The Untapped Mushroom Potential

Mushrooms are a member of organisms known as fungi. The term mushroom refers to the visible part of the fungi, the fruit body.

There is very high demand for mushrooms especially the button type, Kenya importing up to 80,000 tones to satisfy its tourist industry.

This is high value crop with great potential for income generation and enterprise diversification.

Its cultivation is a lucrative activity that requires little space, few inputs and no arable land. This makes it a viable and attractive enterprise for both rural farmers and peri -urban dwellers.

Mushroom cultivation failed in the early times due to their complex nature. Their biology was not well known but their ecology was known; thick trunks of hardwood were covered with soil in the hope of a future harvest!

The Chinese people were the first to grow mushrooms professionally in the thirteenth century. To date, many wild species are being collected for consumption than are being cultivated but there is a growing interest in cultivation to replace wild harvest.

Besides the indigenous mushrooms that are popular in western Kenya, four exotic species are currently grown and consumed in Kenya. These include the world most popular mushroom, the Button (*Agaricus bisporous)*, the Oyster (*Pleurotus spp*), Shiitake (*Lentinula edodes*) and Reishi (*Ganoderma lucidun*), the latter two being grown on a small scale for their medicinal values.

Some species of mushrooms can be grown in simple structures such as a mud house that does not require heavy capital investment/or expertise to construct. Urban dwellers can grow the crop in their backyards. It is therefore ideal for the Kenyan situation where declining land size is a major problem.

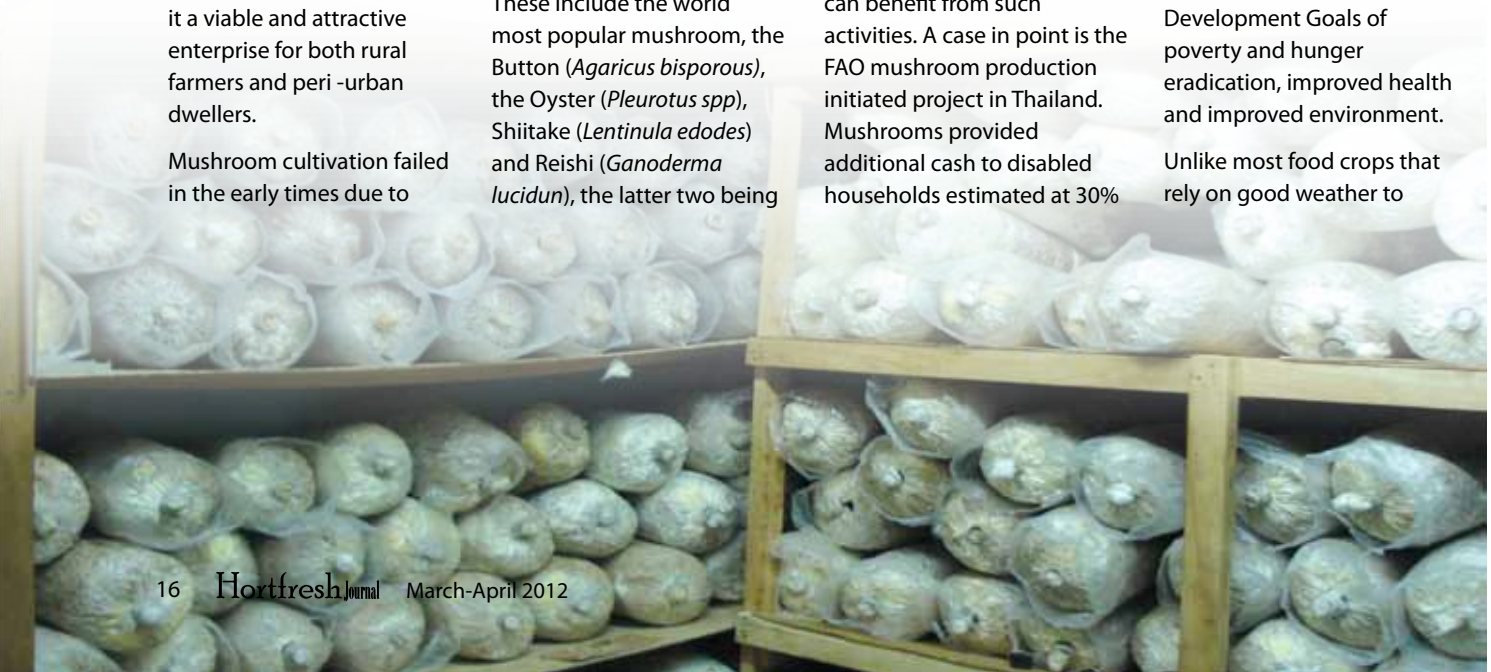
The old and young alike stand to gain from mushroom related activities with great opportunities for women and youth who have no land ownership. Even the disabled can benefit from such activities. A case in point is the FAO mushroom production initiated project in Thailand. Mushrooms provided additional cash to disabled households estimated at 30% of the total income (FAO, 2001).

Mushroom cultivation can directly improve livelihoods through income generation, food security and better health. There are several opportunities along the mushroom value chain that can be exploited thereby creating employment for several people.

They have the potential to boost the overall national economy, thus helping the country achieve the 10% GDP growth.

They have the potential to steer the country to deliver the global commitment of achieving the Millennium Development Goals of poverty and hunger eradication, improved health and improved environment.

Unlike most food crops that rely on good weather to



Simple mushroom houses made of polythene. Photo by : Gateri at Gutien county, China

Mary W. Gateri, next to a simple mushroom house made of mud at KARI-Thika

thrive, mushrooms grow in a controlled environment and therefore are not prone to vagaries of weather. They can also be grown throughout the year (no seasonality) and thus have potential to provide food and nutrition security.

Businesses such as substrate supplies and spawn production stand to thrive. Opportunities for creation of cottage industries for processing such as canning, pickling and drying are yet to be exploited.

Due to their high nutrition, mushrooms fetch a premium price compared to other vegetables or sources of protein. Export markets are also viable if good preservation measures are put into place.

Kenya is an agricultural country with a lot of agricultural and industrial wastes. Putting such wastes into profitable mushroom production offers an environmentally friendly disposal system. The Spent Mushroom Substrate (SMS) is highly nutritious and can be used as feed for goats, sheep and cattle offering opportunities for nutrient cycling. The SMS can also be used as manure to grow vegetables or other food crops.

Mushrooms have also been used in soil bioremediation as they are able to break down notorious organic pollutants that strongly adhere to humic substances which bacteria in the soil are unable to reach and degrade. This aspect together with nutrient cycling has helped to reduce the foot print of agriculture and has contributed to sustainability of agriculture.

Many countries have benefited from mushroom cultivation and a case in point is China. With a population of 1.7 billion people, China remains self-sufficient in food and agriculture products for domestic and world markets. Mushrooms play an important role in offering employment to a big portion of her population, generating income and providing food and raw materials for pharmaceutical industries. In the mountain ranges of China, the cultivation of mushrooms permitted the government to eliminate poverty in a few years (Chang and Miles, 1997). China produces 86% of the world mushroom production, but only exports 20%, with the rest being consumed within.

Read on How to Grow Mashrooms in July-August edition

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