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Mushroom Cultivation in India: A Boon for Diversification, Health and Sustainability

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Mushroom cultivation offers diversification and addresses the challenges of quality food, health, and environmental sustainability. India has seen a recent surge in commercial mushroom farming, with several states, including Haryana and Maharashtra, leading in production. Notably, button, oyster, paddy straw, and milky mushrooms are recommended for year-round cultivation.



Mushrooms are well-suited to supplement diets which lack proteins and, in a sense, they are rightly called “vegetable meat”. Carbohydrate and fat contents of edible mushrooms are quite low. Mushrooms have a high percentage of water 93-95% as compared to raw

beef (70%) and fresh vegetables (92%). The absence of starch in mushrooms makes it an ideal food for diabetic patients and for persons who want to shed excess fat. Mushrooms are low in

Mushroom farming provides an additional income source for farmers, especially those facing low returns from traditional agriculture. Its low land requirements make it accessible to individuals with limited space, contributing to income generation and environmental benefits through the efficient utilization of waste materials.

Benefits of Mushroom

1. Nutritional Benefits

calories, fat-free, cholesterol-free and very low in sodium.

2. Medicinal Benefits

More than 100 medicinal functions are produced by mushrooms and fungi and the key medicinal uses are antioxidant, anticancer, antidiabetic, antiallergic, immunomodulating, cardiovascular protector, anticholesterolemic, antiviral, antibacterial,

antiparasitic, antifungal, detoxification, and hepatoprotective effects;

3. Economic Benefits

Mushroom cultivation is a space confined technology and requires marginal investment. It utilizes agricultural residue as substrate for mushroom production. Cultivation of mushrooms is a source of national income, as well as means of poverty alleviation. Well as in marketing activities as labour-intensive management and offering opportunities for processing enterprises. Mushroom farming needs low capital, low technical knowledge and even in an indoor setting it is possible to cultivate mushrooms in their homes like rearing poultry with a little capital Therefore mushroom cultivation not only empowers rural women but also alleviates poverty from the grass root level.

4. Environmental Benefits

Mushrooms play an important ecological role in the management of ecosystems. Indirect mushroom cultivation is a bioconversion process of organic substances which provides opportunities for the recycling of organic matter thus reducing pollution substances used in mushroom cultivation are applied as organic manures to the land after harvesting of mushrooms. Mushroom cultivation is an appropriate technology for management of agricultural and agro-industrial residues.



Mushrooms Value-Added Products

Trending mushroom products available on markets are snacks, fried mushrooms, burger, pastry, nuggets, popcorn, pickles, biscuit, ketch-up, soup powder and candy.

Opportunities

Mushroom production in India holds significant promise due to a growing demand stemming from the nutritional and medicinal benefits of mushrooms. The rise in health-conscious diets has made mushrooms an appealing choice. What makes this opportunity even more attractive is the low initial investment and the potential for high returns in a short period, making it an excellent option for income diversification among farmers. Mushroom cultivation's adaptability to small-scale and indoor setups enables those with limited land resources to participate. Moreover, it promotes sustainable agriculture by utilizing agricultural and industrial waste as substrates. This environmentally friendly practice not only addresses waste recycling but also creates job opportunities, particularly in rural areas, empowering women and alleviating poverty. Additionally, the mushroom market extends beyond fresh produce, with a growing demand for value-added products like snacks and soups. Some Indian states offer government initiatives and incentives, further propelling the expansion of mushroom cultivation. In essence, mushroom production in India caters to dietary, economic, and environmental needs, making it an enticing prospect for individuals exploring opportunities in the agriculture and food sectors.

Challenges of mushroom production in India

Key constraints in the mushroom industry in India include the unavailability of raw materials like spawn

and compost, complex loan procedures, insufficient government support, limited awareness of nutritional value, inadequate technical guidance, production fluctuations, perishable nature, transportation challenges, cumbersome compost preparation, lack of cold storage, and quality spawn. Furthermore, poorly organized markets, limited financial assistance knowledge, concerns about mushroom poisoning, and inadequate preservation and recipe information are major hindrances to building a sustainable mushroom industry.

Conclusion

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Mushroom cultivation in India offers numerous benefits, including nutritional value, medicinal properties, economic opportunities for farmers, and positive environmental impacts through organic waste recycling. It empowers rural communities and provides a source of income. However, challenges such as limited access to raw materials, complex loan procedures, lack of government support, and insufficient awareness hinder its growth. Addressing these challenges is essential for building a sustainable mushroom industry in the country.