

# Bakery Product Perfection

*Key executives from across the ingredient spectrum offer their perspectives on future bakery. What new challenges and opportunities are turbulent commodity prices creating?*



Sandrine Bouvier, Tate & Lyle  
Application Scientist, Bakery

### **What are the consumer demands driving bakery development and how can ingredient suppliers address them?**

Consumers demand different things from different products. For biscuits, cakes and pastries, indulgence remains a key selling point; consumers are seeking new treats and tasty experiences. When it comes to bread, breakfast cereals and cereal bars, the demand is more for what

we call healthy options; products that will help people reduce their calorie count or sugar usage, or increase their fiber intake, without any lessening of taste, texture or pleasure. As an ingredient supplier, we help manufacturers reawaken consumer interest with products that are tempting to the eye and pleasing to the palate. We bring them a portfolio of high quality ingredients and stabilizer systems, and knowledge of how they interact in the food matrix. We also use our formulation expertise to support product development, as well as sensory analysis or consumer studies. Bringing all this together, we provide solutions that respond to the tastes, health drivers, regulatory environment and economics of different regional markets.

### **What are you developing to address the needs for fat, sugar and salt reduction in products?**

We have developed solutions that enable manufacturers to improve the overall nutritional profile of their product. For example, using our soluble fiber STA-LITE Polydextrose, we have developed a number of cakes, muffins and cookies that offer a sugar reduction of up to 35%; calorie reduction of up to 25%; and fat content reduction of up to 50%, allowing "reduced fat" claims. These products also have increased fiber content, enabling "high fiber" claims. When it comes to reducing salt content, Tate & Lyle has signed an exclusive licence agreement with Eminate Ltd., a wholly owned subsidiary of The University of Nottingham, UK, for its novel salt reduction technology. The product, currently known as SODA-LO, is an innovative clean-label salt product that enables added salt levels to be reduced by up to 30% in foods such as bread, pizza bases and baked snacks, without the loss of flavor or structure.

### **What new challenges and opportunities does the turbulence in the commodities market for basic bakery ingredients provide for an ingredient supplier such as yourself?**

We help our customers face the challenges the market throws at them. One of the hottest topics at the moment is the availability and price of eggs. So we have developed a number of interesting solutions that enable egg replacement of between 10% and 100%. The result is for example a moist muffin with similar product properties compared to the full-egg version, and the feedback from our customers has been very encouraging. Cocoa is another key bakery ingredient subject to price volatility. In response we have launched CARCAO Carob powder as a partial cocoa substitute, allowing food manufacturers to make significant savings in total recipe costs. With its familiar cocoa-like flavour and coloring, CARCAO can be used as a partial cocoa replacement in general bakery applications, and in bespoke products where we work with the manufacturer's required colors and flavors.



Cathrin Kurz, National Starch [Ingredion]  
Marketing Manager Wholesome & Bakery

### **What are the consumer demands driving bakery development and how can ingredient suppliers address them?**

In Europe and the US, there are a number of trends driving the bakery sector, including health and wellness, clean label and cost saving. Fat reduction is a hot topic as consumers seek to reduce fat and calorie intake, while at the same time fiber-enriched breads are also

popular providing an easy way to boost nutritional intake. Gluten-free is likely to continue to be a big trend. Clean label is becoming more important as consumers increasingly demand simple ingredient listings. Reformulating to meet these needs does not come without its challenges. Consumers want all of these extra benefits without compromising on quality, taste, texture or flavor.

### **What are you developing to address the needs for fat, sugar and salt reduction in products?**

Ingredion Incorporated's portfolio includes a complete line of specialty starches, flours and sweeteners that allow for the reduction of fats, sugar, and sodium. HOMECRAFT CREATE 765 specialty flour possesses fat mimetic qualities that allows manufacturers to reduce the fat content in their indulgent baked goods while saving on cost and matching taste, texture and product quality. HOMECRAFT CREATE 765 specialty flour can help you improve the nutritional profile by reducing total calories, calories from fat and grams of fat per serving.

### **What new challenges and opportunities does the turbulence in the commodities market for basic bakery ingredients provide for an ingredient supplier such as yourself?**

Increasing raw material costs are driving customers to look for cost saving options. In response to this need, Ingredion Incorporated launched a global initiative to help our customers stay competitive in the current cost-sensitive climate. As the challenge of maintaining margins impacts food developers worldwide, our Value Matters program offers innovative solutions to the cost-versus-quality conundrum.

### **What are your thoughts on the rising interest in authentic and regional-style bakery products?**

Across the food industry, consumers are looking for authentic and regional-style products. The baked goods sector, in particular, has a strong heritage with many local differences in terms of taste, texture and shape. Craftsmanship is also highly appreciated by consumers, and it seems these trends will continue to grow. Generally, consumers in Europe are increasingly aware of what they eat, how it has been produced and which ingredients were used.

The clean label trend is also feeding into this, as consumers increasingly look for products with well-known ingredients lists. Our Novation functional native starches, also available in organic varieties, as well Homecraft functional flours, enable manufacturers to create authentic baked goods, while also delivering an additive-free label.



## Industry Thoughts



Sander van Vugt, Kerry  
Commercial Director Bakery  
and Fine Bakery Europe

***What are the consumer demands driving bakery development and how can ingredient suppliers address them?***

Consumers nowadays are seeking familiarity and demand bakery products that accentuate freshness, and provide an authentic taste and texture experience, which is reflected in the widespread return to traditional bread types such as sourdough or retro breads. In addition,

bakery products positioned as being natural are increasingly popular and typically make some form of no additives or preservatives claim. There has also been a growing use of wholegrain claims to promote naturalness, as well as growing use of seeds and ancient grains that are perceived as being good for you. Retailers and manufacturers continue to look to meet the requirement for simpler ingredient declarations using ingredients more familiar to the consumer, and in fewer numbers, as this equates to more natural in the mind of the consumer, therefore gaining a competitive edge.

***What are the consumer demands driving bakery development and how can ingredient suppliers address them?***

Better taste, freshness and, increasingly important, less wastage are desired in the current climate. Bread is one of the worst offenders for food being thrown away in the home and the bakery industry is striving to do more to address this wastage issue. As consumers are looking for ways to save money, our customers are very interested in solutions that can enhance shelf life of bread and bakery products, maintaining its freshness longer and offering the consumer better value. One of the indicators here is that keeping bread fresh by freezing it is growing in popularity, as well as buying frozen and baking at home so it is fresh for immediate consumption. Consequently, developing solutions to keep bread fresher for longer has become a focal point for Kerry application efforts, where we have developed a range of unique products that enhance bread shelf life, while using only clean label ingredients. An example of this is our product Upgrade W2, that inhibits mold development and is a natural, clean label alternative to the chemical calcium propionate. Another issue our customers face is an urgent need for guar gum replacement in their formulations. Our application and technology expertise has produced a natural, wheat based solution that can be applied to all customers' requirements.

***What are you developing to address the needs for fat, sugar and salt reduction in products?***

The demands for lower salt, sugar and fat content continue to drive the bakery industry towards developing more natural, fresh and healthier products that are aligned with consumers' individual nutritional needs. Bread manufacturers are facing a difficult challenge – how to persuade consumers to eat more of their products as consumption is declining due to dietary changes, particularly in mature markets. To win share from competing breakfast items, large scale bakers are influencing a shift in perception towards healthier bread focusing on adding further functionality, strengthening the nutritional message with extra fiber and adopting lower salt levels to boost the health appeal of their offerings – which is particularly high up the agenda at the moment. UK bread has among the lowest salt levels in Europe, having made good progress in achieving salt reduction targets of 1g/100g of bread. Elsewhere in Europe this is something manufacturers have started tackling or are looking to address in coming years – Netherlands, France, Italy and Finland are already making progress in this area to bring it below 1.5g/100g levels. Reducing salt in bread does not just affect flavor, but dough properties, volume, texture and shelf life. Kerry has integrated natural ingredient solutions to enhance taste and improve dough processing. Using Hybake SR to reduce salt content and Upgrade W2, fermented wheat flour that contains natural organic acids that inhibit mold development, salt reduction in bread from 1 gram per 100 gram to 0.5g per 100 gram can be achieved. This while maintaining texture, flavor and shelf life.





**Michel Faes, IMCD Group**  
Technical Manager, Food & Nutrition

***What are the new consumer demands driving bakery development and how can ingredient suppliers address them?***

The freshness of the final product is one of the core parameters for consumers when asked to evaluate product quality. We see a continuous demand in premium quality bakery products; whether for fresh bake, prepared or preprocessed use. A good example of a still growing segment is in-store bakeries. These especially need

flexibility, being able to respond quickly with premium products to a varying consumer demand throughout the day. Therefore a continuous investment in understanding the processing and formulation know-how to cope with the new processing trends in the market is an important driver in the food industry, and also within the bakery market segment.

***What types of reformulation efforts are your customers involved in and how are you helping to meet these needs?***

To guarantee this process innovation, bread formulators have to ensure that, apart from creating a premium quality end product, they firstly ensure processing flexibility and secondly fault tolerance. Today, guar gum is used as a stabilizer in many bread and bread-roll formulations. Looking at the market, we see that guar gum prices have increased tremendously within the last months. This is a crucial situation, where our application expertise, in terms of formulation and processing understanding, will enable the positioning of valuable and cost effective ingredient alternatives and processing advice to our customers. Different ingredient solutions have already been shown to be successful. Therefore an understanding of the regional sensory consumer needs is also fundamental. We strongly believe that the successful combination of this know-how and its alignment between our technical center and our local application labs is a key driver for the solutions we suggest and develop. In summary, this makes the difference in the service towards our customers.

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In addition to the freshness of the final product, a health & wellness positioning is most important to reflect the consumer needs of today. Healthier products need an application specific new product development approach to propose a product with a better nutritional positioning, but with the same sensorial parameters. The definition of the product's sensory profile is a fundamental starting point, before reformulation work can begin. Within the IMCD Food & Nutrition Technical Centre we have, for example, been developing a concept for a "30% fat reduced pound cake," starting from different ingredient functionalities, keeping similar processing conditions. Cake batter rheology, baking and final eating parameters have been monitored and resulted in a combination of an emulsifier, dietary fiber and freshness enzyme technology, which meets premium, sensory, quality and processing aspects.

***What are your thoughts on the rising interest in authentic and regional-style bakery products?***

Authenticity is the reflection of our cultural habitat and heritage. It makes us who we are, how we behave, interact, and how we enjoy our food, what we often do together with family and friends. This authenticity makes us value regional specialties, resulting in local product differentiation and positioning. To understand these regional needs, it is important to rely on a network of local experts. This is why it is important for us as a company to provide marketing expertise and field-based technical sales representation for many of the leading international ingredients producers to invest in local expertise. Food technologists should be able to understand the local market needs and build a strong relation with food experts in the academic world and the ingredient manufacturing industry.



**Craig Rose, Seagreens**  
General Manager

***What are the new consumer demands driving bakery development and how can ingredient suppliers address them?***

Consumer demands are primarily for great taste, and increasingly to also provide nutrition, address health concerns, and ensure ethical and innovative ingredients. These demands are multi-faceted, covering issues of salt reduction, bioavailable nutrients and minerals, weight management, free from foods,

and organic ingredients that are sustainably sourced with food provenance. As an ingredient supplier, Seagreens is supplying its organic, sustainable, dried and milled human food quality seaweed as an ingredient with multiple attributes that is researched, developed and delivered in response to these demands. Branded ingredients such as Seagreens ensure quality, consistency and traceability. This provides confidence for the manufacturer and consumer. We work very closely with our distributor, Gee Lawson, and in partnership with manufacturers and their brands to promote, educate and support on the features and benefits of Seagreens.

***What are you developing to address the needs for fat, sugar and salt reduction in products?***

Seagreens has undergone extensive research with breads, cheeses, meats and sauces as a salt replacer. This has been done both to address flavor issues, and also functionality of shelf-life extension. Seagreens is by no means only a salt replacement product, and other attributes include the ability to enhance satiety for weight management, as well as providing wide nutritional benefits, and address specific nutritional needs for key minerals. Seagreens for salt replacement was highlighted by Research Councils UK as a "Big Idea for the Future," in their report of that name in 2011, which consisted of a selected few projects being carried out across the UK that are seen to be driving our economic and social well-being.

***What are your thoughts on the rising interest in authentic and regional-style bakery products?***

Food provenance is a rapidly growing trend, and authenticity and traceability of products is paramount. Understanding where products come from, how they were produced, and even the name of the producer gives manufacturers and consumers the confidence in ingredients and end-products that they are made with sincerity and passion to meet market place demands. Seagreens is human food quality seaweed produced in the Scottish Outer Hebrides. The name covers several particularly nutritious brown wrack seaweeds from sustainable wild harvesting where proprietary methods ensure international compliance for food and nutraceutical ingredients. Our industry is one of artisan routes and philosophies, mixed with modern technologies and business practice, to provide the highest quality, scalable and sustainable ingredients.

***What does "natural" mean in the bakery industry and what is the role for ingredient suppliers in cleaning up product labels?***

"Natural" is a term that seems to be used increasingly on labels. A concern is that, in order to meet consumer demand for this term, it may be used without too much thought for really what is "natural." This will ultimately dilute the term and confuse the consumer. For Seagreens, natural is exactly what we are. All our products are sustainably wild harvested, dried at low temperatures and then milled, with nothing added or removed except water. This is a natural product. Natural is perhaps a term that is evolving out of the organic movement, to encompass more than just organic certification and include factors of where ingredients are sourced, how they are processed, transported and the entire sustainability of this; environmental, social and economic. We anticipate that the provision of truly organic, natural and sustainable products will be increasingly demanded by consumers.