

MUSHROOM CULTIVATION AND THEIR HEALTH BENEFITS

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A well balance diet contains all essential nutrients which are necessary for good health, but there are certain dietary factors which go further than meeting our recommended dietary intakes. Mushrooms can serve as food, tonic, and medicine. Often grouped with vegetables, mushrooms provide many of the nutritional attributes of produce, as well as attribute more commonly found in beans or grains. Mushrooms are low in calories, fat-free, cholesterol-free and very low in sodium, yet they provide several nutrients that are typically found in animal foods or grains. Certain section of people consider mushroom to be non-vegetarian, whereas some people avoid mushroom thinking them to poisonous in nature. Mushrooms are known to have many health benefits. Filled with proteins, vitamins, minerals, amino acids, antibiotic and anti oxidants, mushrooms are highly nutritious. This delicious edible fungus is used extensively for all kind of dishes, from soups to pizzas and from salads to pickles. Here are the types of mushrooms and their health benefits including their nutritional values:

1. White Mushroom:

White mushroom contains selenium which aids in weight loss and prevent prostate cancer. These mushrooms have special carbohydrate that gives a strong metabolism rate and maintains equal blood sugar levels.

2. Shiitake Mushroom:

Shiitake mushrooms have the potential to fight tumors, as they have high amount of lentinan, which is a natural antitumor compound. These mushrooms are excellent source of vitamin D and helps in fighting infections.

3. Oyster Mushroom:

They have significant level of zinc, iron, potassium, calcium, phosphorus, vitamin C, folic acid, niacin, vitamins B-1 and B-2. It has a high anti-oxidant compounds and is known to save us from variety of diseases and helps us in beating stress.

4. Reishi Mushroom:

Reishi mushroom are having anti-cancer, anti-oxidant, anti-bacterial, anti-viral and anti-fungal properties. These mushrooms contain gandermic acid which helps reduce bad cholesterol which in turn can lower high blood pressure

5. Shimeji Mushroom:

They can fight tumors. They can also help diabetes, asthma and certain allergies by enhancing the immune system and boosting its healing capabilities. They are high in essential nutrients such as zinc, copper, manganese and Vitamin D.

6. Maitake Mushroom:

Maitake mushroom are good for preventing breast cancer. They are known to cleanse our body system and also keep our immune system strong

7. Chanterelle Mushroom:

They are good for our eyes, lungs and make our immune system strong. These mushrooms have anti-microbial, bacterial and fungal properties. They are also high in vitamin C, D and potassium.

8. Porcini Mushroom:

They are known to be anti inflammation and contain the compound called ergosterol which is capable of fighting against infection causing diseases. They are high in calcium & also have high fiber content and avoids us from having constipation.

MUSHROOM CULTIVATION

Mushrooms grow from microscopic spores that take root in a substrate, or growing medium. These are various steps which we need to focus on during mushroom cultivation:

Choosing Mushroom Spawn and Substrate: Decide what type of mushroom to grow. Purchase spawn. White button mushrooms are hardy and produce plenty of "fruiting bodies."



I. Source the right kind of substrate: To grow mushrooms, you will inoculate substrate with an injection of mushroom spawn. Mushroom growing kits come with pre-mixed "grow bags," which you inoculate with spawn through a small hole. The mushrooms grow directly in the bags, and you cut off the top of the bag to harvest them. White button mushrooms need composted manure substrate. Oyster mushrooms need straw substrate

II. Creating the Optimal Growing Environment: To grow them in your home, a temperature of between 55 and 60°F is required. If your house gets hot during summer, consider growing mushrooms in the winter instead, to make sure the mushrooms don't get overheated.

III. Create a humid environment: Mushrooms need a high air moisture level to thrive. Dark and humid environments can lead to mold growth and attract insects. Different types of mushrooms

require slightly different growing conditions.

IV. Inoculating the Substrate and Monitoring Mycelium Growth: Inoculate the substrate with spawn. The spawn should have come in a plastic syringe. Remove the cover and inject the spawn into the substrate. If you're using a mushroom kit with a grow bag, place the syringe needle into the small hole on the front of the bag. If you're using a tray filled with substrate, use the syringe to inject the substrate in several places. Keep the substrate warm for two weeks. For the first stage of its growth, mushroom spawn must be kept at a temperature of about 70 °F (21 °C). This encourages the growth of mycelium, the white, feathery roots that will eventually produce mushrooms. Don't let the heat rise above 70°F, since higher temperatures can kill the spores. Keep the substrate at this cooler temperature for the remainder of the growing cycle. Cover with an inch of soil or moss. When

the delicate webbing of mycelium has formed, it's important to protect it with a layer of soil or peat moss. Place a layer of newspaper or a thin cloth over the layer of soil or moss. Keep the top layer moist for at least ten days. Don't over water. After 10 days, remove the cloth or newspaper. Continue misting the soil or moss underneath twice daily until you see pinheads or tiny mushrooms, begin to sprout.

V. Harvesting the Mushrooms: Pick the mushrooms when they have grown to full size. The pinheads will develop into full-sized mushrooms; pick them when they've reached the size you deem to be mature. After you pick the first fruiting, the mushrooms will fruit again. There are usually more mushrooms the second time. Pick these when they're mature. The cycle will continue for three to four months until the supply has been exhausted.

Conclusion

Mushroom cultivation has become a profitable business with the produce fetching good returns in the market because of the rise in demand for edible mushrooms. The health benefits of mushrooms include relief from high cholesterol levels, breast cancer, prostate cancer, and diabetes. It also helps in weight loss, and increases the strength of your immune system. A regular intake of mushrooms can make you healthier, fitter, and happier.

