



## Mühlenchemie improves baking with composite flour

**F**lour treatment specialist Mühlenchemie has developed a new series of enzyme-based products that improve baking results with composite flours. These solutions allow replacement of up to 20 percent of the wheat with alternative raw materials, without losses in quality. This enables the use of locally available grains and reduces dependence on global raw materials markets. The 'Compozym' toolbox is available for numerous applications and flours and is being extended for further uses.

Rising grain prices and varying market availability have hit the milling and baking industry hard. In particular, import of the wheat used for many baked goods increases the cost pressure on companies. So mills are looking for ways to make their raw materials sourcing less dependent on the global wheat market. One way to achieve this is to use composite flours made of wheat and other crops, such as maize, cassava or sorghum, which are grown and available locally in many parts of the world. With Compozym from Mühlenchemie, these crops can replace up to 20 percent of the wheat without impairing quality. The use of regionally grown grains or other crops makes it possible to efficiently manage raw materials fluctuations and shorten supply chains. Reverting to local suppliers not only supplements wheat imports, but also opens up the possibility of marketing innovative and more sustainable products made of composite flour.

### Solutions for optimum baking results with composite flour

Reducing the proportion of wheat flour and adding other flours changes the properties of the flour, dough and final baked goods. This can result in reduced volume, lower stability and shorter fresh keeping, as well as differences in the colour and/or surface structure of the final products. With the Compozym enzyme series, bakers can compensate for these effects and get the same results as



with pure wheat flour. The toolbox consists of intelligent, state-of-the-art product solutions, including complete solutions for tin loaves like sandwich bread, freestanding breads like baguettes and fino, and flatbreads like paratha and chapati. The toolbox also offers products to address the special requirements of composite flour, regardless of the application. Among these are solutions that provide better water absorption during dough production, improved stability during fermentation, and longer freshness and softness. All the solutions can be used in a variety of composite flours.

The new Compozym product line was developed based on extensive analyses in Rheology and subsequently in the baking laboratory and has been tested and refined with a wide variety of flours and applications. "Our development work continues, and we have further MC product solutions in the pipeline," says Mühlenchemie Product Manager Greta Reers. "We're expanding the Compozym line to address additional applications and are continually adapting it to market conditions."

### Long experience, innovation and local knowledge

Mühlenchemie is in close dialogue with over 2000 mills in more than 150 countries. In recent years Mühlenchemie has steadily expanded its capacities for applications research in local markets. Today, experts in Germany, Mexico, Singapore, India, China, Russia, Kazakhstan, Turkey, Kenya and Nigeria assist mills locally with their own laboratories. Thus, Mühlenchemie technicians are familiar with the latest requirements of the mills, what raw materials are on the market, and how to process them for which results. This knowledge is bundled at the central 'Futuremaker' Stern-Technology Center in Ahrensburg, Germany, where over 100 scientists and applications technologists work on tailor-made solutions to meet the requirements of the worldwide milling industry.