

# WEBINAR ON PLANT-BASED PROTEINS: THE CANVAS FOR INNOVATION

REPORT BY

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Protein Foods & Nutrition Development Association of India (PFNDAI) organized a Webinar on 'Plant Based Proteins: The Canvas for Innovation' on 17th May 2024. The event was sponsored by International Flavours and Fragrances (IFF).

The welcome address of the webinar was given by Dr.

Jagadish  
Pai, Editor  
at PFNDAI.

He welcomed the speakers, panellists, and the participants.



He thanked IFF for sponsoring the webinar. Plant-based proteins have been used in industry and have had ups and downs, but we are headed towards the right goal. With the help of industry, government, supporting organizations, and individuals the goal of reducing the burden on the environment due to excessive consumption of resources can be achieved.

Additionally, plant-based proteins have their health benefits, with all of the aspects covered during the webinar, he ensured that everyone would find it informative.

Ms.  
Samreen  
Shaikh, Jr.  
food  
technologist  
at PFNDAI  
introduced

the speakers for the session, providing a brief about their background, qualifications, and expertise.



Dr. Shashank  
Bhalkar,  
Executive  
Director,  
PFNDAI  
delivered the  
talk on 'Plant-  
based: Health  
advantages & changes  
needed to incorporate



in today's diet'. He highlighted the implications of the rising world population, land footprint, and freshwater footprint of protein sources like beef, pork, chicken, soybeans, and microalgae, emphasizing that plant-based proteins use fewer resources and are less harmful to the environment. The IMRB (Indian Market Research Bureau) survey revealed that over 80% of Indians are protein deficient, primarily consuming carbohydrates and protein through grains. Animal proteins have higher PDCAAS and essential amino acids, while plant proteins are less absorbable and digestible.

The shift to plant-based proteins offers health benefits, sustainability, and reduced environmental impact, preventing animal sacrifice. Dr. Bhalkar discussed the benefits and challenges of plant-based proteins, including health issues like leaky gut and autoimmune effects. He highlighted commercially exploited plant protein sources like soy, pea, peanut, algae, leaf protein concentrate, and millet. He concluded by discussing the theme of Protein Day 2024; #solvewithprotein, aiming to provide protein-rich food and build a healthy, nutritionally secure nation.

**Mr. Indranil Chatterjee**, Regional Product Line Manager - Business Unit Protein for IFF, gave a talk on 'Plant-based



protein: Challenges in plant-based proteins and how to overcome challenges in creating plant-based protein with solutions.' He discussed the functionality of muscle protein in emulsified meat products, highlighting the challenges of mimicking colour, structure, aroma, flavour, and taste in plant-based proteins. He explained that plant proteins have a globular structure, while

animal proteins have fibrous structures. The texture of plant-based products is influenced by functionalities like solubility, emulsification, gelation, water-binding, and elasticity. Salt is a crucial factor in modification, as it dictates the protein's behaviour in food. He also discussed the texture analysis of plant-based products using web diagrams and mouthfeel wheel. Plant proteins suppress flavour more than animal proteins, and authenticity is crucial when creating plant-based products. Off-notes in plant proteins can be due to protein sources and processing conditions, with bitterness and astringency being common taste issues. Mr. Indranil suggested choosing sources with lower flavour intensities, such as oat rice, for developing new products. Masking technology is used to reduce certain flavour components like bitterness. Lastly, he discussed the challenges in plant-based protein beverages.



talked about 'Rising demand for high protein intake/Better understanding of plant-

based foods.' She started the talk by explaining the importance of protein in the human body and the lack of awareness about balanced diets in India. The government of India has taken steps to promote protein uptake, such as improving protein in MID DAY MEAL, RASHTRIYA POSHAN MAAH, POSHAN PAKHWAD, and Eat Right India by FSSAI. Consumers are increasingly purchasing high-protein products, and the preference for plant-based proteins is driven by sustainability and animal cruelty. The market size for plant-based proteins is estimated at 0.91 billion USD in 2024 and is expected to reach 1.21 billion USD by 2029 at a CAGR of 5.85%. She also highlighted the innovation of plant-based proteins in India and globally, discussing growth opportunities and challenges.

After every presentation, **Ms. Simran Vichare**, Nutritionist at PFNDAI coordinated the questions raised by the attendees. The speakers enthusiastically answered the questions raised.



A panel discussion followed the presentations. Ms. Samreen Shaikh introduced the Panel moderator and panellists.

**Dr. B Sesikeran**, Chairman, Scientific Advisory Committee, Hon. Scientific Director, PFNDAI, former director, NIN(ICMR) as the Panel moderator and **Ms. Naaznin Husein**, Founder-Director, Freedom Wellness Management, Chairperson-Nutrify Today Dietetics, **Mr. Nikhil Nair**, Product Development Manager-Foods, Marico Limited, **Ms. June Swer**, Strategic Business Unit head, Chatha Foods Pvt. Ltd. and **Dr. Vidya Sridhar**, Senior Manager Food Designer, Amway Global Services India Pvt. Ltd. as panellists.

**Dr. B Sesikeran** asked the questions to each panellist. He moderated the session well and expressed his thoughts post the answers given by the speakers.



**Dr. Vidya Sridhar** discussed the loss of nutrients due to processing plant-based protein and the need for formulation and fortification to overcome this. She emphasized that protein is consumed for its amino



acids and is not lost during processing. She also highlighted that affordability, regulatory compliance, allergenicity, and availability are considered when developing plant-based proteins.

**Mr. Nikhil Nair** talked about protein deficiency in India, as the majority of Indians are primarily vegetarian. He suggested consuming foods of a complementary nature to overcome this issue.



**Ms. June Swer** discussed the scope and market of developing high-protein traditional Indian foods in a vegan way, and the awareness raised by PBFIA (Plant Based Foods Industry Association) working with government agencies like FSSAI and APEDA.



**Ms. Naaznin Husein** discussed the health advantages of plant-based proteins in the diet and the need for a wider choice of



palatable plant-protein based products.

**Mr. Jayant Kapre**, Sub Regional Lead, Indian Sub-Indian Continent, IFF presented a vote of thanks on behalf of IFF. He thanked the speakers, panellists, PFNDAI Team and the attendees for asking probing questions. He further expressed his thoughts on plant protein and the vested interest of IFF in creating awareness about plant-based proteins and making them palatable to consumers.



At the end of the session, **Ms. Sanyukta Telange**, Technical Assistant, PFNDAI gave a vote of thanks to the webinar sponsor, speakers, and panellists, along with her PFNDAI team members for making the webinar a success. She also thanked the attendees for patiently attending the webinar.



The entire webinar recording is available on the following link:

<https://fb.watch/sl4qb2hd0E/>

