

# WEBINAR REPORT ON FUTURE OUTLOOK ON HEALTHY INGREDIENTS WITH SPECIAL EMPHASIS ON PROTEINS "FOOD & NUTRITION EXPO 2022"

Protein Foods & Nutrition Development Association of India conducted the first ever Virtual Exhibition & Webinar on Future Outlook on Healthy Ingredients with Special Emphasis on Proteins under the "Food & Nutri Expo 2022" on 14th Dec 2022.

The sponsor for the event was Hindustan Unilever, Marico, Nestle India Ltd & Fine Organics Industries.

There were 7 Exhibitors for the Virtual Exhibition - Vista Processed Foods, Hexagon Nutrition Ltd, Roquette India Pvt Ltd, SA Pharmachem Pvt Ltd, Prolicious, Sensient India Pvt Ltd & PFNDIAI.

The delegates were able to access the whole virtual event consisting of a webinar & virtual exhibition, participant was allowed to visit all the stall, explore the various products of the exhibitors & get the E-Brochure' & exchange business cards. The participant was having access to the Networking lounge to



**Ms Anuja Padte,**  
Food Scientist,  
PFNDIAI



AUTHORS

**Dr Shashank Bhalkar,**  
Assistant Director,  
PFNDIAI

## Session I

have one on one conversations with exhibitors, speakers, and experts.

There were 3 Informative sessions which were held under the Webinar & the sessions were sponsored by Amway, Marico & Zydus Wellness. The sessions were as follow

1. Current Developments in Proteins
2. The emergence of Health Foods, Supplements & Claims
3. Dialogue Among Leaders on Nutri cereals & Proteins



**Dr Jagadish  
Pai**

The webinar started with a warm welcome to all the Delegates, Speakers, Sponsors & Exhibitors for the event by **Dr Jagadish Pai**, Executive Director PFNDIAI. **Ms Dolly Soni**, Manager Marketing and Projects, PFNDIAI gave brief information of the first-ever

**FOOD and  
NUTRITION  
EXPO 2022**  
& also introduced all the speakers.



**Ms Dolly Soni**

### Dr Shatadru

**Sengupta**, Vice President - Legal, Hardcastle Restaurants Pvt Ltd; Chairman, PFNDAI, gave a welcome address where he mentioned the changes raised after the pandemic and people certainly became aware of Nutrition, Health & Safety. He gave some highlights on the webinar topics which were to be discussed by the expert. He gave his best wishes to all the speakers, panellists & sponsors for the event.



**Dr Shatadru Sengupta**

animal proteins are superior to plant proteins. He highlighted audience about different protein sources such as animal, plant & others. He further mentioned that According to ICMR - NIN RDA published in 2020, PE (protein efficiency) ratio requirement ranges between 5-15 across all age groups. PE ratio is based on the weight gain of a test subject (normally rats) divided by its intake of a particular food protein during the test period. In humans, it depends on the age and physiological condition of the individual. He also explained to the audience on allergenicity of proteins.

The second presentation was by **Dr Shobha Udipi**, Hon Director, Integrative Nutrition and Ayurceuticals, Medical Research Centre-Kasturba Health Society.

Dr Udipi presented on Recent Perspectives on Quality of Proteins, where she mentioned that protein in our diets accurately & objectively defines protein quality -an important role in addressing human nutrition requirements, nutrition policy, trade, and product development. Further, she also mentioned that US FDA currently uses the Protein Digestibility-Corrected Amino Acid Score (PDCAAS) to

measure protein quality in most foods, Canadian government utilizes the PER. She also briefed on the Issues/Challenges in Quality Evaluation. At the end of her talk, she explained structural changes modify protein digestibility.

The third presentation was by **Dr Govindarajan Raghavan**, Head R&D, Zydus Wellness presented on Developing Innovative High Protein Products where he spoke on Diet Diversity, which is crucial to meet the nutritional needs, and gave a brief on the

consumption of the right quantity & quality of protein & the daily requirements needed. Further, he spoke on the Role & Types of Protein i.e. Structural, Biochemical & Kinetic & the types of amino acids. Dr Govindarajan briefed on the various sources of proteins, which are Plant Protein, Animal Protein, Dairy Protein (Milk & Milk Products), Insect Protein & Algal Protein.

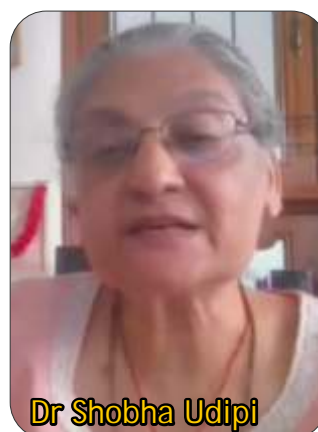


**Dr Govindarajan Raghavan**

Dr Sesikeran gave a presentation on the topic Importance of Proteins with the Health Benefits of Plant Proteins. He mentioned that Protein is required right from conception until death at every stage they are needed for the growth of the body for the maintenance of the various system & basic metabolism. Our country has overcome protein deficiency to some extent but at the same time, there is a common opinion that



**Dr B Sesikeran**



**Dr Shobha Udipi**

He explained in briefly the DIASS score & also highlighted the Scientific Literature on Protein Blends. Further, he spoke on the survey conducted on the Taste & Protein Quality while the formulation of high Protein Products was done.



In the end, he mentioned that the future will be the application of advancing omics tools, databases & networks to the breeding of new varieties in record time for emerging plant-based protein food systems.



Mr Pranay Jain



Mr Vinay Hastak



Dr Bhavna Sharma



Dr Jagadish Pai

There was a Q&A round taken for all the speakers after the respective presentations. Also after the Presentation, there was a Panel Discussion which was moderated by **Dr J S Pai**, Exe. Director PFNDAI & the panellist were **Mr Vinay Hastak**, -Vista Processed Food, **Dr Bhavna Sharma**, Head, Nutrition Science Division, ITC Foods, **Mr Pranay Jain**, Founder Body First.

Dr Pai welcomed all the panel members and the interaction started with the Q&A round where the panel interacted on the various subject matters. Many of the high protein food products are either high-sugar beverage mixes or bars etc. or meat analogs. Why industry does not think of some new products? & Plant proteins

especially from legumes are mostly globular which are difficult to imitate the fibrous structures of animal proteins. So, there is a need for adding many additives, which may not be welcome to consumers, & whether there are any solutions for it.

## Session II

The second session of the webinar was Emergence of Health Foods, Supplements & Claims. The first speaker for the session was **Dr Vidya Sridhar**, Senior Manager, Food Designer, Amway India Enterprises Dr Sridhar presented on the topic Application of Proteins to Make Healthier Food Products.

She highlighted the audience in brief on protein quality, protein functionality & applications. She explained in detail about protein & protein nutrition & also covered in detail the roles of protein & protein quality: Animal vs Plant scores as there are very essential while developing any new products. She further spoke on the emergence of plant protein & the sources of plant proteins, which are pulse protein, cereal protein, potato protein, water lentil protein, nuts protein & oilseed protein. She also briefed the audience on the protein Functionality & applications & of the food format of protein.

She concluded her talk by interpreting the application vs functionality for different food

categories & also the challenges overcome while applications. She summarised her talk by mentioning that the Consumer needs increasing for high-quality clean-labelled protein-rich products. New-age proteins are on the rise with excellent functionality to meet consumer needs.

Understanding the functionality of protein is key to choosing the right protein for successful application in food.

The Second talk for the session was by **Dr Sudershan Rao**, Dy Director (retd) National Institute of Nutrition, Hyderabad. Dr

Sudershan presented on the topic of Validation of the Health Benefits of Functional Foods before Making Health Claims. He mentioned that "Health Claim" means any representation that states, suggests, or implies that a relationship exists between a food or a constituent of that food and health & also mentioned the essential components that are Nutraceutical Ingredients & health-related benefits.

Further, he spoke on the requirements of under regulations for health claims & the process for the substantiation of health claims (Codex).



Dr Vidya Sridhar



Dr Sudershan Rao

Dr Rao further explained to the audience the essential components of systemic review i.e., the search strategy used to capture the scientific evidence, food or property of food, the health effect-proposed relationship & a final list of studies based on the inclusion and exclusion criteria. He also briefed on how the decision tree needs to be approached for establishing food health relationships and the criteria that should be considered. He concluded his talk by mentioning that Substantiation is a basic requirement of making a health claim & observational studies or studies in animal models or in vivo and in vitro studies are not sufficient for substantiation of a health claim.

The last talk for the session was by **Dr A Sivakumar**, Head Regulatory, HUL.

Dr Sivakumar presented on the topic of Newer Systems of Healthy Rating of Food Products. In his talk he briefed the audience about Front of Pack Labelling (FOPL) & the objectives of front of pack labelling i.e. to educate the consumer on the nutritional quality of F&B products, enable consumers to make healthier choices quickly & intuitively & drive reformulation by F&B industry.

He also briefed on types of



**Dr A Sivakumar**

FOP labelling systems used globally under nutrient specific systems i.e. numeric only (GDA Labelling), colour coded labels (multiple traffic Lights), warning labels (black octagon labels of Chile) & summary indicator system i.e. scale base graded labels (Health Star Rating, Nutriscore). He further spoke on the FOPNL journey in India, which started in the year 2013, & the FOPL model for India was announced in 2021-2022. Further, he spoke on Food Safety & Standards (Labelling & Display) Amendment Regulations, 2022 & the INR product categories, which included Category 1: Solids (including dairy products & beverages) Category 2: Liquids (excluding dairy products) Category 3: exempted from FOPNL.

He also explained why we need product group-specific categories in INR. He concluded his presentation by summarising on per serving/portion-based algorithm and not 100g/100ml. Inclusion of category-specific product groups, broaden the "positives" definition: vitamins, minerals, essential fats, reconstitution principle to be applied (beverages-HFD, squash, and soups), exclude HFSS definition as it creates ambiguity.

There was a Q&A round taken for all the speakers after the respective presentations. Also after the Presentation, there was a panel discussion which was moderated by **Dr Shashank Bhalkar** Ass. Director, PFNDAI & the panellist for the session were



**Mr Arjun Dasoondi**



**Ms Shilpa Wadhwa**



**Dr Shashank Bhalkar**

**Mr. Arjun Dasoondi**  
Associate Vice President, Process & Packaging Engineering, I&S- Amway,

**Ms Shilpa**

**Wadhwa** Head - Nutrition, Health & Wellness, Nestlé India.

There were few questions discussed on the health foods, supplements & claims like are Indian consumers even aware of how to read the existing food labels and the importance of each parameter on the label? Any survey has been done to understand this. & health rating of food products is nice. However, how far are they practicable? Can you have each and every piece of food going into mouth be highly nutritious?

Does the authority want people to have a better overall diet or remove all sweets, savouries and fried foods removed from the market?





### Session III

The third session was "Dialogue on Nutri Cereals and Proteins" which was the cherry on the cake of the whole program. We were fortunate to have towering personalities from Industry and research on this very current and important topic of "Nutri Cereals". The time of this dialogue was very apt, as FAO has declared 2023 as Millet year.

#### Initial thoughts of speakers on Millets

**Dr Sesikaran B**, Former Director, NIN (ICMR), Hyderabad & Hon Scientific Director, PFNDAI was the moderator of the discussion.

In his opening remarks briefly talked about Millets in India. It has 5000 years of existence in India with its ups and downs. This crop requires little water, and can grow in hotter temperatures. Initially, it was consumed by a large population. Then people switched over wheat and rice thinking that this is food for poor.

Now in the era of climate change and also when NCDs are on rise, Nutri Cereals are gaining importance because of their ability to grow in harsh climate having lesser greenhouse effects and also their composition of relatively higher protein and fibre helpful in controlling lifestyle ailments. Dr. Sesikaran then asked speakers to share their initial thoughts.

**Dr. Dayakar Rao** (Principal Scientist IIMR) who has about three decades of research work experience on Millets, described the development of these Nutri-Cereals post-independence. Initially, they were grown for self-consumption by farmers. After green revolution, rice and wheat became staple diet.

Now with emergence of NCDs and typical Nutritional profile of Millets, which are helpful as diet for these conditions, they are gaining importance and have transformed from crop for self-consumption to commercial crop. IIMR has been responsible to build this value chain from scratch.

Government programs like Nutri Hub are also helping to build the value chain. Like other cereals, their proteins also lack in Lysine and they can be complemented with legumes.

**Dr. Nikhil Kelkar** (Joint managing Director, Hexagon Nutrition) briefly gave his opening remarks. He talked about how high protein and



fibre make them healthy cereals. There is need to develop a range of products to popularize them. Also, the usage by urban population should increase.

**Dr. Prabodh Halde** (Head Research and Regulatory Affairs, Marico) mentioned that 2023 will be International Millet Year as declared by FAO.

In addition to Protein and Fibre, we should not forget Vitamins and Minerals from these wonderful cereals.

Another point he mentioned that there is lot of awareness created about these is creating pressure from Consumers to have products based on Millets. He is hopeful that even 10% of our population changes to Millets will be good.





Ministry of Food Processing is encouraging millet based start-ups by giving PLI scheme. The products are distributed in ICDS schemes. APEDA is doing export promotions of these products. Presently twenty Government departments are working on value chain of Millets. Next question was for Dr. Nikhil. Daily fibre needs are quite high. How to meet by consuming Millet based products? In his reply, Dr. Nikhil said the daily requirement is 25 to 30 g which is difficult to meet. It can be met by addition of other fibres like Isapgol. These kinds of fibres are difficult to swallow. However new ingredients like resistant maltodextrins which are also with low glycemic index may be used. When asked about presently only products like multigrain atta are mainly available with is insignificant, Dr. Prabodh mentioned mainly two issues. Product taste, which very critical for consumers and secondly, maintaining quality of grains at farm level.

### Second round:

In the next round of questions, Dr. Dayakar Rao was asked about issue of Antinutritional factors in Millets. He responded this is known fact



since seventies, but with advancement in processing technology like Extrusion, Germination or Fermentation, it is not of great concern. Dr. Nikhil was asked about role of proteins in age related issues like Sarcopenia. He said the issue is real as even in case of urban population, the daily requirements are not met for proteins. By using clinical nutrition supplements the issue can be tackled to some extent. D. Sesikeran added that not only meeting daily requirements is important but also the physical activity is equally important. When asked about Fortification of Millets based products, Dr. Prabodh responded that the Millets are rich in Micronutrients. Instead of fortifying externally, this can be achieved by use of two different Millets to get the desired result. Millets can be presented in the form of tasty products like Ice Cream etc. Dr. Dayakar opined that although many Millets are rich in micronutrients giving as much as one third of RDAs, the bioavailability is a question. He also mentioned the efforts of IIMR with other ICAR institutes to create composite products like Millets plus Mushrooms to get sufficient Micronutrients.

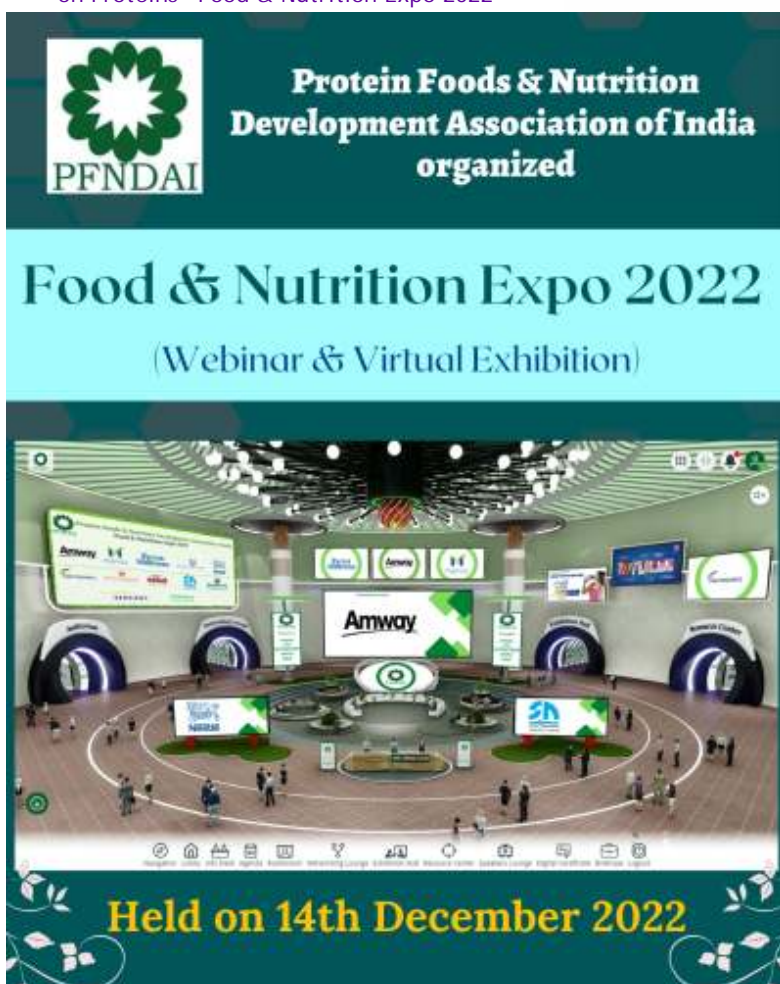
### Third round:

Question to Dr. Dayakar was on storage of Millets and flour. He gave very exhaustive reply. Grains can be stored for about twelve months, which is reasonably good storage period. In case of flours, because of lipase getting activated during milling, the rancidity developed shortening the shelf stability. Vacuum

packing will help but will be good only for export as the cost is involved. Dual technology where first the germ is removed prior to milling might help. Converting flour in value added products by extrusion will also help extending shelf life. Dr. Nikhil was asked on his views on whey proteins quality aspects. He said that we are importing lot of whey proteins. When used in clinical nutrition products, instantised whey is required because of good dispersibility. Whey proteins have PDCAAS of 1, BV of 104 and NPU of 92. They are rich in BCAA, therefore can be used in sports nutrition products. The next question to Dr. Prabodh was lot of new sources of proteins like chia seeds, quinoa etc. are being imported. and marketed. We want to promote millets. How do we tackle the issue? Dr. Prabodh said that they can be consumed as in India as we have protein deficiency. The cheaper sources like millets can be used by the people in the bottom of the pyramid. Dr. Dayakar Rao added that he sees this will not be that difficult to handle as the Prime minister himself is talking of using the millets in all the forums. There are twenty outreach programs developed for millets. Lot of big industries want to work on millet products with IIMR and that shows good future for millets.







Thus, this interesting session covered all the aspects of these wonder cereals. This includes history, present status, work by research institutes and industry, raw material and product problems, government support and future.

The webinar ended with a vote of thanks to all the sponsors, exhibitors, speakers, panellist, audience & organizing team by Ms Dolly Soni, Manager Marketing and Projects.

Please click the attached link to view the live-recorded Webinar  
<https://fb.watch/ipJhAeAqN/>

