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Guided By

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Project Title

UTILIZATION OF ORGANIC WASTE FOR DEVELOPMENT OF HUMUS TO STUDY THE ENGINEERING PROPERTIES OF SOIL

Abstract:

Stabilization of organic wastes by composting is highly desirable as composting eliminates odor, increases nutrient contents, and prevents the organic wastes from becoming phytotoxic when incorporated into the soil. It is a microbial-mediated process, which breaks down some of the organic to more readily useable forms, with the release of a sizable portion of organic C as CO₂. The viability of composting depends very much on the quality and consistency of compost produced as they affect compost marketability and its end use. The article reviews the composting processes, various techniques used in compost production, and the methods used in the determination of compost maturity and quality.

The present project aimed at studying the effect of organic content on the soil geotechnical characteristics mainly compaction and shear strength. In this project, the humus is treated as organic content, which is added to silty soil in the different percentage by weight. The SPT test and direct shear test were conducted to determine the compaction & strength of these soil mixtures. The result of proctor test for these soil mixtures reveal that the maximum dry density approximately 28% as the organic content in silt soil increase 40%. Therefore, minimization of organic content in soil is important to ensure maximum soil strength for constructions especially on organic soil

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