

1 **Isolation and selection of cellulose degrading microorganisms for utilisation along with**  
2 **earthworm in efficient conversion of municipality waste mix to compost**

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25 Municipality biowaste (MBW) was decomposed alone or in mixture with rice straw (RS)  
26 and cowdung (CD) using culture of *Streptomyces xanthochromogens* (CDM9) and *Eisenia*  
27 *fetida*. CDMs were isolated from six source materials which contained CDM population  
28 in the range of 5.4 to 8.5 log cfu/g dry biomass and their cellulolytic activity ranged  
29 from 0.0 to 0.431 IU/min. CDM 9 showed consistently high cellulase activity in cellulose  
30 and MBW substrate and its co-inoculation with the earthworm enhanced decomposition  
31 of the MBW mix. A positive correlation between pH of the composting feed mix and N  
32 loss suggested N loss in form of NH<sub>3</sub>. Overall, mixing of MBW with RS and CD and  
33 inoculation with the two decomposer agents resulted better quality compost in all  
34 respects.

35 **Keywords:** Municipality biowaste, cellulose degrading microorganism, nitrogen loss,  
36 pathogenic and beneficial bacteria.

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