MUSHROOM PRODUCING TECHNICIAN (MPRT)

Core Qualification File Syllabus

Detail of Theory Syllabus – 72 hours

SL NO	CONTENT	DETAILS
1	Introduction to mushroom -7 hours	• History of mushroom fungi • Nutritional and medicinal properties of mushroom • Types of edible , poisonous and medicinal mushroom • Study of edible mushrooms -- *Pleurotus*, *Volvariella* and *Agaricus* • *Scope and opportunity in mushroom cultivation* • Nature of work
2	Mushroom Spawn (seed) production/ procurement – 9 hours	• Preparation of pure culture • Preparation of mother spawn • Production of planting spawn • Storage /Transportation of spawn • Criteria for selection of good quality spawn
3	Cultivation of Button mushroom – 9 hours	• Procurement of raw materials • Wetting of substrate materials/ formulation • Outdoor fermentation in stacks/ turning schedule by long method • Short method of composting done in two phases: phase -1 (Outdoor/ bunker) and phase -2 bulk pasteurisation chambers) • Spawning of compost/ spawn run • Casing and case run • Cropping and harvesting of mushroom • Post harvest handling
4	Cultivation of Oyster mushroom – 9 hours	• Procurement of raw materials • Substrate formulation • Substrate wetting and treatments: Hot water/ steam • Spawning of substrate and filling in container/ bag spawn run • Exposing of bags for cropping • Cropping and harvesting of mushroom • Post-harvest handling
5	Cultivation of Paddy Straw mushroom – 9 hours	• Procurement of raw materials: Paddy straw bundles • Substrate wetting and treatments: Hot water/ steam • Stacking of paddy straw bundles in a heap and spawning in layers • Polythene cover of the heap for spawn run • Cropping and harvesting of mushrooms • Post harvest handling
6	Cultivation of Milky mushroom – 9 hours	• Procurement of raw materials • Substrate formulation • Substrate wetting and treatments: Hot water/ steam • Spawning of substrate and filling in container/ bag, spawn run • Casing and case -run • Exposing of bags for cropping • Cropping and harvesting of mushroom • Post-harvest handling
7	Insect - Pests management in cultivated mushroom – 4 hours	• Major insect pests - Mushroom flies/ nematodes/mites

8	Disease management in cultivated mushroom – 4 hours	• Dry Bubble and wet bubble – major diseases of cultivated mushroom • Competitor/weed molds encountered: Green, yellow and plaster moulds/ Coprinus
9	Mushroom growing unit/ house – 4 hours	• Construction of mushroom growing unit
10	Entrepreneurial skills and economics for small enterprise – 4 hours	• Explore the market and marketing concepts • Economics of different types of mushroom
11	Management of spent substrates and waste disposal of various mushroom – 4 hours	• Management of spent substrates and waste disposal of various mushroom

Detail of Practical Syllabus – 96 hours

SL NO	CONTENT	DETAILS
1	Selection of types of Mushroom and sites – 3 hours	• Orientation to a mushroom farm • Identification of different types of mushroom • Selection of appropriate Mushroom cultivation sites
2	Production of Mushroom Spawn (seed) – 15 hours	• Preparation of pure culture • Preparation of mother spawn • Production of planting spawn • Storage /Transportation of spawn
3	Production of Button mushroom – 15 hours	• Wetting and mixing of ingredients • Short method of composting done in two phases: phase -1 (Outdoor/ bunker) and phase -2 bulk pasteurisation chambers) • Spawning of compost/ spawn run • Casing and case -run • Cropping and harvesting of mushroom • Packaging storing and grading of Mushroom
4	Production of Oyster mushroom – 15 hours	• Substrate wetting and treatments: Hot water/ steam • Spawning of substrate and filling in container/ bag, spawn run • Exposing of bags for cropping • Cropping and harvesting of mushrooms • Packaging storing and grading of Mushroom
5	Production of Paddy Straw mushroom – 15 hours	• Substrate wetting and treatments: Hot water/ steam • Stacking of paddy straw bundles in a heap and spawning and covering of the heap with polythene for spawn run • Cropping and harvesting of mushrooms • Packaging storing and grading of Mushroom
6	Production of Milky mushroom – 15 hours	• Substrate wetting and treatments: Hot water/ steam • Spawning of substrate and filling in container/ bag, spawn run • Casing and case –run • Cropping and harvesting of mushroom • Packaging storing and grading of Mushroom
7	Pest Management and control – 2.5 hours	• Identification and management of pests by chemical and non - chemical methods
8	Disease Management and control – 2.5 hours	• Disease identification and management by chemical and non - chemical methods
9	Design and develop mushroom production growing unit – 5 hours	• Construction of mushroom growing unit using locally available materials
10	Development of Entrepreneurial skills and economics - 3 hours	• Market survey • Calculation of Cost Benefit ratio of mushroom production

OUTCOMES

Outcomes to be assessed	Assessment criteria for the outcome
1. Interpret training program and explain the overview of Mushroom production	➢ Explain the basics of mushroom ➢ Identify of different type of mushroom ➢ Determine of nutritional value of mushroom ➢ Develop interest in mushroom Production
2. Demonstrate Production of Mushroom Spawn (seed) and procurement of Spawn seed.	▪ Able to explain Produce quality spawn for different mushroom. ▪ Able to procure mushroom spawn from authentic source.
3. Prepare and harvest Button mushroom	● Able to prepare compost, casing soil and manage crop ● Able to pick, wash, grade and pack the harvested button mushroom
4. Prepare and harvest Oyster mushroom	● Able to prepare substrate and manage crop ● Able to pick, grade and pack the harvested Oyster mushroom
5. Prepare and harvest Paddy Straw mushroom	● Able to prepare substrate and manage crop ● Able to pick, grade and pack the harvested paddy straw mushroom
6. Prepare and harvest Milky mushroom	● Able to prepare substrate and manage crop ● Able to pick, grade and pack the harvested milky mushroom
7. Demonstrate Insect - Pests and Disease management	▪ Able to identify and manage Insect - Pests affecting mushroom ● Indentify and manage diseases affecting mushroom
8. Develop Mushroom growing unit/ house	▪ Able to design and develop mushroom production unit
9. Explain Entrepreneurial skills and economics for small enterprise	▪ Able to prepare a business plan for small scale enterprise
10. Plan for Management of spent substrates and waste disposal of various mushroom	● Able to manage bio waste of mushroom industry