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BAKER & BISCUIT

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BISCUITS & SNACKS
Flatbread Sales Are Anything
but Flat





NPD Building Blocks: **Relevant, New and Exciting**



This year has been, as for us all, entirely unprecedented for the bakery business, which for them translated into a massive increase in demand for their breads.

For this issue, I've had the pleasure to interview Alison Ordonez, innovation and quality director at Roberts bakery, a fourth-generation family business supplying retailers throughout the UK. It employs a staff of 900 and operates bakeries in Northwich, Cheshire and Ilkeston, Derbyshire. This year has been, as for us all, entirely unprecedented for the bakery business, which for them translated into a massive increase in demand for their breads. While their artisan range also performed well, categories that were less requested included (logically) foodservice products and sandwich thins. The bakery was quick to move in sync with swift changes, adapt strategies and commute to sales channels in need of supply. This shows perhaps most clearly when looking at its snacking range: originally designed for the on-the-go breakfast food sector, Roberts has since switched focus and its new snacks are now designed for consumers who want to feel the benefits of healthy energy at home, and outside – while transitioning to or settling into a long-anticipated new normal. “Five months ago, we were targeting an on-the-go consumer in a market set to top GBP23bn by the end of 2022. Since the outbreak of the pandemic - thanks to the agility of our brand and operations - we've quickly adapted to take advantage of new opportunities,” the bakery's representative said. While all foundations of consumer behaviors have been rearranging and are still in fast motion, I was impressed to see Roberts showing a deep understanding of the disruption, and how they considerately assessed even the mental wellbeing of consumers, to find solid revenue opportunities in an environment of behavioral quicksand. “There is certainly an increased demand for better-for-you snacks that still offers escapism without conflicting with health goals. We know that most shoppers are now trying to eat and drink healthier. This new range meets their needs perfectly – being healthy nutrient-rich snacks that taste great too,” Roberts' Ordonez summarized. The offerings the bakery provides are backed by NPD based on proven building blocks: convenience, comfort, health & nutrition, freshness and a great taste. The interpretations are new and exciting, much like their product range with the same name. This is essentially the joy of discovery in the business for me, every time, that work is more human and highly efficient. •



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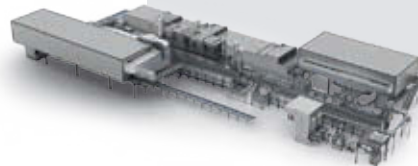
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U.S. Success For Tecnopool



Tecnopool has earned a key role in the North American food processing market thanks to key factors including a good understanding of the culture, its in-country presence, personal relationships and technical expertise, the company acknowledges. According to Nicola Scudella, Tecnopool’s sales manager for North America, “Americans, same as Italians for some typical and traditional sectors (i.e. food), are very protective of the “Made in the USA”. The challenge is to overcome this initial resistance

towards foreign products.” Working for members of the American Society of Baking is the most secure accreditation and a passport to any future negotiation, in Tecnopool’s experience. This year has been a further test due to the COVID-19 situation. “When I think that during lockdown we closed a contract with a large leading company like Artisan Chef for three bakery lines, I am obviously satisfied with how we rethought our communication processes to navigate the crisis,” acknowledges Scudella.

Cargill builds USD21m House of Chocolate



In a move to facilitate better product development, Cargill unveiled its plans for a “House of Chocolate” complex at its Mouscron, Belgium site. The complex, which will be built alongside the company’s existing chocolate production plant, will include a state-of-the-art chocolate experience center, a unique pilot plant, a sensory lab and creative workspace for the company’s European R&D team of chocolate engineers. The new 700 square meter complex will enable customers to experience the convenience of an all-in-one development process, from inspiration, innovation and training, through pilot lab testing, sensory testing and finally, culminating in commercial-scale production – at a single location. Staffed by a team of more than 40 chocolate engineers, including sensory experts, technical service specialists and R&D scientists, the new facility will serve as the hub for all of Cargill’s chocolate, coating and filling activities.

Positive Signals For ProSweets Cologne 2021

The organizers of ProSweets Cologne recently announced they have positive signals ahead of the show. On the one hand, registrations from 22 countries have been received, including renowned and specialized solution suppliers from the entire product spectrum – from processing and packing machines, through to robotics, packaging and ingredients. On the other hand, ISM, which is staged in parallel, is recording high demand and around 80% of the exhibition space is already booked. Potential sweets and snacks manufacturers will also take the opportunity on-site in Cologne to inform themselves about new industry solutions at the supplier trade fair. Together, both trade fairs form a strong duo again in January 2021 for the re-start of the industry and not only do they boast a manifold and competent alignment, but also it is – above all – a safe one, thanks to the #B-SAFE4business concept, the organizers say. The measures developed by Koelnmesse include among other things continuous online ticketing with complete registration, significantly wider aisles, extensive hygiene measures and the obligation to wear a nose and mouth mask in all sections except when seated at the stands or in the foodservice area.



Kells Launches Simple Speedy Whip Sponge Blend

Irish millers and bakery experts Kells have launched their new Speedy Whip Sponge Blend to help bakers make a wide variety of sponge cakes by just adding water. With no added colors or flavors, the blend allows bakers to prepare cakes faster and achieve a lighter result due to the stiffer batter. It can make Victoria Sponge style cakes, sheets for celebration cakes or layer cakes and Swiss rolls. The Speedy Whip Sponge Blend joins Kells’ Sponge Cake Blend range which includes their Complete Sponge, Kells Sponge and Chocolate Sponge. Commenting on the new Speedy Whip Sponge Blend, MD of Kells, Robert Mosse says: “Time and resource continues to be a challenge for bakers and this has been even more apparent in the past few months. The new Kells Speedy Whip Sponge Blend is the perfect solution for bakers who are looking for a versatile sponge mix that is quick and simple to use but doesn’t compromise on the final bake.”



Stern-Wywiol Gruppe Creates Plant-Ingredient Company

The Stern-Wywiol Gruppe recently announced the creation of a new subsidiary entity called Planteneers – The Plant Based Pioneers. Initially a part of Hydrosol, a specialist for stabilizing and texturing systems and also a Stern-Wywiol Gruppe subsidiary, the new company builds on the success of Hydrosol, and is led by Managing Director Dr. Matthias Moser.

“We intend to continue to grow with both companies,” emphasizes Torsten Wywiol, CEO of the Stern-Wywiol Gruppe. “With that in mind, it will be important to focus on each of their strengths, and further build on them for both brands with the appropriate strategies in each case. That’s the reason we separated the plant-based field out of Hydrosol. To put it differently, our former ‘plant-based baby’ has grown up and is ready to strike out on its own. We’re bundling its capabilities in a dedicated company.”

Treehouse Bakery Launches Vegan Cake Kits

Treehouse Bakery has launched a new plant-based recipe box in the UK, with six cake kits containing everything needed to bake at home. The bakery weighs out each ingredient and delivers them. The six recipes that are on the menu include Biscoff Blondies, Cheerio Cookie Cups and Chocolate Brownies. Each is easy to follow, doesn’t require any specialized equipment and uses packaging that is fully recyclable or compostable. The kits swap out traditional ingredients of butter for soft baking spread and eggs for flax or cider vinegar, making the plant-based transition a simple one. Each box comes with a recipe card to follow along and details of how to recycle packaging.



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Customers demand the highest quality bakery products delivered on time and at the right price. Rademaker understands these challenges. We provide efficient bakery equipment for every possible production environment, based on your specific dough processes and product requirements. Resulting in the lowest cost of ownership in the market yielding maximal results in terms of product quality and return on investment.

Let Smart Mixers in Charge

From precision dosing to top-efficiency mixing and kneading while fully in control of all machine parameters and dough characteristics, smart mixers perform best and are the answer to all process challenges. Data aggregation and real-time monitoring provide powerful tools to achieve the desired result precisely and consistently.

By Catalina Mihiu

Smart features are quickly establishing themselves as a superior go-to for mixers, enabling time and resource savings with increased processing efficiency. Continuous mixers have been steadily gaining ground as a technology themselves over the past 10 years, relying on benefits they can provide, which range from precision in ingredient dosing, real-time data collection, storage and customized reproduction, to higher throughputs and more consistent dough - all done automatically.

For French technology specialist VMI, for example, the latest innovations upgrading their mixers relate to automation and the feedback of data allowing better control of the process. Its continuous mixer Verymix provides graphs and visual metering of motor intensity, dough temperature, glycol valve openings and mixing energy data, which ensures stability to the production procedures and the proper tools to ensure consistency of mixing. The VERYMIX continuous mixers make it possible to automate the flow management towards resting phases or for a transfer to the line, while also reintegrating the dough scraps.

HYDROBOND TECHNOLOGY

Exact Mixing has recently been awarded patent protection for its Hydrobond Technology® by the U.S. Patent and Trademark Office (USPTO). It delivers instant, uniform hydration of a flour stream before it enters the mixer, without adding heat to the dough, and results in a shorter mixing time, with less energy required. “This patent represents a major breakthrough in dough mixing. Rapid hydration is an advanced technology to make bakery doughs faster,

with more uniform moisture distribution, and with less energy,” said Jim Warren, vice president of Exact Mixing at Reading Bakery Systems. Hydrobond Technology mixes dough on a particle-to-particle basis. When used with a continuous mixer, it speeds up the continuous process allowing for the use of a shorter mixer, which means a smaller footprint as well as lower equipment costs, and lower energy costs. It can also be used with a pre-hydration system to mix particles of flour, minors and water directly into a brew holding tank.

The data RBS mixers can collect encompasses virtually all ingredient measurements, including instantaneous rate, temperature, and, in the case of liquids, viscosity. Gravimetric metering measures ingredient rates to within 0.5%. PID controls to control the rate precisely and all data is saved and available to the operation at the HMI. The mixing energy is measured to be sure the produced dough is well developed. “Data is collected during operation to ensure the process is correct. Also, statistical data is collected to help understand the process and develop new processes in the future,” the company’s specialists explain for us, adding that they experience manufacturers increasingly asking for smart features such as real-time data that allows the system

*Ton van der Pas,
team leader High
speed mixers,
Benier Kaak*

“

Based on information about the flour’s weight and temperature, the correct amount and temperature of water is supplied. Other liquid ingredients like liquid yeast, vinegar, oil, etc. are measured by flow meters.



to adjust to changing conditions without an operator's intervention, and area in which this type of technology excels.

Hydration levels in continuous mixing are controlled by having precise controls on the ingredient streams. "This is then ensured by seeing that the required mixing energy and dough resistance remain constant," Exact Mixing specialists say. Software integration then brings the optimization line to the next level; "Oversite controls and data collection systems are commonly placed a level above the mixing system controls so that a complete line supervisory controls system can be employed," they add.

THE GOAL IS SPEED IN EACH BATCH

Kaak's Benier MDD High Speed Mixer uses pressure, vacuum and/or aeration - parameters that facilitate the optimization of the rheological properties of the dough in a relatively short time, with a high range of water contents (varying from dry bread crumb dough to high water percentage doughs like toast bread and pizza). With this mixer, up to 14 batches of dough can be processed per hour, minimizing the aging effect of each batch. This means a constant dough output and no variations in dough quality on the dough make-up lines. To achieve time-savings, energy is rapidly transferred from the impact plate to the ingredients using a powerful drive. The specially-designed impact plates (with round or flat bars as standard) and the mixing bowls with baffles are also contributing to the efficient energy transfer. The Benier MDD comes with a completely automated dosing system, measuring the flour's weight and temperature. "Based on

Data is collected during operation to ensure the process is correct. Also, statistical data is collected to help understand the process and develop new processes in the future.

this information, the correct amount and temperature of water is supplied. Other liquid ingredients like liquid yeast, vinegar, oil, etc. are measured by flow meters," Kaak's specialists explain. During dosing, the impact plate gently rotates to optimize the ingredient distribution before the mixing starts.

The high-speed mixing process uses pressure and/or vacuum: "Vacuum is used when a dough/product must have a fine cell structure. It also allows the dough to absorb more water, which ultimately lowers its price per kg," they add. Using pressure to mix the ingredients supports the gluten formation because there are more oxygen molecules available to react with the glutamine and the gliadin protein (forming Di-sulfide bridges). This can result in a more open bread crumb structure with a bigger volume, we learn.

To gain complete control over the process, high-speed mixers such as the MDD measure the amount of energy per kilogram (Whr/kg) that is added to the dough. This ensures that each dough batch is the same, regardless of the batch size.

Continuous or by batch, mixing is perfected with increased control made possible by employing state-of-art, smart technology innovation. •



*Exact Mixing
(RBS) specialists*

All Things Cold

Controlled cooling and freezing have requirements and solutions that are unique to each bakery. While there is no universal, one-stop-shop technology to meet all production stages and needs when lowering temperatures, manufacturers will design the machine to meet the intended parameters precisely.

By Catalina Mihi

Variations in production capacity, the characteristics of different types of goods going through production, the facility's footprint, the process in the manufacturing sequence, the ambient temperature and machinery placement: these are some of the factors that will play a role in determining what cooling technology works best, when, where, and how. "Every bakery has its own special conditions and requirements. Our job as a manufacturer is to offer each customer an individual solution, so that they can produce with our cooling systems the best possible quality products," specialists at WACHTEL tell us. While spiral systems make sense for industrial productions, for handcrafted or semi-industrial bakeries it's more flexible to work with shock- and storage freezers, also for economic reasons.

On a spiral technology, one of the main benefits is coming from its established reputation in the bakery business. It is a reliable, easy to understand solution that excels where there are few change-overs between products with different proofing, cooling, freezing time, and when there is no concern about cleaning and cross-contamination.

COOL RISING

A special case worth looking into is that of a start-up putting together its machinery line-up. Looking at the proofing, cooling and freezing technology needs, when starting from scratch, the German specialist will first look into the kinds of products that will be produced. "A good basic [piece of equipment] for a start-up is definitely our automatic proofer and retarder cooling box with COOL-RISING®," WACHTEL recommends, as "the best way to develop more taste, better crust, more aroma and a longer freshness/shelf life." The temperature, the humidity and the air circulation are computer-controlled by the company's IQ COOL control-panel.

While it's paramount that the products going through cooling systems have the exact characteristics aimed for, other aspects also factor in choosing, respectively working with and optimizing cooling equipment. They include timings and resource optimization, factors that all spell cost savings as production efficiency increases. To optimize the production of baking goods in quality, rationality and economically, is it indispensable to work with a good cooling system, tailored



to the production. The wrong settings or circumstances can quickly harm the quality – and even safety – of the products. “If you are freezing already baked products, for example, it’s very important to run through the temperature range from +7°C to -7°C very quickly. In this temperature range, the retrogradation is at the highest level. It means that the water stored in the starch is going out, released,” WACHTEL explains. For unbaked products, the goal is to preserve the moisture of the product’s surface.

To maximize process efficiency for cooling and freezing operations, “You should always consider combining heat recovery with cooling units, in order to use the waste heat to produce warm water,” specialists from WACHTEL recommend.

MANAGE THE COOLING & FREEZING AREA

Handling systems are crucial support to cooling, proofing and freezing. The demand for short production runs, with a wide variety of customizations, is also reflected in the cooling area of the baking plant. MECATHERM’s M-UB handling system, an alternative to classic spirals, provides creative solutions in this respect, allowing access to products between cooling and freezing, to personalize or slice them; it can also sync to handle quick stops in the packaging area for packaging changes, for example. This handling system enables all kinds of baking sheets, assemblies and peelboards to be transported, for the seamless transition of products to proofers, chillers and freezers, as it transports trays through the mechanization unit via a continuous loop. During the different stages, and particularly while the products are in the proofing chamber, the products must be handled gently to ensure that they’re of optimal quality. The elimination of all impact and friction guarantees uniform and gentle handling during all processing stages. “It is critical to guarantee a product’s positioning

during these process phases. For proofed and frozen products, as an example, it’s mandatory to keep spacing between products. These spaces are the “paths” for the air to circulate allowing proper thermal treatment of the products,” Jérémy Hogrel, Soft & Pastry sales support manager and M-UB Mechanization product manager, MECATHERM, recommends when operating such a handling system. If these spaces are too big or too small, the consequence is an irregular thermal treatment of the products, resulting in consistency loss. Keeping the products perfectly in place saves a huge amount of money when it comes to feeding packaging machines – and the vertical system does just that.

HOW TO NAVIGATE CHALLENGES

During cooling and freezing, products are not as sensitive as they are during proofing and baking. Nevertheless, products need to be kept in a good state throughout these process phases. “During the cooling phase, thermal treatment and moisture management are relevant points to watch to ensure an optimal process result, while preparing the products to advance toward the next steps, which can be slicing, injection, deep freezing – each with specific characteristics to be met,” Hogrel emphasizes.

Another important aspect during these phases is hygiene; in a freezer, and, even more so, in a cooler, all the parameters create the ideal environment to ensure a very good proliferation of bacteria. Then, being aware of the risk of having superpositions in the cooling/freezing machine itself cannot be overstated, MECATHERM’s specialist adds: “Particularly a superposition of static or moving mechanics above products must be avoided. Wear parts and friction elements on the products are a daily concern of industrial bakers today; a good practice is to ensure a daily cleaning of the mechanization and surrounding enclosure.”



The M-UB system incorporates the French specialist's last innovations; it has been developed to meet these needs and stay relevant particularly for a highly versatile and dynamic market producing in industrial capacity. This system is adaptable and flexible, whatever the constraints imposed and the products to be transported, Hogrel illustrates: "All types of supports (peelboards, trays, pans, straps, etc.) can be transported through the M-UB, and the same mechanization technology can be used through all the steps of product realization processes, either by being in ambient air as for a cooler or a stacker, or in an air-conditioned enclosure for use as a proofer or freezer." This vertical transport technology, consisting of an ascending and a descending stack, is carried out without top transfer thus ensuring perfect, smooth and delicate handling of the supports and products without shock. There is no friction (and therefore no contamination with metallic or plastic dust), no mechanical shock (product integrity is maintained even through the most sensitive



Photo: MECATHERM

stages like proofing, while guaranteeing a positioning of the products on the supports). Moreover, the M-UB system is designed for easy customization that would answer specific production requirements: "The pitch between levels is adapted to the products transported, the overall height of this vertical equipment is adjustable to fit in the tiny buildings as well as in cathedrals. The cherry on the cake is that, in case of a downstream stoppage, there is no need to stop the whole line; an extra capacity is there to save production, for example, sized to save one full oven," he adds. The M-UB is also a maintenance-friendly structure: all electro-mechanical parts are accessible with feet on the floor, and most of the maintenance is prepared to be done

During the cooling phase, thermal treatment and moisture management are relevant points to watch to ensure an optimal process result, while preparing the products to advance toward the next steps, which can be slicing, injection, deep freezing - each with specific characteristics to be met.

without employing any tools. "Nevertheless, understanding [its operating principles] is a point, maintenance is an additional one, and giving to maintenance teams the possibility to ensure a good follow-up throughout the lifespan of the equipment is a real topic. This technology speaks for itself, equipped with its smart interface tools gives to each interlocutor oriented and relevant answers matching their needs and at the right moment, keeping in mind that information overflow is counterproductive," Hogrel details.

SPIRAL PERFORMANCE OPTIMIZATION

JBT is also stepping up its sustainable design, hygiene and optimization technologies. The company said food safety, performance and optimization are the key technologies in the latest spiral freezer to join JBT's Frigoscandia brand, at the equipment's launch in September. As a global technology equipment supplier to the food processing industry, JBT has launched its new Frigoscandia GYRoCOMPACT® 70 Spiral Freezer which, the company believes, is set to take food-focused freezing to the next level. At 700mm, the new freezer is more compact than any of its predecessors, yet offers up to 20% increased capacity. Designed to be both sustainable and hygienic with several new streamlined features to further eliminate food traps and maximize food safety, the new freezer joins the GYRoCOMPACT 700mm product line. The new freezer is also iOPS-ready to enable peak optimization.



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*Torbjörn Persson,
director of Value
Stream and Global
Product Line, JBT*



One key factor is that the freezing process itself doesn't limit the growth of bacteria on contaminated products, but only stops it momentarily. This is one reason why optimized hygienic design has always been our top priority. Floor joints, reduced overlapping surfaces, reduced visible threads and pop rivets are just some of the innovations.



Photo: WACHTEL

Customer feedback, combined with its pioneering of the self-stacking spiral belt, are what drives the development of the Frigoscandia brand, as Torbjörn Persson, JBT's director of Value Stream and Global Product Line, explained: "Customers continue to require increased food safety, combined with higher efficiency in uptime and capacity. Of course, most industrial freezers are quite large, so the need to have food-safe freezers is really important when looking at a full food production line. One key factor is that the freezing process itself doesn't limit the growth of bacteria on contaminated products, but only stops it momentarily. This is one reason why optimized hygienic design has always been our top priority. Floor joints, reduced overlapping surfaces, reduced visible threads and pop rivets are just some of the innovations."

MORE USES OF COLD: FREEZE-DRYING

Another area involving ingredient processing that thrives in the cold is freeze-drying, at the end of which the finished product is unaltered nutritionally and remains 100% natural with only the water removed. Ingredients processed in this way allow product producers to create easy on-the-go flavors that are stable at room temperatures for many years. Any ingredients with a high water content respond well to freeze-drying, as the finished product retains all of the original flavor and nutritional value of the initial product. As a result, it means freeze-dried ingredients are perfect to give a flavor boost to savory bakes such as breads, crackers, bars in addition to sweet bakes. Unlike other drying methods, freeze-drying is a gentle process that takes place over a longer time. European Freeze Dry processes ingredients for the commercial baking sector. Their specialists explained the subtleties of the process for us: "The freeze-drying process uses a deep vacuum under which neither ice nor water can exist. The pressure from the

vacuum, with a controlled amount of heat applied, causes the ice to leave the product as a vapor trail, which is then captured on an ice condenser within the freeze drier, upon which the vapor forms again as ice. The process takes on average a day to complete, carried out in a set of 'chambers' which can be controlled at various temperatures and time schedules depending on specific product requirements. We approach each new ingredient individually, such as varying degrees of heat applied and differing lengths of time in the freeze dryer, to ensure that the final product retains the most flavor and nutritional goodness." The process is not without challenges: without proper controls on the programming, the product can appear to collapse, for example. This does not impact the shelf-life but can make the product look less visually appealing. "All freeze driers are linked to monitoring stations to show any change in program controls, monitored 24/7. This means that any deviations in the program can be discovered and rectified," European Freeze Dry reveals.

Freeze-dried ingredients provide a wide range of solutions for bakeries, from supplying pizza ingredients such as mozzarella, caramelized onion, chicken and meat pieces, through to vegetables and vegan ingredients. "Similarly, our range of gourmet ingredients can elevate bakes to a new consumer, with our mulled apple pieces perfect for porridge pots or bars, while freeze-dried fruits such as strawberries can be the perfect flavor addition to sweet bakes such as cupcakes or sweet loaves," the specialists at the company tell us. Rehydration is the logical step to using freeze-dried ingredients. "For some meals, this can be by simply adding some splashes of water to the ingredient, whereas others will naturally rehydrate when added to a final product – for example, the water content in a bread dough will naturally rehydrate the pieces of cheese or caramelized red onion that are added to it," they explain. In conclusion, innovation is here for all of the cooling and freezing needs in the bakery; the more customized, the better. •



Photo: European Freeze Dry

European Freeze Dry specialists



The pressure from the vacuum, with a controlled amount of heat applied, causes the ice to leave the product as a vapor trail, which is then captured on an ice condenser within the freeze drier, upon which the vapor forms again as ice.

Smooth (and Food-safe) Operator

No matter the application, or if they will come in direct contact with baked goods or not, lubricants in bakeries require care, to reap all of the benefits - increased output, machinery performance and efficiency - but none of the risks. Contamination-free is the goal, while ensuring smooth operations.

By Catalina Mihu

Many lubricants used in baking equipment require the food grade (FG) rating. Non-food-grade is strictly permitted only in areas where there is zero chance of contamination. For heavy-duty equipment, extreme pressure (EP) lubricants should be used. In some special cases, lubricants may be required to obtain unique certifications, such as Kosher & Halal ratings for Jewish and Islamic standards for food preparation. Requirements lubricants need to meet are set in place by various organizations; equipment technicians at Shaffer and Synova list some of the American ones for us: The International Organization for Standardization (ISO), the National Lubricating Grease Institute (NLGI), the National Science Foundation (NSF), The American Petroleum Institute (API), International Lubricant Standardization and Approval Committee (ILSAC), Independent Lubricant Manufacturer Association (ILMA), and the Society of Tribologists and Lubrication Engineers (STLE). On the old continent, the European Lubricating Grease Institute (ELGI) is the authority in this field, a group of scientific and technical institutes dealing with lubricating greases and associated products. The institute is involved in all aspects of this product group, particularly those concerning the technical, economic, ecological and legislative positions in Europe. In its selection

of food-safe lubricants, the ELGI lists the H1 category, encompassing “Lubricants for incidental food contact, fitting in the HACCP plan with maximum incidental levels of lubricant presence in the foodstuff as defined by the FDA.” Moreover, lubricants holding the EU Ecolabel license meet the criteria that guarantee:

- Reduced impact on the aquatic environment and the soil during use;
- Reduced CO2 emissions;
- High percentage of renewable raw materials;
- Limited use of hazardous substances.

NO HANDS DIRTY

The amount of lubrication needed is based on the equipment manufacturer’s recommendations and can be influenced by user experience. “Both under-lubricating and over-lubricating can have negative consequences,” Bundy Baking Solutions specialists stress. Some key challenges to using machinery lubricants in bakeries that they highlight include ensuring that food-grade lubricants are kept separate from non-food grade lubricants. Keeping lubricants properly identified and available to the varying applications is a fail-safe procedure, as is assuring that proper lubrication techniques are always utilized. “A simple, but effective practice is the use of color-coding of





A CHECKLIST:

Safety is the paramount factor in bakery facilities; some key points to keep in mind when lubricating bakery equipment are:

1. Clean up any overflow or spills immediately to avoid personnel slips and falls.
2. Lubricate equipment only as directed by the manufacturer. This will ensure that the equipment runs properly and will help prevent equipment failure, thus causing a potentially dangerous situation.
3. Ensure that all equipment is at a zero-energy state prior to lubricating. Lock-out tag-out (LOTO) procedures should always be followed.
4. Body positioning, extremity placement, and ergonomics should always be of focus when lubricating equipment of any type.
5. Confirm that equipment has cooled down in areas that you will be applying lubrication, which will prevent burn hazards from already present oil.
6. Wear proper safety protection to prevent harmful exposure to lubricants.

Source: Shaffer and Synova equipment technicians

lubricant storage and dispensing devices (e.g. colored grease zerk covers that help prevent cross-contamination and misapplication),” they recommend. The frequency of lubrication should be determined by the equipment manufacturers’ recommendations and may also be influenced by user experience. The recommendations set forth by the manufacturer vary according to running time and the equipment’s environment.

THE SCIENCE

Oils can be mineral-based (MIN) or synthetic (SHC-synthetic hydrocarbon). SHC oils break down into several categories which all have different temperature ranges, viscosity ranges, and material (metals, rubbers, plastics, etc.) compatibilities. Specifications will vary due to the temperatures and workload of the equipment. “For example, a bearing on an oven requires a different lubricant than that used on a bearing on a finished product conveyor. Food-grade lubricants are not required in all bakery situations; rather, only if there is a risk of direct or incidental contact with food ingredients or finished products. The type of oil and/or grease used on a piece of equipment is tailored to the force, heat, material, environment, and safety/health regulations affecting the equipment,” the specialists from Synova and Shaffer weigh in. “Our manufacturing teams recommend the

use of synthetic lubricants whenever possible. Although they are typically more expensive, we believe that the high-quality of these lubricants are reflected in their performance and the extension of the life of the equipment,” they explain.

Cleaning should be done both before and after the application of lubricants to avoid contamination. While the main consideration is safety, there is an often-overlooked reason for cleaning – preventative maintenance. “Most equipment in a bakery undergoes sanitation. Oil and grease that purges or squeezes out of bearings and is not cleaned up will become a target. For example, when lubricating the Trunnion Bearings on one of our Shaffer® mixers, bakeries will use Impact-FG grease. This white grease is oftentimes mistaken for dough by the personnel performing sanitation procedures, which is sprayed with cleaners and pressurized water.

This process actually washes out some of the newly installed grease; therefore, lubrication efforts are erased. If the personnel greasing the Trunnion Bearings had simply wiped the excess grease away, the issue could be avoided. It is best never to spray water on any lubricants; rather, wipe any excess lubricants off with a dry towel,” Shaffer illustrates.

Food-grade lubricants are generally considered non-toxic; used oil can be recycled or used as fuel. Many lubricants, especially those classified as H3, are biodegradable. As they are not mineral oil-based (non-fossil fuel), synthetic lubricants have a much longer life than petroleum, thus less “carbon footprint” because of the lower usage quantities.

For further advancements, manufacturing divisions at Shafer and Synova tell us they “Look forward to the “enterprise” incorporation of world-class tribology practices, such as oil analysis (including drop-cards), lubricant storage/filtration systems, cloud-based Computerized Maintenance Management Systems (CMMS), paperless reliability management, and Condition Based Monitoring (CBM). At Shaffer, we are in the process of creating Supplemental Service Guides, educational and instructional guides that go beyond the standard service manuals that will provide bakeries with a more in-depth understanding of installation, operation, and preventive maintenance best practices on our equipment.” •

Bet on Nature

A trend only accelerated by the pandemic, the preference for plant-based ingredients skyrockets as plant power is recognized throughout eating occasions and is becoming a social-media darling. What does this mean for a cereal-based industry? Functional, nutritional, and natural ingredients all around.

By Catalina Mihu



The plant protein market was valued at USD36.5bn in 2018 and is poised for growth up to USD46.4bn by 2023, according to data shared by Lesaffre's Biospring. The plant-based trend is now nothing short of a revolution in food, bakery included. Innova Market Insights identified it as one of the main trends of the year, a forecast that completely checks out in October. And that's not all: it has also been driving the clean-label narrative in an important conversation in the last several years. Producing plant-based foods requires a certain amount of tolerance in production. Wheat proteins help to build critical structure but can also enhance rheology. Taste and texture are key contributors to consumer purchase and preference in plant-based foods. Wheat proteins have a light neutral flavor, allowing the desired flavoring of the product to shine. Texture is a key preference factor and a point of differentiation. "Various textures are possible with the full range of wheat proteins. In fact, you can dial in on specific textures by selecting certain wheat proteins. For example, more elastic wheat proteins contribute to a firm, crunchy texture, and more soluble proteins will contribute to a more tender bite," Mandrila Group USA also emphasized in a presentation.

Market research experts are forecasting a long-term trend evolution towards higher expectations in terms of quality, as well as increased awareness of added health benefits and environmental compatibility.

- To develop baked goods that are entirely plant-based, wheat is the foundation; however, other ingredients must find their same-role stand-ins. Among popular requests, AGRANA Starch has been providing clean-label(!) solutions replacing eggs, for example. "AGENOVUM® is a vegan egg substitute based on wheat and corn. It is suitable for many applications

such as pastry, pancakes, biscuits, spaetzle and crispy breading, available also in organic quality. This is vegan protein power made in Austria!" Tatjana Figl-Wolfsberger, AGRANA Starch – marketing, detailed for us.

- High-quality vital wheat gluten is also high on plant-based shopping lists, and for good reason: "Vital wheat gluten has high water absorption properties, improves visco-elasticity and binding and, therefore, dough stabilization. Moreover, it boosts resistance in puff and frozen pastries. With its meat-like, fibrous texture, wheat gluten is an ideal meat alternative – especially in combination with trendy bakery products."
- Fiber improvement is also in demand when formulating to develop plant-based goods; due to the increasing emphasis placed on gut health, a high-fiber content in snacks and bakery goods will continue moving into the focus. "Potato fiber has well-developed water-binding properties and texturizing characteristics," points out Figl-Wolfsberger. The insoluble fiber retains moisture, slows staling, enhances mouthfeel and increases shelf life. A high-fiber content claim may be indicated on the label. Agrana launched the first "organic" potato fiber on the market.

TRENDS IN PLANT-BASED FOOD

Long-term trends like a vegetarian, gluten-free, high-protein and low-sugar diet have become a standard by now and appropriate products must not be missing in any portfolio, AGRANA believes. "This year, those trends remain emphasized by the gut-health-trend - and that means fiber, fiber, and fiber!" Figl-Wolfsberger underlines. In their work with customers, AGRANA observes bakers are focusing on "perfect taste, short preparation times and a conscience-friendly choice, refined with Hippocrates' saying, 'Let thy food be thy medicine, and medicine be thy food'. As we all want to eat healthily, especially in these turbulent times, healthy home-snacking is crucial," she highlights the opportunity. For NPD advice, AGRANA recommends betting on high-fiber content, less sugar, organic quality, and following the free-from trend. Recipes are developed at the AGRANA Research and Innovation Center, ARIC, a knowledge base bakeries can access. "This is exactly AGRANA's field of expertise: the combination of AGRANA starch innovations with new or traditional formulations will enhance any recipe, turning it into a must-

*Delphine Compain,
Flour & Mixes
marketing
manager, Grands
Moulins de Paris*



Grain-based ingredients, which throwback to the soil, farming, nature, nutrition, and roots, are the first ingredients to be tackled by sustainability. One of the advantages of processing wheat into flour is that 100% of the wheat grain is recovered in our mills.

Vital wheat gluten has high water absorption properties, improves visco-elasticity and binding, and, therefore, dough stabilization. Moreover, it boosts resistance in puff and frozen pastries.



Tatjana
Figl-Wolfsberger,
marketing,
AGRANA Starch

have product and creating greater customer value. AGRANA's specialties score high on GMO-free, clean-label and sustainability and organic indices. Their Austrian origin is a warranty for high quality and responsible agricultural sourcing. Undoubtedly, there is an increasing market for organic snacks. Healthy treats are seeing the highest growth rates for NDP overall: the great number of vegetable-based snacks and on-the-go, quick-to-eat goods such as bites or puffs serves as evidence," she shares. This is not to forget the importance of baking "green" – sustainable, GMO-free and organic production. AGRANA believes sustainability means acting in an economically viable, sparingly and energy-efficient way, respecting both its internal and external stakeholders.

A MILLER'S PERSPECTIVE

The plant-based trend was among the popular consumer priorities last year, as it was also highlighted at IBIE 2019. As a miller, Grands Moulins de Paris is a plant-based product provider by definition, working with wheat, and being a part of the plant-based supply chain every day, since wheat is high in carbohydrates and can be a source of proteins. Delphine Compain, Flour & Mixes marketing manager, told us in an interview what changes in demand the French company is observing, including a higher interest in the origin of their wheat and transparency regarding its production: "This year has been unusual due to the pandemic. However, taking into account that plant-based mainly emanates from the bigger trend of naturalness, it is true that bread and pastries now tend to get cleaner and promote simple and short ingredient lists. Plant-based can also be noticed on new topping solutions or as inclusions to bread and bread products," she highlights. Their flour records the pulse of the bakery they supply, making Grands Moulins de Paris an accurate market barometer. Post COVID-19 needs can be different and even opposite than last year, we learn. "Some bakers will ask for good prices and some others may ask for higher quality products

and certified products that guarantee commitment to new environmental values (i.e., organic). Generally speaking, in a period when people look for reassurance, local flours represent bakers' main concern. The wheat we provide is 100% French and collected closeby, from our milling facilities, which enable us to ensure the best quality and efficiency," Compain says. Thanks to a wide range of products made of flours, mixes, and ingredients, Grands Moulins de Paris are able to provide the appropriate solutions to bakers via tolerant and easy-to-use products or via special, unique, and pure flours or ingredients such as their traditional dry sourdough range. Sustainability begins with the grains and they can provide unique insights, a responsibility the miller acknowledges: "Grain-based ingredients, which throwback to the soil, farming, nature, nutrition, and roots, are the first ingredients to be tackled by sustainability. One of the advantages of processing wheat into flour is that 100% of the wheat grain is recovered in our mills. The co-products resulting from the milling process of the wheat are used in particular in animal feed," adds Compain.

PLANT-BASED BENEFITS

All Grands Moulins flours are made from grains selected for certain characteristics to guarantee baking results. The company does so by collaborating with its cooperative farmers on the selection of wheat varieties to meet the requirements coming from bakers. Each manufacturing process, whether artisanal or industrial, meets specific expectations and specifications. This is why they develop flour profiles in line with each market working with different types of wheat. "For example, VRM Label Rouge CRC wheats are for our artisan bakers and strength improving wheats are specialized for our industrial customers," explains Compain. Tailor-made flours are developed thanks to turbo-separation (separation of starch and wheat grain protein by density) and micronization (grinding of wheat semolina to obtain fractions with different protein content) in particular, she reveals. With health, safety and convenience as top purchase motivators, products that deliver exceptional nutrition and a high-quality sensory experience will be poised for success. Plant-based and wheat proteins are a winning combination. •

CEREAL BASES TO EASILY CREATE PLANT-BASED PRODUCTS



OAT BASE*

+



WATER

=



OAT DRINK

BENEFITS :

- ✓ Pure bases to create your Unique Selling Proposition
- ✓ Bases to reduce the logistic complexity

RANGE :

- ✓ Oat base
- ✓ Spelt base
- ✓ Rice base
- ✓ Tailor-made solutions

*The right base to formulate plant-based drinks, yogurts, desserts, ice-cream, etc.

How Will UK's Flour and **Bread Brexit?**



As the end of the transition period looms, there are still many issues to settle before the UK cuts ties with the EU - including whether wheat flour produced in the UK will be accepted on the EU market after December 31, 2020.

By Anton Aldrick, special projects manager, Campden BRI



Until then, flour produced in the UK ‘enjoys’ the benefit of the mutual recognition for the free trade of products produced in the single market without hindrance. From January 1, 2021 however, the flour may not be able to be exported into the EU due to the mandatory nutrients added to it as required by UK domestic legislation. Adding nutrients to foods is commonplace but the singular requirements of the UK Bread and Flour Regulations regarding nutrient addition do not align with EU legislation.

This has implications for the movement of goods into and out of the EU after the end of this year and could mean millers would end up having to produce two streams of flour: one with the added nutrients for the domestic market and the other without the nutrients for use in a product intended for the EU. To put this all into context, let’s delve into how the UK came to require wheat flour to have nutrients added to it in the first place.

FEEDING THE NATION

During the Second World War, the UK Government - concerned that food shortages would contribute to vitamin and mineral deficiencies - looked for ways to increase the nutritional value of the general population’s food. To prevent the incidence of rickets, the addition of calcium carbonate to flour became mandatory in 1941 to increase levels in the diet when dairy products were scarce. This continued throughout the 1940s up until the end of food rationing in 1954. Also, to make full use of the nutritional value of the wheat grain and to replace the more highly refined white flour then commonly used for bread making, the Ministry of Food introduced legislation that required mills in the UK to produce a flour with roughly 80% extraction or higher of the wheat grain. This flour could be likened to what we know today as ‘brown flour’; the bread made with this flour became known as the ‘National Loaf.’ This flour had another benefit: its high extraction meant there was more flour produced from the same amount of wheat grain which helped reduce the amount of wheat that was being imported from North America and Canada, thereby supporting UK farmers. In 1953, this milling requirement was reduced so bread could then be made from flour of around 70% extraction.

Adding nutrients to foods is commonplace but the singular requirements of the UK Bread and Flour Regulations regarding nutrient addition do not align with EU legislation.



However, as this meant it contained lower levels of nutrients, legislation was introduced to restore the mineral iron and two B vitamins (thiamine and niacin) lost in the milling process, along with the added calcium in all bread and flour except wholemeal. The UK has continued to require these nutrients to be added to wheat flour ever since. Many consumers may not have even been aware of this because up until the introduction of the EU Food Information to Consumers Regulation (FIC) in 2011, the added nutrients were not required to be listed in the ingredients list of the flour. Regulation (EU) No 1169/2011 requires all ingredients added to a product to be included in the ingredient list, making UK-produced wheat flour a compound ingredient. Therefore, this needs to be declared as ‘flour (wheat flour, calcium, iron, niacin, thiamine)’ or similar.

The levels at which the nutrients should be added back to flour are currently listed in The Bread and Flour Regulations 1998:

Mineral	PERMITTED AMOUNT (MG/100G)	
	Not less than	Not more than
Calcium carbonate	235	390
Iron	1.65	-
Thiamin	0.24	-
Nicotinic acid or Nicotinamide	1.6	-

FORTIFIED FOOD IN THE EU

Fortified foods in the EU are regulated by Regulation (EC) No. 1925/2006 on the Additions of Vitamins and Minerals and of Certain Other substances to Food. This requires a nutrient to be added to food in a ‘significant amount’ and is defined now in the FIC as at least 15% of the nutrient reference value of a nutrient. As the levels of vitamins and minerals required by the UK Bread and Flour Regulations are lower than this, they do not meet the minimum requirements for fortifying food under the EU legislation. As such, UK flour with the added nutrients should not be described as ‘fortified flour’. Under the single market mutual



recognition principle, while the UK was a member of the EU, UK flour has been able to be exported into any of the EU Member states without hindrance as this would be a barrier to free trade. Similarly, the UK has permitted flour without the mandatory nutrients added to it to be imported into the UK from the other EU Member States. The big question is, what will the position of both types of flour be after the end of the transition period? At the time of writing, it is not yet known whether UK flour or flour products will be accepted into the EU and vice versa.

AN OPPORTUNITY FOR CHANGE

The UK Bread and Flour Regulations have been reviewed periodically and the current situation represents the ideal opportunity to do so again. Previous reviews concluded that the addition of the nutrients was still relevant to support the nutritional intake of the population so a suggestion to remove this requirement



There are currently no plans to introduce the mandatory fortification of flour with folic acid, but a review of the Bread and Flour Regulation could once again raise this as a possibility.

did not garner much support.

Increasing the levels of nutrients to bring them in line with the EU requirements for fortified foods may be a more likely option that could be considered and one that would ensure the free movement of goods between the UK and the EU.

Another option that has been put forward is to change the mandatory nutrients to include folic acid, in Scotland this has already been the subject of public consultation but any action in this area is still to be decided.

FOLIC ACID

In the UK, there has been a long-standing debate as to whether bread and flour should be fortified with folic acid as a means to increase folic acid intake in pregnant women or women planning to conceive. This is intended to reduce the incidence of neural tube defects such as spina bifida. In countries where folic acid fortification has been made mandatory, it has had a significant impact on reducing the occurrence of this condition. Canada introduced mandatory fortification in 1998 and experienced an almost 50% decrease in neural tube defect cases. A similar impact was found in other countries such as Costa Rica and Chile.

In 2006, the UK Scientific Advisory Committee on Nutrition (SACN) published a report on

folic acid and the prevention of such defects that recommended that fortification of flour or the flour used for making bread should become mandatory. This, in turn, led to a further review that looked at a potential link between folic acid and colorectal cancer. This was published in 2009 and, in it, SACN upheld their previous recommendation for the introduction of mandatory fortification with folic acid. However, the 2009 report also stated that long term intake of folic acid from fortified foods and supplements above a certain threshold should be avoided in adults over the age of 50. Also, those with a history of colorectal adenomas should not be consuming folic acid supplements above the recommended nutrient intake (RNI) for folate of 200 micrograms per day since there is an increased risk of developing colorectal adenomas.

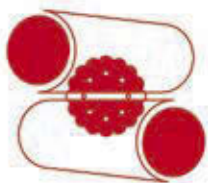
As the purpose of the fortification is intended for women either planning a pregnancy or are in the early stages of pregnancy, the question has been asked if adding folic acid to flour alone would achieve the desired effect. Advice from the Chief Medical Officer in the UK recommends all women considering having a baby to take a folic

acid food supplement. Indeed, in 2016 the Department of Health decided that the mandatory fortification of flour with folic acid was not the best way to increase the intake of folic acid among a small percentage of the population as it may have implications on the rest of the population. There are currently no plans to introduce the mandatory fortification of flour with folic acid, but a review of the Bread and Flour Regulation could once again raise this as a possibility.

In summary, the future of UK wheat flour is complicated, but the situation also presents an opportunity to review the current legislation surrounding it to ensure continued free movement of trade with the EU. It will also provide the opportunity to once again look at the possible health implications and benefits for the whole population if folic acid fortification were to be made mandatory. •



At the time of writing, it is not yet known whether UK flour or flour products will be accepted into the EU and vice versa.



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Flatbread Sales, Anything but Flat



The European flatbread market has benefited from product innovation – for example, more flatbreads made from vegetable flours (e.g. pea or lentil) have been developed to cater to gluten-free consumers, while products suitable for vegans and/or vegetarians are becoming more apparent.

By Jonathan Thomas

Consumer interest in flatbreads throughout Europe has grown steadily in recent years. Many types of flatbread are unleavened, i.e. made without adding yeast. They are a staple of the cuisines of North Africa, Turkey and the Middle East, India and its neighbors (e.g. Bangladesh, Pakistan and Sri Lanka) and parts of Central America. In Europe, sales of flatbreads are worth an estimated USD11.5bn per annum, with sales having grown by around 7% in recent years. The rising popularity of street foods has also contributed towards market growth – products such as wraps and other filled flatbreads lend themselves well towards social media channels, where images can be shared with friends and family.

TORTILLAS & WRAPS

Tortillas – soft, thin and flat unleavened bread typically made from wheat and corn flours – represent one of the market’s largest sectors. Although they can be eaten by themselves, they are more often used as food wraps, where they act as a carrier for meat, fish, vegetables, etc. Tortillas are associated with Mexican cuisine, where they are used to prepare dishes such as tacos, burritos, enchiladas, etc. Mexico is the world’s leading producer of tortillas, accounting for over 40% of annual global output. Per capita consumption of maize tortillas in Mexico is also high by world standards, amounting to more than 80 kg per year.

Across much of the world, tortillas have posed a growing challenge to traditional white sandwich bread as wraps. Much of this is due to their wide versatility, although demand is also believed to have increased on health grounds, given the appearance of varieties such as wholegrain and gluten-free. In western markets such as Europe, wraps based on chicken are amongst the most popular, since these are ideal for both classic and more exotic flavors. Many of the wraps positioned in the European market draw their inspiration from cuisines such as Mediterranean and Indian/Asian. As the wraps market has expanded in Western Europe, innovation has become more apparent – not just in terms of fillings but also for the carrier materials themselves. One leading UK-based supplier is Signature Foods, owner of the Deli Kitchen range of flatbreads. During 2019, the company added two new production lines to its facility in Dunstable to cope with growing demand. A recent addition to the Deli Kitchen range were new Brioch Style Wraps, described as a world first. Available in Tesco and Waitrose stores, these combine a sweet French brioche with Mexican-style wraps.


INDIAN FLATBREADS

Indian cuisine boasts a large range of different flatbreads, most of which are influenced by the country’s diverse regional tastes. Although wheat flour is most often used, other Indian flatbreads

55k
flatbreads per week are sold by The Jake & Nayns brand

11.5
bn
USD per annum: flatbread sales in Europe





Naan is arguably the type of Indian bread with which most western consumers are familiar. However, the category continues to broaden.



are made with varieties such as millet, rice, or lentil flour. Indian flatbreads are versatile since they are eaten on different occasions – these range from meal accompaniments (e.g. naan) to acting as a carrier for ingredients such as meat and vegetables (e.g. chapatis). Naan is arguably the type of Indian bread with which most western consumers are familiar. However, as has been mentioned previously, the category continues to broaden – other notable examples include the following:

- Roti – flat and unleavened bread made from wholemeal flour;
- Chapati – a wholemeal flatbread popular in Pakistan, Bangladesh and Sri Lanka, as well as India;
- Paratha – this looks and tastes like a mixture of flatbread, pancake and puff pastry and is often served either plain or (more usually) stuffed as a snack;
- Bhatara – endemic within the Delhi region, this is a deep-fried, balloon-shaped flatbread which is often eaten for breakfast, accompanied by mixtures such as chickpea curry;
- Bhakri – an unleavened flatbread that can be made with wheat, sorghum or rice flour.

The street food phenomenon continues to attract consumer interest in Indian flatbreads in markets such as the UK. One notable UK-based supplier is Food Attraction, owner of Jake & Nayns, whose products are listed in retail outlets such as supermarkets (e.g. Sainsburys) and petrol forecourts, as well as onboard flights for Virgin Atlantic. The Jake & Nayns brand sells approximately 55,000 units per week. The company owns the Naansters brand, a range of filled naans in varieties such as Beef Madras, Chicken Tikka, Balti Chicken and Chickpea Curry. In September 2020, the range has extended with a new Fiery Naga Chilli Chicken flavor. Early in 2020, the parent

company announced plans to expand its Leicester premises, thereby increasing the number of employees at the site from 105 to 150.

Also present in the UK market is Butt Foods, which is based in Nottingham and produces bakery goods to customers within the foodservice industry. Its flatbreads – of which more than 60 million are produced every year – appear under the Baked Earth brand. A relatively recent addition to its range was naan bread manufactured using sourdough.

MEDITERRANEAN & MIDDLE EASTERN FLATBREADS

Across Europe, consumer interest in the cuisines of Middle Eastern countries such as Turkey, Israel, Lebanon and Syria is growing. One staple is lavash, a soft, thin flatbread, while khobez (an Arabic flatbread often used to make wraps) is also gaining a foothold. As further evidence of the growing trend towards Middle Eastern foods, The Lebanese Bakery opened a new site in London's Covent Garden during 2018, focusing upon freshly baked Lebanese recipe flatbreads. Such has been the company's success that it opened a second store in Harrods during 2020. Lavash and khobez form part of the range of Dina Foods, a supplier of Mediterranean foods such as pitta bread. The company owns the Paninette brand, which comprises white and wholemeal wraps, as well as flatbreads such as naan and chapati. Dina Foods uses a unique blend of French flours for the products in its Paninette range, milled in the French style before being baked in a stone oven. Meanwhile, pitta bread remains a popular food across much of Europe since it is low in calories and fats and is a suitable accompaniment to dips such as hummus. To further illustrate its versatility, it is also being marketed as a healthier dipping alternative to nachos.

LUNCHTIME & BREAKFAST OCCASIONS

Until recently, one of the major drivers within the global market for flatbreads was the ongoing expansion of the food-to-go sector. In the UK, for example, this market was valued at GBP18.5bn in 2019, of which sandwiches such as wraps account for a share of more than 42%. Most of these are eaten in the middle of the day – according to a 2018 report from Mintel, sandwiches and wraps



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represented the leading food of choice at lunchtime, purchased by 45% of consumers. In the UK and elsewhere, consumer tastes have become broader to encompass a wider range of cuisines and flavors, due in part to the growing influence of street foods. For this reason, Asian and Latin American flavors have become commonplace. However, COVID-19 appears to have put a brake on this growth for the time being. In the UK, the Institute for Grocery Distribution (IGD) expects the food-to-go market to contract by more than GBP8bn during 2020. With more people working at home, footfall in cities and major urban areas has shrunk dramatically, while many foodservice operators within the sector were forced to close their doors during lockdown. Although growth is expected to return to the market from 2021 onwards, the anticipated economic recession is likely to hurt sales. COVID-19 has already caused casualties within the food-to-go sector. During May 2020, the UK-based Adelle Foods (a manufacturer of sandwiches for companies such as Aldi and Caffè Nero) went into administration, citing the virus and its effect upon demand as the main reason. Its Urban Eat brand – which includes sandwiches, wraps, salads and snacks – was acquired later in the summer by Samworth Brothers, in a deal worth over GBP6m. Amongst the acquired business was the sub-brand Urban Eat Street. As its name suggests, its products are inspired by street foods and include

varieties such as Bacon Naan, Vegan Bean Burrito and Mozzarella & Tomato Flatbread. Demand for flatbread-based bakery goods as on-the-go foods is strongly influenced by the average time spent during lunchtime, which remains a key consumption occasion. Prior to the arrival of COVID-19, it was commonplace for workers to go out during the middle of the day to buy lunch from retail outlets such as supermarkets convenience stores, bakeries, cafes and restaurants. In general terms, the length of the average lunchtime has declined within the last few decades, a trend accelerated by the habit of many people of eating at their desks. According to a recent survey of 15,000 people in 27 countries carried out by TSheets on behalf of QuickBooks, the average time spent taking lunch is highest in Brazil, at just 12 minutes short of an hour. This figure decreases slightly to 44 minutes in Portugal, which is the highest in Western Europe. Between 30 and 40 minutes is commonplace in regions such as Europe and North America, although this drops to 28 minutes in Spain and less than 20 minutes in Greece. As the time spent having lunch has declined, so has average expenditure. It is



One staple is lavash, a soft, thin flatbread, while khobez (an Arabic flatbread often used to make wraps) is also gaining a foothold.



estimated that UK consumers, for example, typically spend GBP3 or less on their lunch. Before COVID-19, there was evidence that consumers were more inclined to trade up to more expensive lunches from outlets such as quick-service restaurants (QSRs), on the basis that they were eating out less frequently. This had led multiple retailers such as supermarkets to suffer a loss in market share. Separate research carried out in the UK by Harris Interactive gives some indication of how lunchtime options that are based on flatbread compare with rivals. According to a 2018 survey of almost 1,350 respondents, Indian tikka wrap emerged as the joint favorite amongst a selection of 'lunch to go' options, cited by 39% of consumers. A similar percentage expressed positive feelings towards Mexican tacos. Other popular selections included South American corn rolls (30%), Korean bibimbap (22%) and Lebanese mezze (20%).

Dina Foods uses a unique blend of French flours for the products in its Paninette range, milled in the French style before being baked in a stone oven.

“

Wrap-style products based on tortillas are also well-represented within the UK market for lunchtime foods. In 2018, a survey of 1,133 adults by Spitalfields Market found that wraps were the second favorite lunchtime food, mentioned by 37% of respondents – this trailed only salads (42%), while foods based on flatbreads were favored by 36% of consumers. Wraps and flatbreads are especially popular as lunchtime options with millennials and Generation Z consumers, many of whom are attracted to their artisanal nature.

Further evidence of the enduring popularity of products based on tortillas comes from the decision taken by McDonald's to restore lunchtime wraps within its UK outlets during July 2020, following a social media campaign. The wraps appeared in Crispy BBQ & Bacon and Crispy Sweet Chilli Chicken flavors.

As sales of on-the-go breakfast foods have expanded in many western markets, the penetration of wrap-style products based on tortillas has increased. Typically, these include fillings such as eggs, bacon and sausages. In the US market, Panera

Bread upgraded its menu to include new breakfast offerings, including wraps made from whole grain lavash.

Varieties included Maple Glazed Bacon with Scrambled Egg & Gouda Cheese, Chipotle Chicken with

Scrambled Egg & Avocado and Vegetarian Mediterranean with Scrambled Egg Whites. As is the case with lunchtimes, however, it remains to be seen how well the breakfast sector copes with the anticipated fall in demand resulting from COVID-19 and its effect upon the food-to-go market. •

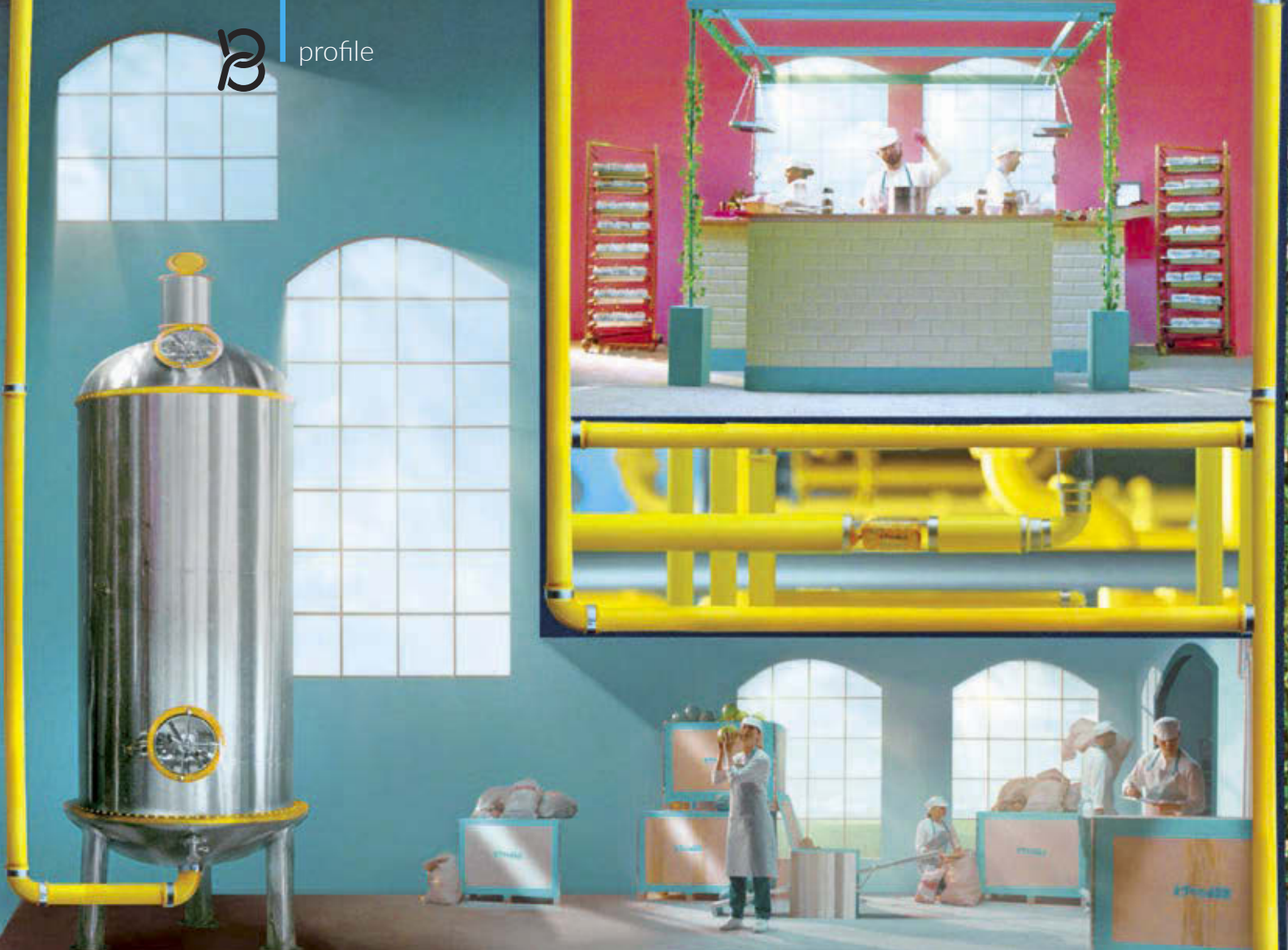
7%

flatbread sales growth in Europe in recent years

18.5
bn

GBP the flatbread market value in the UK in 2019





Generation Next

Under the motto “the next-generation bakery”, Roberts serves all major supermarkets and local convenience stores across the UK. Just as the bakery started running a campaign that offers a look behind its doors to “bust bread boredom”, we had the opportunity to talk to Alison Ordonez, the company’s innovation and quality director.

By Catalina Mihi

From its bakeries in Cheshire and Derbyshire, Roberts bakes for retailers throughout the UK with the help of its 900-people team. The fourth-generation family business celebrated its 130th anniversary in 2017, marked by a fundamental repositioning of the business as “an ambitious challenger brand, to become Britain’s next-generation bakery, the most innovative bakery in the UK and properly shake up baking,” Ordonez recalls. They felt the category was sluggish,

complacent and ripe for excitement. The change brought a completely new look for the branded Roberts range and 13 new products, which, in 2019, led to a hugely encouraging 4% branded growth in a declining market. “Our award-winning artisan Bloomer range led the charge then and is still leading – driving our first national UK listings - and has been followed up with healthy variants like Digestion Boost and our latest healthy range building on positive customer



reaction to new look, recipe and taste experience for a modern consumer,” she underlines. For pure news impact, Roberts got creative with Gin and Tonic and Espresso Martini Fun Buns developed in its test kitchen – newly named The Exploratory.

WHY CRICKETS?

For a bakery with such a long history, Roberts knows trends – and its Crunchy Cricket Loaves are just one example. Why crickets? “As well as having very strong sustainability and environmental credentials, insects are also very tasty and shouldn’t be overlooked as a great recipe ingredient. Our Crunchy Cricket Loaf provided consumers with a good source of protein and an easy way to familiarize themselves with insect-based food,” Ordonez shares. Crickets offer significant environmental benefits to other animal sources of protein. “For example, they expel just 1g of greenhouse gases per 1kg protein produced compared to 2,850g for the same weight of beef. They can also be vertically farmed and require very low input - in terms of both water and feed - to produce a protein source rich in all nine essential amino acids as well being high in iron, calcium and B12,” she highlights. Developing the Crunchy Cricket Loaves was not without challenges, the first and main one being finding a supplier. It was identified in the UK’s leading insect food brand Eat Grub, which could provide enough cricket flour so Roberts could kickstart its NPD. “With all of these benefits, we set out to enrich the goodness of our loaves whilst highlighting some important environmental issues and tapping into this increasingly popular alternative and high-quality protein source available to us,” Ordonez says. The flour is now sourced from the world’s only farm with Grade A BRC food safety certification, which also makes it a little more accessible and cost-effective. Although it remains notably more expensive than regular flour due to its relative rarity, Roberts’ customers are happy to pay a premium for products with such environmental and health advantages.

NEW & EXCITING PLUS SNACKS

Family classics are among the bakery’s best-sellers, especially the 800g White in Thick and Medium slice variants. In the “New & Exciting” range, Roberts has recently launched Vit Hit 50% wholemeal/50% white flour loaf, True Vitality Good for You Bloomer, Energy Balance Good for You Bloomer, Digestion Boost Bloomer and Ultimate Fiber wholemeal. This category also includes the recently launched snack range. The Pangel is an example here, a pancake-bagel fusion that’s high in protein and comes in raspberry & chia and chocolate and coffee flavors, and the Brookie - a soft brioche bun combined with an attractive swirl of cookie available in chocolate orange and apple & cinnamon flavors.

For inspiration in bread, Roberts is constantly looking to evolve against a declining market and consumers, especially millennials, avoiding bread for perceived health reasons: “So much of our focus is using healthy ingredients insight to stimulate the bread category and offer consumers more choice to answer their individual health needs. We have also taken a deliberate stance to be more direct on the pack with the consumer benefits so this can easily be understood rather than focusing, for example, on how many seeds there are,” the company’s innovation and quality director tells us. Some of its key focus areas are fiber and wholegrains, and new ingredients for breads with more vegetable influence in flavor, color and nutritional benefits.

CARE FOR ENVIRONMENT

On the other hand, making strides in its sustainability goals, the bakery has continued its journey to move away from single-use plastic bread bags. “We have delivered a signature business process for innovation that ensures we are constantly filling our funnel with ideas and bringing the best through to commercialization. We have separated our R&D (2-5 years) from our NPD delivery plan (0-2 years) to ensure we succeed in both and our aim in R&D is to invent the uninvented, helping us keep the category stocked with new, vibrant and different bakery products,” we learn. Roberts is the first bakery brand in the UK to reduce plastic in its bread bags by 53%. Sustainability is at the heart of what they do, as they also acknowledge the shoppers’ efforts towards it. “When we introduced our Bloomer range in easily recyclable at home packaging in September 2018, we highlighted our strategy to act rather than



Alison Ordonez, innovation and quality director, Roberts bakery



We have delivered a signature business process for innovation that ensures we are constantly filling our funnel with ideas and bringing the best through to commercialization.

pledge - to become plastic-free as soon as we can. We packaged them then in a sustainably-sourced paper bag with a very thin poly prop coating to ensure that the loaves stayed fabulously fresh. We've since taken another step towards plastic-free – and another UK bread brand first – when we launched a revolutionary new bread bag in June 2019 for our core 800g bread bags, reducing our plastic by 53%. This reduction was supported by our 'Rise up against Plastic' campaign, a message that we also featured prominently on the packs so they would stand out and the shoppers could easily identify the range on shelf and make a sustainable choice," the bakery reveals. The next milestone for them will be moving towards a fully pulpable closed loop paper bag. Their new snacking range is already in compostable packaging and individually wrapped.

THE COVID FACTOR

Post-lockdown interest in health is probably the most significant trend to come out of COVID-19. Roberts wants to meet shoppers who are now searching for healthy options, and mealtime inspiration, as more meals are being consumed in the home. Part of that trend is an increased focus on developing immunity to future outbreaks, so food that helps boost their immune systems and provides protection is high up the shopping list. She details: "To meet that need, we have launched a new four-strong healthy bread range into the convenience channel that very much focuses on ingredients to drive nutritional, health-boosting value."

These include a True Vitality Good for You Bloomer which is full of super-foodie ingredients - whole hemp seeds, brown rice flour, malted wheat flakes and zinc for a healthy immune system; an Energy Balance Good for You Bloomer which has been created

using oatmeal and a mixture of quinoa, watermelon and chia seeds. It's packed with magnesium to support a healthy metabolism; a Vit Hit 50% Wholemeal, 50% White flour loaf which is a combination of 50% white flour, 50% wholemeal flour with the addition of seven vitamins and minerals for extra everyday goodness. "These include Thiamine B1, Vitamin D, Vitamin B6, calcium, iron, niacin and folic acid; plus an Ultimate Fibre Wholemeal loaf which is a more wholesome take on our original wholemeal classic - and, at 8.7g fiber per 100g, is the brand's highest fiber wholemeal loaf to date, packing, on average, 30% more punch than other wholemeal products. The snacking range has also just launched in September. Originally designed for the on-the-go breakfast food sector pre-COVID, Roberts has since switched focus and its new snacking range is now designed for those consumers who want to feel the benefits of healthy energy at home or outside. The nutritious ready-to-eat snacks are made by mixing real fruit pieces and flavors - raspberry, apple, cranberry, orange - with other tasty ingredients such as chia seeds, coconut, raisins, cinnamon, chocolate and coffee. Each contains less than 250 calories and comes individually wrapped in compostable packaging.

Longer-term, Roberts prepares for a decline in the consumption of white sliced bread and will provide alternative options to entice new people into the market and loyal consumers to try something new. "We have a program of investment across the board to prepare us for that," she concludes. •

Read the full interview online, at www.worldbakers.com.



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A Case for Additives

Club PAI – People for Food Additives & Ingredients is a non-profit association that gathers professionals from the ingredient and additive business, sharing problems, technical, commercial or regulatory constraints and marketing targets. The French organization aims to support the innovation and development of new products, but also to promote ingredients.

By Catalina Mihi

Club PAI has more than 80 members and aims to bring together professionals from different sectors, share and pool expertise, while broadening the circle of know-how exchange initiated nearly 30 years ago. Sophie de Reynal, marketing director, Nutrimarketing, told us in an interview on behalf of the Club PAI what bakers should know about the organization whose members include familiar names like Lempa, Meurens Natural, AIT Soufflet Group, Biospringer, Böcker France, PLMA International, and Unigrains. The initial aim of the association formed in 1993 was to promote ingredients and to network and share their expertise. Professional trade shows joined and are now part of the club, including SIAL, FiE, CFIA, and PLMA – the association will take part in the shows with an exhibition stand and share presentations, innovation guides, recent study updates and other resources. They also have partnerships with institutions like the Quebec Delegation in Paris. To be a member of the club, you need to be an ingredient/additive manufacturer or distributor. “One of our members is LEMPA, a technical center; it is the main laboratory in France for the bakery market, working to develop innovation in areas such as

gluten-free bakery products, for example. Our membership has doubled in the last 10 years. If 30 years ago, it felt right for us to have about 40 members only – now we think that it could be interesting for us to grow so now we are looking for new members,” de Reynal explains.

The association provides its members with two exclusive market studies each year. They can also use the PAI Letter, the Club’s English/French-language magazine to communicate and stay informed. It is printed and distributed to all professional food shows, with the exception of this year, when it is sent out virtually, taking into account trade events being on hold. Members are also welcomed to join PAI’s exhibition stand at specialty events attended, such as CFIA, IN-Food, SIAL, FiE, HIE, FIA, or Fi India. “We also promote all of our members throughout the year when we (at Nutrimarketing) have to find new products for our customers, and we organize two plant visits per year,” she added. To support members with technical problems they might face, PAI will either seek support among its members or find the appropriate expert and liaise them to work together. For example, LEMPA has numerous technical solutions to develop new products, ranging from gluten-free to added fiber

or salt reduction – knowledge that can be shared when needed. Help with regulations at French and European levels is also available: “At Nutrmarketing we monitor new products, new ingredients, new regulations and scientific updates, but also consumer awareness and expectations. We conduct market studies and we guide innovation tools in professional food shows. With this work, we can help with legislation aspects as well, because we monitor regulations in Europe and the rest of the world. We work with lawyers specialized in the food industry, so if we don’t have the answer, we can always connect our members with them,” she highlights.

LET’S BAKE

Bakery ingredient science is in the wheelhouse of the Club PAI, in their work with technical facilities, including LEMPA. “We have a network of technical centers in France, some of them are bakery-focused working in fields like texture or nutritional improvement. A lot of our members are working with specific ingredients for bakery products,” she explains. Limagrain, for example, can provide grains expertise, and Louis François is the source for small-quantity ingredients for use in smaller-sized bakeries, which are at the core of the French industry. Darégal is another member that supplies certain herbs and Naturex is a source of natural colorings, for example, both valuable resources for bakeries. Many member companies are also involved in flavors, and solutions to naturally reduce sugar in biscuits and cakes, or salt-reduction alternatives. To build its market data extensively, the

Club has a partnership with Euromonitor, so it can provide its members with specific data they might need, from different markets in the world. Market studies are all available for free to members and can be accessed for a price by non-members as well.

“We prepare insights on how to use by-products instead of wasting them, to fight food waste, how to develop new ingredients (i.e., pulses, grains or vegetables), on sugar and salt reduction. In France, the Nutriscore label is implemented to help consumers make informed choices – we are also working on guidelines to improving this score, an important topic for manufacturers,” de Reynal says. Several Club members are working on solutions aimed specifically at improving the score, by adding fibers or flavors to reduce sugar, she points out. Topics in the organization’s agenda that are also important in bakery revolve around five main trends: convenience, pleasure, health, naturalness and sustainability. While these topics are unchanged for the past 20 years, what each encompasses is changing and PAI observes these trends. For instance, fat is now “good”, which was not the case before, while the ingredients manufacturers want to include less of include mainly sugar and salt. PAI also organizes training – last year, the main topic was clean-label. Now, the focus is on reducing the Nutriscore, and it’s taking place online. The organization proves to be a valuable resource in all aspects related to working with ingredients – they are also hosting virtual innovation tours for FiE, an interesting event to watch remotely. ♦

MEMBERSHIP MEANS:

- Two exclusive market studies each year.
- Communication via the PAI Letter (English/French magazine, distributed to all the professional shows)
- Exhibit to shows at the Club PAI’s stand (CFIA, IN-Food, SIAL, FIE, HIE, FIA, FI, etc.).
- Communication with professional media.
- Communication with buyers, R&Ds and customers through the PAI Contact, a monthly email newsletter which is sent to more than 10,000 contacts (buyers, R&D, ingredient manufacturers, media, etc.)

Online Means Truly Global



Fi Europe, co-located with Hi Europe, is a truly global event, bringing together key industry players from all over the world. With countries at different stages of measures combatting COVID-19, the trade fair shapes up to be a best-in-class virtual event.

By Catalina Mihi

The call to switch the fair to an exclusively virtual event is a welcomed decision, organizers tell us. FiE & Hi is currently expecting to host over 8,000 participants, although it is early to accurately estimate the event's amplitude because of the convenience the online environment offers. Registration has opened in September, however, "A virtual presence can also be achieved quite spontaneously with numerous and varied options for companies to showcase their offerings," the organizers point out. In addition, the timeframe for Fi Europe CONNECT was extended from November 23 to December 4, to support plenty of opportunities for attendees to network, expand their knowledge and make the contacts necessary for their business. Since the announcement, Julien Bonvallet, brand director at Informa Markets tells us how their preparations have changed: "However, we have expanded our content team, which has already organized more than 100 on-demand and more than 16 expert sessions. These ideally complement our existing content offerings, such as the virtual Fi Conference."

The main reason people visit Fi Europe co-located with Hi Europe is to generate contacts – and that remained the goal during the changeover. That is why FiE & Hi has taken special care to ensure that Fi Europe CONNECT is a no-frills platform: "We want to make it as easy as possible for all involved to find suitable solutions, ingredients or partners, to network and make virtual appointments with just a few clicks," he adds.

TRENDS

In bakery, as in many other areas, clean label is now becoming even more important in the light of COVID-19. "That's because if consumers better understand nutrition as a preventive tool, they will question the origin of ingredients more than ever before," he highlights. A closely-related trend is ancient grains: they not only represent a return to genuine food and authenticity but also have exciting functional benefits. They contain zinc and selenium, for example, which are essential for a well-functioning immune system, as well as antioxidants. In addition, dietary fibers and intestinal health continue to be very important issues in artisan and industrial bakery.

DOING BUSINESS ONLINE

Initially planned as a hybrid event, the go-to ingredients fair is truly expanding its reach by going online. And this means plenty of opportunities for bakery professionals. November 26 will be entirely dedicated to seminars focusing on bakery and snacks, and the current challenges facing this segment, the organizers tell us. "The topics range from solutions for vegan bakery products and reformulation opportunities to personalized nutrition and texture optimization. Attendees will gain access to the seven on-demand sessions and two live sessions of this stream via the Fi Europe CONNECT pass. Registration can be done easily online at www.figlobal.com/fieurope."

"Trade show concepts are not static and are constantly evolving. That is why I assume that in the future, face-to-face events will be increasingly supported by digital tools, especially in the field of networking and matchmaking, and thus may well have a hybrid nature. However, the fact that face-to-face events have been almost completely canceled this year has significantly accelerated progress in this respect," organizers conclude. •

Read the full interview online, at www.worldbakers.com.

2021 FEATURE PLANNING

1

JANUARY/FEBRUARY – interpack special issue

Ad closing: Jan 25/Publishing: Feb 08

TECHNOLOGY

Conveyor systems
Dough dividers/rounders

PROCESS

From lab testing to line production: adjustments

FOOD SAFETY *NEW

Contamination risks & solutions

INGREDIENTS AND NUTRITION

Proteins & fibers

PACKAGING

Depanning
Digitization in packaging

MARKET TRENDS

Biscuits in Europe

SNACKS

Wafers

CRAFT BAKING

Deck and rack ovens

TRADE SHOWS

interpack, Internoga

2

MARCH/APRIL – Anuga FoodTec special issue

Ad closing: Feb 22/Publishing: Mar 08

TECHNOLOGY

Trays and coatings
Software & sensors

PROCESS

Depositing synchronization
Flexibility in production

FOOD SAFETY

Monitoring & inspection

INGREDIENTS AND NUTRITION

Oxidizing & reduction agents
Fillings

PACKAGING

Secondary packaging

MARKET TRENDS

Bread in Eastern Europe: fresh & packaged

SNACKS

Buns & rolls

CRAFT BAKING

Freezers, display freezers

TRADE SHOWS

Modern Bakery Moscow, Anuga FoodTec, Pizza Expo

3

MAY/JUNE

Ad closing: May 14/Publishing: May 31

TECHNOLOGY

Extruders
Frying equipment

PROCESS

Cooling & freezing, vacuum cooling
Proofing

FOOD SAFETY

IoT in food safety management
Process, product & staff protection

INGREDIENTS AND NUTRITION

Flavors
Oils & fats

PACKAGING

IoT in packaging solutions

MARKET TRENDS

Health trends in Europe's Big Four markets

SNACKS

Savory vs sweet snack flavors: biscuits & crackers

CRAFT BAKING

Kneaders & mixers

TRADE SHOWS

Snackex

4

JULY/AUGUST – iba preliminary report

Ad closing: July 23/Publishing: August 09

TECHNOLOGY

New oven technologies
Sheeters & laminators

PROCESS

Topping & glazing
Scaling production

FOOD SAFETY

Traceability - preventing recalls

INGREDIENTS AND NUTRITION

Yeasts and sourdough
Plant-based bakery

PACKAGING

Sustainable materials

MARKET TRENDS

Pastries in Europe

SNACKS

Cakes & pies
Frozen bakery products

CRAFT BAKING

Small footprint technology

TRADE SHOWS

iba, Anuga

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SEPTEMBER/OCTOBER – iba special issue

Ad closing: Sept 17/Publishing: Oct 04

TECHNOLOGY

Turnkey lines
Smart bakery systems

PROCESS

Cutting and forming
Calibrating production lines

FOOD SAFETY

Safety certifications & compliance

INGREDIENTS AND NUTRITION

Sustainability in ingredient sourcing & supply

Enzymes

PACKAGING

Soft robotics

MARKET TRENDS

German-speaking countries: bakery segments

SNACKS

Expanded/extruded snacks

CRAFT BAKING

Pastry equipment

TRADE SHOWS

iba, Gulfood Manufacturing

6

NOVEMBER/DECEMBER – iFIE special

Ad closing: Nov 05/Publishing: Nov 23

TECHNOLOGY

Extruders
Conveyor belts

PROCESS

Lubrication
New Product Development

FOOD SAFETY

Sanitary technology design

INGREDIENTS AND NUTRITION

Emulsifiers
Flours

PACKAGING

Checkweighers

MARKET TRENDS

Clean-label performance in Europe

SNACKS

Healthy snacks

CRAFT BAKING

Artisan bread

TRADE SHOWS

FIE & Ni, Europain, ISM

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