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EDITORIAL

Bio-bin Composting

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Developing countries like India generate more putrescible waste as compared to developed countries. The putrefying nature of the waste makes it less viable for storage and transportation. It also hinders the recovery of recyclable materials. Limited land resource available for dumping of waste which is evesr increasing with increase in population ha lead India to think techniques of reducing waste at the source itself. Composting is one such technique which is most viable to serve the purpose. Composting is a biological process in which microorganism, mainly fungi and bacteria, convert fast degradable organic waste into humus like substance, which is high in carbon and nitrogen. It's excellent medium for growing plants that recycles the nutrients and returns them to the soil.Apart from being clean, safe and economic, composting significantly reduces the amount of garbage. The compost produced from composting is a kind of organic fertilizer which can be used instead of chemical fertilizer and is better, especially when used for growing vegetables. It has the capacity to withhold the moisture content in the soil and makes the soil easier to cultivate. It supplies part of the sixteen essential nutrients needed by the plants and helps to reduce the adverse effect of excessive alkalinity. It helps the soil to cool in summer and warm in winter. It aids in preventing soil erosion by keeping the soil covered. It prevents water evaporation due to heat.

The concept of composting gave rise to a system known as 'Bio-bin' which is an in-vessel composting. Bio-bins is the innovation to find a better way to disposeoff the putrescible waste and turn it into compost on site in a relatively short time. It's now being used at various trial sites, expanding from greengrocer waste to becoming an effective vessel for the collection and disposal of Putrescible Food Waste. The Bio-bin process involves circulation of oxygen into the Bin. Ammonia and high temperatures combine to kill off diseases causing pathogens. Nowadays microorganism culture made by BTM (Bio Trigger Mechanism) is also added to the content of Bio-bin so as to accelerate the process of composting. The use of this technique not only eliminates foul odorbut also minimizes the risk of diseases in the environment due to flies and mosquitoes. Bio-bin finds use on small scale in kitchens while in gardens, shopping centres, malls, etc. are the places where Bio-bin can be carried out on large scale.

Some of the benefits of implementing Bio-bin system include quicker composting, optimum aeration to maintain aerobic conditions, control of leachates, economic & safe process, easy handling of the wastes & easy operation, potential economic returns from the bin and reduction in amount of waste for final disposal. Municipal Solid waste in India consists 35-40 per cent waste of putrefying nature, which makes 'composting' the most aesthetical and viable technique to be practiced extensively. In developing countries like India, Bio-bin Technology offers one of the practical solutions to deal with the tremendous amount of waste generated and related delinquents. The concept of Bio-bin has a great scope to be promoted not only in metropolitans but also in small towns and villages.

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