



**A Unit of Mushroom Machinery Manufacturing**

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# **BROCHURE**

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**“Nature alone is antique & the oldest art a Mushroom”**

[www.mushroommachines.com](http://www.mushroommachines.com)

[sales@mushroommachines.com](mailto:sales@mushroommachines.com)

## OUR PROFILE

We are the manufacturer of all kinds of Mushroom Farming Machinery and provides complete Mushroom Project Consultancy services which include our visit to their farm, project report formation which is prepared by our CA, Site Mapping, Complete Farm Layout prepared by our Civil Engineer, Insulated Puff Panel rooms construction, Composting Unit Formation and installation of latest technology based fully and semiautomatic machinery under the supervision repudiated scientist and consultant. We also dealing in all type of shed constructions work which includes formation of Pre-Fabricated shed which are used for multipurpose. This shed work is completed under the guidance of our highly experienced & expertise team.

We also provide our services to Old Mushroom Farm which needs automation. For this automation our expertise will visit to their farm and with their magnificent knowledge and matured experience suggest them the best possible way to atomized old methodology with the lasts one.

We work with an aim to provide customize solution to our customer as per there Project requirement as we are the manufacturer of wide range of Mushroom Farming Machinery. Our Machineries are fully Automatic, Computerized as well as semiautomatic based on customer need. Our machineries helpful to maintained control environmental condition inside growing room and composting tunnel so throughout the season customer received best quality of Compost and superior grade of Mushrooms in bulk amount without affecting by external temperature & Humidity. Our highly qualified and hard working team with their innovative ideas and technical mind working on the each & every challenging task faced in mushroom field and to grow this Mushroom field worldwide for the goodwill of humanity.

# Director's Message



**Mr. Shashank Maheshwari**

Me Biotechnology

Bits Pilani

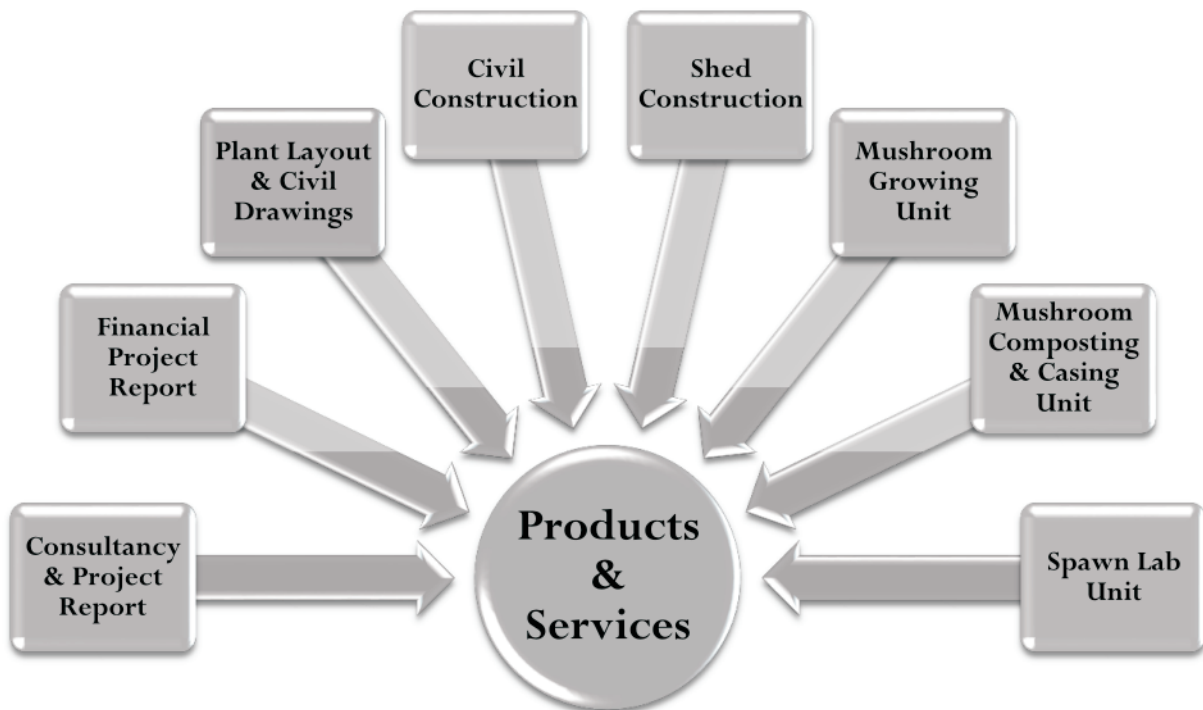
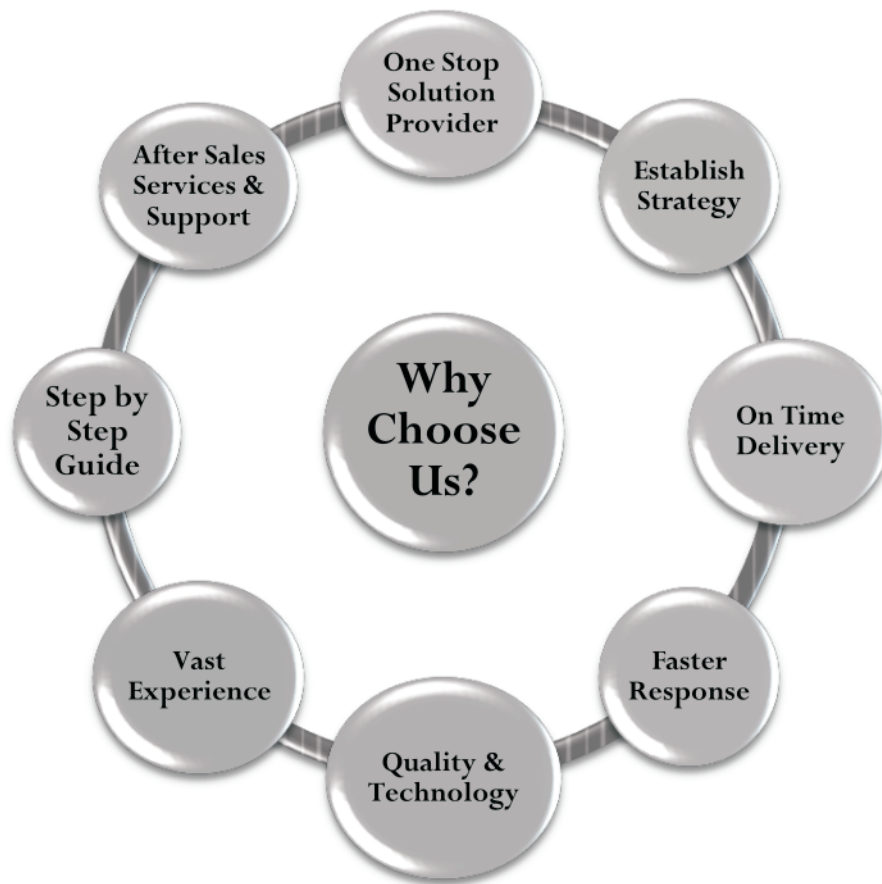
In the current process of widespread globalization, we in SM Biotech understand that meeting our customer's requirement is essential to the success of our organization. We can say that the years we experienced in the past are significant years and it is clearly seen that we have intensively delivery our best performance to focus on customer satisfaction.

On behalf of the SM Biotech, I would like to thank our valuable customers, reliable dealers and suppliers. Besides, I would like to make a special mention of our staffs' enthusiastic contribution in establishing our organization. The one thing I would like to present is that our leadership is a result of our employees. They have clearly made SM Biotech one outstanding organizations. We know our highly trained engineers apply their specialized knowledge to reliably and efficiently produce high quality service.

We are now in an ever-changing market environment. In such situation, we firmly believe that "trust" is the key element in persuading customers to choose our quality products. We totally accept that "trust" can create a "Win Situation" for a long deeper relationship.

Our distributed products with latest technologies and excellent service are to find them in every corner industrial activity and community living. We will continue our endless effort to serve our valuable customers.

In addition, we in SM Biotech will intensively endeavor in environmental awareness for the purpose of preventing from climate changes and resources depletion. We are committed to preservation of the environment we live in. So in summary, I would like to thank again all those who have contributed relentless hard work and effort of the past to bring up today and will continue to grow for years to come.



# PRODUCT LIST

- ❖ Phase 1 Composting Bunker & Blowers
- ❖ Phase 2 Pasteurization Tunnel & Blowers
- ❖ Tunnel AHU
- ❖ Pasteurization Tunnel Doors
- ❖ Spawning & Bag Filling Machine
- ❖ Bunker Filler
- ❖ Compost Turner
- ❖ Straw Pasteurization Machine
- ❖ Bag Filling Machine
- ❖ PUF Panel Mushroom Growing Rooms
- ❖ PUF Panel Cold Rooms
- ❖ Mushroom Racks
- ❖ Environment Control System-Air Handling Unit & Cold Room Unit
- ❖ Water Spray Machine
- ❖ APFC & Distribution Panel
- ❖ Steam Generator
- ❖ Laminar Air Flow
- ❖ BOD Incubator
- ❖ Autoclave
- ❖ Mushroom Dryer
- ❖ Storage Shed

## Phase 1 Bunker

Bunkers are Civil constructed for phase 1 composting & aeration ducts are connected with required blowers installed at one end of bunker. A turning is given after 2-3 days from bunker 1 to bunker 2. About 3-4 turnings on each 2nd day complete the phase 1 composting. Size of the bunker depends on the quantity of compost prepared in the bunker. This phase is generally termed as chemical oxidation phase.



## **Phase 1 Bunker**



## Composting Unit & Pre-Wetting Area

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## Phase 1 Bunker Blowers



## **Phase 2 Pasteurization Tunnel**

The second phase is the pasteurization phase. The compost prepared as a result of microbe mediated fermentation process need to be pasteurized in order to kill undesirable microbes & to convert ammonia into microbial protein. The whole process is carried out inside a steaming room or tunnel where an air temperature of 60°C is maintained for 4-6 tunnel. °4-6 hours. Damper with actuator is used to supply the fresh air in the tunnel.



## **Mushroom Composting Unit**

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## Tunnel Doors

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## Compost Tunnel Blowers & AHU

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## Spawning & Bag Filling Machine

If we talk of one technology that has benefitted the packaging industry in the past few years, it is undoubtedly automation. An automatic Spawning & bag filling machine can be very useful for any your bagging in many ways. mushroom farm. This machine can help you ease your bagging in many ways.

- ❖ Layer wise spawn mixing
- ❖ Support speeds of up to 14 bags per minute
- ❖ Lower the production cost
- ❖ Low labour & maintenance cost
- ❖ High efficiency with infection free compost



## **Straw Pasteurization Machine**

Pasteurization is the process used to reduce the number of harmful competitor organisms in a substrate before inoculating it with mushroom spawn. Pasteurizing a substrate gives the mushroom mycelium a head start, allowing it to spread throughout the substrate before other contaminants, such as mold or bacteria, get a foothold.

- ❖ Atomised hot water Pasteurization, Conditioning, Spawning & Bag Filling.
- ❖ Power saving solution with recycling of hot water.
- ❖ Available from 50Kg to 1000Kg straw pasteurization per cycle.
- ❖ Easy to operate & low maintenance cost.



**Straw Pasteurization Tank**



**Straw Pasteurization Conditioning & Bag Filling**



**Compost Bag Filling**

## **Bunker Filling Line**

Bunker Filler is used for filling composting bunkers. You can unload directly with a loader into the hopper of the machine. Then the machine doses and spreads the compost with the swivel conveyor with speed of 10MT/hr.

- ❖ It is a customised product & made according to the size of bunker.
- ❖ Filling Conveyor comes with Up & Sideways movement.
- ❖ Functionality, Safety & User-friendliness.
- ❖ Time saving, low labor & maintenance cost.



## **Compost Filling Line**



## Loading Hopper

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## **Compost Turner**

Compost turner, sometimes called compost windrow turner, is widely used to mix and stir compost materials in commercial composting operations. It is widely used to turn organic residuals that can be turned from a waste into a useful soil through composting.

- ❖ Proper mixing of compost & there components.
- ❖ Provide good aeration & maintain temperature & level in compost.
- ❖ Available in three versions: Tractor/Motor based & Self-Propelled Engine based.



**Compost Turner**

## Insulated PUF Panels

PUF panels are sandwiched panels made of polyurethane which is usually sandwiched between two metal sheets. These panels are used for mushroom growing chamber to maintain Temperature, Humidity & Co2 level in the growing room. These panels can be used at many places including cold storage, shelters, ripening chambers, office cabins, control rooms, etc.

- ❖ Lower cost & anti corrosive
- ❖ Energy saving due to low thermal conductivity
- ❖ Lighter & easy to install
- ❖ Highly durable & inexpensive



## **Mushroom Racks**

- ❖ Flexible structure to handle compost holding bags
- ❖ Corrosion resistance, no water logging & easy to assemble
- ❖ Racks are made up of MS & GI material





## Mushroom Racks & Pet wire

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## Environment Control System

- ❖ Air Handling Unit (AHU) is used to maintain Temperature, Co2 level, Humidity & De-humidity in the mushroom growing room.
- ❖ Recycling of fresh air in the growing rooms.
- ❖ Damper with actuator & filters are used to supply fresh air in the room.
- ❖ It works on R22 & R407 gases mainly.
- ❖ It comes in different capacity like 5.5ton, 11ton, 16.5ton & so on.





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## Air Handling Units

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## Cold Room Units

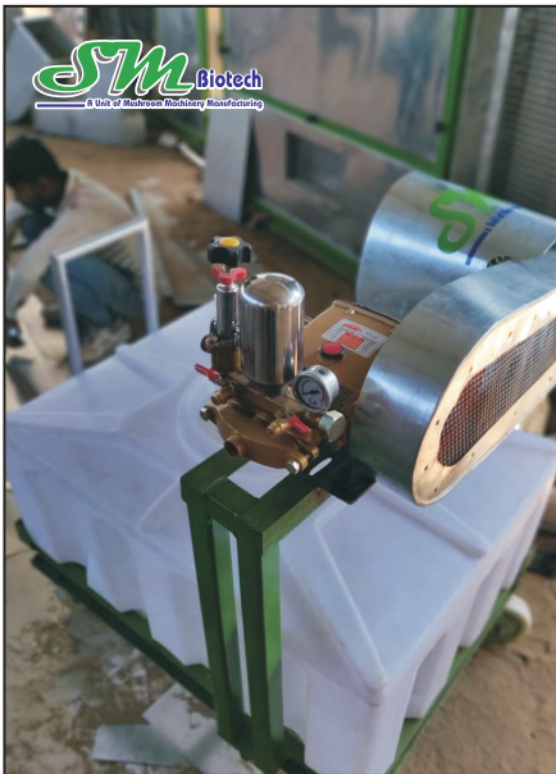
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## **Water Spray Machine & Sprayer Tree**

- ❖ Automatic machine to maintain humidity 80-85%
- ❖ Complete cure from water logging & excess watering as spraying water in fogging/mist form using spray tree.
- ❖ Easy to operate, reduce labor cost
- ❖ Low maintenance & high efficiency



## **Water Spray Machine & Sprayer Tree**

## **APFC & Distribution Panel**

APFC is an automatic power factor control panel which is used to improve the power factor, whenever required, by switching ON and OFF the required capacitor bank units automatically.

- ❖ Reduce reactive & apparent power demand
- ❖ Helps to avoid power factor surcharges & maximum demand penalties
- ❖ Reduce the risk of operational issues & power loss
- ❖ Improves power factor



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## Casing Blower & Steam Generator

Casing soil is a nutrient deficient medium, which helps in converting the vegetative phase into fruiting. Fruit bodies are formed in abundance and thus production is economical. It helps in conserving the environment in mushroom beds.

- ❖ Using steam generator, colour, texture, density & consistency is maintained
- ❖ Organic Process without use of any chemicals
- ❖ High productivity yield & less time consuming process

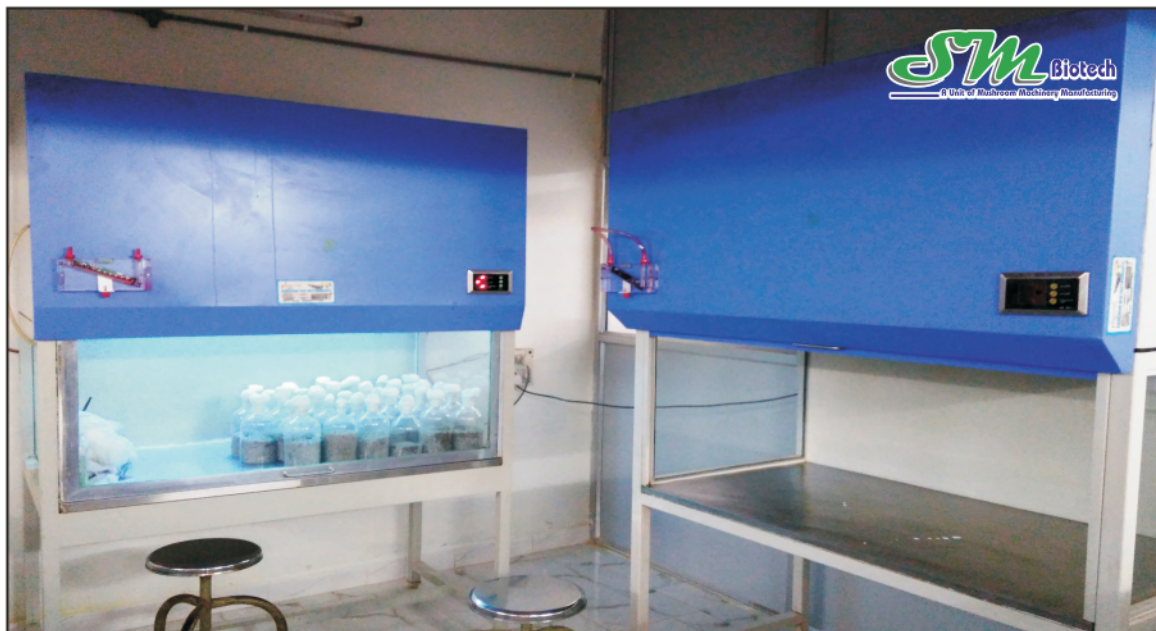


## **Spawning Lab & Equipments**

We assist you to install your own spawn lab to produce best quality of spawn. In Spawn lab formulation we provide all laboratory equipment and machinery such as Laminar air flow, Autoclave, Incubators etc. We also provide you trained personnel to produce mushroom spawn.

### **Laminar Air Flow**

The principle of laminar flow cabinet is based on the laminar flow of air through the cabinet. The device works by the use of inwards flow of air through one or more HEPA filters to create a particulate-free environment. HEPA (High-Efficiency Particulate Air) filters remove 99.97% of particles  $> 0.3 \mu\text{m}$ . The air flow velocity remains between 0.3 m/s to 0.5 m/s.



### **Laminar Air Flow**

**Autoclave:** Autoclave, also known as steam sterilizer, is the most effective machine for the sterilization of lab equipment, water, or media. The machine uses steam under pressure to kill bacteria, viruses, and spores present in/on the equipment or culture media.



**Autoclave**

**BOD Incubator:** BOD Incubator also known as Biological Oxygen Demand incubator. It is a special type of incubator which is used to generate an insular environment with a constant temperature of 20°C.



**BOD Incubator**

## **Mushroom Dryer:**

Mushroom Dryer or Oyster Mushroom Dryer is used for drying oyster mushrooms at optimum temperature, humidity for best quality product. The Dryer capacity available from 25 kg & up to 500 kg per day. Also, you can use this dryer for any kind of fruit or vegetable drying as per customization.



## **Mushroom Dryers**

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## **Industrial Storage Shed:**

We are the manufacturer of all types of industrial sheds which are used for different storages purposes in mushroom farming. Our sheds are designed by highly qualified engineers & are cost effective, highly durable and robust in nature.





## Composting & Industrial Sheds

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## **Completed Projects Globally**

1. Fater Suhail Al Ziraeia Company, Saudi Arabia  
**(300kg/day Mushroom Production)**
2. Ostrich Nepal Pvt Ltd, Gangolia, Nepal  
**(5ton/day Mushroom Production)**
3. Qian Yuan White Mushroom Enterprise, Hulu Langat, Selangor, Malaysia  
**(100kg/day Mushroom Production)**
4. Eastern Agro, Dhaka, Bangladesh  
**(Spawn Lab & Compost Unit)**
5. Bahrain Mushroom Farm, Kingdom of Bahrain  
**(100kg/day Mushroom Production)**
6. Wanja Kanyu, Nairobi, Kenya  
**(100kg/day Mushroom Production)**

## **Completed Projects in India**

### **Jammu & Kashmir**

1. Abhimanyu Mushroom Farm, Jammu, J&K, India  
**(1Ton/day Mushroom Production)**
2. Sheikh Zubair Mushroom Farm, Kanispora, Baramulla, J&K, India  
**(50kg/day Mushroom Production)**
3. Bhat Engineering, Srinagar, J&K, India  
**(200MT/Month Compost Production)**

### **Punjab & Haryana**

1. Indo Mushroom Farm, Yamunanagar, Haryana, India  
**(2Ton/day Mushroom Production)**
2. Funguys Foods Oyster Mushroom Farm, Tauru, Nuh, Haryana, India  
**(200Kg/day Oyster Mushroom Production)**
3. Mehta Agro Products, Bathinda, Punjab, India  
**(500kg/day Mushroom Production)**
4. HUSC Agro, Pathankot, Punjab, India  
**(100kg/day Mushroom Production)**

## Uttarakhand

1. Herbestar Mushroom Farm, Haldwani, Uttarakhand, India  
**(200kg/day Mushroom Production)**
2. The Himalayan Farms, Haldwani, Uttarakhand, India  
**(200kg/day Mushroom Production)**
3. Hemagiri Farm Pvt Ltd, Haldwani, Uttarakhand, India  
**(400kg/day Mushroom Production)**
4. King Mushrooms, Haldwani, Uttarakhand, India  
**(60MT/Month Compost Unit & Maintenance)**

## Uttar Pradesh

1. Red Giants Star Projects, Varanasi, Uttar Pradesh, India  
**(500kg/day Mushroom Production)**
2. Parth Mushroom Farm, Lucknow, Uttar Pradesh, India  
**(500kg/day Mushroom Production)**
3. Anantesh Pratap Singh Mushroom Project, Lucknow, Uttar Pradesh, India  
**(150MT/Month Compost Production)**
4. Kautilya Mushrooms, Meerut, Uttar Pradesh, India  
**(500kg/day Mushroom Production)**
5. Mushroomiyat, Meerut, Uttar Pradesh, India  
**(100kg/day Mushroom Production)**
6. Indian Potash Limited, Village Rohana, Muzaffarnagar, Uttar Pradesh, India  
**(Bio Compost Mixing & Bagging Machine)**

## Bihar

1. Deepak Mushroom Farm, Patna, Bihar, India  
**(100kg/day Mushroom Production)**
2. Organic World Mushroom Farm, Patna, Bihar, India  
**(100kg/day Mushroom Production)**

## Rajasthan

1. BMS Organic, Alwar, Rajasthan, India  
**(500kg/day Mushroom Production)**
2. Vikas Naga, Jaipur, Rajasthan, India  
**(50MT/Month Compost Production)**
3. MPUAT Composting Unit, Udaipur, Rajasthan, India  
**(45MT/Month Compost Production)**

### Jharkhand

1. Pure Foods, Ranchi, Jharkhand, India  
**(650kg/day Mushroom Production)**
2. Whitefarm Agrokart, Ranchi, Jharkhand, India  
**(100kg/day Mushroom Production)**
3. Neel Mushrooms, Tatanagar, Jharkhand, India  
**(200kg/day Mushroom Production)**

### Meghalaya

1. Sidharth Mushroom Farm, Mendipathar, Meghalaya, India  
**(Spawning & Bag Filling Machine & 50kg/day Mushroom Production)**

### Odisha

1. Sri Vijaya Ganapathi Mushroom, Parlakhemundi, Odisha, India  
**(400kg/day Mushroom Production)**
2. Ganga Bhumi Mushrooms, Nabarangpur, Odisha, India  
**(500kg/day Mushroom Production)**
3. Chandrama Mushroom Farm, Sonapur, Odisha, India  
**(500kg/day Mushroom Production)**

### Andhra Pradesh

1. CSPL PUREFIELDS Pvt Ltd, East Godavari, Andhra Pradesh, India  
**(500kg/day Milky Mushroom Production)**

### Karnataka

1. Kutelu Mushrooms Mangalore, Karnataka, India  
**(200kg/day Mushroom Production)**

### Tamil Nadu

1. Greenness Agro Farm, Tiruppur, Tamilnadu, India  
**(300kg/day Mushroom Production)**



## CONTACT US



7Km. Bhopa Road, Makhiyali  
Muzaffarnagar -251001 (U.P.) India



+91-8171599292 / 7037541005



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