Elective Course 1

BSCBOE 133: Mushroom Cultivation Technology

Unit	Topics	Teaching Hours
I	Introduction: What are mushrooms, general structure, diversity, food and medicinal importance of mushrooms. Edible and non-edible mushrooms - Features and examples. Edible mushrooms commercially cultivated in India Paddy straw (*Volvariella volvacea)* Oyster *(Pleurotus* spp) and *white button (Agaricus bisporus)*- Important Morphological features. Cultivation Technology: History. Infrastructure- substrates (locally available) Polythene bag, vessels, Inoculation hook, inoculation loop, stove, sieves, culture rack, mushroom unit (Thatched house), water sprayer, tray. Pure culture: Medium, sterilization, preparation of spawn, multiplication. Mushroom bed preparation (Oyster mushrooms) - paddy straw, sugarcane trash, banana leaves, areca sheath and coconut leaves. Composting technology in mushroom production – long and short methods.	12
II	Cultivation : General Steps involved in cultivation of Oyster and Button Mushrooms. Storage: Short-term storage (Refrigeration – upto 24 hours), Long term Storage (canning, pickling, papad making), drying, storage in salt solutions. Chemical composition and nutritional values (In general): Proteins - amino acids, minerals, carbohydrates, vitamins and crude fiber. Food Preparation: Types of foods prepared from mushrooms Research Centers - National level and Regional level.	12

References:

1. Marimuthu, T. Krishnamoorthy, A.S. Sivaprakasam, K. and Jayarajan. R (1991) Oyster Mushrooms, Department of Plant Pathology, Tamil Nadu Agricultural University, Coimbatore.

2. Swaminathan, M. (1990) Food and Nutrition. Bappco, The Bangalore Printing and Publishing Co. Ltd., No. 88, Mysore Road, Bangalore - 560018.

3. Tewari, PankajKapoor, S.C., (1988). Mushroom cultivation, Mittal Publications, Delhi.

4. Nita Bahl (1984-1988) Hand book of Mushrooms, II Edition, Vol. I & Vol. II.