

# Solutions to your bakery supply chain challenges

The Baking Ingredient Division of African Food Industries (AFI) supplies functional food ingredients to the milling and baking industries within Sub-Saharan Africa. With a combined experience of over 135 years within the industry, this AFI team's skill set stretches from industrial bakery optimisation to artisanal craft demonstrations.

**D**uring the Covid-19 pandemic, many imported ingredients were, and still are, in short supply. The international freight backlog and rise in fuel prices have resulted in the inflation of ingredient prices. It is due to this challenge that AFI's research and development team developed cost-effective, functional enzyme-based replacements for many imported materials. The team have developed alternatives for a number of emulsifiers and dough conditioners that have proven to be very successful as 1:1 replacement for DATEM, SSL, monoglycerides and various combinations of conditioners.

The emulsifier replacement products DR1000 and DR2000 have been the most successful at replacing DATEM, which has shown to be the ingredient with the largest supply shortage. AFI further developed a yeast-lowering functional ingredient called YR1000 that enhances the activity of yeast through improved yeast food and nutrient availability during proving. The boost in yeast



activity has resulted in 25% lower yeast usage, while increasing the control of oven spring.

AFI now also designs and supplies product-specific improvers and enzyme blends to match the expectations of individual customers. Enzymes can modify different components of dough, starch, proteins or lipids, and can be used to improve crumb texture, dough stability, loaf volume, tolerance, taste and flavour. These enzyme blends can optimise ingredient activity or create synergies between a multitude of functional ingredients. At AFI, enzymes are selected after extensive trials and are sourced from many global enzyme specialist suppliers. Enzyme formulations are developed according to the individual needs of bakeries and mills, and are only finalised once the blend of enzymes performs optimally according to the customer's expectation in application.

Tortilla improvers are another example of AFI'S product-specific offering. The tortilla improvers contain high-performance ingredient selections for extensibility, conditioning, leavening and preservation. Combinations of these technologies can be made to suit the plant or product required.

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Additional chemical leavening systems, like baking powders, are available to suit product needs ranging from doughnuts to flapjacks, flatbreads and cakes. Each baking powder is activated by varying reactions to moisture, time, temperature and physical activity. AFI specialists are available to assist customers in evaluating the ideal leavening product for optimal results.

AFI's flavour team also supplies a range of colour and flavour options to clients and bakery research and development. With both sweet and savoury options, and dozens of flavours available, their range is often used in the development of cake, sponge and muffin mixes. One of our latest offerings is the bun spice, which makes for the perfect Easter bun glaze. **BR**



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