



SUNFLOWER SEED HULLS AS A MAIN NUTRIENT SOURCE FOR CULTIVATING *GANODERMA LUCIDUM*

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ABSTRACT

Sunflower seed hull, an abundant and cheap by-product of the edible oil industry, was used as a substrate for growing *Ganoderma lucidum* in a synthetic log system. We evaluated: i) Mycelial growth rate on different formulations of supplemented malt-yeast agar (MYA); ii) Mycelial growth in substrates of sunflower seed hull with the addition of malt or wheat bran; and iii) the biological efficiency and the production rate at the end of the first harvest. A significant increase in growth rate was achieved when the MYA media contained 10 g L⁻¹ glucose plus 0.4% milled sunflower seed hulls. The substrate containing wheat bran showed a higher mycelial growth rate. Productivity of the substrate containing 5% malt was higher than those from other formulations. Sunflower seed hull can be used as the main energy and nutritional source in the formulation of a substrate for the cultivation of *G. lucidum*, and the addition of 5% malt to the substrate improved the mushroom growth rate.

Key words: Biodegradation, *Ganoderma*, mushroom cultivation, sunflower seed hull.