

Mushroom Biology and Production

Course 1 - Fundamentals of Mushroom Biology

(SEM 1)

Unit-I: Fundamentals of Fungal Biology

- Fungi – General characters & mode of fungal reproduction.
- Two major groups of higher fungi – Characteristics of Ascomycetes & Basidiomycetes.
- Definition of Mushroom.

Unit-2: Biology of Mushrooms

- Types of Mushroom with example – Epigenous & Hypogenous, Humicolous, Lignicolous & Coprophilous, Edible & Poisonous.
- General morphology (different parts) of Mushroom.
- Reproduction and general lifecycle of Mushroom.

Unit-3: Mushroom cultivation – History & Present Status

- History of Mushroom cultivation in India.
- Present status of Mushroom Industry in India.
- Problems of Mushroom cultivation / Mushroom industry in India.

Unit-4: Mushroom – Nutritional values & Uses

- Nutritional value of Mushroom.
- Uses of Mushroom – As food, as medicine & other uses.

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Course 2 - Basics of Mushroom Cultivation Process
(SEM 2)

Unit-1: Basic Requirements and Phases of Mushroom Cultivation

- Criteria for site selection for Mushroom cultivation.
- Basic requirements for Mushroom cultivation.
- Major phases in Mushroom cultivation.

Unit-2: Compost & Composting

- Definition of Compost & Composting.
- Qualities of good Compost.
- Compost preparation & Compost conditioning.
- Preparation of Compost – Long method (Natural compost & Artificial Compost) and Short method.

Unit-3: Mushroom Spawn

- Definition of Mushroom Spawn.
- Qualities of Good Spawn.
- Preparation of Spawn.

Unit-4: Preservation of pure Mushroom cultures

- Objective of preservation of pure Mushroom cultures.
- Short term preservation.
- Long term preservation.

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Course 3 - Mushroom Cultivation and Post Harvest Technology
(SEM 3)

Unit-1: Cultivation & harvesting of Oyster Mushroom.

Unit-2: Cultivation & harvesting of Paddy Straw Mushroom.

Unit-3: Post Harvest Technology – Short & Long-term storage of harvested Mushroom.

Unit-4: Demonstration on cultivation technique of Oyster Mushroom OR
Self visit to any Mushroom cultivation laboratory or industrial setup and
report submission.