AIP NEWSLETTER

OCTOBER 2017

WPO WORLD PACKAGING ORGANISATION FULL MEMBER

Australian Packaging Covenant Signatory

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AUSTRALIAN INSTITUTE OF PACKAGING

AIP DIPLOMA IN PACKAGING TECHNOLOGY EXAM RESULTS - BEST EVER!

The AIP Education Team is pleased to advise that in June, 6x AIP Diploma in Packaging Technology students sat a total of 7 examinations. The results included 3x Distinctions and 2x Merits; with the highest average score on record being the outcome. 3x of the students were sitting for their first exam, 3x were sitting their last exam before changing their focus to completing the Unit 4 Project. APPMA Scholarship winners were 3x of these success stories. A special thanks must go out to their tutors – Pierre Pienaar, FAIP, CPP and Gordon Robertson, FAIP for their support and fine preparation of the students. The next examinations will be held on 22nd and 23rd of November and I would encourage all other active students to sit their next exam.

Ralph Moyle FAIP, CPP
AIP Education Administrator

FIRST NEW ZEALAND CPP MEETS THE IOPP

During PACK EXPO 2017, which was held in late September in Las Vegas, USA, Coster Ngirazi MAIP, CPP, Packaging Technologist, Fonterra who was the first New Zealand Certified Packaging Professional (CPP), had the opportunity to meet the new Executive Director, Jane Chase and Jim George, Education Director of the Institute of Packaging Professionals (IoPP) who developed the CPP program. This was a once-in-a-lifetime opportunity for Coster to meet Jane and Jim and to also showcase our first New Zealand CPP to the IoPP!

ISN'T IT TIME THAT YOU JOINED RECOGNISED PACKAGING EXPERTS FROM AROUND THE WORLD WITH THE INDUSTRY'S LEADING PROFESSIONAL DESIGNATION?

Attaining the CPP® designation is an excellent investment in your professional development and the credential defines the packaging professional and allows organisations to seek out and hire the right professional based on verified knowledge, skills and industry contributions. Using the CPP® program to assess and evaluate one's professional competency validates you as internationally proficient as a packaging professional; a cut above your peers. The Certified Packaging Professional (CPP)® designation is a registered trademark of the Institute of Packaging Professionals (IoPP) and is now internationally recognised by both IoPP and AIP. To find out more please email educate@aipack.com.au

NEW MEMBERS

The AIP would like to welcome the following new Member.

NAME	GRADE	STATE
Amber Bonney	Associate	VIC
Vinotha Bheem	Member	VIC

JOIN THE AIP LINKED IN GROUP TODAY LinkedIn

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AIP MEMBERS INVITED TO PLASTICITY SYDNEY

NB: AIP Members to receive 20% discount: Promo code is AIP_20off_deal

Following successful conferences in the USA, UK, China and EU, Plasticity Forum - the only global conference focused on plastic sustainability and circular economies - is coming to Sydney on 31 Oct 2017. Plasticity Sydney is the only global conference focused on plastic sustainability and circular economies. This is a great opportunity for industry to come together to share learnings and add to the global movement.

WHAT'S ON OFFER

A day of 'Ted Talks' style speakers and broad conversation followed by networking drinks. Topics include:

- Plastic sustainability at the heart of business models
- Global perspective on waste stream economics
- Inspiring end-markets – creative applications for recovered plastics
- Rethinking the basics - decentralised processing, soft plastics collection, local closed-loop in action, community engagement solutions
- Designing for the future - hassle-free packaging, supply chain overhaul, and scaleable solutions
- Capital markets view on funding circular economies
- Sustainable brands

Register today https://www.plasticitysydney.org/rego-form and use your AIP discount code for 20% off. The code is AIP_20off_deal

DON'T **MISS OUT** ON THE LATEST **AIP ACTIVITIES** FOR **2017**

ALL MEMBERS ARE **INVITED** TO ATTEND **ANY** EVENTS ACROSS **AUSTRALIA** & **NEW ZEALAND**

To register to attend any of the events simply email info@aipack.com.au or visit the events page on www.aipack.com.au

FOOD INNOVATION CENTRE (FIC) SITE VISIT

VIC

When: **25th October**
Where: Clayton Campus, Monash University
What: AIP Members will have the opportunity to have an exclusive visit to the Food Innovation Centre (FIC) which will showcase how consumer products may be developed from scratch to 3D model building, testing and printing and then placing that new product in a virtual store planogram to ensure future consumer preference.

VIC CHRISTMAS PARTY

VIC

When: **22nd November**
Where: Lord Cardigan Restaurant, Toorak
What: Established in 2007 as the Lord Cardigan Restaurant is the brainchild of husband and wife team, John Singer and Dominique Bolger. As our VIC Annual Christmas Dinner 2017 theme is a 'White Christmas' all guests are invited to wear something white on the night! Be ready to participate in the Christmas Trivia and win the 2017 Trivia Award.

A PACKAGING & PROCESSING WEEK EVENT

2 & 3 MAY 2018
AIP NATIONAL CONFERENCE
MARRIOTT RESORT SURFERS PARADISE
QUEENSLAND, AUSTRALIA

PACKAGING GLOBALISATION

SPONSORED BY DESTINATION GOLDCOAST.

A PACKAGING & PROCESSING WEEK EVENT

2 MAY 2018
WORLDSTAR PACKAGING AWARDS
As a part of the 2018 AIP National Conference
MARRIOTT RESORT SURFERS PARADISE
QUEENSLAND, AUSTRALIA

PROUDLY HOSTED BY

WORLDSTAR FOR PACKAGING

WPO
WORLD PACKAGING ORGANISATION

A PACKAGING & PROCESSING WEEK EVENT

2 MAY 2018
2018 PACKAGING & PROCESSING INNOVATION & DESIGN AWARDS
As a part of the 2018 AIP National Conference
MARRIOTT RESORT SURFERS PARADISE
QUEENSLAND, AUSTRALIA

PIDA™
PACKAGING & PROCESSING INNOVATION AND DESIGN AWARDS

COORDINATED BY

APPMA Australian Packaging and Processing Machinery Association Limited

PAC.NZ Packaging Council of New Zealand Inc.

PACKAGING GLOBALISATION

2 & 3 MAY 2018
AIP NATIONAL CONFERENCE
MARRIOTT RESORT SURFERS PARADISE
QUEENSLAND, AUSTRALIA

CALL FOR SPEAKERS

YOU ARE INVITED TO SUBMIT AN ABSTRACT FOR CONSIDERATION UNDER THE THEME PACKAGING GLOBALISATION

DEADLINE FOR ABSTRACT: 17TH NOVEMBER 2017

SPONSORED BY DESTINATION GOLDCOAST.™

A PACKAGING & PROCESSING WEEK EVENT

2018 CALL FOR SPEAKERS

The Australian Institute of Packaging (AIP) is currently at the planning stage of the 2018 National Conference that will be held at Marriott Resort Surfers Paradise, Queensland on 2nd and 3rd of May. Following a number of highly successful conferences, the 2018 AIP National Conference will be designed to deliver a two-day educational program that will cover a broad range of topics relating to the theme **PACKAGING GLOBALISATION**.

The 2018 AIP National Conference **PACKAGING GLOBALISATION** will attract delegates from all facets of the packaging industry including packaging technologists, packaging designers and engineers, sustainability managers, marketing, sales, production, design agencies and much more. to equipment suppliers, raw material providers, users of packaging, retailers and consumers.

LIST OF RECOMMENDED TOPICS

A list of topic areas are included below for your consideration. These topics should be considered from the point of view of technical, environmental and consumer issues. This list is not limiting and any additional ideas would be welcomed. The AIP intend to break the conference predominantly into breakout sessions after the opening and keynote presentations, to ensure that a diverse range of issues and topics are covered over the two days. The AIP is looking for a broad range of speakers from all areas of the packaging industry to ensure that the National Conference offers something for everyone.

TOPIC SUGGESTIONS

The AIP National Conference Programming Committee is looking for presentations and papers under the theme **PACKAGING GLOBALISATION** and incorporating case studies and real-life applications from end-users is strongly encouraged. Please ensure that your paper is delivered at a high-technical level, incorporating case studies and application stories.

Suggested Topics:

1. Global Trends in Labelling
2. Latest Trends in Private Labels
3. Nanotechnology in packaging
4. Augmented and Virtual Reality
5. Vacuum packaging innovations
6. Better Understanding BlockChain
7. Disruptive and dynamic packaging
8. Understanding the Circular Economy
9. Latest Trends in Robotics & Automation
10. Latest Global Packaging Design Trends
11. What is new in the world of packaging?
12. Latest trends in MAP and Skin Packaging
13. Latest Innovations and award winning trends in Ease-of-Opening designs.
14. Understanding Packaging Recyclability: What is the world collectively achieving?
15. Innovative digital printing for packaging
16. Global Food Waste Strategies & Programs
17. Save Food Packaging Trends and Designs
18. Latest Updates in Country of Origin Labelling
19. Artificial Intelligence and its role in packaging
20. Global Trends in Serialisation & Authentication
21. Global Trends in Active & Intelligent Packaging
22. Global Sustainable Packaging Trends & Innovations
23. The Latest in 3D Printing for the packaging industry
24. Latest Trends in Product Stewardship: Global Examples
25. The importance of Packaging in the Food Waste Debate
26. Latest packaging innovations to extend shelf life

THE TIMING OF ABSTRACTS AND PAPERS IS AS FOLLOWS (PLEASE ADHERE TO THE DATES):
DEADLINE FOR ABSTRACT: 17TH NOVEMBER.
SPEAKERS NOTIFIED: BY LATE DECEMBER 2017.

CLICK HERE TO ACCESS THE CALL FOR PAPERS

CRC TO FIGHT FOOD WASTE CURRENTLY SEEKING APPROVAL

Written by Lauren Davis - SustainabilityMatters Magazine

With 42% of food produced in Australia currently ending up as waste — either during the production and manufacturing stages or via the end consumer — over 50 industry and research organisations have come together to do something about it.

The Fight Food Waste & Fraud Cooperative Research Centre (CRC), originally proposed in November 2016, aims to tackle the growing international problem of food waste and fraud by developing the circular food economy in Australia to valorise 'waste' and by protecting the integrity and provenance of our food and wine products, both domestically and abroad.

"There's not enough realisation within food industries about how to profitably work with waste," said Peter Wadewitz, managing director of food waste recycler Peats Soil & Garden Supplies, a partner of the CRC. "There's an urgent need to introduce and promote new solutions."

Wadewitz is confident the proposed CRC could accelerate the transformation of existing organic waste streams into high-value products such as nutraceuticals, as well as develop new forms of high-value soil amendments from the likes of discarded European carp. Such breakthroughs are expected to help strengthen the circular agrifood economy — currently a hot topic in Australian political circles.

The CRC is also expected to have a significant impact on the potato industry — the third-biggest commodity in the world and also the one with the highest rejection rate in the fresh food sector. It is claimed that 25% to 40% of potatoes are rejected by the sector, largely due to the rigidity of supermarket selection criteria; together with high losses in carrots, oranges and bananas, these food wastes total $360 million in Australia each year.

"Potato producers accept this level of loss because they are accustomed to it," said Robbie Davis, CEO of CRC partner Potatoes South Australia. "They don't see that it's a significant problem needing a timely solution to increase farm gate margins.

"We are 10 to 20 years behind Europe in recognising food waste problems in the value chain, especially in the development of preventative measures. In terms of profitability, productivity, sustainability and food security, this simply has to stop, and collaborative efforts within the CRC will show the way forward."

Davis is concerned other possibilities are not currently being explored, such as combining waste from different food industries to create new products, including other foods for human consumption. Most producers only consider their waste crops as being feed for livestock, rather than possible recyclables of higher value.

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http://www.sustainabilitymatters.net.au/content/waste/article/crc-to-fight-food-waste-currently-seeking-approval-547465875

CRC TO FIGHT FOOD WASTE CURRENTLY SEEKING APPROVAL

Written by Lauren Davis - SustainabilityMatters Magazine

"The CRC could produce evidence of new solutions that aren't even being considered at present," Davis said. "Producers need to realise that with something like starch extraction from waste potatoes, profitability soars in an area where there currently is none — from $0 for waste to $1000 a tonne for extracted starch."

The proposed CRC also ranks new packaging innovations among its priorities, believing that improved packaging could swiftly introduce positive change to Australia's food industry. CRC partner the Australian Institute of Packaging (AIP) has already shown its support for this idea, two years ago taking up the World Packaging Organisation's (WPO) invitation to launch the Save Food Packaging awards.

Winners of the Save Food Packaging awards have been shown to enable great advances in Cryovac and portion control solutions, as well as improved use-by date information to help prevent wastage of packaged foods. Now the AIP wants to encourage industry support to ensure the widespread implementation of these world-leading innovations.

"The CRC will help these innovations get embraced further in food industry production," said AIP Executive Officer Nerida Kelton. "It will make a huge difference if improved Save Food packaging design becomes standard criteria for all manufacturers. The CRC can provide a national platform that accelerates positive change. We can't have a fragmented approach if we expect to see necessary improvements."

The AIP and its associates recognise that research and evidence-based education will play a vital role in the implementation of improved food packaging.

As noted by Associate Professor Karli Verghese from RMIT University, who has been working with the AIP, "The most immediate need is to obtain clear and accurate mapping of where food waste occurs in the supply chain — and why.

"There are so many opportunities to value add rather than simply view food waste as compost; we need more innovations to be understood and embraced."

So what if we fail to act decisively on food waste? Apart from the obvious economic loss, the problem could escalate environmental damage. Australia's estimated 7.6 million tonnes of wasted food converts into 19.3 million tonnes of CO_2 equivalent — or 3.5% of our total emissions — and also wastes more than 1.46 million ML of water each year.

The strong financial commitment from CRC bid partners, across a wide cross-section of industry, government and research bodies, thus underlines a growing need and desire to transform Australia's current food waste situation. $120 million in investments has already been pledged by the partners, according to Davis, showing the level of commitment from major players in the food industry to introduce necessary change.

The CRC is seeking the maximum 10-year term to best align it with the delivery of the United Nations Sustainable Development Goal of a 50% reduction in food waste by 2030 at the retail and consumer levels and reduced food losses along the production and supply chains. Ultimately, the CRC seeks to slash financial losses to waste, increase profitability for food industries, boost export potential and bolster Australia's clean and green image.

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http://www.sustainabilitymatters.net.au/content/waste/article/crc-to-fight-food-waste-currently-seeking-approval-547465875

ALUCAPS PURCHASE THEIR 32ND CCM FROM SACMI

Alucaps Group are one of South Americas largest supplier of high quality plastic and metal closures to the beverage, food and pharma industries, including the Coca Cola Group. Alucaps has a long-standing partnership with Sacmi and their latest machine is no less than the 32nd model from the CCM series to be installed at one of Alucaps manufacturing facilities located in Mexico, Venezuela, Ecuador and Guatemala.

Can two different caps be produced using the same die? With Sacmi compression technology the answer is yes, and this is just one of the reasons why the Alucaps Group decided to purchase an all-new Sacmi CCM64MB compression moulding closure system. Designed to handle up to 1,600 caps a minute with just 64 cavities, the CCM64MB has one of the lowest cycle times in the industry (2.4 seconds) and can manufacture caps of variable diameter up to a maximum of 52 mm. Thanks to Sacmi compression technology, the machine can manufacture of caps with different designs (in this case, a cap for water and one for carbonate soft drinks) from the same dies. This can be achieved by varying the thickness of the upper cap section which can be set directly via the operator interface (HMI).

In addition to the ability to produce two different caps with one die, the reasons behind Alucaps continued trust in Sacmi includes the superiority of compression technology compared to alternative injection solutions and Sacmi's ability to develop the lightest, highest performing plastic caps on the market.

For further information contact

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www.hbm.com.au

MASTER OF FOOD AND PACKAGING INNOVATION
INTERNSHIPS AVAILABLE

The University of Melbourne and the Australian Institute of Packaging (AIP) would like to offer your company the opportunity to engage students from the Master of Food and Packaging Innovation (MFPI) for an industry internship in 2018. The Master course is a joint initiative between the University of Melbourne and the AIP.

The MFPI is a unique post-graduate Degree, training students to be well rounded professionals in the area of NPD as well as food packaging processes and design. Students completing this two-year Degree study subjects in the areas of food science, food safety, packaging materials and processes, packaging design, consumer behaviour, product innovation, entrepreneurship, business management and marketing.

SO HOW WILL YOUR COMPANY BENEFIT FROM A MFPI INTERN?

FIND FUTURE EMPLOYEES

Taking an MFPI intern provides an ideal opportunity to assess your potential future employees. Students from the Master of Food Packaging and Innovation have the knowledge, skills, drive and enthusiasm to be highly successful employees, and potentially future leaders, in the food and food packaging industries.

INCREASE PRODUCTIVITY

MFPI interns are highly motivated and ready to tackle whatever tasks you give them. This internship provides a great opportunity to receive some extra help with research or projects that you are having difficulty finding the time or resources to complete. In addition, the interns bring with them a fresh pair of eyes that can inspire new ideas and help to problem solve. It is also worth noting that many of the interns have worked in a diverse range of fields prior to undertaking the Master Degree and bring with them a range of skills obtained through previous employment.

SUPPORT STUDENTS

Hosting an intern supports industry development and the future leaders of the food and food packaging sectors. Be a part of a student's career journey by giving them invaluable practical experience in their chosen field. In addition, you can help them to further develop their workplace skills and facilitate the establishment of networks and professional contacts.

MFPI students are required to undertake 120-200 hours of work as part of their internship. These hours can be taken over weeks or months, depending on the needs of the company. **If you are interested in taking an intern in 2018 or would like more information, please email info@aipack.com.au**

PACKAGING TECHNOLOGY TRAINING IN VIETNAM

Written by Prof Pierre Pienaar FAIP, CPP, Education Director

Two years later and the AIP (Australian Institute of Packaging) along with the support of the World Packaging Organisation (WPO) was back in Vietnam and again what an experience being involved in a five day residential training program (RTP) in Packaging Technology in the province of Tra Vinh, Vietnam. At this training, there were 34 students from industry. We used the facilities at one of Tra Vinh University's satellite facilities, state of the art Mylan Group, located just outside the city of Tra Vinh in the heart of the Mekong Delta. More than ever before it was evident that there is a need as well as a desire for many, across our globe to learn more in the science and technology of packaging.

The WPO in collaboration and with the support of AIP (Australian Institute of Packaging), those who have the knowledge and the ability to share information; I believe have an obligation to help those in developing countries. In this event the standard was high and all students absorbed information like a sponge and simply wanted more. They were keen and eager to learn which was evident in their final course related presentation at the end of the week.

This initiative was led by the WPO President, Tom Schneider having met the Mylan Group founder and CEO, Dr My T Nguyen at PackExpo in Chicago in 2013. Dr My T as we have come to know him affectionately again invited us back.. Although this recent training covered the entire spectrum of packaging technology, what drove the students, which was evident in their questions, was how one can improve packaging; reduce costs, what their packaging counterparts were doing in developed countries and how they can improve packaging of foodstuffs to reduce wastage.

PACKAGING TECHNOLOGY TRAINING IN VIETNAM

Written by Prof Pierre Pienaar FAIP, CPP, Education Director

The challenge I found was conveying the information, especially the technical aspects to the students through translators. The two translators were exceptionally patient and my sincere thanks and appreciation for translating non-stop for the week.

As part of the training program, we visited converting facilities, state of the art and the first high tech company in the province, i.e. Mylan Group's flexible manufacturing plant for high barrier films used for electronics, food and pharmaceuticals. This facility matches and in many cases is better than any European based facility that I have seen. The mere fact that this is the third training program that we have done in Vietnam is a step in the right direction in helping packaging training across a broad spectrum of packaging technologists of the future in Vietnam. Plenty more education is required at all levels of the packaging spectrum, i.e. formal and informal sector, but at least the WPO/AIP is present and doing something about education.

Similar training programs undertaken this year by the AIP and supported by the WPO were Indonesia, Nigeria, Kenya, Iran, and the remaining part of this year, we will be in China and Italy. The aim is purely to get more people in developing countries educated in Packaging Technology. It continues to be a long road but a hugely rewarding one.

QENOS' DIRECT BUSINESS SEEING POSITIVE SIGNS FOR GROWTH IN THE AUSTRALIAN MARKET

Qenos' recently established PE direct business – eXsource – is now providing businesses in the region with a new and expanded product range of local and international specialty polymers.

This new business has seen a number of positive signs for growth, specifically in applications for the packaging industry. This includes easy opening films, re-closable seals, barrier films, industrial packaging films, injection moulding and blow-moulding.

"With businesses in the market competing with the growing volume of imported finished film and imported finished goods, many eXsource customers are staying ahead of the competition by developing new products for niche applications, said Ged Beckton, eXsource Business Manager.

The eXsource direct channel is working closely with businesses to provide a reliable and high quality supply of the best local and international polymers as well as specialty polymers and Qenos Polyethylene.

"We are seeing a growing trend in the Australian market of brands moving from the traditional rigid packaging to flexible alternatives. There is also a focus on manufacturing established products more efficiently. says Jackson Allan, eXsource Sales Manager.

According to recent Australian Bureau of Statistics Import Data, in Australia, finished polymer film imports grew at a compounded annual growth rate of 8% in the 10 years to 2015. In that same time, demand for polyethylene in the Australian film manufacturing market decreased with a CAGR of -3%.

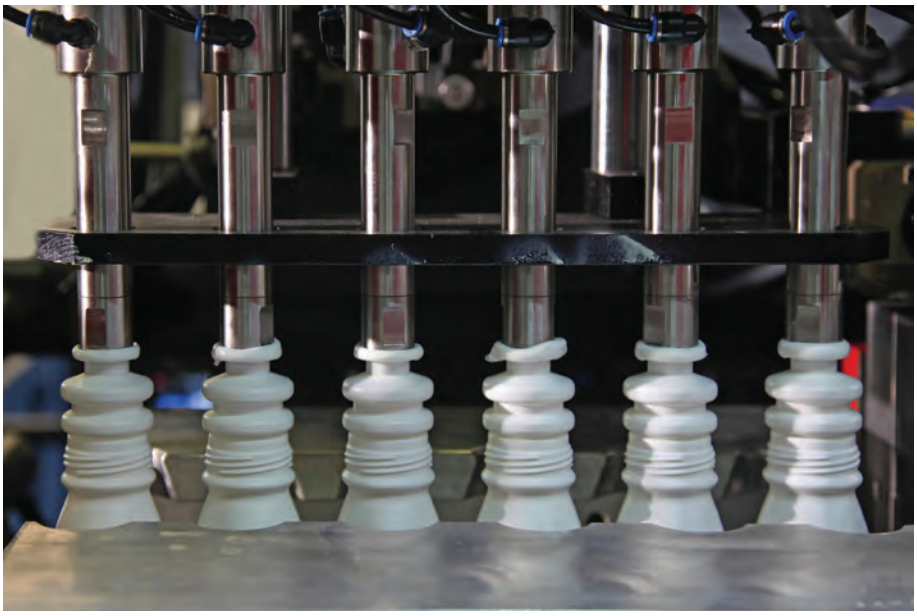
Encouragingly, demand for polyethylene in the Australian film manufacturing market has remained steady over the last three years despite continued growth in finished film imports. This has resulted in growth in the overall size of the market, which may reflect efforts in the food industry to add value to their products before exporting.

"We are seeing our customers make the most of favourable market trends, for example the move towards flexible packaging solutions that reduce weight and offer brands more shelf presence. says Allan.

The eXsource product range features a number of polymers that add functionality and enable light-weighting in flexible packaging films.

To find out more go to www.exsource.com for the latest technical information and specific product expertise

The missing link



The majority of quality issues are the result of 'critical components' being out of control in the moulding process.

Control is key when it comes to plastic bottle manufacturing. EBM specialist Stephen Barter talks us through the missing link between filling line speed and bottle specifications.

THE plastic bottle is a great delivery method for most consumers, but for the packaging technologist it's a different story. As an engineering component, the bottle is critical to the performance of a filling line.

In terms of engineering components, plastic bottles are no different to capping heads. Consistent plastic bottle performance creates predictability, and is one of only a few keys to process improvement in filling, labelling, and capping line speeds.

Plastic bottle manufacturing is a precise recipe of temperatures and pressures, and lack of control in this recipe almost certainly impacts your filling lines' Overall Equipment Effectiveness (OEE).

Documented bottle specifications are designed as a tool with which you can hold your supplier accountable for providing products within these parameters. The specifications include some dimensional and function measures, which are in fact the lag results of critical process inputs.

So why don't we have the recipe that includes critical process inputs documented on the bottle specification? If we did, you could hold your supplier accountable for better manufacturing standards and predictable results for you to work with.

There are five critical components in any recipe for plastic bottle moulding. They are so important, I wouldn't be running a moulding machine without knowing they are under control:

1. Plastic parison melt temperature
2. Mould water temperature
3. Mould water pressure
4. Blow air pressure
5. Bottle mapping (distribution of plastic plotted in a line graph).

Minor deviations to one of these controls will result in reduced bottle performance. Critically, the dimensional and functional checks may not detect issues until the filling line is affected.

For example, a 500ml bottle was transferred from another supplier to the plant I was working at. When we produced bottles from the same mould they were actually 2.5mm taller. Understandably, this caused concern for the packaging manager and put him in a difficult position for continuation in supply.

Because we had the five critical controls in place, we could determine that the previous bottle supplier had built and adjusted the mould to suit an out-of-control process. This resulted in variation in the bottle quality and was a long-term problem.

Being 'in control', we were able to prove every bottle was precise in dimension and performance, and meant we could confidently re-size the mould to suit our process and produce consistent bottles, leading to improved filling line performance.

The majority of simple to serious quality issues are the result of these 'critical controls' being out of line in the moulding process. This is the reason your supplier may be struggling to solve quality variations.

With critical controls on your specifications, you can have improved performance of your filling, labelling, and capping, and hold your supplier accountable to it for long-term performance. ■

Stephen Barter MAIP has 30 years of specialised experience in extrusion blow moulding (EBM), and through his company Pro Technical Plastic Manufacturing Solutions, has consulted to major manufacturers on EBM processes, systems and design. Many major FMCG brands now on shelf have been influenced by his knowledge and project execution. Barter is currently developing a start-up EBM company using equipment designed in-house to further enhance the quality and efficiency of plastic bottle manufacturing in Australia. He can be contacted at stephen@promoldmodule.com

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WHILST THE SPRING LAMBS GAMBOL!

Written by Michael B Halley FAIP

A group of four food processing experts presented at the Australian Institute of Packaging's (AIP) meeting in September, the official start of the Australian spring. A paddock full of members of the AIP and the Society of Plastics Engineers (SPE) were corralled by the organisers to discuss issues and developments around packaging innovations and trends in the meat industry.

Professor Srinivasan Madapusi (Srini) from RMIT University was the 'Judas lamb' but there was no slaughter on the night. Srini talked about issues around plastics packaging and their effect on a sustainable future. His chemical engineering knowledge was front and foremost but he managed to bring it down to basics and into the area of nano technology. It is believed that the future will be in nano technology with a positive impact on the environment. But as Srini said the overarching need is for packaging to be environmentally benign, so that waste matter can be converted into energy and packaging film. Nano technology is not a solution as a solution but must be presented on a hard surface to gauge the efficacy.

Volatile organic compounds (VOCs) sensors will play a major part of the future as a wide range of carbon based (organic) chemicals (compounds) are found in various man-made and naturally occurring solids and liquids. As the name infers they are volatile compounds that need specific control to achieve their worth as a packaging substrate.

Australia is the largest producer and consumer of meat and as tastes and consumer behaviours change the packaging industry must be up with, or ahead of the herd. Studies show that perception is extremely important, as an example of a limp or crispy cauliflower demonstrated. Modified atmosphere packaging (MAP) techniques can extend shelf life by over 400% and also increase tenderness and juiciness.

The topic of the evening was meat and Srini addressed colour, oxidation, and temperature issues and enlightened us about myoglobin that gives meat its red colour. On the topic of packaging he proffers that it prevents contamination, reduces external influences that affect smell and taste; and as meat is high in the ranks of globally distributed food it could not exist without packaging. Srini as well as MAP had penned up other packaging trends such as intelligent, vacuum and active and delivered a summary of each.

His final message was sustainability is number one and packaging will be protecting more that it consumes. Alan Adams, MAIP, Market Manager - Retail, Case-ready Meat, Poultry and Seafood at Sealed Air followed with an opening remark that his company's mission was to create a more secure and less wasteful global supply chain. It has been found that consumers think packaging is more damaging to the environment than food waste probably because the packaging is left when the food is consumed and visibility plays on folk's minds.

The middle classes are consuming more and more protein and also wasting food possibly due to larger than needed package sizes offered by retailers. When meat is bought at a butcher one or two cuts can be bought but in the chiller cabinet meat is generally in multiple cuts.

Food waste has environmental, economic and social impacts, but programs like National Food Waste that has a desired outcome of a 50% reduction in food waste by 2030 are all positive. There are some conflicts in the trade as the retailers are controlled by sale by date whilst the consumer is checking the use by date. The latter have a sort of NIMBY attitude about these issues and marketing needs to consider ways to address the conflict. Consumers want packages to be resealable and clearly show the use by date.

Alan explained that an unwrapped cucumber had a shelf life of three days whilst a wrapped one lasted for 14 days. Nearly half of consumers surveyed said they switched to wrapped cucumbers when shown the shelf life advantage. Packaging has assisted in the expansion of home delivered meals and also converted 'take out' cooks to home based preparers. Duck was a poor seller until the brand owner introduced cook in the package retail units. Sales have grown exponentially and it is noticed that the chicken producers have also introduced similar cook in the bag products.

Alan left us with this mantra 'if you tell consumers what you are doing for them they will reward you'. Michael Lee MAIP, Manager, High Value Food Frontiers Meat & Livestock Australia (MLA) was probably not going to talk much about two legged animals but those which have four were given a good run. Meat & Livestock Australia Ltd (MLA) strives to be the recognised leader in delivering world-class research, development and marketing outcomes that benefit Australian cattle, sheep and goat producers. Working in collaboration with the Australian Government and wider red meat industry, MLA's mission is to deliver value to levy payers by investing in initiatives that contribute to producer profitability, sustainability and global competitiveness.

Michael stated clearly that partnerships are the solution to improve the value chain and that packaging is an enabler of value creation. One needs insight into where meat will be prepared and consumed.

He indicated that change happens all the time and often subtly. What should we do, not what can we do, and what's now, what's next and what is possible keeps him focused on putting customers at the centre of all developments.

WHILST THE SPRING LAMBS GAMBOL!

Written by Michael B Halley FAIP

Put the consumer at the centre and work out for there has worked for MLA as witnessed by the myriad of new consumer packs available for sale. The same meat can be many products all of which need different packaging. Increasing shelf life and visibility is most important as the consumer can only make a buying decision by what is able to be seen. We learnt that different plastic packs are needed for ready to remove meat that will be cooked at home, ready to cook meat such as the aforesaid duck, and ready to eat meat that is now on offer at supermarkets.

Irrespective consumers must be able to open the package so eating regimes must be understood. Lifestyle choices vary and whilst one consumer may take a ready to eat meal home another may want to open it and consume it whilst walking. Smart labelling to explain the product will be very much involved in developments around meat packaging. MLA has a global oversight and is very concerned about substitution in export markets and what packaging methods can be developed to ensure that "paddock to plate" is discernible and cannot be curtailed. Right now the focus is on consumer behaviour but all indications are that ultimately consumers will be less and less involved in choosing food. Smart kitchens are already in vogue and will continue to interface across the whole supply chain.

Stuart Shaw Red Meat Business Manager Scott Automation + Robotics delivered his address with a series of video clips that explain how robotics has added value and safety to the meat processing industry. He explained that robotics is driven by vision technology, and the efficiencies and safety that are delivered.

Innovation that ensues from robotic processing leads into reduction of waste and profitability. Witnessing the robots processing lamb carcasses with surgical precision and to an exact specification for the particular animal was quite breathtaking.

The skinned and cleaned animal is x-rayed and a specific processing program continues. This ensures that all (for instance) legs of lamb produced are exact in detail except proportionally.

Thirteen years ago there was only one robot in meat processing plants but now there are many all with improved technology. The video showing lamb processing showed how the robot can process the carcass continuously in a programmed safe manner. Before the human cutter with a hand held circular saw was very much at risk of injury. But human processing is still part of meat processing and Scott Automation has a system to eliminate serious injury. BladeStop™ is available worldwide and is uniquely designed to reduce risks of serious injury by mechanically stopping the band saw blade when the unit senses that a person has come in contact with the blade.

BladeStop is available in two sensing methods. Upon sensing contact with the operator, the blade stops operating within 9 milliseconds. This can be a huge difference between having just a small skin cut or an amputated finger. In addition Glove Check can also be added which detects the operator gloves moving at high speed in a zone directly upstream from the meat saw blade. This triggers the mechanism to stop the saw blade. (Deflates the old joke about the butcher that backed into the band saw and got a little behind in his work)

Another video showed Automatic Guided Vehicles (AGV) moving packed products into cold storage. From a materials handling and productivity point this showed a major breakthrough in technology. Robots place the packaged goods directly on a pallet which sits on the AGV. This eliminated forklifts and the reduced the floor space needed to manoeuvre the unit loads. So after a question and answer period delegates departed and on the way home had many thoughts to process along with digesting the chicken meal that had been served by humankind. "As a vegan I think people who sell meat are disgusting; but apparently people who sell fruit and veg are grocer."

The recently born lambs will gambol in the paddocks for some months to come but many will later be processed and packaged for sale to hungry consumers. But one sure gamble is that not any of the meat will be consumed by a robot! (Not yet anyway)

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