

Cultivation of Black Poplar Mushroom (*Agrocybe aegerita*)



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INTRODUCTION

Agrocybe aegerita (Brig.) Sing., commonly known as 'black poplar mushroom' has good scope in India. *Agrocybe aegerita* is one of the tastiest mushrooms grown in temperate climates mostly on poplar and willow wood and develop fruit bodies in nature from spring to autumn, has unique flavour, good nutritive and medicinal values. This mushroom is known to have an antitumour lectin.

PRODUCTION SYSTEM

Wheat straw or sawdust supplemented with wheat bran is commonly used as substrates for cultivation. Wheat straw or sawdust is wetted thoroughly with water for 16-18 hrs. After wetting 5-10 per cent wheat bran is added in the saw dust and mixed thoroughly. Polypropylene bags are used for the cultivation. Two kg wet substrate is filled in each bag. The bags are plugged with non absorbant cotton by inserting a ring in the mouth of the bag. The filled bags are sterilized in the autoclaves for 1½ -2 hour at 22 p.s.i. After the bags have been sterilized and cooled down to room temperature, they are inoculated with 2-4% wheat grain based spawn. The Bags are placed/ arranged in incubation rooms where mycelia can grow favorably. The optimum temperature for the mycelial growth is between 25 and 28°C, so the temperature of incubation room is kept between 23°C and 26°C under the normal commercial cultivation conditions. Mycelia spread over the whole bag after 25-30 days.



Spawn run bags

Once the mycelium has fully colonized the substrate and formed thick mycelial mat it is ready for fruiting. Contaminated bags with mould may be discarded while bags with patchy mycelial growth may be left for few more days to complete the mycelial growth. At this stage the bags should be opened. A temperature of 25-28°C and RH 80-85 per cent are maintained. Good fruit bodies are encouraged to form by adjusting the humidity in the room and by correct moisture content of the substrate.



Developing fruit bodies

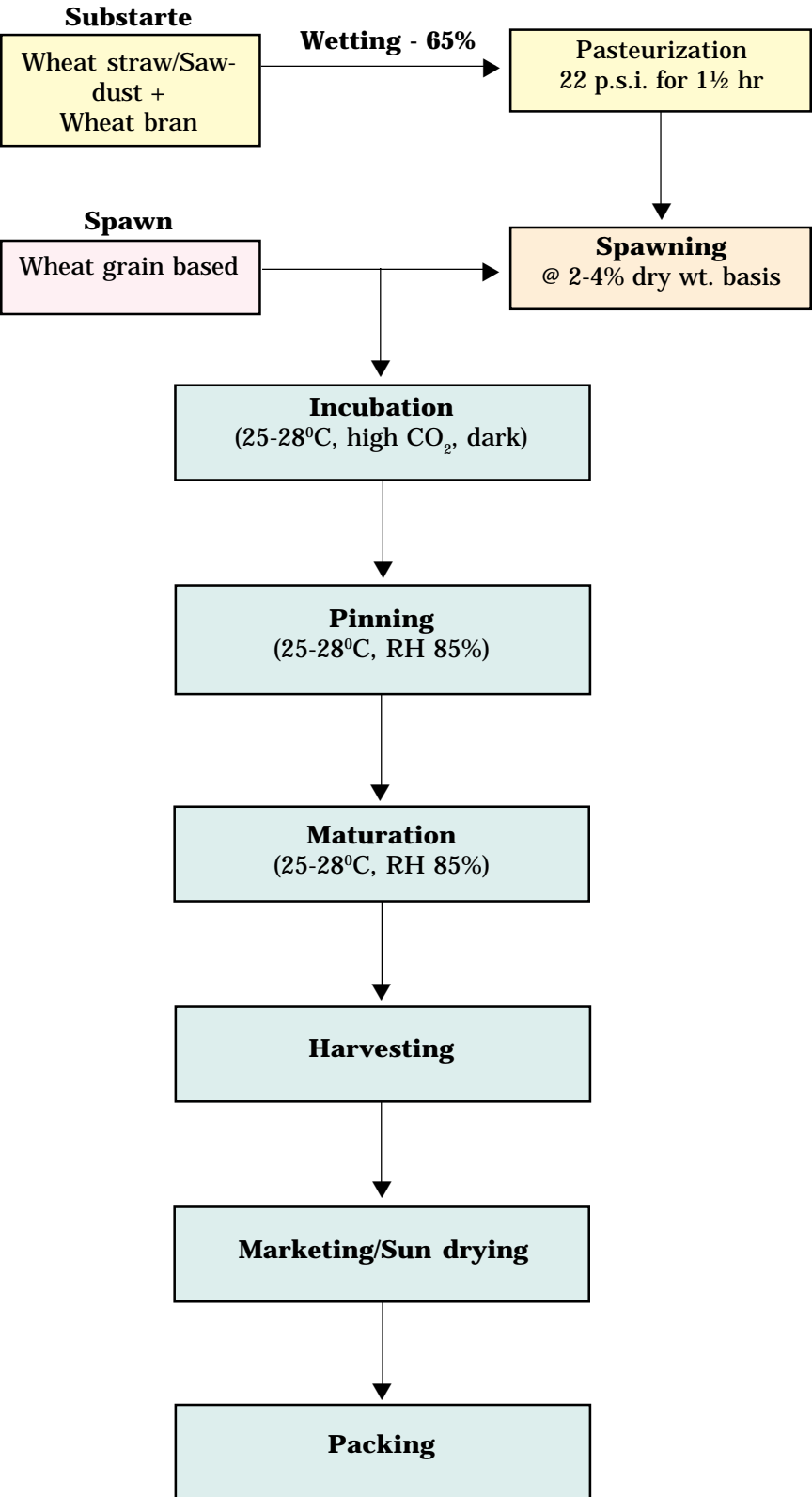
Small primordia start appearing after 5-8 days after opening the bags which become ready to harvest in the next four days. Average weight of a single fruit body is 3.5g. The fruit bodies could be sun dried or could be stored



Crop ready to harvest

in the refrigerator for 7-10 days. On an average 300g of fresh fruit bodies can be harvested from half Kg dry wheat straw, thereby giving 60 per cent biological efficiency.

Flow Chart of *Agrocybe* production



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