

CERTIFICATE COURSE IN
MUSHROOM PRODUCTION,
Recognized by Gondwana University, Gadchiroli

DEPARTMENT OF BOTANY

ABOUT THE COURSE

Course coordinator: Dr. Vasanti K. Rewatkar, Professor and Head

Department of Botany has started Certificate course in Mushroom Production from the session 2020-21. This is a certificate course aims to cater subject-matter and manual knowledge on mushroom farming and to popularize its advantageous farm economics. It thoroughly describes and infuse the theory and practical knowledge on subject. The learner will get enriched with knowledge and experience on mushroom farming. The course content is well designed. It is taught in a very simple way that we can easily understand it. Growing, harvesting, marketing, storage and even making various delicious dishes using mushrooms are taught this is an excellent introductory certificate course recognized by Gondwana University, Gadchiroli.

Duration & Eligibility

Course duration - 3 Months (90 Days)

Eligibility – Students of any UG programme of home Institute or other institution. This course is available to the External students also.

We are providing

1. Practical to Learn how to produce mushroom
2. Certificate
3. Notes
4. Information of Mushroom based foods

Course Objectives

1. To make the learners self reliant to identify several kind of mushrooms.
2. To provide detailed hands on training on mushroom cultivation, packaging and marketing.
3. To develop a business plan on mushroom cultivation.
4. To help the learners to practice a means of self employment and income generation.

Learning Outcomes

1. Understanding mushrooms, types (edible & poisonous) and mushroom production
2. Learning, cultivation of different edible mushrooms
3. Introduction with climatic requirements of mushroom cultivation
4. Knowledge of harvesting and post harvesting processes of mushroom
5. Learning value added products preparation from mushroom
6. Having the prospects of commercial mushroom production

Course Syllabus

Unit – I: (18 Hours)

Introduction: History, nutritional and medicinal value of edible mushrooms; poisonous mushrooms. Types of edible mushrooms cultivated in India (Species and varieties of Volvariella, Pleurotus and Agaricus).

Unit - II: (18 Hours)

Cultivation Technology: Infrastructure, substrates (locally available), polythene bags, vessels, Inoculation hook, inoculation loop, low cost stove, sieves, culture rack, mushroom unit (thatched room) water sprayer, tray, packing material. Pure culture: Culture medium, sterilization, preparation of spawn, multiplication. Mushroom bed preparation: Sterilization of substrates, filling/bagging, inoculation of spawn, factors affecting. Low cost composting technology for mushroom production.

Unit - III: (18 Hours)

Storage and nutrition: Short term and long term storage (refrigeration, canning, drying, storage in salt solutions, making powder, pickle and papad).

Unit - IV: (18 Hours)

Mushroom recipes: Curry, salad, pickle, papad, soup etc.

Research Centers - National and Regional levels. Cost benefit ratio - Marketing in India and abroad, Export value.

SHRI. DNYANESH MAHAVIDYALAYA, NAWARGAON

DEPARTMENT OF BOTANY

GONDWANA UNIVERSITY RECOGNIZED CERTIFICATE COURSE

IN

MUSHROOM PRODUCTION

Duration: Three Months

Introduction



Mushroom production represents an opportunity for college students interested in an additional enterprise and is a specialty option for students without much land. Mushroom production can play an important role in managing farm organic wastes when agricultural and food processing by-products are used as growing media for edible fungi. The used substrate can then be composted and applied directly back to the soil.

Mushroom cultivation

Many people are intrigued by mushrooms' nutritional and medicinal properties, but mushrooms contain many essential amino acids therefore they are a good source of protein. Mushroom production is different than the cultivation of green plants as they are saprophytes means they grow on dead and decaying substrates. They do not contain chlorophyll so they cannot prepare their own food materials hence depend on other plant materials for their food. Mushroom species prefer a particular growing medium, but some species grow on a wide range of materials.

There are the steps in mushroom production— from start to finish.

Choosing a growing medium

Sterilizing the medium

Seeding the beds with spawn(Spores of mushroom)

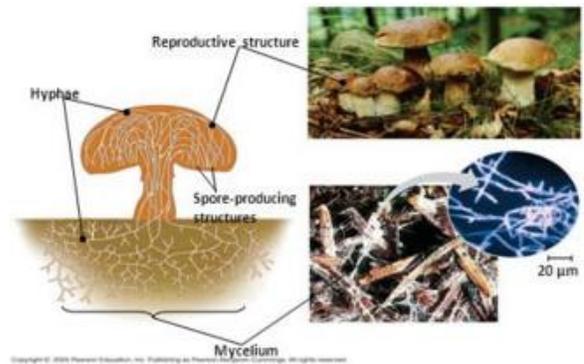
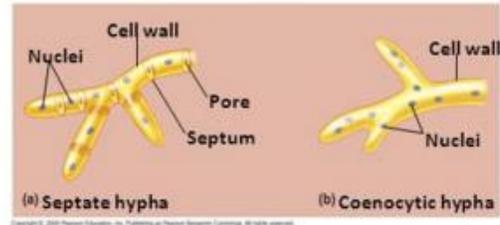
Maintaining optimal temperature, moisture, and other conditions for mycelium growth and the fruiting body formation

Harvesting, packaging, and selling the mushrooms

The entire operation can also be conducted inside. However, indoor mushroom production demands a much higher level of knowledge, continuous monitoring, and timely maintenance of environmental conditions

- body structure:
 - hyphae enhances the ability to absorb nutrients
 - hyphae form an interwoven mass called a **mycelium (mycelia plural)**
 - a mycelium infiltrates the material on which it feeds
 - mycelia grow very fast – nutrients for growth are carried rapidly via cytoplasmic streaming to the growing hyphae
 - the emphasis is on **increasing mycelium length** NOT width

Body Structure



DIFFERENT TYPES OF MUSHROOM CULTIVATION IN INDIA



BUTTON MUSHROOM



OYSTER MUSHROOM



PADDY STRAW MUSHROOMS



Various Delicious dishes prepared from Edible Oyster Mushroom