

COMPOSTING SERIES



Benefits of Compost in Maintaining Soil Health

Soil used for agriculture is much more than only dirt. Soil can be considered a living and changing organism because many factors influence its effectiveness in sustaining and also promoting plant growth. These factors include organic matter, infiltration, microorganisms and water retention.

Maintaining the ideal parameters of these factors can prove challenging as they may change with time. Using compost is an effective manner of improving or maintaining soil health. Compost is mainly organic matter that provides valuable nutrients, such as nitrogen, phosphorus and potassium, to the soil and the plants growing in it. This aids in reducing the use of synthetic fertilizers in plant production and, in turn, reduces the environmental impact of agricultural production. Organic farmers can find it difficult to supplement nutrients to the soil without these synthetic fertilizers, therefore making compost a valuable alternative.

Water is crucial for plant development; however, an excess can cause problems. Too little water and the plants become dehydrated and die. Too

much water and the roots of the plants will rot. Compost contributes to the necessary water qualities of soil. It helps to retain moisture in its particles, which keeps the soil moist. Additionally, since it is a porous material, it allows for excess water to drain out, maintaining water levels in the soil at optimal levels.

Microorganisms are already present in soil and are important to maintain the soil's biological characteristics. The term "soil microbiome" refers to all the microorganisms naturally present in the soil and the valuable biological functions they carry out. Microorganisms help to break down large compounds into smaller compounds that plants can take advantage from to promote their growth. This leads to the regeneration of organic matter and to the release of nutrients to the soil. However, microorganisms need ideal conditions in terms of humidity, pH and temperature to survive. All of these are provided by compost, which contributes to creating the ideal environment for microorganisms in the soil to survive and multiply.



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Pub. 3838-A (Online Only) 04/22

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