

FAQS:

1: What is the world production of mushrooms?

World production of mushroom is growing and now exceeds three million tonnes worth a market value of US \$ 10 billion and *Agaricus bisporus* accounts for most of this production. Globally, mushrooms are traded mostly in processed form. However, lately fresh mushrooms are being preferred over preserved ones in EU and American countries. Major exporting countries of fresh mushrooms are Netherlands, Poland, Ireland and Belgium. China is the largest exporter of preserved mushrooms with a market share of 41.82%. Netherlands (25.11%) and Spain (7.37 %) are the other major countries. India ranks sixth with a market share of 4.44 %. The major importing countries of prepared and preserved mushrooms are Germany, USA and France while of fresh mushrooms are U.K, Germany, USA and France. India is also a prominent exporter of dried and preserved vegetables to the world. The country has exported 56,158.40 MT of dried and preserved vegetables to the world for the worth of Rs. 742.74 crores during the year 2013-14.

2: Write the Classification of Species:--- *A. bisporus*?

Kingdom-----[Fungi](#)

Phylum --[Basidiomycota](#)

Family:---- [Agaricaceae](#)

Genus:--- [Agaricus](#)

Species:--- *A. bisporus*

Agaricus bisporus is [cultivated](#) in more than seventy countries, and it is one of the most commonly and widely consumed mushrooms in the world.

3: What are the common types of mushrooms cultivated in India?

Three mushrooms are commonly cultivated throughout India namely button (*Agaricus bisporus*), Oyster (*Pleurotus* spp.) and paddy straw mushroom (*Volvariella volvacea*). Oyster mushroom (*Pleurotus* sp.) belonging to Class Basidiomycetes and Family Agaricaceae is popularly known as 'dhingri' in India and grows naturally in the temperate and tropical forests on dead and decaying wooden logs or sometimes on dying trunks of deciduous or coniferous woods. It may also grow on decaying organic matter. The fruit bodies of this mushroom are distinctly shell or spatula shaped with different shades of white, cream, grey, yellow, pink or light brown depending upon the species.

4: Mention in detail what are nutrients contents in white button and other mushrooms?

White button mushrooms, the popular ones has got following compounds,ie Niacin,Riboflavin,Folate,Phosphorus,Iron ,Panthothenic Acid,Zinc,Potassium,Copper,Magnesium,Vitamin B6,Selenium,Thiamin and Disease Fighting Properties.

- All mushrooms are an excellent source of the antioxidant Selenium which works with vitamin E to protect cells from damaging free radicals. Some studies also indicate that antioxidants are some of the best nutrients for preventing and fighting cancers. Like almonds, mushrooms are becoming more popular for their cancer-fighting and disease protecting properties.
- Shitake mushrooms in particular are also high in the beta-glucan Lentinan. Lentinan has been linked with strengthening the immune system and helping combat illnesses that attack the immune system like AIDS.
- In addition, mushroom extract has been linked to some treatments for both migraines and mental disorders.

5:Write notes on oyster mushroom and types?

Oysters are one of the most versatile mushrooms. They are easy to cultivate and common all over the world. They are also very beautiful, coming in a broad spectrum of colors.

• The name *oyster mushroom* is also applied to other [*Pleurotus*](#) species, *P. ostreatus* is sometimes called as the *Tree Oyster Mushroom* or the *Grey Oyster Mushroom* to differentiate it from other species in the genus. Other names may exist:

- Oyster Shelf
- Tree Oyster
- Straw Mushroom¹
- Hiratake ("Flat Mushroom" in Japanese)
- Tamogitake

6: Write notes on Beta-glucans?

Beta-glucans, found in numerous mushroom species, contribute to resistance against allergies . The beta-glucans contained in oyster, and other gill mushrooms are considered to be the most effective. Beta glucans are sugars that are found in the cell walls of bacteria, fungi, yeasts, algae, lichens, and plants, such as oats and barley. Beta glucans are used for high cholesterol, diabetes, cancer, and HIV/AIDS.. Beta-glucan refers to a class of soluble fiber, which can be found in many plants; for example, oats, wheat and barley.

7: Write flow chart on Cultivation of Mushrooms?.

Mushroom cultivation can be done by using agriculture waste from forest and industries. Those are easily available in the villages.

Cultivation of Mushrooms.

Flow chart

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Paddy straw chopping, fill up in gunny bag soaking in water (for 8-12 hrs)

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Drain off excess water

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Hot water treatment (for 30-60 min) drain off excess water

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Drying up to 60-70 % moisture Prepared bed layering of spawn Pinning the bed Spawn running

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Hanging of bed watering Pinhead stage Mature mushroom

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Remove the plastic bag pinhead appeared

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Harvesting of mushrooms packing of mushroom.

8: Write the different methods of Preservation of Mushrooms?eg Drying and preservation?

As with cooking it will often help to cut the mushrooms into bite sized pieces or slices prior to preserving them. There are a number of ways to preserve mushrooms which includes drying, freezing, pickling, salting, powdering, and a few more.

Drying and preservation. Fresh wild edible mushrooms have a short period during which they can be eaten or consumed. Owing to their perishable nature, they quickly deteriorate, rot, or shrivel up. On questioning local people about this aspect, it was realized that they consumed Proceedings of the 7th International Conference on Mushroom Biology and Mushroom Products (ICMBMP7) 2011 Section: Economical and societal features 572 large number of the mushrooms in fresh form and only a few are preserved after sun-drying, smoke drying or salting

9: Explain what is Pickling and Freezing Raw Mushrooms methods?

Clean the mushrooms.

Chop the mushrooms into slices or dice. You can always chop them up smaller when you use them. For now, just aim for pieces that are no more than 1/2-inch thick.

Spread the mushroom pieces in a single layer on a cookie sheet or large plate. It is okay if the pieces touch, but they should not overlap. Freeze for 2 hours.

Transfer the frozen mushrooms to freezer containers. Because they were frozen in a single layer first, the pieces will stay loose and individual in the containers.

Pickling - Mushrooms can be pickled using a standard pickling brine and pickling techniques. If you know how to pickle cucumber you know how to pickle mushrooms. Some people dress up their pickling brine by adding flavored vinegar, chilies, or spices to complement the mushroom's flavor.

10 : Mention what is mushrooms packed in oil?

Packed in Oil - Here is another process in which you use oil as a principal means of preserving the mushrooms. First, combine one cup of wine vinegar with 2/3 cup of water and simmer. Add in a few spices like salt, thyme, bay leaf, and so forth and then cook for about 15 - 20 minutes. Add in the mushrooms (cleaned and sliced) and simmer for another 10 minutes. Drain the mushrooms well and allow them to dry. Place the mushrooms in a sterilized canning jar and cover with olive oil. Seal the jar and place in a dark, cool, location. This process will allow you to preserve about one pound of wild mushrooms and the oil will take on the delicate flavor of the mushrooms. You may want to try using the oil in salad dressing.

11: Write notes on preservation of mushrooms by drying method?

Drying - If needed, remove any stalks or other tough parts and slice remaining pieces thin. Uniformity is not necessary but it does help. If you are using a dehydrator, place the slices on your racks and follow the manufacturer's instructions. You can dehydrate with your oven by placing the mushrooms on a cookie sheet lined with parchment paper. Set the oven's temperature to 150°, keep the door ajar and dry the mushrooms thoroughly. Some mushrooms can be dried by threading them with a needle and thread and then hanging them up to dry; a lot of people have done this with morels.

The key to drying is that you remove all moisture to avoid spoilage. Once dried the mushrooms can be placed in airtight containers and set into a dark place to avoid mold growing and spoiling them. If you are unsure as to whether or not the moisture is removed, store the containers in a freezer.

12: What is salting of mushrooms?

Salting - Preserving mushrooms in this way goes back many years and while not a real popular method throughout the U.S. is still used in many other countries. You will need to use a ratio of 3 parts salt to 1 part mushrooms for this process. (ex. 1 pound of mushrooms will require 3 pounds of salt.) Begin by cleaning the mushrooms thoroughly and slicing them rather thick. Using a covered glass jar, pour in a layer of sea salt, now

add a layer of mushrooms, pour salt over the mushrooms until covered and then add another layer of mushrooms. Continue this process until the jar is full, then cover. After several hours you will see the volume of mushrooms has diminished and that you can add more mushrooms and salt to the jar. Continue until full and then store in a cool location.

13: Write notes on health benefits of oyster mushroom?

The oyster mushroom is one of the few known carnivorous mushrooms. Its [mycelia](#) can kill and digest [nematodes](#), which is believed to be a way in which the mushroom obtains [nitrogen](#). The oyster mushroom is frequently used in [Japanese](#), [Korean](#) and [Chinese cookery](#) as a [delicacy](#).

The folic acid present in oyster mushrooms helps to cure anemia. It is suitable for people with hyper-tension, obesity and diabetes due to its low sodium : potassium ratio, starch, fat and calorific value. Alkaline ash and high fibre content makes them suitable for consumption for those having hyperacidity and constipation. A polycyclic aromatic compound pleurotin has been isolated from *P. griseus* which possess antibiotic properties.

14: What is Agaricus bisporus?

Agaricus bisporus is an edible basidiomycete mushroom native to grasslands in Europe and North America. It has two color states while immature – white and brown – both of which have various names. *Agaricus bisporus* is so common that its common name is simply "mushroom." It is cultivated by mushroom farmers to the tune of \$800 million each year. The common store mushroom, *Agaricus bisporus*, (also known as "commercial mushroom" and "button mushroom") was first cultivated on horse manure heaps in France in the 1700s. It is still grown this way. Until recently it was the main mushroom cultivated in the United States.

15: What is P. ostreatus mushroom?

Pleurotus ostreatus, the oyster mushroom, is a common edible mushroom. It was first cultivated in Germany as a subsistence measure during World War I and is and is now grown commercially around the world for food. *Pleurotus ostreatus* grows in the fall to early winter. The almost identical *Pleurotus populinus*, a recently described species, grows in late spring and occasionally. *Pleurotus ostreatus*, the pearl oyster mushroom, is a common mushroom prized for its edibility. Long cultivated in Asia, it is now cultivated around the world.