

Performance of composting household kitchen wastes: A case study in Matara municipality

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Abstract

As Sri Lanka enters the next phase of mass urbanization, one of the challenges that the nation faces is to devise a sustainable Solid Waste Management system (SWM) which would be capable of coping with the ever growing volume of solid waste. Among 38 tons of daily disposal of solid waste in Matara municipality, majority consists of degradable organic wastes. For the establishment of proper solid waste management system in the area, degradable waste should be converted to compost at household level. The objective of this study was to examine the performance of composting degradable solid wastes at household level using concrete household composting bins which were distributed among households.

The research was conducted in Walpola GN division in Matara municipality. Sample of 50 households were selected and compost bins made from concrete were installed and mobilization programme was undertaken to prepare backyard compost. Results of the survey showed initially only 32% were aware of composting household wastes, while majority (68%) was not aware. At the initial survey it was found 57% of households supply household waste to municipal council (MC) trucks while only 30% making compost. At present, 100% use their kitchen waste for composting.

About 52% of the households agree with the performance and ability of handling and given compost bin. Only 6% of the households could produce compost within a period of six months, while the majority of households (51%) could produce after a period of six months representing a low rate of process. As a consequence only 54% of the households in the sample used the produced compost for home gardening.

Among the problems associated with the given model of compost bins, difficulty to move the bin (23%), low decomposition rate (17%), problems of snails and flies (14%), and inadequate capacity (3%) difficulties of taking the produce out were dominant. About 34% of the households maintained the compost bins at satisfactory level. So the study concludes that although the introduced compost bin was comparatively effective, an array of problems have arisen which require further study.

Keywords: Composting, Household Waste