International Journal of Medicinal Mushrooms, Vol. 3, p. 196 (2001)

Cultivation of a Selected "Sporophore Only" Producing Strain of the Edible and Medicinal Mushroom *Pleurotus tuberregium* (Fr.) Sing. on Waste Paper and Plantain Peelings

Omonrefoza O. Osemwegie,[1] Omoanghe S. Isikhuemhen,[2] Jude O. Onyolu,[1] and John A. Okhuoya[1]

[1]Department of Botany, University of Benin, Benin City, Edo State, Nigeria and [2] Kyushu Research Center, FFPRI, Kurokami 4-11-16, Kumamoto 860-0862, Japan

Growth and sporophore yield in strain Pt-Omon13 of *Pleurotus tuberregium* (Fr.) Sing. on substrates made of waste paper (WP), plantain peelings (PP), and different combinations of WP and PP were investigated. Sporophores were produced on all substrates and substrate combinations tested. A substrate combination containing 80% by weight of waste paper gave the highest sporophore yield at 43.78 ± 5.1 (fresh weight) per 100 g. Another substrate combination containing 80% by weight of plantain peelings gave the least sporophore yield among the substrate combinations tested (3.15 ± 0 g/100 g). The high sporophore yield of this fungus on some of the substrate combinations may qualify waste paper with supplementation of plantain peelings as a suitable substrate for the low-cost mass production of this mushroom. This could also become an environmentally friendly avenue for biological recycling of these wastes, which are abundant in our immediate environment. The stability of the strain used (Pt-Omon13) as a selected "sporophore only" producing strain is further confirmed.

1521-9437/00/$5.00