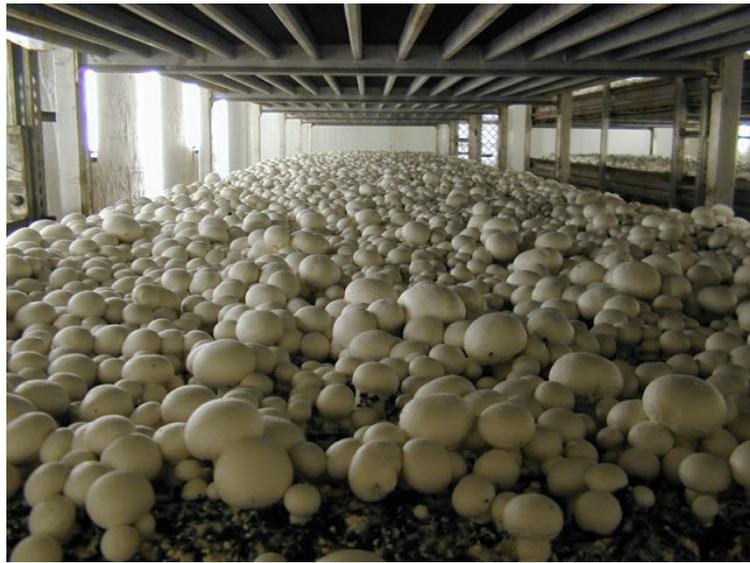


SKILL DEVELOPMENT COURSE

MUSHROOM CULTURE



COURSE CODE-M2 & M4 ZOO SE01D

No of Credits-02

SYLLABUS

- A. Mushrooms, Nutritional and Spawn
 - 1. Introduction of mushroom science.
 - 2. Mushroom biology including edible and poisonous mushrooms .
 - 3. Brief history of mushroom cultivation .
 - 4. Importance of mushrooms, Nutritional and medicinal aspects.
 - 5. Preparation of spawn.
 - 6. Pure culture
 - 7. Mother spawn.
 - 8. Spawn
 - 9. Maintenance of Mushroom lab and equipment .
 - 10. Design, equipment and register.
 - 11. Economics .

PRACTICALS

- 1. Identification of edible and poisonous wild Mushrooms
- 2. Preparation of slants.
- 3. Collection of tissue.
- 4. Preparation of pure cultures
- 5. Incubation of pure cultures.
- 6. Disease identification in pure cultures.
- 7. Preparation of mother spawn.
- 8. Incubation of mother spawn.
- 9. Disease identification of mother spawn.

10. Storing the cultures and mother spawn
11. Preparation of spawn.
12. Boiling the grains
13. Sterilising the bottles
14. Inoculating the bottles
15. Incubating the bottles
16. Disease identification in spawn.
17. Preserving the spawn
18. Marketing
19. Lab maintenance
20. Equipment handling.
21. Visit to Mushroom lab.

CULTIVATION

Other Mushroom Cultivation

1. Importance of Oyster Mushroom Cultivation
2. Selection of Various substrates .
3. Sterilizing the Substrate .
4. Bag filling .
5. Spawning .
6. Incubating the beds .
7. Shifting to Cropping room .
8. Pests & Diseases .
9. Harvesting .

10. Processing .
11. Marketing.
12. Recipes.
13. Economics.
14. Cultivation of Paddy Straw and other Mushrooms.
15. Low cost Mushroom farm design & Production .

EQUIPMENTS:

1. Test tubes
2. Test tube holders
3. Measuring Jar
4. Kettle
5. Gas stove / Kerosene stove
6. Cooker (or) Autoclave
7. Laminar flow
8. Bunsen Burner / Spirit lamps
9. Forceps
10. Electric Weighing .machine - 1 (0.1 gm to 1 kg).
11. Thermometer.
12. Hygrometer.
13. Glass rods.
14. BOD Incubator.
15. Inoculation needle
16. Equipment for spawn -1. Gas stove/Kerosne stove
2. Autoclave.
3. Laminar flow -
4. Bunsen burner / Spirit lamps
5. Forceps
6. Inoculation loops
7. Bottles
8. Aluminium sieve.
9. Weighing balance
10. Thermometer.
11. Hygrometer.
12. Vessels
13. Buckets
14. Sieve.
15. Sprayer

Equipment for Cropping

1. Paddy straw chopper / motor
2. Drums (200 lts)
3. Thermometer
4. Hygrometer
5. Hand sprayer
6. Gunny bags
7. Humidifier

Raw Material for pure culture

1. Distilled water

2. Malt extract agar
3. Non absorbant cotton
4. Spirit
5. Tissue

Raw Material for spawn :

Consumable

1. Jowar
2. Caco3 & Calcium Sulphate
3. Water
4. Culture tube
5. Spirit
6. Non-absorbent cotton
7. Empty Saline bottles
5. Laminar Flow

Material for Cropping :

1. Paddy straw
2. Bavistirel Bavistine
3. Formaldehyde
4. Malathion
5. Sand
6. Gunny bags
7. Potassium Permanganate
8. Racks / Hanging

9. Polythene covers for beds
10. Poly thene covers for packing
11. Vessels for Boiling
12. Stove / Firewood
13. Sprayers

Material for spawn production:

1. Jowar
2. Caco₃
3. Non absorbant cotton
4. Spirit
5. Polythene cover 6" * 8" (Self locking).

SUGGESTED READING

1. Handbook on Mushrooms by Nita Bahl Published by Oxford & IBH publishing Company.
2. Mushroom Cultivation by J.N. Kapoor published by ICAR, New Delhi.
3. A handbook of cultivated mushrooms by Dr. Ashok Ghanekar.
4. Handbook of Horticulture IARI, New Delhi.