

**Assessing Substrate Formulation and Domestication of Straw (*Volvariella*
Volvacea) Mushroom**

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Volvariella volvacea mushrooms have increasing demand in Sri Lanka. The yield of straw mushroom depends on the cultivation methods and compost (growing) medium. Before the rice straw was only material used for preparing the growing medium for *Volvariella volvacea*. Therefore, straw mushrooms presently are grown in some other materials. However, Sri Lanka's technological advancements in mushroom growing are not up to par with those of other nations. There are no technological approaches to increase the yield of straw mushroom in Sri Lanka. The sample of mushroom morpho-species were collected from Hingurakgoda, Polonnaruwa District, Sri Lanka. The collected Straw mushroom was aseptically isolated by a tissue-planting technique in a laminar flow hood. The Straw mushroom sample was characterized with their morphological and molecular characteristics. Investigated the suitable spawn material for Straw mushroom. In the result the PCR amplification of ITS 1 and ITS 4 of the *Volvariella volvacea* mushroom yielded approximately 700 bp. Analysis of the PCR amplified ITS regions of *V.volvacea* in the present study confirmed the heterogeneity among the isolates of paddy straw mushroom. Colonization of the substrate was completed within 14 days in kurrakkan grains. Kurakkan was the best spawn substrate for the straw mushroom than paddy and sorghum. To use the mushroom spawns to select the best available substrate and to optimize the environmental conditions effect on the straw mushroom cultivation. To find the activities to increase the yield of straw mushroom production in Sri Lanka.

Keywords: *Volvarilla volvacea*; *Compost*; *ITS regions*; *Colonization*; *Substrate*; *Yield*