

ELECTIVE COURSE – III (EC) – MUSHROOM TECHNOLOGY

Unit – I

Introduction – history – scope of edible mushroom cultivation – Types of edible mushroom available in India – *Calocybe indica*, *Volvariella Volvacea*, *Pleurotus* sp., *Agaricus bisporus*

Unit – II

Pure culture – preparation of media (PDA and Oatmeal agar media) sterilization – Preparation of test tube slants to store mother culture – culturing of *Pleurotus* mycelium on petriplates – Preparation of mother spawn in saline bottle and polypropylene bags and their multiplication.

Unit – III

Cultivation Technology : Infra structure, Substrates (locally available) polythene bag, vessels, Inoculation hood – inoculation loop – low cost stove – sieves – Culture rack mushroom unit (Thatched house) – Mushroom bed preparation – Paddy straw, sugarcane trash, maize straw, banana leaves.

Unit – IV

Storage and nutrition : Short term storage – Long term storage (scanning, Pickles, papads, drying, storage in salt solutions) – Nutrition : Proteins, amino acids, mineral elements. Nutrition : Carbohydrates – Crude fiber content, vitamins.

Unit – V

Food preparation, Types of foods prepared from mushroom - soup, cutlet, omelette, samosa, pickles, curry. Research Centres – National level and Regional Level Cost benefit ratio – Marketing in India and abroad – Export value

Reference:

- Marimuthu et al., (1991) Oyster Mushrooms, Dept. of Plant pathology, TNAU, Coimbatore.
- Nita Bahl (1988) Hand book of Mushrooms, II edition, Vol.I & II.
- Paul Stamets, J.S. and Chilton, J.S. (2004). Mushroom Cultivator: A practical guide to growing mushrooms at home, Agarikon Press.
- Shu-Ting Chang, Philip G. Miles, Chang, S.T. (2004). Mushrooms: Cultivation, nutritional value, medicinal effect and environmental impact, 2nd ed, CRC press.
- Swaminathan M. (1990) Food and Nutrition, Bappco. The Bangalore Printing and Publishing Co. Ltd., Bangalore.
- Tewari and Pankaj Kapoor S.C. (1988) Mushroom cultivation, Mittal Publications, Delhi.