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Composting for safe and nutritious production

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The food that is consumed by the growing population is the gift of agriculture activities. This food is assumed to be highly nutritious as many are unaware of the fact of number of chemicals that go into its cultivation. To increase production, artificial or chemical fertilisers are utilised instantly that pollute the food cycle. To prevent that, economical, easy and sustainable organic farming can be practised with the help of composting. Composting is a natural process that involves the decomposition of organic matter by microbes under controlled conditions. Composting is performed in 3 phases, namely mesophilic, thermophilic and maturation phase. In the mesophilic phase, the mesophilic bacteria decompose the organic matter at moderate temperature; in the thermophilic phase, the thermophilic bacteria decompose the organic matter at high temperature; and in the maturation phase, the mesophilic bacteria again decompose the organic matter at moderate temperature. The organic waste (green matter and dried matter) is shred and made into a pile; in case of lack of space, compost reactors and compost tumblers are used. The presence of proper moisture and oxygen supply is ensured for the decomposition to occur. Turning the compost once a week facilitates breakdown process and eliminates odour. This is performed until the organic matter turns dark, crumbly and smells like earth, which usually takes four to six months. Compost obtained through this method could fertilise the agricultural land, home garden, flower bed soil, etc. without causing any harmful effects, in an economical manner. Studies made by researchers reveal that, the plants intake 30% of the fertilisers used in agriculture and the remaining 70% stays in the soil leading to environmental pollution. Therefore, by practising better composting methods we could feed the plants as well as soil with green manure that would benefit mankind in return in the form of safe agricultural produce, meat, dairy, fresh groundwater, etc.

Keywords: Compost, Chemical fertiliser, Organic waste, Composting, Pollution prevention, Organic matter, Decomposition by microbes

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