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A simple technique for obtaining pure culture of *Pleurotus* spp.

N. D. SHARMA, SUSHMA NEMA AND B. K. RAI*
Department of Plant Pathology, J. N. Agriculture University, Jabalpur.

A new technique to obtain pure culture of mushroom with tea leaves and tissue culture technique from fresh basidioma/fruit body has been suggested. The method greatly facilitate growers to develop/raise their own culture for mushroom spawn.

Key words : *Pleurotus* spp., pure culturing technique

INTRODUCTION

Cultivation of edible mushrooms is a modern agriculture enterprise that challenges the combined skills of industrial and agricultural technology (Chang and Miles, 1993). There are some 10 genera of mushroom commonly cultivated in the world. Of these *Pleurotus* is comparatively a high yielder with simple cultivation technology than other mushrooms and is most suitable for low income group people. The other superiority includes its less space, water requirement for cultivation, recycling of usually available agro-waste, high nutritive value being rich in protein, vitamin, rare amino acids, minerals and having high medicinal value. It can remove unempolyment and can raise the income of marginal farmers. The Oyster mushroom can change the face of our country's low income group people.

In the present paper attempts have been made to use a very easily available house waste tea leaves in order to get pure spawn through tissue culture technique.

In this method coarse used tea leaves were taken and washed with water. These leaves were then partially air dried and treated with 1% solution of glucose and peptone and then air dried. After air drying these leaves were filled in 25 × 90 mm culture tubes and sterilized at 121°C for 15 minutes.

Inoculation was done selecting a good freshly plucked fruit body and the inner tissue from the stipe-pileus junction was removed and transferred to tea leaves culture tubes (TLCT). By tilting TLCT, tissues were place at the bottom with sterilized forceps. In this way tissues from various parts such as stipe and just below gills were also removed and transferred by the above mentioned method. These tubes then placed at 25°C ± 2°C for 5 days.

The mycelium of *Pleurotus* traveled fast from bottom and soon covered upper leaves. A few colonized tea leaves pieces taken from these tubes were transferred to potato dextrose agar slants. Within 8–10 days the culture become ready for subsequent studies/cultivation. The fungal/bacterial (due to presence of excess water in fruit body) contamination remained in the bottom leaves and did not show any progress. A pure culture thus can be obtained. Similarly pure culture can be obtained by adding sterilized tea leaves to contaminated culture. The added tea leaves to culture, readily colonized by the mycelium of *Pleurotus* which could be used later for developing pure culture of spawn.

DISCUSSION

Availability of quality spawn is a major problem in mushroom production for amateur as well as commercial growers (Tiwari and Kapoor, 1988) ... To

* Paryavaran and Adivasi Vikas Kendra, Panti Naka, Shadar Bazar, Jabalpur.

make culture from tissue is a immediate and simple method but to keep culture free from bacteria as well fungal contaminant is not easy. Use of antibiotics and fungicides requires precision knowledge, skill and availability of chemicals. The present method is most easy as it requires used waste tea leaves wihch is available every where from big city to small village. The differential growth pattern of *Pleurotus* spp. helps in obtaining pure culture of oyster mushroom.

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