A STUDY OF SOME FACTORS EFFECTING GROWTH AND YIELD IN MUSHROOMS *PLEUROTUS OSTREATUS* AND *VOLVARIELLA SP.*

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Pleurotus ostreatus and *Volvariella sp.* are two Basidiomycetes, popularly known as 'Oyster mushrooms' and 'Straw mushrooms'. In this study, two parameters, temperature and the C/N ratio of the substrate were studied in relation to their vegetative growth under laboratory conditions. In addition, two cellulosic substrates which are freely available in Sri Lanka were evaluated for mushroom yields.

The effect of temperature on growth of both fungi were more marked on PDA compared to Rice Straw and Rubber Sawdust. Also the optimum temperature for the fungus was substrate dependant. *P. ostreatus* showed optimum growth on PDA and sawdust at 35°C and 37°C respectively. *Volvariella sp.* showed growth on these substrates at 34°C and 32°C respectively.

The C/N ratio of the substrate had a distinct effect on the growth of both fungi. *P.Costreatus* showed the best growth at the C/N ratio of 40 whereas the C/N ratio of 20 was the optimum for the growth of *Volvariella sp.*

Of the substrates evaluated for the yield of *P. Ostreatus*, rice straw was better than Rubber Sawdust. The biological efficiency of *P. ostreatus* on straw was 60% (w/w) compared to 30% (w/w) on sawdust. Also fruitbody initiation on straw was 2-3 days earlier than sawdust.