

HOW DO SPECIALTY FOOD INGREDIENTS AND THEIR MANUFACTURERS CONTRIBUTE TO THE SUSTAINABILITY OF THE FOOD SYSTEM?

What are specialty food ingredients?

Specialty food ingredients typically preserve, texture, emulsify, colour, help processing and add an extra health dimension to produced food. They are all key to guarantee the wide range of processed foods as offered today to the consumer. With their technological, nutritional and health related functions they make the food tasty, pleasant to eat, safe, sustainable, healthy and affordable.

Role of specialty food ingredients for resource efficiency in the food chain

Improve resource efficiency along the food chain by:



Specialty Food Ingredients provide tools and solutions to improve resource efficiency along the whole of the food value chain, due to their effective impact during food processing and food storage. They enable the full use of food raw materials, improve the efficiency of food processing and help reduce food waste. Due to its innovative nature, the Specialty Food Ingredients industry constantly strives to improve manufacturing processes.

Specialty food ingredients: “sustainability enablers” throughout the food chain

With 3-8 % of its turn-over dedicated to research and development, the European specialty food ingredients industries are those within the food industry at the cutting edge of research and innovation: they are well placed to address the sustainability challenge by developing specific approaches depending on the very nature of the ingredient, its sourcing, manufacturing process and functionalities in the final foodstuff.

Specialty food ingredients improve resource efficiency in the food chain by continuously innovating and by using all valuable components of raw materials

Dependency on higher value/less abundant/ environmentally costly raw materials can be complemented through alternative sourcing from other products or the continuous search for valuable components within by-products which come out of the processing of raw materials into main products, bringing higher value to the market.

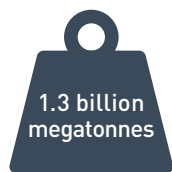
Fibres are a typical example of the valorisation of a by-product through their use as a bulking agent in food, as are e.g. gelatine produced from slaughtering by-products, whey protein from cheese manufacturing or tocopherols from soya processing.

When possible, the specialty food ingredients manufacturers convert their side streams into by-products to avoid waste, e.g. dicalcium phosphate is a product derived from the gelatine manufacturing.

Specialty food ingredients help make processing of foods more efficient, thus limiting the quantity of raw materials required for production and resulting in energy saving, thus reduction of Greenhouse gas

Increased production yields can be obtained thanks to specialty food ingredients. For example, enzymes help increase juice extraction from fruit, and cultures help capture more protein during cheese manufacturing. Enzymes used in the brewery process induces large energy saving.

Specialty food ingredients improve resource efficiency in the food chain by reducing downstream losses



One third of the global food production gets lost or wasted

Roughly 1.3 billion MT of food is lost or wasted annually (corresponding to one third of the global food production). Specialty food ingredients have a significant impact in the reduction of this waste by extending the shelf life and protecting the organoleptic properties of the food. Hence less food is wasted as it can stay longer on the shelf or consumers have more time to consume the foods.

Preservatives are well-known for their important role in extending shelf-life of foodstuffs without compromising their safety. Buffered vinegar, for example, can extend the shelf life of sausages from 12 days to 15 days while maintaining spoilage bacteria. Antioxidants such as rosemary extract are added to many types of foods such as fats and oils, sauces and dressings, meat, poultry and fish, to extend shelf-life.

Many other ingredients contribute to reduction of food waste by preserving the high organoleptic quality of foodstuffs, hence keeping them attractive to consumers until their "use by" date or even after the "best before" date. To quote but a few: stabilisers and gelling agents that reduce the syneresis in milk-based desserts; emulsifiers that avoid separation of oil and water in mayonnaise and sauces; colours that compensate for discoloration of soft beverages occurring over time; antioxidants that avoid rancidity of fats and oils; anti-caking agents that prevent powdered cake preparations to agglomerate etc.

Technology advancements continuously reduce the environmental impact of the specialty food ingredient production

The European specialty food ingredients industries acknowledge their responsibility of being themselves as resource-efficient as possible in the production of specialty food ingredients. Among other activities the specialty food ingredients production notably strives for energy efficiency improvements and lower water usage.

Specialty food ingredients are one of the key options for sustainable food processing

The research-oriented mindset of the specialty food ingredients sector furthers the development of new solutions. For example, innovative manufacturing technologies allow diverse raw materials sources to be turned into specialty food ingredients with the same technological or nutritional functionalities.

"Regulations are necessary to guarantee the safety of food products. It is, however, important to monitor if these regulations don't hinder the innovation and application of novel options in food industry for sustainable food processing"

- STOA report: * Technology options for feeding 10 billion people – Options for sustainable food processing

* IC STOA 2013/122 - November 2013

The European specialty food ingredients industries spent in average €2 billion on R&D every year. They do have the potential to develop innovative ingredients in order to address important challenges facing the food chain in future.



EU Specialty Food Ingredients represents a united voice for the specialty food ingredients industry on scientific, technical and regulatory issues relating to food products in Europe. It is our aim to ensure that all stakeholders - from manufacturers and retailers to regulatory authorities and consumers - are correctly informed of the use, safety and benefits of specialty food ingredients. In total, more than 200 international and national food ingredients companies are currently involved in the Federation's activities through direct membership or an association. 3-8% of EU specialty food ingredients manufacturers' turnover is dedicated to research and development.

For more information, please visit: www.specialtyfoodingredients.eu