Research Article

Improved Method of Composting for Button Mushroom Production in Foot Hills of Darjeeling

BN Chakraborty, U Chakraborty, S Barman, S Roy

*Immuno-Phytopathology Laboratory, Department of Botany, University of North Bengal, Siliguri -734013, Darjeeling, West Bengal, India *Corresponding Author's Email: bncnbu@gmail.com*

Abstract

This study was designed to determine the efficiency of rice straw based compost during different periods of composting in production of *Agaricus bisporus* for the first time in plains of North Bengal. Minimum spawn running period was observed in 15 days fermented compost followed by 20, 25, 30 and 35 days fermented compost. Highest fruit body production was observed 25 days fermented compost followed by 20 and 15 days fermented compost. Temperature and relative humidity during the cropping time was observed. Lowest fruit body production and highest time for fruiting was reported in 40 days compost. Nutritional constituents such as protein and carbohydrate and lipid content were measured in fresh fruit body as well as dry powder of fruit body of *A. bisporus*. Total free amino acid content and phenolics were also determined using methanolic extract. The result from the study revealed that the composting duration of the compost has no significant effect on biochemical constituents but has an effect on spawn running in the compost, primordial initiation and growth and development of fruit bodies.

Key words: Button mushroom, casing, compost, fermentation, pasteurization, amino acid, phenolics

Citation: Chakraborty BN, Chakraborty U, Barman S, Roy S. 2017. Improved method of composting for button mushroom production in foot hills of Darjeeling. *J Mycol Pl Pathol* 47 (3): 324-335.