

**Don Bosco College, Kohima**  
**Certificate Course**  
**On**  
**Mushroom Cultivation**  
**Duration: 30 Hours**

**Course Objectives:**

- Enable the students to identify edible and poisonous mushrooms
- Provide hands on training for the preparation of bed for mushroom cultivation and spawn production
- Give the students exposure to the experiences of experts and functioning mushroom farms
- Help the students to learn a means of self employment and income generation

**Course outcome:**

By successfully completing the course, students will be able to:

- Identify edible types of mushroom
- Gain the knowledge of cultivation of different types of edible mushrooms and spawn production
- Manage the diseases and pests of mushrooms
- Learn a means of self-employment and income generation

**Syllabus**

**Module 1: Introduction to mushrooms (2 hours)**

Mushrooms -Taxonomical rank -History and Scope of mushroom cultivation - Edible and Poisonous Mushrooms-Vegetative characters

**Module 2: Common edible mushrooms (2 Hours)**

Button mushroom (*Agaricus bisporus*), Milky mushroom (*Calocybe indica*), Oyster mushroom

(*Pleurotus sajorcaju*) and paddy straw mushroom (*Volvariella volvcea*).

**Module 3: Principles of mushroom cultivation (8 Hours)**

Structure and construction of mushroom house. Sterilization of substrates. Spawn production

culture media preparation- production of pure culture, mother spawn, and multiplication of spawn. Composting technology, mushroom bed preparation. Spawning, spawn running, harvesting. Cultivation of oyster and paddy straw mushroom. Problems in cultivation - diseases,

pests and nematodes, weed moulds and their management strategies.

**Module 4: Health benefits of mushrooms(2 Hours)**

Nutritional and medicinal values of mushrooms. Therapeutic aspects- antitumor effect

**Module 5: Post harvest technology: (4 Hours)**

Preservation of mushrooms - freezing, dry freezing, drying, canning, quality assurance and entrepreneurship. Value added products of mushrooms.

**Module 6: Training/ Workshop/ Field visit(12 Hours)**

Sterilization and sanitation of mushroom house, instruments and substrates

Preparation of mother culture, media preparation, inoculation, incubation and spawn production

Cultivation of oyster mushroom using paddy straw/agricultural wastes



## References

1. Marimuthu, T. et al. (1991). Oster Mushroom. Department of Plant Pathology. Tamil Nadu Agricultural University, Coimbatore.
2. Nita Bhal. (2000). Handbook on Mushrooms. 2nd ed. Vol. I and II. Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi
3. Pandey R.K, S. K Ghosh, 1996. A Hand Book on Mushroom Cultivation. Emkey Publications.
4. Pathak, V. N. and Yadav, N. (1998). Mushroom Production and Processing Technology. Agrobios, Jodhpur.
5. Tewari Pankaj Kapoor, S. C. (1988). Mushroom Cultivation. Mittal Publication, New Delhi.
6. Tripathi, D.P. (2005) Mushroom Cultivation, Oxford & IBH Publishing Co. PVT.LTD, New Delhi.
7. V.N. Pathak, Nagendra Yadav and Maneesha Gaur, Mushroom Production and Processing Technology/ Vedams Ebooks Pvt Ltd., New Delhi (2000)