

Training on Microbial processes for value addition in food and beverages

February 1st – 21st, 2012



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Agricultural Research, New Delhi**



**Department of Agricultural Microbiology
Tamil Nadu Agricultural University
Coimbatore – 641 003
Tamil Nadu**

Training on Microbial processes for value addition in food and beverages

India is today the second largest producer in food, fruits and vegetables with a buffer stock of over 60 million tones of wheat and rice. Due to poor handling of the produces, post harvest losses have been high (20 – 30%) resulting in a significant gap between gross production and net availability to the consumer. A mere economic and environmental beneficial approach is needed to generate value added products from agricultural and industrial by-products, thereby increasing the income of the respective sectors.

Microorganisms, with their extremely diverse metabolic activities, represent an almost unlimited source of biological processes for industrial applications. Best use of microbes from the laboratory to full commercial scale is achieved based on traditional fermentation technologies and scaling up of innovative technologies.

Microbial systems are ideally suited to achieve this since there is a wide range of known and recently discovered bioprocesses to produce value end products like probiotics, antimicrobials, flavors, fragrance substances, food, vitamins, enzymes, amino acids, health drinks, alcoholic beverages, vinegars, nutraceuticals, pigments etc., Screening, optimization, recovery and separation of the above mentioned microbial value added products are necessary in fermentation based processing of agro industrial sectors.

At present, utilization of biologically derived molecules, structures and cells to fulfill human needs is slowly catching up and getting due importance. Therefore, there is a need to give training on the applications for exploiting novel microbial processes to the entrepreneurs and industrialists.

This training aims to impart knowledge on microbial processes, with the special emphasis to the production and recovery of value added food and beverages products.

TRAINEES

Teachers and researchers working in this area in SAUs, ICAR and other institutes are eligible. The number of participants will be limited to twenty.

THE COURSE

The training is designed to provide both theoretical knowledge and practical skill.

COURSE OUTLINE

Concept and scope of microbial processes for value addition – fermentation – Principles – substrates – types of value added products- fermenters operation and design – different types – methods of fermentation- scale up –Adaptation of microorganisms – down streaming processes.

Production of enzymes and its application – pigments (food and feed colorants) – alcoholic fermentation –fruits and cereals in wine production –health drinks- antioxidant properties of the fermented products- single cell protein application- probiotics production and application in food and feed- Bacteriocins - Growth regulators - antimicrobials nutraceuticals- polymers

Aanaerobic microbial processes- microbial spoilage and prevention – microbes in solid waste – marine products- traditional fermented products- future industrial applications. Intellectual Property Rights – Patent filing.

DURATION

Twenty one days

February 1st – 21st, 2012

VENUE

Department of Agri. Microbiology, Tamil Nadu Agricultural University, Coimbatore – 641 003, Tamil Nadu

TRAVEL

Traveling allowance will be met by the organizers. Depending on the availability of funds, reimbursement will be restricted to III tier AC / Sleeper class fares. No DA will be provided for journey period.

ACCOMMODATION

Food and accommodation will be arranged at the University campus only for the participants.

LAST DATE

Completed application form in the prescribed format through proper channel should reach the following address on or before **07.01.2012**

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