



KrishiKosh (कृषिकोश)

(/) An Institutional Repository of Indian National Agricultural Research System



(/)

[Advanced Search \(/advanced-search\)](/advanced-search)

[Krishikosh \(/\)](#) / [Birsa Agricultural University, Ranchi \(/handle/1/93542\)](#) / [Thesis \(/handle/1/93550\)](#)

Please use this identifier to cite or link to this item: <http://krishikosh.egranth.ac.in/handle/1/5810021690>

Authors: Kumari, Niirupa (/browse?type=author&value=Kumari%2C+Niirupa)

Advisor: Kudada, N. (/browse?type=author&value=Kudada%2C+N.)

Title: STUDIES ON THE CULTIVATION OF WHITE MILKY MUSHROOM (*Calocybe indica*) IN JHARKHAND

Publisher: Birsa Agricultural University, Kanke, Ranchi, Jharkhand

Language: en_US

Type: Thesis

Pages: 66

Agrotags: null

Keywords: STUDIES ON THE CULTIVATION OF WHITE MILKY MUSHROOM (*Calocybe indica*) IN JHARKHAND

Abstract: White milky mushroom (*Calocybe indica*) offers a good potentiality for its cultivation in Jharkhand because of prevailing suitable climatic conditions, availability of various kinds of agricultural residue at low prices in abundance, which can aid generating sources of income for the poor tribal people. Therefore, keeping these points in view, the present study attempts were made on various parameters related to find out the suitable substrate for spawn production and to know the effect of casing soil, substrate treatment, casing thickness and vermicompost in substrate enrichment on growth and yield of *Calocybe indica*. These studies were conducted in Mushroom Production Unit, Department of Plant Pathology, Faculty of Agriculture, BAU, Kanke, Ranchi during the year 2012. Out of different spawn substrates evaluated for *Calocybe indica*, jowar grain based spawn supported best mycelia growth and produced maximum yield, size (length of stipe, diameter of stipe and pileus) and weight of sporophores followed by wheat grain based spawn. Maize grain based spawn gave poor performance. As compared to other casing materials used, well decomposed FYM + garden soil + Sand (1:1:1 v/v) has shown early pinhead initiation and produced maximum yield and biological efficiency. The bag cased with FYM + garden soil + sand (1:1:1 v/v) also gave maximum size (length of stipe and diameter of pileus) and weight of sporophores. Lowest yield and biological efficiency were recorded in the treatment where sand alone used as casing. The study of different pre-treatment methods indicated that autoclaved paddy straw substrate gave early spawn run and produced maximum number of sporophores, yield and biological efficiency as compared to other pre-treatment methods of substrate evaluated. Autoclaving pre-treatment method also gave maximum size (length of stipe and diameter of pileus) and weight of sporophores followed by hot water and chemical treatment with formaldehyde @ 100 ml/100 litres of water plus bavistin @ 10 gm/100 litres of water, while, paddy straw treated with tap water (control) showed inferior performance. Maximum number of sporophores, yield and biological efficiency were recorded in casing thickness of 2.0 cm. However, these were no significant difference on days for first picking from the day of pinhead formation and average yield obtained in response to 1.0-2.0 cm casing depth. Thickness of casing layer beyond 2.0 cm gradually decreased the mushroom yield and delayed the appearance of sporophores. Vermicompost was used for substrate enrichment in different combinations with wheat straw and paddy straw. Treatments containing 50% Wheat straw + 50% vermicompost performed better with respect to most of the parameters studied such as increased size (length of stipe and diameter of pileus) and weight of sporophores. Similarly, the maximum number of sporophore, yield and biological efficiency were also recorded. The highest net benefit of Rs. 120.17/bed fresh mushroom (net benefit-cost ratio 3.12) was calculated in jowar grain based spawn followed by wheat grain based spawn (net benefit-cost ratio 2.89). The highest net benefit-cost ratio (3.73) for substrate enrichment by vermicompost was found in 75% wheat straw + 25% vermicompost followed by 50% Wheat straw + 50% vermicompost (2.56).

Description: STUDIES ON THE CULTIVATION OF WHITE MILKY MUSHROOM (*Calocybe indica*) IN JHARKHAND

Subject: Plant Pathology

Theme: STUDIES ON THE CULTIVATION OF WHITE MILKY MUSHROOM (*Calocybe indica*) IN JHARKHAND

These Type: M.Sc

Issue Date: 2013

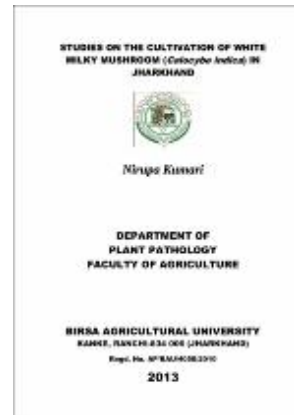
Appears in Collections: Thesis (/handle/1/93550)

Files in This Item:

File	Description	Size	Format
------	-------------	------	--------


1422 Nirupa Kumari.pdf

2.27 MB Adobe PDF



[View/Open \(/displaybitstream?handle=1/5810021690\)](#)

[Show full item record \(/handle/1/5810021690?mode=full\)](#)

 [\(/handle/1/5810021690/statistics\)](#)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.