

**3 Months Certificate Course
On
“Mushroom Culture Technology”**

Organized and conducted by

**Department of Botany
North Gauhati College**

Course duration: 38 hours

Requirements: Mushroom growing house, paddy straw, Oyster mushroom Spawns, Polythene bags, ropes, spread mat, absolute alcohol, bleaching powder, autoclave, culture media, pH meter, laminar air flow chamber, spirit lamp, inoculating loop, glass apparatus, incubator, hot air oven, spray bottle, Trays

Number of seats: 60

Target group of students: Under Graduate students

Credits: 3

Learning Objectives:

- To acquaint students with the variety of mushrooms and enable them to distinguish between edible and toxic mushrooms.
- To foster enthusiasm for the cultivation of edible mushrooms.
- To offer practical training in the techniques of cultivating mushrooms.
- To gain knowledge about the medicinal and nutritional benefits of edible mushrooms.
- To offer avenues for self-employment with minimal investment and the potential for high income generation.

Learning outcomes:

- Upon successful completion of the course, students will be able to,
- Distinguish between edible and poisonous mushrooms.
 - Engage in the practice of cultivating diverse varieties of edible mushrooms using the Mushroom Culture Technique.
 - Acquire the skills for self-employment and generating income.

SYLLABUS

THEORY (13 hours):

UNIT 1: Introduction to Mushroom

Understanding the classification and Characteristics of mushrooms, Habitat and Distribution of mushrooms in India and N.E. Regions, Types of mushrooms-edible mushrooms and poisonous mushrooms, nutritional and medicinal importance of mushrooms.

UNIT 2: Principles of cultivation of edible Mushrooms

Infrastructure requirements, Methods and preparation of pure culture of mushrooms: Detailed Steps in Spawn Preparation, including Mother Spawn and Commercial Spawn. Techniques for Spawning, along with Considerations for Spawn Storage and Transport.

UNIT 3: Composting technology in mushroom production

Composting techniques for Mushroom Cultivation, Procedures for mushroom Bed preparation, Exploring Casing Techniques and Materials Used in Mushroom Cultivation.

UNIT 4: Mushroom harvest Technology

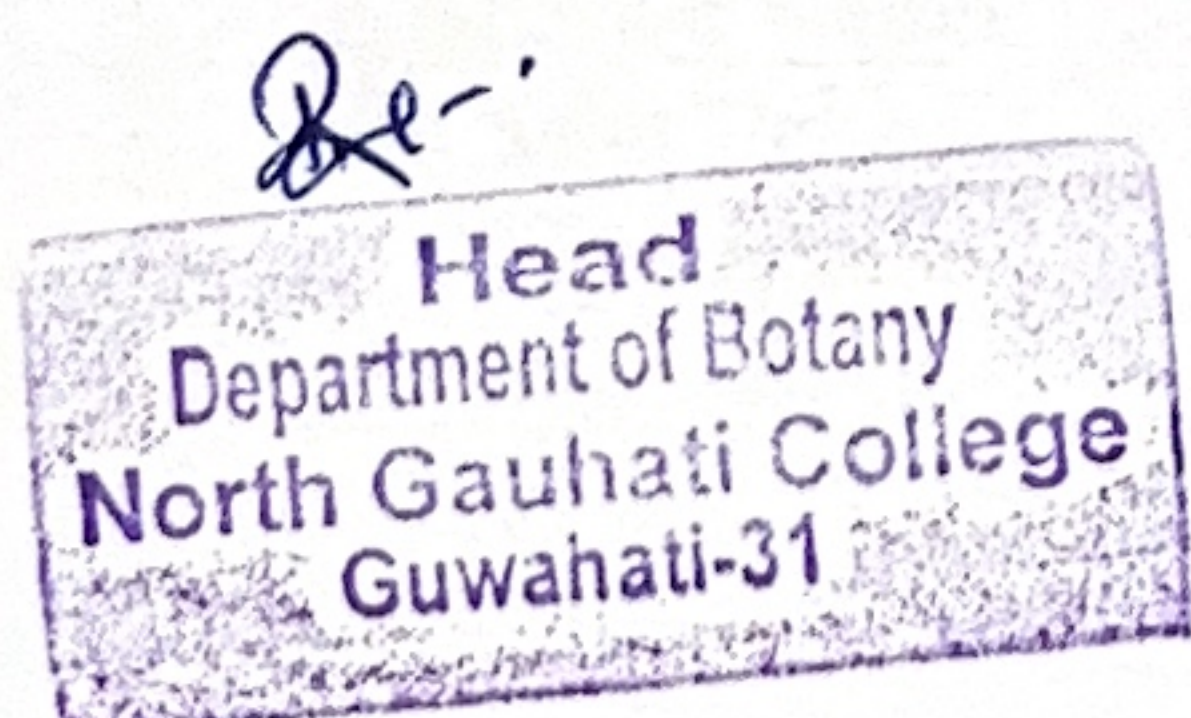
Techniques and Best Practices for Mushroom Harvesting, Post-harvest technology for maintaining mushroom quality, Preservation methods for mushrooms, exploring market opportunities for Mushrooms, Value added products of mushrooms.

PRACTICAL (25 hours)

1. To study the principle and functioning of instruments utilized in various mushroom culture techniques of mushroom culture.
2. Compost preparation, study of various types of casing and casing material.
3. Demonstrate Methods of preparation of media and pure culture.
4. Preparation of spawn and spawning.
5. Hands-on experience in cultivating Oyster mushrooms using paddy straw or lignocellulosic wastes.
6. To study the nutritional content, market value, post-harvest technologies such as packaging and preservation.
7. Visit a Mushroom Cultivation Farm or Centre to observe real-world applications and practices.

Evaluation: Oral Test and Report Submission

Course Co-Ordinator



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