

## Section 4

### Q1. Composting

The process of decomposition of organic matter is called as 'Composting'. This process recycles various organic materials otherwise regarded as waste products and produces a soil conditioner.

The process of composting requires making a heap of wet organic matter (also called green waste), such as leaves, grass and food scraps and waiting for the materials to break down into humus after a period of months. However, composting can also take place as a multi step, closely monitored process with measured inputs of water, air and  $\text{CO}_2$  and Nitrogen rich materials. The decomposition process is aided by shredding the plant matter adding water and ensuring proper aeration. by regularly turning the mixture when open piles or windrows are used.

Composting is an aerobic method (meaning that it requires the presence of air) of decomposing organic solid wastes.

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## Section 4 Q 1 contd.

Composting requires organisms require four equally important ingredients to work effectively.

- Carbon
- Nitrogen
- Oxygen
- Water

Along with all the above ingredients, microorganisms play an important role to break down organic matter to produce compost. The most common microorganisms are

- Bacteria
- Actinobacteria
- fungi
- Protozoa
- Rotifers. etc

→ Organic ingredients intended for composting can also be used to generate biogas through anaerobic digestion. This process stabilizes organic material. The residual material sometimes in combination with sewage sludge can be treated by a composting process before selling or giving away the compost.