

FreshSAFE packaging concept for equilibrium atmosphere packs**Extended shelf life for delicate natural products**

Wolfertschwenden, 6. December 2021 - Fruit and vegetables continue to live after harvesting. If the product is to remain fresh and appetising in the pack up to the point of consumption, the metabolic processes must be controlled by an innovative method. Thanks to the FreshSAFE packaging system from MULTIVAC, there is a method of producing equilibrium atmosphere (EMAP) packs, which optimises the oxygen content in the packs in a continuous, natural and sustainable way. Les Maraîchers d'Armor, a cooperative in the French region of Brittany, uses the technology to pack its white beans, the so-called "Cocos de Paimpol", in trays under modified atmosphere, enabling the shelf life and quality of the product to be preserved for as long as possible.

Les Maraîchers d'Armor is a cooperative situated in the heart of the vegetable growing area of Les Côtes d'Armor. More than 420 gardeners, operating in the north west corner of Brittany, cultivate over 80 types of vegetables as well as strawberries and other fruits, and the annual production quantity is around 175,000 tons. In conjunction with two other cooperatives in Brittany, the products are marketed under the well-known label of "Prince de Bretagne".

Cocos de Paimpol – well-loved and very delicate

Around 200 producers concentrate on the cultivation and propagation of white beans, which are marketed under the name of "Cocos de Paimpol". These yellow and violet-flecked pulses with their egg-shaped seeds and delicately melting "bite" find their ideal growing conditions in the area between Paimpol and Tréguier. In 1998 the "Cocos de Paimpol" was the first fresh vegetable and the first Breton product to receive a special designation of origin, and several years later this became a protected product name.

"In order to be able to satisfy the demand from consumers for a ready to cook, "all-in-one" product, the idea was conceived in 2020 of packaging the Paimpol beans under modified atmosphere," explains Florian Josselin, who is responsible

for new product innovations at the cooperative. “The challenge was to find a reliable packaging concept for a semi-dry product, which alters extremely rapidly after harvesting.”

The solution: FreshSAFE. This process involves pre-perforated films, or films perforated mechanically on the MULTIVAC packaging machine itself, which ensure that a controlled oxygen permeability is achieved, and this can be matched exactly to the specific respiration characteristics of the particular fresh product. The objective is always to maintain the most beneficial concentration of oxygen and carbon dioxide for the particular product. This equilibrium atmosphere (EMAP) is achieved through the interaction between the respiration of the product and the required permeability of the film. The FreshSAFE packaging system can be produced on thermoforming packaging machines and traysealers as well as chamber machines.

T 600 traysealer with FreshSAFE microperforation system

At Les Maraîchers d’Armor the T 600 is used, the smallest fully automatic MULTIVAC traysealer that can be integrated into a line. This versatile and scalable model is suitable for packing small and medium-sized batches very flexibly, and it is particularly easy to operate thanks to its IPC06 machine control with touchscreen.

The T 600 is equipped with the MULTIVAC FreshSAFE microperforation system, which automatically perforates the upper web during the packaging process.

Thanks to the cost-effective needle perforation system, all current upper webs can be perforated to the individual permeability that is required.

In order to meet the requirements of Les Maraîchers d’Armor, the packaging line also included a TDS 300 denester from TVI, as well as a MDC drag chain infeed system and direct web printer from MULTIVAC. The packs themselves consist of a board tray and a transparent upper web, so that the consumer can see the freshness of the product at a glance.

Significantly extended shelf life thanks to FreshSAFE

Due to the FreshSAFE microperforation system, the product retains all its sensory characteristics in the pack. It remains appetising as well as fresh, and its shelf life is significantly longer than products packed in other types of packaging. This means that there is considerably more leeway in the supply chain, and this gives processors like Les Maraîchers d'Armor a better opportunity to market their high-quality but delicate natural products.

More information on packaging fruit and vegetables can be found at:

<https://de.multivac.com/de/fresh-produce/>

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About MULTIVAC

MULTIVAC is one of the leading providers worldwide of packaging solutions for food products of all types, life science, and healthcare products, as well as industrial items. The MULTIVAC portfolio covers virtually all requirements of processors and producers in terms of pack design, output, and resource efficiency. It comprises a wide range of packaging technologies, as well as automation solutions, labellers, and quality control systems. The product range is rounded off with solutions upstream of the packaging process in the areas of portioning and processing, as well as bakery technology. Thanks to our extensive expertise in packaging lines, all modules can be integrated into complete solutions. This means that MULTIVAC solutions guarantee a high level of operational and process reliability, as well as efficiency. The MULTIVAC Group has approximately 6,900 employees worldwide, with some 2,300 based at its headquarters in Wolfertschwenden. With over 85 subsidiaries, the Group is represented on all continents. More than 1,000 sales advisors and service technicians throughout the world use their know-how and experience to the benefit of customers, and they ensure all installed MULTIVAC machines are utilised to their maximum. Further information can be found at: www.multivac.com.

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