

Mushroom Cultivation as an Income Generator for Farmers

Arti Sharma¹

Department of Agriculture, Guru Nanak Dev University, Amritsar, Punjab-143005, India

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Mushrooms are edible fungus and are a protein-rich food source for the major population. Mushrooms are termed super food owing to its many nutritional benefits. Besides its nutritional value mushrooms have been used for its medicinal properties recently. For example, it is a perfect food for diabetic patients as it has zero sugar. In addition to this there are some other medicinal properties of mushrooms. It is very good for stomach related ailments, ergothioneine that has shown to have neuroprotective effects can help to improve cognitive function and reduce the risk of age-related cognitive decline, have anti-inflammatory properties etc,. Mushrooms as a food have so many advantages, as well as mushroom cultivation also has many advantages because unlike conventional farming, which requires land, high cost of cultivation and use of machinery, mushroom cultivation requires low investment, minimum training, and yields quick returns. In addition to this, it can be done indoors and requires a very small area of land, and they may be produced on a variety of cheap agricultural or forest wastes, including as sawdust, corncobs, and rice straw. Therefore, mushroom cultivation can act as an alternate source of income for farmers which will ensure financial stability in farmers.

There are mainly five species of mushrooms grown in India i.e., White button mushroom, Oyster mushroom, Paddy straw mushroom, Shiitake mushroom and Milky mushroom. Considering the market demand, Button mushroom is the best option. Demand of Button mushroom is very high among customers as compared to other species owing to their mildest flavour, and ability to readily absorb the flavours that they are cooked with. Although it can only be grown in its growing season from October to February, and small farmers cannot afford the high-tech setups to produce it throughout the year, it is a safe option because of the market demand. Some farmers also prefer to cultivate Oyster mushrooms, they consider Oyster mushrooms a better option for two reasons: - 1. It can be grown throughout the year. 2. It requires very simple production techniques. In India, the maximum production

is of button mushroom followed by Oyster mushroom. Out of the total mushroom produced, white button mushroom share is 73% followed by oyster mushroom (16%), paddy straw mushroom (7%) and milky mushroom (3%). (Ved P Sharma, et.al.,)

Considering mushroom cultivation as an alternate source of income, the farmer's attention always came on how much profit he could make and how much he would have to spend. Research conducted on the cost-benefit ratio of small, medium and large farms of mushrooms indicates that on an overall basis, the total cost involved in cultivation of button mushroom is ₹463/sq.m. Bed area spawned for small farms. The mushroom yield in small farms as per data is 7.04 kg/sq.m. On average, the net profit is expected to be ₹163/sq.m. of spawning area. According to economic research, economies of scale caused non-recurring and recurrent expenses per square metre of bed area to decrease as mushroom farm size increased. The reason why medium mushroom farms have better gross returns is because large mushroom farms have higher net returns due to lower cost and a relatively higher average price realisation. Large mushroom farms have the highest input-output ratio (18.1), followed by medium (1.47) and small (1.35) mushroom farms. (Rajdeep Singh and J M Singh (2018). This cost of cultivation decreases with the increase in the size of farm and ultimately net profit increases that's why mushroom growers should be educated about the farm-size economies of mushroom growing.

Engagement of youth into these kinds of farm businesses is another positive outcome. Research states that more than half of the respondents used as subjects during research held were graduate or postgraduate degrees. (Mahantesh Shirur *et.al.*2020). Because so many young people choose to cultivate mushrooms in the study region in Karnataka, the Central Government's "Attracting and Retaining Youths in Agriculture (ARYA)" programme has chosen this activity as one of the preferred options to be addressed on a priority basis. In Punjab state also free skill training for mushroom cultivation is provided by the government. Many other states like Himachal Pradesh, Kerala etc., provide a 50% subsidy to the one who is willing to start a mushroom farm. Other Govt. Subsidies for Mushroom Cultivation in India came under RKVY Scheme 2021-22 which offers financial assistance for Mushroom cultivation via 5 programs as follows:

- ✚ **Program 1** Small Scale Mushroom Production Unit – Subsidy up to 40% of the total cost of Rs. 28,125/unit. However, the max limit is – Rs. 11, 250/unit.

- ✚ **Program 2** Hi-tech Milky Mushroom Production Units – Subsidy up to 40% of the cost of Rs. 2.50 lakh/unit. However, the max limit is Rs. 1.00 lakh/unit.
- ✚ **Program 3** Minimal Processing and Value Addition Units of Mushroom – Subsidy up to 40% of the total cost of Rs. 1.00 lakh/unit. However, the maximum cost of Rs. 0.40 lakh/unit.
- ✚ **Program 4** Small Scale Mushroom Spawn Production Units – Subsidy up to 40% of the entire cost of Rs. 5.00 lakh/unit. However, the maximum cost is up to Rs. 2.00 lakh/unit.
- ✚ **Program 5** Vermicompost Units for Compost Production – The final total cost of creating compost of dimensions is 30'x8'x2.5' with a cost of Rs. 1.00 lakh. However, this scheme provides subsidies up to 50% of the cost of Rs. 0.50 lakh (which shall be based on size or even a pro-rata basis).

The expansion of the mushroom market is a testament to the achievement of this industry. The size of the world mushroom market was 14.35 million tons in 2020. The market is expected to grow from 15.25 million tons in 2021 to 24.05 million tons in 2028. The mushroom market is growing rapidly due to their pleasant aroma, fine taste, nutritional value and special flavour. The expansion of the mushroom market is also influenced by other factors such as the growing demand for healthy and organic foods, awareness of the health benefits of mushrooms and the growing popularity of vegetarian and vegan diets. Many exotic preparations are made from them like soup, pickles, vegetables etc. It is also used for stuffing several food preparations and for garnishing. Mushroom market is categorised on the basis of its application into; fresh mushroom and processed mushroom. Fresh mushrooms dominate market growth in 2016. Applications of processed mushroom include; dried mushroom, canned mushroom, frozen mushroom and others. Mushroom market growth is anticipated due to increasing demand for processed food.

References

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