KARPAGAM ACADEMY OF HIGHER EDUCATION
(Deemed to be University)
(Established Under Section 3 of UGC Act, 1956)
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Department of Microbiology

Report of the Event

Mushroom Cultivation Workshop December 2017

07.12.2017

Organizer: Dr. M. Kulandhaivel

Participants: 30

The mushroom cultivation workshop was conducted on 07.12.2017 by department of Microbiology, Karpagam Academy of Higher Education to develop the technical skill of the students to become a Bio entrepreneur. Around 30 students participated in the workshop and benefitted. Mushrooms, their health properties and benefits, their cultivation, processing and how to run a mushroom production farm. A mushroom, or toadstool, is the fleshy, spore-bearing fruiting body of a fungus, typically produced above ground on soil or on its food source. Mushroom has excellent medicinal properties. The cultivated mushroom or the common field mushroom initially forms a minute fruiting body, referred to as the pin stage because of their small size. Slightly expanded they are called buttons, once again because of the relative size and shape. Once such stages are formed, the mushroom can rapidly pull in water from its mycelium and expand, mainly by inflating preformed cells that took several days to form in the primordia.

Edible Mushroom Contains

- 92% water, 4% carbohydrates, 2% protein and less than 1% fat
- Raw mushrooms provide 22 calories
- Rich source (20% or more of the Daily Value, DV) of B vitamins, such as riboflavin, niacin and pantothenic acid, selenium (37% DV) and copper (25% DV)
- Moderate source (10-19% DV) of phosphorus,zinc and potassium.
- Vitamin C and sodium have no or minimal

Consumption benefits of mushrooms.

It is rich in protein, fibre, and amino acids. Mushroom is a 100 per cent vegetarian food and is good for diabetes and joint pains. Pickles, pappad, soup powder, health powder, capsule, health

drinks and pakodas can be made using mushroom. It has no cholesterol and helps in purifying blood. It has low sodium and substantial vitamin and minerals.

Six phases of mushroom cultivation

Phase I: composting

Phase II: composting or pasteurization

Phase III: Spawning and growth (24 to 27 °C (75 to 80 °F) for rapid growth)

Phase IV: Casing

Phase V: Pinning

Phase VI: Cropping

Types of mushrooms can be cultivated indoors

There are many species of edible mushrooms that can be cultivated indoors. Some of the most commonly cultivated are:

- *Agaricus bisporus* - white and brown button mushrooms also known as crimini (brown) and portabella (mature brown) and as Champignon)
- *Lentinula edodes* (shiitake)
- *Pleurotus ostreatus* and *eryngii* - oyster, tree mushroom, abalone mushroom and king oyster, plus several other species in the genus *Pleurotus* - gray, brown, pink, yellow etc.
- *Flammulina velutipes* - enoki
- *Volvariella volvacea* - paddy straw
- *Hericium erinaceus* - lion's mane
- *Grifola frondosa* – maitake
- *Auricularia* spp - wood ear
- *Agaricus subrufescens* / *Agaricus blazei* - almond mushroom

The scope of mushroom cultivation businesses in India

Mushroom production has tremendous scope. Mushroom production requires very little land and can be a good source of employment for educated youth. The two primary inputs for mushroom production – agro-waste and labour are easily available. Integrated mushroom production in existing farming system will supplement the income of rural masses and will lead to inclusive growth.

Lecture Delivering

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Bag Preparation

Bed Preparation

Enable | Enlighten | Enrich
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Program completed with hands on training