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July/August 2020 - volume 32 issue 4



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The Changing Face of Global Eating Patterns



By **Dan Orehov**,
Managing Editor



WHY ETHNIC FOODS WILL CONTINUE TO GROW

Consumers continue to seek out more new and exciting food. As a result, operators and suppliers offering mainstream ethnic flavors, such as Mexican and Chinese, will turn to regional variants to offer something different. According to research company Technomic, 36% of respondents in a study say they like to explore regional varieties of mainstream ethnic cuisines, so they can try new foods and flavors. While some consumers are already familiar with Sichuan, Cantonese and Western Mexican foods, there are still many more regional varieties to explore. Consumers indicate a greater interest in trying Yucatan and Taiwanese or Fujian fare. Thus, offering regional and traditional ethnic foods will help emphasize the authenticity factor, as it showcases operators' expertise with the cuisine. However, producers and outlets must set expectations before consumers order their food, as consumers will already have preconceived notions of what Mexican and Chinese cuisine should be like. As a result, those serving regional food from these regions would benefit from highlighting how these flavors differ from mainstream representations. Moreover, the experiential element will play a larger role in the ethnic occasion. Technomic says that younger consumers are especially likely to consider the overall dining experience when determining if an ethnic dining occasion is authentic. And a quarter of consumers choose ethnic foods because they want to experience a different culture. In fact, some of the fastest-growing Asian restaurants feature a hands-on experience that allows customers to experience cooking their own foods. In conclusion, the food and its presentation, decor, ambiance and even music, all play roles in helping customers decide whether or not a restaurant is authentic. Operators can take the experience to the next level and differentiate by helping customers immerse themselves in the cuisine via being more hands on with the food. Not least, providing information about the country or culture (e.g., information about the music being played or history of a dish), can also add to this experience.



Offering regional and traditional ethnic foods will help emphasize the authenticity factor, as it showcases operators' expertise with the cuisine.

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Italy

CIBUS DIGITAL PLATFORM

Fiere di Parma and the portal GDO News have signed a partnership agreement to strengthen the digital platform MyBusinessCibus. The GDO News manuals on the different product categories of Made in Italy food will be translated into English and sent to all the top international buyers. In addition, buyers will be able to access exclusive material on the trade's page as well as additional information content in the newsletter that Cibus periodically sends to the international food & beverage community. Foreign buyers will thus have at their disposal in-depth manuals on every single product category to help them plan their category activities both before the event in www.mybusinesscibus.it and during the exhibition in Parma, from 4-7 May, 2021.

US

SIMPLOT INTRODUCES CRUNCHIER FRIES

Simplot has begun shipping a new line of fries: fries that stay crisp 40+ minutes after cooking. Moreover, they can be reheated to perfection at home in the microwave by their growing base of off-premise customers. The new brand is called Simplot Conquest® Delivery+™. "These new fries outperform anything on the market in terms of holding capability, and it couldn't come at a better time for our operators," said Mark McKellar, president of Simplot Foods. "Fries are the most popular and profitable food item on most menus. With the explosion in off-premise dining, operators simply cannot afford soggy fries anymore."

The Netherlands

LE DUC FOOD LAUNCHES NEW DIGITAL MAGAZINE

As a follow-up on launching a new website last month, family-owned Le Duc aims to inspire customers in a digital way. In cooperation with the well-known Dutch founder of the "meatless week" movement Isabel Boerdam, Le Duc created an inspiring and playful digital magazine: <https://le-duc-autumn-magazine.maglr.com>. This quarterly magazine will give an update of the latest food trends and offers a quick glance into the local farm-to-fork process of breaded mushrooms. Above all, it will give several new serving suggestions for every type of channel or guests, and for different moments of the day. "As more and more people are consciously eating less meat, it is important to offer your guests vegetarian food in an attractive way. The way you present your vegetarian food is decisive in the success of your sales," Dick den Hertog, founder of Le Duc said. "Our goal is to inspire our customers to add and highlight meatless snacks on the menu more often, both in



the consumer and in the food service market. On our website we are already showing menu suggestions for different types of foodservice channels and in-home consumption. With our new digital inspiration magazine Snackables, we have found a way to send inspiration to our clients regularly." When interested, one can also subscribe to Le Duc's website, and will then receive Snackables automatically, four times a year. "It goes without saying that vegetarian snacks should be tasty," Dick den Hertog added. "Growing up between the onion- and potato fields, we also respect nature and we realize that we can only make a tasty product with the best ingredients from nature." The Stellendam based company was the first to manufacture American style Onion Rings in Europe in 1998 and added vegetable, cheese, and potato appetizers to its assortment. The company supplies to hospitality and catering customers, wholesalers, quick-service chains, premium brands (B2B), and retailers.

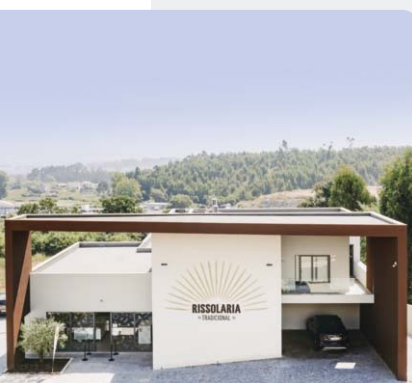
Portugal

RISSOLARIA TRADICIONAL OPENS NEW PRODUCTION UNIT

Rissolaria Tradicional, a Portuguese manufacturer specialized in the production of traditional frozen snacks,

opened a new production unit in Vila Nova de Gaia in Porto, Portugal. With an area of approximately 3000sqm, it combines in the same unit the best of both worlds, with a handcrafted and

mechanized unit, to give a direct response to different customers in the areas of foodservice, retail and private brands. This unit will also be equipped with a new product development department and laboratory responsible for creating the new product lines that will complete the company's portfolio, following the highest standards of quality, tradition and rigor. For more information about Tradicional Rissolaria, visit the company's website www.rissolariatradicional.com or contact them directly at geral@rissolariatradicional.com.



Global

NESTLÉ'S SALES SLOWED IN Q2

After a stronger-than-expected start to the year, Nestlé's organic growth moderated in the second quarter to 1.3%, reflecting the severe impact of movement restrictions on out-of-home businesses and some consumer destocking. In the first half, Nestlé saw sustained momentum in the Americas and positive sales development in EMENA. Zone AOA saw a sales decrease, with growth turning positive in the second quarter. Organic growth was 4.1% in developed markets, based entirely on RIG. Growth in emerging markets was 1.1%.



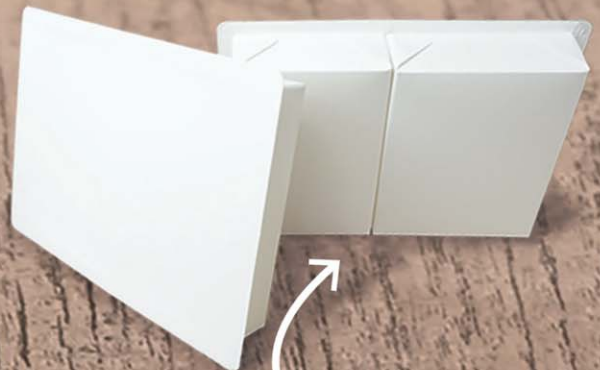
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Germany

CHANGE IN MANAGEMENT AT ERLENBACHER BACKWAREN



Bernhard Neumeister, chairman of the Management Board of erlenbacher backwaren gmbh, has retired on 31 July. He spent 22 years of his almost 50 years of professional life working for the company. During this time, erlenbacher has developed immensely. From a pure co-packer, the company has become the leading supplier of frozen baked goods in the European out-of-home market.

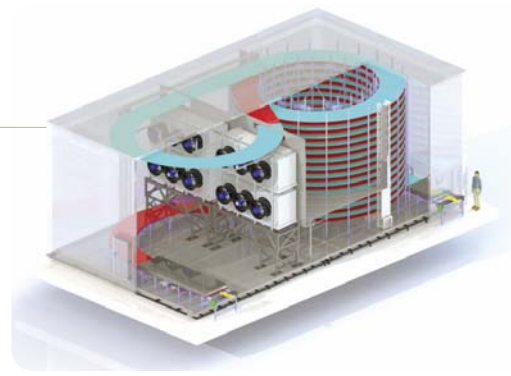
"A real team effort, for which I am very grateful to my colleagues, erlenbacher was not just any job for me. It was a vocation, a passion," emphasizes Bernhard Neumeister. The successor of Bernhard Neumeister is Matthias Casanova, who has already been working in leading positions in the frozen food sector for many years. He brings extensive international know-how to the company and will take over the position of CEO and thus control the strategic development of the company in the future.

Italy

TECNOPOOL BETS ON CUSTOMIZATION

For Tecnopool, which has created and is building a large group specialized in the entire food processing chain, growth is not only an entrepreneurial goal but also a valuable opportunity to integrate resources and new innovative drives. Customization, for example, has fueled Tecnopool's evolutions in various directions.

"Today, customizing a plant doesn't necessarily mean higher costs. As we are increasingly operating at a total processing level, combining the advantages of customization with those of standardization has been very effective. At first glance both approaches, standard and custom, might seem opposite, but they are absolutely compatible: in fact, customization does not always mean reinventing everything from scratch. In the case of cooling, for example, we have analyzed our projects and devised a standard system for combining spirals and evaporators, with a modular approach that offers various advantages," Michele Capuzzo, an engineer specialized in refrigeration technology said. On the one hand, customers can have access to price-competitive, high quality equipment, thanks to the simpler design



and rationalization of production. On the other hand, customers obtain the most suitable system for their production needs, which translates into better performance and lower line operation costs. For the technical department, this exciting challenge does not only concern individual projects: in fact, it means using all the skills available to continuously improve products and processes in all areas, especially in a group that is increasingly moving towards total processing. "If we consider refrigeration technology, both for cooling and freezing, we have made a competitive leap in quality, integrating the evaporator into the system design instead of resorting to standard machines from external suppliers or designing a special machine every time. Furthermore, reducing energy consumption with optimized systems makes companies more sustainable, not just economically, which rightly pleases the customer, but also from an environmental point of view. An aspect we care a lot about is that it benefits the community," Michele Capuzzo added.

Germany



FROSTKRONE SHOWCASES NEW MOZZARELLA STICKS

The Frostkrone Food Group has just brought out its bestseller product, the Mozzarella Stick,

in a brand-new look, dressing it in an even crunchier coating and an improved recipe. This really special crispy coating means that the Mozzarella Sticks now come out of the oven in your kitchen with an even higher "crisp" factor than before. Just one bite into their soft, melt-in-the-mouth center and the magic begins, with the delicious delight of mozzarella creating a perfect balance between cheese and crispiness.

Mozzarella Sticks from Frostkrone have been a popular classic for years, permanently flavor of the month in supermarket freezers, always sought after by all kinds of customers. And the reason is plain to see: these cheesy sticks can be prepared quickly and easily in the oven and they are always blissfully tasty. Preparation is completed in virtually the twinkling of an eye. And all the more surprisingly, the results then turn out better. Because the coating now gets so crunchingly crispy in the oven while the lusciously melting mozzarella in the stick's center begins to unfold its aroma. The tasty red pepper dip adds the final note of perfection to the snack experience.

Germany

AGRARFROST RECEIVES AWARD

Potato and frozen food specialist Agrarfrost was awarded the Deutschlandtest seal of "Germany's most innovative company" in the frozen food category by Focus and Focus Money. The representative survey of Germany's most innovative companies is the largest survey of the perceived innovative strength in Germany. The assessment is based on statements regarding the five subject areas of innovation, investment, research & development, new products, and technology. For Agrarfrost, innovations are of great importance – most recently, the Lower Saxony company brought the Minions 3D potato figures on the market.

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FOCUSING ON QUALITY & AUTHENTICITY

With the growing immigration rates, due to employment opportunities, higher education, and tourism, the demand for ethnic food has been increasing.

The ethnic food manufacturers are focusing on the convenience factor, quality of food, cuisine variants, and packaging formats of the products. Therefore, according to Mordor Intelligence, with the increasing consumption of nutritious food and rising capital investment in producing healthy, ethnic-based food, the market studied is expected to gain traction over the forecast period. The market studied continues to diversify, as consumers

continue to experiment with new global cuisines. Some of the niche ethnic food categories include the African and Indonesian cuisines that have been growing over the recent past. Ethnic Foods are those which are traditionally prepared without any adulterants, colors or flavors. The ethnic food gives the customer a satisfaction of eating their own country specific food, while living in other country. These cuisines are demanded and preferred by majority of the global

population, thus increasing their market base. In the developing countries like India, the cross-culture cuisines like the Chinese and Italian cuisines are highly preferred by the all the segments of population, thus increasing their market shares. Restaurant chains who are serving the ethnic foods are increasingly diversifying their foodservice facility by preparing different types of ethnic cuisines, due to the development and innovation of taste among people.



GREEK SPECIALTIES

Evoiki Zimi S.A. has been in the export business for more than 20 years and expands every year its geographical distribution. One of its major products is Kataifi dough, made with fine flour and the special and unique recipe



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The flavor lifecycle is continuing to accelerate, adding pressure for operators and suppliers to seek out new and unique flavors from ethnic cuisines.

the reviews shared. Exploring the new culinary experience for both global and authentic regional cuisines are on the rise among consumers in Asia-Pacific. As such, the researchers say that the global ethnic foods market is fragmented, with various small and medium-sized companies. The development of regional markets and local players in different parts of the world due to globalization of food is the major factor for the fragmented nature of the market. North America and Asia-Pacific are the two regions showing maximum competitor activities.

MARKET TRENDS

Consumers' interests in Asian cuisines, such as Thai, Korean, Vietnamese, and Japanese, are increasing, globally, and they are seeking bold and spicy flavors. As per the data published in the Pew Research Center report in 2017, there were 20 million Asian-Americans in the United States, an increase of 72%, since 2000, making the Asian population the fastest-growing population group in the country. With an increasing number of Asian-American grocery store chains, Americans are consuming more Asian food than ever. In 2017, iFresh, a Chinese supermarket chain in the United States, introduced its tenth national location and

first Texas location in Houston, thus, meeting the demand for ethnic food products among the fast-growing Asian population and the established Vietnamese community. The rising young population, along with a fast-paced trend of eating out and experimenting various interstate and inter-country food trend on a frequent basis has provided a plethora of growth opportunities for ethnic food services operation in Asia-Pacific region. The increasing use of social media among the Indians and other developing countries means they are sharing their culinary experiences – urging consumers to try new food options and outlets, based on

WHAT'S HOT ON MENUS IN 2020

Plant-based proteins are the hot ticket this year, along with the need for eco-friendly packaging as the delivery boom continues. According to the US National Restaurants Association (NRA), plant-based protein is top of mind for chefs in the US in 2020. More than 600 American Culinary Federation chefs completed the survey, ranking nearly 133 individual items in 12 different categories to identify emerging and ongoing trends for the year ahead. Results indicate that Americans are still hungry for healthy food, but they're also interested in more options, new alternatives, and going beyond simply healthy into sustainable options that are good for everyone and the environment. Plant-based protein took high honors in both new menu items and protein categories. In recent years, a large number of quick service restaurants adopted meat alternatives, adding them to menus and to the mainstream conscience. Plant-based proteins and meat alternatives have been on chefs' radars for some time, but this



44%
of consumers say they always prefer completely authentic fare.



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year they'll take off in response to increased consumer demand. Some started offering the option in test markets, quickly expanding the offering to all or nearly all locations nationwide. It's not unusual to find plant-based protein or meat alternatives on fine-dining, university and fast-casual menus, as well. These menu debuts also were supported by creative advertising and marketing campaigns, heightening awareness of the option and creating brand-new menu items for people to get excited about. Of course, clever marketing alone doesn't sustain a trend, but survey data supports consumers' excitement around meatless menu options. Mushrooms, vegetable noodles and rice, and new chili peppers all ranked in the top 15 food items. According to research from the National Restaurant Association's Restaurant Industry 2030 report, experts expect plant-based protein food products will continue to grow in popularity during the next decade.

ENGAGING AND ECO-FRIENDLY

Survey options that included the phrase "eco-friendly" scored highly, sidling up to other top-of-mind trends such as delivery. Eco-friendly packaging received the highest ranking of any of the 133 survey options, and for good reason. Off-premises dining - takeout, delivery, drive-



Photo: Kanaki

thru, curbside, and even food trucks - makes up 60% of all restaurant traffic. One reason for this could be the increased amount of time adults spend traveling to and from work. 42% of employed adults say they are spending more time commuting and working than they used to. Among millennials, this rises to 52%. According to Hudson Riehle, senior vice president of research for the National Restaurant Association, a large portion of industry growth over the next decade will come from the off-premises market. With increased restaurant meal consumption happening outside of the restaurant comes a need for packaging materials that hold food quality. It's worth

mentioning that, interest in eco-friendly packaging may not be driven entirely by consumer demand; businesses are increasingly being guided by local legislation and regulations governing what materials can and can't be used in certain markets. Plus, sustainability initiatives feel good, for both businesses and for consumers. Chefs again rated zero-waste dishes highly, which repurpose scraps, trim, and other food items that would normally go into the trash.

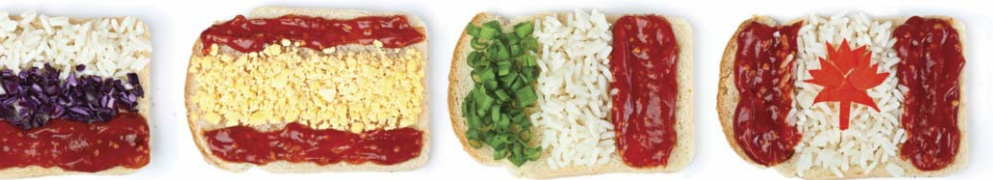
HEALTHY IS STILL ON TOP

The bowl trend has been around for a few years, but it's still hot, hot, hot. Chefs ranked healthy bowls tops in the new menu items category. Healthy kids' meals

Consumers are now easily able to look up information about what the authentic version of a dish should look and taste like.

11.8% is the estimated CAGR for ethnic foods by 2025.





continue to be top-of-mind, too. "The increased emphasis on children's cuisine is reflective of the underlying consumer trend in which parents are looking for children's meal solutions that align with their current food and beverage preferences," the Association's Riehle says. While healthful kids' meals are catching on, the popularity of healthful fare is still dependent on geographical location and price point. Then, of course, there's the challenge that every parent faces: actually getting their kids to eat something new and different. According to research company Technomic, most mainstream ethnic flavors on menus come from European and East Asian cuisines. As consumers' curiosity in new and unique flavors grow, they will seek out less mainstream ethnic cuisines. For example, Middle Eastern, Eastern European and Southeast Asian cuisines show opportunity for growth. Balancing authenticity, yet still offering flavors that broadly appeal will be a challenge. Operators and suppliers looking to introduce dishes from these cuisines could consider first introducing dishes with familiar ingredients or formats. For example, Chinese jianbing (a crepe-like breakfast wrap) has been trending on menus and can reach broad appeal due to its similarity with more mainstream breakfast wraps.

Technomic also says that A third of consumers (32%) would be willing to pay extra for authentic ethnic fare. However, authenticity means something different to each consumer. Operators can signal it via the food's flavor, staff trained in the cuisine preparation and presentation. Operators and suppliers must position their dishes in a way to incorporate authenticity, while still remaining true to their offerings. For example, concepts that feature ethnic sauces on traditional American dishes can emphasize the authenticity of the ethnic ingredients (e.g., noting where the ingredients were grown). While 44% of consumers say they always prefer completely authentic fare, 23% say their preference changes based on the cuisine. Those providing menus with less mainstream ethnic flavors may have more leeway to offer more Americanized versions. Moreover, setting expectations before orders are placed will be crucial to driving repeat visits. Operators should clarify the flavor profile and ingredients of a certain dish, so customers aren't surprised if the dish doesn't fit their personal definition of authentic.

TO CONCLUDE

Researchers from Technomic say that consumer demand and interest in

Menu clarity and helping consumers feel comfortable trying new dishes (e.g., pictures and explanations around the flavor profile of new ethnic ingredients) will both be key to driving trial.

ethnic flavors continue to drive menu innovation. The flavor lifecycle is continuing to accelerate, adding pressure for operators and suppliers to seek out new and unique flavors from ethnic cuisines. Additionally, consumers have more access to knowledge about ethnic cuisines than ever before, as a result of travel, media and technology. This is driving curiosity in new and less mainstream ethnic cuisines. Additionally, greater access to information is also playing a role in heightened demand for authenticity. Consumers are now easily able to look up information about what the authentic version of a dish should look and taste like. While authenticity continues to be a buzzword across the whole foodservice industry, it's especially important for differentiating ethnic dishes and concepts. Still, operators and suppliers must ensure that their food and ingredients come across as accessible to consumers. Menu clarity and helping consumers feel comfortable trying new dishes (e.g., pictures and explanations around the flavor profile of new ethnic ingredients) will both be key to driving trial. ■

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Image: Avocado ice cream is one of the many possible uses for avocado pulp



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A SENSORY EXPERIENCE

Coatings used in the food industry for meat and fish now carry a wider appeal to the senses.

The global market for food coatings (of which batters and breadings represent a significant sector) was worth an estimated USD2.9bn in 2019, having grown by an annual average of around 6% in recent years. Much of this increase has been driven by the rising consumption of processed meat and seafood products, with future growth likely to come from emerging economies in regions such as the Asia-Pacific.

TECHNOLOGIES

Coatings such as batters and breadings are typically used to improve the sensory appeal of foods by enhancing taste, appearance and texture. These types of coatings also help to retain the moisture of foods during the deep-frying process. Additionally, both batters and breadings

can protect meat and seafood during the freezing and frying processes, assisting in holding in moisture which results in a juicier finished product. Sometimes described as 'wet coatings', batters are typically a mixture of flour and liquids (e.g. milk or eggs). Wheat flour has been the standard ingredient for some time, but the growing popularity of gluten-free diets has led to manufacturers experimenting with alternatives such as potato, rice and soya flours. Other ingredients are often added to batters as leavening agents to aerate the finished product and therefore improve fluffiness, with baking powder and beer two notable examples. Breadings, in contrast, are drier coatings, consisting of particles which stick to the surface of the protein. Typical breadings range from simple blends of wheat flour, corn starch and seasonings to more complex varieties based on breadcrumbs incorporating additional ingredients (e.g. nuts and seeds) for additional flavor and texture. Increased consumer demand for healthier options has led to the development of coatings promoted on a health platform. One of the most common

examples has been the emergence of batters and breadings suitable for gluten-free coated foods, whereby manufacturers have opted for flours made from vegetables and pulses (e.g. lentils, peas and chickpeas) to replace wheat-based varieties. Meanwhile, the coated foods market appears to have recognized the potential offered by ancient grains, which are increasingly appreciated by consumers for their numerous health benefits. In the Dutch market, a recent addition to the Iglo range of frozen seafood from Nomad Foods was breaded fish with an ancient grains coating, launched in Multigrain and Spelled & Sourdough varieties. In a similar vein, the same company has tapped into the health benefits associated with seeds, since it supplies Chicken Strips with Chopped Pumpkin Seeds in the Austrian market. Recent activity within the market also suggests that panko breadings are becoming more commonplace. Panko breading (a lighter form of coating typically used in many forms of Japanese cuisine) is recognized as offering a lighter, crispier and flakier coating compared with more traditional breadcrumbs, since it



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At the retail level, breaded and battered foods suitable for vegans and/or vegetarians are also apparent.

absorbs less oil and grease. Thus far, panko breading has been most apparent with seafood such as tilapia and shrimps. Elsewhere, other efforts to improve the texture, taste and nutritional profile for batters and breadings used in the coated foods industry remain ongoing. One recent innovation from Goldensheaf (which forms part of Kerry Foodservice and is the UK's leading brand of batter) is a new batter which stays crisper for longer and is therefore ideally suited for delivery channels. Goldensheaf's Smart Batter absorbs less oil and offers improved taste, as well as being low in calories. Another leading supplier of coatings is Newly Wed Foods, whose range includes breadcrumbs and tempura batters. A recent addition to its range was Biscuit Crumb, which delivers a tender bite reminiscent of Southern-style homemade biscuits, bakery goods with a browned crust and a soft, flaky interior. European bakery trends have also influenced new product activity, since Iglo's range in Austria includes Oven-Baked Cod with a Focaccia Herb Coat. The market has also witnessed greater interest in coatings offering ethnic-inspired flavors. Examples have included African

(e.g. harissa), Asian (e.g. yuzu) and Middle Eastern (e.g. Aleppo pepper). In the UK market, the Birds Eye range from Nomad Foods includes Mexican Nacho Crumb Chicken Grills, which are coated in breadcrumbs blended with spices and tortilla chip pieces.

IMPACT OF COVID-19 PANDEMIC

The lockdown enforced across much of the world resulting from the COVID-19 pandemic has undoubtedly had an adverse effect upon demand for coated foods via foodservice locations. At the retail level, however, the situation appears to be far more promising. In the UK, for example, data from the British Frozen Food Federation (BFFF) indicates that sales of frozen foods rose by over 28% in both value and volume terms in the four weeks ending 22nd March 2020, compared with the same period 12 months earlier. Separate data from Kantar suggests that the number of in-home meals consumed in the UK during the lockdown period increased by more than 500 million per week. Scampi appears to have been one of the main beneficiaries of this trend. During

March 2020, the UK-based Whitby Seafoods reported a surge in demand for frozen scampi, supplying an additional 1 million portions to major supermarket chains such as Tesco, Sainsbury, Asda and Morrisons. Across the European region, meanwhile, market leader Nomad Foods reported heightened demand for many of its frozen foods in the retail sector during the early stages of the COVID-19 crisis. In what may serve as a pointer towards the future direction of the market, the same company reported that the share of its revenue taken by online channels increased from 5% to 7% during this period. Many foodservice operators, however, appear to be struggling, a situation unlikely to improve for much of the industry during the short to medium term. Some companies within the industry have been forced to adopt new business practices, such as experimenting with online ordering (e.g. via food delivery platforms like Deliveroo and UberEats) or increasing the frequency of cashless purchasing. Within the UK, the trade body the National Federation of Fish Friers (NFFF) – which protects the interests of around 8,500 UK fish and

chip shops – considers the future to be not entirely negative. One reason is that – unlike pizzas or takeaways from Indian or Chinese restaurants – meals such as fish and chips are amongst the most difficult to replicate at home.

In addition, the Covid-19 has also resulted in a fall in prices for many types of the fish which have traditionally been used in coated foods, mainly due to the widespread closure of the foodservice industry. For the UK fishing industry, this decrease in prices has been most evident for species such as hake and monkfish, the bulk of which tends to be exported to European and Asian markets. This has led industry sources to suggest fish and chip operators try serving battered hake alongside more traditional favorites such as cod and haddock. Research carried out in 2018 by the trade body Seafish found that 8% of consumers would potentially be interested in buying hake, which has the added advantage of being an extremely sustainable species.

MARKET TRENDS

Consumer health concerns are expected to remain a significant driver within the

Consumer health concerns are expected to remain a significant driver within the coated foods market over the coming years.

coated foods market over the coming years. The rising demand for products suitable for battered and breaded foods suitable for people following gluten-free diets has already been mentioned, while the expected future development of the market for coated vegan foods will be discussed in more detail shortly. Another recent trend has been for manufacturers of coated fish and seafood to emphasize the omega-3 content of their products. In addition, manufacturers continue to develop coated foods which address more general health concerns. During the autumn of 2019, for example, US manufacturer Tyson Foods launched new Air Fried chicken products in its home market, in varieties such as strips and nuggets. In these instances, the chicken has been air-fried, giving the same taste as traditional fried chicken but with 75%

less fat. In the UK market, Youngs Seafood recently extended its Chip Shop range with new Lighter Large Cod Fillets, which contain 45% less saturated fat than conventional alternatives.

Smaller-sized coated foods also feature within the ranges of many leading suppliers. Not only are these suitable for alternative meal occasions such as snacking, but they also contain less calories. The Birds Eye range in the UK, for example, includes mini fish cakes and chicken fillets, while the market leading Donegal Catch brand in Ireland features mini cod and whiting fillets. In the foodservice industry, Seafish's 2018 research found that 72% of UK consumers would prefer cooking method for fish and chips which lowers the amount of saturated fat, while 45% expressed an interest in smaller portions to chips to reduce calorie intake. Furthermore, 62% would like to see fish and chip shops provide information regarding nutritional content. Eating occasions for coated foods also appear to be widening. Although consumption of products such as chicken nuggets, chicken strips and battered and

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Efforts to improve the texture, taste and nutritional profile for batters and breadings used in the coated foods industry remain ongoing.

association with chicken. This trend is also evident in North America. As of July 2020, A&W Canada (a chain of burger restaurants) is seeking to launch vegan chicken nuggets within its 950 Canadian locations. These had initially been trialed in selected provinces, of which British Columbia was one example. The new nuggets are supplied by Maple Leaf Foods under its Lightlife brand. At the retail level, breaded and battered foods suitable for vegans and/or vegetarians are also apparent. The Quorn brand mentioned earlier (which, since 2015 has been part of the Filipino-based Mondo Nissin Corporation) includes a variety of breaded and battered fish alternatives, such as fishless fillets and fingers. The range also features various meatless breaded escalopes (available in varieties such as Emmental, Mozzarella & Pesto and Cheese & Broccoli), vegan alternatives to chicken nuggets and strips, Southern Fried Poppers and Picnic Eggs, which are similar in appearance to breaded Scotch Eggs. ■



breaded fish has traditionally been skewed towards the evening meal, recent evidence suggests that frozen foods are finding increasing favor during the middle of the day. According to Nomad Foods, much of the recent growth in demand for frozen foods in markets such as the UK has come from lunchtime occasions. Furthermore, Seafish's 2018 research found that lunchtimes now account for almost 20% of all fish and chip meals sold via independent outlets.

On a related note, manufacturers are also launching products targeted at specific demographics. While certain types of coated foods (e.g. fish fingers and chicken nuggets) have always had a strong following amongst children, baby and toddler foods manufacturer Ellas Kitchen now supplies frozen coated foods aimed at 'big kids.' The range – all of which is promoted as gluten-free – includes Cod Fishies, Starry Chicken Nuggets and Cheesy Croquettes.

VEGAN FOODS – A NEW OPPORTUNITY?

It seems likely that the continued growth in demand for vegan foods and meals will present opportunities for manufacturers of coatings and coated foods over the next few years. Between

2014 and 2019, for example, the number of vegans in Great Britain quadrupled – there are now an estimated 600,000 vegans in the country, according to the Vegan Society, accounting for just under 1.2% of the overall population. By 2025, it is forecast that approximately one in four British consumers will classify themselves as either vegetarian or vegan. Some of the world's leading foodservice brands have expressed an interest in supplying coated vegan foods to take advantage of this trend. Early in 2020, KFC launched the Vegan Burger at its 900 UK-based locations. This is described as an alternative to its popular chicken burger – it features Quorn instead of chicken breast fillet, coated with the company's unique blend of 11 herbs and spices. Prior to the COVID-19 lockdown which closed much of the UK foodservice industry, KFC stated that around 1 million Vegan Burgers had been sold. However, a recent survey carried out by the magazine *Vegan Food & Living* found that 57% of respondents would never eat at KFC even if it did provide more vegan options, due to its strong



QUALITY, TRADITION, INNOVATION AND RIGOR!



In this interview with Rosa Maria Carvalho - Founder and CEO of Rissolaria, we discuss, among others, the history of the company, the spirit of the Portuguese cuisine and its role in the company's product development.

What is the history of your company?

The History of RISSOLARIA is a success story, but above all a story of work, and passion for Mediterranean/Portuguese cuisine. We were born 28 years ago in a garage, what nowadays can be called a start up! RISSOLARIA arose due to the need for extra income as professional opportunities were limited. 18 years ago, my husband was fired from his job and with the money we received from the Portuguese Social Security project, we created our first factory. This year we open a 3000 m2 unit and have a second one in perspective. We are a reference in the production of frozen snacks in our country. It's that history, originality and quality of our products and the Portuguese tradition that we want to present to the whole world!

What role have the spirit and culture of Portuguese cuisine played in the development of your products?

It's total! We love and fully identify with Portuguese cuisine. Most of the current products in our portfolio are typically Portuguese (rissoles, pies, croquettes, bôlas). Our cuisine remains very "natural", based on fresh products, herbs, spices, without dyes or preservatives. The expression "Mum's Food" is part of our DNA. Good cooking doesn't have to be complicated! It needs to have flavor and take people on a journey of flavors.

Please discuss the importance of quality and tradition in your products.

I am a Chef who loves the traditional without closing the doors to innovation. I love creating new things, talking about different cuisines, food options, trends.

But I am a fan of traditional food, healthy eating, the ancient Portuguese flavors, and high-quality ingredients. I am aware on the importance of industrialization/automation at this moment in our industry, but I am also a fan of manual labor. I believe in the love and passion that my team and I put in every masterpiece that we create. It is a simple, a democratic art, but it awakens the senses of those who experience it.

What are some of your leading and best-selling products in your portfolio and what are your target segments and markets?

Patties (Rissois), samosas, pies are undoubtedly the products we sell the most. The most sold references are meat, shrimp, cod, black pork with "Serra" Cheese and Cockle with cuttlefish ink dough. We are also reference by our green tea vegetable samosas, orange paprika shrimp samosas, the famous cod fritters, pies, Pasteis de Nata and "Queijadas". Due to the quality that we have always privileged, we are strongly connected with the Horeca channel, but increasing our position with conventional retail that seeks in this segment a product of quality and originality.

How do you see the finger-food segment evolve in the future and what role do you believe your company will play in this segment?

Snacks and savory like most frozen foods products have great potential in the future. Our product above all promotes comfort and convenience, but we are working and developing new recipes and portfolio to make it an even more balanced product for the consumer. For this we created a new kitchen/laboratory

that together with our nutrition team will allow us to develop new products for different markets and trends. It is our mission to promote Portuguese industry and Portuguese products. Portugal is much more than a quality tourist destination. We are also quality producers and industry, that have a close eye in the current needs of the international consumer.

How do you ensure the high-quality of your products, that have made the company famous?

Above all, being careful in the choice of the raw materials and always prioritizing rigor in the manufacturing process! We invest in close relationships with our suppliers who love their profession as much as we do. We always look for differentiation, quality and non-easy profit. Our market has many players that promote low cost instead of quality. We want to reverse this position and attract the largest number of partners for better positioning, as we believe that this way, we will all win, specially the final consumer!

Please discuss the certifications that the company has received.

Rissolaria Tradicional, through Certid, was one of the first Portuguese companies of its segment to join HACCP. Because we care about the environment, we adhere to the Ecoleo program and we are changing all of our packaging to more environmentally friendly materials. With the opening of the new factory, we are also with the IFS certification process on the way, although for us, the rigor in terms of hygiene and food safety standards is more than a system of rules, an obligation and a duty to ourselves, as well as to all our customers. ■



RISING HEALTH AWARENESS DRIVES THE MARKET FORWARD

The food & beverage industry has witnessed a significant shift in recent years. As consumers are becoming more aware of their diets and their impact on their health and wellness, processed foods infused with artificial ingredients are losing their appeal among consumers. Due to these factors, consumers are shifting toward vegan food.

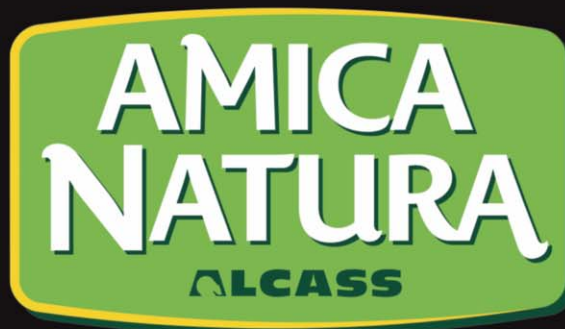
The plant-based food sector is witnessing significant growth across the globe. Along with the rise in health consciousness, consumers are also concerned about the climatic changes, due to which they are adopting plant-based food products. The rise in instances of lactose intolerant population is also one of the key factors, which is driving the growth of the dairy alternatives market, as dairy products are difficult to digest for such consumers.

The rise in acceptance of vegan food has led to the development of a whole new food ecosystem. This is mainly driven by

companies that are introducing new and innovative products, which are healthier and sustainable. The diverse plant-based product portfolio offered by these companies has led to a shift in the food habits of consumers and are offering plant-based food. Meat substitutes and dairy alternatives are not just catering to one specific segment but are witnessing high demand worldwide.

Considering the increase in health awareness among consumers, various food products, such as meat patties and sausages, are being replaced by plant-infused meat products. The production of meat products is constantly witnessing

a rise with the increase in the global population. This has led to acute damage to the environment and global warming. In order to mitigate the global-warming issues and cater to the rising demand for meat products, many countries around the world are focusing on encouraging the adoption of plant-based meat products. According to the Good Food Institute, developing countries, such as China, India, and Brazil, are witnessing a rise in meat production and consumption, which offers a high growth potential opportunity for meat alternative product manufacturers. The increase in instances of lactose allergies and a rise in



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health awareness are the key factors driving the demand for dairy alternatives. Globally, the health benefits of dairy alternatives have led to large-scale adoption of numerous applications. Consumers are shifting from synthetic dairy products to plant-based products, which is further contributing to the growth of the market. Dairy alternatives are manufactured using a wide variety of plant-based sources, including soy, wheat, pea, almond, and hemp. The global dairy alternatives market is estimated at USD22.6bn in 2020 and is projected to reach USD36.8bn by 2025, recording a CAGR of 10.3% during the forecast period.

CONVERGENCE OF MEGATRENDS

Multiple factors have led to an increase in the vegan population, including health, climate, and animal welfare, which is projected to drive the demand for new innovative vegan food products. The rise in the adoption of plant-based products has encouraged food and beverage manufacturers to diversify and update their product portfolios. The vegan food market has witnessed various innovative solutions to offer a wide variety of products to consumers. Some of them are as follows:

- In July 2020, Archer Daniels Midland Company (ADM) (US) entered into a partnership with Imagine Meats (India). Imagine Meats is a newly launched venture that focuses on improving plant-based innovations in India. As the vegan trend is gaining momentum in the Indian market through this partnership, Imagine Meats is all set to expand ADM's portfolio of protein

ingredients to introduce traditional Indian dishes. In the future, through the partnership, the companies are also focusing on global expansion.

- In July 2020, two big corporations Nestlé (Switzerland) and Starbucks (US), came together and launched new Starbucks Non-Dairy Creamers. In 2018, both the companies signed a deal, according to which Nestlé paid USD 7.15 billion to Starbucks for the right to sell and market Starbucks products around the world. The new Starbucks Creamers are the addition to the earlier deal. Both the companies are focusing on capitalizing on the growing demand for plant-based products worldwide.
- In April 2020, Cargill (US) and fast-food chain KFC (China) have collaborated to offer plant-based foods to consumers. For the first time, KFC will begin selling plant-based fried chicken in China, over a limited period, whereas Cargill will be the supplier of nuggets. Initially, the plant-based fried chicken will be available at only three outlets. Cargill has taken the step-in response to the growing interest in the Chinese meat-substitute industry. In addition, poultry production in China has been affected by the COVID-19 outbreak.
- Starbucks (US) has announced the launch of its new plant-based menu exclusively in China, which will feature plant-based protein meal options offered by Beyond Meats (US) and Omnipork. The menus will also contain non-dairy beverages from Oatly (Sweden). Starbucks has taken this step, in response to the growing preference among Chinese consumers for healthier choices. In addition, the

COVID-19 outbreak has encouraged consumers to reconsider their diets.

MAIN MARKETS

The US is one of the major markets, which received an investment of USD673m for the plant-based food industry in 2018. According to Good Food Institute (GFI), a total of USD17bn has been invested in the plant-based food industry. These investments involved 233 completed deals and 229 unique investors. In 2018, among these investors, venture capital represented 43% of the total number of completed deals. The consumers are increasingly adopting plant-based foods, as they are becoming more conscious about their health and adopting a healthy lifestyle. As per a report by GFI, the US retail sales of plant-based food products have increased by 17% from 2017 to 2018. Plant-based milk is the largest and most popular category, accounting for 13% of the US retail milk market in 2018. Meat alternatives or plant-based meat account for the second-largest market share, recording a value of USD 684 million. Factors impacting the vegan food market are as follows:

• Rising awareness about health and wellness among consumers

Consumers are witnessing increased inclination toward a nutritional diet. They are becoming more conscious about their health and wellness and are increasingly adopting plant-based food for a healthy lifestyle. Among them, a high percentage of the millennial population is shifting to organic and plant-based food products. According to the Plant-based Foods Association (PBFA), the plant-based retail sales of plant-based food and

beverage alternatives in the US was formulated to replace conventional meat, dairy, eggs, and seafood products, which reached USD5bn in 2019. Moreover, the COVID-19 outbreak is further contributing to the growing sales of plant-based food & beverages.

- **Innovation and developments in the plant-based protein market to encourage the vegan trend**

The food & beverage manufacturers are increasingly investing in innovation and development of meat alternatives, dairy alternatives, and protein nutritional beverages. Key factors that are encouraging new product developments in the plant-based food market include the increasing vegan trend. According to a study published by the European Vegetarian Union in 2019, the vegan population in Europe contributes to more than 6% of the European population. In addition, retail food chains are focusing on widening their product portfolios to cater to align with the growing vegan trend.

- **Rise in the lactose-intolerant population**

One of the major factors that have been encouraging the demand for plant-based



products is the prevalence of lactose intolerance. Lactose is a major carbohydrate in milk and can cause abdominal pain, diarrhea, nausea, gut distention, and constipation. The digestion of dairy products becomes difficult, as these symptoms occur among consumers due to the lack of gut enzyme lactase. The lack of lactase leads to difficulty in converting milk sugars into absorbable compounds, due to which lactase remains undigested. Thus,

consumers are witnessing an increasingly opting for dairy alternatives.

- **Increase in investments and collaborations in the plant-based food market**

Government entities across various countries have been promoting the consumption of plant-based food and dairy substitutes due to their functional health benefits. Moreover, the environmental concerns associated with animal-based meats further encourages

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the authorities to promote vegan food products. Government entities have been actively investing in the research and development activities for plant-based food & beverages. For instance, Beyond Meat (US) has successfully introduced its plant-based burger patty through research conducted by the University of Missouri, which enabled the government to invest further in research activities.

CHALLENGES OF THE VEGAN FOOD MARKET

Although the trend of opting for plant-based products is rising, there are still many problems and challenges faced by vegan food manufacturers. There are multiple scientific and technical issues associated with the functionality, digestibility, taste, and texture of plant-based ingredients. In order to offer the desired taste, texture, and mouthfeel, some meat analog products use salt, sugar, and fats to compensate. These ingredients are also used for masking undesirable traits of plant proteins. While the plant-based meat alternatives are meat-free, some meat analog items are ultra-processed foods. In such cases, producers fail to demonstrate their clean-label credentials. Due to these factors, vegan food manufacturers need to take a balanced approach to product development. In order to sustain their growth in the vegan food market, key companies will have to depend on the diversification of protein sources. Key food companies need to shift from animal protein toward plant protein. Food companies and manufacturers also need to explore and adopt a diverse range of plant-based options. As the demand for vegan food is increasing, the

industry also needs to be prepared to obtain protein-rich ingredients to produce plant-based foods. The use of a wide variety of plant sources by companies will help in avoiding intense pressure in the agricultural land.

IMPACT OF COVID-19

Recently, the whole world has been significantly impacted by the COVID-19 pandemic, and the lockdown has been imposed by various governments. The food & beverage industry is going through a transformation due to the COVID-19 pandemic. The pandemic has impacted the usual functioning of the sector, as well as consumer trends. It has encouraged the adoption of vegan products as health-enriching products for consumers. The worldwide situation has encouraged consumers to rethink about the food they consume, its source, and how it is distributed in the market. It has compelled consumers to focus on the food systems, as well as the safety and

hygiene maintained, while using animal-based ingredients. These factors have encouraged consumers to opt for plant-based food and dairy alternatives. As consumers across the globe look to protect themselves from COVID-19 pandemic, they are now following healthier diet plans. They are willing to purchase vegan food, as these food products contain natural ingredients that are equipped with medicinal benefits. Plant-based food is gaining increased popularity among consumers, as it is a safer and more sustainable source of protein.

WHAT DOES THE FUTURE HOLD FOR THE INDUSTRY?

Nowadays, consumers are willing to try new and innovative products that are being offered by food and beverage manufacturers operating in the plant-based food market. The increase in the adoption rate clearly depicts the acceptance of vegan food in the market. Consumers are increasingly opting for plant-based meat alternatives and dairy alternatives, as the production of vegan products also results in reduced emissions in the environment. Additionally, food and beverage companies are focusing on developing innovative products to increase their product offering. New products are also expected to play a key role in accelerating the market growth in the future. Moreover, the COVID-19 pandemic is impacting the vegan food market positively, as consumers prefer natural and safer source of protein. Veganism is going to become a lifestyle for consumers in the future. ■



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Prima Menü focuses on ready-to-heat meals in cardboard tray packaging and serves its products to many customers in the retail market, home delivery and foodservice market in Europe.



The current assortment contains potato- and noodle gratins, hearty complete meals like “Schnitzel” and “Currywurst”, Asian dishes like “Chicken Tikka Masala” and snacking products such as “Chicken Nuggets” with french fries and a sweet chili dip. Prima Menü develops innovative products to be an attractive partner for its clients. Especially the product concept “Loaded Fries” attracted attention in the European retail market.



www.primamenue.de



Both varieties “Tex Mex Fries” and “Chili Cheese Fries” combine crispy microwave fries with a tasty, delicious sauce. You can whether dip the fries in the sauce or load the sauce on top of the fries.

Thanks to its 25 years of know-how in producing ready meals, the company ensures to meet the customers expectations. The production is IFS 6 – Higher level, MSC/ASC, QS and Organic certified and fulfils the highest quality requirements.

The production facility only uses certified CO₂ neutral green energy to create a more sustainable product.





IT'S ALL ABOUT DESIGN

The frozen potato industry is a high paced, 24/7 operation that requires a whole host of robust and durable equipment, including conveyors and conveying systems that can stand up to the weight and rigor of the industry.

There are always various challenges to address during this process but manufacturers are working closely with each customer, in order to overcome them. Trevor Howard, managing director at Fabcon is of opinion that the need for conveying systems to be flexible is a particular increasing requirement and always a challenge – while the design should also allow for flexibility and future changes. This is especially true when there is a need to combine multiple products which must be distributed to multiple alternative packaging stations and seasoning systems with minimum changeover and cleaning times. “Our British-built Fabcon conveying systems are trusted by a wide number of worldwide chip and snack producers as they have a variety of purposes to help with the production cycle – especially when it comes to buffering and storage when a downstream machine is halted, or to help transform a batch flow into a continuous one,” Howard explains. “Fabcon offers both vibratory and horizontal motion conveyors. Our horizontal motion conveyors can be suspended from a

gantry or the ceiling, so they can be cleaned easily underneath. Using one of our vibratory conveyors may mean that producers only have one foot on the floor, while some competing systems will have four and a large subframe. Our solution is a huge space saver. When it comes to our vibratory conveyors, these essentially ‘bounce’ the product along. This doesn’t provide the same self-cleaning advantage and also runs a greater risk of seasoning drop off, which can build up in the pan,” he adds. Another challenging aspect is designing transference systems against limited space constraints, as Blake Svejksky, general manager - Product Handling Systems with Heath and Control explains, especially because conveyors are typically needed to provide more functionality than basic transference, a fact which adds to the complexity of their arrangement within tight spaces. With this fact in mind, the second most challenging aspect may be sanitation and maintenance accessibility. The best conveying systems will not only facilitate ease of maintenance access (i.e., access to its component parts) but will not require any preventive maintenance; they would also be designed for wash-

and-go or wipe-and-go sanitation, which means that conveyors and their component parts will resist debris buildup, allowing them to be cleaned in place with little investment of time and effort. Beyond these spatially related challenges, when it comes to conveying systems, potato processors face the challenge of cost constraints, installation timing, and gaining a clear and accurate understanding of all requirements early in the project life cycle.

“Conveyors can be fitted with a variety of screens which provide dirt, water, slicing slivers, oil, and crumb extraction. Conveyors are also designed with a variety of gates; this allows for on-demand distribution of product to multiple end points, each of which may produce unique finished products,” Svejksky says. “Finally, the integration of more specialized features and subsystems can transform a conveyor into an entirely unique system, such as an accumulation or a seasoning system; both can transfer product and provide critical functions within potato processing plants,” Svejksky further explains. Heath and Control provides several options in this area, including Incline

Transfer Conveyors, FastBack® Horizontal Motion Conveyor, FastBack FastLane Slicer Infeed Conveyor, FastBack Blending Systems, MinuteMan Accumulation Conveyor (MinuteMan), FastBack SwitchBack™ Accumulation Conveyor (SwitchBack), FastBack Revolution® Proportional Gate (Rev Gate) and the FastBack Revolution On-Machine Seasoning System (FastBack OMS System).

HOW DO THESE SYSTEMS DIFFER?

State-of-the-art conveyors use advanced engineering design systems and modern premium efficient drives and controls to move large volumes of product throughout the processing plant which helps conserve energy. The advanced vibratory and belt conveyor designs are much more sanitary which saves labor time and energy resources when it is time to clean and sanitize the processing equipment. According to Koko Neher, sales manager of PFI Global, the main categories of belt conveying are flat,

troughed, and elevator style which can transport potatoes from storage into the first stages of processing. Flat belt and trough style can transport whole potatoes into peeling and slicing processes. Belt and vibratory conveying can transport from slicing into sorting. Vibratory solutions can also provide a solution for basic sorting related to size and dewatering needs. Flighted belt conveyors are commonly used to elevate product to the distribution deck prior to packaging. Vibratory and horizontal motion solutions are used to deliver product into weighing, seasoning and packaging. Most commonly, belt conveyors are supplied with monolithic thermoplastic belting and stainless-steel framework. This style of belting has become a new standard when designing a hygienic sanitary belt conveyor. For vibratory and horizontal motion solutions all product contact surfaces and framework are also stainless-steel. "PFI offers belt conveyors in a variety of styles for potato processors. Those include: trough, incline, reversing, retracting, flat, deceleration, lifting, and

flighted conveyors. Vibratory offering includes: laning, dewatering, sizing, sorter preparation, screening, grading, and distribution solutions. Our horizontal motion conveyor is a great solution for layouts requiring reversing solutions. It is also preferred to reduce seasoning or batter loss over a vibratory option in a distribution to packaging area," explains Neher. "When developing a layout in a potato plant we add features to streamline processing. Vibratory conveyors can serve as ways to orientate, sort, grade, screen, and dewater. Belt conveyors are utilized for feeding multiple downstream processes and reject systems for upstream grading activities," adds Neher. Similarly, Jim Ruff, vice president, Process Systems & Integrated Solutions at Key Technology says that in potato processing plants, belt conveyors with intentionally low sanitary design standards are often found at raw receiving where heavy-duty construction enables them to convey product that is mixed with dirt and rocks in environments that are often dusty and



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We often adopt terms from English, but we don't know their exact meaning – for instance, RTE. Ready-to-eat (RTE) stands for prepared foods whose microbial count is so low that one can eat them immediately. What does one need this for?

RTE – MAXIMUM SAFETY

Manufacturers of stir-fry and ready-made meals notice that more and more consumers just warm their products up for eating, even though the products should be heated up thoroughly. They ignore the hygiene risks. If they harm themselves, difficult litigations often arise, from which the manufactures cannot be exonerated, due to lack of evidence. Dishes with RTE components solve this problem technologically. Due to their very low microbial count, they offer the elderly and mothers with toddlers, among others, the best possible safety, even if the products are heated up below the optimal level.

HIGHLY EFFICIENT PROBLEM SOLUTIONS

RTE is also relevant to production processes, in which heating up is not possible, or would be complicated. With chilled ready-made meals, snacks or ready-to-eat salads, ingredients like pasta, rice, or grains often have to be treated microbiologically, pre-cooked, or at least heated up before processing. This is extremely time-consuming and expensive for small batches. In other cases, producers, who don't have their own cooking systems, don't process certain raw materials at all. For both cases, RTE ingredients are efficient problem solutions. They pave the way to considerable synergy effects in the workflow, as well as to the development of innovative products for new sales markets.

RTE FOR ALL LOW TEMPERATURE RANGES

The RTE technology can be used for products of all low temperature ranges.

- Ultra-fresh: best-before date up to 20 days
- Pasteurized (fresh): best-before date up to four weeks
- Frozen, IQF, and portioned: best-before date – more than 12 months.

EBROFROST – LEADER IN RTE

For some time, Ebrofrost has certified product lines for the manufacturing of RTE articles in different plants, from ultra-fresh up to frozen.

www.ebrofrost.com





Photo: PFI PPI



Photo: Key Technology

sometimes muddy. Here, conveyor belts are made of either robust rubber, PVC or urethane and support frames are often mild steel. On the rest of the processing line, belt conveyors that feature stainless steel frames and either PVC, urethane or thermoplastic belts can be used to convey cleaned, washed and cut product as well as frozen product. For a more sanitary design and superior reliability, vibratory conveyors, which typically feature either 304 or 316 stainless steel beds and frames, are preferred. "Iso-Flo® is our versatile family of natural frequency vibratory conveyors that maximize sanitation and reliability. We can tune the speed and stroke of Iso-Flo to match the needs of each application so performance is optimized. And it can be fitted with screens, drop-out gates, diverters with side discharges and other features to achieve fines removal, scalping, dewatering, de-oiling, product distribution, aligning, spreading, feeding, collecting, transferring and more," Ruff explains. "Iso-Glide™ is a

modified Iso-Flo that achieves a motion that resembles horizontal motion to offer gentle handling and quiet operation as well as superior sanitation and reliability. Our Impulse® vibratory conveyors feature frame-mounted electromagnetic drives. Ideal for scale feeding, ingredient feeding, product mixing and more, Impulse starts and stops quickly to achieve precise metering and low maintenance. Impulse utilizes sanitary design features similar to Iso-Flo," Ruff also says. The company's sanitary belt conveyors feature a positive drive thermoplastic belt and a tool-less collapsible take-up system, which releases tension from the belt, along with an option for fastener-free carry-ways, which allow the sanitation crew to simply lift the belt up to wash under it. An optional drive system eliminates belt drives. Furthermore, with the acquisition of Herbert Solutions earlier this year, Key has added more whole potato conveying technology to their family of equipment and enhanced our portfolio of potato processing solutions.

SUMMING IT UP

In conclusion, besides researching the most energy-efficient conveying systems, potato processors should partner with an experienced vendor who will provide a detailed throughput analysis as a part of the discovery process to ensure that conveyors are adequately sized for the job. An oversized conveyor will require more energy and will take up more space than smaller models, while an undersized conveyor may become bogged down, creating bottlenecks in the product flow and risk product damage. State-of-the-art conveying systems will also be designed to work in concert using advanced controls and information systems which ensure that product flow remains balanced throughout the plant and that no system is over-fed or starved for product. Such controls-enabled responsiveness and interconnectivity means that conveyors consume only the energy needed to move just the required amount of product at any given time as quickly as possible without damage. ■

Photo: Heat and Control

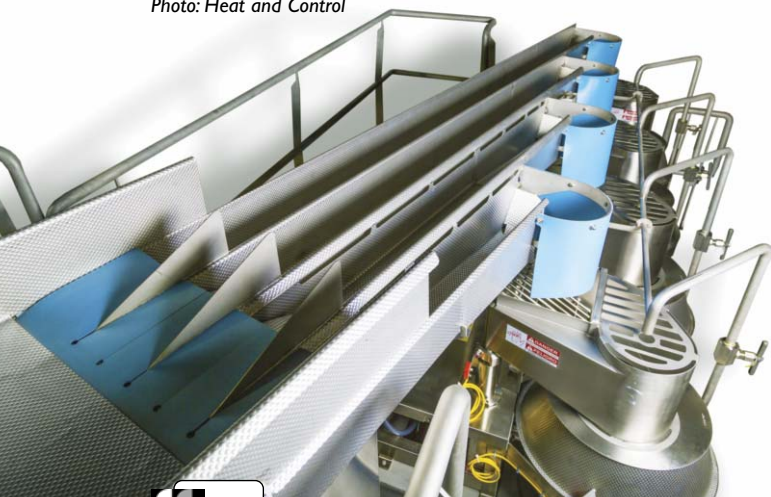
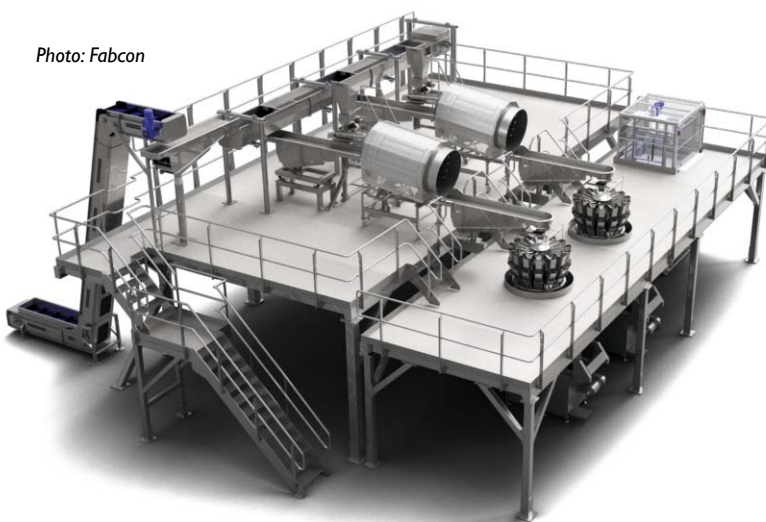


Photo: Fabcon





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CAREFULLY WATCHING EACH STEP

Conserving energy and other resources has always been a concern and priority for any food processor, which is why manufacturers of modern spiral freezers, but also freezing solutions for storing frozen food have come up with ingenious means of reducing unnecessary resource consumption.

When referring to freezing equipment, whether spiral freezers, storage freezers and the like, all these need to work flawlessly in synergy, in order to get the product right, in a timely fashion and with great quality. Paragon Quality Foods is one of the United Kingdom's leading meat suppliers. Its Doncaster plant produces a variety of ground beef products - including hamburger patties and kebabs - for customers in the foodservice and fast food sectors. The spiral freezer is a critical application.

CASE STUDY: DIRECTDRIVE SYSTEM ENHANCES FROZEN GROUND BEEF PROCESSING

During standard 12-hour shifts, the freezer's expected output is 1.5 tons per hour. Any problems in this area can greatly hinder overall plant productivity. Paragon's previous freezer belt was a

tension-driven, stainless steel belt that frequently flipped up or crashed. Failures could occur as often as three times per week, with each failure resulting in up to two hours of downtime. Maintenance personnel sprayed the spiral with large amounts of silicone grease up to four times per day. Though this lubrication process helped alleviate Paragon's downtime issues, it was unreliable and far from ideal. This is where equipment manufacturer Intralox comes into play. According to information from the case study that Intralox is showcasing on its website, the Doncaster plant began to explore other spiral freezer conveyor belt options. They wanted a solution that would eliminate tensioning issues, mitigate downtime, and reduce the time, money, and effort spent on maintenance. Most of all, they wanted a solution they wouldn't have to "babysit" (closely monitor and tend to). They chose the Intralox® DirectDrive™ System (DDS™). The DDS relies on a

patented operating system that engages the belt edge directly with the drum to generate zero slip and significantly reduce belt tension. By decreasing maintenance and cleaning expenses while maximizing production time, meat and poultry processing plants can improve performance while reducing total ownership costs. Working closely with officials from Paragon and the Doncaster plant, Intralox's Optimization Services Group (OSG) oversaw the spiral retrofit project from beginning to end. As unforeseen challenges arose, OSG consulted with Paragon to determine solutions and implement them. In March 2016, the two groups completed installation of a 26-tier DDS spiral freezer equipped with blue acetal Intralox Series 2900 SpiraloX DirectDrive belting.

The tensionless, positively driven DDS solution has met or exceeded all of Paragon's expectations. There have been zero crashes or flip-ups; the



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previous issues with downtime, maintenance, and lubrication (as well as the related expenses) have been eliminated. Paragon has realized annual savings of approximately USD277.000 (GBP215.140). Project payback was achieved in less than five months. The optimization of the spiral freezer has allowed Paragon to significantly enhance the Doncaster plant's overall capacity and efficiency. Paragon officials have been pleased with not only the technology, but also with Intralox's responsiveness and seamless communication. "The DirectDrive System is without a doubt a superior technology to metal belting," said Kevin Harmer, Paragon Engineering Manager. "It has helped optimize our line efficiency, and we do not have to babysit our spiral anymore!"

FREEZING SOLUTIONS BEFORE PACKAGING

With over 160 employees, a production value of EUR70m in 2018, several offices and factories around the world, Automha SPA from Italy is today a leader in the design and construction of automatic warehouses, according to company representatives. The company's representatives say that an automatic storage system in the

freezing area is very important in order to reduce energy consumption and the number of workers, but also to increase the organization of the plant and the logistics.

"Regarding the final step of the processing plant, that is the storage of the finish product before shipment, this can be divided into three areas. The first is the expedition and receiving area, with a temperature of 0-4°C, situated in front of the storage area. For this particular area, Automha provides automatic conveyors, roller conveyors, chain conveyors, roller to chain conveyors for 90° transfer, rotation platform conveyor and slat conveyors," the company's experts explain.

The second area, also called the proper storage area at a temperature of -25°C is fitted with Automha equipment such as the Autosatmover machine with Supercap on board, namely an automatic system for storing and retrieving pallets in a multi-depth storing lane. Lastly, for the third area, named by Automha the layer picking area, with a temperature of -18°C, this is usually situated in front of the storage area, on the first floor and can be fitted with automatic lifters, to move pallets from the ground floor, but also

with walking conveyors, where the operator can remove the wrapping film from the finished goods.

"There is also the option to use a shuttle loop, with a rush mover vehicle, to transfer the load unit between conveyors, in conjunction with anthropomorphic robots, and conveyors in interface with the automatic wrapping machine and automatic labelling machine," explain the company's experts. "We design each project based on the specific needs of the client, for each sector and are international leaders in the frozen industry. At the basis of Automha's mission, we place a strong focus on innovation, to ensure maximum customer satisfaction and the issues of social and environmental sustainability," say the company's representatives. Last but not least, longevity is an important aspect that frozen food manufacturers need to be aware of. As part of a moving system, conveyor belting wears off and must be maintained to provide consistent and effective service. Consistent maintenance practices will help ensure proper operation of the conveyor and conveyor belt which can lead to increased longevity of both pieces of equipment. ■

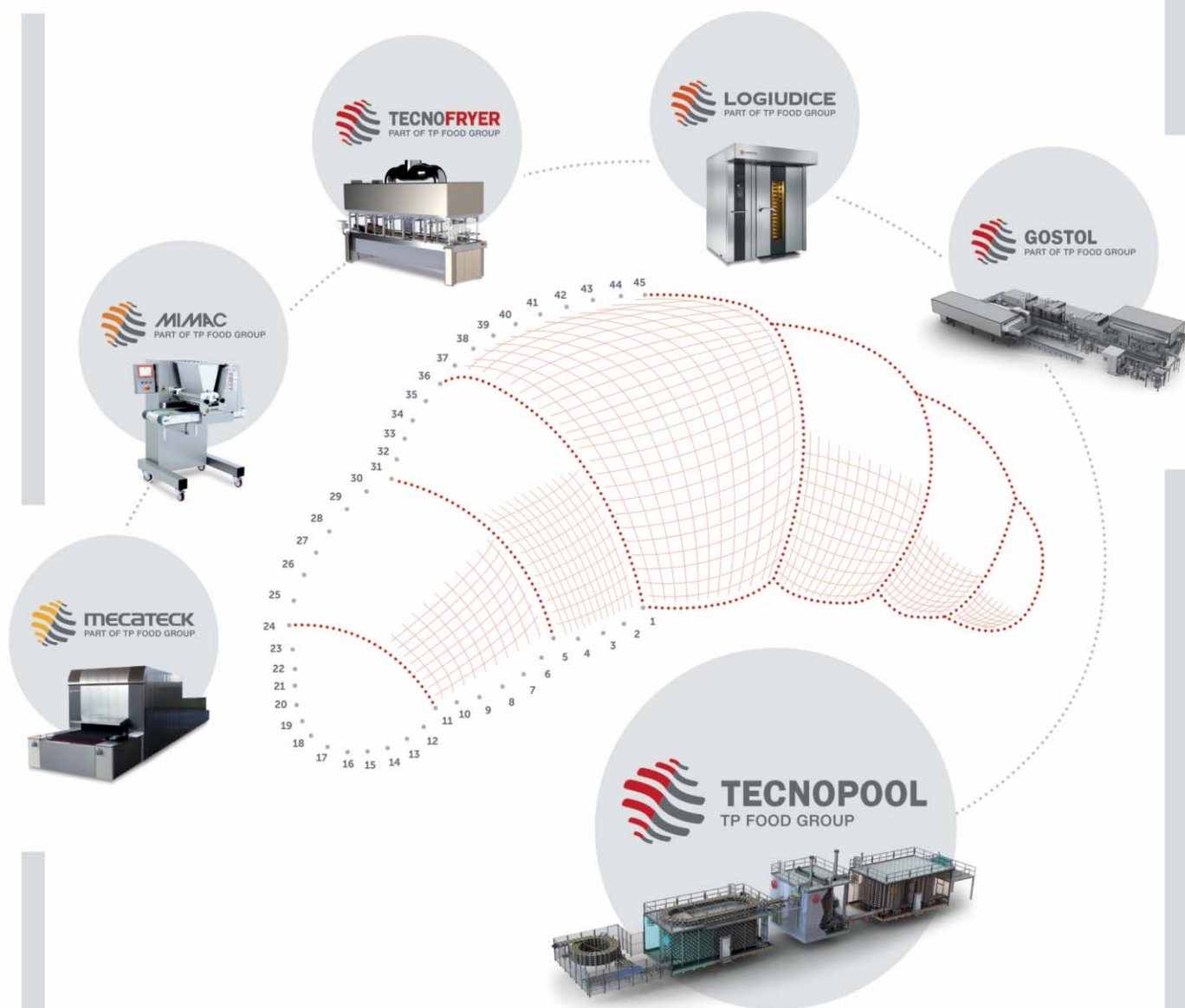




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STATE OF THE INDUSTRY

The global frozen potato market was estimated at USD57.15bn in 2018 and is expected to hit USD74.40bn by 2025, registering a CAGR of 3.8% from 2019 to 2025, according to a report published by Allied Market Research, the business-consulting wing of Allied Analytics LLP.

Increase in number of quick service restaurants and high disposable income of people augment the growth of the global frozen potato market. Due to the global lockdown, the market has witnessed decrease in sales of processed potatoes. On the other hand, high cost associated with frozen potato products hampers the market growth to some extent. However, growth in demand in emerging economies is expected to create an array of opportunities in the industry. By geography, in 2018 Asia-Pacific accounted for around two-fifth of the total market share and is anticipated to lead the trail from 2018 to 2025. Furthermore, the region would showcase at the fastest CAGR of 4.3% during the period. Based on type, the French fries segment contributed to nearly two-fifths of the total market revenue in 2018, and is anticipated to manifest the fastest CAGR of 4.2% throughout the forecast period. Other segments analyzed in this report include hash brown, shapes, mashed, sweet potatoes/yam, battered/cooked, twice baked, topped/stuffed, and others. Based on end-user, the commercial segment accounted for more than four-fifths of the global market share in the year 2018, and is expected to dominate during the study period. At the same time, this segment would portray the CAGR of 3.9% till 2025. The report also analyses residential segment.

COVID-19 IMPACT

With crops still growing in the ground – and some of them being ploughed in – the US potato industry is asking: “How can we reduce the size of this year’s market over supply,” says Cedric Porter of World Potato Markets. Due to mandated shutdowns, the US potato industry has been reeling from an oversupply of processing potatoes left over from the 2019 harvest, explains Kam Quarles, chief executive of the National Potato Council. “Individual potato growers and state potato associations have distributed millions of pounds of potatoes to charities, food banks, and local drop off locations nationwide, incurring substantial financial losses in support of the needy despite their own businesses being threatened by the pandemic,” he says. “We desperately need Congress and the Administration’s partnership to defend America’s family farms in this crisis and believe the latest support package is a positive step in that long road.” Some processors began early, by encouraging growers to find other outlets for their contracted crops if possible. Others have been reducing the contracted acreage for 2020 by up to 50%. There have been generous offers by Plains growers to give away the contents of their existing stores. However, these processors remain many miles away from where the primary demand for

free food for food banks is: on the Eastern and Western seaboard. JR Simplot responded to the situation in North Dakota by closing its Grand Forks plant two weeks earlier in April to allow annual cleaning to take place. The plant is expected to re-open this week. Although more potatoes are grown in Idaho, Washington State is the most reliant on the processing industry, with 90% of the potatoes grown in the state destined for fries and other products. The Washington State Potato Commission has launched a drive to give away one million pounds (450 tons) of potatoes to the needy. Washington’s three main processing companies are reported to have reduced this year’s contracted acreage by between 14 to 35%. Plantings are expected to be down by 20% this year.

THINGS LOOKED GOOD BEFORE SPRING

COVID-19 restrictions were non-existent in many states for much of March. If anything, there was a rush towards stockpiling, driving up demand. While the current situation looks bleak, then, the first three months of 2020 were buoyant. Potatoes USA recorded a 19.4% increase in frozen-potato sales during this period and a 9.4% increase in sales of potato chips/crisps. The total value of the US domestic sales during this quarter was USD3.365bn (EUR3.11bn), 15.5% higher than in

Canadian potato stock figures from Agriculture and Agri-Food Canada show stocks of 1.462 million tons, which is 13.1% more than in May 2019.

the previous year. While fry processors are taking a hit due to the closure of restaurants and food service outlets, chip/crisp processors have a different story to tell. In Michigan, which is the largest producer of chipping potatoes, chips sales have been compensating for the gap left by foodservice. Here the worry has been whether there will be enough chipping varieties around to last until June, when the new crop comes on stream. Large bags of chips are reported by Michigan Potatoes to be "carrying the industry" although the manic pace has quietened since early April. Sales of small bags have declined as sandwich shops remain closed. Some chipping potatoes have been diverted into soup production. All eyes are now on how quickly the foodservice sector re-opens in the US, as this will take pressure off the need to export fries globally. It is likely to be a patchy reopening, given that a reported 7.7 million jobs were lost in the US leisure and employment industry in April, a fall of 47%. Nearly three quarters of these jobs are in the foodservice and bars. A return to the regular sporting calendar fixtures would be one way to help boost fry sales. In March US frozen fry exports fell by 11.5% in March, to 88,399 tons, compared with March 2019. Buoyant sales to Mexico helped shore up the loss of sales in the COVID-19-stricken Far East.

Due to mandated shutdowns, the US potato industry has been reeling from an oversupply of processing potatoes left over from the 2019 harvest.



CANADA'S FRENCH FRIES PROCESSORS REDUCED CONTRACTS

The later planting season may have helped Canadian growers to weather the Covid-19 effect on world markets. On 24 April, The Potato Growers of Canada warned growers that French-fry companies would be looking to reduce their contract amounts by 15 to 30% this year. Although it predicted that demand for table-top varieties would be stronger, with likelihood of processing varieties ending up on table tops, it suggested that farmers might want to consider reducing their fresh potato acreage by 10 to 15% in response. Canada's biggest potato processor, McCain, has been doing its bit to reduce the surplus by committing to donate 20 million lbs (9 000 tons) – which equates to some 60 million servings of spuds – to foodbanks across the country. It has also made a donation of CAD1.3million (USD930 000; EUR860 000) from the McCain Foundation. McCain's concerns about the decrease in demand for potatoes from the foodservice industry as a result of the COVID-19 pandemic has also led it to lay off staff at its processing plant in Carberry, Manitoba. More than a quarter of the company's potato-grower partners in Canada are based there. Cavendish Farms is approaching the surplus problem from the finished product. Its Filling Freezers with Love



Although more potatoes are grown in Idaho, Washington State is the most reliant on the processing industry, with 90% of the potatoes grown in the state destined for fries and other products.



initiative, aims to donate over 50,000 packs of frozen potato products across seven Canadian provinces, as well as to make donations of CAD1 million (USD710 000; EUR660 000). Canadian potato stock figures from Agriculture and Agri-Food Canada show stocks of 1.462 million tons, which is 13.1% more than in May 2019. Stocks in Prince Edward Island are 18.0% higher, at 436,800 tons, the Brunswick figure is 8.2% higher, at 217,000 tons, with Alberta 7.7% higher, at 339,300

tons. Manitoba is 20.8% up, at 272,000 tons and Quebec is 4.8% higher, at 131,500 tons. There were 1.040 million tons of processed potatoes in US stores at the beginning of May – 12.5% more than last year – with 5.9% more fresh potatoes, at 171,800 tons, and 21.5% more seed, at 25,050 tons. The higher seed stocks suggest much smaller planting for the 2020 crop. Canadian frozen fry exports in March were only 2.2% less than in March 2019 at nearly 88,000 tons. ■



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Arabatzis – Hellenic Dough is the largest frozen-dough company in Greece and among the largest in Europe.

Producing more than 700 different frozen-pastry-products, such as Bougatsa, Croissant, Country pies, Filo dough products, Koulouri, Pizza and Puff Pastry products, with a variety of different fillings and shapes the company serves the food service market, as well as the retail market. All frozen-pastry-products are made in 3 state-of-the-art facilities at Sindos - Industrial Area of Thessaloniki using fully automated, cutting edge machinery. Since its establishment, the company has operated with a philosophy of producing goods synonymous with high quality. It has ensured that at all stages of production, its quality meets the highest international food standards such as ISO 9001, ISO 22000, BRC and IFS. Goods are produced via a wholly or partially automated process, but without cutting corners when it comes to quality or taste.

Arabatzis – Hellenic Dough specialises in frozen-pastry-products inspired by the Mediterranean and Greek diet, with raw materials from the rich Greek land, such as Greek extra-virgin olive oil, Feta PDO cheese, spinach,



yoghurt and many others, turning the Mediterranean diet into an international trend.

Thanks to its over 45 years of knowledge on dough business, its professional approach and technological infrastructure, each year Arabatzis – Hellenic Dough continues to develop products focused on what the consumers are looking for. Having the flexibility, the company ensures serving and satisfying every target group worldwide, adapting traditional recipes to its production.

At the moment, Arabatzis – Hellenic Dough distribute its products in more than 40 countries, sharing delicious tastes and high quality products to millions of families.



The company's strategy and vision is to continue its already long term growth all over the world by creating new innovative products and establishing new collaborations worldwide.

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THE COLD CHAIN IN THE AGE OF COVID-19

The pandemic has created many challenges that businesses are responding to and working through. To help understand the ripple effect of COVID-19 on the cold chain industry as the pandemic sprints across the hemispheres, the global cold chain industry surveyed all its member companies around the world.

Warehouses everywhere report the crisis has reshaped and adjusted their operations. Not surprisingly, the most frequently cited challenges were supply chain disruptions, care of employees and creating a safe work environment, and access to personal protective equipment and cleaning supplies. How the companies have responded to the crisis is consistent with the top challenges with a focus on people, a safe workplace, maintaining business

continuity and workforce morale. To understand more specifically the impact, and subsequent challenges and solutions, we connected with temperature-controlled warehouse managers in different regions of the world for their first-hand accounts of operating in the age of COVID-19.

STATE OF THE INDUSTRY

The experiences of cold storage warehouse operators in February through May of this year depended, to a great degree, on where they were

located on the planet. In the beginning, in China, the challenge for cold chain facilities was simply to stay open as local authorities ordered all businesses shuttered, explains Justin Chan, Partner and General Manager of VX Cold Chain Logistics.

"We first had to implement all the required safety measures in a matter of days to ensure our staff, and our clients' staff on site, were operating with proper protection and operating in compliance with preventative measures," Chan says. "Then we had to engage the local

authorities to demonstrate we were following the enhanced health and safety standards."

In the United States, some cities and states staggered under case numbers higher than experienced by entire continents. Refrigerated warehouses were designated essential services and never closed.

"The biggest challenge has been providing a safe work environment for our employees while maintaining good customer service and managing through labor issues," notes Ken Johnson, executive vice president, Warehousing Group at U.S. company RLS Logistics. "Our customers are dealing with the same issues as we are, which is then affecting their inventory levels."

"One of the biggest concerns was ensuring we had ample amounts of appropriate PPE (Personal Protective Equipment) and we had the proper cleaning procedures in place," says Matt Reed, general manager of US Cold Storage Minooka. "As recommendations were changed by the Center for Disease Control and Prevention (CDC), it created some challenges in adjusting procedures and staffing with those recommendations in mind."

After the United States, Brazil is the second most affected nation by COVID-19. "Our biggest challenge has been to contain panic, especially when someone in the company goes on medical leave, regardless of the reason," says Manoel Honorio, operational manager at Brazilian company Friozen. Sidney Catania, president of Comfrio, also located in Brazil, operates in four different business segments, each one impacted in a different way. "Foodservice is suffering the most because of social isolation restrictions. On the other hand, the food industry suffers from

insatiable demand and consequently, we have a hard time meeting this demand. Our teams make daily adjustments." Australia and New Zealand have been relatively fortunate and combined, have had fewer than 10,000 cases of COVID-19 as of mid-June. But in March and April, media coverage of a pandemic that appeared to be running rampant in parts of the United States and some European countries did little to allay fear.

"We had panic buying in both countries resulting in production volumes spiking up by 50%, so initially, it was a challenge to meet the daily demands of our retail customers," reports Tom Kennedy, general manager of Americold's facility in Murarrie, Australia.

Denmark was one of the first European countries to announce a lockdown on March 11, and was the first in Europe to reopen schools, daycare centers and smaller businesses.

"This was only possible because citizens and companies acted with the same determination so the virus declined very fast," explains Niels Lundgaard-Svenstrup, co-owner of Danish company Husky. He points out that both Denmark and Norway employed the same early, pre-emptive shutdown and the two countries have agreed to open their common border by mid-June. However, the border with Sweden, a country that chose not to shut down and eventually saw a rise in cases, remains closed.

BEST PRACTICES AND OPERATIONAL SHIFTS

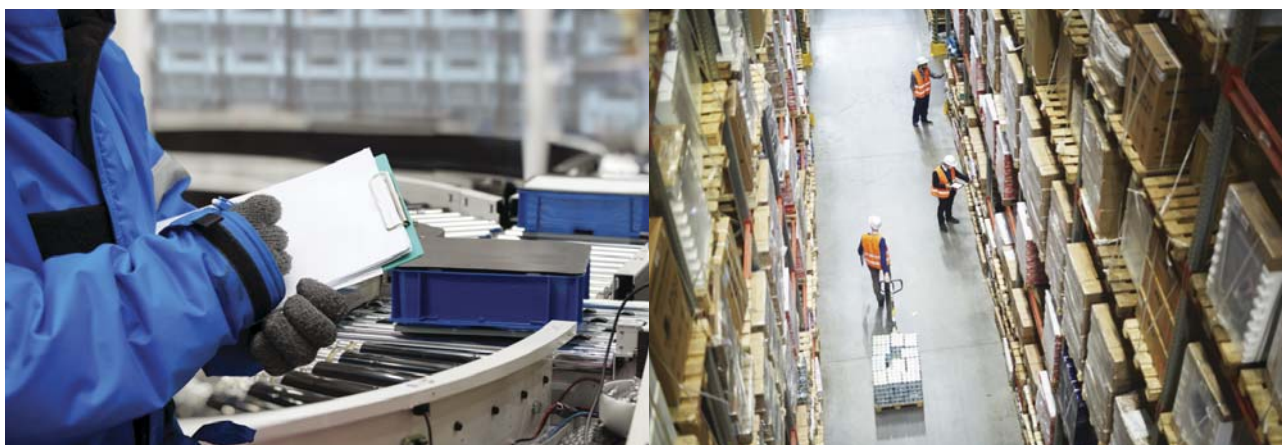
Changes brought on by the pandemic have been both micro and macro. "The simplest methods are the best," Kennedy believes. "Rostering the movement of staff in and out of facilities

and lunch rooms to ensure social distancing, regular deep cleaning including sterilization of common areas, equipment and touch points, and more hand sanitation stations throughout the facility. These simple and effective principals and weekly communication from senior leadership has made our team confident to work each day in our facilities and the mood is high."

"The most significant changes to our operations center around protecting the front line from the virus while keeping our essential functions running," notes Mauricio Barrera, chairman of Qualianz in Mexico. "We have become very strict about protocols including regular body temperature measurement, identification of symptoms, tracing of suspicious cases, sanitation of spaces, and even drills on procedures should an employee test positive. So far, we have been fortunate in terms of containing any spread among our people."

"To ensure we maintain social distancing, we've staggered shifts and breaks and we're holding pre-shift meetings in smaller groups," says Stephen Draper, regional vice president – Southeast for Americold. "We're monitoring areas where associates or visitors may line up – like the time clocks and driver check in areas – and reminding people to stay 6 feet apart. We've added a lot of signage and marked out spots on the floor and postponed all largescale meetings including local town halls and roundtables."

"Very early on we arranged to have an outside provider come to the site and complete weekly deep cleaning," Reed explains. "We were also able to find a sanitizing fogging agent and apply it to common areas weekly and both these new practices have truly helped us protect our employees and maintain normal operations."





"Most of our non-essential operations staff are working from home and we are utilizing video conferencing for our meetings," Johnson says. "Outside visitors are not allowed onto our campuses unless necessary and travel within our company has become almost non-existent, unless done by car. And, we no longer allow truck drivers on our docks for safety reasons." Johnson adds these changes have altered how they do business tremendously. "I suspect most, if not all, of these will remain in place for the short term and some will be permanent."

"Frequent communication during a time of global uncertainty has also been an important best practice," Draper points out. "We've provided regular updates to our leaders through a variety of methods – operational briefing calls, email updates, a repository of resources and protocols – so they can communicate clearly with their teams and answer questions. Materials have been provided in multiple languages to meet the needs of our diverse and

global audience. We've also provided updates to our customers and worked with them to ensure they received the support they needed."

CREATIVE SOLUTIONS

"During the epidemic period, before entering the territory of Wuhan, a seal was put on the driver's cab and the driver stayed in the cab, without contact with the outside world," Chan explains. "After the truck returned from Wuhan, the cab was unsealed. This way the drivers could avoid isolation after each trip."

"Documents from truck drivers are now being delivered either behind screened windows or via mail before the driver arrives, minimizing the risk of an infection," says Lundgaard-Svenstrup. "The loading and unloading that truck drivers previously did is now being handled by warehouse employees. That's required additional training for these employees to ensure the task is done properly and without delay."

Fulfillment processes are driven by labor that typically stand shoulder to shoulder on a production line. "Our

team recognized the issue of social distancing and built plastic barriers placed between each worker," Johnson offers. "It helped keep any virus transmissions down to a minimum." Henry Ha, CEO of Metcold in China, shares that his company established a new Emergency Spending Account in its operating budget to cover potential expenses resulting from emergencies and other unforeseen major disruptive events. Catania reports Comfrio brought in doctors to address their teams about how to protect themselves from the virus and how to stay mentally healthy.

"We have installed thermal cameras to capture and record the body temperature of individuals as they enter our facilities," Kennedy notes. "Once inside the facility, we've used floor decals as a visual reminder of social distancing practices."

"At the onset of COVID-19, we established a global hotline and task force to address any questions or issues, and it's been heavily utilized," Draper says. "Providing guidance, support and protocols through that one point of contact has enabled our leadership teams to rapidly meet the needs of our customers and our associates."

"Our CEO and leadership team implemented a 30-minute daily alignment call every morning before the workday to not only talk through priorities and hurdles, but to transmit key messages across functions and organizational levels," Barrera explains. "These sessions have been so useful that we'll likely keep them once the situation improves. We've also rolled out group chats with all operational leaders to enable an immediate flow of information." ■

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[frozen dossier food]

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STATE OF THE FROZEN FOOD INDUSTRY

is a project which contains reports on the most important frozen food categories, as well as technical equipment innovation related to product manufacturing, published both in print and on-line.



IS HYGIENE A TOP SALES ARGUMENT?

Aspects that hygiene monitoring services often haven't accomplished, the coronavirus has effectively managed instantly. The sensibility for hygiene, even with dishwashing, has risen noticeably with food professionals. More and more of them have become convinced that hygienic activities help to retain guests because they satisfy their need for safety.



The cleaning chemical has to ensure that the color of the cups and the imprints are preserved even after several hundred dishwashing cycles.

Just shortly before the pandemic, one heard the opinion among restaurateurs quite often that the HACCP is kind of an annoying subject, which at the end of the day only costs time and money. Currently, the attitude is changing in all segments of the out-of-home market. More and more players recognize that guests visit such locations more frequently in which they feel safe with regard to the preparation of their meals as well as to the cleanliness of the glasses, dishes and silverware. The Europe-wide well-known Virologist, Christian Drosten, put it correspondingly in a nutshell last March in a podcast: "I avoid small diners, bars, and clubs. One knows how they wash there. Glasses are pulled over the brushes two or three times and that's it. Anyone can easily imagine that this is superficial at best, but by no means hygienically clean." Therefore, hygiene in the gastronomy and large-scale catering establishments has come to be a subject that guests, patients and residents are interested in.



Whoever discreetly, but convincingly explains to the guests which measures he or she is going to implement, can make points and retain them in its own operations.

HAND-WASHING DISHES – A HIGH RISK

Actually, everybody knows that automated dishwashing beats the pants off hand-washing dishes with which on the one hand neither the temperature nor the time is controlled according to HACCP

requirements. On the other hand, kitchen sponges and dishcloths are the perfect breeding grounds for up to 340 types of bacteria, which are pathogens to some extent, as the scientists of a university have found out in 2017. By contrast, automatic dishwashing, when used according to the specifications of the manufacturers, ensure:

1. That the temperatures as well as the dishwashing times are kept in compliance to HACCP guidelines and
2. That the chemical cleaning agents are dispensed in line with demands.

It's clear that each dishwashing process represents an expense, but it also optimizes the workflow. Under-counter glasswashers of the entry level already offer runtimes of maximum 180 seconds and a use of only a little more than two liters of water per rack.

REUSABLE CUPS: A SENSITIVE ISSUE

It has become common practice to accompany every type of event culinarily – at least by offering beverages. In doing so, the organizers are increasingly replacing the formerly used disposable cups with reusable receptacles. This applies similarly to the "to go" and "take-away" segment. Avoiding garbage and using resources efficiently are thereby the significant motives. However, what is especially critical is that the cups are frequently stacked up after washing. They have to be completely dry for this, because



HACCP: TO-DO's

1. Hazard Analysis

Check each step of your food production, even in the scullery, where hygienic risks can emerge.

2. Critical Control Points

Determine all critical control points (CCP's) for the dishwashing process, too. Set down which mandatory measures you are able to take to eliminate or minimize the risks.

3. Critical Limits

Set the critical limits for the CCP's.

4. Monitoring System

Ensure that each of the dishwashing processes is also adhered to consequently. Record the results of each control measure. Take your own samples.

5. Deviations – Precise Instructions

Develop unmistakable instructions for the cases in which the CCP's are not observed. Regulate clearly who is also responsible for the removal of a problem for the dishwashing processes.

6. Documentation

Record all of the records (inspection reports, breakdowns, provisions, etc.).

7. Internal Controls – External Audits

Appoint one person as an in-house hygiene officer, who can check each area of your kitchen operations anytime. Of course, this also applies to the scullery and can be carried out, for instance, with the so-called wipe tests. Allow your operations to be checked periodically, but not at too large intervals, externally. Therefore, you are recording that you are taking hygiene seriously.

Source: Meiko/Germany

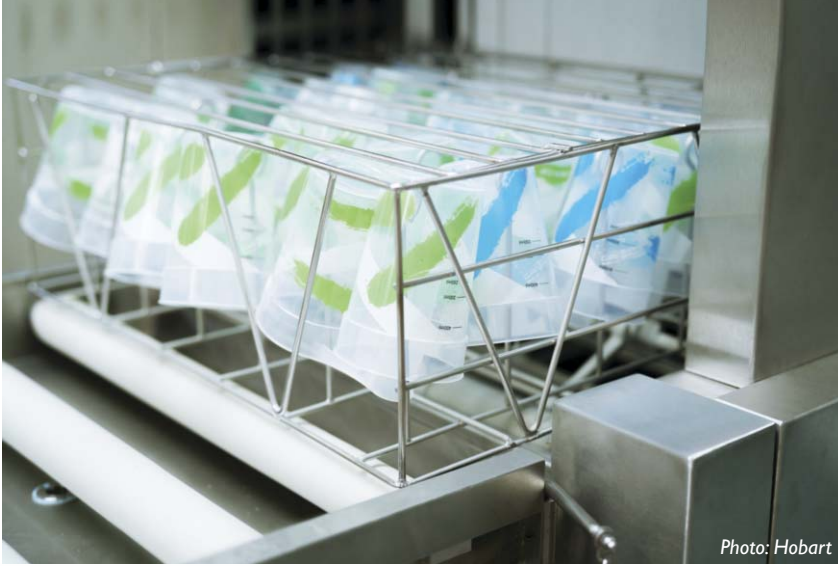


Photo: Hobart

manufacturer (Winterhalter) has developed a bottle rack with special bottle washing jets for this, in which up to six bottles can be washed in - and outside per wash cycle. If necessary, the bottle rack can be exchanged for a standard rack without difficulty. Of course, hygiene, even that of dishwashing, won't become a top sales argument. But cleverly conveyed it can support and strengthen other arguments. ■



Photo: WiHa

technology is particularly important for reusable cups for the reasons named. But it is also relevant for all pieces of tableware that have to be stacked directly after the dishwashing cycle.

At Winterhalter/Germany, one even refers to another point: the cleaning chemical has to ensure that the color of the cups and the imprints are preserved even after several hundred dishwashing cycles.

FLEXIBLE AND QUICK CONVERSION

In some European countries, one can earn quite well with mineral water. Being that the crates are heavy and take up a lot of storage space, some food professionals are thinking about offering self-made carbonated water in their own bottles or decanters. A

It's clear that each dishwashing process represents an expense, but it also optimizes the workflow.

otherwise mold grows in them. Hobart/Germany has developed a special drying process. After every wash cycle, it converts the moist air with energy storage of hydrothermal into hot drying air, which is fed back to the washing chamber. Being that the moisture is not able to drop on the reusable cups anymore, they can be stacked up immediately after the dishwashing without the risk of mold growing in them. This

(HIDDEN) HYGIENE PITFALLS IN THE GASTRONOMY

- Kitchen sponges and washcloths: they are breeding grounds for up to 340 types of bacteria - pathogens, in part. They have to be replaced early on and at short and regular intervals.
- Sinks - waterborne microbes and mold collect here.
- Countertops - they have to be cleaned a number of times daily.
- Kitchen utensils like boards, knives etc. - they have to be color-coded and have to be assigned to precise positions resp. functions. In no case should they be used for different tasks like cutting meat or salads. They have to be washed after each use.
- Obsolete dishwashing equipment like devices without heat recovery give off steam. Thus, they raise the temperature and moisture in the kitchen and provide excellent breeding grounds for mold - in hidden places too.

Source: Meiko/Germany





PROCESSES



PRODUCTS &
INGREDIENTS



MARKETS



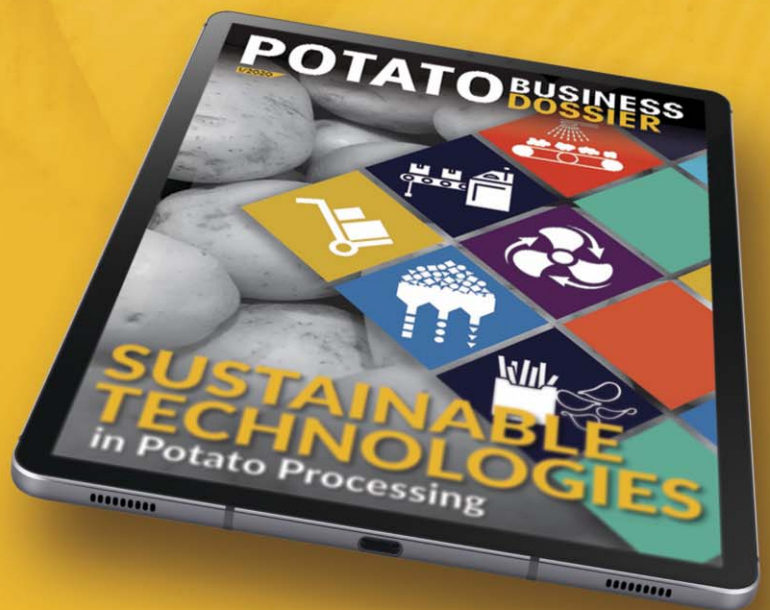
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FROZEN FOOD IS PRESENT IN OVER 98% OF HOUSEHOLDS

Whether they are simple and uncooked (unprepared fruit, vegetables, fish and meat) or more processed, frozen food products appeal to consumers around the world due to their convenience.

The latest research shows that the worldwide frozen food market generated sales of nearly USD220bn in 2018, according to Marketsandmarkets. And the sector should continue to grow to reach USD231bn in sales revenue between now and 2023 (+5.1% in five years). In volume, the majority of sales worldwide are accounted for by vegetables (6.473m tons), ready-to-eat meals (4.973m tons) and meat products (3.378m tons).

FROZEN FOOD IN FRANCE WORTH EUR9BN

French consumers also adopted frozen food a long time ago. Today, these products are part of their everyday consumption: on average, 98.6% of

households buy frozen food, with families spending EUR223 a year on it in 2016. In total, the frozen food market is worth EUR9bn of revenue in France. In volume, this represents nearly 2 million tons of goods, according to Syndigel. Benefiting from a more positive image than ultra-processed products, unprepared products are one of the pillars of the frozen food market in France. Potatoes in all their forms occupy the top spot in the list, making up 20.2% of frozen food sales in France. Vegetables are also popular, arriving in second place in French market sales. From carrots and onions to broccoli, cauliflower and courgettes, frozen vegetables account for 19.1% of the sales in the sector. Fish, however, does not encounter the same

success. With the exception of cod, always popular with consumers, all other types of frozen fish have seen their sales drop in France.

Overall, frozen seafood is becoming less popular: between 2014 and 2017, purchases fell by EUR12.9m. This makes it the fastest declining frozen food category in France in recent years. The same observation can be made for frozen meat and cold cuts, which are losing appeal among French consumers. Between 2014 and 2017, their sales dropped by EUR5.5m.

READY-MADE DISHES

Taken alone, the frozen ready-made dish market was worth EUR5bn in sales in 2019. But fortunes vary in this

segment. Frozen pizzas saw their sales rise by 5% in 2016, a reminder of the fact that France is the world's second biggest pizza consumer behind the United States. Potato-based products and ready meals that can be cooked in several minutes also saw their sales rise by 1.5% and 0.9% respectively. The strongest growth relates to frozen appetizer products, whose sales rose by 7.6% in the space of a year, according to data from Kantar Worldpanel. Meanwhile, other categories have shrunk in recent years in France. This is the case with manufactured products containing meat (beef, poultry, game or other), which saw their sales go down by 3% in 2016. According to researchers, it must be said that until quite recently, consumers have been distinctly wary if not hostile of prepared meals in general, and particularly those based around meat. This can be attributed to various food scandals, including the lasagna horsemeat scare which was revealed to the general public in 2013. Since then, manufacturers have made the necessary adjustments to fulfil the expectations of consumers, by becoming more stringent in their manufacturing processes. As a consequence, consumer trust is returning little by little. According to forecasts by Xerfi, frozen prepared meals should see their sales rise by 2.5% over a year, continuing the upward trend first observed in 2018.

BREAD, DESSERTS AND ICE CREAM

Ice cream continues to be a big hit with consumers. In 2018, the turnover of the category rose by 7.8% to more than EUR997m. Ice cream desserts are mainly consumed in the summer, during the hottest weather, but also at the end of the year with frozen yule logs. This increase in sales should however be put into perspective. Previous years have not always been healthy for ice creams and frozen desserts in France. Between

A trend seen to be growing in France is represented by the new brands of meal kits, which have been gaining value share, by targeting time-pressed premium consumers.

9bn
euro is the estimated revenue generated by frozen food in France.

2014 and 2017, the sales of these products literally collapsed, dropping by EUR5.9m. Bread, meanwhile, is on the rise, a trend that has been in evidence for several years.

FROZEN FOOD AT FRENCH TRADE SHOWS

As a key part of the food industry, frozen food has always been well-represented at one of the largest food and beverage trade shows, SIAL. It could always be seen in all its forms: whether unprepared products (fruit, vegetables, fish, meat) or prepared dishes, bread, cakes and pastries, desserts and ice cream. At the 2018 edition for example, 390 exhibitors made up the "frozen food" offering, spanning a surface area of 10,500sqm with 88% of these coming from outside France. If this event attracts so many stakeholders from this market, including from abroad, this is due both to its reach - the exhibition attracts a huge audience of buyers and professionals from all over the world - and to its status as a platform at which to discover the latest new products in the sector. In this respect, SIAL Innovation has always been an important event and represents a unique chance to show off a product during its launch period. It should be noted that the frozen food sector is one of the most innovative in the world, accounting for 7% of all innovations launched on the market each year, according to the trade show

organizers. Another example speaks for itself: at SIAL innovation 2019, 90 frozen products were selected. One of them even won the silver award, the frozen vegetables by the brand Industrie Rolli Alimentari SPA. These vegetables, produced by eco-friendly and pesticide-free supply chains and wrapped in biodegradable paper bags, were launched at the beginning of 2019 by the Italian firm Rolli.

COMPETITIVE LANDSCAPE

Leading players focus on healthier products, transparency of ingredients, and convenience on the French frozen food market, according to Euromonitor International. Groupe Fleury Michon remained the leading player in ready meals in France in 2019. It steadied the decline in its value share of ready meals in 2019 by continuing to focus on healthier variants of its chilled ready meals and launching products with a naturally healthy and organic positioning made with locally-sourced ingredients. Another trend seen to be growing in France is represented by the new brands of meal kits, which have been gaining value share, by targeting time-pressed premium consumers. Sales of dinner mixes (commonly referred to as meal kits) continue to grow in France. There have been a number of start-ups offering new meal kit concepts, including Quitoque (purchased by Carrefour in 2018), Foodette, and Les Commis, each of which have taken value share from the dominant retail brand, Old El Paso. Lastly, French ready meals continue to dominate despite the fact that the presence of other ethnic cuisines in ready meals is very weak in consumer retail in France. However, both chilled and frozen ready meals remain dominated by French meals. ■





FROZEN FOOD IS BOOMING DURING LOCKDOWN

On behalf of the Deutsches Tiefkühlinstitut (dti), the market research institute INNOFACT AG carried out a representative consumer study to shed light on purchasing behavior and attitudes towards frozen products during the COVID-19 pandemic-related "lockdown" in Germany.

Frozen products have become an indispensable part of today's diet. Practically every household (98%) likes to buy and use them - even in normal times. The pandemic period caused a good third (33%) of those surveyed to intensify the use of frozen products. The top three favorite categories in the frozen food range are vegetables / herbs, followed by fish and pizza. Above all, the 18 to 59-year-old consumers stated that they used more frozen products during the COVID-19 period. The choice of products is quite different depending on the age group: The 40 to 75-year-olds in particular reached for deep-frozen fish more often, while the 18 to 59-year-olds increased their use of potato products. According to the above-mentioned study, for 72% of those surveyed, the

most important reason for the increased purchase of frozen food during the pandemic period is the long shelf life of the products, which makes it easier to keep stocks. In this way, shopping processes in retail can be reduced to the extent necessary that consumers want to avoid due to the risk of infection – 68% of those surveyed explicitly named this as a decisive point in the purchase decision for frozen food. Another decisive motive for buying is the quick and easy preparation of meals with frozen products. In view of home office and homeschooling, it makes sense that households were looking for relief when preparing meals. After all, 46% of those surveyed worked from home entirely or temporarily during the COVID-19 period and often had to manage the double workload of work and household.

Another positive result communicated by the German Frozen Food Institute (dti) is that those who use more frozen products obviously appreciate them more. It is particularly noticeable that the 18- to 39-year-olds in the survey rate frozen products much more positively than before the pandemic.

FROZEN FOOD RECEIVES TOP MARKS

Overall, the impression of the respondents in all frozen product groups has changed positively, according to the information provided. The product groups queried in the study are rated as good or very good by at least two thirds of those surveyed. Vegetables / herbs, fruit / fruit, potato products, fish and bread rolls received the highest rating. Cakes and pies are rated particularly well

by older consumers. Not surprisingly, because cakes and tarts are most commonly consumed in this age group. When asked about their future consumer behavior, 14% of respondents said they will use more frozen products. Especially those under 40 indicated higher purchase intentions. This offers positive prospects for the sale of frozen products in the food retail sector and in frozen home services in 2020, also beyond the pandemic phase.

NO SUPPLY ISSUES

dti, the German Frozen Food Institute, sent out a press release informing there are no supply bottlenecks in Germany, as far as frozen products are concerned. Frozen food producers are working hard to make sure customers can make their purchases, and even if an article is temporarily out of stock it will return to the shelves as soon as possible.

"Food is part of our country's critical infrastructure and companies have taken all precautions to ensure that operations can continue", dti says. "More and more people are currently working from home and the daycare and school children will be cared for primarily at home in the next few weeks. When working in the home office, frozen foods make it easier for people to prepare their daily meals. With the established system of telecom home services and the food-on-wheels, the frozen food industry offers a reliable supply of goods to people who do not want to shop now or who cannot."

The Federal Institute for Risk Assessment points out that COVID-19 is not transmitted via food, but only through the respiratory tract (droplet infection). Therefore, consumers need to be careful to wash their hands more often and thoroughly but should not worry that COVID-19 will infect them by food transmission.

GROWTH CONTINUES

Sales of frozen foods in Germany grew by 1.5% in 2019, a new report from the dti has revealed. The annual per capita consumption of frozen products could thus increase by 0.7kg from the previous 46.3kg (2018) to around 47kg (2019). According to dti calculations, the volume of frozen foodstuffs will rise to 3.83m tons in 2019 (from 3.77m tons in 2018). The figures include frozen food products for home and foodservice markets. In terms of sales of frozen products in

Compared to the previous year, the dti trend survey shows that organic and regional continue to be strong trends when it comes to frozen foods.

Germany, dti expected growth of 3.5% to EUR15.3bn in 2019 (EUR14.7bn in 2018). At the same time, manufacturers report being concerned about rising commodity prices and logistics costs due to crop failure and driver shortages. Frozen food products have a higher consumer reach and are used in almost every household. 68% of households are frequent users and buy frozen foods several times a month. These purchases are, to a large extent, planned. In the consumer market, growth is supported by established brands, as they provide competitive pressure on private labels through their discount listings. New product concepts and new players also play a role in market development. In the first half of 2019, frozen potato products, ready meals, and frozen pizza were the categories that recorded the largest increase. Frozen fish, meat, as well as frozen fruit and frozen snacks lagged behind the expectations in food retailing.

ORGANIC REMAINS A TREND

dti closely monitors the development of the trends in the frozen food range and surveys its member companies about them. The most important trend is by far the desire to save time and money on shopping and cooking. People are increasingly looking for nutritious and simple solutions for their daily diet, and so their demand for healthy and sustainable food continues to increase. Compared to the previous year, the dti trend survey shows that organic and

regional continue to be strong trends when it comes to frozen foods.

Vegetarian, vegan frozen foods and the trend towards reduced sugar, salt and fat remain stable. On the other hand, dti found that the trends for premium products, snacks, and free-from products are somewhat in the downturn.

Moreover, in discussions with customers, sustainability was found to be an important factor when it comes to deciding which frozen foods to purchase. 75% of dti's members confirm this is indeed the case. The design for carbon neutrality of the products (20%), the use of recyclable packaging material (25%) and the animal welfare label are currently the most important concerns.

The foodservice market continued to develop positively in 2019. According to calculations by the NPD Group Deutschland GmbH, based on the consumer panel CREST, a general growth of more than 1% in the number of customers was expected in 2019. In the first quarter of last year, the number of diners had increased by 1% and the average bonus by 3%. Gastronomy development is always closely related to the overall economic mood. The individual areas of gastronomy are developing differently: the best performers were full-service restaurants with a specialization in vegetarian, job catering and the takeaway sector. Frozen food products have also a wide range of uses in every catering sector and are valued by chefs by their main advantages (freshness, durability, natural qualities, portionability) and flexibility, allowing them to profit from the positive market development. ■

33%
of German consumers have intensified frozen food shopping during the pandemic.





THE CHANGING FACE OF GLOBAL EATING PATTERNS

Universal rates of obesity and other nutrition-related, non-communicable diseases (NCD) are steadily increasing and stem largely from the transition from traditional to present-day eating patterns and physical activity. Population ageing is one of the most significant trends of the twenty first century, a phenomenon that occurs when the medium age of a region rises due to longer life expectancy. Diet can play an important role in the prevention and maintenance of nutrition related chronic diseases. As populations continue to age, a spotlight is being shone on ways to reduce the burden of getting older and opportunities to maintain good health.

Food choices and eating habits have changed dramatically around the world over the past fifty years. Diets have been influenced by a range of factors: technologies in our kitchen, modes of transport supplying shops, media, government as well as trade and migration. Ageing, globalization and urbanization all signify new challenges impacting what's consumed and its impact on nutritional status.

DINNER DYNAMICS CONTINUE TO EVOLVE

A general trend towards less structured meal occasions has been recognized around the globe. Changing family structures (fewer than 25% of households consist of a married couple with children) and the rise in single households are influencing consumption habits. Busy lifestyles, longer, more unpredictable working hours and a rise in the number of females in the workforce are also contributing factors. Traditionally, meals took place at set hours of the day, however now meals are dictated by

work and leisure activities and must be more flexible. Eating habits are already far less rigid than they were twenty years ago and this will become more pronounced in the future as people eat what they like when they can, mixing and matching rather than conforming to traditional values. Significant differences in eating patterns are evident between countries. China, France and Japan still have relatively set meal structures in contrast to Brazil, UK and US, where although meal times differ greatly between individuals, most are casual, simple and require less clean-up time. On a global level, lunch was revealed to be the most consistent meal of the day, with almost three quarters of respondents eating a meal at 12/1pm. The latest Greendex survey by the National Geographic Society measured consumption habits and attitudes in 18 countries. Each country was scored on the relative size of its environmental footprint. Compared with 2008, consumer habits have improved to some extent in all countries surveyed, except Brazil. Food eaten in restaurants has a significant impact on caloric intake and therefore weight gain. Each additional meal or snack eaten away from home adds an average of 134 calories compared with the same meals or snacks prepared at home. Provided all other influencing factors remain constant, this additional meal eaten away from home each week could result in approximately two extra pounds per year. The effect of food prepared away from home on daily caloric intake is even more pronounced in obese individuals.

FOOD WITH A MEANING – SOCIAL EATING

Food, once consumed for survival is now consumed as a social activity. Social eating norms are perceived standards for what constitutes appropriate consumption, whether that be amounts of foods or specific food choices, for members of a

social group. Food often brings people together in a social setting. The presence of other people during a meal occasion has an effect on behavior as humans have the tendency to crave approval from others. A National Geographical study looked into cultural differences and food and it found that the majority of countries included reported that food was an essential part of their culture. Indian, Chinese, Spanish and Mexican consumers in particular were most attached to their national foods.

DOWNSIZING CONSUMPTION NORMS

People can be very impressionable when it comes to how much they eat and this becomes their consumption norm. For many individuals, determining how much to consume depends on how much they would usually eat rather than what the appropriate portion size is. Both the abundant choices in flavor varieties and the social aspect of eating influence an individual's food consumption, and this is especially true for women. A previous study found that women who were given multiple flavor choices ate more ice cream than those who were offered one flavor. Women who dined alone ate less than those who ate together. There is further empirical evidence showing that foods that don't retain their shape (amorphous foods) are consumed in larger portions. Recent studies suggest that portion distortion begins as early as three years of age. It was once believed that a person's position or profession influences their portion size however, more recent research contradicts this notion. Although more affluent and informed consumers are more likely to avoid buying the larger size to begin with, once they begin to serve themselves, they choose the larger portions. Due to busier lifestyles, populations are mindlessly eating i.e. eating when possible rather than when necessary. Mindful eating is an idea that encourages a shift

away from autopilot eating by paying attention to your body's hunger cues. This notion is associated with reductions in binge-eating.

NUTRITIONAL OUTCOMES OF OUR NEWLY DEFINED EATING PATTERNS:

a) Non-communicable diseases

By 2020, projections indicate that non-communicable diseases e.g. cardiovascular diseases, cancers, chronic respiratory diseases and diabetes will account for 75% of all deaths. Cardiovascular diseases and chronic obstructive diseases (such as chronic obstructed pulmonary disease and asthma) are expected to increase rapidly in many low and middle-income countries and NCDs are now a major cause of poverty, loss of productivity and poor quality of life worldwide. In 2013, an estimated 2.1 billion people (nearly 30% of the global population) were overweight or obese. Research has looked at the link between obesity and leptin resistance. Obesity is thought to cause so-called central leptin resistance, which can cause the person to overeat and thus gain more weight continuing the cycle of overeating. High saturated fat and low fiber were associated with high serum insulin, total cholesterol, weight, waist circumference and BMI over a 10-year period. Improving consumer diets has a crucial role to play in reducing the burden of NCDs. Three quarters of global survey respondents, who are trying to lose weight plan to change their diet, and nearly as many (72%) intend to exercise.

b) Self diagnosed Intolerance and Allergy

The prevalence of allergies is increasing throughout the world, affecting up to





35% of people. Primarily seen in countries in Europe and the US, allergies are on the rise globally, with a significant increase in the incidence of food allergy particularly amongst children. In this age of globalization, it is not only populations that migrate but also food and beverages. As people adopt foreign diets and import exotic products, there has been an associated increase in allergy. With an abundance of information available on the internet, evaluation from health care providers is not always deemed necessary among consumers. Three quarters of people in a study, who reported they had non-coeliac gluten insensitivity (NCGS), did not fulfill the criteria for its diagnosis. No one knows the true incidence of NCGS because validated biomarkers necessary for diagnosis have not yet been identified. As a result, consumers look to food in an effort to manage their own health and are limiting multiple dietary components without any medical supervision. A number of research teams are investigating whether reduced levels of nutrients - in particular, vitamin D, omega-3 fatty acids or antioxidants - might contribute to the development of allergies.

RE-ENGINEERING CONSUMPTION PATTERNS

Government organizations can do more to promote the importance of eating healthier by implementing labeling regulations; supervising food taxes; supporting healthy eating in schools and workplaces and restricting the marketing of food and drink products that are high in sugar and fat to children. Providing incentives for the food industry to formulate food and drink products with less salt, fat and sugar will have a positive effect on products available to the consumer. Regulation has been developed in some countries in the European Union (EU) and in the United States (US) that require the addition of calorie counts on menus. With more

people are eating away from home, this regulation intends to support better food choices. Another EU regulation- Food Information to Consumers (FIC), was introduced in 2014 and was aimed at making food and drink labels more accessible to the consumer. Initiatives promoting the importance of nutrition and healthy eating have been developed in the past however, adequate evaluation to monitor the impact on populations is lacking. More assessment is needed to create more effective public health campaigns.

THE FOOD INDUSTRY - A POWERFUL PLATFORM FOR PREVENTION

Growing awareness around what constitutes healthy food has started to see a shift in eating habits among mainstream consumers and healthy eating is now more top of mind than ever before. Consumers are bombarded with healthy eating tips and tricks as they turn to Google for advice. Food brands are responding to the interest in 'healthier' food and beverage products by formulating 'better-for-you' and 'good-for-you' varieties that promote the reduction or exclusion of the named and shamed food villains such as trans-fat and sugar and an increase or addition of nutrients such as calcium, vitamin D, fiber and whole grains. The food industry can play a vital role in the appropriate education of consumers by empowering them with relevant information to enable them to make better food choices.

Individuals are re-evaluating their diets and paying close attention to nutritional components in order to pro-actively manage their health. Consumers are shunning restrictive fads in favor of a more holistic wellness approach. These more open-minded, health-conscious consumers are focusing on their long-term health and wellbeing and are willing to occasionally splurge as they look for the right balance. The focus is on positive nutrition; consumers would rather hear what they can eat rather than what they can't eat. Food products revert back to basics as consumers demand whole 'real' foods and choose products rich in natural intrinsic health benefits, while avoiding heavily-processed products. There is growing demand for products that can help individuals to increase their fruit and vegetable intake and products containing 'superfoods', which will further increase their value as healthful ingredients. Protein and fiber are seen as an unstoppable combination and are included in a range of food products to entice consumers. With the mounting negative publicity around sugar, consumers look for alternatives that they consider to be safer and healthier options e.g. Stevia.

Lifestyles are becoming more demanding and time pressured and access to calorie dense foods is easier than ever, driving the development of unhealthy eating behaviors. The food industry needs to leverage the natural health credentials of food products, keeping ingredient lists short. Giving the consumer a reason to believe they can trust the product to deliver nutritional value to them is essential, however, the priority is brand transparency. Consumers look for more tailored, value added products, giving manufacturers the opportunity to develop convenient, targeted nutritional products that can help alleviate the burden on the health systems caused by the crippling effects of NCDs. ■



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MINI PIES BY ZIMI PSACHNON

The delicious mini pies of Zimi Psachnon, with the unique puff pastry (a perfect fluffy dough of fine flour and margarine) or shortcrust pastry (crunchy, biscuit-textured dough), are made using the purest ingredients and always with the same loving care. Mini pies are ideal to eat any time of the day, as a snack for children at school or during lunch break for adults at work. They only need to be baked for 20 minutes and are ready to be served at parties, family and friends' gatherings. All types have fairly enthusiastic fans with sweet, savory and spicy flavors (feta cheese, sausage, spinach, ham, kasseri cheese, apple, vanilla cream). Mini pies of Zimi Psachnon are distributed in all Europe.

www.evoiki-zimi.gr



OVER THE MEAT



Amica Natura to launch the new Plant Based Burger: 100% plant based, gluten, soy and GMO free. This innovative burger is 100% obtained from plant proteins but with the appearance and flavor comparable to a meat burger. In fact, the aspect, the texture, taste and cooking are completely similar to its meat counterpart. Plant Based Burger is the challenge to food innovation, with the added value of a totally made in Italy production. For over 15 years the company has developed a path aimed at sustainable nutrition, reaching today this important result, which combines healthy nutrition and reduces the environmental impact because it is based on plant proteins.

www.amicanatura.it

SAINTLY DESSERTS GET A NEW LOOK

Saintly, the range of plant-powered frozen desserts launched last year, showcases a smart new look as the brand enjoys a surge of interest following the increase in frozen food sales in response to the COVID-19 pandemic, along with the boom in the plant-based foods market. The Saintly range comprises:

Blackberry & Apple Crumble Tarts; Sweet Almond & Raspberry Tarts; Chocolate & Salted Caramel Tarts; British Apple Tarts and Dark Chocolate Tarts. Recommended retail price is GBP4.99 and each pack contains two tarts. The line-up of all-natural sweet treats produced without artificial additives,

preservatives, palm oil, dairy or animal-based ingredients now boast added standout in the freezer cabinet courtesy of the investment in new packaging. The new format focuses on the brand's Vegan Society approved status.

www.saintlyfoods.com



FAIRLIFE LAUNCHES LACTOSE-FREE ICE CREAM



Coca-Cola dairy brand Fairlife has partnered with Boardwalk Frozen Treats to release a lactose-free Fairlife Light Ice Cream. The product launch comes after Coca-Cola acquired the remaining stake in Fairlife earlier this year. The ice cream category is worth USD14bn, according to Mintel data cited in a press release. The offering comes in seven flavors: vanilla, chocolate, cookies & cream, chocolate peanut butter, double fudge brownie, java chip and mint chip. Each flavor will have between eight and nine grams of protein and 40% less sugar than other ice creams. The Fairlife ultra-filtered light ice cream will be sold for USD4.98 for a 14-ounce container at select retailers nationwide, with future expansion planned for later this year.

www.fairlife.com



“BOLAS”: THE NEW OVEN SNACK BY RISSOLARIA

Rissolaria presents the new product line by Rissolaria Tradicional – “Bolas”. Available in four different varieties, (meat, vegetables, chicken & sardines), this snack is delivered frozen and pre-baked, for maximum commodity and taste. Just unfreeze and it's ready to eat. As always, the dough recipes from Rissolaria are made with the best extra virgin olive oil from Portugal, as well as fresh and high-quality ingredients, for a supreme delight. Healthy and light, great for any time of the day! To complete the oven line, don't miss our wide range of gourmet pot pies, with more of 10 different flavours, inspired in the Portuguese traditional cuisine.

exportacao@rissolariatradicional.com

NEW MENU OPTIONS FOR FOODSERVICE

Northamptonshire-based frozen food distributor Central Foods has unveiled two new items for the foodservice sector to cater for customers with dietary requirements. The Menuserve brie and red onion tart are suitable for gluten-free and vegetarian diners, while the Menuserve beetroot and thyme tarte tatin is for vegan and vegetarian customers. Both items are premium products that suit the increasing demand in the foodservice sector for good quality, pre-prepared options that are suitable for those with dietary requirements, but which will also prove popular more generally – helping to avoid menu proliferation. The Menuserve brie and red onion tart is a gluten-free cheddar and chive pastry tart filled with a brie and cheddar sauce and topped with a red onion compote. The Menuserve beetroot and thyme tarte tatin features balsamic roasted beetroot wedges and thyme on a crisp, puff pastry base.

www.centralfoods.co.uk



PURPLE CARROT TURNS TO THE FROZEN AISLE

Purple Carrot took their new 100% plant-based, single serve meals to the frozen aisle at most Whole Foods Market stores across the US. Developed in partnership with Conagra Brands, Purple Carrot will launch four single serve meals including Plant-Based Meatball Marinara (made with Gardein Meatless Meatballs), Maple Chipotle Veggie Bowl, Sweet Corn Elote Bowl, and Fiesta Pepper Bowl (made with Gardein Beefless Ground). Consumers have been able to purchase these meals starting the first week in July, with a starting price of USD5.29.

www.purplecarrot.com

GATHERED FOODS LAUNCHES FISH-FREE APPETIZERS

Gathered Foods, the producer of Good Catch® plant-based seafood, announced the launch of a new product line: frozen entrees and appetizers. It consists of New England Style Plant-Based Crab Cakes, Thai Style Plant-Based Fish Cakes, and Classic Style Plant-Based Fish Burgers. The frozen entrees and appetizers use Good Catch's proprietary six-legume blend (peas, chickpeas, lentils, soy, fava beans, and navy beans). The new frozen appetizers and entrees have an MSRP of USD5.99 and are available in retailers across the East Coast, with expanded distribution throughout the country planned for later this year.

www.gatheredfoods.com





POLAGRA 2020 TARGETS FOODSERVICE AND FOOD TECHNOLOGIES

According to the organizers, Polagra, taking place September 28 – October 1 in Poznan, Poland, is a place to present products that meet the needs of consumers, new technologies to maintain the highest safety standards in food production, as well as solutions that improve the work of catering and accommodation facilities. The denominator is the taste around which new business relationships are built conditioning the development of the industry and the promotion of Polish food abroad.

The organizers of this trade fair announced that well known events - Polagra Food, Polagra Tech along with POLAGRA GASTRO and INVEST HOTEL – are going to be organized from now on under the joint and stronger brand name – Polagra.

"We want to derive from Polagra's historical potential in creating an event that will bring maximum inspiration, new business opportunities and will become a must for food producers, buyers but also restaurants owners, hotel facilities," said Dariusz Wawrzyniak, MTP Product Group director.

THREE THEMES

This year's Polagra, according to its new theme, will consist of three thematic salons: Food, Foodtech and Horeca/Foodservice.

The Food Salon will be filled with food products responding to consumer preferences, where numerous meat and dairy producers will present their offer, but companies representing other sectors, including fruit and vegetable processing, sweets, spices, drinks, vegetarian and functional foods will also complete the exhibition.

The Foodtech Salon will let visitors get acquainted with the new technologies, allowing to keep the highest food producing safety standards. The exposition area will be filled up with machines and equipment used in food sector, especially in baking and confectionery. Food packaging innovations will also find their spot.

Manufacturers and distributors of equipment, devices and even whole equipment concepts improving work of catering facilities, such as for restaurants and hotels, are invited to participate in Horeca/Foodservice salon.

FOCUS ON ORGANIC

Special inspiration zones will be designated within all three salons. One of them will be Eco&Organic, dedicated to producers and distributors of eco food, interested in broad cooperation based on deliveries to retail chains. As in previous years, the exhibition will be accompanied by a program of events, including workshops and debates concerning food industry situation and new opportunities for its development, as well as cooking shows and other competitions.

"Recent months have brought huge challenges for the industry related to companies' basic activity and sales strategy in the near future as well. Changing regulations or consumption models will influence the activities of the sector too. I believe that during Polagra together with invited experts, we will be able to discuss the most pressing problems in the industry and find the best solutions for them," said Wawrzyniak.

POLAGRA IS AN INTERNATIONAL EVENT

A key role in this trade show plays MTP's "Hosted Buyers" program, which will be attended by entrepreneurs willing to commence trade cooperation with Polish food producers. The organizers say that starting this year, Polish producers will be additionally supported by promoting their export potential on a brand-new contacts exchange platform named BuyPoland.pl. "The portal is an efficient tool created to support foreign entrepreneurs in finding products and services suppliers from Poland. The platform is widely promoted by Polish missions abroad and its functionality is recommended to business clients from all over the world by MTP representative offices," the organizers said. "Such combination of trade fair events in which face to face meetings are supported with all year long promotional activities, makes Polagra 2020 an event of not only culinary but also business discoveries. For all food producers this is going to be the best place to gain new business contacts in CEE and for visitors a great possibility to learn about trends, innovations and solutions which common feature is taste," they conclude. ■



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JANUARY/FEBRUARY

Ad closing 31.01/Publishing 14.02

Frozen Pasta for Catering and Foodservice

product innovation, manufacturers, suppliers

Bakery and Pastry

key market players, producers, suppliers

Frozen Desserts

market dynamics, new product development

Bio and Organic Products for the Food Industry

clean label and energy saving products

Frozen Potato Market

innovative products and European overview

Frozen Potato Technology

cutting, slicing, peeling, dicing

Technology & Logistics

conveyor belts, spiral ovens, IQF freezers & chillers

Technology and Equipment for Frozen Bakery

proofers, ovens, coolers, freezers

Technology in Food Processing

equipment innovation and evolution

Ice Cream Market in Europe

evolution and estimates

Nutrition & Ingredients

for frozen bakery and potato products

Trade fairs: Biofach, Gulfood, Internorga, FoodEx Japan, CFIA, FoodExpo Greece, Wabel Frozen Summit, M.A.D.E., Modern Bakery, AFFI-CON 2020, Snackshow-Parriza, Foodex Birmingham

3

MAY/JUNE

Ad closing 29.05/Publishing 12.06

SUMMER FANCY FOOD SHOW NEW YORK SPECIAL EDITION**Frozen Food from Italy**

market overview for retail and foodservice

Frozen Pasta & Sauces Market

trends, new product development, producers, suppliers

Frozen Pizza Market

major producers, suppliers, country breakdown

Technology and Innovation for Frozen Pizza

processing machines, toppings, portioning and forming

Ingredients for the Food Industry

for pasta, pizza, ready meals (herbs, rice, vegetables, mushrooms, processed meat)

Frozen Finger Food, Fried or Baked Mix Balls

trends and successful products

Frozen Burgers

new products, producers and suppliers

Frozen Snacks and Pastry

innovative products for retail and foodservice

Optical Sorting Technology

innovation and latest equipment

Deep Freezing Technologies, Proofing, Baking, Cooling

for bakery applications

Frozen Food in the US

evolution, challenges, opportunities & major players

Trade fairs: Summer Fancy Food Show

5

SEPTEMBER/OCTOBER

Ad closing 18.09/Publishing 02.10

SIAL SPECIAL EDITION 2**SIAL Food Trends**

special report

Key Exhibitors Road Map at SIAL

latest product innovation

Bakery & Pastry

new product innovation, suppliers, producers

Frozen Vegetables, Fruit, Mushrooms, Green Herbs

solutions for retail and foodservice

Technology Innovation for Frozen Vegetables and Fruit

cutting, slicing, peeling, dicing

Technology & Logistics

trends and solutions in packaging equipment

Technology Automation

saving cost, manpower and time

Meat and Poultry Products

market overview in EU vs USA

Frozen Food in France

key players, product innovation, suppliers

Global Retail Market

consumer behavior, new products, processors, suppliers

Nutrition & Ingredients

for pre-baked and ready to bake foods

Trade fairs: Sial, südback, Alimentaria Foodtech, Agro Prod Mash, Interpom/Primeurs, Process Expo, PLMA Chicago, Gulfood Manufacturing, Pack Expo, Global Cold Chain Expo

2

MARCH/APRIL

Ad closing 27.03/Publishing 10.04

PLMA, CIBUS & INTERPACK SPECIAL EDITION**Appetizers, Snacks and Pies**

high convenience, filo pastry products, pizza, ready meals

Frozen Vegetables, Fruit, Mushrooms, Green Herbs

trends and market overview

Technology Innovation for Frozen Vegetables & Fruit

cutting, slicing, peeling, dicing

BeNeLux Market Review

major players and new products

Cooked & Pre-Cooked IQF products for the Food Industry

rice, pasta, sauces, cereals, noodles, vegetables

Technology & Logistics

industrial freezing equipment

Packaging Technology

state-of-the-art equipment and solutions

Meat & Poultry Products

categories and market evolution

Technology in Professional Kitchens

multifunctional cooking devices

Private Label Food

innovation, new products, producers, retailers

Frozen Fish & Seafood

sustainable practices, market overview, major processors

Nutrition & Ingredients

vegetables, fruit and herbs

Frozen Food in Germany

market overview

Trade fairs: PLMA Amsterdam, Cibus, Interpack, Alimentaria, Seafood Expo - Processing Global, NFRA Convention

4

JULY/AUGUST

Ad closing 31.07/Publishing 14.08

SIAL SPECIAL EDITION 1**Coated/Breaded/Batter Foods**

new products, market evolution

Ethnic Foods - Greek, Mexican, Italian, German, French & Asian Food

product trends, producers, markets overview

Potato Market Update

frozen fries market overview in retail & foodservice

Potato Technology Innovation

new equipment for frying, cooking and seasoning

Vegetarian and Vegan Food

product trends, innovations

Technology & Logistics

trends in cold storage and warehousing

industrial freezing equipment

Frozen Food in Spain and Portugal

latest market developments

Dishwashing Machines for Professional Kitchens

hygiene & resource conservation

Nutrition & Ingredients

trends for coated and breaded products

Trade fairs: Sial, Polagra Food-Tech

6

NOVEMBER/DECEMBER

Ad closing 25.11/Publishing 11.12

Ready to bake & Pre-Baked Foods

market innovation, producers, new products

Convenience Food for Retail & Foodservice

European market evolution, category breakdown

Frozen Products for Catering & Foodservice

suppliers, producers, processors

Burgers, Grilled and Party Products

meat and substitute products for vegetarians

Technology & Logistics

freezing and chilling equipment

Quick Service Restaurants & Bar and Snack Channel

market evolution, leading operators in Europe

Food Management Systems

efficient processing of data in professional kitchens

Nutrition & Ingredients

ethnic food innovation

Frozen Food in Scandinavia

producers, suppliers, consumer trends

European Retail Market

suppliers, major retail categories, food trends

Trade fairs: Sirha 2021, Fruit Logistica 2021, Marca Bologna 2021, Sigep 2021, Gulfood 2021

Frozen Food Europe

on social media

