B.Sc. III Year

Semester – VI

BBO-E603
DSE-2 Dissertation

The students may op dissertation in lieu of one paper

B.Sc. III Year

Semester – VI

BBO-S601
SEC-4 Mushroom Culture Technology

MM : 100
Time : 3 hrs

Sessional : 30
ESE : 70
Pass Marks : 40

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Learning objective:

- To understand the techniques used mushroom culture technology.
- To acquire the information about the mushroom cultivation and management technology, nutritional and medicinal value of edible mushrooms.
- To become familiar with mushrooms storage and nutrition value.
- To learned technique and acquire the information on types of foods prepared from mushrooms.

Learning outcomes:

At the end of course student will be able

- The student will be able to familiar with history, nutritional and medicinal value of edible mushrooms, and poisonous mushrooms, infrastructure and necessary tools and items required for cultivation, and export value of mushrooms.
- The student will be able to understand the various methods used for pure culture, sterilization, preparation of spawn, multiplication, and mushroom bed preparation, short-term storage and long term storage of mushrooms.
- The student will be learned and understand the various methods of used in whole mounts, peel mounts, squash preparations, clearing, maceration and sectioning; tissue preparation.
- The student will be able take the decisions for carrier point of views in research, industries and academia entrepreneurships etc.

Unit 1: Introduction:

(10 Lectures)

History; nutritional and medicinal value of edible mushrooms; Poisonous mushrooms; types of edible mushrooms available in India –*Volvariella volvacea,Pleurotus citrinopileatus, Agaricu sbisporus*.

Unit 2: Cultivation Technology:

(24 Lectures)

Infrastructure: substrates (locally available) polythene bag,vessels, inoculation hook, inoculation loop, low cost stove, sieves, culture rack, mushroom unit (thatched house) water sprayer, tray, small polythene bag; pure culture: medium, sterilization, preparation of spawn, multiplication; mushroom bed preparation - paddy straw, sugarcane trash, maize straw, banana leaves; factors affecting the mushroom bed preparation - low cost technology, composting technology in mushroom production.

Unit 3: Storage and Nutrition:

(16 Lectures)

Short-term storage (refrigeration – up to 24 hours) long term storage (canning, pickels, papads), drying, storage in salt solutions; nutrition – proteins - amino acids, mineral elements nutrition - carbohydrates, crude fiber content - vitamins.

Unit 4: Food Preparation:

(10 Lectures)

Types of foods prepared from mushroom; research centers -national level and regional level; cost benefit ratio - marketing in India and abroad, export value.