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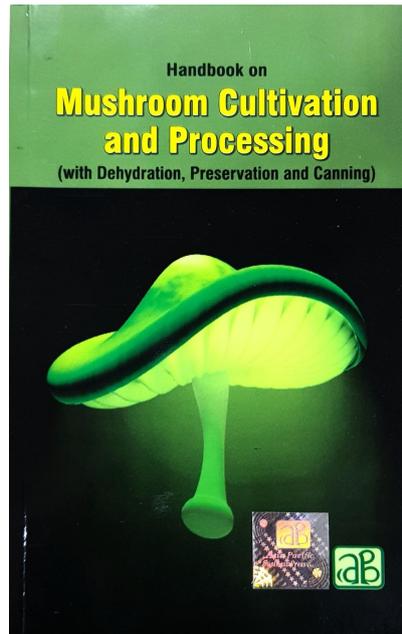
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Handbook on Mushroom Cultivation and Processing (with Dehydration, Preservation and Canning)

Code	NI164
Format	paperback
Indian Price	₹1275
US Price	\$125
Pages	544
ISBN	9788178330341
Publisher	Asia Pacific Business Press Inc.

Description

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*), factors determining the amount of spawn needed, fungicides for mushroom diseases insecticides for mushroom pests 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.

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Common Morel
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(Schaeff) ex. Fr. (S. Str.)
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(Paulet) ex Fr.
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Krombolziella Rufescens

(Konr.) Sut.
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Krombholziella Scabra (Bull. ex Fr.) R. Maire
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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, Bluettes, Blue Leg
Lepista nuda (Bull. ex Fr.) W. G. Smith
Blewitt, Bluettes, Blue Leg
Lepista saeva (Fr.) P. D. Orton
Tricholomopsis rutilans
(Schaeff. ex Fr.) Sing.
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(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. George's Mushroom
Calocybe gambosa (Fr.) Donk
Giant Clitocybe
Leucopaxillus giganteus (Sibth. ex Fr.) Sing.
Melanoleuca brevipes
(Bull. ex Fr.) Pat.
Catathelasma imperiale
(Fr.) Sing.
Wood Woolly-foot
Collybia Peronata (Bolt. ex Fr.) Kumm.
Russet Shank
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Greasy Tough Shank
Collybia butyracea (Bull. ex Fr.) Quel.
Spotted Tough Shank
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Hohenbuehelia Petaloides
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Megacollybia Platyphylla
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Slimy Beech Tuft
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Rooting Shank
Oudemansiella radicata (Rehder ex Fr.) Sing.
Strobilurus Esulentus
(Wulf. ex Fr.) Sing.
Little Wheel Toadstool
Marasmius rotula (Scop. ex Fr.) Fr.
Marasmius scorodonium (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
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Amanita umbrinolutea Secr.
Fly Agaric
Amanita muscaria (L. ex Fr.) Hook
Amanita regalis
(Fr.) Michael
Caesar™s Mushroom, Imperial Mushroom
Amanita caesarea (Scop. ex Fr.) Grev.
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Amanita gemmata
(Fr.) Gill.
Death Cap
Amanita phalloides (Fr.) Link
Destroying Angel
Amanita virosa (Fr.) Bertillon

False Death Cap
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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.
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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
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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
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Agrocybe dura
(Bolt. ex Fr.) Sing.
Agrocybe praecox
(Pers. ex Fr.) Sing.
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Hypholoma capnoides
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Psilocybe semilanceata
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(Brond) Gill.
Shaggy Pholiota
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(Fr.) Sing.

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(Fr.) Sing
Gymnopilus sapineus
(Fr.) R. Maire
Kuehneromyces mutabilis
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(Fr.) Kumm.
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(Bull. ex Fr.) Ricken
Jewâ€™s Ear, Judasâ€™ Ear
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Yellow Brain Fungus, Witches Butter
Tremella mesenterica Retz. ex Hook.
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Lentinus Lepideus
(Fr. ex Fr.) Fr.

25. GLOSSARY OF BASIC MYCOLOGICAL TERMS

About Niir

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