

The preparation of the compost is an essential step in commercial mushroom production. Composting is done outdoors and usually requires a little or two weeks to complete. It results in a substrate that is high in insoluble nitrogen containing compounds as well as cellulose and lignin. The composted material then is placed in shallow trays housed in especially constructed buildings in which the temperature, humidity, and ventilation can be controlled. Each of these factors is important in the successful growth of the fungus mycelium as well as in the formation of basidialocarps. Adequate ventilation is essential since a CO_2 concentration greater than 4% will inhibit or even halt mushroom development. In 2 or 3 weeks following spawning - the introduction of spawn into the compost - the mycelium should have grown throughout the compost and the bed is ready for casing. In casing, the surface of the bed is moistened and covered with a 1.5-3.0 cm layer of soil. Loam soil is commonly used in this step. casing is necessary since it induces the formation of basidialocarps. By controlling the temperature in the building, the grower can to some

extent regulate the harvest time of the mushrooms. Basidiocarps appear at different intervals regulate the harvest time and most growers will harvest four "breaks" or "flushes" of mushrooms before removing the compost and ~~preparation~~ preparing for the next crop.

Nutritional index of mushroom is; it contains higher levels of nutrients than vegetables; good source of minerals and vitamins; mushrooms are antitumor, having antiviral activities; mushrooms also lower cholesterol level.

Eating of mushroom is technically called mycophagy (Gr. mykes = mushroom + phagein = to eat).

Somatic structures :-

The mycelium of agaricoid typically arises from as a primary mycelium from a homokaryotic basidiospore. From the interaction of homokaryotic mycelia, secondary mycelium is formed. In many saprobic agarics, this secondary mycelium inhabits the soil, becoming more abundant with time. It has tendency to grow ~~apart~~ outward in all directions from a central point forming a large, invisible, circular colony. When the time for sporulation arrives, basidiocarps are produced at the periphery of colonies and thus form a ring.

This ring is called fairy ring because of an old superstition that mushrooms growing in a circle represent the path of dancing fairies. Secondary mycelium of an agaric may or may not possess clamp connections. Those of some species tend to form mycelial cords or rhizomorphs. Rhizomorphs are very effective in securing territory for the fungus and in absorbing and transporting nutrients. Some rhizomorphs may attain great length. Agarics like Armillaria mellea, Panellus stypticus are bioluminescence.

Mycorrhizae

Mycorrhizae are symbiotic associations between the hyphae of many kinds of fungi and the absorbing organs, typically the roots of the plants. Most of the agarics form the mycorrhizal relationship with roots of many plants. Mycorrhizal fungi benefit their host plants by (1) increasing the physiological area of the root system; (2) increasing the plant ability to capture water and nutrients such as nitrogen, phosphorus, potassium and calcium from the soil; (3) increasing the plants tolerance to drought, high soil temperature, and extremes of soil acidity caused by