

1. Record Nr.	UNINA9910556878803321
Autore	Manickavasagan A.
Titolo	Plant Protein Foods / / edited by Annamalai Manickavasagan, Loong-Tak Lim, Amanat Ali
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-030-91206-X
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (522 pages)
Collana	Biomedical and Life Sciences Series
Disciplina	572.62 613.282
Soggetti	Food science Botany Food Engineering Plant Science Food Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. High protein foods: A comparison of animal origin vs plant origin foods -- 2. An overview of plant-based protein rich products -- 3. Processing technologies to produce plant protein concentrates and isolates -- 4. Product development technologies for plant protein-based foods -- 5. Enrichment and fortification of traditional foods with plant protein isolates -- 6. Plant-based meat analogues and modified meat extenders -- 7. Fermented plant protein products -- 8. Extruded protein films / non-textured protein products -- 9. Plant protein based drinks / beverages -- 10. Sensory and physical properties of plant protein foods -- 11. Amino acid profile and bioavailability of plant-based protein rich products -- 12. Nutritional quality, health implications of plant-based protein rich foods and/or Plant protein foods in the prevention and management of non-communicable diseases -- 13. Anti-nutritional factors and biologicalconstraints in the use of plant protein isolates and concentrates -- 14. Safety and regulation requirements for plant-based protein rich foods -- 15. Meat replacers and meal plans based on plant protein isolates for human

consumption -- 16. Global trends in the use of plant protein foods: Awareness, availability and consumption -- 17. Marketing opportunities for plant-based protein products.

Sommario/riassunto

Regular consumption of plant-based protein foods instead of animal-based protein foods reduces the risk factors for cardiovascular diseases, diabetes and certain cancers. Apart from human health, the adverse effects to the environment due to the production of protein is much higher for animal sources than plant sources. Greenhouse gas emissions from the production of one pound of lamb meat, for example, are thirty times higher than one pound of lentils. As consumers are increasingly aware of personal health and environmental impact of food production, the demand for plant protein foods is increasing globally. This trend has prompted several large-scale collaborative research projects on plant-based protein products supported by the industry and governmental agencies. Several established multinational meat companies have started adding plant-protein product lines to meet the current demand. This book presents the first comprehensive compilation of literature on plant-based protein foods. Chapters cover protein extraction technologies from plants, comparison of amino acid profiles of plant- and animal-based proteins, approaches to product development for plant-based protein products, health benefits of plant-based protein foods, market opportunities, and future challenges. Plant Protein Foods is an essential reference for consumers, students, researchers, food manufacturers and other stakeholders interested in this domain.