

Vermicompost: A Sustainable Soil Amendment for Carbon Sequestration, Enhancing Microbial Growth and Physicochemical Properties of Non-Agriculture Soil

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Abstract: Vermicompost is proved to be one of the best natural/organic fertilizers for the soil amendment for restoring physicochemical and biological properties of the soil. The chemical composition of the vermicompost depends on the substrate and contains the micro and macro nutrients, various bio molecules like cytokinin, auxins, PGR's, enzymes required for seed germination, healthy microbial and plant growth. The use of organic amendment like vermicompost, organic manure is simple, user-friendly, eco-friendly and sustainable alternative for soil restructuring. It was observed that vermicompost has ability to maintain the carbon to nitrogen ratio for healthy microbial growth, slow down the use of chemical fertilizers, pesticides, increase disease resistance in crop and thereby yield per hector of the crop land by converting non agriculture land into fertile crop land. Organic amendments like vermicompost are proven to be essential for mitigating the climate change, healthy ecosystem and wellness and wellbeing of the globe.

Keywords: Vermicompost, Organic fertilizer, Soil Amendment, Carbon to Nitrogen ratio, Seed germination, Physicochemical Properties

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