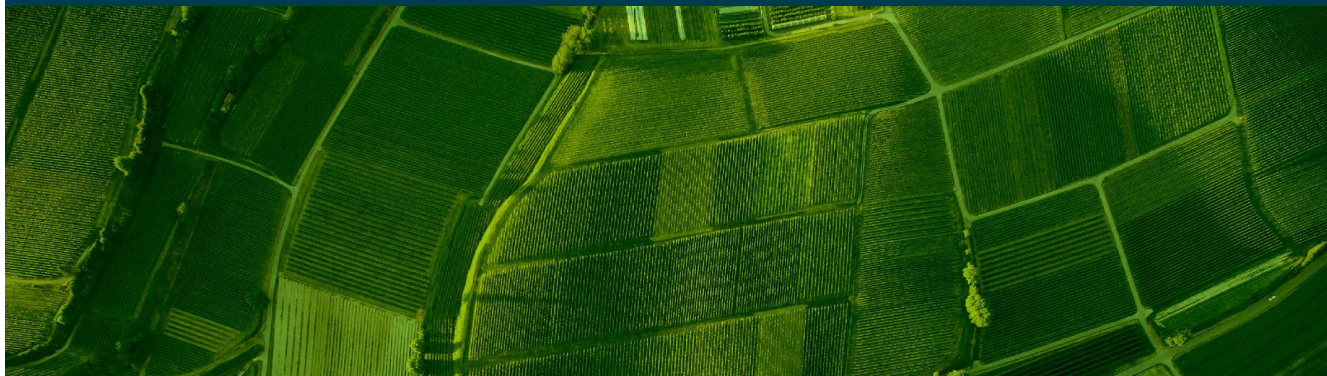


Practice Abstract No 32

Tempeh of Dutch Faba Beans for the vegan/vegetarian market



Description

Tempeh is a fermented traditional Asiatic food proceeding from Indonesia. It is made from soaked and cooked soybeans inoculated with a mold, usually of the genus *Rhizopus*. After fermentation has occurred, the soybeans are bound together into a compact cake by dense cottony mycelium. Fermentation process makes the starches easier to digest, resulting in a compact, whitish block product. During the growth of mold, the functional properties of foods are formed as follows: protein is hydrolyzed to amino acids and peptides by proteolytic enzymes, oligosaccharides is hydrolyzed to monosaccharides, phytic acid degraded to inorganic phosphates.

With regard to food products, flavor and textures are of most importance and top priority aside from nutrition, because they decide whether a food has preference and competitiveness at market.

Although traditionally, soya beans are used for tempeh processing, FOODVALLEY proposes the substitution of the soya beans by one local Dutch legume, faba beans. As the same way than soya beans, faba beans have a high protein content (according to bibliography: aminoacid score = 0.66-0.75; Digestibility = 76-82% and PDCAAS = 54-66).

In order to increase the consumption options of Dutch faba beans and in line with the growing trend of high quality protein products for the vegan and vegetarian market, the CO-FRESH project will establish the formulation of the fermentation substrate (based on faba beans and other ingredients), the most suitable *Rhizopus* strain and the process for getting a new Tempeh with exceptional sensorial and nutritional properties.

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Stakeholders

Food manufacturers, consumers, local farmers

Country/Region

Netherlands

Keywords

Tempeh, Faba beans, fermentation



Pictures



About CO-FRESH

The CO-FRESH project aims to provide techniques, tools and insights on how to make agri-food value chains more environmentally sustainable, socio-economically balanced and economically competitive. The project pilots several agri-food value chain innovations to see how they, in combination, can improve environmental and socio-economic sustainability.

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