

## GROWTH AND YIELD PERFORMANCE OF OYSTER MUSHROOM (*Pleurotus ostreatus*) ON DIFFERENT SUBSTRATES IN DRY ZONE OF SRI LANKA

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Saw dust is a popular substrate used in Oyster mushroom (*Pleurotus ostreatus*) cultivation in Sri Lanka. Growers in Dry Zone face difficulties in finding adequate saw dust. Therefore, it is imperative to find an alternative substrate for oyster mushroom cultivation.

This study was conducted at Faculty of Agriculture, Rajarata University of Sri Lanka to find out effects of different combinations of substrates and substrate preparation methods on growth performances and yield of oyster mushroom. A two factor factorial experiment arranged in CRD with three replicates was conducted. The factors were methods of substrate preparation (with fermentation and without fermentation) and different combinations of substrates. The duration for spawn running, pinhead formation, fruiting body formation and growing cycle were observed. Diameter, number, yield, and dry weight of fruiting bodies of mushroom were recorded. Biological efficiency of each treatment was also calculated.

Significant effect of treatments on growth performance and yield was observed. The highest mean values of yield and biological efficiency were 308.17 g/bag/growing cycle and 102.72% respectively in T1 (paddy straw 75% + water hyacinth 25%). T5 (paddy straw 50% + Banana leaves 50%) had 254.14 g/bag/growing cycle and 84.71% respectively. There was significant effect of treatments on dry weight and diameter of fruiting bodies. The highest mean value (11.378) of dry weight was in T7 (saw dust 100%) and highest mean values of diameter were in T5 (6.59 cm) and T1 (6.56 cm). Treatments and method had significant effect on number of fruiting bodies. The highest mean value (18.5) was in T1 in method 2. The lowest time period (26 days) for spawn running to fruiting body formation was observed in T5 in method 2. Treatments had significant effect on growing cycle. The highest mean value (42 days) of growing cycle was in T1.

Based on the overall performances, substrate combination of Paddy straw 75% + Water hyacinth 25% and paddy straw 50% + banana leaves 50% is suitable for oyster mushroom cultivation in Dry Zone of Sri Lanka.

*Key words:* Oyster mushroom (*Pleurotus ostreatus*), Substrates, Dry zone