After five years of research, Bonduelle Combines Technology and Flavor to Create a New Line of Vegetables

Innovation is at the heart of Bonduelle’s strategy. With its new InFlavor controlled dehydration process, the Bonduelle Americas team has once again achieved a technological feat: producing frozen mushrooms, peppers and onions with authentic flavors that rival fresh vegetables in both look and taste.

Although many frozen vegetables are already used and appreciated by the food industry and consumers alike, some are not. This is the case for vegetables that are high in water content, such as mushrooms, onions and peppers. The traditional freezing process is not advantageous because it amplifies the natural release of water when thawing, thereby altering the look and texture of the vegetables.

A GREAT CHALLENGE. SIGNIFICANT INVESTMENTS.

Bonduelle Americas was determined to further its research until a successful outcome was achieved. The challenge was two-dimensional in nature. On the one hand, come up with a technological process that could be applied to the industrial sector and on the other, assess its commercial potential. To achieve this, Bonduelle Americas invested more than six million dollars in production research, studies and trials. Aware of the potential for such a breakthrough, the Government of Canada actively participated in the project by providing 2.4 million dollars in subsidies from the Agro-innovation program. Quebec’s Department of Agriculture, Fisheries and Food (MAPAQ) contributed $500,000 dollars.

PARTIAL DEHYDRATION

In theory, the principle is simple, explains Michel Casgrain, Corporate Manager of R&D for Bonduelle Americas. “In a natural and inevitable fashion, freezing transforms the free water content in a vegetable into ice crystals which breaks up the vegetable’s cellular structure. By eliminating some of the free water before freezing, we can avoid the formation of ice crystals that cause the undesirable release of water and alters the look and the taste.” Moving from idea to solution required developing an innovative preparation and transformation process.

To create the process and the production module, Bonduelle Americas partnered with EnWave, a Canadian company based out of Vancouver that specializes in dehydration technologies. About nine months later, the new dehydration and preparation process using partial vacuum-microwave drying yielded its first conclusive results. Not only did the process provide frozen vegetables at their very best, but it did so with an incredible concentration of flavor and nutritional value, hence the name InFlavor, a name that embodies this breakthrough technology. “We are very proud of this achievement. InFlavor is concrete evidence of our ability to innovate,” asserts Michel Casgrain.
FUTURE MARKETING

The InFlavor process offers great marketing potential as it allows for the introduction of vegetables with a high water content onto the frozen food market. "It's unanimous. InFlavor vegetables compare favorably to fresh produce while offering the practical and economic advantages of frozen food," states Lyne Ménard, Brand Manager for Bonduelle Americas.

The InFlavor process, exclusive to Bonduelle, will allow chefs, cooks and large restaurant chain employees to improve their practices. "Many disregard frozen vegetables with a high water content in their daily food preparation in favor of fresh vegetables. Now it's a whole other story! With InFlavor, Bonduelle has literally reinvented freezing for certain vegetables," affirms Christian Malenfant, Vice-President of Marketing for Bonduelle Americas.

Within five years, Bonduelle has successfully completed all stages of research and development. Bonduelle Americas is currently in the process of planning its product line, as well as the investments and operations that will be needed for high volume production. With the new InFlavor dehydration and preparation process using partial vacuum-microwave drying, Bonduelle once again asserts its position as a world leader in ready-to-use vegetables.