

# **St Thomas College, Kozhichenry**

## **Certificate Course in *Oyster and Milky Mushroom Cultivation and Spawn Production***

**Name of the Department:** Department of Botany

**Course Coordinator:** Ms Adheena Elza Johns

**Duration of the Course:** 30 hours

### **Course Objectives:**

1. To provide basic information about mushrooms and its cultivation
2. To become aware of various scientific aspects of mushroom cultivation
3. To enable the students to be aware of the advantages of using mushroom cultivation as microenterprise
4. To become aware of the various value-added products from mushroom

### **Course Outcomes:**

1. Familiarization of different mushrooms and cultivation of different types of mushrooms
2. Provide basic information for adopting mushroom cultivation as a business opportunity
3. Acquire ability initiating mushroom based microenterprises.
4. To undertake mushroom cultivation as hobby/career
5. Acquiring ability for the preparation of mushroom based value-added products

### **Course Outline**

#### **Module 1: (2 hours)**

Introduction to mushrooms

History of mushroom cultivation, present status of mushroom industry in India

#### **Module 2: (2 hours)**

Economic and medicinal importance

Food value of mushrooms, proteins, vitamins, minerals, carbohydrates, fats, energy value, medicinal importance.

#### **Module 3: (4 hours)**

Identification of mushrooms

Morphology of mushroom. different types of mushrooms. edible mushroom, poisonous mushroom, white button mushroom, paddy straw mushroom. oyster mushroom, milky mushroom.

**Module 4: (4 hours)**

Production of spawn

Spawn production laboratory, different types of spawn production, preparation of grain spawn-pure culture, mother spawn, sub-culturing.

**Module 5: (1 hour)**

Maintenance of mushrooms

Mushroom house: structure, precautions taken to maintain humidity and hygiene.

**Module 6: (3 hours)**

Cultivation of different mushrooms

Cultivation of White Button, Paddy Straw, Oyster, and Milky mushroom

**Module 7: (2 hours)**

Pest control

Common Pests and diseases in mushroom and its control measures.

**Module 8: (2 hours)**

Post-harvest

Post-harvest technology, Value added products from mushroom.

**Practical: (10 hours)**

- Spawn production
- Preparation of PDA medium
- Isolation of pure culture
- Preparation of mother spawn, sub culturing
- Cultivation of Oyster and Milky mushroom

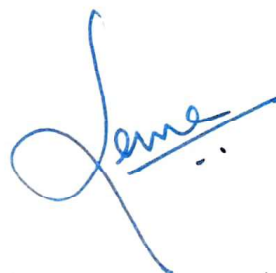
**Mode of Evaluation: (2 hours)**

Attendance, Tests

**Recommended Readings:**

1. Chang S.T. and Hayes W.A. (1978) The Biology and Cultivation of Edible Mushrooms. Academic Press Inc.
2. Chauhan N.M. Scientific Cultivation of Mushrooms
3. Kreiger L. C. C., (1947) A Guide to the Mushrooms - Asiatic Publishing House.
4. Marshall N. L. (1910) The mushroom Book, Double Day Page & Company 1910.

5. Mishra S. R., (2014) Techniques of Mushroom cultivation Discovery Publishing House Ltd
6. NIIR Board (2011) Handbook on Mushroom Cultivation and Processing, Asia Pacific Business Press Inc.
7. Sharma O. P., (1989) Fungi and Allied Microorganisms McGraw Hill Education (India) Pvt Ltd.
8. Singh S. K. and Jha P. K., Mushroom (2014) -Production and Utilization, Scientific Publishers, Jodhpur.
9. Stamets P. (2000) Growing gourmet and Medicinal Mushroom.



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