

EUROPEAN

BAKER & BISCUIT

Issue 5 (196) | Vol. 32 | 2024

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Technology

Baking It Smart: How Oven Tech Is Heating Up the Industry

Product Spotlight

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WEEKLY NEWSLETTER

contents

Issue 5 (196) | Vol. 32 | 2024

- 04 **Comment**
The Future of Baking: Tech-driven, Transparent, and Healthy
- 06 **News**
Highlights of Business Moves, Market Trends, New Launches, and Research
- 10 **Technology**
Baking It Smart: How Oven Tech Is Heating Up the Industry
- 14 **Expert View**
Low Pressure Extrusion: Reshape Your Product Possibilities
- 16 **Special Feature**
Critical Controls Make All the Difference
- 20 **Food Safety**
Step by Step to Digital Food Safety
- 22 **Packaging**
The Future of Baking Industry Packaging: Trends and Innovations
- 24 **Supply Chain**
Maintaining Quality in Frozen Bakery Products
- 28 **Snacking Trends**
Indulge Yourself
- 32 **Ingredients**
Sweet, Sweeter, Sweetener
- 36 **Market**
For Italians, the Quintessential Bread is Still the Fresh and Unpackaged One
- 38 **Product Spotlight**
Meet the Bread Sommelière Who Can Make Your Bread (Sell) Better
- 42 **Trade Shows**
Fi Europe Gears Up for a Stunning 2024 Edition

32

INGREDIENTS

Sweet, Sweeter, Sweetener





The Future of Baking: Tech-driven, Transparent, and Healthy



While consumers are mindful of health and sustainability, they also crave indulgent, satisfying snacks—a balance that forward-thinking brands are already mastering.

Tudor Vintiloiu

As we head into the final stretch of 2024, the bakery industry is trying to stay ahead of the continuously evolving consumer expectations. The latest findings from Puratos' Taste Tomorrow report highlight three critical trends reshaping the market: tech-inspired innovations, conscious consumerism, and holistic health. These insights not only reflect a significant shift in shopper behavior but also provide a clear roadmap for where the industry is headed.

The rise of technology in food production, particularly through AI and other tech-driven innovations, is revolutionizing how we approach product development and customer interaction. From empathic AI to recipe creation, the possibilities are endless. This opens the door to creativity and efficiency, pushing bakers and manufacturers to embrace innovation as a competitive edge.

At the same time, conscious consumerism is driving demand for transparency in sourcing and production. Consumers want to know where their food comes from, how it's made, and the impact it has on the environment. Locally sourced ingredients are gaining favor, even if the majority of shoppers don't consistently buy them yet.

A health-centric mindset is another pivotal trend, with an increasing number of shoppers prioritizing gut health, natural ingredients, and functional foods. The rise of "power ingredients" like whole grains and fiber presents an opportunity for bakers to market products that align with this holistic approach to wellness.

In this issue we take a closer look at how these themes are translating into indulgence with our feature article, "Indulge Yourself." While consumers are mindful of health and sustainability, they also crave indulgent, satisfying snacks—a balance that forward-thinking brands are already mastering. As we continue to navigate this evolving landscape, it's clear that the future of bakery lies in a seamless blend of innovation, transparency, and holistic health. •



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Mondelez to Acquire Chinese Bakery Evirtth



Mondelēz International announced that it has signed an agreement to acquire a significant majority stake in Evirtth, a leading manufacturer of cakes and pastries in China, subject to customary closing conditions, including regulatory approval. The move represents an important step forward in Mondelēz’s

strategy to accelerate growth in the cakes and pastries category – a core focus for the company, alongside chocolate and biscuits. Founded in 2013, Evirtth is a leader in frozen-to-chilled cakes and pastries in China, a category currently estimated at US \$3 billion, growing at a compound annual growth rate of about 15 percent. Chinese consumers increasingly seek fresh, premium options with innovative and sophisticated taste profiles to meet a growing range of snacking occasions.

Mondelēz already has a minority investment in Evirtth to develop, manufacture and supply frozen-to-chilled cakes and pastries in China featuring some of its iconic brands, including Oreo and Philadelphia.

Kellanova Selling Participation in Egyptian Snacks Company



Kellanova, the majority shareholder in Egyptian foods company Bisco-Misr, is selling its participation in the company to Hayel Saeed Anam Group & Co. Bisco-Misr, established in 1957, makes biscuits and other snacks under brands such as Bisco Tea, Nice, Maamoud, Marie, Bisco Wafers and Seasonal Kahk. “This deal is a strategic step demonstrating the positive climate and potential for investments in the Egyptian market,” Robert Chanmugam, managing director for the Middle East, North Africa, Turkey and Sub-Saharan Africa said. He added: “Egypt is an important and strategic market for Kellanova with long-term growth opportunities. Since the time we began operations in 2015, we have remained committed to the country and will continue to invest to grow our business, develop local talent and bring innovations to the marketplace across our diverse portfolio of cereals, snacks and noodles products, offering diverse choices to meet the demand of Egyptian consumers.”

One Rock Capital Partners Plans Acquisition of Europe Snacks



One Rock Capital Partners announced that an affiliate has entered into an exclusive agreement relating to the planned acquisition of Europe Snacks, a leading private label manufacturer of savory snacks for the European market. Europe Snacks provides stacked chips, snacks, crisps and crackers to major food retailers throughout Europe, and is a trusted co-manufacturing partner to international brands in the region.

“Over the past three decades, Europe Snacks has grown to be a leader in the private label market across its key product categories and geographies,” said Kurt Beyer, Partner at One Rock. “We are excited to partner with the team, to build upon their strong heritage and to continue driving growth.”

“Europe Snacks aligns well with our investment strategy of acquiring leading companies with potential for growth and improvement,” added Lukas Zeitlberger, Principal at One Rock. “We look forward to working closely with management to enhance the Company’s operations and capitalize on new market opportunities.”

Esau & Hueber joins Bühler

Swiss technology group Bühler announced the acquisition of Esau & Hueber, a German company specializing in individual solutions in hygienic process and fermentation technology in the beverage, food, pharmaceutical, and biotechnology sectors. The acquisition enhances Bühler’s malting, brewery, and sustainable protein businesses, expanding the company’s expertise and capacity in these areas while multiplying the reach of Esau & Hueber’s technology across Bühler’s global network.

Esau & Hueber is an independently managed manufacturer with 42 employees and supports its clients in all project phases. It designs and builds high-tech facilities and develops advanced processing technology. Esau & Hueber holds strong expertise in yeast and fermentation management, as well as automation. Esau & Hueber will continue to operate from its home in Schrobhausen.



M&S Switches Garlic Baguettes Packaging to Recyclable Paper

Marks & Spencer (M&S) has introduced a new paper packaging for its garlic baguettes, marking a significant step in its ongoing efforts to reduce plastic waste. The retailer, known for its commitment to sustainability, is the first in the UK to switch to paper packaging for garlic baguettes, eliminating 5.5 million units of plastic annually. The new packaging, which is FSC-approved and fully recyclable at home, now wraps all of M&S's single and twin garlic baguettes. These baguettes are a popular choice among M&S customers, with the single garlic baguette alone selling 4.3 million units each year.

M&S has made reducing plastic packaging a priority, responding to the strong preferences of its customers. The company has a history of leading in sustainability initiatives, such as introducing a fully recyclable paper fibre coffee cup and lid earlier this year and replacing plastic bags with paper bands on banana bunches. Additionally, key produce items like British Collection vine tomatoes, mushrooms, and tropical fruits have been transitioned to cardboard packaging.

Grupo Bimbo Buys Brazilian Bakery Wickbold

Grupo Bimbo is strengthening its position in Brazil with the acquisition of local bakery group Wickbold. As part of the deal, the Mexican bakery giant is picking up four more factories in southern Brazil. More than 2,500 staff work for Wickbold, which is based in Diadema in São Paulo state. Financial terms were not disclosed. In a brief statement, Bimbo only provided an outline of the deal, which also includes the Wickbold and Seven Boys brands. Wickbold acquired Seven Boys in 2015.

Grupo Bimbo CEO Rafael Pamias said: "This family-owned business complements our brand portfolio with brands that consumers love and better positions our company in the south region of Brazil."

Grupo Bimbo entered Brazil in 2001 with the acquisition of Plus Vita and Pullman, two brands it still sells in the country. In 2008, the company bought the Nutrella brand.

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New Lory Crumb Varieties for Crunchy Breaded Products Without Frying

Food ingredients expert Loryma introduces an innovative solution for crispy coatings that meet growing demand for healthier, low-fat convenience products. The new wheat-based Lory Crumb extrudates give breaded products a deliciously crunchy texture without the need for added fat or deep-frying. These reduced-fat products can be easily prepared in an oven or air fryer, delivering an appealing golden-brown finish. Be they sweet, salty or spicy, the new Lory Crumb varieties allow for the creation of a wide range of on-trend snacks such as bitterballen, chicken nuggets, vegetable patties and plant-based meat replacers. The Lory Crumb range is available in two granulations – medium and coarse – allowing the coating to be tailored to different substrates.

The innovative wheat-based crumbs by Loryma eliminate the frying step entirely, both for producers and consumers. This advanced solution ensures a satisfying crunch and strong coating adhesion, even during extended warming periods, making it ideal for foodservice environments

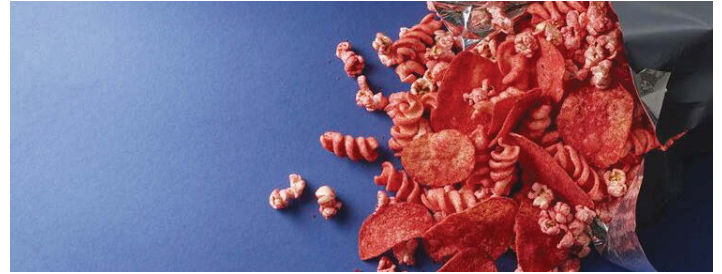
revyve Releases New Yeast-Based Texturizer for Eggless Gluten-Free Products

Food tech pioneer revyve launched its next-generation gluten-free ingredient line made from baker's yeast. The new egg replacer delivers excellent texturizing functionalities and is fully neutral in flavor and color.

This launch will accelerate revyve's expansion into new food categories, fulfilling demands for clean-label, sustainable texturizing ingredients to replace eggs, especially in gluten-free products. Being allergen-free, the new ingredient enables commercialization in categories such as sauces and potato products where gluten poses a barrier to entry. Additionally, its neutral flavor profile makes it ideal for flavor-sensitive products, such as sweet baked goods and confectionery.

revyve is bringing the new ingredient to market through its first commercial production plant in Dinteloord, Netherlands.

Oterra Introduces I-Colors Bold: Redefining Intensity in Natural Colorization



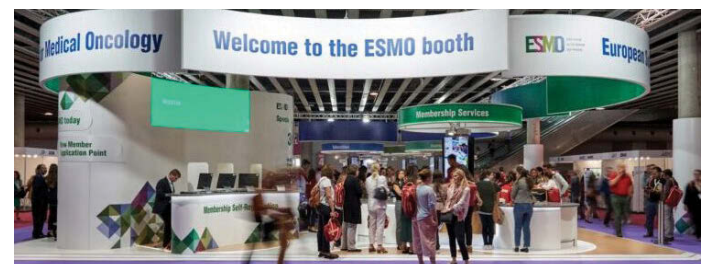
Oterra, a global leader in natural colors, has introduced six bold new variants to its I-Colors line. Creating I-Colors Bold meets growing demand for vibrant and intense colors while satisfying consumers' demand for natural ingredients.

It is now possible to introduce a vivid red for snack applications that can compete with artificial colors for impact, but using sweet potato as a raw material. "The reduced particle size

creates more intense color because there is a larger surface area to reflect light," said Luc Ganivet, Chief Innovation Officer at Oterra. "And because of a better dispersion of the powder the color is distributed more uniformly."

The range of 10 I-Colors Bold milled powders enable manufacturers to achieve deeper, richer shades with lower dosages, enhancing product aesthetics and appeal.

Fira de Barcelona Launches Two New Events in China



Fira de Barcelona's foreign activities are gaining presence in Asia with the holding of Alimentaria Chengdú and Smart City Expo Hangzhou at the start of the course. These two new shows will help to open up the Asian market to Catalan and Spanish companies from the technology and food sectors, in addition to the activity of the two venues in the cities of Nanchang and Xuzhou which Fira operates in the country. Fira de Barcelona is reinforcing its commitment to China as a strategic market and this last four-month period will organise two new shows. These are Alimentaria Chengdu, which takes place on 19 and 20 September; and Smart City Expo Hangzhou, from 25 to 29 September. The first Chinese edition of Alimentaria, Fira de Barcelona's leading food and beverage show, which is jointly organised with Sichuan International Expo Group, will feature an exhibition area with 100 companies and associations.



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Baking It Smart: **How Oven Tech Is Heating Up the Industry**



As the global demand for bakery products rises, industrial bakers are increasingly seeking solutions that combine efficiency, flexibility, and sustainability. In this context, equipment manufacturers are leading the charge in oven technology innovation, each offering unique solutions that address the needs of today's baking industry.

By **Tudor Vintiloiu**

Reading Bakery Systems (RBS) has long been at the forefront of innovation in the baking industry. Their latest hybrid tunnel ovens, which combine direct gas-fired (DGF) and convection technologies, are designed to tackle some of the most pressing challenges in modern baking.

One of the key challenges in traditional baking processes is maintaining consistency and product quality across large production runs. DGF ovens, while effective for certain stages of baking, often struggle with issues like moisture control and color consistency. RBS's hybrid ovens solve this by integrating convection zones, allowing for better control over moisture, texture, and color.

According to RBS, their hybrid ovens offer improved efficiency by using DGF zones in the early stages of baking, where flavor and texture are developed. The convection zones in the latter stages ensure uniform drying and color, which is particularly crucial for snack foods like crackers.

"The DGF oven zone performs well in the first phases of the oven where flavor and texture development are the primary goal. However, in the final phase of the baking process where controlling product drying is the priority, a zone of multiple high-temperature burners with little airflow is not optimal for operators to achieve uniform product moisture and color. To optimize the baking process for snack foods, a combination of oven zones can be used to provide the most efficient and uniform process that ensures consistent product quality. It is now accepted technology to use a hybrid oven with DGF zones in the first 33-66% of the oven, with convection zones used for the rest of the oven," the company explains. RBS has also developed the Emithermic XE Zone, a DGF replacement technology that provides the necessary high heat without direct gas burners, reducing energy consumption and emissions.

DATA-DRIVEN EFFICIENCY WITH SCORPION TECHNOLOGY

RBS's SCORPION® Data Logging Measurement System is another critical innovation, playing a significant role in the design and optimization of their ovens. This technology provides detailed insights into the baking environment, such as heat transfer, air flow, and humidity levels, enabling RBS to fine-tune their oven designs for maximum efficiency.

"The Scorpion is used to validate the pre-build simulations and modelling before any steel gets cut for a new oven design. Later, validation via the Digital Air Velocity Sensor Array will produce a map of the air currents inside the process, telling the design team whether the air distribution inside the oven needs to be adjusted with permanently installed baffles inside the distribution plenums. The Scorpion tells our engineers immediately where interventions need to happen," RBS points out.

The SCORPION® system is not just a tool for R&D; it's also used in the field to help bakers optimize their processes. For instance, the system's Digital Humidity Sensor allows for precise control of moisture levels, ensuring product consistency and reducing waste. This data-driven approach to oven design and operation is helping RBS's customers achieve better product quality while lowering operational costs.



SUSTAINABILITY IN BAKING

With sustainability becoming a key focus across industries, RBS has been actively developing technologies that reduce energy consumption and emissions. Their ovens now feature lighter-weight belts, exhaust heat recovery systems, and improved insulation—all designed to cut energy use and lower greenhouse gas emissions. RBS also offers fully electric baking solutions, which are gaining popularity as more bakeries look to transition away from gas-fired ovens.

"Most bakeries aren't ready for all electric ovens, so RBS ovens can be installed as gas now, and easily converted to electric heat in the future," company representatives told us.

MECATHERM'S M-VT VERTICAL OVEN

Mecatherm, another leader in industrial baking equipment, has recently introduced the M-VT vertical oven, which represents a major leap forward in both flexibility and sustainability.

The M-VT oven is designed to bake a wide variety of products, from crusty breads to delicate pastries and soft brioche. Its versatility makes it an ideal solution for industrial bakers looking to diversify their product lines while maintaining high quality.



One of the key innovations in the M-VT oven is its shockless conveying system, which ensures smooth movement of products through the baking process. This system is particularly beneficial for delicate items that are prone to damage during baking. Additionally, the oven's modular design allows for precise control over baking conditions, enabling bakers to fine-tune temperature, air flow, and moisture levels for each product.

ENERGY EFFICIENCY

Mecatherm's M-VT oven is also designed with sustainability in mind. Its compact vertical design reduces the oven's surface area, resulting in up to 30% less energy consumption compared to traditional tunnel ovens. The oven's convection heating system operates at lower temperatures, further reducing energy use.

In addition to its energy-saving features, the M-VT oven supports bakers in their transition to electric power. Mecatherm offers retrofit solutions for existing gas ovens, allowing bakers to switch to electric heating and reduce their carbon footprint. The oven also features an innovative energy recovery system that captures heat from baking vapors and repurposes it for other stages of the production process.

Mecatherm has also prioritized ease of use in the design of the M-VT oven. The oven's technical components are easily accessible for maintenance, and the system's digital tools enable operators to monitor performance and energy consumption in real time. These features help bakers reduce downtime and improve operational efficiency.

GEA: PLUG-AND-PLAY OVENS FOR MAXIMUM ADAPTABILITY

GEA, a global leader in industrial processing solutions, has introduced its own innovative approach to oven technology with its plug-and-play solutions, aimed at increasing efficiency and adaptability for industrial bakers.

GEA's plug-and-play ovens are designed for quick and easy installation, allowing bakeries to integrate new equipment with minimal disruption to their operations. These modular ovens are highly adaptable, making them suitable for a wide range of products and production scales.

One of the standout features of GEA's ovens is their ability to be tailored to specific production needs. Whether a bakery is producing crusty breads, pastries, or specialty items, GEA's ovens can be configured to deliver consistent results. The plug-and-play design also makes it easier for bakeries to scale up or modify their production lines as needed, providing long-term flexibility.

GEA's plug-and-play ovens feature advanced insulation

and heat recovery systems, which help reduce energy consumption and lower operational costs. By capturing and reusing waste heat, GEA's ovens can significantly reduce the amount of energy required for baking, making them an eco-friendly choice for industrial bakers. In addition to their energy-saving features, GEA's ovens are equipped with advanced control systems that allow for precise monitoring and adjustment of baking conditions. This level of control helps bakers improve product quality and consistency while minimizing waste.



CONCLUSION: THE FUTURE OF INDUSTRIAL BAKING

The advancements in oven technology from Reading Bakery Systems, Mecatherm, and GEA are helping to shape the future of industrial baking. With a focus on flexibility, sustainability, and operational efficiency, these companies are providing bakers with the tools they need to meet the demands of today's market while preparing for the challenges of tomorrow.

RBS's hybrid ovens, with their data-driven design and energy-saving features, offer a powerful solution for bakers looking to optimize their processes and reduce their environmental impact. Mecatherm's M-VT oven provides the versatility and energy efficiency needed to handle a wide range of products, while GEA's plug-and-play ovens offer a flexible, scalable option for bakeries of all sizes.

As the baking industry continues to evolve, these companies will undoubtedly play a key role in driving innovation and helping bakers succeed in an increasingly competitive market. •



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Expand your product portfolio with a flexible low pressure extrusion system from RBS

Low Pressure Extrusion: Reshape Your Product Possibilities

When the Low Pressure (LP) Extruder was introduced by Reading Bakery Systems in the early 1950s, the technology literally reshaped the snack food industry, as it allowed efficient mass production of pretzels and other bread snack products. Today, recent innovations, like easily interchangeable die assemblies and control system software, are making snack production and development more efficient and flexible than ever.

By Reading Bakery Systems

The latest LP Extruder design allows snack makers to produce a range of products – hard pretzels, bread snacks, filled sticks and nuggets, braided sticks, and fried potato snacks to name just a few – all on one machine.

This flexible alternative to conventional dough forming and sheeting systems offers new, cost-effective opportunities for the snack food industry. Snack makers looking to create or test new product ideas, expand product lines, and increase throughput can now do so more reliably and consistently than ever before.

QUICK, EASY, LOW-COST PRODUCT CHANGEOVERS

What really differentiates today's Low Pressure Extruders is the interchangeable forming dies that allow quick, easy product changeovers. To switch between products, operators swap one compression head and die for another

with a different shape. The process only takes minutes but enables countless product possibilities.

Rapid product changeovers and product quality are also supported by the integrated control system. To switch between products, operators simply select a different recipe on the touchscreen.

Depending on the specific product, key Extruder design variations also support smooth product transitions.

For filled stick products, the machine is outfitted with an additional pump to combine the dough and filling into a single rope. The extruder pushes dough into a compression head, forcing it to flow around a filling nozzle. The additional pump pushes soft fillings such as cheese, peanut butter, or chocolate through the extruder compression head and die to fill the dough stick. A guillotine cutter then cuts the filled product rope into sticks or nuggets.

LP Extruders can even be configured to produce fried

snacks such as potato rings, potato sticks, and ethnic noodles. Following extrusion, the product is delivered to a fryer by a conveyor or by incorporating an oil “free float” conveying section.

PRECISE CUTS AND PIECE WEIGHTS

Low Pressure Extruders also feature high-performance, automatically controlled bandcutter blades that support product consistency and throughput.

As dough is extruded through the interchangeable forming dies mounted on each compression head, beveled bandcutter blades slice it off at speeds up to 275 cuts per minute. The blades are electrostatically coated with a food-grade, non-stick coating that enables clean cuts with virtually no dough or inclusions sticking to the blade. Production rates, product thickness and piece weights are regulated by the auger and bandcutter speeds, which are managed by the control system. LP Extruders with multiple die units can process up to 3,000 pounds (1500 kilograms) of dough per hour.

UNIFORM DOUGH FORMING AND FLOW

Featuring intuitive operator controls and food-grade plastics, today’s self-contained machines optimize dough forming and flow consistency while supporting easy sanitation.

Dough hoppers can be fed manually or with an automated feeding system and are segmented to give operators greater control and facilitate consistent dough flow with whole, undamaged hard or soft inclusions. For low cohesion dough, optional pre-feed rollers force the dough into extrusion augers to eliminate air pockets. The lightweight, seamless plastic hoppers also eliminate dough harborage areas and make cleaning easier.

Depending on the operation and product line, LP Extruders can be outfitted with between one to six die forming units. Each forming unit features twin augers that meter a controlled flow of dough from the hopper to the compression head and on through the forming die.

The twin auger design improves product flow and reduces crystallization in the dough. Operators can control auger speeds and dough flow at a control, and dough pressure and temperature in the compression head can be monitored to help ensure dough consistency.

R&D AT THE RBS SCIENCE & INNOVATION CENTER

Snack product research and development is directly linked to forming die development. Using the latest software and manufacturing techniques, RBS works with snack makers to develop customized die and compression head assemblies that can bring a wide range of product shapes to market. These shapes and products can then be tested at



the RBS Science & Innovation Center. Our 30,000 square-foot Innovation Center is a licensed food processing R&D facility with complete processing lines, including an LP Extruder with bandcutter. Production testing on this unit will verify whether the dough flow and product shape is acceptable. If not, RBS die designers can make the necessary changes. It’s the best possible way to ensure a successful manufacturing process and gain the confidence of all members of your development team.

WANT TO EXPLORE LPE SYSTEM AND PRODUCTS?

Today’s LP Extruders offer an extremely flexible and cost-effective alternative to conventional dough-forming and sheeting systems. As industry pioneers in LP Extrusion technology, RBS has worked with leading snack food manufacturers to help them produce new snacks for generations. If you are looking to expand your healthier, baked snack product offering, contact RBS today!

For more information, visit www.readingbakery.com or call RBS at (01) 610-693-5816. •





Critical Controls Make **All the Difference**

Critical food safety controls are essential to prevent foodborne illnesses. Contaminants such as bacteria, viruses, and chemical hazards can cause serious illness or even death if not properly managed. By implementing critical food safety controls, food producers can identify, monitor, and control potential hazards at key points in the production process.

By Jo Ilie



Critical food safety controls are not only vital for ensuring consumer health but also for maintaining business operations, minimizing waste, and building long-term trust with consumers and regulators alike.

According to the World Health Organization, more than 600 million people fall ill and 420,000 die from contaminated food globally each year. Prioritizing food safety control points along the entire food supply chain could prevent potential illnesses, even death.

FPS' RULES FOR GOOD HYGIENE PRACTICES

FPS Food Process Solutions, a major food equipment manufacturer, emphasizes the importance of hygienic design in manufacturing equipment as well as being aware of critical safety controls that can make a difference in food safety in the food processing industry. The company believes in the shared responsibility of all food business operators involved to play an active role - by preparing for all possible scenarios that could compromise food safety by knowing how to avoid food safety incidents by following good hygiene practices.

Tracking food products is like a journey – we need to know where it came from, at what stage it has gone through in the supply chain, how it was processed, and how it finally arrived for consumer use.

Janice Price, Global Process Specialist at FPS, understands food safety concerns not only from an equipment manufacturer but from a customer point of view, having designed and implemented process controls and operational standards at a food manufacturing plant. “A food safety incident is really an oversight or inadequate control from the food business operator. We have to look at critical checkpoints to make sure that there is no cross contamination, be it from leftover food debris from a previous production run to condensation dripping onto food. Whenever a product leaves the facility, even the trailers are tagged before they get to their next destination.”

Accessibility is another major food control factor. Being able to access the inside of a food processor such as a freezer, requires the need to gain access to where food can get caught. Potential contaminants, such as food debris, mold, even chemical substances from cleaning agents, can transfer to a new production batch, leading to possible contamination. Being able to access tight, even difficult spaces that need to be cleaned thoroughly is a must. “From a food-safe point of view, we need to make sure that no product is left inside, no pooling of water is sitting in the equipment,” says Price. “We need to make sure that potential allergens from one product are not being transferred to a non-allergen product, and lastly, being able to get inside to clean your equipment. This is what it really means to be able to access your equipment.”

MINEBEA INTEC'S SOLUTIONS FOR REDUCING ENVIRONMENTAL IMPACT

Minebea Intec, a leading global manufacturer of industrial weighing and inspection technologies, offers solutions for sustainable production processes. Increasing efficiency, conserving resources and protecting against expensive product recalls that damage the company's image and the environment are key issues. Minebea Intec's solutions come in to ensure maximum efficiency and the greatest possible conservation of resources along the entire production chain, from incoming goods to outgoing goods.

At the beginning of many production processes, for example in the food, pharmaceutical or cosmetics industries, ingredients have to be mixed in the right proportions. Many companies work with automated mixing systems equipped with high-precision load cells from Minebea Intec. “Our weighing solutions guarantee precise, continuous, fast and flexible dosing processes and minimize material losses,” says Yannick Salzmann, Global Product Manager at Minebea Intec. The weighing solutions can be easily integrated into manufacturers' production lines as an OEM solution. “Our weighing module Novego was specially developed for weighing tanks and process vessels,” says Yannick Salzmann. “The hygienic complete solution offers a variety of innovative features for simple and error-free installation as well as maximum resistance to lateral forces.” In addition to dosing processes, Minebea Intec's load cells can also be used to weigh vehicles and carry out fill level checks.



With the static industrial scales from Minebea Intec, such as the bench and floor scales from the Combics and Midrics series, industrial customers can also organize their dosing and mixing processes more sustainably thanks to precise weighing results. The industrial scales from Minebea Intec are also characterized by a very long service life and low energy consumption.

Once the mixing process is complete and the products are on the conveyor belts, the dynamic checkweighers from Minebea Intec come into play. "With the help of dynamic checkweighers, companies can optimize their production processes, improve material and resource management and increase the accuracy and consistency of production processes," says Lars-Henrik Bierwirth, Product Manager at Minebea Intec.

With the Essentus, Synus, Flexus and EWK models, Minebea Intec offers a complete product portfolio in this segment for a product throughput of up to 600 items per minute. Each checkweigher is characterized by a stable and robust mechanical design and a sufficiently high weight to ensure precise and reproducible high speed weighing results.

X-ray inspection systems not only detect products contaminated with metal, glass, rubber, stones, plastic parts or bone splinters, but also enable inline quality checks such as weight determination, counting of components, detection of missing or faulty products, fill level control and checking the integrity of closures.

Minebea Intec offers a broad portfolio of X-ray systems for the inspection of packaged products. Typical applications include cartons, boxes, bags, trays and portion packs, which can contain a variety of dry or liquid food products. The Dylight and Dymond models have been specially developed for these applications. They are characterized by a hygienic design and high detection sensitivity with low power consumption.

Minebea Intec launched the Dypipe X-ray inspection system for viscous and liquid products just last year. "The Dypipe is equipped with an innovative sample insertion system that enables real-time inspection," says Liang Mengqi, Global Product Manager at Minebea Intec. "This means that manufacturing companies can always be sure that their production processes are running smoothly and safely." Another sustainable approach that Minebea Intec offers its customers for the modernisation of all weighing and inspection systems is the recycling of existing systems. This environmentally friendly solution is popular with many customers worldwide and also offers cost benefits.

FORTRESS TECHNOLOGY EUROPE'S BAKERY CHECKWEIGHING COMPLIANCE ESSENTIALS

To ensure compliance with net weight regulations, processors need to identify under or overweight packages. Daniel Shail, Applications Engineer at Fortress Technology Europe explains that, for optimal performance, food manufacturers must look for these features:



- Fast re-calculations linked to automated tolerance tables,
- Airflow covers with cut outs to improve weighing accuracy,
- Hygienic Clean in Place designs,
- Secure RFID user access control,
- Modular electronics, enabling seamless integration with inspection, filling and packing equipment,
- Dynamic load cell technology to handle temperature fluctuations,
- Sophisticated reporting software, with clear HMI visual indicators and graphical histograms,
- Conveyor Run Only modes if a HACCP metal detector is part of the system,
- Reliable infeed and outfeed conveyors, presenting products individually to the checkweigher at the correct speed.

The standard Fortress Raptor checkweigher is available in four belt widths – 100mm, 200mm, 300mm and 400mm – and can verify the weight of products up to 8kg, with a new slimline, ergonomic design. For bulk applications, such as pet food, ingredients, grains and other large items, the bulk Raptor system can weigh products up to 25kg, with a heavy-duty version available up to 50kg Fortress also provides the option to integrate the Raptor Checkweigher with a metal detector or X-ray, and even engineers customized multi-aperture, multi-lane combination systems.

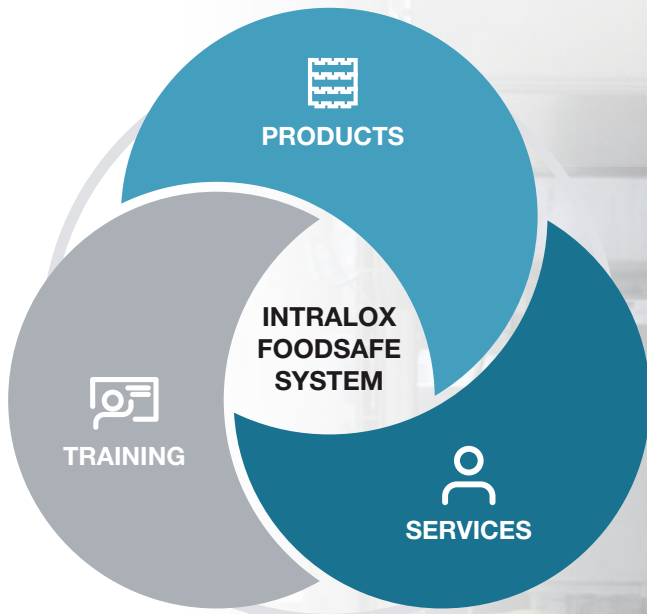
CONCLUSION

Technological progress has made guarding the safety of food much easier. This helps with protecting public health, maintaining food quality, and ensuring business sustainability, as long as food safety controls are taken seriously and integrated in the production process. •

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> RELIABLY INVENTIVE

Step by Step to Digital Food Safety

The food industry is facing a digital transformation. Going forward, it will be necessary to digitize processes and procedures for food safety in such a way that they can be audited and monitored online.

By Ian Scott-Mance, Technology Manager
at Mettler-Toledo Product Inspection

The signs are clear: digital food safety can no longer be put on the back burner. Initiatives such as “New Era of Smarter Food Safety” by the US Food and Drug Administration (FDA) and “Race to the Top” by the Global Food Safety Initiative (GFSI) make it unmistakably clear that the topic of digital track & trace in the food industry is gaining importance. Full traceability is already a prerequisite for certain products to access some Asian markets. China, for example, requires product types to be fully traceable before it will permit it to be sold in its domestic market. Countries like Australia are also very proactive in promoting relevant food safety initiatives.

In addition, manufacturers are also increasingly being confronted by the big players in the food retail sector imposing stricter requirements for farm-to-fork traceability, which must be embedded in digital supply chain management. In response, food manufacturers must begin focusing on data collection, which is the essential starting point for any project that seeks to improve food safety through greater traceability. The great news is this can also aid other digitalization initiatives that the manufacturer may be working on. For example, the collection, analysis and digital availability of food safety data can also help to optimize the efficiency of production processes.

This is just the start though. Digital food safety is a process in itself, and here are the key steps to take:

Step 1: CONDUCT AN AUDIT OF DATA BEING COLLECTED AND CURRENT FOOD SAFETY PROCESSES

The efficient collection of data is a basic requirement so that it can then be made available across the entire supply chain, in an accessible, i.e. digital, form. Therefore, a comprehensive audit must be carried out to determine the current data status. Many of the required food safety data and processes should already be available in the company and should be well documented, as they should already have been determined in the context of food safety certifications. For example, production line critical control points ought to have been identified through earlier HACCP certification and appropriate inspection systems should already be installed there.

Nevertheless, the audit usually proves to be a challenging task. A look into practice today reveals a highly fragmented picture of how audit data relevant to food safety is recorded, collected and stored in the process flows of manufacturers. It is common to find that this data is already highly networked in part, but it is also often still gathered using tools such as USB sticks, or manually with pen and paper. From a technological point of view, the complexity is demanding, as the systems on the shop floor are of different ages and use a wide variety of protocols, network infrastructures and management processes. Older software solutions and devices in particular were originally not designed for open



IoT / Industry 4.0 communication, as is standard today for new investments.

Manufacturers are therefore faced with the challenge of migrating a colorful hodgepodge of hardware and software into a unified digital food safety program. This is no walk in the park, but it is a manageable task. Global standards and communication protocols, uniform ID coding and standardized transformation events meanwhile significantly reduce the level of complexity. Examples are OPC U / A, GS1 Digital Link and EPCIS 2.0.

It cannot be stressed enough how important it is to approach the assessment of the current situation with great care and attention to detail. The more carefully the homework is done in the management of information, the more it pays off in the medium and long term, both for a smooth and cost-efficient migration to digital food safety, and as an enabler for further digitization initiatives.

Step 2: DEVELOP YOUR DIGITALIZATION STRATEGY

The key strategic questions are, which specific applications need to be mapped, and what are the company's long-term digitization goals? Are we seeking merely regulatory and market compliance with minimal effort, should the now digitally-available data also be used to optimize the production processes, or should we be aiming for a profound and sustainable digital transformation of the company with a view to IoT and Industry 4.0? Each of these scenarios requires a different plan, schedule, and capital cost. Each scenario has a different outcome.

Data exchange is central to digital track & trace, enabling the identification of the whereabouts of specific batches at a specific point in time in a matter of seconds. The task is to analyze the data pool, to convert analogue processes into digital ones and to find a suitable cloud data management solution. In this phase of strategic development, it is advisable to talk to suppliers and manufacturers of the systems installed on the shop floor at an early stage. Many companies - as we often find out in our conversations - are surprised at what they are already capable of doing in terms of data acquisition and provision. The digitization of food safety does not mean a complete system replacement as a rule. A simple device upgrade or the purchase of a software option are often sufficient. When selecting a suitable cloud data management provider, it is important to ensure that it is very familiar with the food safety landscape, that it uses open global standards and fully supports the use of the data provided in any web-based application.

Step 3: SECURE AND BUILD UP EXPERTISE

All internal and external stakeholders relevant to digital food safety who participate in the process must be identified. It is important to determine which knowledge and know-how is available and where it is available in the company for food safety digitalization. In addition to your own company, a corresponding assessment and evaluation must also be carried out for all partners in the network who are involved in the applications and are supposed to access them. Talking to the stakeholders in the value chain is an important part of the process. Based on this, an overview of the existing expertise and the knowledge gaps that have yet to be closed must be created. Guidelines for data sharing must be formulated and it should be specified who should have access to specific data and information, and in which phases of the product life-cycle they require it.

Step 4: INSTITUTIONALIZE CHANGE MANAGEMENT

The digitization of food safety is a process that entails organizational changes in work practices and affects the interests of a wide variety of departments in the company - from purchasing to production to marketing. The cultural change associated with this transformation process must be managed proactively and carefully. Employees have to understand and accept that the higher level of data transparency required also includes those involved outside of their own company. Leadership quality and demonstrated commitment to the project are required here in order to drive the changes forward. It is advisable to put together a multi-stakeholder group that works out the common advantages of digitization, but also formulates common reservations and concerns. Senior executive sponsorship and a continuous exchange of information with the management teams on the progress of the transformation programs are essential to keep the change process on track and under control. A road map with manageable, incremental and intermediate goals must be formulated; Applications are to be identified in which the company can benefit most quickly and easily from digitization.

SUMMARY

By taking a more strategic approach to adopting digital food safety and planning the digital transformation of the supply chain, food manufacturers are well positioned to make the transition inexpensively, with minimal business disruption, and when it is necessary or desirable. Many companies will find - perhaps to their surprise - that they are already in a good starting position to initiate the transformation process. The technology may seem complex, but it is relatively easy to use. •



The Future of Baking Industry Packaging: Trends and Innovations



By **Rebecca Marquez, Director of Custom Research at PMMI**

The baking industry, a crucial segment of the broader food sector, stands on the precipice of significant transformation driven by advancements in packaging technology. Recent findings from the Transforming Packaging and Processing Operations white paper, produced by PMMI, The Association for Packaging and Processing Technologies, provide a deep dive into how technological innovations and sustainability initiatives are reshaping the baking industry's approach to packaging.

EMPHASIS ON PRODUCTIVITY AND AUTOMATION

One of the primary concerns within the baking industry has been the enhancement of productivity through automation. The report reveals that nearly half of the industry leaders surveyed are prioritizing automation to streamline operations and reduce costs. Automated packaging systems not only speed up the production line but also ensure precision and consistency, critical factors in food packaging.

SUSTAINABILITY: A GROWING PRIORITY

Sustainability remains a pressing issue, with a significant portion of respondents acknowledging its importance in their operational strategy. The baking industry is increasingly adopting sustainable packaging solutions, such as biodegradable materials and processes that minimize environmental impact. This shift is not just about corporate responsibility but also aligns with consumer preferences for more eco-friendly products.

THE ROLE OF ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) is set to play a transformative role in packaging operations. From predictive maintenance to optimizing packing processes, AI technologies help bakery manufacturers reduce downtime and predict maintenance needs before breakdowns occur. This predictive approach not only enhances efficiency but also extends the lifespan of packaging machinery.

This assumption is reinforced in PMMI's latest white paper, *The AI Advantage in Equipment: Boosting Performance and Bridging Skills Gaps*. The key takeaway from conversations with experts across the supply chain is that AI is more of an evolution than a revolution. The technology is not at the level yet where tasks can be completed solely by AI, and so a human is still required to make final decisions. The three key impacts that currently available AI solutions will have on the packaging industry are increased staff productivity, increased machine performance and overall equipment effectiveness, and mitigating skills gaps and labor issues.

DATA-DRIVEN DECISIONS

The integration of data analytics into packaging operations is revolutionizing how bakeries understand and streamline their processes. The use of data lakes and analytics allows for a more granular view of production metrics, enabling bakeries to make informed decisions that boost operational efficiency and product quality.

ADDRESSING THE SKILLS GAP

As the baking industry embraces more sophisticated technologies, the skills gap becomes increasingly apparent. The *Transforming Packaging and Processing Operations* white paper highlights the necessity for continuous training and education to equip workers with the necessary skills to manage advanced packaging systems. Programs aimed at bridging this gap are crucial for sustaining innovation and growth within the industry.

COLLABORATIVE AND FLEXIBLE PACKAGING SOLUTIONS

The trend toward more collaborative and flexible packaging solutions is evident in the rise of modular packaging equipment. This flexibility allows bakeries to quickly adapt to changing market demands and product types without significant downtime or financial outlay.

CONSUMER ENGAGEMENT THROUGH SMART PACKAGING

Smart packaging is gaining traction, offering features like Quick Response codes and near-field communication tags that engage consumers and provide them with detailed product information. This technology not only enhances the consumer experience but also aids in brand loyalty and market differentiation.

Looking ahead, the baking industry is poised to continue its trajectory toward more integrated, intelligent, and sustainable

packaging solutions. The ongoing collaboration between technology providers and baking professionals is essential in driving these advancements. As bakeries navigate these changes, their focus will likely remain on enhancing efficiency, sustainability, and consumer satisfaction.

The insights from PMMI's whitepapers underscore a dynamic period of innovation in the baking industry, reflecting a broader trend toward smarter, more sustainable operations that are expected to shape the future of food packaging. Bakery manufacturers will find the latest innovations at PACK EXPO International (Nov. 3–6, 2024; McCormick Place, Chicago).

Making its PACK EXPO International debut, Sustainability Central (located in West Hall, Booth W-21020) will take an expansive look into packaging sustainability and what it means to brands, including expert speakers, and a look at actionable, sustainable solutions in manufacturing, materials, recovery, logistics, analytics, and design. Attendees will hear from industry experts on a range of packaging sustainability topics and learn how to make their brands more sustainable. Processing and packaging innovations also will be found at the Processing Zone on the upper level of Lakeside (LU), the Logistics Pavilion in the North Hall (N), and Emerging Brands Central (Booth W-20049), a new show feature offering 30-minute presentations on product development, packaging innovation, and scaling strategies.

Other educational sessions will be offered in multiple locations: the Innovation Stage (Booth N-4560, N-4580, and N-4585), Processing Innovation Stage (Booth LU-7147), Industry Speaks (Booth N-4565), and Reusable Packaging Learning Center in the Reusable Packaging Pavilion (Lakeside, upper level). With more than 150 educational sessions on the show floor, PACK EXPO International is a hub for education and thought leadership where industry experts share timely knowledge on the latest topics and trends in packaging and processing.

Networking opportunities also abound. The PACK gives BAC™ event features a comedy performance by Nate Bargatze and benefits the PMMI Foundation. Other networking activities include the Packaging & Processing Women's Leadership Network Breakfast featuring Lisa Sun, the Young Professionals Network Reception, and a full schedule of activities for students such as the Future Innovators Robotics Showcase, the PACK Challenge, and the Amazing Packaging Race.

The most expansive and all-encompassing packaging and processing industry event in 2024, PACK EXPO International, will feature 2,600 exhibitors offering solutions to many of today's biggest manufacturing needs from an intersection of industries to 40-plus vertical markets. More than 45,000 attendees from consumer packaged goods and life sciences companies worldwide will converge, searching for innovation, connection, and insight. For more details and to register, go to packexpointernational.com. •

This article is based on the information and insights provided by PMMI for European Baker & Biscuit readers.

Maintaining Quality in Frozen Bakery Products

Frozen bakery products, such as breads, pastries, and doughs, rely on the cold chain to preserve their quality throughout transportation and storage. The cold chain ensures that the texture, flavor, and structure of these items remain consistent and any break in the cold chain can lead to ice crystallization, which negatively affects the product's texture and freshness.

By Bogdan Angheluță

The frozen bakery market is highly competitive, and that requires an accurate understanding of the dynamics involved in the preservation process. Amongst all, frozen bakery products are the most sensitive in the quality factor if exposed to temperatures above 0°F -18°C, according to the World Food Logistics Organization (WFLO) as quoted by the Global Cold Chain Alliance (GCCA). Due to its composition, being mostly a low moisture and high sugar content product, these products have extremely low freezing points, e.g., layer cakes freeze at approximately 5°F -15°C and fruit pies solidify between 14 to 18°F -10 to -8°C.

When these products are exposed to temperatures above 10°F (-12°C), thawing results in an increased rate of deterioration in quality. Consequences from this are extreme and diverse for the product kinds. Frozen bakery products need to be well protected from quality loss due to high temperatures or temperature fluctuations. There needs to be rapid handling when placing these products into or removing them from freezer storage, since they can warm up very quickly when ambient temperatures are encountered. The rates of warming up vary for the various types of frozen baked goods: pound cakes and breads, for example, tend to heat up more easily from their usual frozen state at a higher temperature and vice versa. Analysis of temperature curves and control of the temperature of frozen bakery products upon receipt will indicate the most appropriate method of

handling. The point to be taken into consideration by every stakeholder of the B2B in the frozen bakery industry is the way in which the maintenance of an effective cold chain contributes to product quality, brand reputation, and customer satisfaction. Understanding the distinctive characteristics of frozen bakery products will mean a strict approach towards temperature control. These are some of the critical factors, and their close monitoring into the future is important for any player in the frozen bakery supply chain. Emphasizing proper handling and storage techniques alone is vital to meeting the general quality and success of products in the market. That being said, let's deep into what the actual handling of these products mean – the cold chain and the logistics behind it.

COLD CHAIN ACCOUNTABILITY TO HEAT UP

According to Fortune Business Insights, the cold chain logistics market was valued at USD242.39bn in 2021 and is expected to reach a sum of USD647.47bn by 2028. This sector has been recording incredibly fast growth in the recent times, which in turn instigates further innovation in the sector, especially towards areas of efficiency and sustainability. These are advanced technologies still in their development stage, such as innovative warehouse automation systems for managing increased demand with a reduced workforce and new packaging solutions that could eliminate the need for refrigerated trucks and storage facilities for up to eight days. Advanced software platforms also improve visibility and compliance across various facets of cold chain operations.

Industry experts believe that with finances in better shape, now might be an especially good time for cold chain players to begin thinking about new partnerships, technologies, and best practices. The pandemic underlined how important it is for supply chains to be resilient, adaptable, and diversified. As the cold chain sector continues to develop, companies will always be open to innovative ideas and will proactively discuss their future strategies. This might place them in a better position to make informed decisions to protect and strengthen their supply chains against emerging challenges and opportunities. But in a world where supply chains continue to grow in complexity, cold chain custody will be one of the key things that brands focus on over the coming year, as a new study by Forbes shows. With growth projected to continue rising at a fast clip, the global cold chain logistics market is primed for much greater accountability measures and technological innovation. Historically, much of the cold chain compliance burden has rested with shippers and recipients. But today, experts stress that all parties involved must bear some measure of responsibility if reputational risk is to be minimized. The study shows that the cold chain integrity will run on an advanced monitoring system in this respect, which is further increasing with its importance. In this direction, tracking product temperatures at every touch point across the transport and storage lifecycle is highly required to be done by IoT devices and sensors. This requires investment from companies in this field to make sure that compliance issues are taken care of along with preparedness for audits at any point in time. With added economic pressure, the cold chain will become even more competitive. This should provide a favorable environment to upgrade standards and expectations for a company's various partners and providers. Shippers could have higher expectations for refrigeration guidelines while the carriers may request more compliance details from their clients. The recipients can require a full audit trail of cold chain history to validate its integrity.

Cold Chain Logistics Play a Pivotal Role

A study by Technavio has pointed out the encouraging prospects of the food and beverage cold chain logistics market. According to the research, it is expected that from 2024 to 2028, the sector will grow by USD175.26bn, with a compound annual growth rate of 16.83%. Nowadays, this industry is feeling the change brought by technologies like 3D printing. Needless to say, innovations are overhauling storage and transportation processes that are very crucial in maintaining quality products or extending their shelf life. Although high development costs represent serious development challenges, the industry leaders are not rejecting new technologies. On the contrary, the companies leading this wave – for instance, Americold Realty Trust Inc. and Capstone Logistics LLC – are well on their way to using innovative solutions to further expand operations and maximize changing market conditions. Trends in the sector also include increasing usage of fuel cell-powered lift trucks. The effectiveness of such machines to perform in low-temperature conditions has reportedly proved highly efficient, operating at temperatures as low as -30°C without any operational glitches. This is a massive plus compared

to its battery-operated counterpart, which has problems regarding limited operation time in cold temperatures. In addition, compared to traditional systems, infrastructure for fuel cells requires 60% less space. This translates to serious gains in productivity, given that fuel cell forklifts only take about 5 minutes to refuel, while changing batteries can take anywhere from 10 to 20 minutes. Major retailers like Walmart and Amazon have already put the technology in place and are continuing to realize the many benefits, which is pushing the market in more positive directions. Another reason for the expansion in cold-chain logistics is the high demand on temperature-controlled solutions from various categories, not just bakery – there range from meat and seafood to beverages and frozen foods. Major items within cold chains – like temperature-controlled places of storage, refrigerated warehousing, and packaging that has been specifically engineered – continue to gain more investment and development. Growth in the frozen food sector and higher online retailing also increase the demand for better cold chain technologies. The sector is also using blockchain technology for increased traceability and supply chain transparency, especially in the case of international trade. Food processing and distribution industries are the direct beneficiaries of these advances in the cold chain. These technologies are becoming essential to maintain the quality of organic products and reach standards for food safety. Due to the reshaping of the landscape day by day with advancing technology, along with the rise in demand within temperature-controlled logistics, the future of food and beverage cold chain logistics looks good. In the future, this industry will continue to face more challenges and opportunities that shape the future in terms of food distribution and preservation on an international scale. •





Yeasts for Frozen Dough, a New Frontier

Manufacturers of frozen pastry and bakery products want their products to offer the same experience to the final consumer as if they were baked fresh. That can be a challenge because the cold affects yeast's properties. That is not the case anymore with Angel Yeast's specialized products for frozen dough.

In addition to the dough formula, freezing techniques and quality control are crucial when developing recipes for frozen dough. Choosing a high-quality yeast specifically designed for frozen dough can significantly enhance stability during freezing, thawing, and fermentation, ensuring the success of the final bread product and achieving the best standards for flavor and texture.

Angel Yeast has developed a range of specialized yeasts for frozen dough, including FrozDo Instant Dry Yeast, Semi-Dry Yeast, and Fresh Yeast, catering to manufacturers' diverse production conditions, regional requirements, and recipe needs. Their Frozen Dough Improver F-99 and Croissant Bread Improver A-PLUS are designed to effectively protect gluten during the freezing process, enhancing the processing performance of frozen dough. Angel invests in quality ingredients and offers high-quality baking essentials that are meticulously selected and tested to ensure the stability of the dough during freezing and the final quality of the bread. Last, but not least, Angel Yeast is committed to continuous research and development of new technologies and formulas to help manufacturers maintain a competitive edge in product development, featuring a variety of yeasts and specialized ingredients tailored for frozen dough.

In order to help manufacturers master their ingredients faster, Angel Yeast offers professional technical assistance to help

clients optimize their recipes and production processes, ensuring they can fully leverage Angel's products and technologies to enhance their competitiveness.

"We work closely with manufacturers to provide product technical training, sharing the latest baking techniques and market trends to boost their production capabilities and product innovation," says the company.

Angel Yeast also delivers specialized technical services and solutions to assist manufacturers in overcoming challenges encountered during frozen dough production, such as temperature control and yeast application techniques. During the new product development phase, Angel Yeast provides trial materials and recipe adjustment suggestions to ensure clients can successfully launch their new products.

Angel Yeast operates several overseas factories equipped with advanced production lines and rigorous quality control procedures. This ensures the consistency and stability of each batch of raw materials, minimizing uncertainties during production. "We offer comprehensive quality assurance to help manufacturers maintain high product standards and achieve customer satisfaction," says the company.

The mix of quality ingredients, technical assistance and services that help manufacturers produce the best frozen dough they can make Angel Yeast one of the most reliable partners a baker can have. •

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Indulge Yourself



Rather than evoking feelings of guilt, as was the case in the past, consumption of many types of sweet bakery products is increasingly inspiring a ‘feel good’ moment, which many feel is vital for their daily lives.

By Jonathan Thomas

The worldwide market for bakery goods – especially sweet varieties such as cakes, pastries, pies, muffins and doughnuts – has long benefited from the strong consumer desire for indulgent yet affordable foods, whether at mealtimes or during snacking occasions. Even though many of these products are typically priced at the higher end of the market, recent demand has held up relatively well, even allowing for the deteriorating economic conditions across much of the world at present. Consumers in many western markets are increasingly seeking out comforting, convenient and affordable food experiences, both for in-home and out-of-home eating. This has been partly attributed to the state of the world today, with the devastating effects of the pandemic having been followed by turbulent political activity in certain parts of the globe (such as the Middle East and Ukraine), as well as economic uncertainty which has been evidenced by rising inflation and the higher cost of living. Rising demand for indulgent and comforting foods is a common trend during difficult times, mostly to help create feelings of warmth, contentment and wellbeing amongst people. According to a 2023 report from Innova Market Insights, much of the world’s population routinely seeks out simple pleasures via foods such as sweet bakery goods. For over half (51%) of global consumers, smaller-sized treats such as cakes are viewed as an everyday moment of happiness, representing one of the most common methods of improving wellbeing. The report also found that almost 10% of UK consumers described enjoying indulgent food and drink as their most significant source of pleasure and happiness within the last year.

The importance of indulgence to the snacking market (of which bakery goods represent a leading sector) was further highlighted by research from FMCG Gurus, which was published in the second half of 2023. This research found that over 70% of global consumers claimed to enjoy food and beverages they viewed as indulgent or a small treat at least once a week. According to the study, 17% of its respondents consumed these types of food and drink on a daily basis, 25% did so every couple of days and 31% did so weekly. Less than 5% of consumers never exhibited this behavior. The reasons for eating snack foods viewed as indulgent are summarized in the table below. As can be seen, the leading driver was for enjoyment and/or pleasure, mentioned by 43% of consumers. This figure was higher than average for respondents in European countries such as France (54%) and Spain

Reasons for Eating Indulgent Snack Foods (%), 2023	%
For enjoyment/pleasure	43
For reasons of comfort	30
To cheer themselves up	27
To boost energy levels	23
As a reward	22
To help deal with stress	20
To feel better mentally and emotionally	18
Boredom	17
For social connections	11

Source: FMCG Gurus





(44%). Other leading reasons include doing so for comfort and as a way of cheering up, while boosting energy levels was mentioned by almost a quarter of respondents. When asked to define what constituted an indulgent snack food, 40% of consumers mentioned a rich taste or flavor. Even though consumers are inclined to treat themselves, however, health concerns can still play a major role in terms of buying behavior. The research also found that 39% of consumers considered a snack that was tasty yet healthy as an indulgent product, therefore providing satisfaction on two levels. The consumption of snack foods considered indulgent appears to be more widespread later in the day, e.g. during evenings and late-night occasions.

THE INFLUENCE OF STREET FOODS

Future demand for indulgent bakery goods is expected to benefit from the continued expansion of the street foods market in many western countries. Across much of Western Europe, street food is now regularly being eaten at a wide range of venues, examples of which include high street stalls, disused warehouses and festivals. In the post-pandemic environment, the market has also witnessed an increase in the number of mobile vendors serving street foods, which are ideally positioned to capitalize on the trend towards eating on the go. According to data from Business Gateway, around half of all UK consumers make a purchase from a street food van at least once per week, while 64% are willing to spend more than the average amount for their daily lunch on street foods. Consumption is heavily skewed towards younger consumers – research from Hartman Group indicates that almost a third of people belonging to Generation Z like to try new foods and recipes on a regular basis. Although savory foods such as Asian and Mexican dishes are believed to account for the bulk of sales, sweet items also occupy a strong position within the street foods market in countries such as the UK. There are many examples of sweet bakery products typically sold and eaten on the street from around the world – some of the leading examples include the following:

- **Crepes** – thin French pancakes which are believed to originate from the Brittany region. Crepes sucrées (sweet crepes) are one leading variety, which typically have sugar added to the batter. Popular sweet toppings and/or fillings for crepes include chocolate spreads, fresh fruit, jam and cream.
- **Liege Waffles** – one of the two leading types of waffle from Belgian cuisine, which are made using a thick brioche-style dough and sweetened with pearl sugar. Popular sweet toppings with Belgian consumers include chocolate powdered sugar and whipped cream.
- **Churros** – long sticks of fried dough from Spanish and Portuguese cuisine, which are typically dipped in chocolate.

- **Pastel de nata** – egg custard tarts from Portugal, which are usually eaten with coffee and sprinkled with cinnamon.
- **Stroopwafels** – thin and crispy round sweet biscuits consisting of two waffle discs filled with a layer of caramel syrup, which originate from the southern regions of the Netherlands.
- **Poffertjes** – small, round and puffy Dutch pancakes from the Netherlands, which are made with yeast and buckwheat flour. They are frequently served at festivals and other outdoor events, traditionally accompanied with melted butter, powdered sugar and/or whipped cream.
- **Kanelbullar** – sweet spiral buns flavored with cinnamon, which are commonly associated with Scandinavian cuisine.
- **Baklava** – a sweet pastry associated with Turkey, Greece and other parts of the Middle East. This is usually made from filo dough, honey and either walnuts or pistachios.

As the street foods market in Europe develops further, sweet bakery goods such as the examples above can expect to become more widespread within the region's urban areas, especially since many are viewed as an indulgent treat by consumers. These products also satisfy other consumer desires, such as being suitable for image sharing on social media websites.

PRODUCT TRENDS

More consumers are now looking to trade up in terms of quality when purchasing cakes, given that they are seen as an affordable indulgence. This trend is especially apparent in the evenings, when consumers are more likely to want to reward themselves with sweet treats such as cakes – according to research from Kantar, there



were 223 million of these evening reward occasions in the UK during 2023, with taste representing the major consumer driver. To tap into this growing market, Premier Foods extended its Mr Kipling Signature Collection range in April 2024 with new small cakes positioned as indulgence products. The new Double Chocolate Cakes and Chocolate & Caramel Layer Cakes joined other sweet bakery goods in the Signature Collection range such as Brownie Bites (which are available in Double Chocolate and Salted Caramel flavors).

Another growth area within the market for indulgent sweet bakery goods is the single-portion desserts and puddings sector. Like many varieties of cakes, these have come to be seen as affordable, everyday pick-me-ups, with more consumers now purchasing these products as a treat or reward. The customer base for small, single-serving desserts remains large, ranging from retailers such as supermarkets to cafes, restaurants, delicatessens, farm shops and other foodservice outlets. Some of the more popular products within this category include cheesecakes and sweet tarts and pies.

The desire for indulgence (often in a social situation) has also been a main driver in the market for doughnuts, especially in many western markets. According to Krispy Kreme's UK business, over 70% of its sales are for sharing occasions, such as with friends and colleagues in the workplace to celebrate birthdays, parties, etc. Separate research from CSM Ingredients states that more than 70% of the UK's doughnut sales occur in the afternoon, partly due to their appeal as an indulgent and affordable snack that can be eaten on the go.

The doughnuts market in many western countries continues to evolve, encompassing new flavors, formats and shapes. Flavor innovation remains rife, with many recent examples drawing inspiration from classic desserts such as tiramisu, apple crumble, key lime pie and crème brûlée. New and emerging formats include finger doughnuts and giant doughnut cakes, as well as doughnut bites such as Timbits from Tim Hortons. There is also more demand for personalized products, such as

the TIY (text it yourself) collection from Project D – this allows consumers to choose their own glaze and craft a message for the top of the doughnut.

Elsewhere in the bakery industry, consumption of sweet pastries such as croissants and pain au chocolat in many parts of the developed world remains high. Breakfast remains a key eating occasion for these foods, although they are also well suited for eating on the go. In both these instances, they are frequently regarded as representing an affordable luxury.

The sweet pastries mentioned above have a rich and established heritage, meaning that many are sold at comparatively high prices by artisanal bakers and other similar establishments and are therefore positioned on an indulgence platform. However, the percentage of croissants sold in Western Europe by artisanal or craft bakers has declined in recent decades, as many are now manufactured using frozen dough – this greatly improves convenience for retail channels such as in-store bakeries (ISBs) and enables them to meet higher levels of demand. Recent estimates suggest that up to 80% of all sweet pastries sold in France were produced industrially, which has prompted fears over the long-term survival of smaller craft bakers.

France has one of the world's largest markets for croissants, with consumer penetration estimated at 75%. This figure is even higher for households containing children, which indicates they are popular with families. Croissants represent the second most popular form of viennoiserie amongst the French population, trailing pain au chocolat but outranking pain au raisins. They are mostly purchased to eat around breakfast time, but also for consumption during the afternoon as a snack. People are mostly attracted to croissants for reasons such as their taste, their freshness and their crispy quality, coupled with the fact that they represent an affordable and indulgent treat.

One of the UK's fastest growing brands within the sweet pastries market is St Pierre, which has been part of Grupo Bimbo since October 2022. The company's range, which is inspired by Parisian café culture, includes croissants, pain au chocolat, chocolate chip brioche swirls, caramel waffles and chocolate-filled crepes, as well as its increasingly well-regarded brioche burger buns. UK sales of the company's products are currently experiencing 94% year-on-year growth, while the brand is also present in the US and Middle Eastern markets. Belgian-style waffles are also making inroads into the market for indulgent bakery goods – in the UK, for instance, more waffles are now being sold via high street outlets and 18% of all households now purchase into the category. During September 2024, Warburtons extended its range with new Belgian Waffles, which were launched in Choc Chip and Pearl Sugar varieties. The company positioned the new waffles as a morning/breakfast treat or between meals snack. •

Sweet, Sweeter, Sweetener

Sweeteners are the most dynamic sector of the bakery ingredients market, as every manufacturer wants to offer customers products that align with their health goals. Continuous research and innovation in this field allows them to do this better every day.

By Jo Ilie

One of the primary challenges bakers face today is selecting the right sweetener to achieve their goals for a new baked product. Whether the aim is to create a reduced-sugar item, reformulate a traditional recipe to meet updated sugar regulations, or craft a baked good tailored to those on specialized diets, choosing the ideal ingredient is key to maximizing flavor – ultimately the most important factor.

The term “sweeteners” includes a broad spectrum, ranging from full-calorie options like glucose syrups, maltose syrups, glucose-fructose syrups, fructose syrups, and dextrose (monohydrate and anhydrous), derived from corn and wheat, to low/no-calorie polyols like maltitol, sorbitol (liquid or powder), isomalt, mannitol, and blends, as well as high-intensity sweeteners like stevia.

Sugar is highly functional in baked goods. Aside from providing sweetness, it has a bulking function and influences texture, spread, structure, browning, processability of the product, shelf life and more. Reformulating to reduce sugars without sacrificing physical and textural attributes, adhering to regulatory requirements, and addressing other nutritional and functional requirements is a huge challenge with no one-size-fits-all solution. Instead, successful sugar-reduced bakery formulations must find the right combination of ingredients to replicate these functions. Here are some recent developments in this field.



NEW STEVIA FROM TATE & LYLE

Tate & Lyle recently unveiled its new stevia composition, OPTIMIZER STEVIA 8.10. This innovative ingredient delivers the highly desired premium taste profile closest to sugar, even at high sugar replacement levels, while offering a more cost-effective solution than other premium sweeteners. This stevia composition offers a comprehensive set of benefits for both manufacturers and consumers. With OPTIMIZER STEVIA 8.10, manufacturers gain access to a versatile, great

tasting stevia at a lower cost-in-use, offering an improved value compared to other premium stevia sweeteners. This translates to delicious, low-calorie options that meet consumer demand without compromising on taste. The unique composition qualifies for labeling as “stevia extract,” aligning with consumer preference for a sweetener derived from nature.

With versatility across applications, OPTIMIZER STEVIA 8.10 is ideal for achieving a superior taste profile in high sugar-replacement formulations like nutrition bars and shakes, functional beverages, vitamin gummies, and yogurt.

“OPTIMIZER STEVIA 8.10 is a breakthrough for the industry,” said Abigail Storms, Senior Vice President Global Platform, Sweeteners & Fibers, Tate & Lyle. “We’ve leveraged our technical expertise to create a sweetener that not only meets the highest standards of taste and quality but also delivers cost savings to our customers. OPTIMIZER STEVIA 8.10 opens a world of possibilities for food and beverage manufacturers because they no longer have to compromise on taste because of cost. Whether you’re looking to improve taste, reduce costs, or enhance the nutritional profile of your products, OPTIMIZER STEVIA 8.10 delivers on all fronts.”

A PLUG & PLAY SWEETENER FROM NUTRAEX FOOD

NutraEx Food, Inc. a leading supplier of natural sweeteners, has launched BI-Sugar – a ground-breaking new plug & play sweetener solution that inhibits the digestion of sugar.

BI-Sugar is produced by NutraEx using its patented dry-embedding technology, which bonds L-arabinose to regular sugar (sucrose) and another natural sweetener, such as stevia or monk fruit. Not only does BI-Sugar enable the reduction of calories from sucrose, but research has also shown that L-arabinose functions as a glycemic inhibitor, delaying and partially blocking the conversion of sucrose into glucose and fructose.

This action means that replacing ordinary sugar with BI-Sugar could help to prevent the blood sugar spike typically associated with sucrose intake. In turn, this could result in longer-lasting energy and support the maintenance of a healthy weight, at a time when GLP-1 drugs such as Ozempic have elevated public discussion and awareness about the biological mechanisms that cause conditions such as obesity and diabetes.

In total, BI-Sugar offers four compelling benefits: optimal sweetness, calorie reduction, sugar blocking, and reduced costs. It is versatile and can be used across various product categories, including beverages, bakery, confectionery, dairy, and dietary supplements. BI-Sugar performs the Maillard reaction to produce delightful caramel notes, a feature that is limited in other sugar-reduction solutions. Furthermore, it is made from all natural ingredients that are Generally Recognized as Safe (GRAS) in the US, removing any regulatory barriers to its use in food and beverage formulations.

NutraEx sources L-arabinose from China-based Healtang Biotech Co. Ltd, a global leader in L-arabinose production, under an exclusive distribution agreement. The sweetener is extensively used in the Chinese food and beverage sector, where it is favored by consumers for its ability to mitigate the glycemic impact of sugar.



KETO-FRUCTOSE FROM FOODITIVE GROUP

Fooditive Group, a pioneering Dutch plant-based ingredient manufacturer, launched a plant-based sweetener, Keto-Fructose (5-keto-D-fructose). This innovative sugar alternative, currently undergoing FDA GRAS assessment, is set to establish a new standard for sugar substitutes with its unparalleled taste, functionality, and sustainability.

Keto-Fructose offers sweetness while preserving all the vital functionalities of sugar. This breakthrough enables food and beverage manufacturers to craft healthier, sugar-free products that consumers will love, without compromising on taste, texture, or shelf-life.

Derived from apples and pears through an exclusive fermentation process, Keto-Fructose seamlessly replaces sugar in a diverse array of applications, including chocolate, baked goods, fruit fillings, glazes, and beverages. The sweetener closely mimics the flavor profile of sugar, making it an ideal replacement for reducing sugar content without losing the beloved taste consumers crave.

Fooditive is actively negotiating with some of the largest companies in the food and beverage sectors to introduce Keto-Fructose to a wider audience. The company is also seeking additional partnerships with leading manufacturers, distributors, and industry innovators to expedite the adoption of Keto-Fructose in the US market. By integrating this revolutionary sweetener into more products, Fooditive aims to significantly impact the industry and meet the soaring demand for healthier, sugar-free alternatives.

Moayad Abushokhedim, CEO of Fooditive, said: “Fooditive understands the challenges associated with replacing sugar, and we recognize that the effectiveness of a sugar alternative is not solely measured by taste. This is why our Keto-Fructose sweetener goes beyond replicating the beloved sweetness of sugar. Its additional functionality enables seamless use in applications and reflects our dedication to meeting the real needs of food manufacturers with forward-thinking solutions.”

He added: “Fooditive stands at the forefront of supporting the food industry’s desire to reduce sugar content while preserving the qualities that sugar adds to food products. This new sweetener embodies our

spirit of innovation, our commitment to sustainability and health, and our mission to identify ingredients that fulfill the needs of American food producers and enable them to meet consumer demand for healthier products.”

Keto-Fructose boasts impressive sustainability credentials and an attractive price point. By utilizing waste side-streams from apple and pear processing to produce the sweetener, Fooditive enhances a circular economy, minimizes environmental impact, and ensures an affordable, accessible product for manufacturers and consumers alike.

PURECIRCLE BY INGREDION EXPANDS ITS STEVIA PORTFOLIO

PureCircle will now be able to offer ingredients from bioconversion in the United Kingdom – including Reb D and Reb M – in addition to its broad portfolio of existing stevia sweeteners and natural flavor modifiers, following the UK government publishing a new specification authorizing PureCircle by Ingredion’s range of steviol glycosides produced via bioconversion in the UK. As these sweeteners are already approved for use in the EU, this approval will allow food and beverage manufacturers to use the same stevia technologies in both markets. PureCircle’s bioconversion process mirrors the plant’s natural ingredient production process, creating a non-GM stevia sweetener with high sweetness quality, clean taste and zero calories in use. As stevia matures from seedling to full-grown plant, various stevia ingredients are formed. By adding enzymes to purified stevia leaf extract, the maturation of Reb M is completed, just as the leaf does naturally.

Sue Bancroft, Director, Healthful Solutions, EMEA commented: “With the approval of PureCircle’s proprietary bioconversion process in the UK, we are empowering our food and beverage partners with the choice to explore the best stevia solutions for their specific product and application. Whether from leaf extract or bioconversion, this approval opens the door for companies to create better tasting products, without the calories.”

Food and beverage companies are encouraged to take advantage of PureCircle’s broader portfolio of Clean Taste Solutions now that they have access to steviol glycosides from bioconversion. These sweetening solutions are 100 per cent stevia tailored to achieve optimized taste performance based on a food and beverage brand’s product category and sugar reduction target. PureCircle, with support of Ingredion, has and will continue to invest and innovate to provide food and beverage formulators with the best and most comprehensive naturally sourced sweetener toolbox available.

CONCLUSION

New-generation sweeteners are a far cry from the bitter sugar replacements of yore. And they do so much more than just sweeten, actually helping manufacturers reformulate baked goods in a way that improves the production process and answer the consumers’ need for less sugar in their diet. •



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For Italians, the Quintessential Bread is Still the Fresh and Unpackaged One

A country that takes so much pride in its culinary heritage couldn't have been less dedicated to its baked goods. Just as Italians love their olive oil and pasta, they love good bread and piadine.

By Jo Ilie

The Italian bread market is heavily influenced by traditional preferences, but also by the economic hardships that characterized the past two years all over the world. The market experts at Euromonitor International looked at how the market has changed in the past year and explain the most important trends bakers and manufacturers should be weary about.

CONSUMERS OPT FOR ARTISANAL PRODUCTS

According to data analytics firm Euromonitor International, fresh unpackaged bread still accounts for a dominant proportion of volume sales in the leavened bread category. The main drivers of choice in this area are taste and freshness, which are important in bakery products because fresh products are considered to be of higher quality. The key driver in recent years has been the preference for artisanal products, with most consumers appreciating mother yeast - a biologically complex natural yeast in which a range of lactic acid bacteria and yeasts coexist. This type of yeast makes for tastier, more digestible products that last longer and counteracts food waste. Producers strive to adopt solutions that can lengthen the shelf life of the product and, on the other hand, combat waste by implementing certain initiatives such as selling bread at a discounted price from late in the afternoon.

PACKAGED FLATBREAD PROVING INCREASINGLY POPULAR

Packaged flatbread is also growing in volume terms, thanks to the ever-increasing popularity of piadina. One of the most popular types of packaged flatbread, piadina is an unleavened variety that is part of the gastronomic tradition of the Emilia-Romagna region, but which is enjoyed across the country. During the pandemic, given an increase in home-based working, some Italians became more inclined to buy piadina so that they could easily recreate the kind of gourmet-

style wraps and sandwiches they were accustomed to ordering in cafés or restaurants.

A simple food consisting of only a few ingredients, but which allows a hearty and tasty meal to be prepared in a short time, piadina resonates with both the growing interest in simple, natural products that are less processed and with the growing demand for convenience amongst busy consumers. It is a much appreciated and purchased product, especially amongst Millennials. Recent years have seen the launch of many products in this category, differing mainly in the type of flour used. Innovation is always a key factor for companies trying to come up with products that attract the consumer's attention.

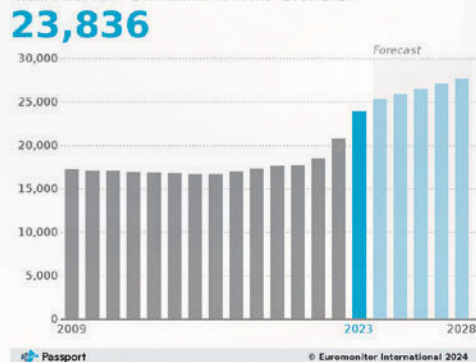
HEALTH AND WELLNESS TREND AFFECTS PACKAGED CAKES AND PASTRIES

In packaged cakes and packaged pastries, 2023 was characterized by a decline in volume sales due to several factors. The economic difficulties prevailing at the end of the review period certainly played an important role, with many families forced to review their spending priorities and focus their reduced purchasing power on essential products. At the same time, the growth of unpackaged products, which are widely considered healthier, and the focus on healthy eating, including reducing sugar and fat intake, are serving to dampen demand in the category. Sugar, in particular, has become a key area of concern for health-conscious consumers. This is why the major companies tend to focus innovation on reduced sugar or rich-in products. •

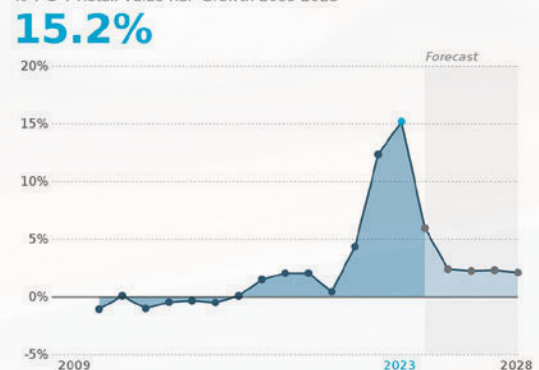
Market analysis based on data provided by Euromonitor International.



Sales of Baked Goods in Italy
Retail Value RSP - EUR million - Current - 2009-2028



Sales Performance of Baked Goods in Italy
% Y-O-Y Retail Value RSP Growth 2009-2028





Meet the Bread Sommelière **Who Can Make Your Bread (Sell) Better**

Lara Schütz, a Romanian-Austrian master baker, is one of the first specialists who helps artisanal and industrial bakers explain to the consumers how their bread products fit in their meals and what they should be paired with. Just as one would with wine.

By Jo Ilie

Lara Schütz was born and raised in Romania and she trained to be an English language teacher. Eleven years ago, while working in Canada, she started becoming interested in sourdough bakery so, when she moved to Austria a little later, she decided to completely change her career. She took the traditional craft route established in Austria for centuries: she went to school, worked as an apprentice, learned the trade and eventually became a master baker - a highly specialized professional in a very conservative guild. That opened the door to becoming a bread *sommelière*, a qualification only available to master bakers. She had to take a year-long course in Germany at the famed Weinheimer Academy and ace very strict exams in order to become a qualified expert in the taste and textures of baked goods.

Now she helps bakeries across Europe - from Croatia to Romania, from Bosnia to Hungary, as well as in Germany and Austria - to become attuned to the new tastes of today's customers, to explain better what they do and to present their products in a way that does justice to the efforts involved in creating them. As an ambassador for bread, she also translated the Weinheimer Academy's Bread Language Guide into Romanian, to help the bustling artisanal bakery scene in her home country up its game.

We asked Lara how does a bread *sommelière* work with bakers and what should a bakery expect from her when she enters their doors.

EBB: Lara, your journey from a career in another field to becoming a Master Baker and then a Bread Sommelière is quite unique. Could you tell us how this all started for you?

Lara Schütz: My adventure with baking began about 11 years ago. I had a career change and decided to dive into the world of bread. I went through all the stages required to become a baker in Austria. I started as an apprentice, continued with more advanced education, and finally became a Master Baker. Before obtaining this title it was a year of intense preparation, but the ultimate goal was always to become a Bread Sommelière.

A Bread Sommelière—it sounds fascinating! Most people associate sommeliers with wine. What does being a Bread Sommelière entail? What skills do you need?

There are indeed many parallels between the wine and the bread sommelier. Fun fact, I'm also a Beer Sommelière, and it's fascinating to observe the deep connections between bread and beer, due to the fact that they share a common history. And I think this is what the Bread Sommelier program teaches us, not only about flavors and fermentation, but also about the history of bread and the greater socio-economic context that fostered its evolution. We learn to appreciate bread's cultural significance and its journey as a product through the hands of bakers and into the public sphere. In terms of skills, you need to know your trade, and that means that the more experience you have as a baker, the easier it is to go smoothly through this really challenging

education program. Beyond that, you need to train your senses in order to be able to feel and describe all the fine nuances bread can offer. Let's note that you start describing the bread from outside to the inside. The sommelier needs to be able to describe the crust of the bread, not only its appearance, but also its smell. Then, you cut the bread and analyze the sound the crust makes, before continuing with the crumb, which has to be described as well. How does the crumb look like, how does it feel when you touch it, what color is it, how does it smell, how does it feel when you bite and chew it, what flavors do you feel in your mouth and how do they evolve? All these elements are part of the sensory evaluation of bread, whether you do this in order to improve a recipe, or during a bread tasting event where you carefully guide your public through this labyrinth of aromas and textures.

So, you don't just focus on the bread as it exists today but also on its history and how it evolves within a bakery. That must involve a lot of discussion with bakers about tradition and innovation.

Absolutely! When I consult with bakeries, I focus on both the flavor and the story behind the bread. Furthermore, these discussions keep being of importance when we do bread tastings, similar to wine tastings, where we present different types of bread to the public. For sure, this is more of a hedonistic approach, trying to bring the bread closer to the customer by explaining the flavors and the ingredients, the fermentation process, the flour used, or even spices. But also the story and the history of those breads need to be told and are an important part of any such event. In order for the sommelier to tell them, the first step is to talk to the baker. In a way, this whole process is a full circle that starts with the baker, is mediated by the sommelier, and closes with the customer.

I imagine you must encounter a wide range of challenges in your consultancy work. What kind of problems do bakeries typically come to you with?

It really depends on the bakery. Many of my clients have inherited their businesses from their parents, so they want to modernize the portfolio without losing their heritage. These days, customers are more health-conscious, looking for more fiber or lighter, artisanal products. Younger generations are also very influenced by social media, so they're interested in trying new styles they see online. Some of my clients may want to appeal to these newer trends, while others are focused on preserving traditional methods.

That balance between tradition and modernization must be tricky. Do bakers ever resist your suggestions for change?

Oh, absolutely! It's human nature to resist change. But in the end, it's all about finding the right balance. I bring my ideas, but it's always up to the baker to decide what's best for their business. It's not about being right—it's about doing what's right for the customer and for the baker. Through constant discussions, fine-tuning, and respect for their philosophy, we usually come up with the best results.

You've worked in so many different countries, from Austria to Romania to Bosnia. How do you approach working with such different bread cultures?

That's one of the most challenging yet exciting parts of my job. Every country has its own bread culture, and even within a single country, tastes can vary drastically. Take Romania, for example. I was born there and thought I knew the local bread culture inside out, but it's evolved so much in recent years. Similarly, Sarajevo is a very multicultural city with influences from Western Europe. French baking, for example, is becoming more prominent everywhere, from Vienna to Sarajevo. As a Master Baker and Bread Sommelière, I need to understand these influences and help bakeries navigate the balance between tradition and global trends.

French baking is a big influence globally, with products like croissants and baguettes appearing everywhere. What do you think of this?

French baking is iconic, and for good reason! The French are excellent communicators of their food culture. They train you, but they also give you a mission—to become an ambassador for their food. That's part of the reason why we see French products gaining so much popularity worldwide. The allure of white flour, the refinement, and elegance of products like croissants and baguettes, have always fascinated people.

Do you think there's a danger of traditional products being overshadowed by these global trends?

That's a concern I have. While I love seeing French products around the world, I worry when local traditions are replaced by global trends. For instance, during Christmas or Easter, local products like Romania's cozonac, Germany's Stollen or Austria's Osterpinzen are sometimes replaced by brioche feuilletée, or by Italian panettone or colomba. If we lose our local bread traditions, that would be a pity. Part of my work as a Bread Sommelière is to help bakeries preserve these local traditions and ensure that they're passed down to future generations.

Preserving local traditions while adapting to new trends—such a delicate balance! Have you had any projects where you recreated traditional recipes from scratch?



Yes, actually! I worked on a project in Austria where a bakery found an old notebook from the owner's grandfather. It contained lists of ingredients, but no methods or instructions. They saw a huge marketing opportunity in recreating one of their traditional products, but the challenge was immense. We had to conduct anthropological research, talking to older bakers, looking at what tools and ingredients were available 40 or 50 years ago, and trying to piece together the original recipe.

That sounds like a real journey into the past. What was the outcome?

It was an incredible experience! We didn't recreate the exact original product, of course—especially since we didn't have the same ingredients, and we didn't have any

information about the method—but it was a heartfelt attempt to bring the bakery’s history to life. More importantly, the process brought people together—the bakers, the customers, and even the local community. That’s what I love about this work. It’s not just about the product itself, but about the story, the history, and the connections that bread creates.

You mentioned earlier that you work with bakeries of all sizes, from small artisanal shops to larger, more industrial ones. When a bakery wants to scale up production, how do you help them maintain consistency?

Scaling up production while maintaining quality is one of the biggest challenges for any bakery. I sometimes hear complaints from customers who say, “This bread tasted amazing two days ago, but now it’s different.” In a small start-up bakery, everything is done by hand, and sometimes there are natural variations in taste. But you can’t afford those inconsistencies when scaling up. That’s why education and understanding bakery technology are so important. If you want to grow your business, you need to ensure steady production by learning the science behind baking, not just relying on trial and error.

So, you really need to know your craft inside and out before you can think about expanding.

Exactly. A lot of people have romantic ideas about opening a bakery, but running one successfully requires a deep understanding of the technology and processes behind it. In countries like Austria and Germany, you can’t open a bakery unless you’re a Master Baker, and that system exists for a reason—it ensures that you have the tools and knowledge to keep your products consistent, even as you scale up production.

You’ve mentioned education several times during this interview. How does the Bread Sommelier program complement your work as a Master Baker?

The Bread Sommelier program adds an extra layer to the Master Baker training. It’s focused on sensory education, teaching us how to describe flavors, understand ingredients, and pair bread with other foods. We learn to look at bread not just as a product but as a cultural artifact, something with a history and a story to tell. While the Master Baker education focuses on production, the Bread Sommelier program helps us communicate the value of that production to customers.

It sounds like being a Bread Sommelier is as much about storytelling as it is about baking.

Yes, exactly! Storytelling is a huge part of what we do. When you can tell a story about your bread—where the ingredients come from, how it was made, what inspired the recipe—you’re connecting with the customer on a deeper level. That’s especially important for small bakeries that want to stand out in a competitive market. Every bakery has a unique story, and it’s our job to help them tell it.

You’ve mentioned the importance of preserving local products, especially with globalization changing the landscape of baking. How do you think the future of bread will evolve?

It’s hard to say, but I think we’ll continue to see a mix of tradition and innovation. Local products will remain important, but we’ll also see more cross-cultural influences, like the rise of French pastries in other countries. What’s crucial is that we don’t lose sight of our roots. Every country has its own bread culture, and it’s important to preserve that while embracing new trends. As long as we can strike that balance, the future of bread looks bright.



Thank you so much for sharing your journey and insights with us, Lara. It’s clear that being a Bread Sommelière is not just about tasting and analyzing bread—it’s about preserving culture, telling stories, and connecting with people. Best of luck in all your future endeavors!

Thank you so much! It’s been a pleasure to share my experiences, and I hope more people will discover the beauty and complexity of bread through their own journeys. •

Fi Europe Gears Up for a Stunning 2024 Edition

More than 1,500 exhibitors and a programme of expert presentations will showcase innovation, share insights and foster business relationships.

Fi Europe is gearing up for its biggest and best year ever. From 19-21 November 2024, Messe Frankfurt will host the leading global event for food and beverage ingredients. Over 25,000 visitors from 135 countries are expected to attend and exhibitors will include ABF Ingredients Group, Azelis, Brenntag Holding GmbH, Cargill, Fonterra and Prinova. The main show arena will feature exhibitors from across the full F&B ingredients spectrum including, for the first time ever, a Petfood Suppliers Hub where visitors can explore the latest ingredients and technologies for pet nutrition. The health ingredients area is dedicated to functional F&B ingredients with proven health benefits. And the expanded Food Manufacturing Technologies & Solutions Area is a one-stop destination for those seeking practical and innovative ways to optimize their supply chain and future-proof their operations, from R&D to delivery. Fi Europe has a strong track record of facilitating business partnerships that deliver successful products. As well as comprehensive exhibition halls offering an opportunity to meet with the best in the business, Exhibitor Showcases will allow innovators to share their unique ideas. All visitor passes also include free access to the Innovation Hub, which will run throughout the show, with a bustling programme of presentations and discussions covering a range of opportunities. Free access to the two-day Fi Europe Conference (19-20 November) is included with all visitor passes too. During a rich variety of expert-led sessions, speakers will focus on solutions for current industry challenges and immediate opportunities for R&D and product development.

Yannick Verry, Brand Director, Food Ingredients Europe & Americas, says: “We’re excited to be back in Frankfurt for Fi Europe 2024. The event has been growing and evolving with the needs of the F&B ingredients industry and we’re constantly looking for new ways to offer a bigger and better platform for our exhibitors and visitors to connect. This year we have some great additions alongside our tried and trusted favorites that make the event even more unmissable than before.”

Exclusive insights will once again be shared at The Future of Nutrition Summit. This special event takes place at the Mövenpick Hotel Frankfurt City on 18 November, the day before Fi Europe opens its doors. Attendees can access the summit with a delegate pass and will hear from industry leaders and visionaries who will give presentations and lead discussions on future trends and developments in health and nutrition. Topics will include Food As Medicine, AI and Food and Sustainable Solutions.

In fact, sustainability will be a key thread running throughout Fi Europe 2024. “Our partnership with international civil society organization Solidaridad is part of our ongoing commitment to sustainability,” says Yannick Verry. “Throughout our Fi Europe features and content, we will highlight sustainable sourcing, transparency, regulatory compliance and more.” With data-driven matchmaking and The Women’s Networking Breakfast also back this year, Fi Europe offers unrivalled networking opportunities. To help attendees plan their days, book meetings and optimise their time, the user-friendly Fi Europe event platform is available online now. •



2024 FEATURE PLANNING

1 JANUARY/FEBRUARY

Anuga FoodTec Special Edition

Ad closing: Feb 14/Publishing: Feb 29

TECHNOLOGY

Sheeters & Laminators / Smart Bakery Systems

PROCESS

Designing & Commissioning / Production Lines / Cutting and Forming / Scoring

SPECIAL FEATURE

Boosting Productivity

EXPERT VIEW

Low Pressure / Extruded Snacks

FOOD SAFETY

Hygienic Equipment Design

INGREDIENTS & NUTRITION

Flours / Shelf-life Optimization / Botanicals / CBD

PACKAGING

Secondary packaging

MARKETS

Germany

SNACKING TRENDS

Expanded / Extruded / Snacks

CRAFT BAKING

Freezers, Display Freezers & Coolers

SUPPLY CHAIN & LOGISTICS

Storage & Warehouse Management

PRODUCT SPOTLIGHT

Pizza / Laminated Dough-based Innovation

TRADE SHOWS

AB Tech Expo, Sirha European, Pro Sweets + ISM

2 MARCH/APRIL

Includes Asia Pacific Overview
Print Supplement

Ad closing: Mar 28/Publishing: Apr 14

TECHNOLOGY

Conveyor Belts, Topping / Filling / Glazing

PROCESS

Inspection & Monitoring / Product Diversification

SPECIAL FEATURE

Energy Saving & Process Optimization

EXPERT VIEW

Sustainable Packaging Materials

FOOD SAFETY

Sanitation & Allergen Management

INGREDIENTS & NUTRITION

Oils & Fats / Flavors & Colors / Water

PACKAGING

Packaging Automation

MARKETS

UK & Ireland

SNACKING TRENDS

Savory vs Sweet Biscuits

CRAFT BAKING

Kneaders & Mixers

SUPPLY CHAIN & LOGISTICS

Traceability

PRODUCT SPOTLIGHT

Traditional Bakery & Ethnic Sweets / Pies & Tarts

TRADE SHOWS

Food Expo Greece, Pizza Expo, IFE, Anufood China, SIGEP China

3 MAY/JUNE

SnackEx Special Edition

Ad closing: May 14/Publishing: May 28

TECHNOLOGY

Turnkey Lines / Software & Sensors

PROCESS

Vacuum Cooling / Seasoning

SPECIAL FEATURE

Smart Production & Industry 4.0

EXPERT VIEW

Efficient Product Transport: Conveying Systems

FOOD SAFETY

Trainings and Program Implementation

INGREDIENTS & NUTRITION

Plant-based Bakery / Enzymes / Free-from Alternatives

PACKAGING

Packaging Design

MARKETS

Scandinavia

SNACKING TRENDS

Pies & Cakes

CRAFT BAKING

Dividers / Rounders

SUPPLY CHAIN & LOGISTICS

Supply Chains & NPD

PRODUCT SPOTLIGHT

Plant-based Bakery Products / Cookies

TRADE SHOWS

Food and Drink Expo, Thaifex - Anuga Asia

4 JULY/AUGUST

Includes North America Overview
Print Supplement

Ad closing: July 11/Publishing: July 28

TECHNOLOGY

Freezing Equipment / Extruders

PROCESS

Depositing / Mixing & Hydrating Ingredients

SPECIAL FEATURE

Sustainability: Challenges & Outcomes

EXPERT VIEW

Oils, Fats & Dough Rheology

FOOD SAFETY

Certifications, Regulations & Compliance

INGREDIENTS & NUTRITION

Dough Improvers / Inclusions / Pulses / DRI & EU regulations

PACKAGING

Sustainable Materials

MARKETS

Spain & Portugal

SNACKING TRENDS

Sandwich Breads / Flatbreads

CRAFT BAKING

Deck and Rack Ovens

SUPPLY CHAIN & LOGISTICS

Handling & Transport

PRODUCT SPOTLIGHT

Donuts / Cakes

5 SEPTEMBER/OCTOBER

Includes Middle East Overview
Print Supplement

Ad closing: Sept 19/Publishing: Oct 03

TECHNOLOGY

New Oven Technologies

PROCESS

Extrusion / Handling / Pick & Place

SPECIAL FEATURE

Product Quality Management

EXPERT VIEW

Plant-based Formulation & Production

FOOD SAFETY

IoT in Food Safety Management

INGREDIENTS & NUTRITION

Sweeteners / Emulsifiers / Antioxidants

PACKAGING

Robots / Cobots

MARKETS

Italy

SNACKING TRENDS

Enrobed / Filled Sweets

CRAFT BAKING

Pastry Equipment

SUPPLY CHAIN & LOGISTICS

Cold Chain

PRODUCT SPOTLIGHT

Frozen Pastry / Sourdough Bread

TRADE SHOWS

Fi Asia, Pack Expo

6 NOVEMBER/DECEMBER

Fi Europe Special Edition

Ad closing: Oct 29/Publishing: Nov 12

TECHNOLOGY

Dough Dividers/ Rounders, Mixers & Kneaders

PROCESS

Conveying / Hygiene & Sanitation

SPECIAL FEATURE

Sustainable Sourcing of Ingredients

EXPERT VIEW

Pans, Trays, Racks & Bakeware

FOOD SAFETY

Process, Product & Staff Protection

INGREDIENTS & NUTRITION

Yeast & Sourdough / Proteins & Fibers / Starches

PACKAGING

Active Packaging

MARKETS

France

SNACKING TRENDS

Wafers

CRAFT BAKING

Small Footprint Technology

SUPPLY CHAIN & LOGISTICS

Software Solutions

PRODUCT SPOTLIGHT

Winter Holiday Treats / Meringues

TRADE SHOWS

Free From Functional Food Expo / Health Ingredients.

Gulfood Manufacturing

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