

INDIA ON THE THRESHOLD OF A NON-GREEN REVOLUTION

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INTRODUCTION

- 7TH LARGEST & 2ND MOST POPULOUS NATION, INDIA'S 70% PEOPLE LIVE ON FARMING
- ON 2.8% GLOBAL LAND, WORLD'S 16% HUMAN & OVER 8% OF LIVESTOCK LIVE HERE.
- GREEN REVOLUTION IN 1968 MADE INDIA WORLD'S 2ND BIGGESTS PRODUCER OF WHEAT AND RICE.
- YET, 2ND GREEN REVOLUTION IS NEEDED FOR FOOD & NUTRITIONAL SECURITY AND POVERTY ALEVIATION OF RURAL AND URBAN POORS AMONG RISING POPULATION.

INTRODUCTION (contd.)

- MUSHROOM FARMING BEING A MICROBIAL CONVERSION OF HEMICELLULOSIC WASTES TO PRODUCE CHEAP PROTEINOUS FOOD WITH NO PRESSURE ON ARABLE LAND IS FIT TO BE DOVETAILED WITH TRADITIONAL FARMING & FULFIL INDIA'S NEED.
- THE TWO SYSTEMS TOGETHER MIGHT BE MORE SUSTAINABLE AND CAPABLE TO PROVIDE BOTH FOOD & NUTRITIONAL SECURITY AND BOOST BOTH RURAL AND SEMI-URBAN ECONOMY.

MUSHROOM GROWTH IN INDIA

- **THOUGH A LATE STARTER, INDIA WITH HUGE AGRI-RESIDUES, CHEAP LABOR & VARIED AGRO-CLIMATE HAS MADE RAPID STRIDES BOTH IN TEMPERATE & TROPICAL MUSHROOMS.**
- **A STRONG R&D AND EXTENSION SUPPORT HAS TAKEN IT TO THE ENTIRE COUNTRY BOTH AT COTTAGE AND COMMERCIAL LEVELS. THE CORPORATE SECTOR LOOKS AFTER EXPORT.**

MUSHROOM GROWTH IN INDIA-2

- RESEARCH BASE BUILT ON INDIGENOUS & EXTERNAL KNOWHOW HELPED TO PERFECT GROWING TECHNIQUES OF BUTTON MUSHROOM & RELEASE HYBRID & SSIs OF *A. bisporus* & STRAINS OF *A. bitorquis*.
- ALSO,VARIOUS SUBTROPICAL & TROPICAL MUSHROOMS INCLUDING A NEW ONE,***CALOCYBE INDICA*** ARE GROWN ON COTTAGE,COOPERATIVE AND COMMERCIAL SCALE, WHILE OTHERS LIKE SHIITAKE & GANODERMA ARE IN PIPELINE .

COMMONLY GROWN Spp: *A. BISPORUS*, *C. INDICA*, *P. OSTREATUS* & *V. VOLVACEA*



Ganoderma lucidum & 2. *Lentinula edodes* , two potential species in pipeline.



MUSHROOM GROWTH IN INDIA-3

1. SEASONAL, COMMERCIAL & EOU FARMS:
BUTTON MUSHROOM
2. SEASONAL & COMMERCIAL FARMS :
OYSTER & MILKY MUSHROOMS
3. SEASONAL & OUTDOOR FARMING :
PADDY STRAW MUSHROOM

BUTTON MUSHROOM



1. A SEASONAL FARM



2. A COMMERCIAL FARM



A SEASONAL BUTTON MUSHROOM FARM

INSIDE VIEW OF EOU FARM

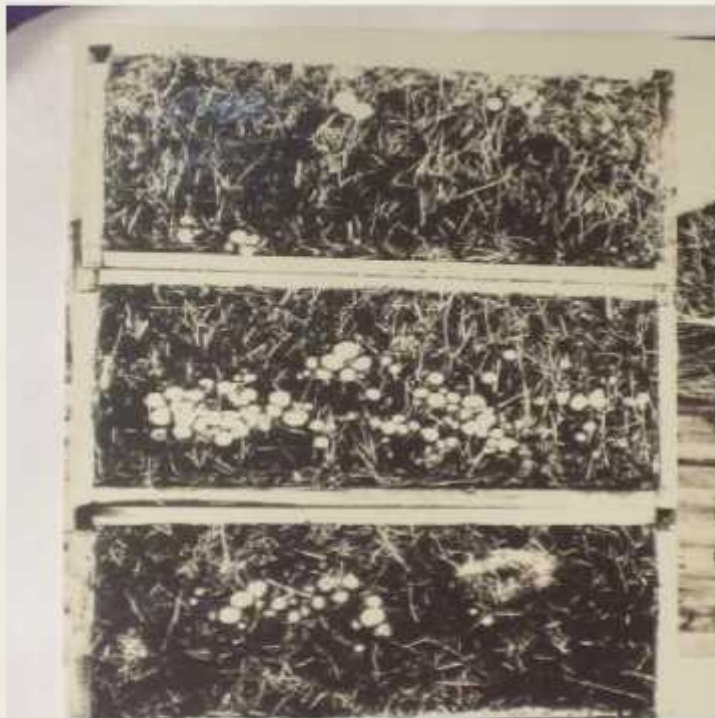
AHU FIXTURES



HEAVY FRUITING OF BUTTON



INDOOR CAGE CULTURE & OUTDOOR FARMING OF STRAW MUSHROOM



A MODEL GROWING ROOM FOR MILKY MUSHROOM





OYSTER MUSHROOM GROWING ON CYLINDRICAL BEDS

MUSHROOM MAP OF INDIA

R & D SUPPORT

A. PUBLIC SECTOR

H.P.:DMR,UNDPMP, YSPU H&F,
HPKVV, **PUNJAB:** PAU,P.U.

HARYANA: HAU,HAIC,
NCR: IARI, IHE,IIT,

U.P.: BHU, CSAUAT, NDUAT,
SVBPUAT,DHFP **BIHAR:** RAU, ARI,

W.B.:BCKVV,CU, **ODISHA:**
OUAT, OAIC, DH,

JHARKHAND:HARP,DIVYAYN,BAU,
DRDASC, **A.P.:** DH,MPTC,

MP: JNKVV, PRADAN,

MS: MPAU,MACS,BAIF,

CHHATISGARH: IGKVV, PRADAN

GOA: ICARC,

JK: SPL,RRL

KARNATAKA:IIHR

KERALA: KAU, TBGRI

TN:TNAU,COA

RAJASTHAN: MPRAU,HD,ARS

GUJRAT: MGSI

ASSAM: HD,RRL,AAU

NEH STATES: HD,S&T, ICARC

A&NI: CARI

B. SPAWN LABS IN PRIVATE SECTOR

Some Featured Spawn Companies in India,2014.

1. Microfungi, Kolkota-700046.
2. Vee Nee Agro, 9,Green Park,Kolkota-700084.
3. PCR Industries, Cuddalore (TN) 608001.
4. Jupiter Biotech, Tiruvannamala (TN) 606601.
5. Myco Groups,Manddaiyur Salai, Thirucharpalli (TN) 620020.
6. Udhayan Mushroom Farm, Aladhar Kovil Road, Madurai-625107 (TN).
7. Anand Mushrooms,Palvakkam,Chennai-600041.
8. ABRM Export, Thirumudi Nagar,Pondicherry-605001.
9. Daily Mushrooms, Gangpuram P.O., Erode,(T.N.) 638102.
10. Wonder Mushroom, Ponda Commerce Centre, Ponda, Goa-403105
11. Konkan Mushrooms, 76,Ponda Commercial Centre,Ponda,Goa-403105.
12. Arora Mushroom Agency, Mohan Singh Place C.P., New Delhi-110001.

Some Featured Spawn Companies in India, 2014 (CONTD.)

13. Swadeshi Enterprises, Model Town, Delhi-110009.
14. Helin Bio Genesis, Sector-2, NOIDA, (U.P.) 201301.
15. Jai Agro Industries, Lilashati Nagar, Gandhi Dham, Gujarat-370201.
16. Ever Green Mushrooms, Opp. J.K.Tower, Ring Road, Surat,Gujarat394210.
17. Omark Enterprises, Maruti Nagar,Hyderabad-502032, A.P.
18. Vinayak Herbal Nutrients Pvt. Ltd. Prasant Vihar, Bhubaneshwar 751024.
19. Katyayni Creation, Cd-314/li P.O. Dhurva,Ranchi-834004 (Jharkhand).
- 20.Renaissance Biotech Pvt.Ltd.Police Colony, Anishabad,Patna-800002 .
- 21.Jaya Agro-foods, Subanapalya, Banaswada, Bangaluru 560043
(Karnataka)
- 22.RKS Enterprises, Tiruvananthapuram 695012 (Kerala).
23. Saraswati Spawn, Pehowa 136128 (Haryana) .

MUSHROOM MAP OF INDIA-2

II. BUTTON MUSHROOM FARMS

EOU FARMS

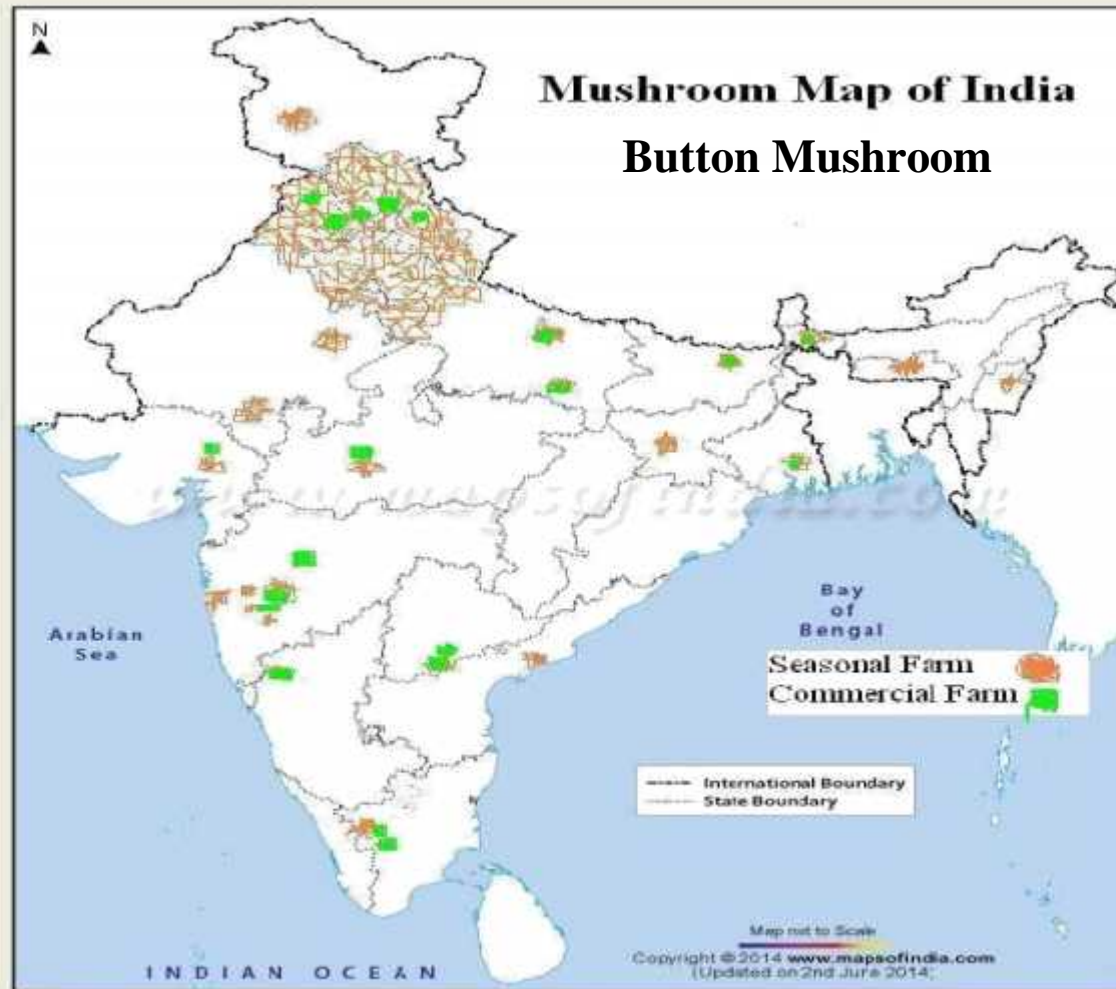
- PUNJAB, GUJARAT, H.P., U.K., A.P. & M.S.

COMMERCIAL FARMS

- M.S., H.P., KARNATAKA, T.N., PUNJAB, HARYANA, U.P. BIHAR

SEASONAL FARMS

- HARYANA, PUNJAB, H.P., JK, NCR, UP, UK, NB, MS, TN, & SOME NE STATES



Agro-Dutch Foods, Lalru (Punjab)	50,000	EOU
Flex Foods, Dehradun (U.K.)	2,500	EOU
Inventa Foods, Hyderabad (A.P.)	4000	EOU
Premier Mushroom Farms, Medchal A.P.	N.A.	EOU
Himalaya International, Idar Gujarat	10000	EOU
---do-- --do- Paonta Sahib (H.P.)	2000	EOU
Cambium Biotech Pvt.Ltd.,Nasik (M.S.)	3000	EOU/Domestic
Kulkarni Farm Fresh,Belgaum,Karnataka	ca.3000	Domestic
Wakefield Mushrooms, Pune (M.S.)	2000	Domestic
Balaji Mushrooms, Baramati (M.S.)	1500	
Domestic		
INKAA Foods, Nalagarh (H.P.)	1500	Domestic
S.R.Mushroom Industries, Allahabad (U.P.)	1500	Domestic
Kodai's West Hill Farms,Kodaikanal (T.N.)	N.A.	Domestic
Mushroom Cultivation, Chennai (T.N.)	N.A.	Domestic
Vikas Mushroom, Solan (H.P.)	N.A.	Domestic
Thakur Mushroom, Solan (H.P.)	N.A.	Domestic
Pankaj Internationals, Purnea (Bihar)	200	Domestic
Others, Haryana-3,U.P.-3, Punjab--5	16,500 approx.	Domestic

Some EOU and Commercial Button Mushroom Farms in India.

MUSHROOM MAP OF INDIA-3

- **OYSTER FARMS:** NORTH-EAST, UK
- **SEASONAL FARMS** & CHHATISGARH.
ALL OVER COUNTRY;
- **COMMERCIAL** ONLY IN GOA,U.K., CHHATISGARH, MS,TN & KARNATAKA;
- **CO-OPERATIVE FARMING** IN
- **MILKY MUSHROOM:**
 - **COMMERCIAL FARMING** IN AP &TN;
 - **SEASONAL FARMS** MORE IN SOUTH. PICKING UP FAST IN OTHER AREAS.
- **STRAW MUSHROOM:** OUTDOOR-SEASONAL/COMMERCIAL FARMS IN ODISHA.

MUSHROOM BIO-DIVERSITY

- INDIA'S RICH GENETIC RESOURCES OF EDIBLE MUSHROOMS NEED CONSERVATION & UTILIZATION FOR SUSTAINED PRODUCTION .
- DMR'S GENE BANK PLAYING A LEAD ROLE IN THAT.
- IN 1999, NRCM RELEASED *A. BISPORUS* HYBRID NCH-102, & FEW SSIs. A FEW MORE ARE IN PIPE-LINE. SOME WILD SPP LIKELY TO BE DOMESTICATED SOON.
- PROTECTIVE HARVESTING, PROCESSING & PACKAGING OF PRIZE WILD MUSHROOMS ONLY, FOR EXPORT.

Wild Collections

LENTINULA EDODES* & *L. LATERITIA
COLLECTED FROM KOHIMA



***MORCHELLA CONICA* IN FOREST**



Wild Collections

GOMPHUS FLOCCOSUS A DELICACY
FROM NEH REGION



CANTHARELLUS CIBARIUS, A PRIZE
MUSHROOM FROM MEGHALAYA



