

# **Handbook on Mushroom Cultivation and Processing (with Dehydration, Preservation and Canning)**

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Mushrooms are the health food of the world. These are that fast growing basidiomycetous fungi which produce fleshy fruit bodies. They are rich in proteins, vitamins and minerals, so they are consumed as energy rich food. Mushroom has been attracting attention of mankind since ancient times and use of mushroom, as food is as old as human civilization. Mushrooms are superior to many vegetables and beans in their nutritive value. It is very rich in protein, vitamins and minerals. Fresh mushrooms contain about 85% water and 3.2% protein. But dried mushrooms water content is low and protein level is high as 34 to 44% and the fat content is less than 0.3%. There are about 100 species of edible mushrooms all over the world. But only three of them are cultivated in India which are Agaricus bisporus, Volvariella volvacea and pleurotus sajor caju. Unfortunately, it is realized that mushrooms did not receive universal acceptance over the years since a number of naturally growing mushrooms are poisonous. Now the situation has been changed because the cultivated edible mushrooms are totally safe for human consumption. Mushroom cultivation fits in very well with sustainable farming and has several advantages: it uses agricultural waste products, a high production per surface area can be obtained, after picking; the spent substrate is still a good soil conditioner. They have less carbohydrate so they are believed to be suitable for diabetic patients. Fresh mushrooms have very limited life and hence they need to be consumed within few hours. But processing and canning increases their shelf life to few months. Osmotic dehydration is one of the important methods of processing mushroom which involves drying technology of mushroom. Mushrooms are very popular in most of the developed countries and they are becoming popular in many developing countries like India. Applications and market for mushrooms is growing rapidly in India because of their nice aroma, nutritious values, subtle flavour and many special tastes. Mushroom cultivation has been declared as a major thrust area by Government of India. Mushroom dish is a common item in all the big hotels. Mushroom production has increased many folds during the recent past. Mushrooms have found a definite place in the food consumption habits of common masses and there is a constant demand for it throughout the year.

Some of the fundamentals of the book are nutritive value of edible mushrooms, medicinal value of mushrooms, advantages of mushrooms, symptoms of mushroom poisoning, morphology of common edible mushrooms, classification of fungi a brief survey, chemical composition, anti nutritional factors and shelf life of oyster mushroom , osmotic dehydration characteristics of button mushrooms, mushroom cultivation, cultivation of white button mushroom (*agaricus bisporus*), actors determining the amount of spawn needed, fungicides for mushroom diseases insecticides for mushroom pets etc.

The present book contains cultivation, processing, dehydration, preservation and canning of various species of mushrooms. It is resourceful book for agriculturists, researchers, agriculture universities, consultants etc.

## 1. NUTRITIVE VALUE OF EDIBLE MUSHROOMS

### 2. MEDICINAL VALUE OF MUSHROOMS

### 3. ADVANTAGES OF MUSHROOMS

How to Avoid Discomfort While Eating Mushrooms?

### 4. POISONOUS MUSHROOMS

Distinctive Features of Poisonous Mushrooms

Symptoms of Mushroom Poisoning

How to Avoid Mushroom Poisoning

## 5. MORPHOLOGY OF COMMON EDIBLE MUSHROOMS

Agaricus Bisporus

Volvariella Volvacea

Pleurotus Sajor-caju

## 6. COMMON EDIBLE MUSHROOMS OF INDIA

## 7. WHERE AND WHEN TO GO MUSHROOMING

## 8. HOW TO COLLECT AND IDENTIFY FUNGI

Steps in the Description of Macro-and Micro-characteristics

of Gill Fungi

(Mode of development)

## 9. CLASSIFICATION OF FUNGI - A BRIEF SURVEY

Fungi

Ascomycetes

Basidiomycetes

Deuteromycetes-Fungi Imperfecti

## 10. DELICIOUS RECIPES OF MUSHROOM

Mushroom omelette

Stuffed Potatoes

Mushrooms on Toast

Mushroom Soup

Mushroom Pakoras

Mushroom Pulao

Mushroom Pickle 1

Mushroom pickle 2

Mushrooms and Peas

Mushrooms and Paneer

Mushroom Samosa

Liver with Mushroom

## 11. CHEMICAL COMPOSITION, ANTI-NUTRITIONAL FACTORS AND SHELF-LIFE OF OYSTER MUSHROOM (PLEUROTUS OSTREATUS)

Material and Methods

Results and Discussion

Conclusion

## 12. COMPOSITION AND FOOD VALUE OF SCLEROTIUM (OSU) AND EDIBLE MUSHROOM (PLEUROTUS TUBER-REGIUM)

Conclusion

## 13. OSMOTIC DEHYDRATION CHARACTERISTICS OF BUTTON MUSHROOMS

Materials and Methods

Results and Discussion

## 14. EFFECT OF MODIFIED ATMOSPHERE PACKAGING ON LOW MOLECULAR WEIGHT

# CARBOHYDRATES OF OYSTER MUSHROOMS

## Materials and Methods

### Results and Discussion

#### 15. MUSHROOM CULTIVATION

Advantages of mushroom cultivation

Comparison of nutritive value of mushrooms with other foods

Salient features of mushroom cultivation

Importance of mushroom cultivation for India

Types suitable for cultivation

#### 16. CULTIVATION OF WHITE BUTTON MUSHROOM (*AGARICUS BISPORUS*)

Temperature

Moisture

Ventilation

Good Spawn

Suitable Growing Space

Compost and Methods of Composting

Nature and Quality of the Basic Material

Organic and Inorganic Supplements

Management of the Compost During Composting

Long Method

Short Method

A Compost Fermentation Method by Means of

Forced Air Circulation

Fermentation Chamber for Compost

Formulation of Compost

Process of Composting and Fermentation

Mechanical composting

Loading the Barrel

Composting Cycle

Spawn and Methods of Spawning

Advantages of Grain Spawn

Disadvantages of Grain Spawn

Methods of Preparation of Grain Spawn

*Agaricus bisporus*

*Volvariella volvacea*

Factors Determining the Amount of Spawn Needed

Method of Spawning

Storage of Spawn

Casing

Sterilisation of Casing Soil

Chemical Sterilisation

Time of Casing

Cropping and Harvesting

Diseases

Soft Mildew or Cobweb (*Dactylium dendroides*)

Brown plaster mould (*Papulospora byssina*)

White plaster mould (*Scopulariopsis fumicola*)

Olive green mould (*Chaetomium olivacearum*)

Inky cap (*Coprinus lagopus* and *C. comatus*)

Green Mould (*Trichoderma viride*)

Truffle disease (*Pseudobalsamia microspora*)

Bubble disease (*Mycogone perniciosa*)

Dry Bubble, Brown Spot Disease

(*Verticillium malthousei* or *V. psallistae*)  
Bacterial Blotch (*Pseudomonas tolaassi*)

Virus Diseases

Control

Insect Pests

Sciariids

Phorids

Spring tails

Cecid

Mites

Nematodes

Control

Fungicides for Mushroom Diseases Insecticides for Mushroom Pets

Abnormalities of Mushrooms

Rose comb

Long stalked mushroom

Scaly and cracked mushroom

Open Mushrooms

Stroma

Preservation

Storage in Fresh Conditions

Controlled Atmosphere

Preservation by Gamma Radiation

Freeze Drying

Steeping preservation

Dehydration of Mushrooms

Canning of Mushroom

Do's and Don'ts of Mushroom Growing

Mushroom Farm Design

Construction and Insulation

Peak Heating Chamber/bulk Chamber/tunnel

Initial Consideration/Work Plan

Casing Pasteurization Chamber

Economically Viable Commercial Button Mushroom Unit

Economics

Fixed costs

Variable Costs

Economics of Canned Product

## 17. CULTIVATION OF AGARICUS BITORQUIS

Harvesting

False truffle (*Diehlomyces microspora*)

Control

Bacterial Blotch and Pests

Control

## 18. CULTIVATION OF PADDY STRAW MUSHROOM (VOLVARIELLA SPP.)

Diseases and Pests

Preservation

Canning

Economics of Production of Paddy Straw Mushroom

## 19. CULTIVATION OF PLEUROTUS SPP.

Method of Cultivation

Preparation of Spawn

Cultivation

# Economics of Pleurotus Cultivation in Hells on a Small Scale

## 20. CULTIVATION OF STROPHARIA RUGOSO ANNULATA

Cultivation

Layout of Beds

Production and Planting of Spawn

Cropping

Harvesting

## 21. CULTIVATION OF AURICULARIA SPP. (JEWâ€™S EAR)

Laying of logs

Cropping yard

Bag method cultivation

Harvesting

## 22. CULTIVATION OF FLAMMULINA VELUTIPES

Cultivation

Spawn

Spawning and Cropping

## 23. CULTIVATION OF PHOLIOTA NAMEKO

Moisture, light and aeration

Japanese Method

Spawn

Inoculation

Laying

Raising

Cropping

Taiwan Method of Cultivation

Construction of plastic mushroom growing houses

Preparation of sawdust medium

Bagging and sterilization of medium

Inoculation and incubation

Fruiting

Cropping

Mori

Ham

Song

Royse

Difference between bag method and log method of cultivation

Important factors

## 24. TYPES OF MUSHROOMS

Orange Peel Fungus

Aleuria aurantia (Pers. ex Hook.) Fuckel

Otidea Onotica

(Batsch ex S.F. Gray) Fuckel

Sarcosphaera crassa

(Santi ex Steudel) Pouz

Discina Perlata (Fr.) Fr

Lorchel, Turban Fungus

Gyromitra esculenta (Pers. ex Pers.) Fr

Common White Helvella, False Morel

Helvella Crispa (Scop.) ex Fr.

Common Morel

Morchella esculenta Pers. ex St. Amans

Morchella Elata Fr

Early Morel

Verpa bohemica (Krombh.) Schroet  
Choiromyces venosus  
(Fr.) Th. Fries  
Summer Truffle, Common (English) Truffle  
Tuber aestivum Vitt  
Winter Truffle  
Tuber Brumale Vitt  
Elaphomyces Granulatus Fr  
Common Earth-ball  
Scleroderma citrinum Pers  
Pisolithus Arrhizus  
(Pers.) Rauschert  
Astraeus hygrometricus  
(Pers.) Morg  
Cyathus Striatus  
(Huds.) ex Pers  
Sphaerobolus Stellatus  
Tode ex Pers  
Bovista Nigrescens  
Pers. ex Pers  
Common Puffball  
Lycoperdon perlatum Pers. ex Pers  
Giant Puffball  
Langemannia gigantea (Batsch ex Pers.) Rostk  
Geastrum triplex Jungh  
Wood Witch, Stinking Polecat, Stinkhorn  
Phallus impudicus L. ex Pers  
Hysterangium Graveolens Velen  
Anthurus archeri  
(Berk.) E. Fischer  
Blackening Russula  
Russula nigricans (Bull. ex Merat) Fr.  
Common Yellow Russula  
Russula ochroleuca (Pers.) ex Fr.  
Cracked Green Russula  
Russula Virescens (Schaeff. ex Zanted.) Fr.  
Bare-toothed Russula  
Russula vesca Fr.  
Russula Cyanoxantha  
(Schaeff. ex Schw.) Fr.  
Grass Green Russula  
Russula aeruginea Lindbl. in Fr.  
Russula Olivacea  
(Schaeff. ex Secr.) Fr.  
Russula Mustelina Fr.  
Russula Xerampelina  
(Schaeff) ex. Fr. (S. Str.)  
Russula integra  
(L. ex Hook.) Fr.  
Russula paludosa Britz  
Sickener  
Russula emetica (schaeff. ex Fr.) S.F. Gray  
Russula sanguinea

(Bull. ex St. Amans) Fr.  
Lactarius piperatus  
(Fr.) S. F. Gray  
Fleecy Milk Cap  
Lactarius vellereus (Fr.) Fr.  
Woolly Milk Cap  
Lactarius torminosus (Schaeff. ex. Fr.) S. F. Gray  
Saffron Milk Cap  
Lactarius deliciosus (L. ex Fr.) S. F. Gray  
Lactarius helvus (Fr.) Fr.  
Lactarius volémus (Fr.) Fr.  
Strobilomyces floccopus  
(Vahl ex Fr.) P. Karst.  
Porphyrellus pseudoscaber  
(Sect.) ex Sing.  
Gyroporus castaneus  
(Bull. ex Fr.) Quel.  
Boletus cavipes  
Klotzsch in Fr.  
Boletus variegatus  
Bow. ex. Fr.  
Gyrodon lividus  
(Bull. ex Fr.) Sacc  
Suillus grevillei  
(Klotzsch) Singer  
Suillus viscidus Fr.  
Suillus placidus  
(Bonorden) Sing.  
Slippery Jack  
Suillus luteus (L. ex Fr.) S. F. Gray  
Suillus fluryi Huijsman  
Suillus granulatus  
(L. ex Fr.) O. Kuntze  
Phylloporus rhodoxanthus  
(Schw.) Bres  
Xerocomus parasiticus  
(Bull. ex Fr.) Quel.  
Xerocomus rubellus  
(Krombh.) Quel.  
Bay Boletus  
Xerocomus badius (Fr.) Gilb.  
Red-cracked Boletus  
Xerocomus chrysenteron (Bull ex St. Amans) Quel  
Xerocomus subtomentosus  
(L. ex Fr.) Quel.  
Xerocomus porosporus Imler  
Chalciporus piperatus  
(Bull. ex Fr.) Sing  
Boletus Lupinus Fr. SS. Romagnesi  
Red-stalked Boletus  
Boletus erythropus (Fr. ex Fr.) Krombh.  
Boletus Luridus  
Schaeff. ex Fr.

Devil's Boletus  
Boletus satanas Lenz  
Boletus Impolitus Fr.  
Boletus aereus Bull. ex Fr.  
Boletus Aestivalis  
(Paulet) ex Fr.  
Edible Boletus, Cepe  
Boletus edulis Bull. ex Fr.  
Bitter Boletus  
Tylopilus felleus (Bull. ex Fr.) P. Karst.  
Krombholziella Aurantiaca  
(Bull. ex St. Amans) R. Maire  
Krombholziella Rufescens  
(Konr.) Sut.  
Krombholziella Oxydabilis (Sing.) Sut.  
Brown Birch Boletus  
Krombholziella Scabra (Bull. ex Fr.) R. Maire  
Paxillus involutus  
(Batsch ex Fr.) Fr.  
Paxillus Atrotomentosus  
(Batsch ex Fr.) Fr.  
False Chanterelle  
Hygrophoropsis aurantiaca (Wulf. ex Fr.) R. Maire  
Omphalotus Olearius  
(DC. ex Fr.) Sing.  
Gomphidius Roseus  
(Fr.) P. Karst.  
Gomphidius Glutinosus  
(Schaeff. ex Fr.) Fr.  
Chroogomphus Rutilus  
(Schaeff. ex Fr.) O.K. Miller  
Ivory Wax Cap  
Hygrophorus eburneus (Bull. ex Fr.) Fr.  
Goat Moth Wax Cap  
Hygrophorus Cossus (Sow. ex Fr.) Fr.  
Pinewood Wax Cap  
Hygrophorus Hypothejus (Fr.) Fr.  
Hygrophorus marzuolus  
(Fr.) Bres.  
Camarophyllus Pratensis  
(Pers. ex Fr.) Kumm.  
Hygrocybe nigrescens  
(Quel.) Kuhner  
Hygrocybe punicea  
(Fr.) Kumm.  
Omphalina epichysium  
(Pres. ex Fr.) Quel.  
Gerronema chrysophyllum  
(Fr. ) Sing.  
Laccaria amethystina  
(Huds. ex Hook) Cooke  
Laccaria laccata  
(Scop. ex Fr.) Cooke

Clitocybe odora  
(Bull. ex Fr.) Kumm.  
Clitocybe clavipes  
(Pers. ex Fr.) Kumm.  
Clitocybe geotropa  
(Bull. ex St. Amans) Quel.  
Clitocybe maxima  
(F. Wett. ex Fr.) Kumm.  
Common Funnel Cap  
Clitocybe gibba (Pers. ex Fr.) Kumm.  
Clitocybe cerussata  
(Fr.) Kumm.  
Clitocybe candicans  
(Pers. ex Fr.) Kumm.  
Clitocybe brumalis  
(Fr. ex Fr.) Kumm.  
Lepista nebularis  
(Batsch ex Fr.) Harmaja  
Wood Blewitt, Bluette, Blue Leg  
Lepista nuda (Bull. ex Fr.) W. G. Smith  
Blewitt, Bluette, Blue Leg  
Lepista saeva (Fr.) P. D. Orton  
Tricholomopsis rutilans  
(Schaeff. ex Fr.) Sing.  
Tricholoma caligatum  
(Viv.) Ricken  
Tricholoma colossus  
(Fr.) Quel.  
Tricholoma Fulvum  
(DC. ex Fr.) Sacc.  
Tricholoma Vaccinum  
(Pers. ex Fr.) Kumm.  
Tricholoma Portentosum  
(Fr.) Quel.  
Tricholoma flavovirens  
(Pers. ex Fr.) Lund.  
Tricholoma sejunctum  
(Sow. ex Fr.) Quel.  
Sulphurous Tricholoma  
Tricholoma Sulphureum (Bull. ex Fr.) Kumm.  
Tricholoma Columbetta  
(Fr.) Kumm.  
Tricholoma Terreum  
(Schaeff. ex Fr.) Kumm.  
Honey Fungus, Honey Agaric, Shoestring Mushroom  
Armillaria mellea (Vahl. ex Fr.) Kumm.  
Lyophyllum connatum  
(Schum. ex Fr.) Sing  
Lyophyllum fumosum  
(Pers. ex Fr.) Orton  
Tephrocybe atrata  
(Fr. ex Fr.) Donk  
St. Georgeâ€™s Mushroom

Calocybe gambosa (Fr.) Donk  
Giant Clitocybe  
Leucopaxillus giganteus (Sibth. ex Fr.) Sing.  
Melanoleuca brevipes  
(Bull. ex Fr.) Pat.  
Catahetasma imperiale  
(Fr.) Sing.  
Wood Woolly-foot  
Collybia Peronata (Bolt. ex Fr.) Kumm.  
Russet Shank  
Collybia Dryophila (Bull. ex Fr.) Quel.  
Greasy Tough Shank  
Collybia butyracea (Bull. ex Fr.) Quel.  
Spotted Tough Shank  
Collybia maculata (Alb. et Schw. ex Fr.) Kumm.  
Hohenbuehelia Petaloides  
(Bull. ex Fr.) Schulz.  
Megacollybia Platypylla  
(Pers. ex Fr.) Kotl. et Pouz.  
Slimy Beech Tuft  
Oudemansiella mucida (Schrad ex Fr.) Hoehn.  
Rooting Shank  
Oudemansiella radicata (Relhan ex Fr.) Sing.  
Strobilurus Esculentus  
(Wulf. ex Fr.) Sing.  
Little Wheel Toadstool  
Marasmius rotula (Scop. ex Fr.) Fr.  
Marasmius scorodonius (Fr.) Fr.  
Fairy Ring Fungus, Fairy Ring Champignon, Scotch Bonnet  
Marasmius oreades (Bolt. ex Fr.) Fr.  
Lilac Mycena  
Mycena pura (Pers. ex Fr.) Kumm.  
Mycena rosea  
(Bull.) ex Sacc. et Dalla Costa  
Mycena fagetorum  
(Fr.) Gill.  
Xeromphalina campanella  
(Batsch ex Fr.) R. Maire  
Velvet Shank, Winter Fungus  
Flammulina velutipes (Curt. ex Fr.) Sing.  
The Miller  
Clitopilus prunulus (Scop. ex Fr.) Kumm.  
Nolanea verna  
(Lundell) Kotl. et Pouz.  
Livid Entoloma  
Entoloma lividum (Bull. ex St. Amans) Quel.  
Entoloma nidorosum  
(Fr.) Quel.  
Entoloma hirtipes  
(Schum. ex Fr.) Moser  
Volvariella speciosa  
(Fr.) Sing.  
Pluteus cervinus

(Schaeff. ex Fr.) Kumm.

Grisette

Amanita vaginata (Bull. ex Fr.) Vitt

Amanita umbrinolutea Secr.

Fly Agaric

Amanita muscaria (L. ex Fr.) Hook

Amanita regalis

(Fr.) Michael

Caesarâ€™s Mushroom, Imperial Mushroom

Amanita caesarea (Scop. ex Fr.) Grev.

Panther Cap

Amanita pantherina (DC. ex Fr.) Krombh.

Amanita gemmata

(Fr.) Gill.

Death Cap

Amanita phalloides (Fr.) Link

Destroying Angel

Amanita virosa (Fr.) Bertillon

False Death Cap

Amanita citrina (Schaeff) ex Roques

Amanita porphyrea

(Alb. et Schw. ex Fr.) Schummel

Amanita spissa (Fr.) Opiz

Blusher

Amanita rubescens (Pers. ex Fr.) S. F. Gray

Agaricus brunnescens Peck

Red-staining Agaric Wood Mushroom

Agaricus silvaticus (Schaeff. ex Krombh) Kumm.

Common Field Agaric, Meadow Mushroom

Agaricus campestris L. ex Fr.

Agaricus augustus Fr.

Agaricus abruptibulbus Peck

Horse Agaric, Horse Mushroom

Agaricus arvensis Schaeff. ex Fr.

Yellow Stainer

Agaricus xanthoderma Genev.

Lepiota cristata

(Alb. et Schw. ex Fr.) Kumm.

Lepiota clypeolaria

(Bull. ex Fr.) Kumm.

Parasol Mushroom

Macrolepiota procera (Scop ex Fr.) Sing.

Shaggy Parasol

Macrolepiota rhacodes (Vitt.) Sing

Macrolepiota excoriata

(Schaeff. ex Fr.) Acker-Sch.

Cystoderma amianthinum

(Scop. ex Fr.) Maubl

Cystoderma cinnabarinum

(Alb. et Schw. ex Fr.) Maubl

Shaggy Mane, Shaggy Cap, Lawyerâ€™s Wig

Coprinus Comatus (Mull. ex Fr.) S. F. Gray

Common Ink Cap

*Coprinus atramentarius* (Bull. ex Fr.) Fr.  
Glistening Ink Cap  
*Coprinus micaceus* (Bull. ex Fr.) Fr.  
*Panaeolus papilionaceus*  
(Bull ex Fr.) Quel.  
*Psathyrella candolleana*  
(Fr. ex Fr.) R. Maire  
*Psathyrella velutina*  
(Pers. ex S. F. Gray) Sing.  
Yellow Cow-pat Toadstool  
*Bolbitius vitellinus* (Pers. ex Fr.) Fr.  
*Agrocybe dura*  
(Bolt. ex Fr.) Sing.  
*Agrocybe praecox*  
(Pers. ex Fr.) Sing.  
*Stropharia rugosoannulata*  
Farlow in Murrill  
Verdigris Agaric  
*Stropharia aeruginosa* (Curt. ex Fr.) Quel.  
*Stropharia albonitens*  
(Fr.) P. Karst.  
Brick Red Hypholoma, Bricktop, Bricktop Mushroom  
*Hypholoma sublateritium* (Fr.) Quel.  
Sulphur Tuft  
*Hypholoma fasciculare* (Huds. ex Fr.) Kumm.  
*Hypholoma capnoides*  
(Fr. ex Fr.) Kumm.  
*Psilocybe semilanceata*  
(Fr. ex Weinm) Kumm.  
*Pholiota destruens*  
(Brond) Gill.  
Shaggy Pholiota  
*Pholiota squarrosa* (Pers. ex Fr.) Kumm.  
*Pholiota carbonaria*  
(Fr.) Sing.

*Gymnopilus spectabilis*  
(Fr.) Sing  
*Gymnopilus sapineus*  
(Fr.) R. Maire  
*Kuehneromyces mutabilis*  
(Schaeff. ex Fr.) Sing. et Smith  
*Tubaria conspersa*  
(Pers. ex Fr.) Fayod  
*Crepidotus variabilis*  
(Pers. ex Fr.) Kumm.  
*Inocybe patouillardii* Bres  
*Inocybe fastigiata*  
(Schaeff. ex. Fr.) Quel.  
*Inocybe argillacea*  
(Pers. ex Pers.) Sing.  
*Inocybe lacera*  
(Fr.) Kumm.

Hebeloma radicosum  
(Bull. ex Fr.) Ricken  
Jewâ€™s Ear, Judasâ€™ Ear  
Hirneola auricula-judae (Bull. ex St. Amans) Berk.  
Yellow Brain Fungus, Witches Butter  
Tremella mesenterica Retz. ex Hook.  
Yellow Chanterelle Pixie Stool  
Cantharellus cibarius Fr. ex Fr.  
Cantharellus tubaeformis  
Bull. ex Fr.  
Oyster Fungus, Oyster-cap Fungus, Oyster Mushroom  
Pleurotus ostreatus (Jacq. ex Fr.) Kumm.  
Lentinus Lepideus  
(Fr. ex Fr.) Fr.

## 25. GLOSSARY OF BASIC MYCOLOGICAL TERMS

## About NIIR

**NIIR PROJECT CONSULTANCY SERVICES (NPCS)** is a reliable name in the industrial world for offering integrated technical consultancy services. NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.

Our various services are: Detailed Project Report, Business Plan for Manufacturing Plant, Start-up Ideas, Business Ideas for Entrepreneurs, Start up Business Opportunities, entrepreneurship projects, Successful Business Plan, Industry Trends, Market Research, Manufacturing Process, Machinery, Raw Materials, project report, Cost and Revenue, Pre-feasibility study for Profitable Manufacturing Business, Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Business Opportunities, Investment Opportunities for Most Profitable Business in India, Manufacturing Business Ideas, Preparation of Project Profile, Pre-Investment and Pre-Feasibility Study, Market Research Study, Preparation of Techno-Economic Feasibility Report, Identification and Section of Plant, Process, Equipment, General Guidance, Startup Help, Technical and Commercial Counseling for setting up new industrial project and Most Profitable Small Scale Business.

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