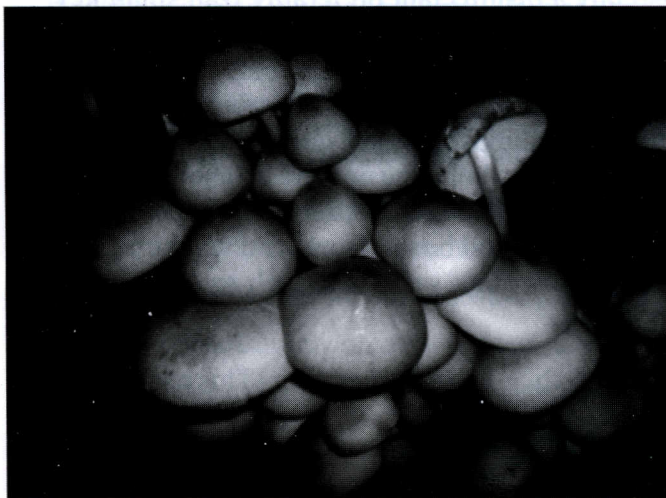


# MUSHROOMS AND THEIR NUTRITIONAL AND MEDICINAL VALUES

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*Volvariella volvacea* (Straw/oil palm mushroom)

Since the establishment of the National Mushroom Development Project in Ghana in 1990, over 6,000 mushroom farmers have been trained in the cultivation of local and exotic mushrooms and are producing for the local market in Ghana. *Volvariella volvacea* (straw/oil palm mushroom), *Pleurotus* spp. (oyster mushroom), *Auricularia auricula-judae* (wood ear mushroom) and *Ganoderma lucidum* (monkey seat mushroom) are cultivated by farmers for sale.

In the countryside and forest regions, *Volvariella volvacea*, *Termitomyces letestui*, *T. microcarpus*, *T. schimperi*, *T. robustus* and *Coprinus disseminatus* are collected for consumption and sale during the onset of the rainy season when mushrooms are abundant. However, **scarcities during the off season as a result of excessive deforestation and bush burning have necessitated domestication and mushroom farming.**

Mushroom cultivation requires little water, no arable land, and involves converting agricultural and forestry wastes to fertilizer and soil conditioners. It is income generating.

Mushrooms until recently remained largely unknown, unidentified, understudied and under-reported in the forest reserves of Ghana. They are generally considered only as an ingredient or complement to various dishes and called the “meat for the poor”. Their utilization was constrained by the relative availability of animal protein from animal husbandry, bushmeat and fish.

However, the importance of mushrooms is increasing as a source of food because they have a pleasing flavour, fine texture, and adequate protein content as well as numerous health benefits. The demand for mushrooms in some industrialised countries such as Japan and China has increased considerably as more affluent people consume mushrooms to improve their health status.

Edible mushrooms contain large amounts of good quality protein consisting of all nine amino acids essential for humans and are especially rich in lysine and leucine, which are lacking in most staple cereal foods. In general, the protein content of fresh mushrooms is about twice that of vegetables, four and twelve times that of oranges and apples, respectively. They are known to be nutritious with mineral content (P, K, Fe, Folic acid) higher than that of meat or fish and most vegetables. Mushrooms also contain vitamins such as thiamine, niacin, biotin and ascorbic acid. They are full of flavour, delicious and can be used in variety of dishes.

Some mushrooms have been discovered to contain ingredients that could be used for the production of new drugs, treatment of cancers and threatening diseases from viruses. Several species have a definitive effect on blood pressure and tumours. They stimulate the formation of a body chemical that fights viral infection and cancer. They have very low calories, carbohydrates, fat, calcium and salt content which make them very good for those with



kidney and heart ailments and hypertension. **They contain certain compounds which are anti-cancerous, anti-viral, and anti-hyper/hypotensive.**

Mushrooms are ideal food for diabetics and overweight people. The sclerotium of *Pleurotus tuber-regium* is known to alleviate heart problems/heal heart palpitation, diabetes, small pox and lower blood pressure.

It has outstanding mitigating qualities for hypertensive patients and improves lactation in breast feeding women. It can also improve the health conditions in underweight babies, and those who suffer convulsions do obtain considerable reliefs. *Auricularia auricula-judae* reduces total cholesterol level while *Ganoderma lucidum* is known to be used for treating breast cancer, skin infections, boils, abscesses and tumors. Refined mushroom extracts, can be consumed in the form of capsules, tablets, soft drinks or dietary supplements and have excellent healing applications.

Mushrooms convert agricultural and forestry wastes (sawdust, root and tuber wastes, plantain/banana leaves, etc) into food and other useful products. If the amount of sawdust, burnt at the saw mills, root and tuber wastes left to rot in the fields could be properly made use of to grow mushrooms, a million tons of mushrooms for table would be produced and millions of organic fertilizers from spent composts made available to local farmers.

The government led by the Ministry of Environment, Science, and Technology and the Council for Scientific and Industrial Research could develop programs to teach all prospective mushroom farmers, especially women, to utilize the several agricultural wastes, in mushroom production on a large scale. In doing so, households, particularly those in rural communities, would have improved benefits from enhanced nutrition, better health status and incomes.

In our next article we will expose readers to the specifics of what to do as a starter in mushroom farming. It is a cost effective venture that requires little capital to begin.



*Termitomyces schimperi* (Sibre)



*Termitomyces letestui* (Tweaworodo)

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