

QUALITY AND COST ANALYSIS OF COMPOST UNDER DIFFERENT COMPOSTING TECHNIQUE

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Abstract: The experiment was carried out during the December 2007 to March 2008, at instructional farm of Indira Gandhi Krishi Vishwavidyalaya, Raipur. Different composting techniques are used. Treatment under aerobic decomposition of paddy straw, soybean straw and fresh cow dung and soil were taken into 5:2 ratios for each pit. The progressive decrease in total organic carbon, and C/N ratio, cellulose, were found under the NADEP method of composting. Ash percent increased with days of decomposition progresses and maximum increase was found at 120 days. The significant increase in CEC was observed in all the methods under aeration and it was maximum [90.66 C mol (p+) kg⁻¹] under NADEP method of composting followed by turning method and three perforated pipe method of composting. The highest L/N ratio was recorded in NADEP method of composting (T₇) (6.95, 11.43, 12.56 and 14.64) at progressive days. While lowest ratio was recorded in traditional method (T₆) (7.10, 8.86, 10.66 and 10.78) at progressive days, respectively. The maximum CEC/TOC ratio was observed (2.55) in NADEP method of composting at 120 days. The maximum cost of production (553.75 Rs/pit) with NADEP method and minimum (212.00 Rs/pit) with traditional method of composting were estimated the frequency of NADEP method was recorded highest with preparation of composting within 4 months followed by turning method of composting.

Keywords: Cellulose %, nitrogen, organic carbon, lignin%

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