



UCC makes bread last longer...

Food scientists at University College Cork have developed a revolutionary method to increase the shelf-life of bread by up to 14 days, a breakthrough that has now been patented and licensed to Puratos, the Belgian-based multinational food ingredients company.

Puratos supplies the baking and confectionery industries in over 100 countries worldwide and will upscale the UCC scientists' work to industrial level before bringing it to the market.

The shelf-life of bread is only a few days before mould appears. The challenge for bakers has been to extend this while responding to consumer demand to reduce the amount of additives in bread products. Twenty per cent of all bread is thrown out due to shelf-life issues which is a major problem in this era of reduced wheat production and increased demand worldwide. Since 2000, world food markets have experienced the greatest sustained increase in price for three decades. There has been a need for new and innovative solutions to reduce wheat wastage while continuing to meet global food demands.

Professor Elke Arendt and her research team in the Department of Food and Nutritional Sciences at UCC have been looking for natural ways to improve the shelf-life of cereal products for the past ten years. One of the most successful areas she has developed has been the use of lactic acid bacteria in bread products. Lactic acid bacteria would be best known for its role in the production of yoghurt and cheese. The incorporation of strains of lactic acid bacteria in bread not only improved the shelf-life of the product but it had other benefits as well. It produced a finer crumb texture and the flavour, volume and the nutritional value of the bread were also improved. The research was funded by the Department of Agriculture and Food under the FIRM programme as well as Commercialisation Technology Development Fund of Enterprise Ireland.

"Sourdough is known for its excellent taste and traditionally extends shelf-life," says Filip Arnaut, R&D Director at Puratos. "Based on UCC's new technology we will bring this to the next level. The new sourdough will have all the benefits of traditional sourdough and in addition extend the shelf-life of baked products, which is what our customers want today. It is not only an extraordinary scientific achievement and example of university and industry co-operation but also an innovative product break-through in line with consumer demand."

"UCC was the first Irish university to develop a Patent and Licensing policy and we continue to take the lead in developing the commercial potential of our research," says Dr Michael Murphy, President of UCC. "Our agreement with Puratos is but one of a number of technology transfer agreements that we have developed with SMEs, and multinational corporations based in Ireland, the US and the rest of Europe in the past year. "Our research income is consistently one of the highest in the country and we are proud to be ranked in the

top three per cent of universities worldwide (*Times Higher Education Supplement, 2008*) based to a large extent on the quality of our research output.”

For more information regarding this technology and other technologies available for licensing at UCC visit the UCC Technology Transfer website <http://www.ucc.ie/research/techtransfer/>

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