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TRENDS AND PROSPECTS OF PLANT PROTEINS IN SUSTAINABLE NUTRITION: FAVA BEANS AS A PROMISING SOURCE

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Sustainable food security is a significant global concern for both the food industry and international governments and agencies. It involves the development of processing technologies that preserve the nutritional value of foods, enhance nutrient absorption, are environmentally responsible, and meet consumer preferences regarding sensory attributes. Over the years, there has been a notable shift towards replacing animal-derived raw materials with plant-based sources. Research on plant proteins has demonstrated their viability as substitutes, with favorable outcomes in terms of nutritional value, sustainable production, and highly satisfactory techno-functional properties. It is worth noting that due to changes in consumption patterns, there is a growing demand for these proteins, driven by the quest for healthier food alternatives. Key sources of plant proteins include legumes, oilseeds, grains, pseudocereals, and agricultural by-products. It should be emphasized that legume proteins exhibit variations in their molecular characteristics depending on the specific species. They are reliable sources of plant protein that produce pod-shaped fruits and edible seeds, such as peas, beans, lentils, chickpeas, and fava beans. The application of plant-based food sources, such as fava beans, faces challenges related to consumer acceptance. Fava beans represent a promising protein source with significant agronomic potential, given their high yield per cultivated area and their ability to thrive in low-temperature conditions. With a protein content ranging from 23-41%, fava beans offer substantial nutritional and functional potential for food applications. Despite the global interest in plant-based protein-rich foods and the nutritional value of fava beans, their utilization remains limited. This presents an untapped opportunity to sustain nutritional needs sustainably, although it requires addressing certain sensory characteristics in future product development.

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