FOREWORD

Small scale farmers and large scale agriculturists have come to realize the dangers inherent in the continual use of chemicals to enrich the soil. In the USA, certain large tracts of lands are reduced to desserts due to the misuse of agro chemicals in different forms. As a small country, we have the potential and we must shift from chemical to organic, a move which will benefit us mostly in economic terms and in improving the fertility of soil as well. Therefore, this research conducted by the EWRM division of the Institute is timely.

In certain parts of the country where large scale paddy cultivation is practised, hay is already used as manure. In urban areas the waste that is just dumped could systematically be treated to make rich organic manure.

What is opportune is to realize its urgency and act promptly. I very much appreciate the efforts made by the research team to study the current status of municipal solid waste composting. I strongly believe the findings and recommendations of the study will be helpful for policy makers in improving the usefulness of the ongoing projects as well as in designing effective programs in this field in future.

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ABSTRACT

Use of compost produced from Municipal Solid Wastes (MSW) in agriculture is gaining popularity in many parts of the world with the current trend towards organic agriculture. Many research studies have been conducted on impacts of soil application of MSW compost as a soil conditioner as well as a fertilizer. By now many local authorities in Sri Lanka are involved in producing compost from the organic fraction of MSW. Government is keen on expanding these projects and has invested a considerable amount of resources. If the country can produce agriculture grade compost from MSW, it will save the huge foreign expenditure that has to be spent on importing chemical fertilizer and it will be more beneficial towards the environmental stability. Considering many such factors, the Government of Sri Lanka in their new development policy "Mahinda Chinthana" is aiming to reduce imports of chemical fertilizer up to 15percent by 2015. Though it was expected to promote the use of compost in agriculture to compensate the reduced amount of chemical fertilizer, limited availability and difficulties in producing compost at farm level have been identified as major constraints for using compost in agriculture. Compost produced from MSW is important as an alternative to address the issue of limited production of compost.

The main objective of this study was to study the potentials of producing compost at the level of local authorities using municipal solid wastes and to examine constraints experienced by them in the production and marketing process. Experiences of other countries were studied by reviewing the literature. Five composting plants which are operating at different capacities in different parts of the country were studied during the fourth quarter of 2012. It was found that local authorities have the potential of producing the local requirement of compost though there is much more room for quality improvement. Government through various policies and programmes is trying to extend composting projects into other areas of the country. Financial analysis has proved positive results for the investment. Benefit Cost Ration is 1.44 and Economic Internal Rate of Return is 5% for municipal solid waste composting.

However, lack of quality standards for municipal solid waste composting, inadequate partnership between managers of the composting plants and the agricultural experts to improve quality for agricultural use were found to be major constraints for the successful function of this process. It is recommended that a suitable institutional arrangement to monitor the quality of MSW compost regularly to market the product with a government certification to create an assurance among the users regarding the quality of the product be formulated and implemented.