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Effect of Bulking Agents and Cow Dung as Inoculant on Vegetable Waste Compost Quality

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ABSTRACT

The source segregated vegetable waste (VW) was used as main feedstock and locally available organic wastes, such as water hyacinth (WH), garden prune (GP) and sawdust (SD) were used as bulking agents (BAs) to make the compost stable and mature in combination with cow dung (CD) as a source of inoculant. Three trials (T_1, T_2 & T_3) were performed with a compost ratio of 6:3:1 (VW: BA: CD) using different BAs. The initial C/N ratio of all the trials was maintained lesser than 23 and composted for 30 days (7 days in rotary drum reactor + 23 days windrowing). The ANOVA analysis indicated that the physico-chemical parameters varied significantly ($p < 0.05$) with the time of composting. It was also indicated that SD is the most performing BA for North-eastern region of India due to optimum germination index of 110% along with leachate management.

Keywords: *Municipal solid waste, bulking agent, composting, leachate*