FACTORS AFFECTING MUSHROOM BED PREPARATION

Environmental factors affecting the mushroom bed preparation, includes temperature, humidity, light and ventilation. Optimum levels of them at vegetative stage differs from those at reproductive stage.

i) Mushroom mycelia can survive between (5-40) º Celsius depending upon the species. For- ex for oyster mushroom, the temperature should be maintained between (22-25) ºCelsius.
ii) A relative humidity range of 75-90% must be maintained inside the shed.
iii) Proper ventilation must be done to remove the excess moisture inside the bed
iv) The straw used for bed preparation must be in proper wet condition, and must be devoid of contamination or diseases.
v) Regular observation of beds must be done to check infestation of insect pests, viz, beetles, mites etc. if noticed pesticides like malathien can be sprayed.

LOW COST TECHNOLOGY:

Certain measures taken to face the economic challenge in mushroom production are-

i) The foundation for bedding material can be soil concrete or a wooden block, which is easily available.
ii) Thoroughly dried long rise straw or uniformly cut dried banana leaves can be used as a bedding material. Which is highly adaptable and inexpensive and non-polluting?
iii) Suitable growing conditions can be availed easily by maintaining temperature, humidity etc. and by use of generous amount of water. Sudden change in weather do not affects production.
iv) Relatively fast growing species that can be harvested within 3-4 weeks after spawning can be used, which emphasize quicker investment and return.

COMPOSTING TECHNOLOGY IN MUSHROOM PRODUCTION

1) The commercial production of mushroom *(Agaricus*, shiitake*,* white button, oyster etc.) traditionally involves the use of substrate obtained by the composting organic waste which makes it the only crop to consume filed or solid wastes. Which implies that mushroom controls solid waste and builds organic soil.
2) The compost can be made from a combination of cow or house manure and bedding, poultry litter, hay, cottonseed hulls, cocoa bean hulls, clay , peat moss, coffee waste, sugarcane baggase, brewer's grain, wheat straw, lime or crushed limestone and commercial fertilizers including ammonium nitrate etc. depending on what is available
3) The substrate is made in two processes phase 1 and phase 2
   i) Phase 1 requires an open or roofed composting site where the crushed organic raw materials is maintained under moderate temperature and moisture, and adequate oxygen, nitrogen and carbohydrate. Then a compost turner plays an important role to mix the ingredients. This phase lasts for 7-14 days.
   ii) The phase 2, compost is pasteurized for 8 hours at 56^{o} C ± 60^{o} Celsius,
   iii) For killing bacteria, weed seeds, and conditioned at 45 degree Celsius up to 7 days to remove ammonia. Now the substrate becomes ready for growth of mushroom.