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Efficiency of compost production in household level to reduce waste generation in Matara municipality

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Solid waste management is a serious problem in Sri Lanka. With increasing waste generation, the final disposal is predominantly open dumping leading to increasing environment degradation and growing health problems. The national solid waste management strategy aims to establish proper solid waste management systems throughout the country and local action plans urgently needed to implement this strategy. Matara is a large town in the southern province of Sri Lanka which disposed waste amounting, 38 t/day. Among this waste majority consists of degradable waste. The objective of the study was to assess the quality of prepared compost with standards value and to find the efficiency of householders in producing quality compost.

The project was planned to undergo in Walpola GN division in Matara municipality. Sample of 50 house holders were selected and initially under gone with questionnaire survey. Then compost bins made by concrete were installed and mobilization programme was undergone to prepare backyard compost. After six months, prepared compost samples were analyzed for the parameters such as EC (electrical conductivity), pH, and moisture content. Compost bin temperatures within the compost bin were taken fortnightly. Results of the survey reveals that land extent of the selected group were, 46% medium land (10-20 perch), 37% small land (< 10 perch) and 17% larger land (>20 perch). Since most of them have medium land availability, most favorable option of waste management is concrete compost bin installation. Again it was found, 30% of the households separate waste and 70% are not. Again 57% disposed the waste by supplying to the municipal council tractor. After installation of compost bin prepared compost were subjected to measure quality and parameters as, pH, salinity, and moisture content complied with standard quality values in compost. Bin temperature was 40^0C and it was best for the regulating of composting procedure. In concern of efficiency of producing quality compost within householders more than 50% (pH-60%, salinity-91%, moisture-89%) were been able to attend there compost with best quality. It can be concluded from the above study that the quality of compost made with kitchen waste management complied with standard quality parameters in compost. At the same time initial project target group were been able to have there own waste management practice with composting with best quality standard.

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