

GRANOFLAKES : A “crispy” project for the European corn flakes sector

Clermont-Ferrand, November 20th, 2015 – Launched in 2012, the GRANOFLAKES project contributes to the competitiveness of the European maize sector for the production of high quality corn flakes.

The project, supported and coordinated by the competitiveness cluster Céréales Vallée, brought together 5 private and academic partners for 3 years. It was funded within the Framework of the « Single Inter-Ministry Fund » (FUI), by the French Government, the Regional Council of Auvergne, the Community of Municipalities of Greater Saint-Etienne and Greater Clermont-Ferrand, and the European Regional Development Fund (FEDER).

To contribute to the competitiveness of the European cornflakes sector

Maize is the most produced cereal in the world.

Mainly intended for animal feed, maize grain is also used for food. For instance, it is processed to produce breakfast cereals : corn flakes.

In Europe, corn flakes production today represents 500,000 tons. However, most of the consumed corn flakes in Europe are made from maize imported from South America, because Plata maize is the reference in terms of quality for the production of corn flakes.



The GRANOFLAKES project generated the development of innovative solutions for the **production of high quality corn flakes in Europe through a combined approach involving improvements on raw material and on manufacturing processes.**

When collaborative environment goes hand in hand with competitive environment

The GRANOFLAKES project brought together **four partners from the private sector and a research institute positioned across the entire value chain**: breeding, characterization, fragmentation, drying and extrusion-cooking.

Limagrain Europe, Limagrain Céréales Ingrédients, Clextal, Veodis 3D and INRA (French National Institute for Agronomic Research) : all of them worked in a coordinated and complementary way for 3 years on each project task.



Innovative solutions for the production of high quality corn flakes

The project partners developed innovative solutions and manufacturing processes for corn flakes production that will benefit to the entire chain :

- **An adapted maize variety:** a promising breeding process combining yield, and technologic and textural properties was set up. As breeding is a long-term process, a new variety that will be well adapted for cultivation in Auvergne (France) should be obtained in the next few years.
- **Optimized first-stage processes:** a pilot tool for grain drying will make it possible to provide advice to farmers or other industrial groups involved in the drying process.
- **Image shooting and analysis tools:** A complete and integrated tool was developed for image analysis. It makes it possible to count grains, identify vitreous and floury particles, and accurately specify grain color and size.
- **Extrusion-cooking processes optimized for the new raw material:** thanks to the GRANOFLAKES project, the quality of extruded corn flakes is very close to the quality of traditional cornflakes.
- **Validated results:** breakfast cereals manufacturers and semolina manufacturers validated all the results. Sensorial studies confirmed that the extruded corn flakes meet the expectations of consumers in terms of appearance and texture.

What he thinks...

Grégoire BERTHE, CEO of Céréales Vallée is pleased with GRANOFLAKES success: « *First of all, the project confirmed the importance and relevance of collaborative work to develop innovative and competitive solutions. Synergies and complementarities between Céréales Vallée members gathered for this project are an excellent example of what our Cluster is able to do. Furthermore, new partnerships are already considered. Besides, our Cluster aims at participating in the development of cereal sectors at the regional and national levels. Contributing in this way to the competitiveness of the European maize sector for corn flakes is thus an integral part of our mission.* »

About Céréales Vallée

Céréales Vallée contributes, through innovation, to improve cereals in a sustainable way in order to meet food, non-food and environmental challenges facing our society. Created in 2005, Céréales Vallée is the only competitiveness Cluster involved in cereal sectors, from seed to finished products. Based in Auvergne, it has an international reputation, and brings together more than 900 members from private and public sectors involved in research, industry and development of cereal chains. It represents a skills platform that is unique in terms of innovation for cereals. In a context of high worldwide competitiveness, the Cluster plays an important role in setting up and coordinate innovative collaborative projects around four orientations: Sustainable Cereal Production, Cereals for Animal Feed, Cereals for Food and Human Nutrition, Cereals for Agro-materials.

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