



**EU-FRESH BAKE - Project no. 036302**

## Freshly Baked Breads with Improvement of Nutritional Quality and Low Energy Demanding for the Benefit Of the Consumer and of the Environment

Period covered by the project: 1/10/ 2006 to 30/11/ 2009 - <http://eu-freshbake.eu/eufreshbake/index.php>

### Introduction

EU-FRESHBAKE FP6 is a STREP project (38 months – 12 partners among which 5 industries and SMEs – 2 M€ Budget). EU-FRESHBAKE focuses on the BAKE OFF TECHNOLOGY (BOT), which consists in producing semi finished bread in industry (most of the time frozen). These products are retailed in downtown baking shops where they are finished or in supermarket for domestic baking. So far, BOT was mainly applied to plain white breads with low nutritional value.



BOT offers convenience for both industry (flexibility) and consumers (freshly baked bread all day long). In final, EU-FRESHBAKE outcomes are helping the ongoing rise of the BOT. In particular, BOT products need to be adapted to the expectations (i) of the consumer in particular regarding the nutritional and organoleptic quality and (ii) of the industry.

The nutritional and organoleptic quality of BOT bread can be improved by taking benefit of refrigeration (chilling or freezing temperature) if specific enzymes and ferments and specific process are used. We also identified that frozen part baked bread has a significantly lower Glycaemic Index than reference bread; this is one of the strong outcome of the project, showing that process can be as important as formulation (for sourdough bread + part baked + freezing we had up to 50% reduction in GI!!). Most processes and technologies used for the BOT are energy demanding; therefore, EU-FRESHBAKE also focused on the industrial practice and on the equipment with respect to the energy consumption; innovative low energy oven has been patented, low pressure baking is being developed, low energy freezer has been developed by MIWE ... EU-FRESHBAKE applications concerned “gluten” breads, “gluten free” breads and “organic” breads; this was covered by 3 SMES engaged in the project: BIOFOURNIL (France), BEZGLUTEN (Poland) and Dr SCHAER (Italy).

### The project's target audience :

Bread is a staple food. The target audiences of the project are mainly:

-(i) the consumer, (ii) the bread making industry, (iii) the baking equipment manufacturers, (iv) the craft bakers. The project has been “attacked” by craft bakers (e.g. in an article in Back Business – 27<sup>th</sup> Jan 2007-p. 27) mentioning about the negative image of freezing in baking sector). In fact, this article brings to the surface the reality of the situation; craft bakers use products from BOT. Even though craft bakers refrain to use frozen bakery, they do so.

### The communication towards the consumers :

Since bread is of interest and is even a sensitive product about which any individual has a point of view, EU-FRESHBAKE has been selected by FUTURIS for an 8 min broad cast (Feb. 2008). This broadcast has boosted the notoriety of the project, even though there was no specific message in it except that European researchers are making high tech research for the bread of the future.



EU-FRESHBAKE on EURONEWS (Feb. 2008) : [http://www.youtube.com/watch?v=HcGrhJj\\_PBk](http://www.youtube.com/watch?v=HcGrhJj_PBk)

### The communication towards the baking industry and the equipment manufacturers :

Thanks to our industry partners in particular PURATOS (world leader in baking ingredients) and MIWE (among the top manufacturers of baking equipment in particular for medium scale industry and craft bakers), communication of the results of the project was naturally disseminated to the baking sector. Three dissemination events are to be mentioned:

- During IBA Fair in Düsseldorf in Germany (Biggest world Fair on baking occurring every 3 years)
- During Flour Bread Conference in Opatija – Croatia in Oct. 2009
- During the final HEALTHGRAIN conference (FP6) in may 2010, where we had a 20 min lecture.

**The communication towards the scientific community :**

EU-FRESHBAKE has published a large number of scientific papers with respect to the size of the project (table below). This is going on either from project's results or from follow up activities and ongoing collaborations between EU-FRESHBAKE partners.

	International Scientific Journals	National Scientific Journals	International congresses	National congresses	Total
TOTAL	37	7	40	14	98

**EU-FRESHBAKE recognitions**

EU-FRESHBAKE has been identified and selected for several events such as (see below):

- National Level: Pr Le Bail gets an Award at POLLUTEC fair on Environment–2009 for the patent filled on a low energy demanding oven developed during EU-FRESHBAKE. This award was advertised in the national radios (France Info, etc ...) for one month.
- EU-Level: Selected for Research Connection (Praha-2009) and for “Food for the 21<sup>st</sup> Century – July 2010” event at the EU Parliament as one of the success story of FP6.
- World level: Pr le Bail has been invited in many conferences all over the world to present the results of the project (Europe, Canada, USA, Argentina, India, ...). Some examples: Invited by Agriculture Canada in Nov. 2009 (optimisation of Energy in the baking sector) and by the Ministry of Food Processing of India for a conference in Thanjavur (Oct 2010 - 2400 attendees).

				
Research Connection Praha 7 <sup>th</sup> May 2009	AWARD at the POLLUTEC Fair Paris 1 <sup>st</sup> Dec. 2009	HEALTHGRAIN Final meeting May 2010	Food for the 21 <sup>st</sup> century Bruxels 8 <sup>th</sup> July 2010	Invited by The Ministry of Food Processing Oct 2010 - Thanjavur-India

**Challenges in communication; what works and what doesn't**

- ✓: Publishing short notes in professional journals EU-FRESHBAKE from the very beginning of the project permits to establish contacts and to tease the professional journals, always very interested in innovation. One or two good pictures and a small text to upgrade is enough to make a lot of noise. Once the seeds are disseminated in the media, the journals come back to you by them selves; one should not wait to have results to start the process!. Around 20 articles have been published in Spain, Croatia, Germany, Italy, France...
- ✓: Key note lectures in conferences: As a coordinator, it is somehow quite easy to be invited to conferences by contacting the board of the conference long in advance; this is a good opportunity to disseminate the messages of your project.
- ✘: Final Dissemination: We did our final dissemination during IBA Fair in Germany 2009, the biggest in the world on baking. It was not a great success even though many people promised to come. People attending a fair are here for a short time and for business. They have no time to spend outside the fair. It would have been more efficient to organize a specific dissemination congress.
- ✓: Final dissemination: Making a specific event (mini congress) as we did when we have been invited by HEALTHGRAIN IP for a communication in their final conference was a success. 300 attendees and a lot of contact have been taken; this induced a lot of contact and was very positive. Such “dissemination congress” may be organized together with other projects on the same theme in the case of small or medium scale project like ours (HEALTH GRAIN was an IP and had funding for such events).
- ✘: Final Dissemination: Making a “pre conference” day before a scientific congress is not always working as expected. It is preferable to organize a specific dedicated event, within the conference or a separate event eventually with other projects.
- ✓: Web site: It has to stay opened for long after the end of the project. Most of the time, the web site of projects are approached rather at the end of the project and after the project is finished. Funding should be provided by the commission (together with specific dissemination strategy) for any research project to leave the website alive for at least three years.

**Measuring the success**

The number of contact on the web site can be an indicator but this is very subjective. Measuring the success of a project is extremely difficult to evaluate. The impact on the industry is often a long term story and several projects on a given theme are sometime necessary to leave a foot print in the industry. One more time, brief notes in Professional journals and scientific papers are some of the best tools. Editing book is also a good manner to leave a project's foot print; this is something I envisage.

**Follow up**

EU-FRESHBAKE web site is still open. We receive quite often solicitations and contact about the Guide of Good Practice for the Bake Off Technology from all over the world. The patent filled on the low energy oven has attracted industry from Italy, France, even China, .... We are defining with the CNRS (FIST valorisation office) the strategy for licensing in selected countries and continent in the world. Scientific papers are still in progress, new ideas and new project may be the next foot prints of EU-FRESHBAKE, a technology oriented project which ends up with a good balance in terms of outcomes; significant step forward regarding the scientific issue, innovation regarding the nutrition (with solutions easy to transfer such as the lower GI for part baled bread) and effective innovations and developed by its industrials and SME's partners

~