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02

Production of Oyster Mushroom *Pleurotus flabellatus* on Soybean straw, Wheat straw and their combinations

Dr. ASHISH SINGH TOMAR
Assistant Professor
PMCoE Govt. Narmada College
Narmadapuram (m.p.)

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ABSTRACT

Mushroom is accepted universally as a source of nutrition food an efficient means of recycling Organic waste.

Soybean straw Lignocellulosic agriculture waste do not provide a good source of animal food because of indigestibility due to presence of lignin. It can be easily recycled by growing Mushroom on this waste. *Pleurotus flabellatus* species grown in soybean straw and wheat straw in different concentration (1:1), (2:2), (3:1), (1:3) and Wheat straw and Soybean straw as control. Production and Bio efficiency is observed The Minimum weight of weight was observed on S+3W i.e. 3.3 gram and maximum weight was observed on Wheat straw i.e. 5.61 Gram.

Minimum Bio efficiency was observed on soybean straw i.e. 45% and maximum Bio efficiency was observed on S+W i.e. 86%. Mushroom species are known to produce a range of degrading enzyme which degrade lignocellulosic waste in this way they feed on the substrate to grow and multiply the biological efficiency depends on carbon nitrogen content and the mixing of two substrate in varying ratio gives varying degree of Biological efficiency. *P. flabellatus* gives maximum Bio efficiency the

combination of provide better environment for cell wall degrading enzyme and balance nutrient supply so with this we avoid the burning of straw on field and makes environment healthier.

INTRODUCTION

Mushrooms are accepted universally as a source of nutritious food and an efficient means of recycling organic waste. There are two ways of utilising this natural wealth to collect and consume the edible ones. Mushrooms are naturally occurring during the rainy season and some of them also cultivate utilising locally available waste material.

Interest in Mushroom biology results from its role in recycling various agriculture forest and grassland waste material. Mushrooms are very delicious and nutritious food for human and also a source of tonic and medicine. Mushroom are found in in almost all habitats. They are distributed worldwide although their growth and multiplication remain confirm to a particular season of the year. Mushroom growth and cultivation required plenty of moisture in nature their abundant growth invariably follows large temperate region. Elette (1977).

Lignocellulosic agriculture waste do not provide a good source of animal food mainly because of their restricted digestibility. The cause of the indigestibility is due to the presence of lignin. Lignin can easily be removed by growing mushroom like *Pleurotus* species on lignocellulosic material. Such treatment of the agriculture waste the given mushroom species rendered them a very good digestible food for animals. Their biotechnological application is likely to be improve and developed further investigation. Mushrooms have now been recognised universally as food crop and are grown on commercial scale in many parts of the world. In India mostly edible Mushroom have been known to be collected locally by villager and tribe for their own consumption or fore sale.

Mushrooms are very rich in protein with a high digestibility co-efficient of about 87%. The protein contents many of the essential amino acid and they are as rich as the animal protein. Its biological value is intermediate between that of vegetable and animal protein. The protein and mineral contains of Mushroom are remarkably higher as compared to other fresh fruits and vegetables and Mushroom have a very low starch contains and therefore form an ideal food for diabetics patient. Apart from their food value. The Mushrooms are sought for their flavour and making soup Rai (1997).

Materials an Methods

Preparation of substrate

Some Mushrooms have the ability to grow directly on substrate after pasteurization as Oyster Mushroom and some needs fermentation or composting makes the substrate selective for growing the Mushroom Mycelium so that other competitor microbes can not grow.

Material Used Straw: Wheat straw, Soybean Straw,

Chemicals: Formaline, Bavestin.

Spawn: *Pleurotus flabellatus*

Water, Polythene bags, Marker Pen.

Different agriculture crop residues were used as substrate for the production of *Pleurotus flabellatus* different agricultural crop residues such as soybean straw, wheat straw used alone and in combination with wheat straw.

1. Wheat Straw
2. Soybean Straw
3. Soybean straw + Wheat Straw (1:1)
4. Soybean straw + Wheat Straw (2:1)
5. Soybean straw + Wheat Straw (3:1)
6. Soybean straw + Wheat Straw (1:3)

Sterilization of Straw by chemical treatment

Take different containers and fill 30 litres of water in each. Add 2.1gram Bavistin and 35 ml formalin to each container and soak the straw. Keep the container for 24 hours. Drain off the excess water and keep it as such for 2-3 hours.

Process of tagging

Polythene bags were used for bagging purpose

Mix evenly 500gm (Dry weight) of straw and 50gm of wheat grain spawn and fill in each polythene bags (mixed spawning)Each bag is marked properly.

$$\% \text{ Biological Efficiency} = \frac{\text{Production of fresh Mushroom}}{\text{1 Kg weight of Dry Substrate}} \times 100$$

Result and Discussion

Pleurotus flabellatus minimum weight was observed on S+3W i.e. 3.39 gram and maximum weight was observed on wheat straw i.e. 5.61 gram in comparison to soybean straw (3.52 gram) 2S+W (3.80 gram) S+W (4.28 gram) 3S+W (4.40 gram) respectively.

Pleurotus flabellatus the minimum Bio-efficiency was observed on soybean straw i.e. in 45% gram and the maximum Bio-efficiency was observed on S+W i.e. 86% and comparison to S+3W (54.2%) 3S+W (54.6%) wheat straw (57.2%) and 2S+W (61.6%) respectively.

Production of *Pleurotus flabellatus* grown on Soybean Straw, Wheat Straw and their combination

S. No.	Straws Used	Period Between spawning to First Flush	Flush wise yields			Total weight of Fruiting body in gram	Total No. of Fruiting Body
			First Flush	Second Flush	Third Flush		
1.	Soybean Straw	17	55	65	105	225	64
2.	Wheat Straw	23	118	126	42	286	51
3.	Soybean +Wheat Straw (1:1)	34	113	165	152	430	98
4.	Soybean +Wheat Straw (2:1)	27	46	77	62	308	81
5.	Soybean +Wheat Straw (1:1)	37	138	108	27	273	62
6.	Soybean +Wheat Straw (1:1)	24	82	82	107	271	80

In India about 1.15 billions tonnes of agriculture crop residue are generated (Rajarathanam et. al. 1997). All Mushroom species are known to produce a range of degrading enzymes which can degrade Lignocellulosic waste in this way they feed on the substrate to grow and multiply. In developing countries oyster mushroom species has been accepted as the easiest form of the biotechnology for profitable removal of various agriculture waste (Lelly, 1987 Saxena. 1990).

The Production of Mushroom fruit bodies is greatly influenced by various environmental factors like humidity. Temperature, carbon dioxide concentration and nature of substrate for each species the nutritional and environmental requirement varies according to genetic map of the species.

Pleurotus species can grow on raw agriculture crop residue with very little pretreatment (Garcha et. al. 1984) it is known that Mushrooms deals on the various factors whicah are given below

a. Chemical composition of the substrate i.e. percentage of cellulose, hemicellulose, lignin etc. are present in the substrate.

b. Production of enzymes and enzymatic degradability of lignocellulosic component present in the substrate.

c. Micro organism present in the substrate.

d. Environmental factors like temperature CO2 humidity and pH of the environment.

Biological efficiency of the Mushroom species

It depends on the carbon and nitrogen content present in the substrate. Soybean crop residue contain higher amount of Nitrogen Dwivedi S.K. (1999)

In this study the biological efficiency of *Pleurotus flabellatus* is due to nature and composition of the substrate and the degree of the production of degrading enzymes. Mixing of the two substrate in

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03

Psychoanalytic Narratives, Audience Gratifications, and Therapeutic Engagement in Hindi Cinema: A Study of Salim–Javed's Screenwriting

Mr. Durgesh S. Gupta
Research Scholar,
The Maharaja Sayajirao University of Baroda

Dr. Varsha B. Parikh
Research Guide,
The Maharaja Sayajirao University of Baroda

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Abstract

The screenwriting partnership of Salim Khan and Javed Akhtar, popularly known as Salim–Javed, marked a decisive shift in Hindi mainstream cinema during the 1970s. While their contribution to narrative form, dialogue, and character construction has been widely acknowledged, limited empirical research has examined their work through an integrated psychoanalytic and audience-centered framework. This study investigates how Salim–Javed's screenwriting fulfilled emotional and psychological needs of Indian audiences by enabling catharsis, moral validation, and cultural meaning-making. Drawing upon Uses and Gratifications Theory, Cinema Therapy, and Cultural Studies, the paper analyses audience perception data (N = 49) alongside textual and practitioner-based insights, including Javed Akhtar's reflections on cinema and society. Findings indicate that Salim–Javed's films functioned as psychosocial tools that audiences actively used to process anger, disillusionment, and institutional mistrust. The study repositions