

GROWTH AND YIELD OF OYSTER MUSHROOM ON COIR DUST BASED SUBSTRATES IN THE DRY ZONE OF SRI LANKA

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The blended mixture of coconut coir dust and mango sawdust could be a better medium for Oyster mushroom production. This would increase the use of biomass while serving as a way of recycling agricultural wastes. This experiment was carried out to evaluate growth and yield performance of Oyster mushroom (*Pleurotus ostreatus*) Jacq. Ex. Fr. (Kummer) cultivation during December (2020) to April (2021) at a mushroom house in Higurakgoda, Sri Lanka (DL1e). Treatments of the study were 100% mango sawdust (T₁), 25% mango sawdust + 75% coconut coir dust (T₂), 50% mango sawdust + 50% coconut coir dust (T₃), 25% mango sawdust + 75% coconut coir dust (T₄), 100% coconut coir dust (T₅). Each treatment was supplemented with additives recommended by Department of Agriculture, Sri Lanka. Grow bags containing 1kg of each treatment were arranged according to completely randomized design with four replicates. Mycelium growth rate, time taken for fully colonization, primordia initiation and first harvest, fresh and dry weights of mushroom, cap diameter and biological efficiency (BE), were measured. Data were analyzed by one-way ANOVA at $p \leq 0.05$ level. Results revealed that the highest mycelium growth rate and fastest primordia initiation in T₃. Time taken for fully colonization and first harvest were ranged 22 – 32 and 38 – 49 days, respectively. Fresh weight (514 gkg⁻¹) and BE (51.4%) of T₃ were significantly higher than T₁ (control) (352 gkg⁻¹, 35.2%). The significantly highest dry weights were reported in T₂, T₃ and T₄. In conclusion, combination of 50% mango sawdust and 50% coir dust is the best alternative substrate for Oyster mushroom cultivation and repeated trial are need to confirm the results.

Keywords: Biological efficiency, Mango sawdust, *Pleurotus ostreatus*