

National Level Conference on Virgin Coconut Oil

Coconut Development Board in association with CSIR-Central Food Technological Research Institute (CFTRI), Mysuru conducted one day National Conference on Virgin Coconut Oil (VCO) on 26th December 2018 at CFTRI Mysuru.

In the inaugural session, Dr. Raju Narayana Swamy, IAS, Chairman, Coconut Development Board (CDB) spoke on the need for doubling the farmers income by 2022 as envisaged by the present government with focusing on technology, value addition and marketing. He emphasized on achieving higher value realization for minimum of 25 coconut products. He told that virgin coconut oil has got maximum attention and called upon the policy makers to further expand its reach thereby benefitting farming community to enhance their income. He complimented, CSIR-CFTRI for doing the commendable work in developing coconut based technologies that support the CDB endeavour to add value on a greater scale. The Chairman stressed that, CDB is working with Indian Institute of Science to develop artificial intelligence using drones to assess the health of coconut trees. This will help farmers to take timely action to protect the valuable trees and products in time. These kinds of technologies are already used in Srilanka. He highlighted that, due to paucity of labourers, the Board is contemplating to develop Robot to pluck coconut fruits. To assist the value addition chain of coconut products, CDB has signed Memorandum of Understanding with Indian Institute of Food Processing, Thanjavur for developing Coconut Ice Cream Vending Machine.

The Chairman appreciated CSIR-CFTRI for organizing the event in the Institute for interacting with VCO manufacturers, coconut product traders and machine manufacturers which will help the future R&D on the lines of conference outcome.

Director CSIR-CFTRI endorsed the remarks of Chairman CDB. He informed that, CSIR-CFTRI will take up coconut product development with special emphasis on coconut milk based technologies which will benefit farming community towards enhancing income. The Conference had two technical sessions comprising of a plenary talk and research paper presentation by eminent speakers.

The first technical session was chaired by Dr. Navin K. Rastogi, Chief Scientist & Head, Food Engineering Department, CSIR-CFTRI, Mysore and Co-Chaired by Dr. S.V. Ramesh, Sr. Scientist, Department of Biochemistry, CPCRI.

Dr. P. Rethinam, Former Executive Director, APCC & former Chairman Coconut Development Board in his plenary talk spoke on the "Current Scenario and Future Prospects of Virgin Coconut Oil manufacturing: Indian Prospective". He emphasized the importance of VCO and indicated that VCO contains Medium Chain Triglycerides (MCT) with high content of Lauric acid (more than 46.8%), which are having properties of developing immunity. He further spoke on the different methods of VCO manufacturing. He opined that VCO is expected to experience high demand from consumers who are high health conscious as well as among the aging population. He further told that if we can fulfill the requirement of importers and consumers, we can have a steady market.

Further in the session on general aspects of VCO



manufacturing, Shri Aravazhi, Deputy Director, CDB and Shri. Sree Kumar Poduval, Processing Engineer, CDB spoke on the importance of VCO and explained the different methods for the preparation of VCO.

In the session on Virgin coconut oil manufacturing and quality aspects, Dr. S.V. Ramesh, CPCRI, Kasaragod spoke on the quality of VCO which profoundly differs from the traditionally produced coconut oil in terms of quality attributes. VCO is reported to be rich in polyphenolic compounds, tocopherols and phytosterols. Major polyphenolic compounds identified in VCO were protocatechuic, vanillic, caffeic, syringic, ferulic and p-coumaric acids. He also briefed the various process of VCO manufacturing developed at ICAR-CPCRI and the quality profile of resultant oils.

In the session on value addition and processing technologies for integrated coconut processing plant, Mr. K. Rajarathinam, Essar Engineers, Coimbatore spoke on the range of equipment for integrated coconut processing plant for processing coconut husk based products, coconut shell based products as well as coconut meat and water based products. He also stressed on value addition and improved processing technologies and development of modernized equipment for producing desiccated coconut powder, coconut water concentrate, virgin coconut oil and coconut milk.

The first session concluded with a session on technologies of oils wherein Dr. S Yella Reddy, Rtd. Scientist, CSIR-CFTRI, Mysore spoke on the basics of the technology of oils and importance of VCO.

The second session was chaired by Dr.G.Venkateswaran, Chief Scientist & Head, Microbiology & Fermentation Department, CSIR-CFTRI, Mysore and Co-Chaired by Dr.G.Suresh Kumar, Scientist, Department of Biochemistry, CSIR-CFTRI. The session started with plenary talk by Dr.K.S.M.SRaghavarao, Director, CSIR-CFTRI Mysore on Virgin Coconut Oil and other Functional Foods from Coconut. Dr. Raghavarao in his presentation emphasized the importance of VCO and how this research was initiated at CFTRI. He briefed on the health benefits of VCO and metabolism in human system. Dr. Rao informed that products such as desiccated coconut powder, spray-dried coconut milk powder and coconut dietary fiber are having medicinal value. Apart from these products, Dr. Rao also spoke on the importance of coconut lassi, matured coconut water in pouches, coconut jam, coconut jelly using addition of pectin and xanthan powder. He further



explained about the membrane process for Cocolal (Coconut water) in tetra pack. Finally, Dr.Rao explained to entrepreneurs on how to make use of VCO and its by-products to get considerable revenue.

Further to the plenary talk, Dr. Sakina Khatoon, Scientist (Retd) Lipid Science Dept.CSIR-CFTRI spoke on Medium Chain Triglycerides (MCT) rich oil processing and benefits for food/nonfood applications: She stressed the importance of Medium Chain Triglycerides (MCT) rich oil with special emphasis on Coconut Oil and its health benefits. The applications of MCT in foods and nonfoods were also briefed.

Dr.R.Chethana, Sr. Tech.Officer, CSIR-CFTRI, Mysore spoke on value added technologies from coconut. She listed the technologies available with CFTRI for coconut and its products. The value added products such as desiccated coconut powder, coconut chutney (both wet

& dry) coconut milk spray dried powder, coconut jelly & jam, tender coconut jam etc. were well explained in her presentation.

Dr.K.Ramalakshmi, Professor & Head, Food Technology Division, BIT, Satyamangalam, Erode spoke on processing and preservation of coconut sap(Neera). She briefed the process of extracting the coconut sap (Neera) from coconut trees by taking care of safety aspects. Clarification regarding the hygienic way of collecting neera from the farm yard to consumer was stressed and the importance of health benefits of neera was also explained.

Dr. Sanjit Kanjilal, Principal Scientist, CSIR-IICT, Hyderabad in her session on virgin coconut oil v/s coconut oil: physicochemical properties, spoke about the importance of edible oil and its fatty acid profiles and its health benefits. He also mentioned about the FSSAI's recent regulatory norms for certain blended oils.

A panel discussion was followed wherein Dr. Raghavaram Director, CSIR-CFTRI, Shri. Sathyendra Rao, Head, Technology Transfer and Business Development CSIR-CFTRI, Dr. Alok Srivatsava, Head, Food Safety & Analytical Quality Control Laboratory, CSIR-CFTRI, Dr. Rastogi NK, Head, Food Engineering, CSIR-CFTRI, Dr. Ramesh, Scientist, Central Plantation Crops Research Institute, Dr. Sanjit Kanjilal, Principal Scientist, Indian Institute of Chemical Technology, Shri. Aravazhi, Deputy Director, Coconut Development Board, Shri. Sreekumar of Pranathmaka Ayurvedics Pvt Ltd Kerala, Shri. Parthiban of Keratech, Kerala and Dr. Venkatesh Murthy Head, Traditional Food Sensory Science, CSIR-CFTRI participated.

The conference was concluded with a vote of thanks by Dr Giriappa K, TTBD, CSIR-CFTRI. Beneficiaries of VCO technologies from CSIR-CFTRI and other coconut product manufacturers, FPO members, machinery manufacturers, exporters and prospective entrepreneurs and officials took part in the conference. ■