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PROSPECTS AND FEASIBILITY OF MUSHROOM (*PLEUROTUS* SPP.) CULTIVATION IN GARO HILLS OF MEGHALAYA

In the recent past, cultivation of edible mushrooms has been gaining importance. Edible mushrooms besides being rich in proteins, vitamins and minerals, contain low fats and starch (Khurana *et al.*, 1983; Samajpati *et al.*, 1983). They are delicious and have medicinal value.

Mushroom cultivation involves low cost inputs and simple technology. The climatic condition of the north eastern hill region of India, particularly Garo Hills of Meghalaya, is very conducive for the growth of oyster mushroom. Mushroom cultivation on agricultural wastes is profitable if market is assured and regualr supply of spawn is made available. The present study was undertaken to evaluate the prospects and feasibility of mushroom cultivation with a view to transferring the technology to the local rubber growers to serve as a source of additional income during the immature phase of rubber.

For the preparation of spawn, wheat seed was boiled to softness and mixed thoroughly with gypsum (2%) and $CaCO_3$ (6%) and autoclaved in polypropylene bags for 20 min. at 1.4 kg/cm^2. After cooling, the bags were inoculated with the pure culture of *Pleurotus* spp. The spawn was used when the seeds were completely colonized by the mycelia (15-20 days after inoculation).

Plant materials like paddy straw, maize stover, banana pseudostem, bamboo leaves and thatch grass (*Imperata cylindrica*) were used for mushroom cultivation. In addition *Pueraria phaseoloides* and *Mucuna bracteata*, both used as cover crops in young rubber plantations, were also tried for cultivation of mushroom. The plant materials were collected and air-dried properly before use. The materials were chopped into small pieces (5 cm approx.) and soaked in water for 8-10 hours. It was then boiled in a drum for about half an hour, cooled and squeezed to remove the excess water. The substrates were made into blocks with the help of a wooden tray (50 x 25 x 18 cm). The spawn was inoculated in between layers of the plant material and 5-6 such layers were pressed hard with the help of a wooden pressure board. The tray was removed gently and the blocks were covered well with polythene sheets and kept for spawn run. After about two weeks of incubation when the mycelial run was complete the polythene sheet was removed. Temperatue and humidity were recorded during the period till the development of fructification. The blocks were sprinkled with water regularly to maintain optimum temperature and humidity and also to keep them moist. After a week development of fruiting bodies was observed. It was harvested before being overmatured. Inoculation of spawn and harvesting of mushrooms were carried out aseptically.

The experiment was carried out inside a thatched mushroom house, 3 x 6 m, constructed within a rubber plantation. A