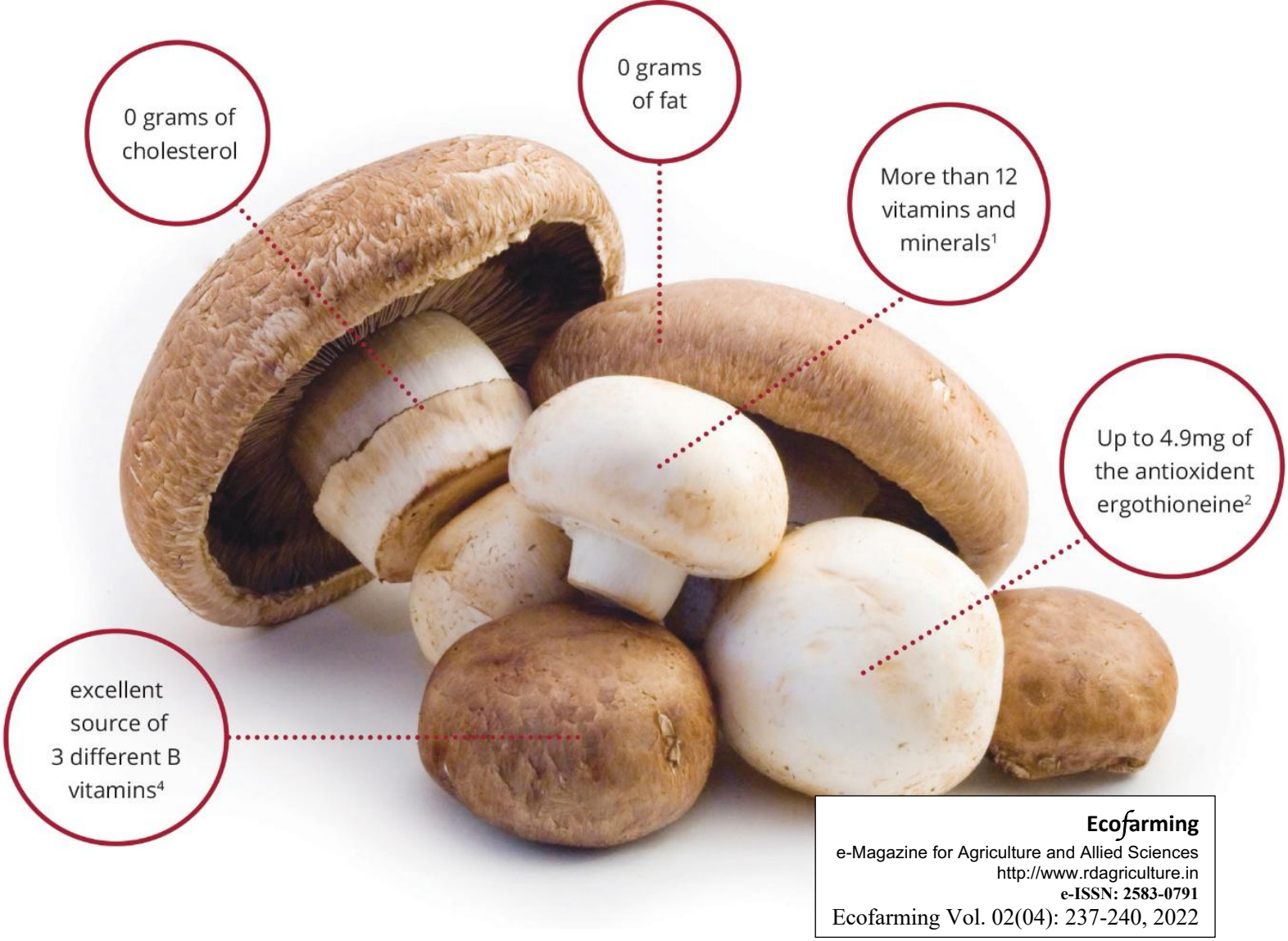

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Mushroom Cultivation

an Economic Serendipity for Rural and Environmental Sustenance

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There are over 200 genera of macro fungi which are of species useful to people. Out of which 12 species are commonly grown for food or medicinal purposes, across tropical and temperate zone. Mushrooms have seen reducing vulnerability to poverty and strengthens livelihoods through the generation of a fast yielding and nutritious source of food and a reliable source of income.

Mushroom cultivation requires negligible land acquisition for its growth and cultivation thereby making it more acceptable and reasonable mode of income generation. Small scale produce does not include any significant capital investment, being prepared from any clean agricultural waste material, and mushrooms can be produced. Being very environment sustainable, the recycling of organic matter becomes easy and feasible to be used as fertilizer.

For nations like ours (India), In 2019, India had 6.2 crore more people living with food insecurity, which increased by 3.8% between 2014 and 2019. In 2020, India is home to nearly 200 million undernourished people where malnourishment has become a big impedance in growth and development, to resolve the health consequences mushroom can be a valuable addition to the balanced diet. As Fresh mushrooms have a high-water content, around 90 percent, so drying them is an effective way to both prolong their shelf-life and preserve their flavour and nutrients. Niacin, riboflavin, thiamine, folate, and other vitamins B, C, and D are all abundant in mushrooms, minerals with no starch but high levels of potassium, phosphorus, calcium, magnesium, iron, and copper. These minerals supply carbs but are poor in fat and fibre. Furthermore, white button mushrooms have a higher protein content than kidney beans, and edible mushrooms are a fantastic source of high quality protein (reportedly between 19 and 35 %). Some mushrooms provide therapeutic effects of specific polysaccharides in addition to all the necessary amino acids, which are recognised as immune system boosters.

Farmers have invested in increasing their mushroom output as a result of the advantages of growing and selling mushrooms, which have allowed them to purchase livestock (chickens and goats), pay for school expenses, and buy home items. Additionally, the household has benefited from better nutrition. (Most households, even those with cattle, consume little animal protein.) Income from mushrooms can complement cash flow, offering either:

• a safety net during tumultuous times to keep individuals from sinking deeper into poverty;

• a fill-in activity that promotes communication

Improved nutrition and more income generally alleviate poverty; alternatively, a stepping stone work to alleviate poverty or perhaps pull people out of it forever income and generally make poverty more bearable through improved nutrition and higher income; or • a stepping stone activity to help make people less poor, or even permanently lift them out of poverty.

Trade in cultivated mushrooms can provide a readily available and important **source of cash income - for men and women and**

the old, infirm and disabled women's empowerment through mushroom production by giving them the opportunity to gain farming skills, financial independence and self-respect.

Women involved in cultivation supporting her family

Farmer during lockdown grew mushroom and helped his family

Poaching is a common consequence of poverty, enabling people aware about the nutrition aspect, textural aspect which is somehow relatable to meat environment sustainability impact and reducing carbon sequestration, mushroom has a very divergent role to play and conserve the slipping animal lives.

In the past 15 years, "citizen scientists" and fungi aficionados have used mushrooms to clean up oil spills in polluted soil in the Amazon, boat fuel pollution in Denmark, and New Zealand, as well as polychlorinated biphenyls, or PCBs, in the Spokane River in Washington state. According to research, mushrooms can eliminate heavy metals, change pesticides and herbicides into more benign substances, and metals from abandoned buildings and decompose plastic. Even heavy metals from tainted water have been recovered and removed using them, referring to the web-like arrangement of fungus species' roots. Mycologists focus on the mycelium," he says Mycelia ingest its nourishment from the outside by secreting potent enzymes that disassemble molecules.

In other words, whatever surface or substrate they are growing on is "digested" by them, becoming nutrients and mushrooms that are edible, depending on the substrate. Growing mushrooms will simultaneously address the accumulation of trash and the creation of proteinaceous food, two of the world's key challenges. In the past, agriculture ministries of poor nations have not frequently actively promoted mushrooms. This neglect has been attributed to a number of factors, including: a dearth of technical expertise in production methods with advisory services provided by the government that are underfunded result in interested farmers having comparably few studies on tropical mushrooms, a dearth of technological know-how to independently seek out technologies, and create spawn with the appropriate strains. The market can present an additional constraint in some regions as the prices of mushrooms are out of the range of most local consumers and unable to compete with other protein sources like beef, beans or eggs for a place in the average family diet.