



*Better quality of life
through better packaging
for more people.*



W P O N E W S

The Packaging Community Around the World

President's Word

Responding to the consumer at a faster pace



In preparation for a speech given in Mumbai at the World Packaging Congress, I looked for some relevant statistics to support what we have already suspected. Thanks to the Smithers PIRA study which was shared with WPO recently, I learned, among other things that packaging will grow at a 4.1% annual rate through 2018. This is further proof that the Packaging Community is moving quicker and quicker.

Technology is certainly driving this pace and so is consumer demand. But I'm not referring to the classic definition for "demand" as in more widgets, or bottles of water. I'm talking about the consumers' demands for products that meet their diverse behavior patterns.

Consumers want the products they buy, and the packages that aid in the products' protection and delivery, to satisfy more and more sophisticated criteria, including:

- values: basic beliefs that drive the human spirit and are most important to an individual's life;
- attitudes: how people react to particular circumstances;
- behaviors: the ways in which people choose to spend their lives and their money;
- lifestyles: how we go about applying our values, attitudes and behaviors.

These behavior trends are being addressed with packaging in important ways including consideration for Sustainability, Healthy Lifestyles, Consumer Convenience, Consumer Safety and Product Security, and Population Growth. And certainly, technology impacts all of these trends. More and more people, now in virtually all societies, know that **Packaging is Important**.

I can also share with you the fact that WPO's place in this Community is growing as well. We will welcome a renewal of several of our sponsors again for 2016. We are beginning to receive inquiries from more countries that want to be part of WPO. For example, just a few weeks ago we received an inquiry from Cuba about membership. Our WorldStar Awards program is growing again; our board members are more engaged; and our members of the Executive Committee are making things happen. Keep an eye on the website. It's becoming more robust weekly.

I sometimes end my speeches by saying that "It's a great time to be a Packaging Professional." And it is... and it's also a great time to be part of the World Packaging Organisation!

Thomas L Schneider, CPP

President

World Packaging Organisation

Marketing

New Marketing Perspectives

***Luciana Pellegrino – Vice President of Marketing**

As reported by Luciana Pellegrino, **WPO** Vice President of Marketing, a very important step was taken by **WPO** during its last meeting in Milan: the development of its strategic planning for the next 5 years.

Gathering the executive board representing **WPO**'s main areas of activities – Education, Sustainability, Food Safety, Market Intelligence, Awards and Marketing, and board members from different countries around the world, the purpose of **WPO** and the pillars that should drive its activities were the center of a dynamic discussion.

Analyzing the international packaging market scenario and the demands of **WPO** members', the model of **WPO** Strategic Planning for 2020 was built considering the following aspects.

WPO's purpose is to "Promote the international network that facilitates solutions to global challenges in all areas of packaging". In addition, to achieve this goal the following pillars have been set:

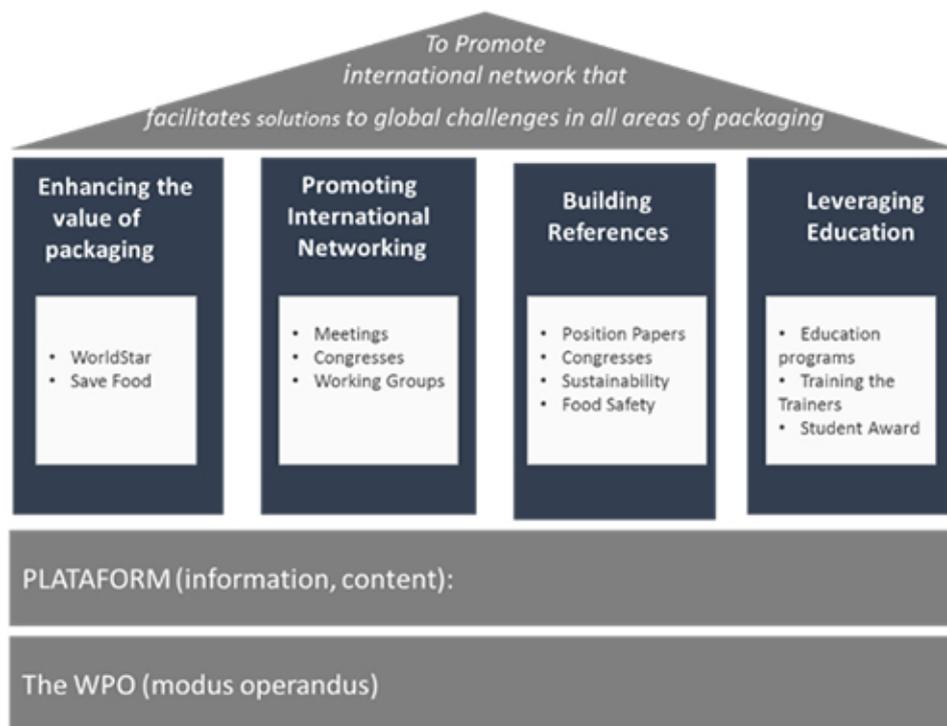
- to enhance the value of packaging;
- to promote international network;
- to build references;
- to leverage education.

Through this strategic model, it makes easier to the international packaging community understand WPO activities and how they complement each other building its Mission: Better Quality of Life, Through Better Packaging, For More People.

Each of **WPO** key areas of activity are enhancing its projects towards the **WPO** strategic plan, what can be confirmed through the articles in this newsletter. Moreover, it is key to highlight the enhancements that have been done at **WPO** 's website: www.worldpackaging.org. Counting with the leadership of IOM3 on its management, **WPO**'s homepage is reestablished in order to bring updated information about its main areas of activities.



What WPO stands for



Around the World

New President of Interpack 2017

Friedbert Klefenz, President of the Packaging Technology division of Robert Bosch GmbH, is the old and new President of interpack. He was unanimously re-elected to this office in April at the constitutive meeting of the Advisory Council for interpack 2017. Both of the Vice-Presidents who held office in the 2014 council were re-elected as well: Christian Traumann, Managing Director of MULTIVAC Sepp Hagenmüller GmbH & Co. KG, and Bernhard Borgardt, Managing Director of Ostedruck Bernhard-J. Borgardt GmbH & Co. KG, who is also a member of the steering committee of the European Plastics Converters – EuPC association, a past president of IK (German Plastics Packaging Association), and a board member of GKV (the Central Federation of the Plastics Processing Industries in Germany).

More packaging education programs in Australia



The Australian Institute of Packaging (AIP), an active member of WPO, continues to fill education and knowledge gaps in the local industry. They just added to their rather extensive half-day interactive training courses, two new courses: "Labelling and matching the label

with the package" and "Food Safety-Packaging Standards and Regulations". The AIP now has 16 of these training courses available; they are offered in Australia and New Zealand. More information visit www.aipack.com.au or contact Education Director, Pierre Pienaar, by e-mail pierre@aipack.com.au.

Turkish Packaging Oscars were selected

The winners of the 6th Crescent and Stars for Packaging Competition, organized by the Turkish Packaging Manufacturers Association (ASD), a WPO member, have been announced. 169 packaging were registered in 9 different categories and 88 packaging were awarded. One prize was awarded to Switzerland during the competition; for the first time, applications from foreign countries were accepted.

All winners were presented during a ceremony at Shangri-La Bosphorus, Istanbul, on September 11th. The finalists would also be able to join not only the WorldStar but also the AsiaStar, organized by Asian Packaging Federation (APF). AsiaStar 2015 ceremony will be take place in November, in Istanbul, and is being organized by Turkish Packaging Manufacturers Association.

Most applications for Crescent and Stars for Packaging Competition came from the food, graphic design and the beverage categories. Approximately 50% of the entries were from these three categories and in the industrial packaging category. There were nearly three times more applications compared to the previous years. The highest number of applications were made for the graphic design category with 39 packaging. The graphic design was followed by the food category, with 29 applications, and industrial transportation packaging category, with 20 applications.

The Judging Committee evaluated the applications in accordance with 11 criteria. Initially, 88 packages were deemed worthy of the "Competency 2015" award, in the light of the criteria, which involve not only the production quality and the environmental awareness but also design originality. Foreign applications were also evaluated during the Competition.

According to the President of the Turkish Packaging Manufacturers Association, Sadettin Korkut, the quality of the entries reflects the quality of the industry. The packaging sector was one of the rare sectors that had no foreign trade deficit and that reached close to US\$ 20 billion in the domestic market. "The sector which shows the development level of a country and its life quality and which grows in parallel with the changing consumption habits and necessities draws attention with its high performance not only in the domestic market but also in the export market. Packaging has become the most important means of delivering products to consumers and also the most important element of the global business processes. We can also see the reflections of this situation through the development of our packaging sector. Our sector today exports to 183 countries mainly in the EU."

Turkish packaging industry exported 1.5 billion tons in 2014 and registered revenue of US\$ 4 billion in exports. It has also showed an increase at the rate of 9% compared to the previous year. "We are so happy to award the successful packaging works of Turkish companies and to have these works known throughout the world."



AIP announces inaugural CPP for Australasia

Following the recent launch of the Certified Packaging Professional designation in Australasia, WPO member - Australian Institute of Packaging (AIP) – announced that the inaugural recipient of the CPP (Certified Packaging Professional) designation is Pierre Pienaar.

“As the inaugural recipient to attain the CPP designation in Australasia I am thrilled to be a part of the newly-formed partnership between the AIP and the IoPP (Institute of Packaging Professional), from US, another active member of WPO. To date, there are about 2,000 packaging professionals worldwide that have attained the CPP designation and I am really looking forward to seeing other packaging technologists across Australasia join the program”, explains Pienaar.

The CPP designation is also based on current skills and expertise, as each candidate requires recertification every 3 years. The CPP Program ensures that candidates are regularly keeping abreast of current packaging trends, innovations and knowledge and the program ensures that packaging technologists are the same level playing field globally.



Results of Packaging Design Student Competition in Turkey

The winners of the 11th National Packaging Design Student Competition, held in cooperation with Turkish Packaging Manufacturers Association (ASD), member of WPO, and Reed TÜYAP, organizer of Eurasia Packaging Istanbul Fair, were announced. 12 projects were awarded in the first, second and third places, honorable mention and certificated projects. This year a record number of projects registered in this competition that aims to encourage the students, who receive design education in Turkey, to be involved in the field of packaging design and to contribute creating a sector with a high international competitive power.

148 projects from Graphic Design and Industrial Products Design /Industrial Design Departments, of 19 different universities throughout Turkey, competed. Highest number of applications was in the category of "Innovative Packaging" (46 projects), "Graphic Design" (17 projects) and "Back to Traditional" (16 projects). The applications were mostly from Istanbul (39), Izmir (20) and Kutahya (19).

Winning designers will be rewarded with both a Cash award and a Scholarship. The award ceremony will be held during the opening ceremony of Eurasia Packaging - International Packaging Industry Fair, scheduled to October 22nd. To view all the winning projects, visit www.ambalaj.org.tr.



Guido Corbella ends his mandate as CEO of Ipack-Ima



In the wake of the great success achieved by last May's edition of IPACK-IMA and with the transfer of the company's share package from Centrexpo Spa to Fiera Milano Spa, Guido Corbella's office as chief executive officer comes to an end.

For 40 years Corbella has been a leading figure in the printing and packaging exhibition industry, first as director of associations ACIMGA and UCIMA and later as CEO of exhibition companies Centrexpo and Ipack-Ima. It was Corbella who organized the first mission of Italian manufacturers of printing machinery to China back in 1979, long before that country established regular commercial relationships with the West.

As a result of Corbella's work, the 23rd edition of IPACK-IMA, last May, was combined with three new "vertical" shows focusing on fresh food products (Meat-Tech for the meat industry, Dairytech for milk and dairy, Fruit Innovation for fruit and vegetables) and by two more jointly held shows: the debuting Intralogistica Italia (industrial, logistics) and Converflex (converting and package printing).

The six exhibitions combined gathered a total of 1,842 exhibitors and 131,296 visitors. International participation was also high: 28% of the total visitors were from 131 countries, with increasing numbers from Asia (+60%), North America (+54%) and Central and Latin America (+40%). Arrivals from Africa (+14%) and Europe also grew by two digits (+15%). An increasing presence of decision-makers and professionals was a testament to the high level and quality of buyers (owner/chairman 32%), coming from production (31%) and their influence of purchasing was decisively (84%).

IoPP announces recipients of the Institute's Packaging Education Scholarship Fund

WPO member, Institute of Packaging Professionals (IoPP), from US, is pleased to announce the recipients of the 2015 IoPP Packaging Education Scholarship Fund. The Scholarship Fund was created to elevate packaging education by raising awareness of packaging as a career choice and is presented to exceptional students headed for careers in the packaging field.

The Scholarship program is funded by founding supporters, including the Contract Packaging Association, Bitner Associates, Inc., the IoPP Chemical Packaging Committee as well as the Cascade, Central Ohio, Cincinnati, Chicago, Minnesota, Missouri-Gateway, and Tejas IoPP chapters, PepsiCo R&D and IoPP Benefactor companies.

The talent identified through this program will also be shared with IoPP Benefactor companies as a recruiting tool for their organizations, providing a post-graduation foot in the door that jump-starts careers in packaging. The 2015 Packaging Education Scholarship Fund had a total of 40 submissions.

"The emerging talent in the packaging industry is evident by the quality of all these submissions," said Jane Chase, Chair, IoPP. "Since starting this program, the Institute is extremely proud to support future packaging professionals who are embarking on a lifelong and fulfilling career. "Five academic scholarships were awarded by IoPP as well as one awarded by the Contract Packaging Association with IoPP's support.

Korean packaging industry in numbers

According to the Korea Packaging Center, member of WPO, in 2013 gross net sales of packaging industry increased to 37.4 trillion won, 2.0 % compared to 36.6 trillion won in 2012. The plastic sector was responsible for 49.7% of domestic packaging market, followed by paper sector. In total, the sector counted with 12,931 companies in 2013; 53% of them with less than five employees.

Statistics estimates that the number of employees was about 168,340 people that year - 76.2% male and 23.8% female. Foreign workers accounted for approximately 9.8% of this total.

Over 50% of packaging enterprises were concentrated in the metropolitan area. The main clients for the packaging industry are Household, with 38% of participation, followed by food (30%) and electricity & electronics (28%).

A good year for packaging in Hungary

The Hungarian Association of Packaging and Materials Handling (CSAOSZ), a WPO member, celebrated its 25th anniversary last June. At the celebration Attila Bencs, President of CSAOSZ, welcomed the representative of the member companies and remind audience about the beginning and the most interesting and funny moments of the last 25 years.

Hungarian Packaging Industry is optimistic, the production of packaging increased 4% (in value) in 2014 which is higher than the national GDP raise (3,6%), reaching 485 billion HUF – US\$ 1.7 billion turnover. This year the economic expectations are encouraging as well.



Packnews.no, from Norway, comes alive again

The Norwegian Packaging Association, a WPO member, delivers news articles, in Norwegian, to Packnews.no, the website relaunched by nordemballage recently in Norway. At the same time, the Swedish site Packnyheter.se changes its name to Packnews.se. Packnews.dk and Packnews.fi are soon to follow.

Packnews.no has been a popular website for the Scandinavian packaging industry. Due to a change in strategy, the owner, Skarland Press, decided to shut down Packnews.no from January 1st 2015. The Swedish publisher of nordemballage and Packnyheter.se bought the domains and re-launched Packnews.no on September 14th. At the same day, Packnyheter.se changed its name to Packnews.se. Packnews.dk and Packnews.fi are soon to follow.

All the Packnews sites will be published in national languages. Per Nordberg, Information Manager at The Norwegian Packaging Association, is the new editor of Packnews in Norway.

Croatian companies at Indiapack 2015

Four Croatian companies, members of the Croatian Institute of Packaging and Graphic Tectus-IatT, a WPO member, will participate at Indiapack 2015 and World Packaging Congress, from October 8 to 10 in Mumbai, India. The participants are: Rotoplast d.o.o. and Bakrotisak d.d. (flexible packaging), Muraplast d.o.o. (polyethylene blown film and multilayer flexible packaging) and Grafik.Net d.o.o. (printing industry).

In order to encourage international cooperation and the export of their products, the Indian Institute of Packaging, also a WPO member, will organize international buyers and sellers meetings (B2B). Croatian representatives are looking for exchanging ideas and information and exploring possibilities of cooperation during these meetings.

In addition to Indiapack, representatives of the four companies will participate at the World Packaging Congress. This mission is a result of successful cooperation between Indian and Croatian Institutes. IatT's Managing Director, Drena

Milijevic, will also participate at the Congress, in the Working Groups and in WPO Board meeting; she will also be a judge in WorldStar Award.

ABRE announces winners of Brazilian Packaging Award



ABRE BRAZILIAN PACKAGING AWARD

WPO member in Brazil, ABRE (Brazilian Packaging Association), just completed the ceremony of the 15th edition of Prêmio Brasileiro da Embalagem (Brazilian Packaging Award) with the participation of more than 200 professionals. There were 78 winners among Gold, Silver and Bronze in seven Categories. All

can be viewed at www.premioabre.org.br.

According to the judging team, the winners were recognized due to excellence in quality, technology, design, functionality, innovation, international competitiveness, marketing appeal sustainability.

In the special categories, the winners were:

- Company of the Year – Hypermarcas (retail)
- Honored Professional –Aparecido Borghi
- Popular Vote –Waker Energy Drink in 300 ml glass bottle (Brasil Mate)
- Student – Beatriz Alonso, Bruna Yumi, Juliana Nogueiraand Silvana Braga with the project Santa Cajuína (a regional beverage from state of Piauí)

This edition of the ABRE Award was even more special. To celebrate its 15th anniversary, its logo was redesigned by the awarded designer, Gustavo Greco, from agency Greco Design. According to him, “the new visual is represented by the A stamp that reinforces the serious, excellence, technology and innovation of the winners”. The award is supported by WPO (World Packaging Organization) and Ulade (Latin American Packaging Union).

From the board

WPO action plan on “Save Food”

WPO, as well as its member institutes, decided in their last meeting in Milan to globally promote and support efforts made in the field of food loss and food waste prevention via packaging. The Organization is already actively cooperating with the Save Food Initiative (<http://www.save-food.org/>) as well as the process and packaging fair Interpack (<http://www.interpack.com/>). The work is being coordinated by WPO vice President of Sustainability & Food Safety, Johannes Bergmair, from OFI, the member in Austria.

At next Interpack,scheduled to May 2017, there will be the first and exclusive exhibition of packaging solutions focused on the “save food” proposal.The first step of WPO and its members’ participation is to stimulate innovation by National Packaging Awards as well as the WorldStar Awards and WorldStar Student Awards (<http://www.worldpackaging.org>).

This new category aims to highlight the role of packaging in preventing food losses and food waste. The packaging

concepts should be smart and sustainable packaging concepts that improve the supply of food to a growing global population. All solutions will be presented at Interpack, in 2017, in Düsseldorf (Germany).

Other initiatives to develop, investigate and highlight "Save Food" packaging solutions including education programs, seminars and conferences, communication and research projects will be part of the show. As an example, OFI (www.ofi.at), is promoting food loss and food waste prevention via adequate packaging in a national research project involving packaging producers, food companies and retailers. The first conference on this topic is planned to be held near Vienna in November 2015.

New webmaster for worldpackaging.org

At its meeting in Milan in May, the WPO Executive Committee appointed Ian Bowbrick (United Kingdom) to succeed Pierre Pienaar, VP Education (Australia) as Webmaster of its website. Ian brings to the job experience of having run several discussion boards and his own website.

Speaking about his appointment Bowbrick said "It is a great privilege to be asked to manage the World Packaging Organisation's website given its strategic importance as a global information portal."

When asked how he was going to approach the role, he went on to say "I would like to see an enrichment of the information provided. This will require the cooperation and involvement of all WPO members. I would therefore ask any member with content for publication or ideas for the website's development to contact me on ijbwpo2015@yahoo.co.uk."

Hungary is ready for WPO!

The organisation of the WPO meetings in Budapest is a great challenge to The Hungarian Association of Packaging and Materials Handling (CSAOSZ), WPO local member. The decision to hold the meeting there was approved by Board Members during the first meeting of the year in May, in Milan. The date scheduled is May 23 to 26 2016.

The location that is being studied is a hotel, at the bank of the river Danube, direct view for the Parliament and the building of the Hungarian Academy of Sciences (one side) or for the Buda Castle and the Fisherman's Bastion (other side). The hotel will hold both WPO meetings and the international conference. Another place is being studied to hold the WorldStar Award ceremony.

Companies that have already confirmed sponsorship for WPO meeting in Hungary are:



For more information contact Miklós Nagy, Secretary General of by e-mail nagym@csaosz.hu or visit www.csaosz.hu or www.wpobudapest2016.org.

WPO supported and promoted PACK EXPO Las Vegas, in US

As part of its strategy of acting globally, WPO gave institutional support and helped in the promotion of PACK EXPO Las Vegas (Las Vegas (USA) – September 28-30), which celebrated its 20th anniversary. "PMMI (The Association for Packaging and Processing Technologies), organizer of the trade show, is a long term partner of WPO. And supporting such an important show also gives us the visibility we need to spread our message to the packaging community worldwide "Better quality of life through better packaging for more people", explains Thomas Schneider, President of WPO.

"We are grateful to PACK EXPO for this long term partnership", celebrates Schneider. He also explains that PACK EXPO is a perfect platform for WPO to promote its projects, especially the ones related to education. "With PACK EXPO support we've been very successful in showing packaging professionals and companies the number of programs WPO has been carrying on in different parts of the world. "From August to December 2015, for example, there are packaging educational programs scheduled in China, Croatia, Vietnam and Iran.

"The professional organizations that represent our attendees understand the value of the shows. They see how being at PACK EXPO Las Vegas strengthens industry connections that support their own organizations' missions and goals, and creates more opportunities for innovation across industry segments", states Jim Pittas, Senior Vice President, PMMI.

Pittas adds: "The PACK EXPO trade shows are about bringing the industry together — the entire packaging and processing supply chain — to spur innovation. With nearly 30,000 attendees expected at PACK EXPO Las Vegas and Pharma EXPO, partners will enjoy the opportunity to network with packaging and processing professionals and other like-minded associations."

For more information about PACKEXPO Las Vegas visit www.packexpolasvegas.com.

Education

Updating on WPO packaging education programs

As part of the commitment that the World Packaging Organisation (WPO) has made to education around the globe as it continues to educate more people in the science and technology of packaging, thus ensuring better quality of life through better packaging for more people.

In the past five to six months there has been exciting developments in education across the globe.

1. Packaging Technology Training

This year commenced with a week of Packaging Technology training in Jakarta, Indonesia during March. This was followed by training in Singapore in June, by way of an interactive forum with industry leaders, a conference on the future of the packaging industry followed by collaborative clusters. WPO Education will tailor its training so as to continue to educate in whichever method suits the region or country. Singapore is a vibrant, developed and advanced industry sector who continues to strive towards establishing and ensuring that they remain at the forefront of technology. This training relating to the needs of the Singapore industry involved presenters covering topics such as packaging in the supply chain, sustainable packaging, electronic smart packaging, global trends affecting the Singapore packaging industry, social

responsibility in packaging and the latest in smart packaging materials. During the collaborative cluster sessions attendees were encouraged to relate their issues that involved the topics presented and in so doing collaboratively finding solutions.

2. Residential Training Program in Packaging Technology

In November a week Residential Packaging Technology training is to be held in Tra Vinh, a city in the Mekong Delta of Vietnam. This is following up on a similar program held in Vietnam in October 2014.

Education within WPO member countries continues to thrive as we introduce new courses fitting their needs. At the request of the Italian Institute of Packaging, we are tailoring a two- day Packaging Technology training course in English as second language to be presented in Milan, Italy in 2016. Already other countries e.g. Croatia, Hungary and Czech Republic have shown interest in such an English course to further educate their members in everyday terminology in packaging so as to improve their communication with the English business sector internationally.

Already plans are in place for 2016 to hold RTP Packaging Technology training in Indonesia in February, followed by China in April, then later in the year similar programs in Ghana, Iran and Vietnam. We are excited to be taking Pharmaceutical Packaging Technology training to Africa for the first time as we hold these courses in Nigeria and Kenya.

To date, the only ASEAN countries we have only focused on Indonesia and Singapore but progress is steady as we work on taking training to countries like Malaysia, the Philippines, Laos, Cambodia, and Thailand. We continue to seek sponsorship for these educational programs so that developing countries can also ensure better quality of life through better packaging for more people.

3. WPO Recognition and endorsement of Packaging Education and Training

This is proving to be growing in demand by member countries where they seek endorsement of their various courses that they offer their members. This year already applications have been received from Sri Lanka, South Africa, United States and United Kingdom.

4. Certified Packaging Professional

In Milan, the WPO Board approved the global accreditation program that currently is used by the IoPP, to be implemented within WPO and to use the WPO name and status to its full effect. The WPO is proceeding with the program using the nominal CPP with the WPO logo. Australia has commenced with the program and have 16 members signed on, with two members having already attained the CPP accreditation. There are seven additional WPO member countries about to get involved in the program. The benefits of the CPP program are:

- Over 1,500 Certified Packaging Professionals
- Over 150 international CPP's
- Unify industry through WPO
- Recognition program
- Commonality of understanding
- Demonstrate packaging proficiency
- Acknowledged globally as benchmark for identifying industry-recognized experts with a common knowledge base
- Advance earning power
- Demonstrate a desire for personal growth and achievement
- Provide innovative and lasting contributions to the packaging profession
- Use suffix "CPP" after name on business cards and letterheads

- Wear the CPP lapel pin
- Display the CPPCertificate

5. On-line internet based training

The Indian Institute of Packaging along with the Australian Institute of Packaging are working together to develop an on-line internet based training between the two countries. They are keen to try and set up a training program on Packaging of Consumer Goods. They envisage a 5 day on-line and/or residential training and hope to get 30-40 students attending.

6. Books

The Czech Republic is currently working on a pictorial book to be released in 2016 that gives packaging terminology in the language of all WPO members.

The WPO is investigating the feasibility, possibility and demand for a Packaging Technology in an e-Book format.

7. Short course based approach

The WPO will continue to build the capacity of member organisations whilst providing a good educational experience for attendees, and focus will be on:

- Asia
- Africa
- Eastern Europe
- Central Americas
- South America

There will always be a demand for this approach within member organisations, which the WPO continues to encourage support.

8. Train the trainers

To ensure long term sustainability in training and education, it is important to have more instructors in packaging technology globally. The WPO has embarked on:

Regionalise the training

Seek expertise within WPO

Seek individuals in member countries

Set up a project and deliver progress at Mumbai meeting

9. Distance learning

Also known as on-line learning, it is a less formal approach to knowledge development. It is currently happening in many member countries, but the WPO has recognised more should be done in developing countries. The status currently is:

- On-line systems running in some member countries
- Many variations and types available
- Specific courses, webinars and blends of different technologies
- Growing area with continuous developments happening in member countries
- Need to encourage members to offer this format of education

The WPO recognises the need and will initially work alongside those countries seeking further development by using the infrastructure already in place in certain developed countries. In the longer term the WPO's intention is to incorporate and

offer the program to any member country.

Education continues to thrive throughout the WPO. Significant strides have been made but the focus has to remain on ensuring a better quality of life through better packaging for more people. What better way to achieve this ambition and goal but through education for all.

For more information contact WPO Education Vice President, Pierre Pienaar, by e-mail pierre@aipack.com.au.

What Australian Institute of Packaging is offering in packaging education

With 16 packaging training courses available both in Australia and New Zealand, the AIP (Australian Institute of Packaging), a member of WPO, resumes its program as seen below:

Certified Packaging Professional

The AIP recently partnered with the Institute of Packaging Professionals (IoPP) in the USA, another WPO member, and launched the Certified Packaging Professional (CPP) credential, here in Australia. The AIP already has two recipients of the CPP credential and another 16 that are currently working on obtaining this credential.

Fundamentals of Packaging Technology modules

The AIP has also recently added the bite-sized modules from the IoPP. These bite-sized Fundamentals of Packaging Technology modules are available on-line which has significantly increased our education availability portfolio, as we have many members wanting to only study their particular area of expertise and not a full course in Packaging Technology.

Certificate in Packaging and Diploma in Packaging Technology

The AIP continue to offer the Certificate in Packaging as well as the Diploma in Packaging Technology by correspondence or distant learning through IOM3 in the United Kingdom. The AIP has offered these courses since the early nineties, and they are continually being updated. These remain popular in the Australian industry due mainly to the student being able to study at his/her own pace on-line.

Master of Food and Packaging Innovation

In July, the AIP formally partnered with Mondelez International to provide the industry-based knowledge in the new Master of Food and Packaging Innovation being offered by the University of Melbourne.

The AIP is coordinating the Food Packaging Materials and Processes subjects and the Food Packaging Design subjects for the Master Program. These are both industry-based units that are designed to bring specialised and skilled experts from the industry to teach these subjects. This course is designed to provide talented people with the knowledge to develop innovations for the Australian food industry.

Mondelez approached the AIP as they wanted the Master course to not only be focused on food – they wanted to ensure that packaging was also represented as they recognise that packaging plays an integral role for the successful launch of new products within the food industry.

By partnering with Mondelez International the AIP once again supports industry-relevant academic options in addition to

the educational portfolio and offerings already available through the Institute. The AIP compliments Mondelez International for taking the initiative to create this course to better serve the food industry in Australasia.

Corporate Partnering Program

The business tailored training program focuses on specific business needs and requirements and provides a learning experience for a specific group of employees or an entire work force. This is usually based on the certificate and/or diploma course in Packaging Technology content.

For more information visit www.aipack.com.au or contact Education Director of AIP, Pierre Pienaar, by e-mail pierre@aipack.com.au.



Country Report

New challenges for Japan packaging industry

As reported by WPO member, Japan Packaging Institute (JPI), due to the new economic policies of the Abe administration, the packaging industry now faces the new challenge of working together to develop the next-generation packaging for the near future. The packaging industry must develop and improve more advanced packaging that meets the demands of society, such as developing more advanced environment-conscious packaging, completing appropriate labeling and promoting accessible designs. The packaging industry will also address further advances in packaging technology for confidence in foods, together with the socially prevalent issue of reducing the loss and waste of foods, which are great challenges for the packaging industry in the future.

In view of such circumstances, the JPI will further improve business such as promoting appropriate packaging, which is the core business, and developing human resources who will lead the next generation. The Institute will also work to address more advanced packaging that meets the demands of society and concentrate our wisdom and work to promote and strengthen public benefit service in order to create an affluent society and materialize a vital packaging industry. In particular, the Institute will hold the Productions and Packaging in Daily Life Show 2015 this year, working together with consumers as well as academia, industry and government in order for us to enjoy better packaging for our society and environment.

In 2015, JPI will also continue the courses for packaging professionals, which are the central pillar for human resource development, offering the 50th Packaging Professional Course. Throughout the last half a century, the institute has educated over 12,000 packaging professionals, contributing to modernized and leading-edge packaging. To mark this major transition, the Institute will again consider developing next-generation human resources in the packaging arena in collaboration with all related sectors.

In the light of the above, the focus will be in the following matters:

- developing next-generation packaging for the near future;
- enhancement of human resource development associated with advanced packaging education;
- globalization of packaging activities and enhancement of international activities;
- preparation for Tokyo International Packaging Exhibition (Tokyo Pack 2016).

This is the current status of Japanese packaging industry according to recent research accomplished by Japan Packaging Institute:

Value

A) Shipment value of packaging materials and containers \ 5,662 bil. (yen)

Previous year: \5,534 bil.(yen)

Ratio to the previous year: 102.3%

B) Production value of packaging machinery \ 458 bil. (yen)

Previous year: \ 440 bil.(yen)

Ratio to the previous year: 104.1%

Total (A+B) \ 6, 120 bil. (yen)

Previous year: \5,975 bil.(yen)

Ratio to the previous year: 102.4%

Volume**A) Shipment volume of packaging materials and containers \ 18.82 mil. ton**

Previous year: 18.64 mil. Ton

Ratio to the previous year: 101.0%

B) Production number of packaging machinery \ 353,300

Previous year: 355,200]

Ratio to the previous year: 99.5%

Table 1 The scale of Japanese packaging industry, 2010- 2014

* unit: billion yen

	2010	2011	2012	2013	2014
Value of materials & containers	5,742.2	5,769.6	5,494.3	5,534.4	5,661.9
Ratio to the previous year	99.4%	100.5%	95.2%	100.7%	102.3%
Value of packaging machinery	416.2	427.9	431.0	440.6	458.6
Ratio to the previous year	101.7%	102.8%	100.7%	100.2%	104.1%
Total Value	6,158.4	6,197.6	5,925.4	5,975.0	6,120.6
Ratio to the previous year	99.5%	100.6%	95.6%	100.8%	102.4%

* including estimation value in 2014

Table 2 A rate in scale of the Japanese packaging industry to the nominal GDP

* unit: billion yen

	2010	2011	2012	2013	2014
Value of materials & containers	5,742.2	5,769.6	5,494.3	5,534.4	5,661.9
Ratio to the previous year	99.4%	100.5%	95.2%	100.7%	102.3%
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Ratio to the previous year	99.5%	100.6%	95.6%	100.8%	102.4%

* including estimation value in 2014

Table 3 Share of packaging materials in shipment value & volume in 2014

Share in shipment value		Share in shipment volume	
Paper & paper products	40.8 %	Paper & paper products	63.3 %
Plastic products	31.3	Plastic products	18.7
Metal products	16.2	Metal products	8.2
Glass products	2.2	Glass products	6.7
Wooden products	2.3	Wooden products	3.1
Other materials	7.2		
Total	100.0 %	Total	100.0 %

Table 4 Overview of shipment value of packaging materials and containers

Upper column: Shipment value in 100 million yen(¥)

Figures in () shows composed ratio - %

Lower column: Comparison with previous year - %

	2012 - final -	2013 - final -	2014 (incl. estimate)
Grand Total	54,943 (100.0)	55,344 (100.0)	56,619 (100.0)
	95.2 %	100.7%	102.3%
Paper & Paperboard Products	22,728 (41.4)	22,905 (41.5)	23,127 (40.8)
	92.7	101.0	100.7
Plastic Products	16,259 (29.6)	16,638 (30.1)	17,704 (31.3)
	97.9	102.3	106.4
Metal Products	9,371 (17.1)	9,112(16.5)	9,148(16.2)
	97.8	97.2	100.4
Glass Products	1,261 (2.3)	1,247 (2.3)	1,262 (2.2)
	97.8	98.9	101.2
Wooden Products	1,406 (2.6)	1,291(2.3)	1,277 (2.3)
	109.1	91.8	98.9
Miscellaneous <u>Incl.</u> seals, labels, tapes, textile products, cellophanes	3,914 (7.1)	4,087 (7.4)	4,099 (7.2)
	89.0	104.4	100.3

Table 5 Overview of shipment volume of packaging materials and containers

Upper column: Shipment volume in 1000 tons

Figures in () shows composed ratio - %

Lower column: Comparison with previous year - %

	2012 - final -	2013 - final -	2014 (incl. estimate)
Grand Total	18,448 (100.0)	18,643 (100.0)	18,828 (100.0)
	98.0	101.1	101.0
Paper & Paperboard Products	11,429 (62.0)	11,712 (62.8)	11,911 (63.3)
	97.3	102.5	101.7
Plastic Products	3,467 (18.8)	3,513 (18.8)	3,528(18.7)
	98.2	101.3	100.4
Metal Products	1,616 (8.8)	1,563 (8.4)	1,548 (8.2)
	99.3	96.7	99.1
Glass Products	1,285 (7.0)	1,261 (6.8)	1,252(6.7)
	96.3	98.1	99.3
Wooden Products	651 (3.5)	503 (3.2)	587 (3.1)
	109.0	91.2	98.9

Table 6 Overview of production number and value of packaging machinery

Production value in 100 million yen(¥)
(); Comparison with previous year %

	2012 -final-		2013-final-		2014 (incl. estim.)	
	Number	Value	Number	Value	Number	Value
Grand Total	258,304 (99.5)	4,310 (100.7)	355,244 (99.2)	4,406 (100.2)	353,309 (99.5)	4,586 (104.1)
1. Packaging & packing machines Total	356,821 (99.6)	3,861 (100.8)	353,824 (99.2)	3,937 (102.0)	351,866 (99.4)	4,051 (102.9)
Unit & inner packaging machine Sub-Total	277,289 (101.3)	3,257 (103.7)	265,236 (95.7)	3,306 (101.57)	264,644 (99.8)	3,380 (102.3)
-Scaling machines	3,730	196	3,680	204	3,943	212
-Filling machines	3,482	389	3,339	385	3,278	385
-Bottling machines	3,864	566	4,624	613	4,683	657
-Canning machines	127	17	117	17	120	17
-Pouch form/filling machines	6,029	594	5,684	613	6,006	616
-Container form/filling machines	249	156	277	168	269	167
-Labeling machines	162,289	129	143,738	117	143,786	130
-Cartoning machines	374	73	398	101	379	102
-Over wrapping machines	16,791	169	17,107	143	17,322	141
-Sealing machines	47,893	145	52,968	171	50,691	170
-Shrink packaging machines	2,544	101	2,507	95	2,611	110
-Vacuum packaging machines	6,210	108	6,358	105	7,362	110
-Others	23,707	609	26,439	570	24,194	558
Outer packaging & packing machines Sub- total	79,532 (94.0)	603 (87.7)	88,588 (111.4)	630 (104.5)	87,222 (98.5)	670 (106.3)
-Case landing machines	512	132	517	142	592	159
-Case gluing machines	91	4	79	3	89	4
-Taping machines	2,994	13	5,281	14	5,285	14
-Boxers	5,136	2	5,371	2	5,369	2
-Uncasers	13	3	14	2	15	3
-Others	6,024	265	17,624	299	16,419	323
2. Bag-making machines Total	1,077 (98.2)	248 (97.0)	1,1104 (102.5)	261 (105.3)	1,078 (97.6)	271 (103.7)
3. Paper & paperboard converting machines Total	306 (96.5)	200 (104.7)	316 (103.3)	207 (103.5)	365 (115.5)	2623 (126.9)

Events

5th edition of exhibition of dresses made of packaging

After Zagreb (Croatia), Belgrade (Serbia), Sarajevo (Bosnia and Herzegovina) and Ljubljana (Slovenia), the 5th jubilee edition of the educational project "Packaging – product – consumer – environment protection", with an exhibition of dresses made of packaging materials "Buttoned-up by Scotch Tape", is coming back to Zagreb.

Dresses made of packaging materials of well-known brands on the Croatian market will be exhibited from November 14-

28 on the "Buttoned-up by Scotch Tape" street in Avenue Mall, a shopping center in Zagreb. The aim of the project is to highlight the importance of packaging as an inseparable part of the product, to promote a product and also to inform and educate consumers about packaging and its functions, with great emphasis on the proper waste management and environmental protection.

The dresses are a result of the artistic vision of renowned Croatian fashion designers. For all of them, stepping into the area of packaging materials is a major challenge. During the exhibition, there will be educational radio quizzes organized for all Avenue Mall visitors and listeners of Totalni FM, a media partner. Listeners/visitors need to find an eco-educational note, which is located in the description of every dress and report to the program to win valuable prizes. All visitors will also have the opportunity to vote for the most beautiful dress.

The exhibition is organized by Tectus Ltd., Institute of Packaging and Graphic arts Tectus – IatT, a WPO member, and Packaging/REGprint" trade journal. For more information send an e-mail to tectus-institut@ambalaza.hr.

PRINT.Fest 2016 – Days with Mr. Print

The intense activities of Institute of Packaging and Graphic Arts Tectus – IatT (WPO member) in the fields of packaging and graphic arts and constant tracking of development in the printing industry through the trade journal "Ambalaza/REGprint", took to the creation of PRINT.Fest 2016 – Days with Mr. Print, scheduled to March 3-4 2016, in Zagreb, Croatia.

The festival will gather experts from six countries of the region (Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Slovenia and Serbia) and includes:

- the two-day conference "New Age of Print"
- CROprint award ceremony for the best printed products on the Croatian market
- REGprint award ceremony for the best printed products on the regional market
- exhibition of nominated printed products and party "Honoring you and Mr. Print".

PRINT.Fest will present innovations in the printing industry, on different aspects, methods and applications that meet the expectation of the modern market individually or in synergy with other communication platforms. For more information send an e-mail to tectus-institut@ambalaza.hr.

17th edition of FEST.A CROPAK

In 2016, packaging festival FEST.A CROPAK, organized by WPO member Institute of Packaging and Graphic Arts Tectus – IatT, Tectus Ltd. company and Ambalaza/REGprint trade journal, will take place in May, in Croatia.

As in previous years, FEST.A CROPAK 2016 will encompass several expert events:

- international conference about trends in packaging industry;
- CROPAK 2016 award ceremony for the best packaging on the Croatian market;
- REGPAK 2016 award ceremony for the best packaging on the regional market.

For more information send an e-mail to tectus-institut@ambalaza.hr.

Message From General Secretary

See you all in Mumbai!

By Keith Pearson*



Thank you to all the members who attended the meetings in Milan. It was exciting to see the excellent attendance from members travelling from far and wide to participate in the WPO meetings and to attend the Ipack-Ima Exhibition and of course the World Expo.

Our attention is now fully focused on heading for India from 8-12 October 2015 and joining with our member the Indian Institute of Packaging as they celebrate their Golden Jubilee. Having been involved with IIP for a long time, it has been wonderful to note the many positive changes that have taken place. As you will have noticed from the program, we are in for an exciting and full week of meetings and events.

We are looking forward to judging the WorldStar Awards during the Indian visit and would encourage all members to support WPO by entering the "best in packaging class" from your country; WorldStar winners are given an opportunity to be considered "World Class" and this title has honor and offers marketing advantages.

The closing date for WorldStar entries was 18 September 2015.

Please note that the WorldStar Student Awards is still open for entry and, as usual, this initiative offers young people a career building opportunity. Entries close on the 6 November 2015.

As mentioned in Milan, WPO members are encouraged to concentrate on identifying packaging that has supported the "Save Food" initiative that is being promoted in WPO and through the competitions.

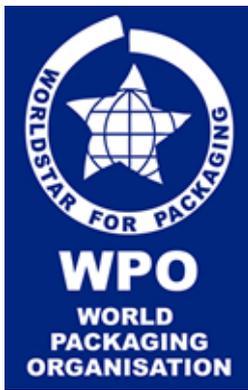
***Keith Pearson is General Secretary of WPO. To contact him glacier@tiscali.co.za.**

Worldstar Awards

Entries for 2016 competition ended by September 18th

The deadline to register entries for WorldStar Packaging Awards 2016 was September 18th, 2015. "We encouraged every WPO member across the Globe to help us promote the largest and most important global packaging award", alerts Thomas Schneider, President of WPO.

Packages eligible for WorldStar are those that have already received a national award recognized by WPO. "In its 47th year, WorldStar is one of the major events of WPO and last year attracted 265 entries from 37 countries around the world with 148 winners. As always our aim for our next competition is to increase the number of entries and countries participating",



adds Schneider.

For general enquiries on WorldStar Packaging Awards contact rachel.brooks@iom3.org or visit www.worldstar.org / www.worldpackaging.org. The important dates regarding the Award are:

- **18 September, 2015** - Closing date for entries which will be judged in Mumbai, India on 8/10 October, 2015

Note: Some national competitions may not have completed judging by 18 September. In that case, those entries must be submitted by the 30 October, 2015 (These entries will be judged

online)

- **1 December, 2015** – Results announced
- **May 2016** - Awards Presentations and Dinner – Budapest, Hungary

Worldstar Student Award

WPO creates Save Food category



Packaging projects developed by students from all over the world can now enter a new category in WPO's WorldStar Student Award, the Save Food Student Packaging Award. This new category was created to support the Save Food Initiative, from Messe Dusseldorf and FAO (Food and Agriculture Organization). "The idea is to encourage students to develop new solutions on packaging to prevent food waste. The project presented can be a new one. That means it does not need to run for a national award previously", explains Thomas Schneider, President of WPO.

The entries for the WorldStar Student Award and the new category Save Food Student Packaging Award end on November 6th. According to WPO's Sustainability Vice President, Johannes Bergmair, from Austria, "Save Food is a topic related to the whole supply chain. And there are many ways and technologies to work on this including logistics, farm to fork transcontinental routings, transit refrigeration, storage conditions, shelf life extension, product handling, and more. Packaging is just one of them and it is the key element that WPO will focus on". This new category of WorldStar Student Award will recognize only packaging solutions that could reduce food waste.

In general terms, the WorldStar Student Awards is an international packaging design competition for students – undergraduate or graduate – from countries around the world who are involved in projects in the field of packaging – structural design and/or graphic design. To participate in the competition, the packaging project must have won a local award. Further, the packaging project should offer a new solution, irrespective of product, that is innovative, aesthetically appealing, environmentally compliant, easy to manufacture, convenient and relevant, and / or that brings efficiency to the packaging system.

The 2015 WorldStar Student Award entries close on November 6th and the Award Ceremony will take place alongside with first WPO Meeting of 2016, in Budapest, Hungary, in May 2016. Entry fee is US \$15.00 per project. Judges for the WorldStar Student Awards and the Save Food Packaging Award category will be distinguished packaging professionals from around the world, representing different countries and cultures.

Judging is based on:

- Degree of Innovation (including conceptual and technical aspect)
- Sales appeal/graphics in the target country
- Sustainability aspects relative to the target country
- Ease of processing/manufacturing
- The extent to which a pack is fit for purpose and complies with the functions of packaging
- Efficiency to the packaging system
- Overall impression.

The top three highest scoring entries will be named as WorldStar Student Save Food Packaging Award Winner and will receive a WorldStar Student Save Food Packaging Award Winner Certificate.

In 2014 and 2015 the WorldStar Student Award is hosted by ABRE (Brazilian Packaging Association). For more information send an email to studentaward@abre.org.br or visit www.worldpackaging.org.

Position Paper

Prevention and reduction of food losses and food waste via appropriate packaging

By **Victoria Heinrich and Johannes Bergmair***

Today's world is facing enormous challenges. Principal amongst these are climate change, environmental destruction, scarce resources, globalisation, population growth as well as demographic change. This is in particular reflected in the topic of food safety and security.

For this reason, the present WPO (World Packaging Organisation) position paper aims at highlighting the issue of global food losses and food waste along the food supply chain and in particular packaging as a valuable solution to this challenge. In doing so, the paper builds up upon recently published data and reports in this research area as well as information and statements of previous WPO position papers. It then closes with the current and envisaged future role of the WPO in this topic.

According to the Food and Agriculture Organisation of the United Nations (FAO), each year approximately one third of the food produced for human consumption is either lost or wasted globally. This does not only result in the fact that, despite sufficient world production, one in seven people in the world are starving but also means that the precious natural resources used in producing these goods are also lost.

While food wastage represents just the tip of the iceberg, the impacts on the environment are incredible. So, the carbon foot print of food wastage is the third biggest after USA and China, the blue water footprint is equivalent to the annual water discharge of the Zambezi or Volga River and approximately one third of the agricultural land area grows crops that will not be eaten, which accounts to the total land area of China, Mongolia and Kazakhstan. Besides this, biodiversity is reduced by the progressive intensification of agriculture and expansion thereof into wild areas. But that's not all. Additionally, food losses and food waste cause huge economic loss and at the moment incalculable costs to society.

Leading experts and organisations, therefore, emphasise that food wastage reduction is inevitably to reduce the pressure on the scarce natural resources. This will not only have immediate effects but also decreases the need to drastically raise the global food production to meet the food demand of nine billion people in 2050.

Where food losses and food waste cannot be avoided, most reports and policies propose further measures of, in hierarchic order, redistribution of food, redirection of food to feed as well as composting and conversion to renewable energy. The least measure should be disposal.

Causes and Solutions

Along the food supply chain – ranging from pre-harvest, harvest and initial handling phase, storage, processing, distribution and storage, to retail outlets and consumption – the causes of food losses and waste are diverse. These range from biological, chemical, biochemical, mechanical, physical, physiological, technological, logistical, organizational, to psychological and behavioural causes – including those induced by marketing or other influencing factors. Examples include damage from pests and disease, unpredictable weather conditions, not meeting the quality specifications, inadequate packaging, spillage and degradation, trimmings and food preparation waste, batch mistakes, inadequate remaining shelf-life, poor management or handling, confusion over use-by and best-before dates, leftovers and many others.

In order to elaborate tailored solutions and to prioritize the actions to be taken, a careful identification of these causes is mandatory. Thereby, it is noteworthy that the causes strongly vary with the product, context and stage of the supply chain and that an integrated perspective is essential to distinguish between the point where food losses and food waste occur and the actual underlying cause, as these often cannot be considered to be identical. Meaning that food losses or food waste appearing at one stage of the food supply chain may originate from more than just one specific cause up- or downstream the supply chain.

Despite different approaches, perspectives, scopes, methodologies or definitions used in the literature on food losses and food waste, which, to some extent, hamper the comparison of studies, systems and countries, a general trend can be observed. Hence, in less developed countries food tends to be lost at pre-harvest, harvest and initial handling phase due to inefficient harvest, storage, transport and processing. With increasing development, waste tends to move up the distribution chain to retail and consumption level. This is also where food is more likely to be thrown away when it is still edible.

When focusing on packaging, some underlying causes were already recognised and organized by stages in the food supply chain. At the harvest and initial handling phase, for example, inappropriate choice of containers and packaging materials is predominant. Moreover, sanitation and hygienic standards of the containers used to pack and transport the products are often insufficiently implemented. Moving forward the food supply chain to processing, lack of packaging poses one of the challenges to be overcome. During distribution and transport, however, rough handling during packaging and unloading of transport vehicles in the combination with the use of inappropriate packaging containers or packages pose a major challenge. Near the end of the supply chain, at the retail outlets, causes are mainly inadequate packaging but also factors like large pack sizes, which force consumers to purchase more than needed. Further, marketing strategies, product promotions and bulk discounts lead to more and larger purchases. Last but not least, packaging damage plays a crucial role.

The Role of Packaging in Minimising Food Losses and Food Waste

Packaging aims to contain, preserve and protect. Basic traits, which allow satisfaction of the modern consumer's demand

for fresh and processed food, which are safe and convenient, independent from season or origin. Besides the basic functions, packaging also fulfils secondary functions like information about the product, convenience, presentation, brand communication, promotion, economy and environmental responsibility.

However, packaging is a highly polarizing topic and repeatedly subjected to heated environmental debates, mainly due to littering and recovery issues of used packaging. A circumstance that fuels the clamour for the general reduction of packaging among some not sufficiently informed parties.

While the reduction of packaging, indeed, could be an important element of general waste policies, it is easily forgotten that unaware omission or reduction of packaging could have the unintended consequence of dramatically increasing the amount of food losses and food waste along the food supply chain. When attempting to tackle the world's waste problem, it is therefore important to focus on packaging fit for purpose following the principle of "as little as possible, as much as necessary". Paradoxically, this may lead to increased frequency or amount of packaging at some stages of the supply chain (Figure 1).

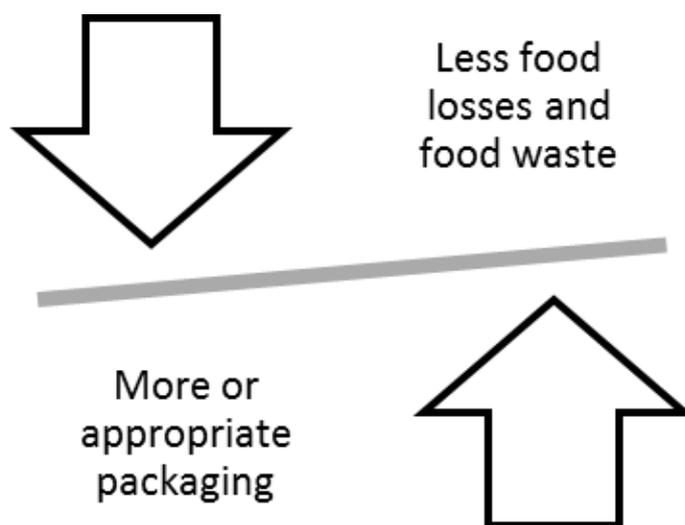


Figure 1: Trade-offs between food waste and packaging.

At the moment, however, primary, secondary and tertiary packaging together only account for approximately one tenth of the total energy inputs for one person's weekly consumptions of food and the protection offered by this packaging also ensures there is no further energy losses through possible food spoilage or wastage. This is why life cycle analysis should not be undertaken without taking packaging into account. Several studies have shown that packaging only accounts for two to five per cent of the total environmental impact in the food chain. In the specific case of beverages this accounts to up to 25 per cent. Against this background, it is of utmost importance to investigate the potential trade-offs between packaging consumption and food waste to achieve the best environmental outcome.

Technical solutions

It has been conclusively shown, that insufficient or inadequate packaging is a factor for food losses and food waste. As a consequence, using the appropriate packaging material is regarded to be a key element of a set of technologies to reduce these losses.

Often quite simple and inexpensive solutions can significantly reduce the level of losses and waste. Along with this, transport and processing need to be adapted to local situations, including infrastructure, economic and human resources

as well as conditions along the supply chain. Solutions need to be affordable and adapted to local conditions, including human resources and to the scale of the operations in food chain.

In a packaging design and development process it is therefore of elementary importance to consider all aspects of the package's life cycle from production through distribution to consumption as well as waste management. In summary there are six key areas to be considered: (i) product needs, (ii) distribution needs and wants, (iii) packaging materials, (iv) machinery and production process, (v) consumer needs and wants, (vi) market needs and wants and (vii) environmental performance.

There are now many modern and innovative food packaging innovations that are providing solutions in these six areas. For example active and intelligent packaging, barrier materials, modified atmosphere packaging, portion sized packaging, breathable polymer films, "easy to empty" packaging, aseptic technology, hermetic seals, re-sealable packaging and many more.

Even though these transport, processing or packaging solutions offer a range of advantages, they often encounter constraints to their acceptance or implementation. This is where further research and studies are required to better understand the food losses and food waste that occurs in this area.

In the context of food savings, two examples of successful food packaging are frequently mentioned: First, selling grapes in trays or bags can reduce the store waste of grapes by 20 % and second, only 1.5 grams of wrapping plastic can keep cucumbers fresh for 14 days.

Current and envisaged future role of the WPO

In the effort to support a sustainable society and under the slogan "better quality of life through better packaging for more people", the WPO currently aims to globally promote:

- The positive economic, social and environmental impact of packaging on society
- A reduction of the negative environmental impact of packaging on society and the environment
- Development of packaging technology, sciences and engineering
- Communication concerning packaging technology and applications
- Advancement of packaging skills and expertise through education
- A forum for national and international organisations to further the state of the art of packaging
- Expansion of the international trade, not the least to support developing countries and economies

To support these actions, the envisaged future role of the WPO can increasingly be seen in:

- Putting all actors together
- Awareness raising of the challenges and impact of food losses and food waste as well as pointing out possible solutions related to packaging
- Support to programmes, projects, research and education related to the packaging's role in food losses and food waste reduction
- Collaboration and coordination of packaging initiatives in the field of food losses and food waste
- Contribution to standards, laws and policies
- Encouraging for innovation (e.g. WorldStar Awards and WorldStar Student Awards)

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Special Article

The key to entry to competitive market is investment in packaging industry

A vision from Iran

By Afshin Fakhr*

In recent years packaging has been considered as complementary part of marketing mix. In fact, researchers have given full recognition to the crucial importance of packaging as a key role in the marketing mix.

In today's competitive market, in parallel with basic and primary purpose (protection, preservation, container, handling, communication), packaging is also an effective promotional tool and used to improve the sale rate. Notably, packaging offers brand owners the possibility to communicate with consumers through distinctive designs and on-pack communication in the form of logos, graphics, images, colors, messages, and product information.

In complicated business world and highly competitive market, where consumers have a very wide range of products to choose, packaging role completely understood by marketers and market makers in influencing on many purchase decisions that are made at the point-of-sale, many companies take advantages of focus on packaging and investment in it.

The point is that packaging is one of the most important factors in evaluating the companies' performance and products. It is very interesting in most of marketing books and articles the marketing purpose of packaging is more noticeable in comparison with its protection purpose. While a new "P" have been added up on the list of famous marketing 4PS (Product, Price, Place and Promotion), and that is Packaging which indicates its importance.

As result of studies, packaging industry is one of the main elements of development of production and exports, and it is essential we consider it as an individual industry that is related to all industries and is also a very important piece in the

whole production process. Packaging is a competitive advantage of any company that gives enough attention to the supply chain. In order to develop the packaging industry, we should produce innovative packed goods that not only could compete with numerous similar products and brands in markets, but also should show a creative and an environment-friendly packaging. This also means that packaging is multifunctional.

Obviously we could make considerable gains from some activities in this industry, including education in different levels, knowledge, R&D activities, culture and networking, nationally and internationally.

Consequently, in Iran we are seeking to improve the packaging industry by the creation of the national and specialized body that includes packaging specialists, designers, researchers and local companies. All with government's support and as part of the work of a group to develop the packaging industry and optimize the Iranian good's packaging. Our goal is to increase the Iranian good's market share and identify the potential of Iranian's products.

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