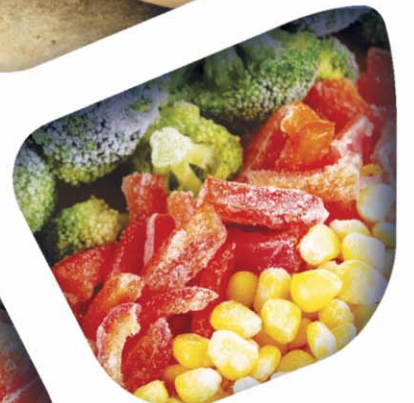


[frozenfood] dossier

ISSUE 1/2022



STATE OF THE 2022 FROZEN FOOD INDUSTRY



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content



06 FROZEN VEGETABLES, FRUIT & GREEN HERB

Steady Growth Ahead



22 SNACKS, APPETIZERS, SIDE DISHES

A Solution for Multiple Occasions



10 TECHNOLOGY INNOVATION

More Efficiency for Processors



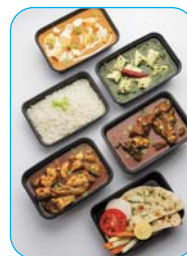
26 BAKERY, PASTRY, AND DESSERTS

Always A Delight



18 MEAT AND VEGGIE BURGERS

A Versatile Range of Products



28 READY MEALS

How the Pandemic Revitalized the Frozen Ready Meals Market



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BOGDAN ANGHELUTA
editor in chief

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oelnmesse will soon open its doors for technology providers, as they prepare to showcase

their latest machinery at the leading global trade fair, Anuga FoodTec. After two years under the impact of the COVID-19 pandemic, the industry got back to business with 2021's trade fairs, and it now returns to normal as most restrictions have been lifted in Europe and around the world (with some exceptions in Asia). While still faced with the harsh reality of the conflict in the Eastern part of the continent, the food industry in general is bouncing back from its struggles and is showing, once again, its enormous innovation power. You will read about some of these new machines in this Dossier. Another topic tackled in this issue is the way new consumption trends affect the future of food, starting with healthy and plant-based. While some have already moved from trends to mainstream, their impact over all aspects of the trade still raises some questions and a lot of excitement. All in all, 2022 certainly looks like a good year for the industry. See you at Anuga FoodTec! ●

LATEST INNOVAT TO BE SHO



IONS WCASED AT ANUGA FOOD TEC 2022



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ollowing its postponement, Anuga FoodTec, the world's leading supplier fair for food and beverages, will now be held as a "Special Edition" from April 26 to 29, 2022. The focus is on

innovations and solutions for the entire value chain - from process technology to filling and packaging technology to food safety, from packaging materials to digitalization and intralogistics.

Anuga FoodTec is the first comprehensive trade show for all areas of food and beverage production after the forced pandemic break. The industry should not miss this great opportunity to meet face-to-face again and learn about innovations and technology advances, especially in view of the challenges ahead. First-hand information, technology demonstrations, live briefings on the latest processes can all be obtained by visiting the trade fair.

Anuga FoodTec is also accompanied by a top-class congress and trade program that addresses the most important topics in the industry and thus provides additional impetus and the necessary exchange between participants. Complementing the presence trade show, the digital platform Anuga FoodTec @home offers extended opportunities for networking and information. This is primarily intended for post-fair work and also offers those customers the opportunity to find out about the latest developments and exchange information with exhibitors who are unable to travel to Cologne in person this year.

SOME OF THE MAIN THEMES AND EVENTS FEATURED AT THE FAIR ARE:

Sustainable Packaging Summit - The Sustainable Packaging Summit and Packaging Europe are partnering with Anuga Foodtec on 27th April to present a half-day conference, focusing on the specific challenges around sustainability in food packaging. How do we balance the non-negotiable requirements of consumer safety and food preservation against the need to reduce and simplify materials in order to eliminate pollution? What are the strategies we need to deploy to eliminate both food and packaging waste while driving down carbon emissions - and what are the emerging technological opportunities we need to be aware of?



Next Generation FoodTech - A profound transformation of the food industry is necessary to ensure our habitat and improve quality of life for our own and future generations. More rapid development cycles, comprehensive transparency and the close interlocking of the global value creation chain, ethical production and complete sustainability are only a few of the challenges the system is currently facing.

Functional Food - When eating is far more than the pure imbibing of calories - in addition to enjoyment and the feeling of being full, the focus is increasingly on the function of food, or the effect of food products on the individual. This is on the one hand propelled by ever new findings concerning the function of our food and its ever increasing availability, including of individual ingredients. ●



STEADY GROWTH AHEAD

Frozen vegetables and fruit represent an important component of the European frozen foods industry, and one of the steadiest in terms of consumption and sales. And that should remain unchanged in the near future, as the market is expected to show a stable annual growth. Still, changes in the consumption patterns of European consumers may come from factors such as the desire to replace food of animal origin with vegetable alternatives.

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As per a 2021 study by FMI, the global IQF vegetables market had an estimated value of USD1,560.1m in 2021. It also is forecast to exhibit a CAGR of 4.5% during

the forecast period of 2021 to 2031. According to FMI, growth prospects for the market remain positive owing to the improvements in global food supply chain infrastructure. The global IQF vegetables market rose at 2.8% during its historical period of 2016 to 2020. Advancement of technology to preserve food has encouraged key players to expand their product portfolio. As demand for convenient food is on the rise, sales prospects for IQF vegetables will improve. Consumers are increasingly demanding simple, hygienic vegetable products that can aid in reducing conventional hassles of slicing and cleaning fresh vegetables. As increasing number of people are focusing on better food quality, key players in the IQF market have lucrative opportunities to capitalize on. Demand for IQF vegetables is increasing as consumers are seeking food with superior nutritional value, flavor, and quality. However, the market is expected to face restraints owing to lack of strong distribution network and supply chain. North America is expected to lead the global IQF vegetables market due to immaculacy of vegetable supply chains in Canada and the US. The market in this region is expected to further expand owing to the availability of farm-fresh vegetables across numerous retail outlets in Canada and the US. Meanwhile, revenue generated from the global frozen fruits market was valued at USD11bn in 2020 and is estimated to rise at a CAGR of 5.6%, to reach USD21bn by 2030, according to a new study by Transparency Market Research (TMR), a global market intelligence company providing business information reports and services. Additionally, the rising demand for seasonal fruits and consumer awareness about clean label products with a longer shelf life is expected to support the growth of the frozen fruits market. According to the World Bank, over 60% of the

world population lives in urban areas. Rise in the hectic lifestyle and slummy health conditions, owing to unhealthy eating habits is driving consumers to demand for special dietary needs and high nutrition products. Consumers are switching to healthy snacking due to convenience and nutrition offered by such products, as round-the-clock snacking is the new “normal”.

INNOVATIONS FOR FRUIT PROCESSORS

TOMRA Food has recently launched the TOMRA 5C premium sorting machine, with the company's unique biometric signature identification technology, for frozen Vegetables. This solution was shown for the first time at Fruit Logistica Berlin, the world's leading trade fair for the fresh fruit industry. By locating the TOMRA 5C on the processing line between the IQF tunnel and the packing station, final checks for food safety and product quality can be made with unrivaled accuracy. As the frozen product reaches the end of the line for bagging, the sorter recognizes and removes any remaining foreign material, extraneous vegetable matter (EVM), and hard-to-detect product defects, such as stems and stalks with green beans and nightshade with peas.




Photo: TOMRA Food



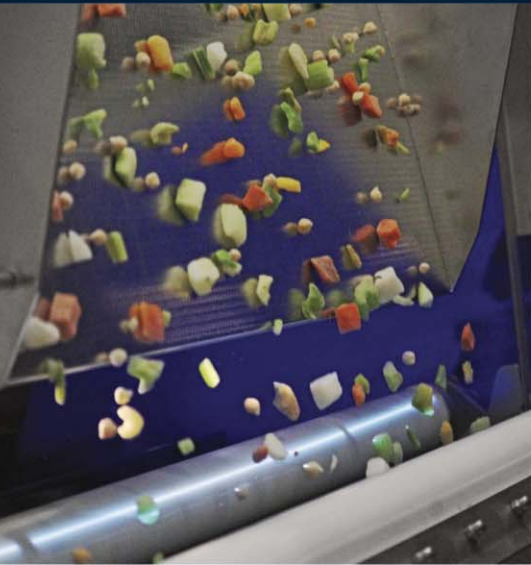
These detection capabilities greatly reduce the risks of consumer complaints or product recalls - already a vital requirement, and one that is harder to meet with organically-grown fruit and vegetables, which typically get delivered to processing lines containing more unwanted materials such as insects, rodents, and EVM. As well as protecting brand reputations, the TOMRA 5C's state-of-the-art technologies deliver other operational advantages, according to company representatives. Compared to its highly effective predecessor, the Nimbus BSI, this new machine further enhances sorting efficiency and yields; is easier to keep running in optimum condition; has a more hygienic design which reduces cleaning time by about 35% compared to the Nimbus, and has a capacity that's greater by 5-10%. The TOMRA 5C was first introduced in 2020 to sort Dried Fruit and Nuts but was designed from the outset for many different applications, including IQF Vegetables and Fruit. This machine is now being made available for IQF lines following tests with one major IQF Vegetables processor in the USA and another in Europe. Validation was conducted over an intensive six-week period, with the machines working for two or more shifts per day and sorting four to five tons of product every hour. Sorting performance was assessed with more than 20 different types of Vegetables, mono and mixed. The trials showed consistently

excellent results - even with Vegetables that are traditionally difficult to sort, such as white cauliflower, and even when looking for foreign materials that are difficult to detect, such as nightshade mixed in with peas. The TOMRA 5C's sorting accuracy is made possible by combining high-resolution lasers with TOMRA's innovative Biometric Signature Identification (BSI) technology, which means that every object passing down the line is assessed not only for its color and shape but also for biological characteristics. This next-generation spectral imaging is able to look inside materials on the line by identifying their unique biometric characteristics or 'fingerprint'. BSI clearly contrasts good and bad materials and is able to detect even smaller defects than those recognized by conventional spectral technology. Efficiency is also improved by connectivity to the cloud-based data platform TOMRA Insight. By accessing live data from the sorter, operators can make almost instant improvements to line efficiencies. When frozen vegetable products are mixed, this facility can ensure that each bag is packed with the right mix. Moreover, accessing data retrospectively makes it possible to quantify the standards of raw materials from suppliers and to make better-informed business decisions. Keeping the TOMRA 5C running for optimum performance is aided by a Heartbeat feature, which gives one-click information about the machine's health status and automatically triggers alarms if their faults. Cleaning is made easier and uptime is increased by a hygienic machine design with minimal and curved surfaces and easy access. Operation is made easy with the well-proven TOMRA ACT user interface. And this machine has proven that it can withstand the tough conditions found in IQF environments, with an ability to perform well in temperatures as hot as 50°C or as cold as -30°C. ●

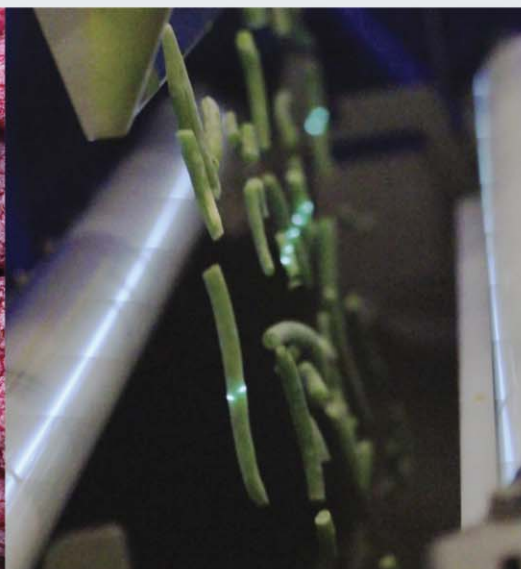
 **5.6%**
is the estimated CAGR of the
revenue generated from the global
frozen fruits market until 2030.



TOMRA 5C



Transforming global food production to maximize food safety and minimize food loss by making sure Every Resource Counts.





MORE EFFICIENCY FOR PROCESSORS

Technology manufacturers work alongside processors to assure that their needs are covered by new, upgraded machinery. And while demands by the latter usually refer to efficiency, there are several other issues that new equipment must address, such as sustainability, hygiene, and cost reduction. 2022 looks like a great year for innovation in all those areas, and you will read in the next few pages.

O

ctoFrost Group, a globally recognized manufacturer of food processing equipment, has always tried to position itself as an industry innovator, continuously offering new and

sustainable solutions to the food processors. Along the years, OctoFrost realized the need to improve the existent traditional impingement freezing technologies and offer a more cost- and space-efficient solution. And therefore, at the beginning of 2022 – the Swedish manufacturer has launched the Multi-Level Impingement Freezer. Designed for a small footprint, it is using three conveyor straight belts that double production capacity per square meter of factory space (instead of using a single belt like that in most freezers) – a completely unique feature on the market. Moreover, when it comes seafood processors, the OctoFrost Multi-Level Impingement Freezer offers a significant competitive advantage: the possibility to install glazers at both ends, for products which require glazing (such as shrimp and fish fillets). This setup allows glazing three times and hardening the glaze – all in the same freezer as the product travels from one belt layer to another – a truly revolutionary, space-efficient and lucrative solution. After becoming an OctoFrost customer, the food processor will receive the full support in the process of factory preparations, delivery, equipment startup, staff training and successful running of the machine. The OctoFrost After Sales department is comprised of a team of customer-dedicated and knowledgeable technicians, located all across the world. With a clear training plan in place, and a highly responsive team for any additional queries – OctoFrost makes sure that every single customer will achieve its production plan when using their OctoFrost equipment. “In a world hit by global pandemic, climate change and military conflicts - disruptive supply chains are of course something hitting all industries in all countries, and food processing industry is no exception,” company representatives say. “Each global region is facing somewhat different kind of challenges, of course, and OctoFrost can respond in the limit of its business activity. The general disruption in the supply chains – has the direct impact on costs: raw materials costs, operational costs, etc. One direction of work is that OctoFrost is trying to diversify its suppliers of raw materials, to be able to deliver the equipment in the promised timeframes so that the food processors can respect their business and production plans. Another

aspect, is the continuous work on the energy efficiency of the equipment, helping our customers in their struggle with the soaring energy prices. In general, developing new features for producing higher product quality, automations, and better overall control of the equipment – all contribute to the competitiveness of the food processor which in turn can help in overcoming the economic challenges we see everywhere,” they add.

EFFICIENT, SAFE, AND ECONOMICAL FREEZING

JBT will be attending IFFA 2022, where the manufacturer will demonstrate how it can support companies in creating and growing their product portfolio and boost their performance using automation, connectivity, and IoT and how to make food processing more sustainable and safer. As such, JBT will showcase their revolutionary self-stacking spiral freezing technology and introduce next steps in



One direction of work is that OctoFrost is trying to diversify its suppliers of raw materials, to be able to deliver the equipment in the promised timeframes so that the food processors can respect their business and production plans.

OctoFrost



Photo: OctoFrost



Photo: JBT



Over the past 60 years, Frigoscandia has been supplying food processors with the world's leading technology to efficiently, safely, and economically freeze almost every type of food product.

JBT

spiral freezing with the new Frigoscandia GYRoCOMPACT® 70 Spiral Freezer. Enhanced food safety, performance and optimisation are the key technologies in their latest spiral freezer. The new freezer is more compact than any of its predecessors, yet offers up to 20% increased capacity. Over the past 60 years, Frigoscandia has been supplying food processors with the world's leading technology to efficiently, safely, and economically freeze almost every type of food product. Today JBT's Frigoscandia freezers meet the needs of a truly global industry. In fact, more than half of the world's rapidly growing production of frozen foods passes through JBT's freezers, according to company representatives. "The DSI® waterjet portioners are designed to efficiently and accurately cut, portion, and sort poultry, meat, plant-based, and seafood to produce portioned fillets, nuggets, chunks, strips, and fat-trimmed products. The cutting and portioning of the product is also a process that can significantly reduce food waste and increase yield. Manual cutting is labor-intensive and prone to inefficiency, potential contamination, and higher food waste. The goal is to use every part of the incoming product so nothing goes to waste. Our intelligent DSI waterjet cutting- and portioning system is the automated alternative that, in addition to decreasing labor cost, has proven to improve product yield and increase productivity consistently," JBT representatives explain. Other products exhibited from JBT's portfolio include the Formcook® 618 Contact Cooker, the most effective heat transfer method, providing fast cooking, high yields, quick changeovers, and easy cleaning. "The Formcook Contact Cooker seals the natural juiciness and fats inside your products for the highest quality and minimum cooking losses. As well as producing a stove-prepared appearance and a superior taste, contact-cooking eliminates the 'fatty' deep-frying process, helping promote a healthy eating image to the consumer." JBT will also demonstrate the packaging innovations including automatic clipping

solutions with JBT Tipper Tie which offers solutions for clipping, netting, bagging, and labeling for each and every level of production. From a finished product standpoint, JBT Proseal has the ability to seal over 35,000 variants of tray shapes and sizes, allied with suitable top films and is armed to help and advise in the ever-developing sector of Tray sealing solutions. At Anuga Foodtec there will be live demonstrations of the automatic tray sealer and new case packer. Finally, Avure High Pressure Processing (HPP) clean-technology systems capable of boosting shelf-life for a range of products will be there to share knowledge on how food producers can grow safer and cleaner. "Avure has over 60 years of high-pressure experience working with food companies on HPP product development, HPP recipe R&D, packaging and navigating ever-changing food regulations," representatives add.

CUTTING PLANT-BASED ALTERNATIVES: WHAT SHOULD YOU BEAR IN MIND?

The vegan industry is booming, as new types of food are entering the market constantly, which translates into the need for more machines to produce the desired shapes and sizes, according to **FAM Stumabo** representatives. Processing of alternative proteins such as meat replacers and analog cheese comes with specific challenges turning them into attractive, ready-to-eat consumer products. „At FAM Stumabo, we have been heavily involved in identifying the specific cutting needs for these new food products. We have been closely collaborating and co-creating to design the best possible cutting solutions for meat and cheese alternatives. Most of today's alternative meat products are produced by an extrusion process. Therefore their consistency, viscosity, moisture content and temperature differ significantly from that of traditional meat products, having an important impact on the cutting process." To create natural-looking meat alternatives that resemble the look, texture, mouthfeel, taste and cut size of traditional meat products, FAM Stumabo's Yuran™ Hytec is a hygienic flat belt dicer solution that perfectly handles extruded meat alternatives. A dedicated range of cutting tools and claws allow you to process meat and poultry-like products into chunks, strips, and hand-pulled look shapes. Easy changeover between cutting tools allows maximum flexibility between multiple cut shapes and sizes. "Whether you are a 'traditional' meat processor or a start-up company entering the alternative meat segment, don't let your cutting challenges set back your new product development," company representatives add. "Plant-based cheese alternatives can be challenging to shred, grate, or dice. As a leading manufacturer of cheese cutting technology, we have dedicated a lot of research and development on quality cutting of analog cheese variants. Machineability and in particular shreddability and diceability of cheese analogues play a key role for specific applications such as pizza and toppings by facilitating its utilization and accelerating melting

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stumabo



Plant-based cheese alternatives can be challenging to shred, grate, or dice. As a leading manufacturer of cheese cutting technology, we have dedicated a lot of research and development on quality cutting of analog cheese variants.

FAM Stumabo



Photo: FAM Stumabo

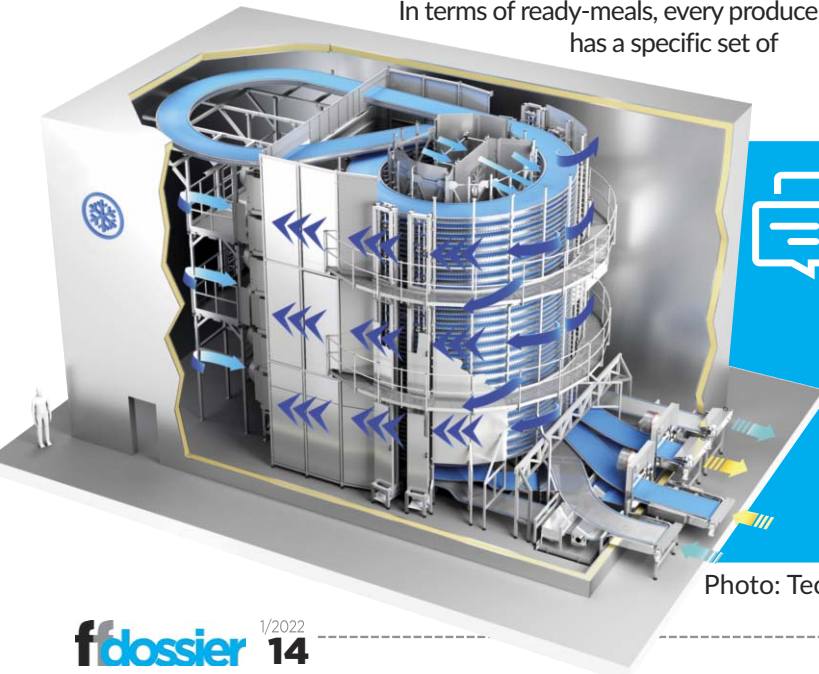
behaviours. The shreddability and diceability of cheese are influenced by a set of material characteristics and is mainly controlled by a fine balance of its viscoelastic behaviour. Research efforts and close collaboration with both processors and research institutes has translated into a successful range of high performant dicing, shredding and grating solutions for analog cheese products. Our cutting solutions take into account a combination of parameters like temperature, speed, special cutting tools, different knife materials, etc. The FAM Centris™ 400C shredder family with SureShred16 cutting heads are powerful, hygienic shredders that offer top quality shreds at high throughputs. Our FAM Hymaks™ and Flexifam 55 dicers are among the strongest and most flexible cheese dicers in the market, producing highly uniform and clean dices and shreds," representatives conclude.

STRIVING FOR FROZEN READY-MEAL EXCELLENCE

Personalization, hygiene and reliability: Tecnopool's patented T-Worth technology ensures greater productivity and increased customer satisfaction in the field of frozen foods, and in particular in the growing ready-meals sector. Unlike conventional drum-based spirals, the T-Worth belt installed in Tecnopool's freezing systems is driven externally by a motor that is smaller in size and needs less power. "This in no way affects the system's performance, as friction is reduced and the belt is driven instead of being pushed, offering considerable advantages right from the design stage," Tecnopool representatives say.

In terms of ready-meals, every producer has a specific set of

requirements, depending on the type of product, volumes, and logistics. By eliminating the need for a central pivot, T-Worth technology increases the system's flexibility, enabling it to combine two separate lines with same-level entry and exit. Another distinctive feature of Tecnopool's freezing systems is the use of horizontal air flows that guarantee excellent freezing quality. The T-Worth system allows cold air to flow over the product, under the product and throughout the spiral at a rate of up to 3 meters per second. "With ready-meals, this characteristic is essential as it ensures excellent, rapid freezing, while preserving the ingredients' flavor and organoleptic properties. The entry of humid external air is limited by air cutting tools placed at the inlet and outlet ends of the belt to reduce frosting and maintain the high efficiency of the evaporators. Moreover, for more than ten years now, Tecnopool has been using sequential defrosting evaporators that can be defrosted individually while the others continue operating, thus preserving the internal temperature of the cabinet and the effectiveness of the freezing process. This method allows the system to run in a continuous cycle, 24/7," representatives add. Finally, easy access to internal spaces also guarantees another important competitive advantage, that is, simpler and faster maintenance, without the need to disassemble parts in order to access the area required. Every maintenance operation can be carried out from the outside of the spiral, thus also facilitating visual inspections.



For more than ten years now, Tecnopool has been using sequential defrosting evaporators that can be defrosted individually while the others continue operating, thus preserving the internal temperature of the cabinet and the effectiveness of the freezing process.

Tecnopool

Photo: Tecnopool



The only limit
is our customer's

IMAGINATION

We design, develop and implement innovative and customized solutions for the food processing industry: high-performance systems for your business

Spiral Freezer

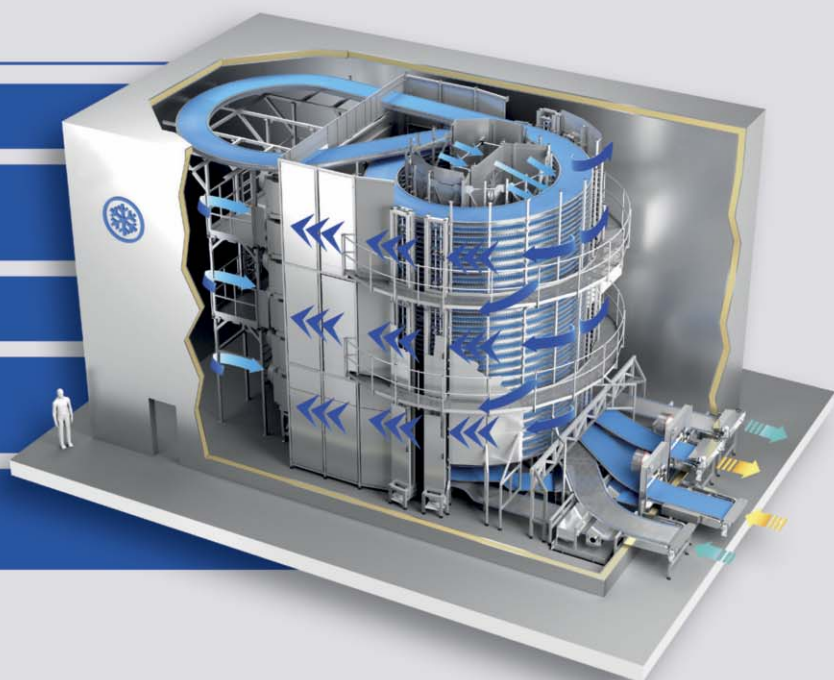
Energy savings

Hygienic design
for enhanced food safety

Fast and easy maintenance

Space saving and flexible
layout definition

Sequential defrosting
for 24/7 continuous production



TECNOPOOL
PART OF TP FOOD GROUP

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ALWAYS IMPROVING ON MANUFACTURING METHODS

When making a capital purchase, processors need to identify the flow of their current system, according to Urschel representatives. If creating a new line, make sure each station will work seamlessly with the next. Safety and flow should be fully analyzed. Working with a line company offers an additional amount of security. "In analyzing a new purchase, such as cutting machinery, a test cut of the supplied customer product may be highly advantageous. The customer should make sure the machine fits their needs and any future flexibility that may be foreseen. If replacing an existing machine with a different model, check to see if there may be a turnkey approach. In addition to choosing the proper cutting machine, ask about spare parts availability, maintenance, and determine the degree of support after the sale," they add. Urschel offers support to every customer for long life of their cutting machinery. Recent innovations by Urschel in the fruit/vegetable sector include the TranSlicer® 2520 Cutter (T2520), E TranSlicer® with discharge conveyor (ETRS-C), new DiversaCut® models (2110A and Sprint 2), the Affinity® CD-L Dicer, and additions to the MicroAdjustable® line of Model CC cutting heads. The T2520 is the latest evolution of the original TranSlicer that revolutionized the fresh salad industry. It excels in commercial food processing of fresh-cut salads, leafy vegetables, celery, leek, carrots, cucumbers, and fruits. The design concept encompasses the next generation of sanitation to greatly reduce cleaning times. To accommodate different types of products, the machine offers a choice between three feed belt configurations: primary and secondary belts, full-length primary belts, or the more compact machine version featuring shorter primary belts. HMI option is also available. The ETRS-C, DiversaCut 2110A® (2110A) and Sprint 2® Dicers feature built-in discharge conveyors to facilitate

dispensing cut product into totes. The built-in conveyors assist in effectively capturing slivered, small cuts of products such as leeks, onions, or peppers to promote complete discharge from each machine. Also new for the 2110A, the DiversaCut 2110A equipped with a large product input. Urschel delivers a targeted solution to processing whole heads of leafy vegetables – the DiversaCut 2110A® Dicer specially equipped with a large feed hopper and a new type of impeller. Working with leading fresh-cut processors, this new development alleviates precutting and minimizes product handling. The new Affinity CD-L Dicer, the most recent addition to the Affinity series, combines new technology with the utility of previous Urschel Model CD-A and L-A machines. Processors replacing Model L-A's with the CD-L achieved more than twice the capacity. Feed spindle, feed drum, and 5 HP (3.7 kW) motor work effectively with the cutting components in the successful processing of dried fruits and other products. Optional integrated oil spray system lubricates circular knives to assist in the processing of sticky products. New addition to the Model CC MicroAdjustable® Cutting Heads, the 14-station patented Julienne Head. The head provides up to twice the capacity of a standard 8-station head and provides a time-saving design that facilitates and expedites cleaning and changeovers. Also of note, the .212 V slice MicroAdjustable SL-14 head that features a new patented SlideLocc™ design. Knives are changed out in three simple steps: slide, lock in place, and tighten. "Urschel speaks the language of food processing and the local language, so important details in customer expectations are met," they add. Some of the key issues processors are facing include adequate labor and staffing and more in a machine design. By engineering and manufacturing improved technology in a machine, the processor saves time, reduces staffing requirements, and improves capacity and quality of product output. "Customers are demanding more in a design than ever before. Cutting principles are more precise to produce tighter, increased in-spec results, dedicated to increasing usable product. Components are constructed with ease of use elements, such as built-in handles, while also being able to withstand rugged production environments. Tools that accompany machines are also designed to expedite routine procedures. It all relates to time savings and cost savings," Urschel representatives argue. Customers are looking for a machine with components that work with their fast-paced line. Small and large companies want a robust machine that will hold precision slice tolerances throughout production runs with guarantees of parts and service when they need them. The ability to make changes 'on the fly' to be responsive to the needs of their environment. "Urschel is always improving on manufacturing methods and designs to introduce newer technology – from machines to components to knives, Urschel partners with processors all over the globe to continue to move forward and grow with the everchanging demands of the food industry," company representatives conclude. ●

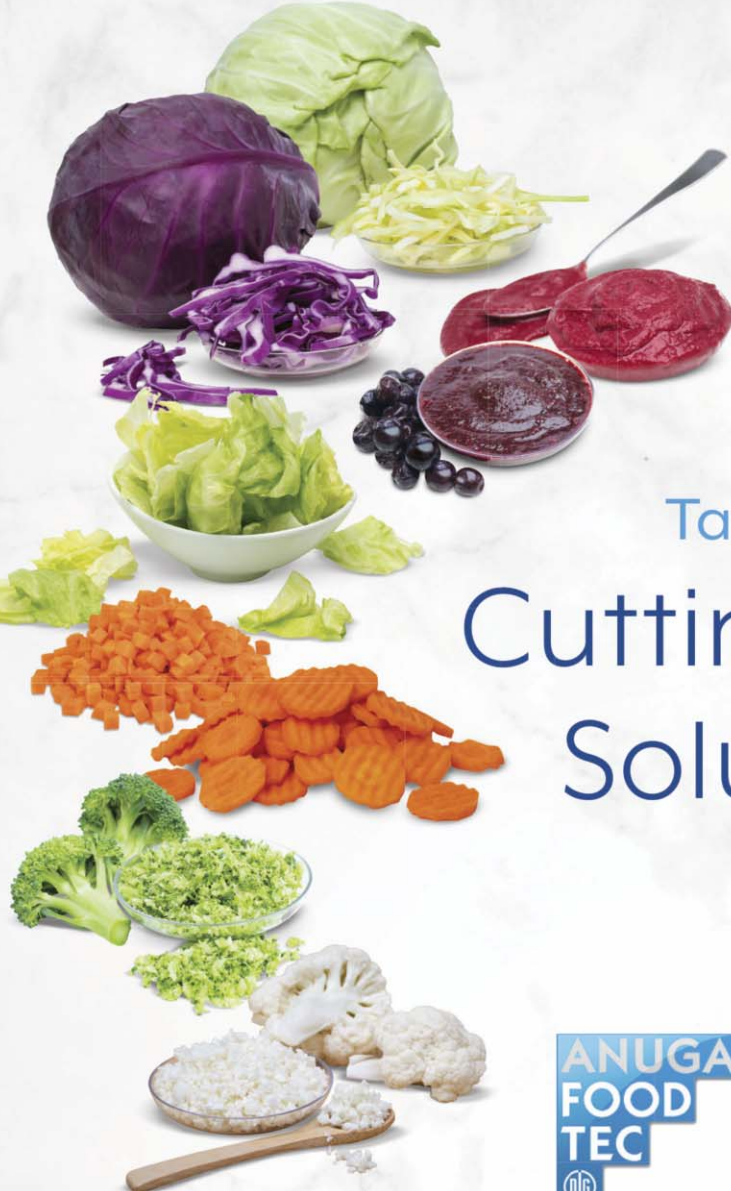


Photo: Urschel



Urschel speaks the language of food processing and the local language, so important details in customer expectations are met. Some of the key issues processors are facing include adequate labor and staffing and more in a machine design.

Urschel



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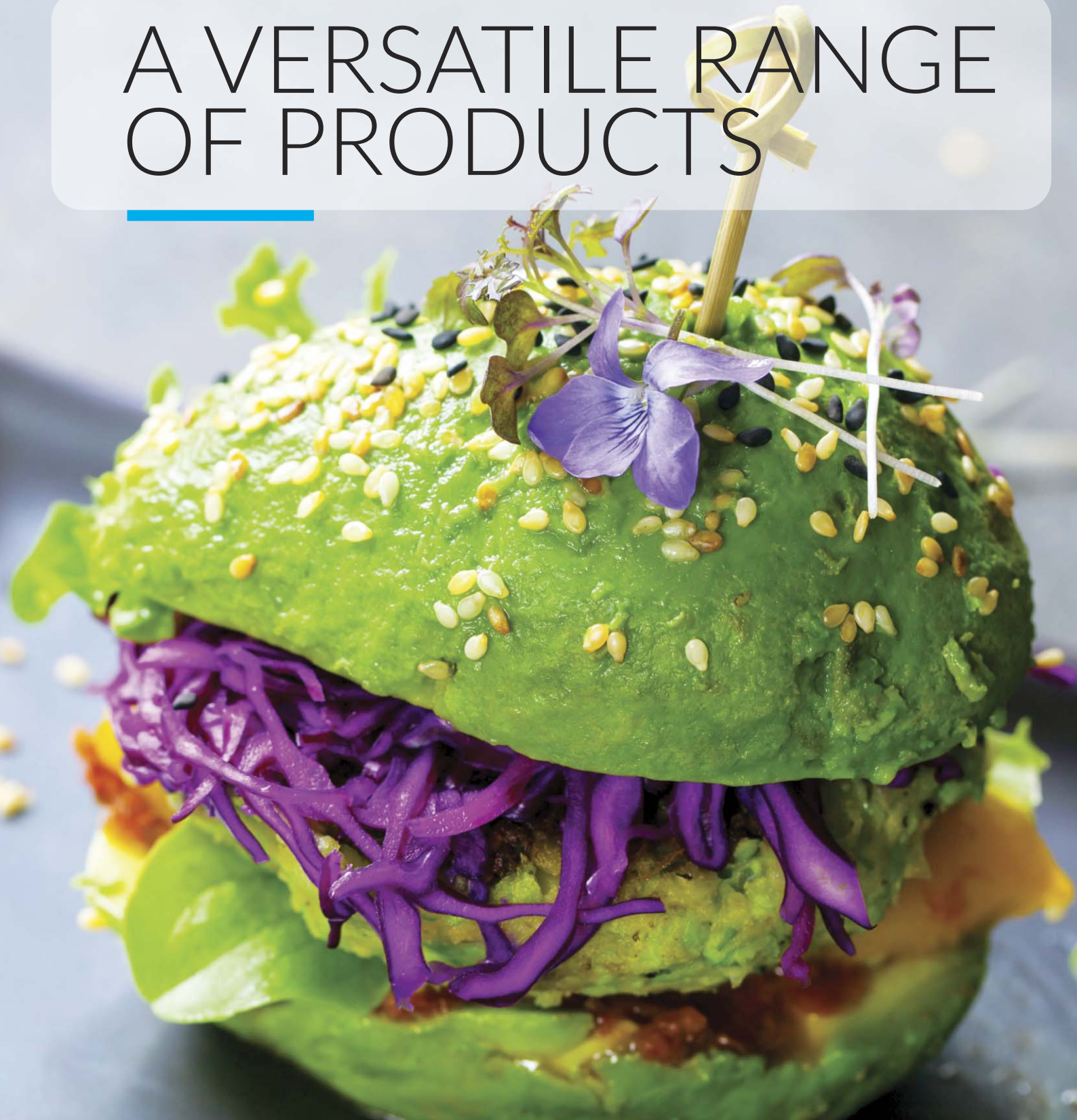
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A VERSATILE RANGE OF PRODUCTS



Burgers are a staple product around the world, and trends such as meat-free or free-from have generated a very intense innovation process by manufacturers around the world. The versatility of the burger patty also makes it easy to work with, so the amount of new products being released in this category every month should come as no surprise.

I

n the US, over two-thirds of the adult population were thought to eat a burger from a quick-service restaurant (QSR) at least once a week prior to the arrival of COVID-19, with

consumers across the country eating approximately 50 billion burgers per annum, as Frozen Food Europe has previously shown. Over 70% of all beef eaten in US restaurants is in the form of a burger. Aside from the impact of COVID-19, the market for meat-based burgers has also had to contend with challenges such as the rise of meat-free diets and health concerns over red meat intake. Although health has been a major driver in the adoption of meat-free diets in parts of the world such as Europe and North America, concern over animal welfare is also a leading factor. For this reason, manufacturers of burgers are having to pay greater attention to supply chain considerations such as animal husbandry and the provenance of their meat. Concerns over climate change and more sustainable use of the planet's resources have also contributed to the rising popularity of plant-based diets. A European study carried out in 2020 by EIT and the University of Reading revealed high levels of consumer concern over processed meats. The study – which surveyed the opinions of people from the UK, Spain and Denmark – discovered that consumers were broadly receptive to meat-based burgers enhanced with additional ingredients such as onions, herbs, spices, mushrooms and pulses. For most respondents, the ideal burger would have a meat content of 75%, with vegetables or plant-based ingredients making up the remaining 25%. In contrast, there was little enthusiasm for processed meat products fortified with additional additives or preservatives.

PLANT-BASED AT HIGH DEMAND

According to the Plant Based Foods Association, that represents over 350 members, plant-based foods grew 27% in 2020, double the growth rate of 2019, and the 2-year growth rate is 35%—a rate that is multiple times faster than animal-based and total store sales. “There is so much opportunity in plant-based meats and it is clear consumers are hungry for more variety. Plant-based seafood is a burgeoning category with many new and established brands releasing delicious options. Based on what we've seen from our membership, be on the lookout for whole cuts of plant-based meat, and new varieties of plant-based bacon and chicken—everything from fried chicken to tenders and deli slices—are on the rise,” Julie Emmett, senior director of Marketplace Development at the Plant Based Foods Association (PBFA) says. Five years ago, she says, pea protein was just making its way onto the scene and now companies are using everything from mung beans, to chickpea, nuts, and seeds—watermelon seeds most recently—to create plant-based foods, often using blends for optimal taste, texture and nutritional content. On the other hand, consumers are shopping for plant-based foods

across the entire store. With plant-based options available in over 30 different categories, consumers are focused on variety to incorporate plant-based foods at all meal occasions. “As our 2021 US retail sales data for the plant-based industry showed, 62% of American households are purchasing plant-based foods with a 79% repeat rate, growing each year. This signals to retailers that making it easy for shoppers to find the plant-based items they're looking for is more important than ever. Through our marketplace development work here at PBFA, we're focused on collaborating with retailers to optimize their plant-based food strategies. For example, we've seen plant-based meat sales increase by 23% when they are sold alongside animal-based meat. Integrated merchandising speaks to the fact that plant-based foods are for everyone. We are seeing expansion into many different types of plant-based meats as well such as chicken, pork, and seafood in many forms that consumers are familiar with such as nuggets, slices, filets.” One big trend is the rise of the Millennial and Gen Z shopper. These younger shoppers now make up 47% of the US population and their primary motivation for purchasing plant-based foods is an interest in having a positive impact on the planet. There is strong interest in foods that are healthy and taste good but also align with their values, meeting expectations for sustainability and social justice. Another trend that PBFA points out is the incremental decline in the price of plant-based foods as the industry scales—decreasing the disparity of price between plant-based foods and animal-based foods, making them more accessible to all.

A COLORFUL RECIPE

Ardo is one of the manufacturers that has recently extended their product line with the addition of the Beetroot Burger. “The pre-fried Beetroot burger immediately brings colour to your plate. This crispy vegetable burger with beetroot and kidney beans is delicious on a burger bun, as a side dish or as a vegan or veggie burger,” the company says. The red colour, the round shape and the fibre-rich texture are perfect as an alternative to the traditional burger. Ardo also recently brought a new product to its plant-based product line, the Beet Bacon. These pre-fried crispy beetroot lardons are an ideal vegan to bacon cubes thanks to



Photo: Ardo



54%

is the growth in plant-based products sales in the last 3 years.



>70%

of all beef eaten in US restaurants is in the form of a burger.

their delicious smoky flavour, a company statement says. The beetroot bacon is gluten-free and delicious in salads or pasta, on a pizza or with goat cheese.

CHANGES IN CONSUMER BEHAVIOR BECOME MORE OBVIOUS

"When setting up a business development strategy, the most valuable insight is innovation, the main engine of a company that always puts you in the future and that is the basis for creating a reference name in the market. Starting from this aspect of innovation, we wanted to come up with something new and offer consumers healthier, more sustainable solutions based on pea protein, good for both them and the Planet," says Eberhart Raducanu, co-founder and CEO of Verdino Green Foods. The Romania-based company made cured meats until 2018 when it decided to focus exclusively on plant-based products. Besides Romania, Verdino conducts business in Germany, Serbia, Spain, Switzerland, the Netherlands, Vietnam, and Great Britain. "Our Verdino product line is the logical consequence of people's changing needs - they pay more attention to their health, climate and animal welfare. That is why we strongly believe that the future is full of alternatives," Raducanu adds. "Consumption habits, as well as taste preferences, are what contribute to the creation of successful products in our portfolio, the first positions being occupied by sausages and burgers. These are, in fact, products that can be found in the menus of those who prefer authentic, traditional tastes, as well as those of consumers who appreciate international ones. In addition to these taste criteria, which are obviously differentiators from the competition, we add the rich sources of nutrients, proteins, and fiber that our products contain, and which form the basis of a balanced diet, a correct and tasty diet, without compromise."

A STRATEGY TO ATTRACT FLEXITARIANS

Korean-based UNLIMEAT says it's focusing on flexitarians, aiming to make it easy for everyone to have at least some meatless meals."We've offered

bulgogi-style slices, burger patties, mince, pulled pork, meatballs, and vegan cheddar cheese products for some time now, and have also recently launched plant-based jerky. Our newest product, which I'm quite excited about, is a line of plant-based meat dumplings and spicy dumplings plant-based meat fillings, so they're quite a bit more satisfying than typical vegan dumplings, which generally only include vegetables. We've created a product that appeals not only to vegetarians and vegans, but also to meat eaters thanks its umami flavors and juicy, chewy texture. Currently, we've also finished development on deli slices, pepperoni, cream cheese, and pork cutlet (Katsu) and are currently working on bringing them to market," Jei Oh, director of brand strategy for UNLIMEAT says. Global franchises such as Domino's and Burger King in Korea are also offering plant-based items, and the market is beginning to open up. However, while UNLIMEAT has seen a wonderful response to its products from vegetarians and vegans, there hasn't been a great response from the broader market just yet.

A „CULINARY-DRIVEN” BRAND

Good Catch has introduced three new frozen range products across Europe: Plant-Based Classic Style Fish-Free Burgers, Plant-Based New England-Style Crab-Free Cakes and Plant-Based Thai-Style Fish-Free Cakes. "We pride ourselves on the variety of flavours offered amongst our products, their flaky texture, and their impact on conserving preserving the oceans' natural resources while providing a high amount of plant-based protein. What differentiates us is that we are a culinary driven brand and focus on curating that experience for the consumer. Often when working with foodservice partners we will look at their current menus and mock up an alternative menu using Good Catch so they can see a how it would fit into the current systems and offering," according to Chad Sarno, chief culinary officer and founding chef. Regarding current trends in the plant-based market, Chad Sarno points out, to little surprise, seafood. "It's a huge white space and Europe is leading the charge when it comes to innovation, with a whole load of products coming out. I've also noticed that consumers are looking for ingredients that are an exact swap to what they already know, for example a cheese that melts, proteins that react like animal proteins when cooked, and texture comparable to what consumers are used to with seafood. The bar has been set high by brands in this space and consumers have big expectations for products that they can use as an easy transition. From an ingredient and texture standpoint, there is a high standard on functionality and it's important for plant-based products to function how people expect them to. Additionally, consumers are more conscious than ever around nutrition and highly processed foods in the plant-based space. This has been a key focus for us, and our products are made from peas, beans and lentils, all being excellent sources of protein, free of mercury, dairy, and GMOs." ●



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A SOLUTION FOR MULTIPLE OCCASIONS



In 2020 and 2021, one of the main growth drivers for frozen snacks and appetizers has been the need to socialize at home with friends and family, as the foodservice industry had come to a standstill. Another factor of development was the convenience brought by these type of products, as snacking became somewhat assimilated to a regular meal. Manufacturers took notice and extended their product ranges, which now cover nearly all consumption occasions.

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he Frostkrone Food Group for example has brought a new touch with its latest vegetarian and vegan finger food and snack variations. The product range includes a huge selection of

meatless snacks: Sweetcorn & Chilli (sweet and spicy corn, seasoned the Mexican way and enveloped in crunchy batter), Mozzarella Bricks (outside crispy and crunchy, inside soft, velvety Mozzarella), and Halloumi-Style Fries (the sticks are made of aromatic halloumi cheese in a crispy golden batter, tempura-style). Additionally, with its new plant-based range called "Really", the Frostkrone Food Group is tuning into the lifestyle of a generation that is increasingly shunning traditional meat products. But it is a generation that certainly does not wish to go without a good selection of flavoursome meals. Enter Really, the perfect answer, which offers a huge variety of completely vegan products that follow the philosophy of plant-based foods. According to the company, the range covers a wide selection of cheeses and also fish, beef and chicken substitute products like Hot Vegan Cheese Bites (vegan-style Hot Vegan Cheese Bites that are the perfect accompaniment for exciting TV evenings. Coated in deliciously crispy breading, they are ready to be enjoyed after only a few minutes), Vegan Chilli Cheese Nuggets (a popular finger food classic presented as vegan snacks for in between meals is just as tasty and hot and spicy as the original chilli cheese nuggets. These nuggets in the crunchy breading come out of the oven after a few minutes and are ready to eat immediately), Vegan Fish Nuggets (the practical, easy-to-handle snacks, baked to a luscious golden colour, are ready after a few minutes), Vegan Beef Burger (whether it's served with a crispy salad and some potato sticks or perhaps in a brioche burger bun, this vegan beef burger has the right consistency and boasts a full-bodied, flavoursome taste), and the Vegan Chicken Burger (a crispy, patty-style burger that is best served together with a sesame burger bun, crispy salad, tomatoes and a vegan sauce). All products are pre-fried and deep-frozen. They can be prepared in the oven, in a deep fryer or in the pan all within a matter of minutes. And

they are ideal not only for snacks at home; thanks to their simple preparation and also their endless serving possibilities and combinations, they are suited for the foodservice sector. Also by the Frostkrone Food Group, the "Now This Is Cheesy!" brand marries together all the delights of cheese in the handy and practical guise of finger food as in these examples: Halloumi Fries (sticks made of aromatic halloumi cheese in a crispy, golden batter, tempura-style), and Cheese 'O'S (cheese & onion rings filled with creamy Monterey Jack and Cheddar cheese and perfected with finely chopped red onions in a crispy breaded coating). "We offer consumers a diverse product range of chilled and deep-frozen, quick-to-prepare finger food and snacks. The Frostkrone Food Group has been an innovation leader driving this segment for years," points out Frédéric Dervieux, CEO of the Frostkrone Food Group.

A NEW LINE OF VEGGIE PRODUCTS

As spring gives you a refreshing & cheerful state of mind, Le Duc's vegetable snacks are chock-full of vegetables and make good use of what nature has to offer. "The crunchiness of our Breaded Garlic Mushrooms for example, easily match with a side salad. And the Le Duc Broccoli Cheese Nugget is full of big recognizable green chunks of broccoli and gives bite to a pasta salad," representatives say. These vegetarian snacks are perfect as a side dish next to the use on a sharing platter. You want your





dishes to appeal to everyone, so variety in dishes and flavors is really important. One way to achieve this is using seasonings that are a perfect fit for the wishes of your guests. In addition, this is the perfect way to lend your dishes a personal touch. The best way to do this is using colorful ingredients combined with veggie snacks and sprinkle a seasoning as a

finishing touch. "And, of course show your guests what's inside of the snacks. For example cut the Breaded Mushrooms into two halves and present it on the leaves of a colorful salad. A healthy starter or snack will be the result. Le Duc is happy to help you with more vegetarian options to make your menu delicious and easy! With our products, you can offer vegetarians and flexitarians alike many versatile dishes, and you can let meat eaters discover vegetarian cuisine in an accessible way." Vegetables are central to many of Le Duc's products. "Broccoli is the main ingredient in our Broccoli Cheese Nuggets. We make them with whole pieces of broccoli, to give the product a nice bite. The nuggets are also filled with Gouda cheese." According to representatives, the cheese that Le Duc uses always meets two important requirements: first of all, it is consistently high quality, as it is important that the cheese has exactly the right firmness, creaminess and color with every bite, in addition to taste. "Secondly, what makes our cheese special as well is that Le Duc only uses cheese made with vegetarian rennet. Le Duc is a specialist in vegetarian products and has been working exclusively with vegetarian ingredients for 20 years. This is how we ensure that our products are suitable for all," they explain. Le Duc's newest vegan finger food product, Broccoli & Cheese Veggie Fries, is also based on the same popular flavor. "This is a product we are proud of: crispy vegetable fries filled with tasty vegetable chunks. Like all of our products, Broccoli & Cheese Veggie Fries are made with lots of love and attention. We start by flavoring the broccoli pieces with a unique Le Duc spice blend. They are made into a batter with potato and cheese before being shaped into sticks in the molding machine. Next, we apply a coating to give the vegetable fries a crunchy bite. The Veggie Fries are then pre-fried, so you only have to cook them for a

very short time. After just a few minutes in the oven, deep fryer or Airfryer, they are ready to serve!" Veggie Fries can be presented as a side dish or as finger food with a dipping sauce; as they are or on a serving board. The advantage of this product is that it appeals to a broad range of guests. Because this product appeals to everyone, the target group is not limited to vegetarians and vegans only. "You can also encourage other guests to snack on veggies more often unnoticed. Children also love them as a fun, tasty and colorful way to eat more vegetables. In addition to Broccoli & Cheese, our Veggie Fries come in three other surprising flavors: Pumpkin & Sweet Potato, Mashed Kale & Potato and Cauliflower & Potato," Le Duc representatives conclude.

DIFFERENT APPROACHES TO SNACKING

The Real Good Food Company announced the launch of its newest products, Stuffed Chicken Bites, which are made from nutritious ingredients and 100% Grain Free, Gluten Free, only 3g net carbs and packed with 25g protein per serving. The platform is merchandised in the fast growing, and high velocity frozen poultry category with other traditional breaded chicken options. Unlike other traditional breaded frozen options, Real Good Foods' Stuffed Chicken Bites do not use processed flours or grains. These stuffed chicken bites can be prepped in minutes and are available in two flavors, Three Cheese and Cheesy Taco. Planet Based Foods, the first company to produce nutritious plant-based meat with sustainable hemp as its number-one ingredient, will debut its first comfort food products – original and southwest taquitos. Planet Based Foods' taquitos are now available to foodservice and retail buyers looking to add soy-free and GMO-free plant-based options to their lineups. Planet Based Foods' newest products represent an expansion into the plant-based convenience category after successfully launching its hemp-based burgers, sausages and crumbles in foodservice and via planetbasedfoods.com and Vejii.com. The company's innovative production process is the first to use hemp seed, along with pea protein and brown rice, to maximize nutrients and fiber in its plant-based meats with zero waste. The brand's Original Crumble now features as a nutritious, plant-based ingredient in its new taquitos that also use 100% vegan cheese. Turning to desserts, My/Mochi has announced the launch of their newest innovation, My/Mochi Smoothie Incredibites, a mashup of pillowy sweet rice dough and real fruit puree smoothie. Arriving this summer, My/Mochi Smoothie Incredibites will be available in two of the most popular flavors of blended smoothies, Strawberry Banana and Mixed Berry. Each handheld snack contains 60 calories of real fruit puree smoothie goodness mixed with pillowy mochi dough chewiness while being gluten-free, made without soy, and free from GMO ingredients. ●

It's all about **POTATO**



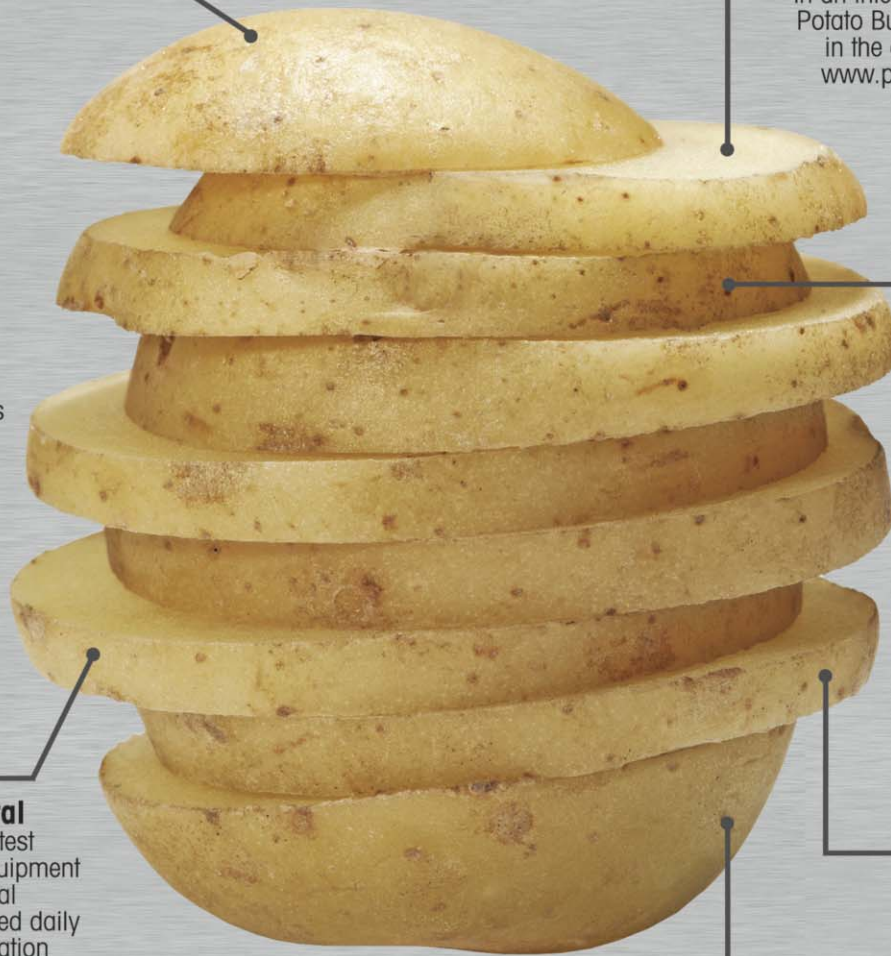
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Potato Processing International has been serving the global potato processing industry for 25 years and is regarded as a must-have information source for potato processors, equipments and ingredients manufacturers, as well as players in storage, retail and foodservice. This business-to-business magazine is published six times per year and continuously strives to be the most comprehensive publication, containing in-depth articles, expert views from some of the most respected companies in the industry, exclusive interviews, as well as news and trends.



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From breaking news to the latest innovations in processing equipment and potato products, the portal potatobusiness.com is updated daily with the most relevant information for all players in the potato processing and storage industries. Regarded as a trusted source of information, the website also contains exclusive blog articles and white papers on various current topics that concern the potato universe.



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Tailored specifically to meet the needs of the busy professionals in the potato industry, Potato Business Digital is the first industry standardized digital magazine for tablets and mobile phones. This quarterly online publication presents exclusive articles on various processing topics, as well as information on ingredients, food safety and storage innovation, in an interactive and dynamic form. Potato Business Digital is available in the click-to-read format on the www.potatobusiness.com portal.



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A COMPLETE COMMUNICATION PLATFORM

ALWAYS A DELIGHT

Frozen bakery and pastry products have always been a convenient solution to those looking for a quick treat. The range of products in this segment is quite impressive, and caters to almost every taste. And the market overall is dynamic, even if the boost given by the time spent at home in the better parts of 2020 and 2021 is fading away.

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he global frozen bakery products market is projected to reach USD29.5bn by 2026, from USD22.3bn in 2021, at a CAGR of 5.8% during the forecast period, according

to a market research report published by MarketsandMarkets. The increase in consumption of frozen bakery products in the emerging markets of the Asia Pacific and Latin America has also led to a rise in the sales of frozen bakery products. The demand for frozen bakery products in developing regions is driven by the increase in disposable income, the report shows. By distribution channel, conventional stores have the potential to be a prominent channel for frozen bakery products. Niche retailers among these stores have also realized the opportunity to establish an effective retail chain. Earlier, these companies marketed their line of products only through exclusive stores situated in prime locations. However, these companies now understand the dynamic changes in consumer preferences for healthier food products. Region-wise, Asia Pacific is among the fastest-growing regions for frozen bakery products.

NEW PRODUCTS BY MAJOR MANUFACTURERS

German-based Brezelbäckerei Ditsch has added further products to its range of filled snacks. Two new savoury fillings – herb butter and garlic butter – have entered the range of filled pretzels. Another new filling is salted caramel, which is a very popular flavour at the moment, including in the baked goods market, according to a company statement. Ditsch's pretzels filled with sweet and salty butter caramel cream (81 g) appeal greatly to consumers, particularly the younger target group. Neuhauser, a company that develops, manufactures and distributes a wide range of bakery (frozen bread, tray part-baked bread, stone part-baked bread, and specialty bread), viennoiserie (ready to prove, pre-proved, frozen or fresh - milk rolls, brioche, beignet), and pastry products (frozen ready to prove or fully baked Pastel de Nata) has also expanded its range, introducing the Pastry Inspirations Shortbread tart with strawberries (a creamy recipe with a strawberry filling and a crunchy sugar topping and cookie pieces), Lemon

Meringue (a lemon filling with a touch of Yuzu with a topping of crunchy meringue pieces), and Crème Brûlée (a gourmet recipe with vanilla filling and AOP Isigny salted butter caramel). Greek specialist Evoiki Zimi S.A. recently showcased its 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. They need only 20-minute bake and are ready to be served at parties and at 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. Arabatzis is one of the leading producers of frozen dough products in Europe, and its consumer proposition is unique as it produces high-quality products with Greek and Mediterranean recipes – products like filo Rolls, bougatsa with cream or hazelnut Praline, traditional country-style pies with spinach and Feta cheese (P.D.O.), puff pastries sheets and many more. Today, Arabatzis Michael SA 'Hellenic dough' produces many deep-frozen products like Filo Rolls, Puff Pastry sheets, Filo dough, Croissants, Traditional Pies, Pizzas, etc. which can be found in food stores, bakeries, hotels, supermarkets, and other retail outlets as well as restaurants worldwide. Turning to innovation, CGM has brought values of customer service, innovation, product quality, territoriality on the shelves of the best distribution brands, first with the fried line and now with a new oven line. The company says it is a unique project for a few reasons. First, it is digital: the packaging is "talking". The QR code on the package will contain constantly updated and always different contents to allow the buyer to live a different experience every time. You will find recipes, tips for use, curiosities, and much more. It is also eco-sustainable, the packaging is compostable. It is also light, as the products that will be part of CGM's line are original, new tastes to be tried, moreover, they are all bakery products, therefore, attentive to health without sacrificing taste. The products that are part of CGM's Oven Line include Arancini with cheese and pepper, Bites of cod, Hearts with Parmigiano Reggiano, Stuffed olives all'ascolana, Green jalapenos, Breaded mini frankfurters, Mozzarella with truffles, and Breaded mozzarella. ●



HOW THE PANDEMIC REVITALIZED THE FROZEN READY MEALS MARKET

Over the previous decade, the variety of frozen ready meal offerings have increased dramatically. Companies are now serving gourmet meals made with high-quality ingredients in the form of frozen ready meals. With the world moving at a breakneck pace, these are satisfying the growing demand for specific meal solutions. A recent report by Future Market Insights suggests that global frozen ready meals market will grow at 8.2% CAGR and reach USD89.7bn by 2032.

By Hakimuddin Bawangaonwala, Future Market Insights

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egion-wise analysis conducted by FMI revealed that Europe currently leads the frozen ready meal market, accounting for 25.2% of the global market in 2022, as regional

manufacturers are investing in developing cold storage facilities. The frozen ready meal market in the US is forecast to grow at a 5.4% CAGR through 2032, supported by rise in convenience trend and growing investments by discount retailers.

The Middle East and African frozen ready meals market is predicted to grow at a robust 6.2% CAGR whereas Asia-Pacific market will expand at 4.7% CAGR, as consumers overcome frozen food stigma and are demanding nutrient rich ready to eat food. Frozen chicken and frozen snacks are expected to account for more than 60% of the global market share in 2022, owing to consumers becoming more health conscious and progressive urbanization across the globe. The study also highlighted that frozen ready food items are becoming popular among on-the-go shoppers and businesses are riding on this convenience trend by offering ready to eat food items ranging from frozen sweets to appetizers and dinners. Frozen ready meals are in high demand in fast paced economies, as consumers look for customized meal options which are not only convenient but also have microbiological and fungal-free properties. To appeal to a larger clientele seeking health and flavor, frozen ready food makers are now integrating food items that have nutritious benefits with taste.

HIGH QUALITY AT AFFORDABLE PRICES

Before the pandemic, frozen ready meals were considered unhealthy as they had high concentration of preservatives and salt that extended the life of food but compromised nutritional value. During the initial phase of the pandemic, a significant portion of the population became concerned about its health. As a result, individuals were more careful about what they consume. To address these changing consumer preferences while maintaining the ease and convenience of ready to eat foods, frozen ready meals manufacturers started producing items which were of great quality, were affordably priced, and minimized health risks. As consumers were confined to their homes due to lockdown and social distancing practices, they relied on healthy quick and ready-to-eat meals to survive. With closure of diners and other outlets, along with aforementioned factors, the demand for frozen ready meals increased significantly during pandemic.

The post pandemic scenario is expected to elicit mixed reactions in the frozen ready meal sector. The opening of quick serve restaurants and resuming of busy lifestyle might hamper the sales in industrialized countries. However, manufacturers are eyeing organic and gluten-free meals for decreasing the amount of additional preservatives in their food products and attract the health conscious consumers. They are also



8.2%

is the projected CAGR for the frozen ready meals market until 2032.

investing in storage facilities to streamline their supply chain and make their products appear on supermarket shelves. In terms of product selection and quality, frozen ready meals have improved significantly. Advancement in preservation techniques to increase life span of frozen packaged vegetarian meals and partially cooked meat meals along with substantial adjustments in the retail sector has helped gain consumers' trust in frozen ready meals. Frozen ready vegetarian meals are still viewed as a distant second to fresh food but manufacturers are cracking the code to draw customers to the refrigerated section by utilizing better labeling.

As a consequence of improved health awareness and concerns about food safety, more consumers are carefully selecting their frozen ready meals. Furthermore, the value of natural ready meals is derived in large part from customer trust and the assumption that the goods are healthy. As customers' awareness about food and its origin develops, companies are focusing on addressing the frozen food stigma with healthier meal choices, as well as promoting 'convenient' reputation.

E-COMMERCE AND ONLINE RETAIL MAKING FROZEN READY MEALS MORE ACCESSIBLE

As digitalization and the Internet continues to take hold, top frozen and ready to eat meal manufacturers are effectively embracing virtual retail and direct-to-consumer platforms to guarantee that their products are available to a diverse range of customers. Research has shown that 50% of American shoppers are willing to purchase food online. Online sales are estimated to account for 15-20% of total food and beverage revenues by 2025. Over the upcoming decade, the demand for vegetarian and frozen meat segment is predicted to grow significantly. According to Future Market Insights, frozen chicken and frozen snacks will account for more than 60% of the global frozen ready meals market by 2022 end. As a result of this rapid growth, major food producers are turning to internet channels, notably e-commerce websites, to widen their product reach.



Manufacturers are combining both conventional as well as technological advancements to enhance outreach of vegan food products. For instance, in January 2022, FEEL FOODS LTD. partnered with SkipTheDishes, a leading on-line food delivery service to provide its BeGood plant-based chicken products in the Tri-City area of British Columbia. In 2021, Feel Foods Ltd. also launched its new e-commerce platform to support enhanced logistical operations for their vegan frozen and ready to eat foods and snacks. The new e-commerce site will have cutting-edge inventory control capabilities to ensure operations are efficient, effective, and uninterrupted. Aside from using their online presence, frozen ready meals producers are also collaborating with traditional brick-and-mortar retailers to guarantee that their products are widely available in accessible areas. For instance, restaurant chain Zizi recently teamed with Tesco to bring some of its most famous frozen ready meals to the latter's frozen food department.

LOW-CALORIE FROZEN READY MEALS ARE BECOMING A REALITY

Consumers are catching on to the idea that frozen meals may be fresher than produce, highly handy, and a terrific method to avoid food waste. This is making it particularly appealing to millennials. The pandemic saw a rise in frozen ready meals sales as buyer preferred long-lasting items and wanted products with superior flavor and nutrients. Improved production processes and growing demand of premium food products have kept frozen ready meals at the top of many consumers' shopping lists as we recover from the pandemic. Manufacturers are capitalizing on this trend and are developing technologies that optimize the concentration of flavors and the quantity of sauces that can be included in frozen ready meals products. For instance, Steam Infusion is assisting frozen food manufacturers in effectively developing and optimizing sauces for inclusion in a frozen ready

meals line. Its Vaction unit technology has been scientifically proved to maintain fresher, cleaner flavors while providing unrivalled cook times and processing efficiency. The improved flavor profile also allows for the reduction of flavor enhancers such as salt. Steam Infusion cooking method is perfect for creating realistic flavours that customers demand and like. Because of the rapid cooking time offered by Vaction unit technology, manufacturers can now add that brilliant, glossy color and rich flavor profile to their product, thus giving frozen ready meals a handmade taste that appeals to consumers.

The high-speed adjustable mixing environment creates a homogenizing effect, allowing manufacturers to mimic fatty flavors and provide a creamier consistency to ready-meal sauces without the added calories. Furthermore, there is no burn-on in the sauces since the food is not subjected to high temperatures, which improves the appearance and allows for faster cleaning.

THE ROAD AHEAD

Consumers of all ages prefer frozen ready meals for their convenience and low cooking time. Top producers are looking to take advantage of increased demands by implementing strategic activities like new product launches and divestments to strengthen their market positions. For instance, Conagra Brands, Inc. launched their extensive summer line products in 2021 to provide single-serve frozen meals, and provide new dishes from Banquet, Marie Callender's, Wholesome Alternative, and Hungry Man. Similarly, popular meal kit subscription business Blue Apron recently launched its own line of microwaveable meals. Blue Apron has joined other services in offering private label items, beginning with frozen microwaveable versions that provide customers with greater convenience. The company is expanding into the private label frozen ready meal industry with the introduction of Heat & Eat, its first line of single-serving prepared meals. Given the expanding number of competitors in this business, it is expected that competition would only intensify. To increase their market presence, established market players must seek collaborations and partnerships. For instance, Pilgrim's Pride Corporation purchased Kerry Consumer Foods' Meats and Meals division in the United Kingdom and Ireland in June 2021. This move is expected to boost the company's portfolio as it will add prominent names such as Denny, Richmond, and Fridge Raiders to PPC's brand family. Kerry Meals is a prominent ethnic chilled and frozen ready meals business in the UK, whereas Kerry Meats is a maker of branded and private label meats, meat snacks, and food-to-go items in the UK and Ireland.

As the market evolves in the upcoming years, a gradual shift in investor objectives, with a greater emphasis on profitability and less on uncontrolled development can be expected. With start-ups emerging in this sector, investors will continue to pay premium prices for the proper frozen ready meals assets. ●



25.2%

is Europe's market share of the global frozen ready meals market.

1

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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

Packaging Technology

state-of-the-art equipment and solutions

BeNeLux Market Review

major players and new products

Cooked & Pre-Cooked IQF products for the Food Industry

rice, pasta, sauces, cereals, noodles, vegetables

Technology and Equipment

industrial freezing, proofers, ovens, coolers, freezers

Digitalization & Networking

smart solutions for the food industry

Frozen Fish & Seafood

sustainable practices, market overview, major processors

Nutrition & Ingredients

vegetables, fruit and herbs

Frozen Food in the UK

market overview

Trade fairs: PLMA, Anuga FoodTec, IFFA Frankfurt, Seafood Expo & Processing Global



3

MAY/JUNE

Ad closing 27.05
Publishing 10.06

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

Multifunctional Cooking Devices

one device for different cooking processes

Frozen Food in the US

evolution, challenges, opportunities & major players

Trade fairs: Summer Fancy Food Show New York, SnackEx

4

JULY/AUGUST

Ad closing 29.07
Publishing 12.08

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

Frozen Food in Spain and Portugal

latest market developments

Technology & Logistics

industrial freezing equipment

Dishwashing Machines for Professional Kitchens

saving resources, networking of devices, hygiene optimization - what next?

Nutrition & Ingredients

trends for coated and breaded products

Trade fairs: IBIE Las Vegas, SIAL



5

SEPTEMBER/OCTOBER

Ad closing 16.09
Publishing 30.09

SIAL SPECIAL EDITION 2

Key Exhibitors Road Map and Event Agenda

SIAL Trends

special report

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

Blast Chilling and Shock Freezing

versatile applications between shock freezing and pasteurizing

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 Stuttgart, INTERPOM Kortrijk



6

NOVEMBER/DECEMBER

Ad closing 25.11
Publishing 09.12

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

Meat and Veggie Burgers

innovation and trends

Technology & Logistics

freezing and chilling equipment

Quick Service Restaurants & Bar and Snack Channel

market evolution, leading operators in Europe

Going Green

substantial contributions of equipment manufacturers

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 2023, Marca Bologna 2023, Fruit Logistica 2023, Gulfood 2023

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