

Nutritious Best from Agricultural Wastes: Oyster Mushrooms

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SUMMARY

Mushrooms are known for their delicacy and nutritional values but their production depends on the substrate used. Oysters grown on various substrates, in which waste grass as a substrate yielded more as compared with other substrates. If these grass substrates can support the growth of oyster mushrooms, it may help to transform these wastes into an accepted edible biomass of high market value, and serve as a cheap source of substrate for mushroom growers.

INTRODUCTION

Oyster mushrooms, popularly known as 'Dhingri' mushrooms, lack chlorophyll and grow on dead and decaying organic matter as saprophytes, and the use of mushrooms is generally a very good approach. Mushrooms are good for the heart, having a low calorie value, and they are very good for diabetic patients having a low fat content and prevent cancer.



Materials used

Paddy Straw, Wheat Straw, and grass, Water bath, Hot Air Oven, Plastic Bags etc.
Chemicals- Malathion 30 EC, Carbendazim (Bavistin), Formalin, spirit etc.

Sterilization

Sterilization is the process which is involved in killing of micro-organisms through Heat Sterilization (121°C for 15-20 mins), chemical sterilization (50ml Malathion, 15 gm Bavistin, 100 ml formalin in 100 lit water for 24 hrs)

Spawning

For spawning 15-16 days old spawn with mycelium formed complete coating around the grain is selected and spawning done thoroughly and holes made to the polythene bag for free diffusion of gases.

Incubation

Filled bags were incubated for first 20 days in dark room, after 20 days incubation they were shifted to light (cultivation) room on hanging bed, and watering were done on a daily basis after shifting to light room and done arrangements to maintain 90-98% humidity and temperature 22-24 °C.

- After 2-3 weeks spawn running takes place.
- After 6-7 days of spawn running, pinhead formation takes place.
- After 10 days of pinhead formation, fruiting body formation takes place.

Harvesting :- Harvesting is done with clean knife by cutting oysters in two to three flush.

Care to be taken

- Always keep the inoculation chamber and its surroundings very clean.
- The working person should swab his hands and inoculation chamber using alcohol.
- Sterilization is an important for controlling pest and disease infestation.

CONCLUSION

Cultivation of oyster mushroom on agricultural wastes grasses provides multi-disciplinary advantages for human being, animals as well as for the ecosystem. The observed differences in the substrates yield may be due to the percentages content of cellulose materials and essential nutrients that are important for the growth oyster mushroom. Research at AICRP on mushroom, Pune, has revealed that P.sajor-caju is the most suitable for cultivation.

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