



Cultivation of Blue Oyster Mushroom, *Hypsizygus ulmarius* (Bull.) Redhead in Plains of Northern India

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Abstract: *Hypsizygus ulmarius* (Bull.) Redhead has been studied to optimize physiological conditions and its cultivation to harvest maximum biomass. Three cultivation trials were carried out during winter season (November, December and January) indoor under natural climatic conditions of Punjab. Three substrates - wheat straw, paddy straw and wheat straw : paddy straw (1:1) were pretreated with hot water (80°C) and chemicals - carbendazim (C) and formaldehyde (F) in three concentration (i) 50 ppm C + 250 ppm F, (ii) 75 ppm C + 500 ppm F, (iii) 150 ppm C + 750ppm F. Maximum biological efficiency (63.70-73.65%), least spawn run period (24-30 days) and pinhead appearance (27-33 days) was observed on wheat straw substrate pretreated with hot water (80°C). Physiological study of *H. ulmarius* was conducted to optimize carbon, pH and incubation temperature using CYM medium to obtain maximum growth. Linear growth was maximum with glucose (13.7 mm/day) whereas maltose showed maximum biomass (20.8 g/L) at pH 6.0 and 25°C.

Key words: Blue Oyster Mushroom, Physiology, Growth, Cultivation, Biological Efficiency
