

September 2020 – 043



WPONEWS

The packaging community around the world



Better quality of life, through better packaging, for more people

President's Word

COVID-19: a big challenge - and opportunity - to the packaging industry

Pierre Pienaar*

The packaging industry has been under the spotlight in this challenging time of COVID-19. More than ever, packaging has been tested in so many ways. Packaging has saved the product on so many levels and allowed the consumer to be safe. I have no doubt our industry will emerge on the other end of this pandemic with a much stronger public awareness and clarity of the key role packaging plays in our lives.

There has been an overwhelming fear of consumers of being exposed to and catching COVID-19, which is currently a driving force behind safe packaging. The response to this has been that companies and brands have had to adapt to meet consumer's new demands. Not only are consumers washing their hands more frequently and using more sanitiser than they have ever used before, they are also increasing their use of household disinfectants and



cleaners. Purchasing behaviour for many consumers has changed in response to the COVID-19 outbreak and consumers are now stock-piling non-perishable items such as rice, pasta, canned fish, canned vegetables etc.

Packaging for the food market has seen a huge growth in the home delivery sector as families go into lockdown or prefer to self-isolate. This new life choice has seen a rise in the production of insulated packaging to keep frozen goods safe for home deliveries. As restaurants have re-opened with limited numbers allowed, if at all, the need for take away containers has skyrocketed. Some countries have reflected an increase in demand of more than 200% for some lines of meat, seafood and poultry. This is a result of more people staying home and cooking for themselves rather than going out to eat. This change has led to a greater demand for appropriate meat trays that have been produced in safe, COVID-free environments.

In the flexible packaging sector, it has become necessary to give more attention to projects that have perhaps been only in experimentation stage to date. New coatings and materials for pouches and sachets that can be anti-microbial, anti-bacterial and aseptic packaging innovations have suddenly had to become part of the new race as consumers demand packaging manufacturers jump over hurdles to produce safe packaging. (PKN Packaging News, 2020, p. 23)

The challenge for us in the packaging industry, therefore, remains two-fold: our first focus should always be on aiming to produce safe, reliable, reusable or recyclable, sustainable packaging; our second – but equally important – focus has to be on insisting local governments cooperate with us as material manufacturers, or converters to create a robust, successful recycling infrastructure that can process all the fantastically exciting new innovations in sustainable packaging.

There is still far too much confusion among consumers regarding the disposal of packaging, especially plastics; and those who are keen to clean up our planet often have no where to go to manage their waste packaging. Now, as consumers expect more protective packaging than ever before, we need to become serious about finding solutions to this even greater pandemic impact on packaging.

The pandemic has also revealed an agitation among consumers who are concerned about health and hygiene. Not only do these consumers want sustainable packaging that is safe, they also want it delivered to their home because that is where they feel safest. Apart from packaging companies re-thinking materials and design for safety, the spike in consumers' digital engagement for shopping now extends beyond clothes and gadgets and suddenly includes, far more frequently, the purchase of groceries. This increased demand means significant implications for packaging design. To date, food packaging has been designed to be sold in a bricks-and-mortar establishment, not through online shipments and tailor-made home deliveries. It can be expensive to deliver a box of canned goods to a home through the mail! We need to rethink packaging materials in terms lightweight, volume density, shelf-ready packaging, in order that shipping costs can be reduced.

I believe education in packaging knowledge is key to our future success. Attending webinars or offering your employees training programs to ensure they keep up with the newest trends and expectations, is an excellent start. The WPO can help you with such training courses.


My real hope, after this pandemic subsides, is that the public perception of and attitude to packaging, particularly plastic and sustainability issues, will have changed as they realise

the value of packaging. I really hope the ongoing drive to remove plastic altogether and of seeing plastic as the ogre – rather than the solution - will have changed to a push for improved waste management infrastructure around the world. COVID-19 has perhaps done the poor plastic victim a BIG favour. And, hopefully, a new focus and knowledge will lead to new innovations for better collection, for recycling and reuse of plastic materials.

***Pierre Pienaar is President of WPO**

 pierrepienaar3@gmail.com

 WPO – World Packaging Organization

 [pienaarpierre](https://www.linkedin.com/company/pienaarpierre)

 [@WorldPackOrg1](https://twitter.com/WorldPackOrg1)

Around the World

WPO member in Greece, AGMPM joins European

Since April, AGMPM (Association of Greek Manufacturers of Packaging & Materials – www.pac.gr), a WPO member, is the new member of European (European Organization for Packaging and the Environment – www.european-packaging.eu). European is an industry organization that reflects the opinion of the packaging supply chain in Europe on topics related to packaging and the environment, without favouring any specific packaging material or system. It aims to achieve a fully accessible European market for packaging and packaged products, while protecting the product and the environment.

Congrats to CSAOSZ for its 30th anniversary!



WPO member in Hungary, CSAOSZ (Hungarian Association of Packaging and Materials Handling – www.csaosz.hu), was founded in June 1990 by 72 companies, after the first free parliamentary elections. It was the second professional organisation in the country at that time.

During the last 03 decades, a modern packaging industry has emerged in Hungary guided by international standards; many of the original companies successfully operated by Hungarian families became multinational and foreign owned companies.



Over this time, CSAOSZ also became an unavoidable professional organisation, whose professional opinion is always expected by the authorities. Its task is to create a competitive and predictable legal environment for the Hungarian packaging industry and to promote the technical and economic development of the profession as well.

At the initiative of its open-for-novelty and excellent professional community – its presidency, secretariat, working groups – the barcode technology was introduced in Hungary and later the EPR system for the management of packaging waste, which has already been proven in Europe.

Because of the high quality, the CSAOSZ professional programs – trainings, workshops, conferences, national packaging awards – are very popular, so during the last decades CSAOSZ became a packaging knowledge centre in Hungary.

Leaders of the Hungarian packaging industry could not be successful without many hardworking and creative experts, designers. The most expressive evidence of the excellent Hungarian creativity is the 112 WorldStar prizes between 1997 and 2020.

CSAOSZ assists the Hungarian packaging companies to develop their foreign relations as well. Since a decade, CSAOSZ (co)organises national booths at the most prestigious packaging exhibitions in Europe, like Interpack, in order to offer its members the possibility for introducing their products at international level.

Congrats to Miklós Nagy, Secretary General of CSAOSZ for such achievements and for being an active and valuable member of WPO.

Packaging Conference 2020 in Singapore



Every year, the Singapore Manufacturing Federation's (SMF - www.smfederation.org.sg), Packaging Council of Singapore (PCS) and Industry Group organises a packaging conference as a platform to reach out to the industry and students from Institutes of Higher Learning (IHL) to discuss the latest trends and changes impacting the packaging industry.

This year, in line with the continued focus on sustainability, the theme of the conference was on achieving zero packaging waste. This is the second year that the conference focused on sustainability, with the first held in 2019.

Due to the COVID-19 pandemic, the conference was held virtually, with part 1 on 27 July 2020, and part 2 to be held in October 2020. During the conference, Aldin Velic, from Oliver Healthcare Packaging, highlighted the challenges the healthcare industry faced in ensuring safe and sustainable packaging methods. William Chen, from Nanyang Technological University (NTU), presented new innovative packaging solutions that are available in the industry. To round off, John Goh, from Xcel Industrial Supplies Pte Ltd, who is one of the winners of the Singapore Packaging Star Awards 2019, shared case studies and best practices on sustainability.

Well done winners of Royal Crown Packaging competition!



The 2nd edition of Royal Crown Packaging Limited's annual competition for tertiary institutions took place virtually from 27th July to 7th August 2020. This year's competition saw students from University of Ghana, Kwame Nkrumah University of Science and Technology, Ashesi University and a new entrant Academic City College.

The competition which is facilitated by IOPG (Institute of Packaging Ghana – www.africapack.org), a WPO member, aims to introduce students to the world of packaging ie studying the corrugated packaging industry and its production chain, identifying the inherent challenges within the packaging industry and proposing innovative solutions to the constraints inherent in the packaging industry.



After two weeks of brainstorming and researching, the various schools presented their findings to the panel of judges. According to IOPG, a couple of the innovative packaging that were presented have been earmarked for the 2021 Students World Star Competition organised by the WPO.

Plastics Conference 2020 in Greece

Recognizing that plastic materials have found themselves in the communicative “line of fire”, AGMPM (Association of Greek Manufacturers of Packaging & Materials - www.pac.gr), a WPO member, was one of the supporters of the 1st Plastics Conference that presented the best practices of production and management of plastics, as well as improved ways for their retrieval and recycling.

The target of the event was to form a Pan-European meeting spot for the most important industries of this field, as well as all the companies and the carriers of recycling and waste management. The new Community Directives have changed everything in the plastics industry, which is, however, already starting to transform, ensuring its development.

International speakers, experts and executives of the plastic industry and representatives of the Greek authorities presented case studies focusing on various topics, among them: initiative and goals of the European Commission; “plastic investment” of the food and beverage industries and innovations; solutions for recycling; bioplastics; industrial evolution; better practices from factories in Europe and Greece.

Participants were informed on the new technological methods of production, waste management, retrieval and recycling and met the visionaries and the innovators of the European plastics industry. For more information access the link <https://www.plasticsconference.gr>.

First and third generation of same family recognised with WorldStar



Following their win in the 2019 Australasian Packaging Innovation & Design (PIDA) Award win in 2019, Impact International was also recently awarded a WorldStar Packaging Award for the Sarah, Craig and Margorie 100% recycled PE and sugar cane PE tubes in the Health & Personal Care category.

Aleks Lajovic, Managing Director, Impact shared his views on what winning a WorldStar means to him and his family business. “When you work in a family business, it is not only financial results that drives you. It is the history, the protection of the legacy and having something to pass on to the future generations. It is about having a team that you see as extended family members and friends and not just employees.”



According to him, his grandfather (Starrapapa) that passed away two years ago, won their first WorldStar back in 1994. “Receiving Impacts second WorldStar in 2020 is one of my proudest moments since becoming the 4th generation to work at the company.”

Impact was one of the 11th Australian and New Zealand companies that has been internationally recognised in the prestigious WorldStar. Winners from Australia and New Zealand also received the third highest amount of WorldStar awards in the world behind Japan and China. This is an incredible recognition for the annual Packaging Innovation & Design (PIDA) Awards program, organized by WPO member Australian Institute of Packaging (AIP – www.aipack.com.au).

From the board

WPO had its first online Packaging Education Program

WPO first online Packaging Training Program was scheduled for September 21 to 24, through Zoom platform. It was open for 100 students, from different parts of the world, that were searching for the training 'Introduction to packaging'. According to Aslihan Arikan, WPO Vice President Education, the format allowed the same interaction with the trainers and the same valuable content provided by face-to-face classes.

The official language of WPO online packaging training is English and during the 4 days of the program, students trained 3 hours per day. Everyday, training commenced at 12h00 (Central European/Vienna time zone). The registration fee was €100. Trainers were Kishan Singh (WPO Ambassador – south Africa) and Pierre Pienaar (WPO President – Australia)

This online training was the second held by WPO in 2020. At the beginning of March, before the pandemic, WPO organized training in Legon, Accra (Ghana). The trainer was Global Ambassador, Kishan Singh, and the event had the support of WPO local member, IOPG (Institute of Packaging Ghana); 26 students participated.

Over the past few years, WPO has been responsible for more than 52 packaging training courses in 15 countries that has influenced more than 2,141 packaging professionals. The idea is to continue this mission even with Covid-19.

WPO aligns its Business Management System to ISO9001:2015

The operational practices and systems of WPO have, over the past 15 years, evolved into a mature and effective business management system, encompassing the General Secretariat, Education, Marketing, Environmental Sustainability, WorldStar Awards, Membership and Media Communication disciplines. Additionally, the generation of position papers on strategic global packaging topics, and the support of global packaging optimisation projects, have been the cornerstone of WPO business activities.

However, in recent years, there has been a growing need to address the requirements of accountability, not only to members, but also to its strategic corporate partners, business relationships, sponsors and other related stakeholders.

To achieve this objective, the decision to align the business systems of WPO to a more formal ISO9001:2015 type of management system was taken. Since the beginning of

global COVID-19 pandemic, GI Business Solutions has been working on this initiative and the project, supported by the WPO Executive Team. The project is expected to be completed by November 2020.

WPO launched 'Packaging Trends Report'

The document 'Packaging Trends Report', based on the entries and winners of WorldStar Packaging Award 2020, the major global packaging competition organized by WPO, is already available for download at WPO webpage www.worldpackaging.org. It can be easily found in the section Resources – WPO Brochures of the webpage.

Produced by Liliam Benzi, WPO Press & Communication Officer, 'Packaging Trends Report' gives an overview of common trends that guided packaging projects all over the world in 2019 and that were submitted to WorldStar Award 2020.



WPO collaborates with ProPak in a series of webinars



WPO is a partner of Informa Markets, through the ProPak team, in a series of webinars that run from June to October 2020. The purpose is to give a truly global overview covering key trends and the hottest topics in the packaging and processing industries in the post-pandemic era.

The webinars include a raft of international speakers from across the globe, a who's who from the international processing and packaging industry, to facilitate a thorough

examination for the future direction of travel for the sector.

The ProPak and WPO webinar series is free to access. The next ones are scheduled to:

- **23 September 2020**
The role of packaging Food Waste and Food Insecurity
- **21 October 2020**
Global Supply Chains

Worldstar

2020 WorldStar Special and Student Awards ceremony goes virtual



In keeping to current circumstances, WPO host a virtual ceremony for the winners of 2020 WorldStar Special Awards and Student Awards. The ceremony happened on two days – August 25 and 26 – due to global time zone differences.

There were 15 winners in the Special Awards, in the categories Lifetime Achievement Award, President ´s Award, Sustainability, Packaging that Saves Food and Marketing – and 12 in the Student Award. Winners are from 14 countries around the globe - Singapore, Spain, Australia, New Zealand, South Korea, Netherlands, USA, Finland, Brazil, Lebanon, Turkey, United Kingdom, China, South Africa.

“WPO Executive team continuous searching and working on creative and innovative solutions to continue interacting with the global packaging community despite the current global circumstances. And this was not different regarding the WorldStar 2020 ceremony that had to be adapted to the pandemic moment”, explains Pierre Pienaar, President of WPO.

WorldStar is the largest and most important global packaging award and the 2020 edition had 214 winners that attracted over 300 entries from 36 countries around the globe. The four countries most awarded in 2020 are Japan, with 34 awards for the third year running, followed by China, taking 22, Australia & New Zealand (ANZ), taking 13 collective, and Germany 12.

Packages eligible for WorldStar are those that have already received a national award recognised by WPO. Entries for the 2021 edition are open until October 19. More information at www.worldstar.org.

Sustainability

Innovative Sustainable Packaging Designs recognised in Food & Beverage



The 2025 National Packaging Targets, from Australia, enables brands to clearly understand what outcomes they need to achieve to ensure that the packaging put into the market is sustainable and circular by design by the year 2025.

The targets include that the packaging is 100% reusable, recyclable or compostable, 70% of plastic packaging is being recycled or composted, packaging includes 50% of average recycled content and there is a phase out of problematic and unnecessary single-use plastics packaging in Australia; all by 2025.

A high number of companies across the Food and Beverage industries are set to achieve these targets and are evident through the 2020 Australasian Packaging Innovation & Design (PIDA) Awards for Australia and New Zealand, organized by WPO member, AIP (Australian Institute of Packaging).

The Sustainable Packaging Design Award has been designed to recognise companies that have developed innovative packaging or processing solutions that incorporates sustainability considerations. Elements include Efficient Use of Materials, Source Reduction, Energy, Recovery and Recyclability, Sustainable Packaging Design Considerations, packaging changes to meet the 2025 National Packaging Targets and Benefits to Society. This is a WorldStar Packaging Awards category.

Due to the broad range of packaging design innovations that covered everything, from milk cartons to e-commerce solutions, the winners were split into two sub-categories. 1. Retail Pack and 2. Product Protection.

2020 Sustainable Packaging Design Special Award – Retail Pack

The winner of the Gold Award for the 2020 Sustainable Packaging Design of the Year category – Retail Pack was Coca-Cola Amatil for the 100% recyclable post-consumer recycled rPET bottles. Coca-Cola Amatil (CCA) has provided key industry leadership and assisted the drive to the circular economy by making and delivering on a commitment to convert all of their single serve PET bottles to 100% post-consumer recycled PET resin (rPET).

By converting all of these SKU's to 100% rPET, seven out of every ten bottles CCA sells in Australia are now made from recycled post-consumer resin. This equates to over 55% of CCA's total PET tonnage or a reduction of CCA's use of virgin plastics in Australia by around 16,000 tonnes a year.



Even more technically remarkable after the bottle weight reductions undertaken over the last decade, the conversion to rPET was achieved without increasing the weights of any packs and in the case of the preform used for warm fill and aseptic dairy, they successfully light weighted these bottles by a further 8.5% during the conversion to rPET.

The winner of the Silver Retail Pack Award was Pact Group for New Zealand's Earthwise brand of PCR 75% rHDPE household cleaning range. Earthwise has been pioneering eco-friendly products for over 50 years and is one of New Zealand's most trusted environmental brands. Sustainability is at the heart of everything they do and are always looking for ways to improve their environmental footprint.

Earthwise follows environmental practices that take into consideration the full life cycle of a product, from sourcing plant-based ingredients, use of recyclable packaging, and management of energy, water and waste to reduce their contribution to landfill.

Earthwise pledged support to the New Zealand Plastic Packaging Declaration and with packaging already recyclable, moving to bottles made from recycled content was the next step. Earthwise will have reused and diverted over 320Tonnes of plastic packaging from landfills over the next 12months.

The winner of the Bronze Retail Pack Award was a tie between Brownes Dairy for Australia's first renewable gable top milk carton and UPM Raflatac & Kiwi Labels for the CUSTOM-PAK rPET Cherry Punnet with self-adhesive label, permanent adhesive that is also washable at the PET recycling plant.

Brownes Dairy identified that to be truly sustainable they must focus on both end-of-life management and recycling, considering the full end-to-end environmental impact their products and package have. After considering different packaging options, Brownes

decided to progress the Tetra Rex Bio-Based Carton, from Tetra Pak. Tetra Rex Bio-Based packages are the world's first fully renewable carton packages - made entirely from bio-based, fully renewable materials. The paperboard used is certified by the FSC and is recyclable.

The Cherry Punnet Label applied to the CUSTOM-PAK rPET container has been manufactured on UPM Raflatac Label Stock, printed by Kiwi Labels and has three features to consider that are relevant to criteria 1: Firstly, the label enables significantly enhanced recyclability of the package once discarded; secondly the package is manufactured from 100% rPET, rather than just virgin PET; and lastly, components of the label stock, namely the label liner, now contains 90% post-consumer recycled (PCR) waste which has replaced virgin plastic.

2020 Sustainable Packaging Design Special Award – Product Protection

The winner of the Gold Award for the 2020 Sustainable Packaging Design of the Year - Product Protection category was actually a tie between Opal Packaging for the recyclable moulded paper inserts Sealed Air Brand Protective Packaging for the TempGuard kerbside recyclable packaging for pre-packaged, temperature sensitive goods.

The Opal Packaging inserts provide superior protection and presentation for fresh produce inside the carton and offer a recyclable alternative to standard, non-recyclable PVC plastic inserts. The recyclable moulded paper inserts are made from responsibly sourced fibre and can be customised with specific colours and branding for a range of products. The inserts are currently available for avocado and mango segments in multiple count sizes.



The individually moulded trays provide shock and vibration protection (no ringing on fruit) and offers ventilation and moisture control characteristics to ensure fresh produce integrity. The inserts are fully recyclable and an alternative to the standard plastic inserts as they are a third lighter than the current industry PP/PVC insert, which weighs 24gm compared with the moulded paper inserts at 16gm. The inserts can also be reused and are space efficient for storage compared to the plastic inserts. They simplify the recycling process as there is no need to separate inserts from the cartons, saving time and reducing contamination within 'bale press' recycling.



Sealed Air's TempGuard is a fully Kerbside recyclable and ARL compliant paper pouch liner made from virgin kraft paper and is filled with 100% recycled paper. It is used to line

cartons that are used for distribution to deliver exceptional thermal insulation for chilled items including chilled meals, pharmaceuticals and chocolate.

TempGuard flexible liner pads are only 14mm thick yet provides cushioning and protection with greater space efficiency compared to EPS (wall thickness of 30mm) and allowing the opportunity for customers to decrease the size of the outer carton. TempGuard's flatpack format enables reduced warehousing costs (space and utilities) and efficiency improvements compared with EPS.

TempGuard virgin kraft fibres on the pouch exterior means that the pouch remains unaffected by product condensation which is especially important for chilled applications such as seafood and for other chilled good processors who are looking for alternatives to EPS.

TempGuard is fully recyclable through PREP with on pack communication providing clear information to consumers about what to do with the product at the end of life.

The judges also awarded a High Commendation for the Sustainable Packaging Design of the Year - Product Protection category to Omni Group for the PerformX 100% recyclable stretch wrap. This reinforced film requires fewer wrapping rotations while significantly higher holding force. PerformX uses over 50% less film than conventional stretch film.

All of these remarkable Sustainable Packaging Designs are now eligible for WorldStar Packaging Awards, the global packaging competition organized by WPO. Thanks Nerida Kelton, Executive Director of AIP (Australian Institute of Packaging), a very active WPO member, for sharing this article.

Message from General Secretary

Hurdle sprint



Life could be so easy, our jobs so straightforward ... if not such hurdles like corona crisis would flap up and question all our plans. I know, it is a bit banal: every crisis has it's chances. What shall we do but shaking off the dust, go on and try to do our best? Well at least we tried within WPO the last weeks and months. And I think, we've been quite successful.

As you know, we had to cancel the meetings at Interpack (Düsseldorf, Germany) in May 2020. Meanwhile it is also clear, that we cannot have a "normal" meeting in South Africa in November 2020. Together with Bill Marshall, Institute of Packaging South Africa, we canceled all our bookings there.

Be prepared that we will hold our WPO Board Meeting and all surrounding events like WPO Working Groups and WorldStar judging online via our Zoom account. Don't miss it! We have important things to do, like voting for WPO President! Timing will be the same – so please keep the week 23.-27.11.2020 blocked in your schedules. We will announce the detailed time plan within the next days.

For all those, who are sad about not going to SA: postponed is not abandoned! IPSA agreed to organize the meeting one year later in November 2021! Thanks, Bill!

Have you recognized the hidden message above? – Yes, we have a WPO Zoom account meanwhile. The new normal, we use it frequently. So, I have the feeling, WPO is even much more in contact, then ever before! That's not the only change in our pipeline: We realized the first WPO Webinar already last week (Great success, realized by a marvelous team! Soha, Luciana, Tanja for organization; Pierre, Chakravarthi, Carl and Kishan: perfect job on the screen!). More Webinars will follow on 2.9.2020, 17.9.2020 and 2.10.2020.

Not enough: Aslihan and her WPO Education Team are preparing the first [WPO](#) Online Training scheduled for 21.-24.9.2020. New experience for all of us – but I'm sure we can multiply this modern education tool soon to spread better quality of life through better packaging for more people!

So everything could be easier, without these hurdles ... but would we reach new levels of services, contacts, communication so quickly as we do now? Anyhow, we have to go on...

Barbara Zottl & Tanja Woschniak

WPO Secretariat

info@worldpackaging.org

Johannes Bergmair

WPO General Secretary

j.bergmair@worldpackaging.org

Special Article

Sustainable environment industrial products packaging: a way forward

By P.V.Narayanan* (in memoriam)



Air pollution, alternate energy, alliance to save energy, alternative fuels, biodiesel, carbon-di-oxide and conservation are the major resource areas that need to be addressed towards a global green glossary. Significant aspects within the above could be reached through "Green Living", "Eat Green", "Think Green", "Go Green Society" and party theme "Go Green in daily life", "Green Entrepreneurs", "Green Technology", "Build Green", "Green Social responsibility" and "Green at Home".

The underlying principle is preserving and renewing when and wherever possible human and natural resources, buy products with post consumer recycled content, participate in recycling, create awareness and encourage changes in the life style, adopt wind and solar energy, use longer lasting materials, use biodiesel and be creative like reusable resources.

The subject of packaging and waste arising out throw away packages have been in the limelight since the recent years and within the family of packages plastics particularly the flexible have kindled considerable debates. The latter probably because of their high volume per unit weight resulting in easy visibility and higher efforts for low return. Demands on packaging gaining strong grounds and their role becoming more challenging-creation of right perception assumes greater significance and allowing the "final pack" do its duty effectively.

Parallel, packaging also becomes the Brand Ambassador for any product with considerable and probably dynamics of the demographics. Notwithstanding with clean environment as a slogan the 3 Rs-Reduce, Recycle and Reuse theories propagated. The efforts of the package converters and packaging personnel then got diverted into the 3 Rs probably with reasonable success.

With the progress of time the term "Circular Economy" surfaced with strongly alongside development of biofilms- edible, soluble and degradable. Most of the researchers, professionals echoed their views and suggestion but interestingly all these addressed to packaging of FMCG products but very little attention seems to have been given to industry products packaging.

Industrial products packaging

The term would primarily relate to engineering and electronic goods like the auto and white goods/entertainment sectors. A review would reveal the large quantum of wood and plywood used besides the synthetic foams. The basic question is "is this a potential area" to be addressed primarily keeping the sustainable – eco-balances and circular economy? Probably worthwhile.

It is estimated that India consumes about 7.7 million cubic metres of wood for packaging and hence the depletion of forest resources. These would mainly be the jungle wood including mango, rubber woods and pine and other hard woods. Medium density woods are more prominent for exports. The wood is converted into boxes and crates, plywood and pallets. Essentially, they offer excellent load bearing properties and plywood boxes are very common for tea/coffee packaging and used plywood boxes for storage and transportation of horti-agro products.

Some developing and third world countries still use wooden boxes and crates for fruits and vegetable packaging. The challenge is how best and how much of the wood could be reduced and a review should be interesting. This review could analyse styles of wooden cases, wooden cases for large and medium-heavy engineering and related products, wooden crates-sheathed and wooden pallets.

- Redesigning of wooden cases considering, end panel battens from four to three, reduction in the number of girth battens, reducing plank thickness and shift to corrugated board packaging media should reduce wood consumption.
- A complete shift from wood boxes and crates to alternate packaging for agricultural produce also save large quantum of forest resources.
- Base wood or pallet mounted engineering products use considerable quantities of wood for side and end panels and top. Since the products are self-held on a firm base- the side and end panels could be sheathed create structure and the sheathing could be from reused plastics sheets, hard boards, or jute boards. These sheathing media are available in larger sizes unlike wooden planks and hence require less nailing besides being more microbial resistant and demand lower replenishment cost, so also less heavy and hence lower tare weight with reduced freight cost wherever the consignments are moved on weight basis. In essence wherever in the case and sheathed case construction large volume of wood is used, the above alternate media could be highly cost effective, save forest resources with other attendant advantages

As for the recycled plastics either HDPE or PP based recyclable waste materials could be used and sheets produced through extrusion process in standard width and thickness. This would not only help to identify reuse of waste plastics but also save considerable quantum of natural wood and plywood.

Jute boards are relatively unknown. However, technologies are developed to convert jute fibre and fabric into sturdy hard boards which could easily replace wood and plywood. The web of fabric is unwound and passed through a coating system wherein the fabric is coated by a spraying or dip process followed by drying resulting in jute board. The sheets could be cut to length as desired. Possibly this newer material is not deployed effectively.

- Large number of IBCs (rigid) are in use for storage and transportation of a variety of chemical and other industrial products. Most of these are reuse and returnable containers. Here again the metal used for side and end panels as well as top could be replaced by recycled plastic or jute board sheets.
- Yet another major area where the forest resources could be saved are the pallets-used both for in-house storage and for transport of goods. Whereas a variety of sizes of pallets are used (though standard sizes are recommended), the two common styles/designs are (i) Reversible (Non-expendable) and Non-reversible (expendable) ones. The former has deck boards on either sides of the strut (load bearing members) and the latter only on one side on which the loads are stacked. High percentage of pallets in vogue are constructed from wood (medium density and higher cost). The plank thicknesses used for the deck board vary from 7/8" to 2". Prima facie the following should help:
 1. In respect of pallets for in-house storage-standardise on single deck pallet.
 2. Replace the wood-planks for deck boards by recycled plastic sheets or jute boards.
 3. Replace wooden pallets by plastic pallets made from waste plastics.
 4. For short term life and single trip consignment consider CFB/Honey comb board pallets.

The added advantage of the alternate media would include less replenishment cost, better

resistance to microbial attack, nil or less treatments, lower weight etc. Whereas the details in the foregoing were mainly related to packaging sector, such as of these alternate media could also find in the fabrication and construction sector with excellent contribution to save natural wood resources. In essence, where there are other means of generating packaging media it is high time prevent destruction of nature wood resource. Conservation should aim at preserving and renewing when possible human and natural resources.

Thinking green means being aware of the inter connection with the world and reflecting on the unintended damage caused to the nature in the daily course. Thinking green leads to acting green-taking corrective action to make environmental responsibility a reality. A cleaner world is indeed a healthier world.

***P.V.Narayanan** was Chairman of SIES School of Packaging in India. Unfortunately he passed away in June, before this article was published.

Special Article

Follow the RED Recycled Road

By **Nerida Kelton***



When you think of outdoor furniture, roads, bollards, fences, patio decking and even footbridges you might not realise that a growing number of these items are made incorporating 'soft plastics' as a way to recycle flexible packaging and materials that have no home at this moment in the current kerbside recycling systems in Australia.

Of the nearly 1.1 million tonnes of plastic packaging placed onto the market in 2017–18, approximately 352 000 tonnes (33%) were soft plastics. However, only 29,000 tonnes or 8% of the soft plastic materials was recycled, with around 28,000 tonnes being recycled from Commercial & Industrial (C&I) sources and only 1,000 tonnes from consumers.

This low recycling figure for soft plastic has highlighted the need for industry and government to give added focus to develop a strong national consumer collection program for soft plastics, combined with investment in additional reprocessing facilities, and innovation to include recycled content in flexible materials. Changes to procurement strategies are key to stimulate further investment in soft plastic recycling and reprocessing and to ensure that soft plastics are seen as a valuable resource that can be recycled, rather than disposed of as waste.

So what does the term Soft Plastics really mean?

Soft Plastics are traditionally Polyolefins which is a collective description for plastics types that include (PE) Polyethylene including HDPE (High Density Polyethylene), LDPE (Low Density Polyethylene), LLDPE (Linear Low-Density Polyethylene), PP (Polypropylene) and (BOPP) biaxially-oriented polypropylene. The polyolefins are the most acceptable materials

for current soft plastics recycling and reprocessing programs.

There are other potential materials used in soft plastics including: (PET) polyethylene terephthalate, (PVC) polyvinyl chloride (PVC), (PS) polystyrene, (EVOH) ethylene-vinyl alcohol copolymer, (PLA) polylactic acid (PLA), bioplastics, aluminium, nylon and paper. These materials reduce the value of polyolefins and, in some cases are incompatible with the majority of reprocessing systems.

The composition of soft plastic packaging can be broken down into two groups - Mono-layer and Multi-layer. Mono-layer packaging refers to the use of one polymer in the development of the material and quite often the material is PE. Multi-layer packaging is composed of two or more materials bonded together through co-extrusion or lamination. The use of different materials types together provides a package with unique barrier and mechanical properties.

So are Soft Plastics recyclable in Australia?

Currently most Australian kerbside collection of recyclable packaging does not accept soft plastics. This restriction is required as the conventional Material Recovery Facilities (MRF) does not allow for the handling of film and flexible plastics as it gets caught in machinery and causes failures or damage.

This restriction has also meant that many consumers are simply not aware that Australia does have recycling and reprocessing facilities available for the recovery of post-consumer soft plastic packaging. In fact, Australia has a number of companies actively and passionately working hard to create new innovative solutions that will ultimately minimise the amount of soft plastics that head to landfill or end up in the oceans and the environment. Companies including RED Group, Replas, Close the Loop, Plastic Forests, Newtecply and others.

So how are Household Soft Plastics Collected in Australia?

The RED Group is a sustainability and resource recovery organisation that developed and implemented the REDcycle Program in 2011. REDcycle is an innovative, recovery model for post-consumer, soft plastic packaging. The program started with 100 Melbourne supermarkets and today has 1830 retail drop off points located primarily in Coles and Woolworths supermarkets across Australia. At this level of stores and locations provided for consumer drop off of soft plastic packaging, the REDcycle program is classified as 'Widely Accepted' recyclability with more than 80% of the population having access to the collection bins.

The REDcycle program is a true product stewardship model where manufacturers, retailers and households share the responsibility to create a sustainable future for as many soft plastics as possible. The cost of collecting and processing the material is covered by many of Australia's best-known brand owners and retailers. Together Coles, Woolworths and brand owners enable the REDcycle national program to make it easy for the consumers to actively participate in the collection and recycling of household soft plastics in Australia.

So what types of Soft Plastics are accepted through the REDcycle program?

In the simplest of terms, the REDcycle program accepts clean, dry, uncontaminated flexible packaging materials that meet the REDcycle material thresholds and have been

approved through the Australasian Recycling Label (ARL) program. Packaging such as bread bags, pasta and rice bags, old shopping bags, biscuit and ice cream wrappers, confectionery and frozen food packaging, plastic bags, cereal box liners, fresh produce bags and Australia Post plastic satchels are all accepted via REDcycle.

The REDcycle program is recognised through Australian Packaging Covenant Organisation (APCO) and the Australasian Recycling Label (ARL) program and have established 'Return to Store', 'Store Drop Off' or REDcycle logos on-pack for the consumers. All Brand owners must become a REDcycle partner to be able to use these symbols on-pack and are also required to join APCO. The 'Return to Store', 'Store Drop Off' or REDcycle logos on-pack communicate to consumers that they can return the packaging to collection points within major retailers across Australia.

Partners within the REDcycle program have access to the Packaging Recyclability Evaluation Portal (PREP) to assess the recyclability of their packaging within Australian recovery systems. Packaging and artwork must also be approved through the ARL program and be able to meet the REDcycle recycling requirements to include the logo on-pack.

How do I know what Soft Plastics can and cannot be returned in-store?

Keep an eye out for the 'Return to Store', 'Store Drop Off' or REDcycle logos that are increasingly being included on packaging as a part of the wider Australasian Recycling Label (ARL) program. If the packaging does not have one of these logos on-pack then it is either not a part of the program, or the materials have not been approved as recyclable under the REDcycle program. These logos are a true indicator of whether the soft plastics can be returned to the store for collection and recycling via the REDcycle program.

Consumers are encouraged to set up a soft plastics bin at home for clean and dry packaging and then return the plastics back to the retail stores that are participating in the REDcycle program.

Usually the REDcycle collection bins are located at the front of stores near the checkout and maybe something that you have never noticed before. If you are unable to locate the REDcycle bin, please ask one of the staff.

There are now 66 partners in the REDcycle program that includes brands, packaging suppliers and retailers. The REDcycle program has recovered over 950 million pieces of soft plastic returned by customers since 2012. The REDcycle program successfully recovers approximately one million pieces of soft plastics per day and has diverted enough soft plastics to circle Australia three times.

The RED Group website www.redcycle.net.au offers detailed information on what soft plastics are accepted through the REDcycle program and provides a list of all collection points across the country for the consumers.

So what happens to the Household Soft Plastics after it is collected from the retailers?

The RED Group collect, sort the recovered soft plastic film packaging and then send it on to their local partners:

1. Replas is Australia's leading mixed recycled plastic manufacturer which aims to provide a solution for plastic waste by delivering quality cost-effective sustainable products. Replas blends this mixed plastic with rigid plastics to form a material viable

for use in the manufacture of new recycled plastic products. The company produces a range of over 200 recycled plastic products which includes bollards, signage, outdoor furniture, fitness equipment and Enduroplank™/decking as well as products suitable for traffic control, parks and gardens and the utilities industry. Replas aims to turn waste into robust recycled plastic products; all the while offering sustainable alternatives to the unnecessary use of virgin materials. www.replas.com.au

2. Close the Loop utilise REDcycle material as a component of high-performance recycled asphalt additive for road infrastructure known as Tonerplas. Tonerplas™ is Close the Loop's ground-breaking asphalt additive, which enhances the characteristics of asphalt. It produces a high-quality road surface, that last 65% longer than traditional asphalt and contributes a major solution to the problematic waste issue of soft plastics. The formulated product is melted into the asphalt mix. A key partner Downer Group then adds recycled glass and recycled asphalt pavement to the mix to create a superior lower carbon product with that results in higher quality roads. Every 1 km of road paved with plastic and glass modified asphalt uses approximately: 530,000 plastic shopping bag equivalents, 168,000 glass bottle equivalents, Waste toner from 12,500 printer cartridges and 20% reclaimed asphalt pavement (RAP). www.closesthe-loop.com.au
3. Plastic Forests uses REDcycle material as a component of products such as mini wheel stops and air conditioner mounting blocks. Plastic Forests became the first company globally to commercialise a unique dry-cleaning process to recycle contaminated soft plastics, without using water. Used soft plastics are recycled into resin for use by the plastics industry or may be repurposed by Plastic Forests into a range of sustainable GreenMongrel products including dunnage, underground cable cover, garden edging and root barrier and the brand new 'GardenBed-Heart'. www.plasticforests.com.au

So how can you get involved in REDcycle?

Everyone has a role to play in both collection of household soft plastics and the purchasing of end-products made from the recycled content. There are several ways that you can get involved in the program both at work and at home.

If you would like to contribute personally then start by making a 'soft plastics bin' at home and at work and arrange to return the packaging to your local collection point on a regular basis. Encourage others to do the same within your workplace and family.

Keep an eye out for products and brands that are advertising the 'Return to Store' and REDcycle logos on pack and next time you are purchasing products consider which brands are committed to the 2025 National Packaging Targets and National Waste Strategy.

The next time you need a deck, fence, garden bed or even a patio consider sustainable solutions that are made from soft plastics. Not only are these solutions designed to be low maintenance they are durable and capable of withstanding the harsh Australian climate.

Reach out to your local councils and encourage them to support keeping soft plastics out of landfill by purchasing roads containing Tonerplas and Replas products or reviewing their procurement of outdoor furniture for recreational areas. Imagine if every school, park, recreational facility, government department and office building in Australia committed to purchasing products made from recycled content.

We all have a role to play and I look forward to seeing procurement strategies that actively encourage the purchase of recycled content and more companies taking the lead in purchasing these products to ensure we create a more sustainable world.

***Nerida Kelton** MAIP is Executive Director of AIP (Australian Institute of Packaging) and ANZ Board Member of WPO.

Credits:

Electronic publication from WPO – World Packaging Organisation – www.worldpackaging.org

Coordination: WPO's President: Mr. Pierre Pienaar / WPO's General Secretary: Mr. Johannes Bergmair / ABRE – Brazilian Packaging Association: Mrs. Luciana Pellegrino / Miss Isabella Salibe

Contribution: WPO Members

Publishing: ABRE – Brazilian Packaging Association – www.abre.org.br

Responsible Editor: IPPO Member Lilliam Benzi - Journalist Mtb 19.352 – Brazil – ldbcom@uol.com.br

Diagramming: Formato Editoração e Design - Mr. Saulo Pacheco

Photos: Contribution of WPO members

www.worldpackaging.org