

EFFECT OF RAW MATERIALS AND AERATION IN THE PREPARATION OF COMPOST

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In an attempt to determine the role of raw materials and aeration in the preparation of compost, the different combinations of raw materials namely straw, ash and leaf mixture (*glyceridia* leaf, *Terminalia catapa* leaf, banana leaf) were left to decompose aerobically or anaerobically. The role of addition of *Trichoderma* sp., which is a beneficial fungus in compost quality, was also determined.

Eight pits were constructed and were filled with materials in different combinations and kept under aerobic or anaerobic conditions with or without the addition of *trichoderma* sp. for a period of five months. Covering the compost with soil provided anaerobic conditions. Split plot in completely randomized design was used in this experiment.

In this study chemical and physical properties of the compost were analyzed by determining the nutrient such as organic carbon, nitrogen, phosphorous, potassium, etc., along with temperature of the compost pit and colour of the compost.

After five months, the lowest amount of microbes and narrower C/N ratio and relatively preferable amount of P and K were noticed. The quality of the compost, based on C/N ratio, P and K, is given in the descending order as follows: Straw, *Trichoderma* sp., anaerobic condition; Straw, *Trichoderma* sp., aerobic condition; Straw, ash,

anaerobic condition; leaf mixture, straw, ash, anaerobic condition; Leaf mixture, straw, ash, aerobic condition; straw, leaf mixture, *Trichoderma* sp., anaerobic condition; straw, ash, aerobic condition; straw, leaf mixture, *Trichoderma* sp., aerobic condition.