## Nutritional and Medicinal value of Mushroom

Mushroom is a healthy diet which is suitable for child to adults. Protein, fiber, vitamin and minerals are found in abundance. Fresh mushroom contains 80-90% water, protein 12-35%, carbohydrate 26-82% and fiber 8-10%. Fiber found in mushroom is digestible. Detils of nutritive elements found in mushroom are as follows:

**( 100 gm mask maat mushroom)**

| Variety of Mushroom | Protein | Fiber | Carbohydrates | Fats | Minerals | Energy (kilocalories) |
|---|---|---|---|---|---|---|
| White Button Mushroom | 33.48 | 20.90 | 46.17 | 3.10 | 5.70 | 499 |
| Plorotus Sajor kaju | 19.23 | 48.60 | 63.40 | 2.70 | 6.32 | 412 |
| Plorotus Oestritus | 30.40 | 8.70 | 57.60 | 2.20 | 9.80 | 265 |
| Dhan Puaal Mushroom | 37.50 | 5.50 | 54.80 | 2.60 | 1.10 | 305 |
| Dudhiya Mushroom | 17.69 | 3.40 | 64.26 | 4.10 | 7.43 | 391 |
| Shitake Mushroom | 32.93 | 28.80 | 47.60 | 3.73 | 5.20 | 387 |
| Winter Mushroom | 17.60 | 3.40 | 43.10 | 1.90 | 7.40 | 378 |
| Black Ear Mushroom | 4.20 | 19.80 | 82.80 | 8.30 | 4.70 | 351 |

## Medicinal Quality

Mushroom develops the immunity system of the body. It maintains the health and reduces the possibility of cancer. It prevents the growth of tumor and balance the blood sugar. Mushroom is beneficial in following diseases.

- Heart Disease.
- Diabetic patient and obesity
- Cancer resistant

**Medicinal value of Mushroom**

| Mushroom | Element | Medicinal Value |
|---|---|---|
| Ganoderma lucidium | Ganoderic acid beta gkucon | Strengthen the immunity system. Protects liver. Its antibiotic nature prevents formation of cholesterol. |
| Lantinula edodus | Eritadanine lentinun | Helps in reducing cholesterol. Cancer resistant. |
| Agaricus bisporus | Lactinus | Increases secretion of insulin |
| Plurotus saroj kaju | Lovastatin | Helps in reducing cholesterol. |

| | | |
|---|---|---|
| Ganoderma frondosa | Polysacharide lectin | Increases secretion of insulin. Reduces quantity of glucose in blood. |
| Auric laria Aurikula | Acidic pelikerides | Reduces quantity of glucose in blood. |
| Curdisaves sinensis | Cordicipin | Helps in reducing tension. Keeps the cells healthy. |
| Tranentis vircircular | Pelikerides K(Crasin) | Immunity and Reduces tension |
| Flamulina valutips | Argathayanin proflamin | Antioxidant, Resistance to Cancer |

**Annual Crop Cycle**

Temperature favorable for vegetative growth of different variety of mushroom and different stages of crop is different which is clear from the table given below. Hence mushroom can be grown round the year by changing the crops.

**Favorable Temperature for growing Mushroom**

| SN | Scientific Name of Mushroom | Prevalent Name | Favorable Temperature Degree Centigrade | |
|---|---|---|---|---|
| | | | Spreading of seed | Function |
| **1** | Agaricus bisporus | Shwet Button Mushroom | 22-25 | 14-18 |
| **2** | Agaricus bitorcis | Grishimkaleen Shwet Button Mushroom | 28-30 | 25 |
| **3** | Plurotas eringi | Karbul Dhinghari | 18-22 | 14-18 |
| **4** | Plurotas flavilatus | Dhinghari Mushroom | 25-30 | 22-26 |
| **5** | Plurotas florida | Dhinghari Mushroom | 25-30 | 18-22 |
| **6** | Plurotas sarojkaju | Dhinghari Mushroom | 25-32 | 22-26 |
| **7** | Calosiby ndica | Dudhiya Mushroom | 25-30 | 30-35 |
| **8** | Valverilla valvasia | Puaal Mushroom | 32-35 | 28-32 |
| **9** | Aurikuleriya Variety | Black Iyer Mushroom | 20-35 | 12-20 |
| **10** | Luntinula Indodus | Shitaake Mushroom | 22-27 | 15-20 |

**Farming of White Button Mushroom (from October to February in winter season)**

**Method of cultivation**

**Preparation of base material**

For mushroom farming, wheat straw are filled in bags and soaked in clean water for a night. If required, 7 gram carbandazim (50%) and 115 ml farce line is mixed in 100 liter of water. The straw is taken out and separated from

additional water. When approximately 70% moisture is remained, it is ready for casing.

**Casing**

In white button mushroom farming, casing is done like dhingari mushroom but the space requirement is double (5-6%) of that of dhingari mushroom. No holes are formed in the bags after casing. The temperature should be around 28-32 degree Celsius after casing and then after the bags are kept in a crop room.

**In white button mushroom farming, casing is done like dhingari mushroom but the space requirement is double (5-6%) of that of dhingari mushroom. No holes are formed in the bags after casing. The temperature should be around 28-32 degree Celsius after casing and then after the bags are kept in a crop room.**

After 20-25 days of casing, the fungus is spread uniformly in the whole bag. Open the mouth of bag and spread 2-3 inch thick layer of cover soil on the upper surface of the straw. Then after, sprinkle water over the cover soil in such a manner that only half of the cover soil is wet. After 20-25 days of putting the cover soil, pin heads of mushroom starts appearing over the cover soil. At this time, the temperature of the crop is maintained at 32-35 degree and humidity at 90% and becomes ready for harvesting in next 3-4 days.

**Yield**

Yield is bout 70-80% of the weight of straw.

**Mushroom of Paddy Husk (Valvarialla Variety)**

This mushroom is also called as Chinese mushroom or summer mushroom. The farming of this mushroom was started for the first time in1822 in China. Its cultivation in India is done in the state of Est Bengal, Orissa, Karnataka, Tamilnadu and Andhra Pradesh situated on the sea shore. At present, its farming in plains is done often in the month of July to September.

**Source of Obtaining place for Mushroom Farming**

Quality space is very essential for mushroom farming for which following sources cn be contacted:

- Department of Plant Pathology, CSA University of Agriculture and Technology, Kanpur.
- Department of Plant Pathology, Govind Vallabh Pant University of Agriculture and Technology, Pant Nagar, Udham Singh Nagar, Uttarakhand.
- Department of Plant Pathology, Rajasthan Agriculture University, Udaipur, Rajasthan.
- Department of Plant Pathology, Mahatma Phule Agriculture Vidyapith, Pune, Maharashtra.
- Department of Plant Pathology, Haryana Agriculture University, Haryana.

**Mushroom Training**

Training is an important part of mushroom production because no one cultivate mushroom successfully without training. Following center can be contacted to get knowledge of right material in right quantity:

- National Mushroom Research Center, Solan, Himanchal Pradesh
- Department of Plant Pathology, CSA University of Agriculture and Technology, Kanpur 208002. Training program is being run in some state under All India Integrated Mushroom Development Project which is as follows:
- Department of Plant Pathology, Indira Gandhi Agriculture University Raipur, Chhattisgarh.
- Department of Plant Pathology, IISR, Bangalore, Karnataka.
- Department of Horticulture, Meghalaya, Shillong.
- Directorate of Horticulture, Ita Nagar, Arunachal Pradesh