

Fiber fortification hurdles: Galam responds to inulin shortage with beet-derived alternative

19 Oct 2020 --- Israel-based Galam is positioning beet-derived short-chain fructooligosaccharides (sc-FOS) as a viable alternative to inulin for fiber fortification. This year has seen a decreased chicory root fiber harvest – from which inulin is derived – presenting formulation hurdles for the industry, according to the company.

“Compared to last year, chicory harvest has decreased in volume, as well as inulin yield. Chicory growers changed their plantation at the expense of wheat, for higher revenue,” Yael Aizenberg, international sales manager at Galam, tells *NutritionInsight*.

Supply chain hurdles

Last summer in Benelux was very dry, resulting in lower production volumes of chicory and hence lower inulin yield, explains Aizenberg.

“For sugar reduction and fiber enrichment, sc-FOS can be a good alternative to inulin, due to its higher sweetening power when compared to that of inulin. It offers approximately 30 percent sugar reduction when replacing inulin and 10 percent for sucrose,” she adds.

Formulating with sc-FOS

Galam is producing GOFOS, its flagship ingredient, by a proprietary, enzymatic process, leading to the formation of GF2, GF3 and GF4 with guaranteed ratios.

Recently Galam also launched sc-FOS with low water activity to offer extended shelf life for symbiotic products (Probiotic+Prebiotic), Aizenberg highlights.

The company showcased its fiber ingredient GOFOS at [ProSweets](#) in Cologne, Germany, earlier this year.

“Sc-FOS is a highly soluble dietary fiber, and one of the most suitable for direct sucrose replacement and calorie reduction. As a fiber it provides only 2 kcal per g). Its molecular characteristics result in syrups with viscosity very similar to that sucrose,” she details.

“Sc-FOS is also unique in its sweetening profile being almost identical to that of sucrose. Sc-FOS is able to provide sweetness, while other alternative soluble fibers are much less sweet or not sweet at all.”

“Moreover, sc-FOS is also able to function as a good binder. Therefore, it can be formulated in the manufacture of dietary bars. However, in food applications where inulin is used for its textural abilities such as resembling fat-like texture sc-FOS will not be an adequate replacer,” Aizenberg underscores.

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Importance of fiber

Consuming an adequate amount of fiber plays a crucial role in a wide range of health-related issues by helping to reduce obesity, improve cholesterol and glycemic index levels and contribute to weight management.

For sugar reduction, sc-FOS can be a good alternative to inulin, due to its higher sweetening power. According to Innova Market Insights, there has been a steady rise in fiber-related claims, with 9 percent average annual growth in F&B launches from 2015 and 2019. The top category is cereals, with 20 percent of launches in 2019 featuring a fiber-related claim.

Bakery follows closely behind at 19 percent, with snacks (13 percent) and ready meals and side dishes (10 percent) trailing behind. Notably, sports nutrition is the fastest-growing category featuring fiber-related growth, with a 39 percent CAGR (Global, 2015 to 2019).

Expanding production capacity

Galam recently unveiled two new production plants in a [US\\$20 million move](#) to expand its sc-FOS production.

The Israel plant specializes in sc-FOS production in powder form and exports worldwide, while the plant located in Spain specializes in liquid sc-FOS production for the European market.

Previously speaking to ***NutritionInsight***, Galam's VP of R&D, support & CSO, Fernando Schved, also highlighted that prebiotics could stimulate the production of beneficial probiotics in the gut, which in turn contributes to [overall health and immunity](#) against viral infections.

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