

Everything for a vegetarian diet – Dr. Alexander Smerz of Döhler on proteins and functional ingredients

The demand for natural and vegetable ingredients for food and beverages has been on the increase for years. Dr. Alexander Smerz, Head of Business Unit Health & Nutrition at Döhler, provides insights into the development of the ingredients landscape.



Suitable for "plant-based meat alternatives": Vegetable proteins from peas and beans.
(Photo: Döhler)

Dr. Smerz, vegetable products are in demand like never before and are an increasing part of daily nutrition. What ingredients are currently on the advance here?

Alexander Smerz: Protein enrichment is currently one of the most important claims when developing vegetable food such as milk alternatives. However, compared to animal milk, they frequently contain less protein, vitamins and minerals. The enrichment with a high-quality protein mix serves as a vegetable source of calcium and iodine.

What challenges does the growing demand for producers entail?

The production process for the final products is similar to that for milk products, however the recipe differs fundamentally. Compared to milk, vegetable ingredients have a completely different nutritional profile and vegetable proteins show a different behaviour than milk proteins. In addition, the vegetable alternatives usually have a strong characteristic taste. An extensive knowledge of vegetable ingredients is therefore essential for producing outstanding vegetable-based products. We use a flavour technology especially developed for this purpose with which the vegetable quality of the protein is retained.

What proteins will be increasingly used as the basis for new product developments in the area of vegetable alternatives in the future?

The proteins and protein mixtures can, for example, be extracted from beans, peas and chickpeas. Here we see a growing demand for chickpea protein and a combination of various vegetable proteins. These are primarily in demand for applications such as "plant-based cheese" as they not only serve as flavouring components, but also contribute to an improved texture and nutritional value. Textured vegetable proteins from peas and beans are, for example, suitable for "plant-based meat alternatives".



Döhler enables product developers to produce vegetable cheese alternatives. (Photo: Döhler)

Does Döhler also offer solutions for this?

Thanks to vertical integration, Döhler offers the food and beverage industry a comprehensive portfolio of natural, high-quality vegetable ingredients. These also include a broad range of vegetable protein mixtures and solutions with an optimised nutritional value and an improved flavour profile.

That means?

As we extract the vegetable proteins and protein mixtures from beans, peas and chickpeas, our protein solutions contain a natural starch content for a high natural functionality. In addition, thanks to our aroma technology and our production method, they also have advanced sensory properties such as no bitterness and no astringency.

Do you think the demand will continue to increase in the future?

Vegetable alternatives have meanwhile established themselves on the market across all products categories. A clear trend to a vegetable diet can be recognised in virtually every European

country and the U.S. A broad consumer base and the increasing number of product introductions in this area are indications that the demand will continue to increase in the future. Predictions expect a global increase in vegetable food and beverages by almost 14 percent by 2024.

Do you see differences in the demand on the various global markets?

In a world-wide comparison it becomes clear that especially in Europe and North America, the demand for vegetable solutions on an almond or oat basis is continually increasing, while in contrast products with soy are popular with consumers on the Asian market. The interest in vegetable food and beverages is also apparent in the fact that considerable investments were made in this industry in recent years. In this context, many start-ups have found their way onto the market and increasingly offer vegetable alternatives to traditional products.

From your standpoint, what ingredients are still important for new product developments in the area of vegetable alternatives – now and in the future?

Functional ingredients are an additional driver for growth, for they supply a healthy added value through the various nutrients, such as vitamins, minerals or secondary vegetable substances. With them vegetable products can be developed which not only have a convincing flavour, but also score with an optimised nutritional profile. Döhler therefore offers a large selection of functional and health-promoting ingredients as the optimum basis for the development of innovative and vegetable food and beverages. For example, in addition to vegetable proteins, these also include branched-chain amino acids, vitamins, botanic extracts and dietary fibres.

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