

MILKY MUSHROOM CULTIVATION

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Cultivation Technology of Milky Mushroom

1. Substrate Preparation:

Calocybe indica Purkayastha and Chandra, can be grown either on composted or fresh straw. For compost preparation, the soil, sand and maize meal are mixed in 12:6:1 proportion and sprinkled with sterile water. It is then autoclaved at 15 lbs. p.s.i. for one hour. Fresh straw (paddy / wheat) is chopped and soaked in clean water for 8-16 hours and subsequently soaked in hot water (80-90°C) for 40 minutes to achieve pasteurization. This method is popular among small growers.

a) Steam pasteurization:

Wet straw is filled inside insulated rooms either in perforated shelves or in wooden trays. Steam is released under pressure from boiler so that temperature inside the substrate is raised to 65°C which is maintained for 5-6 hours.

b) Sterilization:

Substrate is filled in polypropylene bags and sterilized in an autoclave at 15lbs.p.s.i for one hour. Once pasteurization / sterilization is over, bags containing straw are shifted to spawning room for cooling, bag filling and spawning.

2. Spawning and spawn running:

At the time of spawning moisture content of the substrate should be 62-65 % and a higher spawn dose (4-5%) of wet substrate is used. After spawning, bags are shifted to spawn running room and kept in the dark

where temperature of 35°C and relative humidity above 80 % are maintained. It takes about 15-20 days when the substrate is fully colonized and bags are ready for casing. Bags are shifted to cropping rooms for casing and cropping.



Fig. Bags showing substratum fully colonized with the mycelium

a) Casing:

Casing means covering the top surface of the bags after spawn run is over with 2-3 cm thick pasteurized casing mixture. Casing mixture (soil 75 % + sand 25%) with its pH adjusted to 7.8-7.9 is pasteurized in an autoclave at 15 lbsp.s.i for one hour or chemically treated with formaldehyde solution (4%) about one week before casing. Casing soil so treated should be covered with polythene sheet for about a week for proper fumigation and to avoid escape of chemical . After a week the sheet is removed and the mixture is turned at an interval of 2 days so that at the time of casing the mixture becomes free from formalin fumes. Casing mixture is spread on the straw surface in uniform layer of 2-3 cm thickness and bed temperature of 30-35°C and 80-90% relative humidity are maintained.



Fig. 9.4 Cased beds

a) Cropping:

When the temperature of cropping room is maintained at 30-35°C along with 80-90 % RH and sufficient light during the day time, it results in the initiation of fruit bodies within 3-5 days in the form of needle shape which matures in about a week. Mushrooms with 7-8 cm diameter caps are harvested by twisting which are then cleaned and packed in polythene bags for marketing.

b) Yield:

It is a crop of 40 – 45 days cycle and the yield varies from 12-15 Kg per 100 Kg compost. The mushrooms are either sold fresh in the market or canned for long time preservation.