were back in March 2020 when we first went into lockdown. However, the deaths have lowered due to our vaccine drive but realistically the vulnerable are still vulnerable. From the easing of the lockdown restrictions, whether vaccinated or not, the increase in shop closures has skyrocketed, due to staff members contracting the virus or being in contact with someone who has it. Due to the rapid increase of cases, through our track and trace system many shops were told to shut immediately as the government had become overwhelmed with regards to how to deal with it, the answer was shut and do the isolation time. This meant that a butcher mid-week, shop fully stocked, being told to shut up shop and isolate for 10 days, leaving customers without deliveries and food not being fit for purpose by the time they can return to work. A lot of speculation was brought about the track and trace and it was thought that the government had understaffed their track and tracers due to easing out of

lockdown and that lead to everyone being told to close and isolate as opposed to going down the testing route to deem if the isolation steps were necessary.

From the gentle easing out of the one plus year of lockdown the butchers are confident that from their service throughout the pandemic that their customers have become more loyal and more grateful to have them and it won't just be for Christmas when they are looking for their once a year order.

Overall the butchers have done the UK proud in supporting their local communities, along the way we have lost too many butchers due to COVID and we will never forget what they have done for us. ■



Insects may one day become a staple of the modern Australian diet. Photo: Dr Bryan Lessard

Insects are the buzz

The insect industry is one of the fastest growing protein sectors globally, not only for human consumption, but also for pet food and animal feed as legislation changes in countries around the world to accommodate the industry's growth and increasing capital flows into commercialisation.

By Stephanie Flynn

While Australia lags behind the rest of the world, there are already companies active in the insect industry and the CSIRO has stepped-up R&D into benefits for the livestock industry as well as releasing a roadmap for the development of the nation's native insects for niche product exports for human consumption.

The Global Picture

As land shortages, water scarcity and climate change threaten the earth's ability to feed the expected nine billion people who will inhabit the planet within the next 35 years, turning to insects as an alternative source of protein will be needed for both humans and animals.

Since the United Nations' Food and Agriculture Organization (FAO) released its ground-breaking scientific paper into the benefits of edible insects for both humans and animals eight

years ago, farming and industrial-level processing of insects for humans and the livestock sector has become a reality.

According to the FAO, the Netherlands has become the global leader in developing the infrastructure for an edible insects industry for human consumption with work well underway in the establishment of a supply chain for large-scale insect farming and the marketing of insect-derived products for food.

Already, global meat processing and agri-business giant, Cargill, has entered the market in the United States developing a large-scale production plant for the processing of insects for salmon and shrimp feed.

According to the latest report, 'No Longer Crawling: Insect Protein to Come of Age in the 2020s' by global agri-business

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company Rabobank, there is no lack of investor appetite with disclosed capital inflows in the insect sector in Europe nearing one billion Euros and, in 2020, exceeding US\$400 million in the United States.

Rabobank expects insects to have larger potential as a feed ingredient than as a consumer food in the next decade and, in their farming, can be used to upcycle low-value agri-food waste into high-value proteins, oils and other ingredients.

Currently pet food is the largest market for insect proteins, followed by the aqua feed market.

Rabobank estimates a global market of up to 500,000 metric tonnes for insect protein as a pet food and animal food ingredient by 2030 with the market for layer hen feed expected to reach 70,000 metric tonnes, broiler hen feed 50,000 metric tonnes and for pigs 30,000 metric tonnes.

Among constraints the emerging industry faces are legislative barriers which are not uniform globally but are rapidly changing.

In the US former food waste that includes fish and meat, or catering and slaughterhouse products are not authorised as insect farm feedstocks, but these are expected to be approved in 2022.

In terms of end markets, in the European Union insect protein can be used as a pet food or aqua feed ingredient but not as feed for poultry or pigs but legislative changes allowing these are also expected next year.

While in the US and Canada pre-consumer waste and other by-products are authorised as feedstocks and, by the end of this year, it is anticipated that insect meal, as an ingredient, will have been approved for inclusion for pet, poultry and pig feed.

The Australian Landscape

In releasing its study 'Edible Insects – A Road Map for the Strategic Growth of an Emerging Australian Industry' in April, CSIRO has estimated an AUD\$4.5 billion domestic and AUD\$2.5 billion export opportunity for alternative proteins by 2030.

The study identifies over 60 native insect species, some 16 of which have been consumed by Australia's indigenous peoples for thousands of years, including Witjuti grubs, Bogong moths and Honey Pot ants, which could form a basis for the development of unique Australian 'Bush Foods' for export to global markets.

Although, according to the CSIRO, the safety of many species for human consumption is still to be determined.

The CSIRO roadmap suggests the co-development of the industry with our first nations peoples, identifying the major market as young consumers where there is a growing trend for alternative, healthier and more sustainable foods.

But, in the short term, the most immediate applications for



Edible insects are high in protein, vitamins and other macro-nutrients. Photo: Boris Ceko

the development of an insect industry are the up-cycling of waste streams and for animal feed.

The emerging industry in Australia has now established a representative body, Insect Protein Association of Australia, which already has several members active in insect farming and the development of systems to process and recycle food waste for upstream processing into feed and food.

In an interview with *Australian Meat News*, Professor Michelle Colgrave, Future Protein Lead with CSIRO Agriculture and Food, said that immediate opportunities exist in the animal feed and food waste application of insects with research well underway for future applications into packaging and pharmaceuticals.

"There are opportunities in animal feed whether that be aqua culture, poultry or ruminant nutrition or alternatively in pet food and there are a number of companies in Australia already manufacturing pet food with insects as an ingredient and they are being used as an ingredient for poultry feed as well," Professor Colgrave said.

"We are not yet able to take food waste from processors of animal products for inclusion in feed for cattle and sheep, current legislation prevents that because of concerns around biosecurity and food safety at the present time.

"We need more research in an Australian context to satisfy the range of safety concerns that exist, so we really are at the very beginning of the industry in Australia," she said.

One of the major benefits of using insects for inclusion in animal feed is that it builds on an already natural habit, many animals such as hens and cats for example, naturally feed on insects.

According to Professor Colgrave, insects thrive on food waste and are incredibly efficient at converting what humans would not consume into high value protein and are, at the same time, rich in a lot of the micronutrients, most notably iron, and they can produce organic fertiliser in the process.

There are companies in Australia already farming insects to address waste management and high protein commercial stock feed and fertilisers.

Perth-based Future Green Solutions farms black soldier flies for the pet food industry, Melbourne's Beyond Ag transforms

food waste into insect meal and oils for pet food and animal feed as well as organic fertilisers and Canberra-based Gotterra has developed modular, decentralised automated waste units using larvae to consume food waste, at the location the waste is produced, converting it into sustainable protein and fertiliser.

While some restaurants in Australia already have our native insects on the menu, Professor Colgrave believes that it will be sometime before they would be available for commercial-scale farming as a great deal of research is needed before such a development could take place.

“We would need to understand what kind of diet we would need to raise them on, their nutrition requirements, how they lay eggs and how we can breed them specifically for production, so they are high-yielding and robust in a commercial setting,” Professor Colgrave said.

“In the immediate term, our attention needs to focus on commercial species such as Mealworm, which were recently approved in Europe by the European Food Standards Association as a novel food, Wax moth or crickets, these are the types of insects that are already being commercially farmed and have greater potential in terms of the lifecycles and an ability to rear them on diets that we can either manufacture or on food waste,” she said.

Professor Colgrave believes it will be sometime before we would see whole insects sitting next to chops and steak in the retail environment in Australia even though this is so in many countries around the world.

There are some two billion people globally who eat insects every day but, in Australia, it is unlikely to be a centre of plate option in the near term.

It is more likely that the protein from insects will be used to fortify products with added protein or micronutrients and, in time, will be listed in the fine print on the ingredient list in products on supermarket shelves.

Future possibilities for upstream processing of insects include the development of packaging materials for food items to replace plastic as well as the extraction of oils as a potential substitute for palm oil.

The current research underway at CSIRO Agriculture and Food by Professor Colgrave and her team at Future Proteins is focused on the production aspect of insects.

“We are looking at some of the great bio-actives that come out of insects, going beyond just vitamins and minerals to other proteins that insects produce that could have health benefits for humans and animals, pharmaceutical applications and other challenges we have in our environment,” Professor Colgrave said.

“We are really talking about one of the most biodiverse sectors and it has been quite underexplored.

“We are in the early stages, we have a vast history of expertise in Entomology and are just now bringing these to bear on these other possibilities, so there is a maturity of some of the techniques and the expertise, we have just not applied it in this way before,” she said. ■

The Bowlers Meatball Cookbook

Meatballs are a staple of most cultures and families, from Asian soups through to meatball spaghetti. Usually based on a minced meat, the humble meatball can be a cost-effective meal that still packs a flavour punch.



The Bowlers Meatball Cookbook written by Jez Felwick, is in essence the recipes for meatballs used in Felwick's foodvan, based in England, attending festivals and food truck events.

With a love of food, the author took a sabbatical from his every day to take a cookery course in Ireland, that as he says, changed the rest of his life.

Understanding that quality cuts of meat makes for a superior meatball, Felwick urges the home cook to talk with the local butcher to get freshly ground meats. Advice on making the perfect meatball includes the use of fresh versus pre-made breadcrumbs; flavourings such as herbs and spices, and the size the meatball should be.

Recipes cover beef, pork, lamb, poultry and veal and go beyond a meatball swimming in sauce, with options for skewers for the barbecue, soups, stir fry or classic French cuisine. In addition, there are a number of recipes using fish – prawns, tuna, salmon. The humble meatball is also celebrated with vegetable based recipes, such as falafels and sweet potato with goat's cheese.

Once the art of the meatball is mastered, the book provides a range of sauces and stocks to complement the different flavour profiles. Sides are also provided like caramelised onions, grilled halloumi, cous cous and salads.

The Bowlers Meatball Cookbook while aimed at the home cook, does give the butcher ideas for value-add meals that take spaghetti meatballs a modern touch. A well presented hard cover, each recipe is given full instructions plus a photo. Published by Octopus Publishing Group, it is available from Stoneman's Bookroom, Castlemaine retailing at \$32.95.

See page 39 for details on how to win a copy. ■

MIJ Carcass Camera approved by AUS-MEAT

The MIJ-30 digital carcass camera has now been granted conditional approval by Aus-Meat for objective grading for high marbling carcasses for marble scores 0-9+.

The camera is the first to be approved by Aus-Meat for the full marbling range. The approval is conditional on maintaining the standards required in the Aus-Meat regulations, which includes documentation for in-plant quality assurance systems and ongoing validation testing.

Developed by Meat Image Japan, the camera has been recognised by the Australian Wagyu Association as an enormous benefit to the Wagyu beef industry for grading of high quality carcasses. The AWA identified that MIJ is recognised as the gold standard for marbling and carcass quality grading technologies. The platform was first developed by Professor Keigo Kuchida of Obihiro, based on 30 years of scientific development and evaluation.

Using image capture analysis, the MIJ-30 camera provides measurement on yield, quality colour and fat percentage. More than 30,000 carcasses across



The MIJ carcass camera used principally for assessing Wagyu has now been given conditional approval by Aus-Meat.

multiple Australian supply chains have been assessed to build a reference set for the MIJ cloud-based carcass grading system.

As a commercial grading tool, the MIJ-30 is ideal for routine industrial use in supply chains across the full range of marble scores. AWA CEO Dr Matt McDonagh said that the Association

has conducted independent trials using the camera extensively across many processor sites during the past three years to develop the Australian reference data for the MIJ analysis and Aus-Meat accreditation.

Professor Kuchida said that a unique attribute of the MIJ-30 is its measurement of marbling fineness, which is a key attribute important to Wagyu quality. The proprietary methods for measuring marbling fineness with the MIJ-30 were established on Wagyu in Japan and form the foundation of quality assessment.

Allan Bloxsom, Chairman of Aus-Meat said that the accreditation of the MIJ-30 is a welcome addition for graders to validate intramuscular fat content in Wagyu.

“Most graders would rarely see Wagyu on a regular basis, so to have technology that enables them to grade higher marbling beef, is a plus,” he said.



“The measurement of IMF takes the guess work out of grading, by giving a scientific measurement that can then be attributed to a marble score. I am sure many in the supply chain will welcome the data available from this system to provide producers and buyers an accurate assessment of the carcass, particularly for a high value product such as Wagyu beef.”

The development of carcass assessment through technology has had a long history in Australia, with ViaScan, E+V and MEQProbe amongst others all undergoing extensive research to reach accreditation level with Aus-Meat, and others are still in the early stage of development.

Each of these systems has limitations, particularly in assessing marble score, with some aiming to meet the standards for MSA grading. The MIJ-30 camera will now be able to assess the 0-6 marble score for MSA plus higher marble scores as well as fineness, colour and eye muscle area, important attributes for Wagyu beef consumers. ■

The Accreditation Process

The purpose of an AUS-MEAT objective technology accreditation trial, is to interrogate and validate accuracy, repeatability and reliability of potential new grading technologies against MSA expert graders and industry graders.

To do this, the technology (in this case, a cut-surface grading camera) is evaluated against experienced graders for a given trait as follows for marbling:

Data needs to be collected from a minimum of 200 carcasses per day over a minimum of three days, giving a minimum analysis set of 600 carcasses.

In applying for 0 to 9+ Marble Score Accreditation, carcasses across the full Aus-Meat marble score range of 0 to 9+ must be well represented.

Three different camera units are required to be operated by three different camera operators during the trial to assess between-camera technology repeatability.

Each camera is required to image each of the 600 carcasses three times to test for within camera repeatability.

All 600 carcasses must be graded by two MSA expert graders and one industry grader.

All camera and grader data are supplied to an independent group for statistical analysis against the minimum requirements published by Aus-Meat for the specific trait.

A report is provided by the independent group to Aus-MEAT along with an application for accreditation from the technology owner company.

The report is reviewed and approved or otherwise by the Australian Meat Industry Language and Standards Committee prior to Aus-MEAT accreditation.



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Refrigeration as a Service

Dr Michael Bellstedt
Director
Minus40 Pty Ltd and Metis
Monitoring Pty Ltd
Unit 38, 276-278 New Line
Road, Dural, NSW 2158
Michael.bellstedt
@minus40.com.au

Refrigeration systems are widely used throughout the meat industry at processors, retailers and butchers, and in between. All refrigeration systems have a few things in common:

- They require a lot of capital to purchase and/or to install, and
- They consume a lot of energy throughout their service life, and
- They require regular inspection, service, repairs and maintenance

There is a trade-off between these things:

Better refrigeration systems that use less energy or require less maintenance generally cost more up front. Whilst spending more up front (Capex) does not guarantee lower running costs (Opex) the principle of “you pay for what you get” does hold. It is well documented, for example, that well-designed ammonia or CO₂ refrigeration systems easily use 40-70% less energy than conventional packaged or rack-based and air-cooled HFC refrigeration systems, whilst offering a longer usable life (20-25 years) compared to 10-15 years for most HFC systems. Modern ammonia systems also outperform traditional liquid overfeed ammonia systems. Annual maintenance costs for modern ammonia or CO₂ systems can also be much lower, especially where automated oil management and predictive fault detection techniques are used.

Considering that energy consumption makes up 60% to 75% of Total Lifecycle Costs, whereas capital expenditure

15% to 20% and maintenance 10% to 17%, opting for a low-cost refrigeration system almost always ends up saddling the end-user with the highest life-cycle costs, reducing his market competitiveness by raising nett cost of doing business. This is because even a doubling of the capital cost is small relative to the life-time energy costs of the system.

But the bulk of refrigeration systems sold and installed fall in the low capital cost category (even some ammonia systems), at high cost to the owner and to the environment due to the higher CO₂ emissions resulting from the increased energy use resulting from such low-cost solutions. Short term thinking, lack of access to capital, poor advice or inadequate information for decision-making are the main drivers for this behaviour.

A significant contributor is that the seller of the refrigeration equipment does not pay the power bill and often earns more doing after-sales service than through the initial sale of the equipment.

This goes to a fundamental challenge faced throughout the industry: Your typical meat processor is not an expert in refrigeration, energy efficiency and refrigeration service and does not have the skills to identify the nett lowest Total Lifecycle Cost refrigeration solution and is dependent on his advisors, who may have different incentives. Nor is he an expert at operating and servicing this expensive equipment, and again relies on a trusted service partner, who also has a business to run profitably. Star ratings help consumers make wise choices for home fridges and freezer, but no such system exists for larger systems.

Refrigeration as a Service (RaaS) seeks to resolve this perennial challenge by putting the ownership of the refrigeration system into the hands of a refrigeration specialist, who is incentivised to keep the nett ownership costs low in his own

commercial interest. The RaaS operator makes a profit by investing into a good refrigeration system, keeping energy and maintenance costs down, whilst selling refrigeration to the end user at a lower rate than the end user would otherwise be paying if he owned the system himself. Both sides win as incentives are aligned, and both the operator and end-user can focus on what they are good at.

This article will explain how RaaS works, addresses some of the practicalities in setting up RaaS and presents two typical case studies in brief.

Refrigeration as a Service – the principle

The basic tenets of RaaS are:

- The RaaS operator owns the refrigeration system. The exact extent of ownership is specific to each contract, but ideally should include all the functional and energy consuming components of the system. The end-user can buy back the refrigeration system at any time at an agreed depreciated price and exit the contract.
- The RaaS operator pays for the power used by the refrigeration system. In most cases, the power usage will be metered and the costs refunded to the end-user who pays the total site energy bill. Hence, if the refrigeration system runs inefficiently, the RaaS operator loses money.
- The End-User pays the operator a fixed monthly fee to cover finance costs and maintenance. If there is a major equipment failure, or significant maintenance work is required, the costs are borne by the RaaS operator. Hence the RaaS operator is incentivised to keep the plant running at lowest maintenance costs.
- The End-User pays the operator for actual metered refrigeration used,



Lynca Meats, South Africa uses an outsourced energy provider for all its needs, model, allowing the site to substantially reduce its personnel costs and focus on the production.

at a contractually agreed rate. The rate is adjusted annually (up or down) in accordance with an agreed escalation rate (typically CPI) and to correct for changes in site operation or changes in power costs. Higher usage and lower energy costs will cause the rates to decrease, or vice-versa. Also, the end-user pays for wasteful use of refrigeration and is incentivised to use cooling sparingly.

- The RaaS operator guarantees the availability of the refrigeration unit. If the refrigeration fails, the RaaS operator will become liable for penalty clauses and does not get to sell any refrigeration whilst the plant is down. Hence the RaaS operator is incentivised to install a plant with suitable redundancy and keep the plant in good running order.

In effect, a RaaS contract is quite similar to a Power Purchase Agreement for solar PV, where the service provider installs, owns and maintains the panels, and charges the site for energy consumed for a fixed contract period.

Setting up a RaaS deal

The key unknowns in determining the rates in a RaaS deal are:

- The capital cost of the refrigeration system, and
- The expected maintenance costs, and
- The expected energy costs.

In every case, determining the above can provide their own set of challenges, and either the RaaS operator or the end user need to wear the cost of working out these unknowns. AMPC members can use PIP support to get this work done.

Real life examples of RaaS

Energy Partners in South Africa are one of the pioneers and current world leaders in the application of RaaS and the two applications below are good examples of food industry applications of RaaS that are relevant and applicable to Australia.

Afrupro – South African fruit packing company

Afrupro was experiencing consistent problems with its existing industrial ammonia plant. The cold rooms were operating above required temperature specifications and the glycol tanks were leaking. This resulted in rising maintenance and electricity costs compounded by expensive product losses. Their upfront request was to replace the problematic plant with a new higher-GWP R407F multiplex system due to the poor temperature stability.

Following a thorough evaluation, Energy Partners Refrigeration proposed an outsourced cooling solution (financed, owned and optimised by Energy Partners). This involved an upgraded ammonia plant to provide better, more reliable cost-efficient cooling. The upgrade



involved the installation of a new liquid receiver (including valves and instrumentation) and new stainless-steel glycol tanks. Existing mechanical controls were replaced with a new computerised control system with remote monitoring capabilities and a full re-commissioning process commenced.

Lynca Meats – South African abattoir

Lynca Meats comprises 28 temperature-regulated rooms to produce a host of processed pork products; an abattoir that markets carcasses, boxed meat and offal; and dedicated units that offer multi-principle cold storage warehousing and logistical solutions to clients.

Energy Partners Refrigeration upgraded the 20+ year old refrigeration system under a 10-year contract, at no capital cost to the client. In addition, Energy Partners Solar installed a 962 kW solar PV system and Energy Partner Steam a new 4ton/hour steam boiler, both on an outsourced basis, such that Lynca Meats now has all of its energy needs (power, cooling, heating) provided to it through an outsourced model, allowing the site to substantially reduce its personnel costs and focus on the production.

continued on page 34

continued from page 33

Conclusion

RaaS is theoretically applicable to any size refrigeration system, but most likely to be most viable for meat processors rather than butcher shops due to the nature of the type of systems and service work done there. Most butcher shops do breakdown maintenance only, and power use is a relatively smaller cost factor to the business than for the meat processors, who also do much more preventative maintenance. Having said that, RaaS would work well on a brand new or full retrofit butchershop where fully new technology can be used (CO2 systems) rather than the common individual packaged HFC use mostly used at butchers.

Refrigeration as a Service is a modern outsourcing model that allows an end-user (meat processors and even butcher) to access low cost and reliable refrigeration and heating without tying up capital and without the hassles of having to retain internal resources to maintain the equipment to ensure availability and low operating cost. This allows the end-user to focus capital and time on core business, rather than having to manage their refrigeration systems.

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Vertical beef supply chain boosts efficiency: ACC

A vertically integrated supply chain delivers benefits in data sharing, streamlined processes and operational efficiencies that the conventional beef supply chain cannot match, according to Paul Gibson of Australian Country Choice (ACC).

However, the differences that define a vertical supply chain from the conventional model require more systems oversight and higher-level compliance, said the Group Manager - Research Development Innovation.

Mr Gibson was addressing the ICMJ northern conference in April; discussing vertically integrated value chains.

ACC is one of the world's largest, family-run vertically integrated beef supply chains and Mr Gibson's 29 years with the company provided him with the insights to share with the audience of 100 meat industry entrants.

"It's a monster – complicated and complex," he told the audience. "There are many moving parts all requiring a very high degree of surveillance managed by advanced standards and systems."

A conventional beef supply chain is characterised by isolated operational



Paul Gibson, Australian Country Choice (ACC).

sectors: pastoral properties, feedlots, factory processing, logistics, storage and distribution and market sales and supply. The vertically integrated chain, however, sees these operational sectors combined, he said.

ACC had developed extensive direct relationships across the entire end-to-end supply chain from producers to customers, particularly focusing on strong partnerships down-chain in logistics and market sectors, Mr Gibson said.

"In a conventional beef supply chain, the interchange of data is limited by a lack of agreement to share," he said. "There are operational

inefficiencies due to multiple transactions undertaken over time.

"There is also unwillingness among the separate parties to collaborate for a win/win outcome, which limits financial gains."

Vertical integration offered collective efficiencies and economies in time and cost, he said. "Data flow in both directions is open and effective and there is improved compliance to legislation, regulation and specifications.

"However, fundamental to this model is control, both direct control of production costs and indirect control of product price in-market. We remove the middleman and we remove the additional cost."

The ACC business model relies on multi-vendor alliances for beef cattle supply and multi-customer alliances for product sale to local and global markets. The company's processing division produces both commercial and retail packed products.

"It all comes down to two things: long-term partnerships, which is the key management mechanism, and data to measure performance," he said. ■

Ginger infusion in sous-vide for increased tenderness

Sous-vide treatment, along with ginger-powder injections could prove effective in increasing tenderness in low-value beef, according to Australian research.

Scientists from the Charles Sturt University, University of Melbourne and the University of Sydney report new ways to alter the tenderness and water-holding capacity of beef – including low-price cuts of younger and older animals.

The same group of scientists found that injections of ginger power, coupled with sous-vide treatment, also increased tenderness in muscle meat from older Angus cattle.

The first group, led by PhD student Zahra Naqvi, examined the effects of sous vide cooking and ageing on biceps femoris and semitendinosus muscles from young animals (<18 months) and those aged 30–42 months. They found that ageing up to 13 days increased tenderness in both muscle groups. They also reported that cooking older beef in the sous-vide for 18 hours for 75°C achieved tenderness equal to that of young animals.

“The higher cooking temperature increased collagen solubility in both muscles and solubilisation of collagen may have contributed to improved tenderness of both muscles in sous vide cooking,” Zahra said.

Meanwhile, the they investigated the effect of ginger power and sous vide cooking on tenderness and water-holding

capacity of M. biceps femoris from 30 Angus cows aged between six and seven years.

The muscle meat was cooked for up to 18 hours at 65 °C and 75 °C after being injected with either 1 g/L or 2 g/L ginger powder solution (containing zingibain). A control sample was injected with water only.

The researchers reported that shear force was reduced and collagen solubility increased with higher zingibain concentration even with one h cooking. “Injecting zingibain along with sous vide cooking demonstrated the weakening of myofibrillar and connective tissue proteins contributing to enhanced collagen solubility and tenderness,” said Zahra. Next phase of experimentations is looking at product safety and sensory characteristics. The research project is aimed to develop value added products with the potential collaboration of meat processing industry.

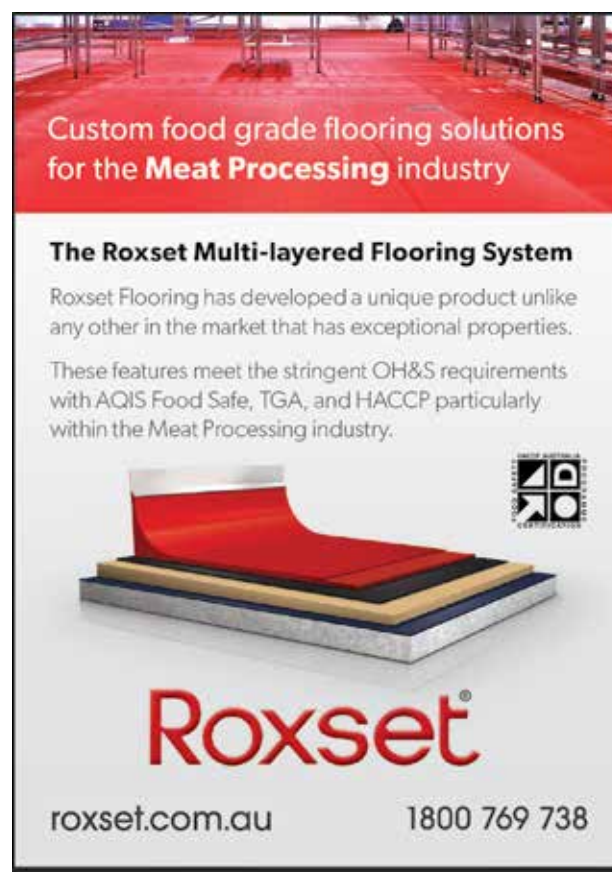
Other researchers involved in this study were M.A. Campbell, S. Latif, P.C. Thompson, D.M. McGill, R.D. Warner, M. Ha and M.A. Friend. ■

What is sous-vide? French for “under vacuum”, sous-vide cooks raw food material inside vacuum pouches, typically either as cook-serve (food served immediately) or as cook-chill (cooked food is rapidly chilled to 0–3°C). The method has been widely adopted in food service outlets due to its comparatively easy handling as well as lower contamination risk.

Sous-vide cooking can be performed in a water bath or a convection steam oven up to temperatures of 80°C.

Two main processes are often described as sous-vide:

1. Products are par-cooked, vacuum-packed and then subjected to high-temperature, short-time, inpack pasteurisation. This process is commonly used by manufacturers of retail-ready meals.
2. Products are vacuum-packed when raw, and fully or partially cooked in the pack, often at a low temperature for long periods. This process is commonly used by gourmet chefs. The products are then refrigerated until use. The products are then warmed, or fully reheated to complete the cooking.



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Truthful labelling: What does *meat* mean?

If you look up Wikipedia for ‘what is meat’ it starts out defining it as ‘animal flesh that is eaten as food’. Go down a bit further for the historical origins of the word ‘meat’ and in Old English it refers to ‘food’ in general. Same in a few other languages, or it can refer to something that is inside the outer husk such as coconut ‘meat’.

So where does that leave the announcement of a senate inquiry into using the word ‘meat’ for labelling for non-animal based proteins such as vegan bacon, or meat free mince?

The inquiry, launched by Senator and Super Butcher owner, Susan McDonald, said it was up to makers of non-meat products to come up with their own distinct terms instead of trading off long-established names of animal proteins.

“There are intellectual property issues, and in our export legislation we have clear definitions of meat being the product of an animal, but there are gaps domestically,” she said.

“The industry invests hundreds of millions of dollars each year to develop and enhance the intellectual property and benefits of red meat in Australia, and it’s important that these investments are protected.

Red Meat Advisory Council chairman, John McKillop, said graziers had had enough saying it is a national disgrace that highly processed plant-based protein made from imported ingredients are allowed to be labelled as Australian meat.

“These highly processed, unnatural plant-based products are increasingly seen as a health risk and are in no way similar to the red meat produced by Australian farmers,” he said.

“The brand and reputation of natural beef, lamb and goat has been built over generations and is now being denigrated by companies that are deliberately trying to use piggyback marketing to sell an inferior product.

“Infringing a trademarked brand to sell another product is unlawful in Australia and so should be the use of our industry’s collective owned meat category brands if a product is not from the flesh of an animal.

“A parliamentary inquiry will provide a voice to the hundreds of thousands of Australian families that collectively own their industry’s meat category brands.

“These voices need to be heard to address the blatant attempt to misappropriate our industry’s category branding for highly-manufactured plant-based proteins, which don’t support Australian livestock producers, processors or retailers.” McKillop said.

The inquiry will investigate the economic effects of non-animal protein marketing on Australia’s red meat industry, the legality of using livestock imagery on vegan products, and the health benefits of non-animal protein manufacturing processes.

The Alternative Proteins Council (APC), the representative group for Australia’s alternative proteins sector says it looks forward to working with the Commonwealth Government and industry stakeholders on the Inquiry.

CEO of Food Frontier – secretariat to APC – Thomas King, said of the inquiry, “There is overwhelming evidence from global authorities on the need for protein diversification in order to feed the world’s growing population – set to reach 10 billion by 2050. Given that global protein requirements will continue to expand, this Inquiry must avoid considering the emergence of new proteins as an ‘either – or’ scenario; it’s a scenario where every industry will need to expand and work together to ensure the world’s nutritional needs are met.”

In its response to the Senate Inquiry’s announcement, the APC noted greater demand for plant proteins worldwide opens up an opportunity for the thousands of Australian farmers and regional communities that stand to benefit from the plant protein industry’s growth. New investment in value-adding supply chains for plant protein will generate new opportunities for Australian legume and grain farmers, feeding into an increasing demand for plant protein in Asia. Demand for plant-based meat is tipped to increase by 200% in markets like China and Thailand.

The inquiry follows on from the passing of a Bill in Texas, USA, to ban the use of the word ‘meat’ on plant-based proteins on labelling, that do not contain meat derived from animals in May 2021. According to Republican Brad Buckley, who put the Bill forward, it is designed to ‘protect consumers, including vegetarians and vegans, from buying something by mistake’. “This is for those who choose to eat meat, but it’s also for those who choose to not eat meat,” he said.

However, if following the money is an indication of where things are headed, then the recent announcement that the global arm of JBS have bought Vivera – the third biggest European plant-based protein producer, plus Cargill’s release of plant-based products in 2020 is telling.

The Vivera range includes a mixture of product names including Plant Greek Style Kebab through to Plant Chicken Pieces with no obvious commitment to how the word ‘meat’ is used. According to a press release by Vivera the acquisition of ‘strengthens and boosts JBS’ global plant-based products

Italian AGED. cabinets offer next-generation dry-ageing technology

platform. Strong growth is expected in this category throughout global markets. The deal will add a brand to JBS' portfolio that is well-established in consumer preference, strengthening the Company's focus on value-added products. Viverra, will join other JBS initiatives such as Seara's, Incrível range, a market leader in plant-based hamburgers, and Planterra, with the OZO brand in the United States.

"This acquisition is an important step to strengthen our global plant-based protein platform", said Gilberto Tomazoni, Global CEO of JBS. "Viverra will give JBS a stronghold in the plant-based sector, with technological knowledge and capacity for innovation".

The Cargill venture, produces chicken protein alternatives for the Chinese market under the PlantEver brand, along with two other plant based proteins for a Japanese based convenience store chain. The products include 'chicken nuggets' and 'beef patties' and according to Cargill 'these products provide Chinese consumers the nutrition value of veggie products combined with the joy that comes from eating great-tasting meat'.

"Cargill is taking an inclusive approach to the future of protein by investing in both animal and alternative protein. We will continue to offer safe, responsible and sustainable proteins to customers and consumers by flexing our supply chain advantage and global research and development expertise," said Managing Director of Cargill Protein China Jackson Chan on the announcement in 2020.

It would appear then, that labelling of proteins to be indicate whether it is animal or plant-based is as much a responsibility of the manufacturer as it is the retailer. ■

Designed and manufactured in Italy by Zernike and sold by Collinson's Packaging, AGED. dry-ageing cabinets are the most advanced dry-ageing products on the Australian market.

Featuring an intuitive touchscreen that lets users select from pre-programmed options or design their own dry-ageing program, these attractive cabinets allow precise management of temperature, humidity, oxygen and airflow. An advanced data logger takes minute-by-minute readings, providing complete operational oversight and HACCP traceability compliance.

Popular with restaurants, butchers and high-end grocers and delis, AGED. cabinets promise to be a visual feature in any setting, with sleek design and large glass doors inviting customers to view the dry-ageing process firsthand.

Available in three flexible models, AGED. cabinets support drying and curing or a combination of both functions, and allow users to maximise their yield with less than 5% weight loss achievable. Their versatility makes them a compelling choice for butchers and artisan producers specialising in meats, cheeses and smallgoods.

"We jumped at the chance to add AGED. cabinets to our product offering," said Collinson's Packaging director, Chris Collinson.

"We believe they're the best dry-agers on the market. Aside from being incredibly user-friendly, they have a unique, patented oxygen sanitisation system which means there's no need to replace UV lamps, filters or salt blocks, like with many other brands.

"I'd invite anyone who's interested in dry-ageing to visit our new showroom and see the results that can be achieved. We have Cape Grim rib eye supplied by Vic Wide Meat Brokers and a range of cheeses on display to really showcase how the cabinets work."

www.agedaustralia.com.au ■



FIND A WORD

AUGUST
2021

Enter the competition to win one **Khabin** 10inch Cimetar Steak Knife & 12inch Steel. And one of five **Khabin** 6inch Granton-edge Boning Knives.

The words in the list below are all hidden in the grid. They may be found in straight lines running horizontally, vertically or diagonally. Some of the letters are shared by more than one word. When you have found all the words in the list, there will be 36 letters remaining: these form the answer to the competition.

When complete, send your copy by mail or email. Include your name, address and phone number to go in the draw for another great prize from **BUNZL**. Results will be published in next issue of Australian Meat News. **Entries close 15 October 2021**

Last issues winners and answers, see page 8



B	S	R	O	D	I	R	R	O	C	E	F	I	L	D	L	I	W
R	A	I	N	F	O	R	E	S	T	U	B	E	E	S	K	R	G
V	E	T	C	U	D	O	R	P	L	A	C	O	L	R	E	Y	O
O	K	S	D	R	I	B	U	T	E	A	T	C	A	R	T	N	O
L	A	O	T	R	B	O	T	R	N	B	Y	M	U	R	R	O	D
U	S	H	A	O	E	>	S	E	W	I	D	T	O	L	P	I	B
N	D	S	C	L	R	L	I	E	D	N	L	P	F	U	E	T	A
T	N	O	I	A	A	E	O	S	A	U	P	N	I	P	N	A	C
E	A	I	S	C	E	S	M	L	C	U	G	L	S	I	G	N	T
E	L	L	S	O	A	T	D	O	S	N	D	U	H	N	U	I	E
R	T	C	A	R	B	O	N	C	R	E	D	I	T	S	I	L	R
S	E	N	R	N	I	O	U	V	M	O	T	H	S	E	N	O	I
R	W	S	G	A	M	L	O	I	N	S	E	C	T	S	S	P	A
L	L	A	F	N	I	A	R	G	N	I	T	S	E	V	R	A	H
B	I	O	C	H	A	R	G	L	Y	T	I	S	R	E	V	I	D
R	O	T	A	T	I	O	N	A	L	G	R	A	Z	I	N	G	Y
>	G	N	I	T	N	A	L	P	E	V	I	T	C	E	L	E	S

GRASS

GOOD BACTERIA

CARBON CREDITS

BIOCHAR

INSECTS

FISH

RAIN FOREST

WET LANDS

TEACH

RESTORE

SELECTIVE PLANTING

SUPPORT

WILDLIFE CORRIDORS

LOCAL PRODUCT

MONO CULTURE

TREES

KOALAS

MOTHS

POLINATION

CORN

SOIL

LANDMARK

ROTATIONAL GRAZING

DIVERSITY

BEEES

PENGUINS

BIRDS

HARVESTING RAINFALL

EAT

VOLUNTEERS

LUPINS

GROUND MOSITURE

“

”

Post: Australian Meat News. PO Box 415 Richmond VIC 3121 Email: athol@ausmeatnews.com.au

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BOOK COMPETITION WINNER

Congratulations to Graham Warren, Perry Butchery Rushworth in Victoria who won the copy of: *The Pie Room* by Calum Franklin.

Graham submitted a correct entry to the question: *Who is the Grand Champion of the 2021 Wagyu Branded Beef Competition?*

Answer: Stone Axe Pastoral

Graham has worked at – and since 2019 owned – the Perry Butchery in Rushworth.

Graham and to all our readers thanks for supporting *Australian Meat News* and entering our competitions. ■



WIN WIN

To enter our competition to win: *The Bowlers Meatball Cookbook* written by Jez Felwick (RRP \$32.95)

Answer the question below.

Send your answer and name and address & phone number to:

Australian Meat News Book Competition

Email: athol@ausmeatnews.com.au (preferred)
or By post: PO Box 415, Richmond Vic 3121

Question: *How many tonnes of insect protein, does Rabobank estimate, will be used as a pet and animal food ingredient by 2030?*

Entries close 15 October 2021



AUSTRALIAN MeatNews



IN THE NEXT ISSUE:

- Retail over Christmas
- Education

Advertising bookings close 15 October 2021

Australian Meat News, PO Box 415,
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Freecall: 1800 621 631 T: 03 9421 2855
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LESNIE'S

EST. 1910

Australia's Favourite Flavours



Lesnie's continually strives to remain relevant and consistent by providing quality ingredients to meet the changes that happen around us. This innovative spirit is one of the reasons the business has been around for so long, successfully serving the local butcher since 1910.

In keeping up with the times, plus listening to valued customer feedback, we've improved the look and flavours of Lesnie's, without compromising on quality.

Lesnie's new look gluten-free glazes and gourmet meals add even more flavour and visual appeal to your range of dinner options. Lesnie's offers flavours that appeal to modern cuisine palates while meeting today's dietary requirements.

Lesnie's Gluten-Free Glazes and Gourmet Meals

Product Code	Description	Size
LES0500104	Gourmet Herb & Garlic Meal Gluten-Free	1kg
LES0500112	Gourmet Tomato & Onion Sausage Meal Gluten-Free	1kg
LES0500114	Gourmet Hearty Steak & Onion Sausage Meal Gluten-Free	1kg
LES0500117	Gourmet Mushroom & Onion Sausage Meal Gluten-Free	1kg
LES1000204	Herb Chilli & Garlic Glaze Gluten-Free	2.5kg
LES1000208	Tandoori Glaze Gluten-Free	2.5kg
LES1001508	Tandoori Glaze Gluten-Free	10kg



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gluten-free