

WhatPackaging?

PrintWeek

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BIG INTERVIEW

ITC's Shirish Yadav
on food packaging

Page 14

MARKET WATCH

Sweet spot of chocolate
confectioneries

Page 26

**Why we need to be serious
about sustainability...**

Page 6, 18, 20



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INDEX

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22

Profile

Packman Packaging's franchise
chain business model

28

Design

Beyondesign's Kavita Dalal shares
package design mantras



30

Paperboard

Nandini Aakarshita's luxury package
printing services



32

Spotlight

Hi-Tech's 1,00,000 sqft
Vapi facility



Sustainable packaging
industry growth by 2024



Size of sustainable
packaging industry by
2024



Tinplates recycled in India



Value of metal packaging
industry



Recyclability quotient of tin
containers

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EDITORIAL COMMENT

How long will sustainability get stymied at every turn

I write this from Chennai. Every day, I have been following the news. How the sunken ship XPressPearl that caught fire and spilled its oil cargo in the Indian Ocean has created an environmental disaster, which threatens Sri Lanka's fishing and tourism industries.

On the one hand, officials have said there are no signs of oil or chemical spills. On the other hand, environmentalists have warned of a possible environmental disaster if hazardous materials are released into the water. It's the usual deadlock. The binary of Us vs Them!

On cue, the old arguments emerge. We need a circular economy that works. That is, a circular economy that tackles climate change. A modus operandi that helps address the 45% of emissions that come from how we make and use products and food. A circular economy that is fuelled by renewable energy. In other words, a thriving, zero-emissions economy.

All of us know this from the countless seminars and conferences, which we attend. Be it going green or how as part of the ocean plastic programme, we have to stop the 20,000th tonne of plastic waste from entering the world's oceans.

One thing the Covid calamity has taught us is speeches and slogans are not the solutions to a problem.

The point is how to make sustainability a reality, today. Which is why this issue is dedicated to "sustainability". My *WhatPackaging?* team members spoke to the top companies and almost all of them concurred. The future is: eliminate waste, reuse materials, regenerate nature, and create new business models. At times, it could be something simple as altering the packaging design so as to help prevent 6,50,000 tonnes of food waste a year. To create something small like a produce sticker to help divert more food scraps and prevent methane in landfills.

Many conversations about going green tend to return to a focus on recycle and reuse. Is this limiting? For example, when should reusable packaging be prioritised over single-use? Perhaps we are looking at a narrow field; as my grandmother told me on her 80th birthday (7 June) that our planet is surviving on four crops. That's right; wheat, rice, corn and potatoes account for 60% of all calories consumed globally. If we want more diversity, we need to eat more types of food.



As part of the composting project, the planet as a whole recycles 83 million tonnes of biowaste every year, reduces greenhouse gas emissions by 9 million tonnes of carbon, and recycles 1 million tonnes of plant macronutrients a year. (Data source: Sustainable Packaging Coalition).

This is good. But is this enough?

For starters, you can ask yourself the following five things...

- Is the workflow, right? 99% of the factories follow non-green habits.
- Know where the final product will end up. If you know what the end is, basically you know how to proceed.
- All of us yearn for the perfect green job, but we have to rely on ourselves and the tools on our shop floor in the end.
- How often have you taken a risk with a green job? 1%? 10? 50%? Never?
- Green is expensive and sustainable is cumbersome. Are you genuinely willing to travel that extra mile?

If not, then like the cargo ship that burned off Sri Lanka's coast, which sank with the load of 300 tonnes of oil in its tanks, and leaked microplastics to beaches, we could be contributing to an environmental disaster.

This is one of the worst environmental disasters in Sri Lanka's history. Already fishing has been banned, and there has been a deathly blow to thousands of livelihoods. Now, imagine this being a tragedy for the planet.

Abhishek Muralidharan,

PrintWeek and WhatPackaging?



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CIRCULAR ECONOMY

Industry conundrum: How to

Sustainability matters and it has to become part of the business speak. The trend is clear, and big brands are racing to clean up. But what is the ground reality? Are we frittering away a great opportunity to be green?

Just a week ago, we celebrated World Environment Day on 5 June 2021. Many companies and brands used the day's significance to flood social media with slogans and messages related to sustainability. This has become an ongoing exercise; in the past few years or so, spreading awareness about sustainability and incorporating green practices has become a key part of the corporate vision and agenda.

This was also the major topic of focus in a series of webinars and virtual sessions since the Covid outbreak. The brands and packaging companies have been vocal about their sustainable manufacturing practices, product launches, and partnerships with waste management firms and NGOs to boost recycling operations. However, despite substantial progress in sustainability, the question persists – Is there a green gap between what our industry talks about and the rest of society?

WhatPackaging? spoke to industry experts from eight companies – Avery Dennison, Cosmo Films, HB Fuller, Kandui Industries, Packman Packaging, Polyart, Siegwerk and Tetra Pak – to understand the sustainability prospects in India.



Ashish Pradhan,
Siegwerk

There is a gap in understanding. Consumers, in general, think all plastic packaging is bad for the environment. When you look at this from the perspective of the packaging industry, we come to the topic of the plastic paradox, which means plastic, as such, is not a bad material. It has reduced carbon footprint significantly compared to rigid packagings such as glass, aluminium cans and such. This is a gap between perception and facts, as seen by the packaging industry. The industry is looking at reducing, reusing and recycling. While a small section of society understands it, by and large, it is still a concept not fully understood by a non-packaging person.

One simple action plan for India: Managing packaging waste is a big topic for India. We have the technology and the intelligentsia that can work on packaging design that makes it recyclable, reducible and reusable. However, the big challenge is segregation and collection, and this is something we have to look at if we want to approach this holistically. We must make waste segregation compulsory across the country.



Ashwin Agarwal,
Kandui Industries

There is certainly a green gap. Plastic is a common man's product. It is crucial to comprehend that plastic is clearly not the issue; its usage and disposal is. Consumer habits will have to change, for which, literacy is the key.

Also, there have been many discussions around the use of compostable packaging material, commonly referred to as bioplastics. However, in my opinion, these may not be a viable option for India as compostable packaging is way too expensive and not feasible in today's context, especially for an economy like ours, considering our per-capita income.

Thus, I believe a continued focus on recycling is the future. If we remain focused on recycling activities and look at incentivising it, success is bound to come.

One simple action plan for India: Multi-layer plastic (MLP) waste is a big challenge for the industry. Also, we need to increase the usage of recyclable materials. Thus, we need to identify the MLP packages using virgin materials, which can be shifted to recyclable alternatives, making it a mandate. To ensure a reasonable approach, the manufacturers of these products should be given, let's say, at least a five-year window to address and adapt to the change.

clean up as packaging grows



Elizabeth Staab,
HB Fuller

Customers are increasingly demanding ecologically friendly product packaging, particularly in fast-growing, developing economies such as India. Moreover, the middle-class is becoming more conscious of the negative impact single-use packaging can have. By addressing this trend proactively, manufacturers can demonstrate that good environmental performance and commercial value can coexist and earn them a competitive advantage. In addition, there are a number of other trends driving sustainability efforts in the packaging industry, such as the growth of eCommerce, plastic substitutes and improved waste collection, among others.

One simple action plan for India: In one of our recent projects in India, we shifted from diesel to LPG in boiler and thermic fluid heaters. This project brought us cost savings together with improving current trends of production volumes and petroleum price matrix. This can be an action plan which can be implemented across India.



Gaurav Jalan,
Packman Packaging

I believe many businesses in India are run by individuals with less subject exposure or experience. So, there is a gap in development. But I am sure, with time, these individuals will become environmentally conscious with the adaptation of eco-friendly practices.

In terms of prospects, we are seeing that the public is becoming more aware of environmental issues. But, in the long run, everyone has to join this effort. We are going to see a boom for sustainable products in almost every sector.

One simple action plan for India: Carry your own bag while visiting the store and opt for products with minimal packaging. Also, people should use compostable or biodegradable bags, which, unlike plastic bags, are easy to break down and do not affect the environment.



Jaideep Gokhale,
Tetra Pak

Currently, a lot of ambiguity exists around the term 'biodegradable'. It is also important to understand that biodegradable packaging can be a good idea for the environment in niche applications, such as agricultural films. However, for other applications, biodegradability itself may be of no environmental advantage. Firstly, biodegradability doesn't prevent litter. And secondly, the process of biodegradation might take a substantial amount of time or might only be achievable in a specialised biodegradation facility. Also, these materials are mixed with recyclable substrates, which can hinder the recycling process. On the other hand, if done efficiently, recycling can effectively address waste management and littering. The need is to ensure that packaging is recyclable and that the ecosystem that enables its recycling exists on the ground.

One simple action plan for India: A strong and uniform regulatory framework can make all the difference. For instance, the endemic issue of littering in India demands strong waste management infrastructure and strong implementation of waste management rules. Moreover, the legislation needs to be uniform across the country, clearly assign the right roles and responsibilities to various stakeholders like manufacturers, brand owners and municipal bodies, among others; and lastly, the legislation needs to be enforced strongly.

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Pankaj Poddar,
Cosmo Films

Plastics have several misconceptions, but the fact remains that it has the least carbon footprint compared to its packaging counterparts. It enables producers and manufacturers to ship more products with less packaging materials. Light-weighting plays a crucial role in uplifting the economic as well as environmental efficiency of product packaging.

The disposal of plastic waste is a pressing concern due to the lack of proper collection and segregation of plastic waste. According to a joint report by Assocham and PwC, India will need a landfill that's the size of New Delhi by 2050. The most crucial step to change this alarming forecast is to segregate waste in every possible way to be treated.

One simple action plan for India: There is a dire need to spread awareness and encourage waste segregation. There should be a uniform policy with the main emphasis on segregation and waste management from the government's end. Organisations need to have an infrastructure for the proper segregation and management of plastic wastes. Along with this, the government and industries need to join hands to manage waste, such as workers getting incentives to sort out waste.



Sim Bean Low,
Polyart

The industry talks about biodegradable, but it's at the most compostable. The industry needs to understand the difference between these two terms. Biodegradation is a difficult process as there is no industrial infrastructure to support the composting of the plastics. Therefore, we need to collect, identify, sort and process plastics.

On a positive note, India has one of the highest plastic recycling rates in the world, and brand owners are contributing their bit to driving this forward. We see large brand owners shifting away from plastic products or moving towards recyclable materials as much as possible. Also, a lot of brand owners have started to demand non-laminated products or mono-components for packaging. Due to the range of stakeholders involved in India's packaging value chain process, we see this as a move in the right direction.

One simple action plan for India: Design the end product, keeping recycling activities in mind. This will ensure that the packages are easily identified and sorted. It applies to all packaging materials, not only for plastics but also paper and paperboard packaging.



Vivek Kumar,
Avery Dennison

India has one of the best recycling rates in the world. Also, constant developments are happening in the recycling world. Consumers are also more aware and alert compared to the previous few years. The brands and manufacturers are also taking responsibility and moving towards green packaging. We have to continue on this path to become a more sustainable nation. Innovations in the packaging field, government regulations, consumer knowledge, and responsible brands will help us fulfil the gap.

Packaging is one of the fastest-growing sectors in India. The demographic dividend and changing profile of households (high-income groups to change from 1:4 today to 1:2 by 2030) will enable consumption growth, leading to higher demand for packaged products. In addition, with the change in consumer behaviour and government legislation, the trend is moving towards more environmentally friendly packaging.

One simple action plan for India: India needs stronger support from each stakeholder in the value chain to tackle packaging waste. Right from sourcing material to discarding them after use, we need proper guidelines along with people's commitment. Also, creating a market for recycled products is the need of the hour. A simple action such as the waste takeback programme can help solve the littering and collection problems in the country.

SUSTAINABILITY

Yash Pakka: Developing green a

Abhishek Muralidharan of WhatPackaging? speaks to Ved Krishna, vice-chairman, Yash Pakka, about the company's Chuk brand, a bagasse-based substitute for packaging

As a key focus area in their corporate social responsibility goals, top brands are taking concrete steps to incorporate sustainable packaging in their production system, followed by the rising inclination of consumers towards environment-friendly products and government initiatives to replace single-use plastics.

According to a report by Mordor Intelligence, the global biodegradable packaging market was valued at USD 93.59 billion in 2020 and is expected to grow by USD 126.85 billion by 2026. A USD 126.85 million market – that's the potential packaging companies across the globe can aim to tap.

Here's one company, Uttar Pradesh-based paper and flexible package manufacturer, Yash Pakka, which has been on the environmental bandwagon with its compostable and biodegradable offerings for close to three decades.

The company claims that all products under its Chuk brand are made from sugarcane residue, which is completely compostable and is a perfect replacement for styrofoam tableware and single-use plastics. The company boasts its clientele among marquee names, such as the Indian



“Boutique solutions will not help the large goals. Significant raw material flow is important and usage of residues is better than trying to hunt for virgin materials.

Ved Krishna of Yash Pakka

Railways, The Park, Hyatt, Haldiram's, Google, Amazon and Starbucks, among others. Chuk has been awarded as one of the top 10 environmentally sustainable brands by the B-Corp organisation.

"At Chuk, we produce eco-friendly tableware using sugarcane bagasse. Compared to plastic, which takes more than 500 years to decompose, our products are 100% compostable. It can decompose within months in



▲ The Yash Pakka plant in Uttar Pradesh with a cap

backyard compostable systems. Our tableware is sturdy enough to prevent leakage of your favourite food item, but yet lightweight to make packing easy. There is no aroma migration so you will be happy that your butter chicken smells as delicious as it is meant to be," says Ved Krishna, vice-chairman, Yash Pakka.

Excerpts from the interview:

Abhishek Muralidharan (AM): As you rely on agricultural residue as the primary raw material for your products, how do you ensure a steady supply?

Ved Krishna (VK): Our products are made from locally-sourced sugarcane fibre, called bagasse, that is untreated with any kind of chemicals. Sugarcane is produced in abundance in the nearby villages. The farmers bring the

Alternative to single-use plastic



Capacity of manufacturing one-million pieces of Chuk tablewares per day



Yash Pakka at a glance

Infrastructure: The company has an installed manufacturing capacity of 39,100 MT paper per annum and one-million pieces of tableware per day along with an 8.5 MW electricity plant that runs on biomass

Product segments: Paper, moulded products and compostable flexible packaging

Annual turnover:
Rs 202.95-crore

2025 target: To emerge as a global leader by 2025 with an annual turnover of Rs 1,400-crore

large goals. Significant raw material flow is important and usage of residues is better than trying to hunt for virgin materials. That said, there will be various other solutions that would evolve, based on other natural materials in the coming times.

AM: Many plastic alternatives have been proposed in recent times, but these solutions often fail to attain scale. How are you addressing this at Yash Pakka?

VK: In the world of impact investing, it is our brand's conscious effort to replace single-use plastics by providing compostable packages. From the beginning, our focus has been innovation and sustainability. All our tableware products are manufactured using agri-residue pulp. This makes the products lightweight for ease in handling, flexible to protect from damage, and strong to prevent spillage. Also, post-usage, these products turn into manure within 60 days, completing the loop. More so, we also recover 95% of the cooking chemicals used to manufacture the pulp, thereby adding to our environment-friendly quotient.

sugarcane crop to the mill, which squeezes all the juice out and then the stalk is left behind. We use that fibrous stalk to make the pulp used to manufacture our tableware products. We have long term contracts with villages within a 100-km of radius of our factory and access to raw material is actually one of our strengths. We are looking to double the production capacity within this year.

AM: Do you feel that this system ensures a steadier flow than availing virgin materials?

VK: Yes, we are completely focused on utilising waste agricultural fibres for our packaging offerings. It can answer all our demand and supply answers in terms of sustainability. I believe that boutique solutions will not help the

AM: What are the eco-friendly products on offer at Yash Pakka. Can you shed some light on the present state of R&D in this domain?

VK: We cater to three broad market segments. Firstly, bags produced from paper made from sugarcane fibre. We are working on reinforcing the same. The targets are to double the strength levels, add water resistance and a higher stretch level.

Secondly, food services. We have created a line of pulp-moulded products as alternates to styrofoam (EPS). It also works well as serviceware. We →

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are now working on understanding and cracking the code on delivery, which we plan to do this year.

And finally, flexible packaging. We have developed some offerings based on agri papers and bio-plastics. We have done beta studies on non-aromatic products (instant noodles, nuts, pulses and so on) and are perfecting the same.

Apart from this, we will also be establishing the largest factory in the country for food wrapping products (grease resistant butter paper).

AM: One thing is for sure, the need for packaging has only gone up with this current pandemic situation. What new opportunities have these times thrown at you?

VK: Packaging has certainly boomed amid this pandemic. We are seeing significant long- and short-term shifts globally. There is an unprecedented shift towards online shopping and delivery, which has led to a substantial increase in packaging consumption. However, unfortunately, a lot of these substrates used are unsustainable and we are working towards alternatives. Thus, it has given rise to many new opportunities.

AM: So, do you feel that sustainability has taken a backseat amid the pandemic?

VK: Yes. There is a slowdown in the will towards reducing single-use plastics and uninhibited use of the same in carry bags, PPE kits, bottled water and so on. It seems that consumption has become arbitrary in the guise of self-care. This will hurt the planet further. However, our government has begun taking measures to curb the situation. And we look forward to the effective implementation of these measures so that more innovation can be encouraged.

AM: What are the positive steps taken by the government and what else can be done by the lawmakers to



facilitate the adoption of compostable packaging?

VK: A line of stringent government norms, issuing mandates on using sustainable as well as eco-friendly packaging solutions can further facilitate the adoption. The government has introduced a couple of good measures on this front. However, some other factors that can make sustainable packaging more viable for different players such as food and beverages, quick service restaurants and so on, are tax waivers at the grassroots level. In addition, GST incentives for both the manufacture and the businesses can also be a helpful step.

AM: You highlighted that online shopping and delivery is growing. So, how are you planning to cater to this new market potential?

VK: Well, as there is a significant shift in people eating out and thus, there is an adverse impact on our country's food service business. So, we are working towards finding new delivery solutions. However, these products are difficult to perfect using natural fibres, but we are exploring workable products.

AM: What role does training and

awareness play in the spread of compostable plastics?

Chuk products are 100% compostable. It can decompose within months in backyard compostable systems.

Ved Krishna of Yash Pakka

VK: There is a rising concern for sustainability and awareness among consumers. More than ever, consumers are now becoming conscious of what they are purchasing, consuming and receiving. Including the past couple of years, and especially during the pandemic, we have seen a significant shift wherein people saying no to using plastics, owing to health concerns. This is gradually driving them to choose sustainable and eco-friendly products. More training and awareness will only accelerate the ongoing process of choosing sustainable products. ■



BIG INTERVIEW

The pursuit of simplicity and so

Shirish Yadav, vice-president of ITC Foods talks to Ramu Ramanathan about the solutions that packaging manufacturers should develop to address changes in food manufacturing, processing and handling

Ramu Ramanathan (RR): What type of solutions should packaging manufacturers develop to address changes in food manufacturing, processing and handling?

Shirish Yadav (SY): The foremost would be an environment-friendly packaging solution. While packaging is a necessary element of the product, it is not the primary product we buy.

RR: True.

SY: Packaging is left behind after product consumption, and is an unwanted leftover in the environment. The industry is trying to find a solution through unlocking the value in these leftovers, so that they get picked up and recycled. However, more environment friendly solutions are also required; not everything will ever get recycled and there will always be a net addition.

RR: Is there a part of the solution required at the packaging manufacturing end?

SY: Yes. That area is around value curve analysis.

RR: Meaning?

SY: It is basically mapping the value of each attribute of your product and superimposing that with the consumer's perception of value on it. Areas where the consumer does not perceive value are probable areas for optimisation and the areas where the consumer understands value are areas for



Packing or packaging does not decrease the nutritional value or make the food unhealthy. On the contrary, packaging preserves the nutrients and keeps the food safe and healthy for a longer time.

Shirish Yadav, vice-president, ITC Foods

value enhancement.

RR: How prevalent is this value curve analysis in our packaging manufacturing industry?

SY: We keep doing this in the FMCG part of the organisation. But I would recommend that packaging manufacturers also look at their product from this angle, so that the cost can be optimised while increasing the consumer perceived value. This is about improving quality where it matters and not wasting money where it doesn't.

RR: During the pandemic months, we saw a surge in the consumption of packaged food. However, we hear about decreasing levels



of nutrition caused by many packaged food types. How can packaging play a role and help us achieve nutrition security along with food security?

SY: There is a lot of misconception in this area. Packing or packaging does not decrease the nutritional value or make the food unhealthy. On the contrary, packaging preserves the nutrients and keeps the food safe and healthy for a longer time. So, in a way packaging is already helping improve nutritional security along with food security, say by making seasonal nutrients available round the year. Suitably designed modern packaging solutions can provide enhanced protections to nutrition and food safety.

RR: And yet, we do find packaging with reduced nutritional value of the product inside...

SY: That is because there are packaged products available with more nutritional value and there are products with less.

Sophistication in food packaging



Today, a larger percentage of the consumers prefer the latter because of cost or taste factor and hence they are produced more. As the consumer preference shifts, the former will take precedence.

RR: In this context, what is the role of agencies? For example, FSSAI has rolled out a lot of standards lately. Do you find them comprehensive?

SY: We believe that all the standards being prepared by the regulator must have been established by evaluating the data from the industry and international scientific references, which are best suited to the Indian context.

RR: What areas do you find them lacking in?

SY: There is a scope for improvement. In case of the pesticide minimum residue limits (MRLs), there should be some comprehensive guidelines for monitoring at

Sound-byte: Shirish Yadav at the FICCI Foodworld India

Shirish Yadav presented a complete overview of the trends and opportunities triggered by the Covid-19 pandemic. His focus: the rise of eCommerce to the growth of digital channels, localisation of supply chain and changing consumer behaviour which has driven trends such as the focus on immunity and hygiene.

Yadav mentioned that the app-based purchases and customised shopping will witness a boom due to 5G adaption which is set to be integrated with 125-bn devices by 2030. The digital commerce channels coupled with consumer online content consumption will transform the Indian food processing and packaging sector.

Yadav said, 'The eCommerce market has now transcended beyond grocery shopping, driving newer opportunities. To enhance the offerings of such digital channels, e-commerce players have incorporated technologies such as cloud computing and cybersecurity among others.'

Citing examples from UTC's best practice method, Yadav shed light on how Industry 4.0 is set to disrupt the food processing industry. He said, "There is a range of technologies available under Industry 4.0 which has transformed the food processing industry in India. Robotics has automated tasks such as mixing, sorting and packaging. AI and predictive analysis have helped marketers to forecast the demand by prioritising data. Blockchain has become important for food traceability. IoT has improved food safety. And 3D printing has helped in creating food formulations through computer-aided designs; it offers a great level of personalisation."

farm level. Fixing the default MRL of 0.1 ppm is not advisable at this moment. A few standards released by FSSAI recently need to be revisited with respect to quality parameters (alcoholic acidity, moisture and acid value) for millets (jowar, bajra, ragi and mixed millet), cashew and ghee.

RR: Any new clause or regulation that has been an apprehension?

SY: Yes, yes. The FSSAI annual return had proposed a clause about an amendment in Form D, which is very cumbersome to be filed by Food Business Operators (FBOs). It includes the number of FoSTaC training of customer complaints and their resolutions, product test report and product category details. Vide order dated 18 December 2020 the amended Form D is made operationalised.

RR: Even the re-labeller company is required to file the returns...

SY: Yes. In addition, there is a draft regulation on FSS (licensing and registration) regulations, 2020 (yet to be gazette notified), which has a proposed clause of additional step of product verification before applying for license.

RR: What is the industry's take on this?

SY: The industry proposal is that such restriction should not be introduced as it further delays/extends timelines for grant of licenses. Moreover, such a system is not followed across the globe. FBOs have been technically improved and many support services are available such as FSSAI Mitra and consultancy agencies.

RR: Is there duplicity of compliance requirements?

SY: In one particular case, yes. The Consumer Protection Act (CPA) 2019 has extended the definition of "goods" under Section 2 (21) of the CPA to include "food".



Following clauses are found to be duplicating (a) product liability (b) misleading advertisement (c) enforcement. For food products, FSSAI regulations are enough and CPA regulation will be duplicity. FSSAI is already a single reference point for all matters relating to food safety and standards.

RR: During your talk at the FICCI Foodworld India seminar, you alluded to reducing energy on the shopfloor and in the factory...

SY: Energy is a national resource. We, as the ITC group, have taken a pledge to reduce specific energy consumption by 30% by 2030. In order to meet this goal, every individual of an organisation will have to take baby steps, which will lead to a cascading effect and hence lead to achievement of desired goals.

RR: Can you share a few of these steps that factories in India can undertake to achieve energy consumption?

SY: I will give three examples.

RR: Please do.

SY: Firstly, an absolute need-based usage. And so, wrong practices such as compressed air usage for cleaning practices. Then there is zero wastage of energy. In this, one has to arrest leakages, chilled air leakages, compressed air leakages and arresting non-productive run-ability of machines.

RR: And thirdly ...

SY: Efficient operation of all equipment. That is: not running beyond the design speeds, achieving benchmark efficiencies in energy guzzling equipment such as boiler, chiller, compressor, oven and fryer.

RR: You had said that manufacturers can refurbish existing models by only replacing the critical elements while most of the old line is retained. Please enlighten...

SY: Digital twin-based remote monitoring of line efficiency is the latest trend and an efficient way of manufacturing. Typically, the old lines or old machines do not support any information exchange such as machine data and process data due to legacy control systems.

RR: So, you basically refurbish the old machine control system...

SY: Yes, with the latest PLC and communication protocol such as Ethernet or Modbus TCP IP. It can help in establishing the real time monitoring of the machine performance and will result in better productivity. Especially in packaging lines where short product runs and high changeovers require continuous monitoring to minimise the underweight and overweight rejections, extra give away in products and improve the overall equipment efficiency (OEE) and reduce the total cost of ownership (TCO).

RR: Under what circumstances should a company opt for an upgrade?

SY: Before upgrading, the company needs to assess first – the age of machines. For instance, very old machines can't meet the speed and versatility and spare parts availability will be difficult. Second: assess the downtime, frequent breakdown and high repair time as well as the skilled resource constraints. And last, the cost of maintenance.

RR: If we were to launch a coding system to cover the entire lifecycle of packaging from its constituents to its functions and its ability to recycle, what should it be?

SY: This is a huge need. Today, biodegradability is the only factor, which is considered and others are ignored, whereas what needs to be seen is the total environmental cost. A coding system based on life cycle assessment (LCA) is the way to go.

RR: What should the form of this code be?



SY: It can be colour codes, or numeric codes which the consumer will become familiar with over a period of time. What is important is a standardised process of LCA analysis, which is auditable. There should be no gaps in the process else, chances of misuse would be high.

RR: In this context, a supplementary question. Do you think packaging is at times over-engineered?

SY: In the Indian context, I wouldn't say that there is a lot of over engineering. Within the packaging industry, India is an example of optimisation. We successfully run some of the most optimised packaging. Flexible

packaging is the predominant packaging in India because it uses much less material per kg of product. This is primarily because we are a value conscious society.

RR: Do you think packaging can be standardised in some ways that can help make collection of post-consumer packaging easier?

SY: Standardisation can definitely help. If a given type of packaging has a given material of construct it becomes easier to segregate and reach the recycle value chain, example being PET bottles and milk pouches. The problem is that PET in bottles and LLDPE in milk pouches is used because they are the



most optimum material for the product and not because of ease of recycling.

RR: Does this rule apply to all or most products?

SY: No. When you try to use the same formula in other products the packing becomes sub-optimised in terms of cost or performance. A system of incentivising a given type of material for a given product may help, but actual benefit will come only when a packaging type completely switches over. Having said that, packaging is highly customised, designed to provide product safety, performance and differentiation. Hence blanket standardisation may not be feasible.

RR: Finally, you are an advocate for the Internet of Things (IoT). Different industries and diverse geographies spending on IoT have jumped over the past few years...

SY: Industrial IoT or IIoT is getting adopted in all industries and likewise in food processing and packaging. It is used right from crop yield monitoring, raw material grading, shelf-life monitoring, batch traceability, manufacturing efficiency, inventory status, finished goods and point of sale.

RR: How should the food processing and packaging industry in India implement IIoT across their organisations?

SY: IIoT is the first step for collecting data and storage on cloud and further big data analytics will add value using AI/ML models to predict the outputs, causes, failures, efficiency and trends. Overall, it will improve the process efficiency by close monitoring and taking corrective actions basis insights or else by establishing a close loop control system. IIoT will finally lead to smart operations be it a smart supply chain or a smart factory. ■



WOOD PACKAGING

Have you ever considered wo

The terms 'plastic packaging' and 'sustainability' have been inseparable for the past two decades? But have you ever put thought about wood as a means of sustainable package? Excerpts from the CII Packaging Conference 2021

Wood has been an integral part of tertiary packaging for centuries.

Wooden boxes, crates and pallets have played a key role in material handling operations in manufacturing facilities; and importing and exporting large shipments and heavy equipment. Wooden packages and pallets find their applications in a range of industries, right from automotive to food and beverages. But what about its sustainability quotient?

Wood as a sustainable material

Wood ticks all the boxes when it comes to sustainability – it has a low carbon footprint, decomposes in the environment, is reusable, renewable, and wooden pallets can be stacked, so it is space-efficient, too.

Andreas Phil, executive vice-president, R&D/technology portfolio, Nefab, says, "Plastics befit



when it comes to circularity, but when it is about a one-way flow, which is inevitable in numerous cases due to difference in regulations and import-export norms, wooden packaging is a great alternative in terms of sustainability. It has a low carbon footprint compared to PP, steel, paper and plywood, among other materials. For instance, wood has an 8% CO₂ per kg, not to mention the value of PP."

Dr T Dhamodaran, chair of excellence forest products, ISWT,

concurs, "Wood is a renewable material. It can be sourced from sustainably harvested forests and certified plantations. These aspects make the material a good substitute for a range of packaging choices."

In addition to sustainability, the other benefits of wood are that it has no MOQs; it offers custom printing or weight options and offers convenience in shipping and transportation.

The perfect wooden package

As wood is a biological material, its properties such as density, moisture content, hardness and printability vary among other characteristics.

As per the IS 6662:1993(R2005) – Timber Species Suitable for Wooden Packaging, about 17 species are at the Suitability Index of 95 (out of 100), close to 45 species meet the suitability index of 80–95, close to 26 species meet the index of 70–80, among other species. This shows the range of options woods provides as a packaging substitute. The standard

Wood as sustainable packaging?



provides the best packaging options in terms of workability, durability and treatability.

According to Manan Chopra, director, Benz Packaging Solutions, a combination of softwood and processed engineered wood make the package aesthetic and lightweight. "It helps reduce the weight of the box or the pallet and stands better to weather conditions. Softwood also helps to bring down the cost of the package," he says.

Wooden pallets and challenges

DK Rai, director, Chep India, says that repairability is a huge challenge in plastics compared to wooden pallets. Due to this, the overall utility value of the pallet is challenged, and even if the repairing has to be done, it becomes quite expensive. "If wooden pallets are being used in many cycles, not being disposed of after every leg of its use, you can replace its pieces and prolong its life for more than 20 years."

However, before stepping into the

debate on plastic versus wooden pallets, Rai emphasises that India is still at a phase where a range of companies is still employing manual labour for material handling. "Thus, the first step to be undertaken has to be to push the use of pallets. Only then can one focus on other aspects such as sustainability."

The other challenge, according to Rai, is that manufacturers have designed their supply chain in isolation. If it can be standardised, especially the backend of the supply chain, and if collaborations can be done to use a common platform, it can bring many sustainable prospects. Based on flexibility, pallets can be purchased as well as rented. "Pallets are least conflicting utilities. Companies don't compete on their pallets but compete on the features of their products. Hence, the same pallets can be re-used and also be repaired for similar applications," he says.

Moisture content in wood

Dhamodaran explains that as wood is a biological material, it can have shrinkage and swelling problems due to moisture content. "So, to rectify this, the timber has to attain the equilibrium moisture content. Technically, the material has to surpass fibre saturation point."

Chopra says, "Wood has a moisture content of close to 30–60%. Thus, solutions such as specialised desiccants can help boost the shelf-life of wood. It can enable the wooden packages to prolong its product properties."

He adds, "We offer in-box and container desiccants, which can absorb close to 400% of the wood's

weight. Products such as these desiccants or VCI papers enable the package to be safe from the processes such as oxidation and condensation."

Wooden packaging regulations

The International Standards for Phytosanitary Measures (ISPM) 15 is a regulation that directly addresses the need to treat wood materials of a thickness greater than 6-mm.

Chopra explains that these measures are in place to keep the micro-organisms and infestation away from wood through processes such as heat treatment or fumigation using methyl bromide. The types of wood subjected to these treatments are mostly softwood, as engineered wood does not have any moisture content.

The Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative (SFI) are the standards for wood certification in India. These standards focus on forest and plantation owners willing to adopt a sustainable forest management system. However, Phil points out that these certifications are a bit on the expensive side for SME or MSME manufacturers to avail.

Thus, local certifications such as the Government of Kerala's certifications for rubberwood should be formed, says Phil. "More companies should demand such certifications from local governments. Besides this, India has to balance importing and sourcing local wood and strive to eliminate the use of jungle wood, which still prevails in a range of companies. Importing wood by sea containers is also a highly sustainable option." ■

ENVIRONMENT

Chapter IV: The role of CO₂ equivalent in climate change

In this edition of his eight-chapter series, Ganeshkumar V, head – sustainability and climate risk, DQS India, explains how carbon dioxide equivalent is used as a benchmark to measure the effect of greenhouse gases in global warming

Imagine you are back from Drupa (good old days) visit and you find one dollar, Rs 5,000, and 250 euros in your wallet. What's the combined value?

You can't add the three different currencies together. So, you first convert all three values into a common denomination – let's assume USD using exchange rates, only then can a single value be derived from the currencies. The same concept applies to greenhouse gases.

Similar to the currency conversion, to make meaningful comparisons between different gases and calculate their combined effect on global warming, we need to come up with a common unit of measurement – tonnes of carbon dioxide equivalent (commonly expressed as CO₂e).

Before exploring this CO₂e, let's revisit a basic physics lesson on greenhouse gases. As per the *Encyclopædia Britannica*, greenhouse gas is any gas that has the property to absorb infrared radiation (net heat energy) emitted and reradiated back to the earth's surface, contributing to the greenhouse effect. The primary greenhouse gases are carbon dioxide, methane and nitrous oxide among others. These gases can be emitted by both natural and anthropogenic sources such as fossil



Intergovernmental Panel on Climate Change (IPCC)

IPCC is the United Nations body for assessing the science related to climate change. The organisation provides regular scientific assessments on climate change, its impacts and future risks, and options for adaptation and mitigation. IPCC, which currently has 195 members, was created in 1988 by the World Meteorological Organisation and the United Nations Environment Programme.

several gases for 100 years. For instance, methane has a GWP of 28. That means one tonne of methane is equivalent to 28 tonnes of carbon dioxide. So, if 1,000 tonnes of methane are generated annually by a landfill site that equals 28,000 tonnes of CO₂e.

So, we've learned that not all greenhouse gases are created equal. But, by using tonnes of CO₂e we have a common unit, which enables us to measure and compare different greenhouse gases and understand

their combined impact on climate change.

More importantly, with CO₂e, GWP and IPCC, we understand the scope and range of assessments that can be done to mitigate climate change and global warming. With few simple steps in the right direction and the available resources at hand, tackling global warming may not seem like a distant goal.

Let's explore more in the coming weeks... ■

fuel combustion in cars, agriculture, landfills and air conditioners, among others.

In terms of its characteristics, each greenhouse gas traps heat in the atmosphere at different rates and has different atmospheric lifetimes. For instance, methane has a lifetime of around 12 years, while nitrous oxide stays in the atmosphere for 10 times longer, at 121 years. This leaves us with the classic problem of comparing apples to peaches. Here's where CO₂e comes in!

Scientists use carbon dioxide as a benchmark for measuring the heat-trapping ability of other greenhouse gases. To convert the other greenhouse gases into carbon dioxide equivalents, we multiply the mass of emissions by the appropriate global warming potential (GWP), which represents the relative warming effect of a unit mass of the gas when compared with the same mass of carbon dioxide over a specific period. Usually, this is 20 or 100 years – the period is important to address the different atmospheric lifetimes of the different greenhouse gases.

The GWP is published by the Intergovernmental Panel on Climate Change and recognised by the United Nations Framework Convention on Climate Change. Here, you can see the GWP of



GLOBAL WARMING POTENTIAL FOR GREENHOUSE GASES

Chemical formulae	Common name	Global warming potential (GWP)
CO ₂	Carbon dioxide	1
CH ₄	Methane	28
N ₂ O	Nitrous oxide	265
CH ₂ FCF ₃	HFC-134a	1,300
SF ₆	Sulphur hexafluoride	23,500

Source: IPCC fifth assessment report (2014)

PROFILE

Packman: Towards a franchise chain in packaging printing

Paper price hike, sustainability, eCommerce and all else. Abhishek Muralidharan of WhatPackaging? speaks to Packman Packaging's founder Gaurav Jalan

With 30 years of experience in the industry, Greater Noida-based Packman

Packaging has recently come up with the idea of a franchise model, where the company is helping entrepreneurs establish their identity by providing them funds to grow more in the packaging industry.

"The franchise model for Packman was created keeping a few things in mind. One of them was to associate more people with Packman and allow them to be a part of the business and eventually lead them towards financial independence. Also, from a business point of view, customers can directly purchase from a local franchise store rather than waiting for their product to reach them, which usually takes a few days," Gaurav Jalan, founder of Packman Packaging, explains.

Like many other businesses, the ongoing pandemic brought both challenges and opportunities for Packman. On the one hand, manufacturing declined followed by declining sales and revenue, which resulted in a loss as far as major packaging products were concerned. On the other hand, the company



Gaurav Jalan

started manufacturing Covid care packaging last year during the lockdown. It was not a part of the company's packaging manufacturing, but something that it always wanted to do. Soon, this gave rise to the idea of establishing a franchise, and gradually, it helped the company reach to newer cities, including Hyderabad, Tirupati, Chennai, Erode, and Kolkata.

According to Jalan, the company has witnessed 70% growth for its Covid-related safety production, with sales figures at 15%. Food packaging is growing at 50% with sales at 15%, electrical goods 10% with sales at 15%, eCommerce packaging at 20% with sales at 45%, and fashion and lifestyle packaging at 10% with sales at 10%.

Jalan says Packman is not just a company that manufactures packaging boxes or packets, but has a complete range of automatic and semi-automatic machinery required for all forms of packaging, along with printing machines. However, right now, the company is not looking at new investments in equipment, but in the form of a franchise chain.

Price hike

Speaking about what has been the immediate impact of the kraft price hike on Packman and the corrugated board ecosystem as a whole, Jalan says it was not only for kraft but also

for raw materials used for packaging. "It was mainly because of the lack of supply of raw materials. As a result, production dipped and manufacturers were forced to hike the price of their existing products," he says.

He adds that with the price rise of raw materials, the company has tried to keep the prices to nominal compared to the rest of the market so that it could help both Packman and its customers during the difficult times.

Of the substrates, Jalan believes corrugated packaging will be there in the future. "The reason is simple. People are now a lot more aware of environmental factors. And this is where corrugated boxes will be a part of the future packaging, as they can be recycled and reused. One of the major factors that manufacturers need to pay attention to is the handling of corrugated boxes in humid conditions. The impact of humidity often causes swelling, warp or distortion. It also weakens the adhesive that binds the flutes. These are the areas manufacturers need to pay attention to. Fortunately, countering those issues are neither expensive nor complicated," he says.

The eCommerce industry

The eCommerce segment saw a rapid boom amidst the pandemic. Jalan explains that when the lockdown was implemented, even the eCommerce companies were mainly selling essential items. But he agrees that owing to these items, it marginally kept the sale flow alive. "However, it cannot be said that there were huge sales because of eCommerce companies, as only limited products were allowed to sell initially," he says.

He adds, "Packman keeps the interests of its clients in the forefront and can proudly say that it was one

Sustainability

Sustainability will be a major topic of conversation post-pandemic. According to Jalan, sustainability is the future and it will be visible even beyond 2021, he says and lists some trends, including made-to-recycle products, replacing plastic with other



Packman boasts its range of automatic and semi-automatic machinery at its Greater Noida plant

of the initial companies that started providing customised services for each of its clients. It included the design of packaging, logo, shape, size, and colour of the boxes and packages. Some of the customised services include boxes of books, chocolate, and cake."

Packman has been at the forefront of helping its eCommerce clients to cut down on plastic packaging. "Besides plastic packaging, there are other alternatives," Jalan says. "We have been helping our clients with corrugated boxes, cloth bags, jute bags, and paper bags. And those products are sturdy, too. Besides, the plastic courier bags we provide also maintain the quality of 60 microns."

materials and compostable or biodegradable products.

"Recycling will be the key. More stress would be given to manufacturing products that can be recycled easily. To be recyclable, packaging requires to be separable, labelled properly, and clean, which are simple criteria to satisfy," he says, adding, "Plastic will be scarcely used and new alternatives would be available. One would soon see packages made out of mushrooms. The other trend would be the usage of compostable or biodegradable packaging. All materials in it are easy to break down."

But are brands, especially the mid-sized ones, ready for the change?

Jalan says, "General people are becoming more aware of environmental issues and in the long run, everyone has to join this effort. The same applies to mid-sized brands. With time, one will see a boom for sustainable products in those sectors as well. Even now, several mid-sized brands have



Everything happens so fast in the modern world that one person is not able to understand it. Everything is just too fast, unfortunately. There is no time to sit and mull and let the ideas mature over decades. Every person, you too, is able to grasp a small piece of reality, and conjecture.

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The company has been helping its eCommerce clients to cut down on plastic packaging



The idea of establishing a franchise has helped packman reach newer cities

started using sustainable ways of packaging."

He adds, "When we talk about sustainability and going green, it refers to eco-friendly manufacturing of products. When one talks of eco-friendliness, it means the products should be recyclable so that it can save raw material, such as paper. Similarly, compostable or biodegradable bags, which unlike plastic bags are easy to break down, do not affect the environment. Packman has always considered doing business that not only benefits people but also the environment. Our corrugated products, biodegradable bags, and cloth bags are some of those examples."

But Jalan agrees that as of now a lot of work needs to be done because awareness and education are important on this matter. Still, many businesses in India are run by those

who are not educated on the subject.

"I am sure with time these people will also become aware and will start adopting those methods that work in favour of the environment. As far as Packman or its partners are concerned, specifically, the franchise, we are already using sustainable methods in most of our packaging products and that is being circulated in all corners of India," he adds.

He suggests ways through which one can achieve targets for packaging waste. These include an emphasis on recycling; using reusable products; going for recycled, recyclable, compostable or biodegradable packaging; and going for products having minimal packaging.

Growth plans

Looking ahead, Packman's immediate goal is to recover the

Rapid fire with Gaurav Jalan



One packaging innovation that made you proud?
Biodegradable bags.

Which printing and packaging person do you admire the most?
Seema Bansal of DCG Pac.

What is the greatest strength of your printing firm?
Design and creativity.

If you could change one thing about your plant, what would it be?

We always need more. So definitely a bigger plant for more growth.

One job you wish you had packaged?
Apple mobile.



losses and go for the position it was in pre-Covid days. "Recovering losses takes time. So, the initial focus is on the same. As far as growing is concerned, even during this period, we have been able to start franchises in different locations. Thus, the company would look to increase the same. It will not only be beneficial for the organisation in terms of revenue but present an opportunity for people to get employment," he says. ■

MARKET WATCH

Sweet spot of choco

Chocolate confectionery market is growing, so is the associated packaging segment. A roundup of the chocolate market in India. By Aultrin Vijay

In 2020, the chocolate confectionery market in India was valued at USD 1.9 billion. Today, the country is considered one of the fastest-growing markets for chocolates in the world. Subsequently, this trend has boosted the chocolate packaging market, including films and paper, as well.

India's strong economic growth over the past decade has catalysed the country's per capita disposable incomes resulting in the growth of the chocolate confectionery industry. As a result, consumers are now buying chocolates for everyday consumption rather than just special occasions.

India's large young population – a

key consumer segment for confectioneries – is another major factor driving the chocolate confectionery industry. Currently, around half of the total population in India is below 25 years and two-thirds are below 35 years. Other factors driving the market include changing lifestyles, westernisation, growth of the food services sector, value addition, and more. Driven by these factors, chocolates are replacing traditional sweets in the country.

Changing consumer behaviour

As millennials constitute a major chunk of the consumer segment, emphasis on sustainable and eco-friendly packaging is paramount. This



segment of consumers prefers healthier options such as sugar-free, gluten-free, organic, and low-calorie chocolates, which could also make a difference in terms of product packaging and the packaging materials used. Thus, changing consumption patterns are also said to impact the chocolate packing industry. Young consumers are looking for newer formats and flavours in confectioneries and brands and packagers are equally cashing in on this demand.

According to an estimate by IMARC Group, the Indian chocolate market is expected to witness a CAGR of 12.1% from 2021 to 2026. The increasing consumer preferences towards chocolate-based baked goods, confectioneries,

Chocolate confectioneries



western desserts in the country represent one of the key drivers for the Indian chocolate market.

The outbreak of the Covid-19 pandemic and the implementation of stringent lockdown regulations across several nations has resulted in a shift from brick-and-mortar distribution channels to eCommerce platforms for the sales of chocolates. For brands, the challenge was to redefine packaging that attracts consumers through electronic screens. Moreover, brands had an additional task of making their packaging eCommerce-friendly, so as to reduce the use of tertiary packaging.

The market has been classified into milk chocolate, dark chocolate, and white chocolate. Currently, milk chocolate holds the majority of the total market share. On the basis of the packaging type, the market has been divided into pouches and bags, boxed chocolate, and others. Among these, pouches and bags dominate the largest segment. In terms of the distribution channel, the market has been bifurcated into retail sales and institutional sales. Among these, retail sales hold the largest market share.

The chocolate market in India has a well-entrenched presence of multinational players such as Mondelez India, Ferrero India, Nestle India, Mars International India, Gujarat Cooperative Milk Marketing Federation (Amul), Hershey India, Global Consumer Products, Surya Food and Agro, Lotus Chocolate Company, and ITC Limited. Multinational companies such as Ferrero, Hersheys and Lindt have a strong presence in the premium chocolate market. In the chocolate

confectionery segment, Cadbury holds a market share of around 65–70%, followed by Nestle at around 20%.

Emerging trends

With the aim of developing active materials for the use in the design of packages, coatings, and packaging technologies, which helps in maintaining and improving the sensorial and nutritional characteristics and safety of foodstuffs, as well as increase their shelf life, nanofabrication technologies are emerging as innovative solutions across the region.

With the growing awareness, the requirement for eco-friendly and sustainable packaging is steadily on the rise. The country is focusing more on sustainable solutions, which is increasingly becoming a business imperative.

Companies such as Eviroc in India are providing eco-friendly food packaging products to food outlets, restaurants, hotels, hospitals, factories, caterers, and all other users. The rise in usage of eco-friendly packaging is expected to drive the growth of the market.

The chocolate confectionery packaging industry in India is moderately competitive, owing to the several players competing to improve their market share. Sustainable competitive advantage can be gained through innovation in design, technology, and application. Companies are increasing their market presence by expanding their business footprint across various end-user markets. With these trends in tow, the market is only set to grow.■

DESIGN

Keep it real: Five packaging

Kavita Dalal of Beyondesign shares five design tips to keep pace with the year's consumer trends

The pandemic has made one thing clear – eCommerce is here to stay. The surge in online shopping amid the pandemic has revolutionised the packaging industry, and the out-of-the-box concept has now transformed to about-the-box. This means brands and packagers, now, will have to ensure that the packaging is sustainable, supports an efficient supply chain and also meets consumer needs.

Recently, I received a body care package with a beautiful outer design. My first reaction was an ecstatic wow! But the unboxing experience was nothing short of a nightmare. With every packaging layer, my patience swayed, and by the end, I was just glad to have finally found the products. This is a classic example of how frivolous packaging has managed to hijack the primal offering of a brand – its products.

Adding exceptionally artsy layers may depict the amount of care that's been put into the product packaging, but one thing 2020 has helped us get straight is – too much packaging is just too much packaging! It's inconvenient, and in 2021, it's way out of style.

Instead, what one should be focusing on is practical packaging, and keep packaging real.

Here are five tips that can enable your packages to be simple, sustainable and attractive.

(These mantras won't hand you your designs on a silver platter, but they will get you going on the right path.)



The right look

Whatever be the age, receiving a package is always an excitement. However, a brand owner must remember that its first interaction with the customer is through the product packaging. Thus, the packaging must appeal to all consumers.

The key to a successful sale is understanding that this first interaction – the packaging shelf appeal – can provide a competitive edge. So, make sure that you get your look right. Colour and graphics can enliven the product. Their correct usage can instantly impress the audience.

Balancing typography and graphics

Your packaging design can't just comprise graphics or pictures. There needs to be a communication balance, which can only be achieved through written content. That said, you don't want to overpower your design with too many words.

Typography is a form of written embellishment. It's an art and a science. So, play with words, stylise and place them for the world

to see. Sometimes simplicity works, but sometimes you'll need to go over the top.

Make sure your content is ICL – impactful, concise and legible. The impactful content will convince your audience that they are making the right choice. Concise focuses on keeping it crisp. With every extra word, you are losing the consumer's attention while legibility ensures clarity. Otherwise, your product's voice falls on deaf ears.

Do research

Every product is curated, keeping a certain group of people in mind – the target audience. That's every brand's motive. So, quick research on the prospective buyers can help brands better understand the product and the people it aims to cater to.

As you cannot sell a box of tampons to everyone, you cannot sell baby food to a middle-aged group. Thus, the target audience plays a huge role in typography, content, colours and finally, the style of packaging. While older consumers might

g design mantras for 2021



appreciate easy-to-understand graphics and fonts, the younger ones might love a fresher and cooler packaging look. So, don't skip on research.

Ethical packaging

The world of packaging is ever-changing. What was unacceptable earlier is very



much accepted today. However, with increased consumer consciousness and awareness about sustainable packaging, sustainability has become a key influencer in purchase decisions. Thus, eco-friendly and practical packaging is the future, and we must adapt to it as soon as possible.

Practicality in packaging makes or breaks the brand image. As mentioned earlier, a sleek-looking package that has multiple packaging layers that hassle your unboxing experience is a letdown. The kind of ease and simplicity made available to consumers while buying the product from the shelf or an eCommerce platform is what they expect while unboxing, too.

Thus, your packaging must be innovative, attractive and yet simple enough to hold the audience's interest. And at the same time, it must be protective enough to sustain the eCommerce supply chain operations.

Packaging functionality

The 2021 mantra screams functionality. Consumers might forget the design aes-

thetics, but they always seem to remember the packaging functionality. Innovation is the pinnacle of creativity; it can turn even a basic container into something unique.

I recently came across some beer cans that resemble frothy pint glasses. I was genuinely impressed by the idea. The concept of drinking the delicious frothy glass of beer and its mesmerising design immediately strikes consumers' attention. It stood out among all the other cans. It was eye-catching, exceptional and downright clever!

When the packaging integrates with the product's function, it becomes an experience. This is what a buyer looks for in a product, and this is exactly what they should get. Packaging is a part of the product experience. So, let it sync!

Today, the selection of a particular product depends on the packaging appeal. Now, consumers have a clear packaging preference, and as the world moves into a customer-friendly phase, designers all across the world have adopted this trend. However, from a design perspective, it is not only the customers that one has to keep in mind, but also the brand. Your packaging design should portray what the brand is all about, its story and most of all, its emotion.

With this, I altruistically bless that you may never have to undergo a frivolous unboxing experience, at least not like the one we did.■



PAPERBOARD

A paradigm shift in niche.

One of the niche print markets hit hard during the pandemic was the luxury hospitality segment. So much so that 'the new normal' has already made some printed products used in the sector redundant. At the same time, it has opened doors for new product verticals. Arjun Dewan, partner at Nandini Aakarshita, a Gurgaon-based startup, which offers print services to luxury hotels, gives the lowdown

What's happening at the hospitality sector?

We are in luxury hospitality segment, which accounts for an important part of the Indian hotel industry, growing at an CAGR of 11% per annum. We were growing our customer base, getting work from companies such as East India Hotels, Indian Hotels, Aria Hotels, Vatika Hospitality, Old World Hospitality, Untitled Hotels PVR, and Big Fish Ventures, among others. Things began to change in the



last week of February 2020, when travel restrictions started. A food festival involving two Michelin star winner, Chef Christoph Rainer, got cancelled because the host correctly guessed that things were going to get worse. From our perspective, it meant no printed menus, no printed announcements, no printed memorabilia, and no printed in-room messages. And from there till now it's exactly a year. We are still standing, however, with reduced cash, business and a longer repayment cycle.

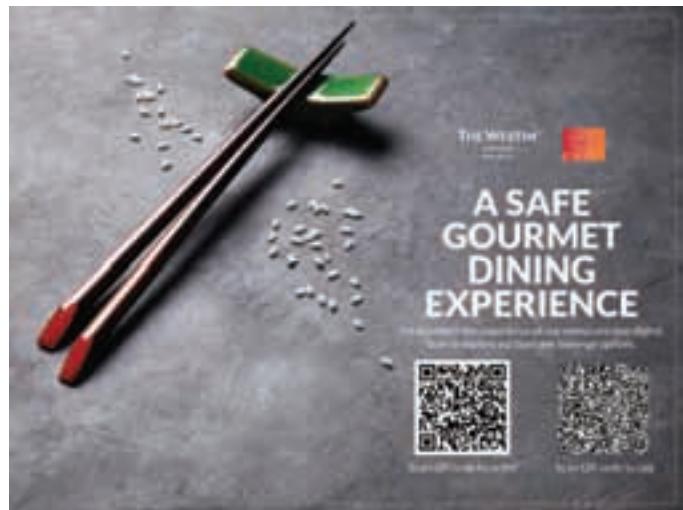
From a printer's perspective, what has changed in the hospitality industry?

Traditional hospitality companies have been great supporters of print. A leading luxury hotel could order over 260 printed items every month as

cheapest pulp board and would involve just a single-colour mini-offset press. All this stopped, and I believe some of the regular printed items will no longer be ordered even when things normalise. It's not just about reduced rates and cutting costs. Technology has also played a role in making some of the printed products redundant. Seen another way, when a USD 20-billion industry shrinks by 50%, it will definitely impact all those who serve the industry.

Is it all gloom and doom?

Surprisingly, the current situation has opened some new doors. However, the opportunities offered by the new demands were not enough to replace the loss that resulted from the closure of the traditional market, but it did compensate to some extent. In addition, it allowed us to add new products to our portfolio. For example, restaurants saw



Personalised packaging



zero dine-in business, and hotels started delivering food. Elaborate meals were attractively packaged and delivered. That meant a demand for printed products such as packaging boxes, cutlery pouches, paper bags, labels, advertisement material, among others. All hotels got printed material related to social distance, hygiene, mask usage and contactless payment. So, if a hotel earlier ordered 25 menu cards for a specialty restaurant, it now moved to a digital menu. However, it used printed single-use placemats from which the guest could scan the menu. One surprisingly big upside

came during the festive season, where leading hotels saw more than expected revenues from their sale of gift hampers. I thought people would have spent less on luxury gifting. In hindsight, however, it made perfect sense – people had been cut off from their loved ones and sending a physical gift during the season was a nice way to stay connected. Luxury hotels are known for high quality and hygiene. Therefore, spending for a gift from here was justified.

Have you seen any other interesting trend?

Companies that were agile and

in control of their production capitalised on the new opportunities that emerged. For example, digital printers saw a huge demand in printing labels and stickers. Die-cutting machines were used to shape face shields; opportunities emerged for single-use surgical masks. They used the same workforce, which was earlier involved in print fabrication. Artisans, who earlier made leather menu covers, got the chance to make attractive sanitiser holders. This trend was not restricted just to the print business. We also saw great entrepreneurial spirit from employees who lost their jobs. Housekeeping staff began home and office sanitisation businesses, chefs started home delivery of gourmet meals and technology staff started offering their services to those who were working from home.

What's your forecast for the immediate future?

At the end of the first wave, I foresaw opportunities in



packaging driven by the emotional urge of individuals and companies to stay connected in the midst of social isolation. Luxury gifting and food deliveries were the big beneficiaries of the trend. The second wave, or as WHO says, the Delta variant, has hit us harder at home and I believe the trend of gifting and food deliveries will not be big this time around. Luxury hospitality is very vulnerable today. If the last time, people spent on emotional wellbeing and self-indulgent consumption, this time, I foresee people spending more on education and mental development. Books, both educational and recreational could be the winners. As vaccination picks up in India, children will emerge as the largest unprotected segment. I foresee parents spending more on the mental and emotional development of their children in the face of continued home schooling and isolation. Internationally, markets in US and Europe are getting back to normal after vaccination. One should witness consumption in those countries rising – meaning more printing related to sectors like garments and gifting.■



SPOTLIGHT

New Vapi plant to help Hi-Tech bolster ink production capacity

The new facility, which is three times the size of its existing plant, has been set up keeping in mind the growing demand for printing inks. Abhishek Muralidharan of WhatPackaging? speaks to Hi-Tech Inks' Karan Mahajan about the investment

Hi-Tech Inks has opened its new factory, an ambitious project kick-started in early 2019, in Vapi, Gujarat. This will bolster its ink production capacity and enable the company to tap into new markets.

With a constructed area of about 1,00,000 sqft, the newly-built facility has an installed capacity of 1,600 MT, which can further be increased up to 2,200 MT as required. The factory is almost three times the size of its existing plant.

Speaking about the investment, Karan Mahajan, managing director, Hi-Tech Inks tells *WhatPackaging?*, "Let's just say that the investment was large enough for not wanting me to invest for quite a few years going forward."

Mahajan says the plant was designed keeping in mind the future demand for printing inks, without sacrificing the safety aspect. Pointing out a fire accident that took place in the past, he said the new facility is equipped with "state-of-the-art safety parameters".

"Simultaneously, I wanted to provide a very comfortable and spacious environment for my team members. These things do not come cheap; especially in the location, we are in right now. We are currently employing close to 200 people, which



Karan Mahajan, managing director, Hi-Tech Inks

includes about 65 contract workers," Mahajan adds.

Safe production

Hi-Tech Inks manufactures all types of solvent-based inks to serve the gravure and flexo printing demands. The company is also geared up to segregate production between the conventional toluene-based inks and the environment-friendly non-toluene inks.

Mahajan divulges more on the product safety norms at the factory: "In solvent-based factories, every product requires safety norms to be



followed, as the solvent itself is the most hazardous product. Based on this, we have installed state-of-the-art safety equipment, which includes fire alarms, smoke detectors, water sprinklers in designated areas and a

3,00,000-litre water tank and foam generating units for fire-fighting.

"We also conduct regular fire and safety training for all our employees and have designated teams within the factory responsible for each area. Regular checks of earthing pits are also done periodically."

Apart from India, the company has been operating in Sharjah, UAE. It has a warehousing and blending facility, which services the entire GCC and the Middle East. It also caters to most of Africa from its Sharjah office.

Mahajan believes that the markets outside of India have definitely been affected more than India due to the ongoing pandemic. "The markets have been much slower with demands also being on the lower side," he adds.

The second wave

The second wave of the pandemic struck India at a time when the country was limping back to normalcy. "Honestly, you only realise the seriousness when it comes knocking at your doors or starts affecting your near and dear ones," Mahajan expressed.

He says the real impact of the second wave started being felt in April, and the cases spiralled out of control, burdening the medical infrastructure. However, it did not affect the factory operations in a big way.

"We have been following the necessary safety and Covid-19 related protocols for over a year now and I think that has helped in keeping things in check," he adds. "Yes, there have been a few cases that have come up, but if you take the necessary precautions and protocols, you can curtail the spread of the virus. Our employees have been very supportive and understand the seriousness of this virus, and thus, the self-awareness also makes a huge difference."

The company followed the standard Covid-19 protocols such as sanitisation of vehicles and work



The newly-built facility has an installed capacity of 1,600 MT

spaces, checking body temperatures, frequent oximeter checks, social distancing, and WFH whenever possible. Apart from that, the company also tweaked its shift timing and the number of people in each shift to maintain distance between each employee while working.

"We also added a health coverage policy for all our employees last year before the Covid-19 pandemic struck and that has been hugely appreciated by the employees," claims Mahajan.

Supply chain management

Mahajan points out that managing the supply chain has been a huge battle for everyone and "we are no different". "Unfortunately, there have been a series of unprecedented events, which coupled with the pandemic, created further challenges," Mahajan states.

However, he feels that the company has not done anything differently. "We have kept the same strategy for procurement and stock planning that we used to maintain pre-Covid. I don't think panic buying and over-stocking help beyond a certain point and that is then a reason to start having cash management issues," he says.

"I would be lying to say that stock planning has been easy. It's been very stressful and probably needs to be attended to multiple times in a day. But, I feel this is also an

experience that the team will learn from and help them get prepared for the future," he adds.

Normalcy is far

"It's still early to start thinking of recovery," says Mahajan, adding that total recovery is very far from our reach. "Unless and until the entire world is free from this, recovery is not possible."

Mahajan remarks that the industry is heavily dependent on imports and the trade gets challenging as per the situation of the exporting country. "So far, it seems that vaccination is helping to some extent and the entire globe needs to focus on vaccination drives so that we could stop the third or fourth wave from coming," he adds.

"For the most part, we have handled the situation to the best of our ability," says Mahajan. "Like any entrepreneur, you always feel there is the scope of improvement, but overall, I am quite satisfied with how my team has handled the entire situation."

However, Mahajan is disappointed by the current situation of the country. "To see people suffering the way they are is cruel and difficult to watch," he says. "Let's hope that the sufferings come to an end soon and start focussing on positive things ahead of us. Until then, stay safe and stay strong." ■

INSTALLATION

A compact press for all flexible packaging needs

Pratik Mehta of Multiflex Polybags speaks to WhatPackaging? about the Chennai-based company's newest CI flexo press – an eight-colour Soma Optima 880

According to a Statista report, the beauty and personal care market in India has been thriving amid the pandemic with a market value of USD 5,134 million in 2021. This surge in demand for personal care products has benefited a range of printers and packaging companies. For Chennai-based Multiflex, this demand rise made it invest in a new eight-colour Soma Optima 880 CI flexo printing machine, which has enabled the company to increase its turnaround time.

With this installation, Multiflex now has three CI flexo presses, adding to its range of three-layer and five-layer extrusion systems and fully automated paper bag making and finishing systems among other machines. The company installed another new paper bagging machine last month.

However, amid the Covid-induced lockdown period, the press' installation became a challenge. But the DKSH India and Soma team made it possible. "We thank the DKSH India and Soma team for their support. The DKSH team helped us find the perfect fit, the Soma Optima CI flexo press ticks all our requirement boxes," says Pratik Mehta, product



Mehta: "A key feature of the machine is its capability to handle both solvent and water-based inks"

development manager at Multiflex Polybags.

The highlight of the Soma Optima 880 press at Multiflex is that it is equipped with a few specific press enhancements such as an auto washing system, auto impression settings, dynamic thermal cooling and a PPP plate protection system among other features. Meanwhile, its eco-friendly quotient includes less solvent consumption for cleaning and optimum electricity usage. Besides this, the company boasts the machine's capability to handle both solvent and water-based inks.

The Chennai-based flexible packaging specialist also boasts its expertise in sustainability and recyclable packaging materials. When asked about the sus-

The Soma Optima CI flexo press at Multiflex Polybags: at a glance

USP: Compact size

Speed: Speed 300 meters

Print size: 820 mm

Substrate range: PE/PET/BOPA/BOPP
12–165 micron, paper up to 210 gsm

tainable product developments at the company, Mehta highlighted that he is proud of the PE+PE laminate structure developed by his in-house team for ready-to-use food packaging. He is bullish about the growth of flexo printing with the rise of such sustainable single-use plastic alternatives.■

SHELF IMPACT

Spotted: The most innovative packaging formats in India's beauty industry

Using Mintel Global New Products Database, Triveni Kulkarni, senior beauty and personal care analyst, Mintel, highlights five recent beauty launches in India that retail in innovative packaging



Wow Skin Science Apple Cider Vinegar Facewash

This product is described as a face wash that has been formulated with 97.4% naturally derived ingredients that dissolve and wash away dead skin cells, dirt or pollutants from the skin's surface. It opens up pores when massaged on damp skin. It comes in a newly designed refillable, reusable 100ml PET bottle. It comes with a built-in face brush and a foaming dispenser and is said to give the face a deep cleanse, a novel packaging innovation in the facewash category.



Swiss Beauty Brightening and Nourishing Winemask

This product is described as a moist and hydrating wash-off facial mask that claims to improve the skin texture and work on rough patches for soft and supple skin. The mild, non-irritating and deeply nourishing product contains water-glycerin for balance; rice extract for skin brightening; and oat extract. The product retails in an 80gm multi-laminate flexible sachet pack suitable for limited washes allowing easy trials given the novelty in its ingredients.

Tonymoly Tako Pore One Shot Nose Pack

Tonymoly Tako Pore One Shot Nose Pack is described as a strong nose pack that removes blackheads from the middle of the forehead as well as the wider nose area. The product retails in a flexible sachet format and comes in a unique octopus-shaped pack that is instantly eye-catching.



Nykaa Skin Secrets Sleeping Mask

Nykaa Skin Secrets Sleeping Masks is said to have active ingredients to target specific skin concerns and provide an intensive and holistic skincare routine for the night. It comes in four variants – Retinol and Hyaluronic Acid, Tea Tree and Aloe Vera, Sea Water and Snail Essence, and Rice Water and Vitamin C. The product retails in a thermoformed 10 ml tray pack that is perfect for one-time use.

Nivea Naturally Good Lily of the Valley & Oil Shower Gel

Nivea Naturally Good Lily of The Valley and Oil Shower Gel is said to offer gentle cleansing and lasting skin comfort. This vegan product contains 98% ingredients of natural origin with 2% essential ingredients in a 99% biodegradable formula that are not derived from animals or animal-derived ingredients. The product comes in a 300ml recyclable bottle made of 97% recycled PET plastic and is probably one of the first movers amongst the affordable brand category to do so.



NEWS

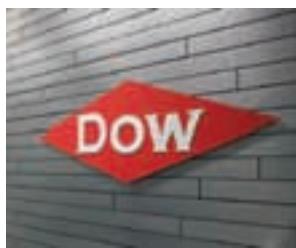
IN BRIEF



Unilever's oral care brands - Signal, Pepsodent and Closeup - have announced plans to convert its

entire global toothpaste portfolio to recyclable tubes by 2025. After four years of development, the recyclable tubes will be available later this year in two of the company's biggest oral care markets - India and France. According to the company, the new tubes will use a high-density polyethylene material instead of aluminium to make it recyclable.

Dow and LucroPlastecycle, an Indian recycling company has welcomed Marico, one of India's leading consumer goods companies



into a tripartite partnership to introduce Dow's PCR-based coalition shrink films into its line of consumer products. This alliance, according to Dow, will enable the company to work towards meeting its new sustainability target of minimising waste by collecting 1MMT of plastics to be reused or recycled by 2030.

EPL (formerly known as Essel Propack) has partnered with GSK Consumer Healthcare (GSKCH) to help the FMCG major achieve its sustainability targets in the oral care segment. As per the collaboration, EPL will be supplying its Association of Plastic Recyclers (APR) accredited eco-friendly Platina tubes for GSKCH's toothpaste range. According to EPL, this partnership will help GSKCH's oral health brands including Sensodyne, Parodontax and Aquafresh tubes to be 100% recyclable by 2025.



Warburg buys majority stake in Parksons

US-based private equity firm Warburg Pincus' affiliate Green Fin Investments BV has acquired a majority stake in Mumbai-based folding carton giant Parksons Packaging.

As part of the transaction, the company's existing private equity investors Kedaara Capital AIF 1, Olza Holdings and IIFL have completely exited their investment in Parksons; the Kejriwal family (founder family) has sold a partial stake.

Ramesh, Siddharth and Chaitanya Kejriwal will continue to retain their current positions of chairman, managing



Kejriwal: a new partnership

director and joint managing director, respectively.

Credit Suisse acted as the exclusive financial advisor to the sellers and its affiliates.

Siddharth Kejriwal said, "We have had a strong collaborative relationship with Kedaara over the past six years and now we are excited to partner with Warburg Pincus in

our next phase of growth."

"This investment in Parksons is a testament to the strong, high-quality business we have built over the past two decades. Their unique understanding of the consumer market will help us further strengthen our position as India's leading paper packaging solutions provider," he added.

Manish Kejriwal and Parin Mehta from Kedaara Capital AIF 1 said, "Parksons is today positioned to further strengthen its dominance as India's largest folding carton packaging solutions provider."

Bizongo secures USD 51-mn in Series C funding

Mumbai-based B2B marketplace for packaging, Bizongo has announced the completion of its Series C funding round with a total of USD 51-million. The latest tranche was led by CDC, a development finance institute owned by the UK government, and Adveq and Bruno Raschle. Schroder Adveq is a leading private equity asset manager with over USD 10 billion under AUM. The round also saw participation from existing investors such as Accel,



(L-R) Ankit Tomar, Sachin Agarwal, Aniket Deb

Adveq and Bruno Raschle. Schroder Adveq is a leading private equity asset manager with over USD 10 billion under AUM. The round also saw participation from existing investors such as Accel,

Chiratae and IFC. Aniket Deb, co-founder and CEO at Bizongo said, "Bizongo has shown more than 3x growth since the completion of the latest round of fundraising and is now inches away from profitability".

SMI opts for three waste management systems

Mumbai-based label-stock manufacturer SMI Coated Products has acquired three Matho waste management systems for its 25,000 sqm production site in Ambernath.

Rohit Mehta (*in pic, left with father, Ajay*), director, SMI, said, "We continuously strive to invest in sustainable, cleanroom manufacturing and environmentally conscious practices. The installation of the Matho waste manage-



The Mehtas at the helm

ment systems is a step in that direction."

The slitting trims or matrix waste covered in adhesive attract dust and bacteria, which causes health hazards. In addition, this waste also occupies substantial space that can be

used for production purposes. Thus, SMI will use the German manufacturer Matho's expertise in waste management systems to extract this label waste from the slitting machine or die-cutting station through suction.

The extracted waste will then be transferred to the central unit for shredding the self-adhesive remains, while ensuring that it doesn't stick to the sides and clog the pipes.

Elephant wins A' Design Award for Himalaya Wellness

Pune-based Elephant Design has bagged the silver honour at the A' Design Award (Italy) for the packaging design of Himalaya Sheet Masks. The product has been launched in the Middle East, Southeast Asia and Europe among other markets.

Ashwini Deshpande, co-founder and director, Elephant Design, said, "It is wonderful to be recognised on a global platform yet again. Our design collaboration with Himalaya was great teamwork between our Singapore and India teams. I am looking forward to this design



The packaging design for the Himalaya Sheet Masks

being a winner with the audiences across the world as well."

According to Elephant, the award-winning package design facilitates Himalaya to carry forward its brand legacy of natural wellness in a contemporary manner. The Pune-based design agency crafted a visual language and system based on Zen time, which focused on creating an entire skincare

routine that evokes fulfilment, tranquillity, and a calming experience.

The Himalaya Asia Pacific team from Singapore said, "Sheet masks are a new and emerging category. For Himalaya's range of masks, we wanted a design which would appeal to different age groups and attract the Gen Z. This design has a perfect balance of herbs, fruits and product benefits."

IN BRIEF



Tetra Pak has tied up with solid waste management NGO Finish Society to increase the collection of used carton packages in Udaipur. As part of the collaborative effort, Finish Society will be working closely with the Municipal Corporation of Udaipur to recover used packs of juice/milk from the corporation's sorting centres, which will then be channelised to the nearest recycler. With this new partnership, Rajasthan has become the 22nd state covered by Tetra Pak's extensive collection network. The network covers 38 cities and 14 Indian Army contingents, supported by over 26 collection and awareness partners, across 22 states and union territories.

WasteAid, a UK-based international NGO, is launching the Zero Waste Cities Challenge to find



entrepreneurs with innovative business ideas that help reduce or recycle waste and create green employment opportunities. The competition is part of WasteAid's Circular Economy Network funded by Huhtamaki, which is running events across three cities: Johannesburg in South Africa, Ho Chi Minh in Vietnam, and Guwahati in India. Two winners in each city will be awarded 10,000-pound and business mentoring support to help make their idea a reality.

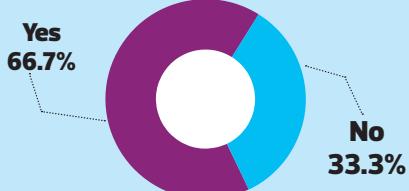


Kandui Industries has launched a thermochromic masterbatch (a kind of additive masterbatch which enables reversible colour changing properties to fibre or moulded items.) These masterbatches have an activation temperature, which helps toggle the end product's colour change. This property is utilised in the secret coding of fabrics and other moulding items, adding a security feature to the original branding. It is also extensively used in children's toys wherein the toy will change colour when refrigerated.

COMMUNITY PAGE

WhatPackaging? Poll

A handheld device powered by speech processing and a QA chatbot that helps technicians to fix problems on the shop floor is a must need in Indian factories.



twitter

 Ashutosh Manohar, managing director – South Asia Tetra Pak India urges the consumers to segregate their Tetra Pak cartons. He says, "The Tetra Pak cartons are already recyclable. So, please help us in our recycling activities by just segregating the cartons."



 Ajit Singh, chairman, ACG Worldwide, says, "Packaging has to be smart and eco-friendly. Empty capsules are the most intelligent containers in the packaging industry. They ensure the right quantity, provide accuracy, moisture-resistance and are edible."



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When it comes to recycling, we need much-more pertinacity

Photo credit: Aultrin Vijay

“
We do need a strong legislation to eliminate single-use plastics as sustainability has taken a backseat during this pandemic. The alternatives are already available and thus, the growth prospects for paper-based packaging are huge.

Saket Kanoria,
MD, TCPL Packaging

Packaging in Numbers

**USD
263
bn**

Value of the Indian processed food market in 2020

**USD
470
bn**

Value of the Indian processed food market in 2025

Source: KPMG

For the
4th consecutive year



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