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Home composting systems for organic waste treatment: Technologies, greenhouse gas emissions and economic analysis

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In developing countries, the biodegradable component of municipal solid waste is typically composed of 40-60% kitchen waste. Composting is a globally accepted technology for clean and sustainable management of organic waste. This study attempts to assess three domestic composting systems, kamba (clay pots), rotary drum, and bin composting. Technical and economic features of the systems were also discussed and compared. During the composting process greenhouse gases are generated, mechanisms to reduce the greenhouse emissions are noted. Composting and Bokashi systems are compared in terms of process mechanisms, the quality of end products, operation and maintenance process. The domestic composting process reduces the pressure on the collection and transportation components of municipal solid waste management. This review provides an insight into the development of strategies for municipal solid waste management at the household level.

Biography

VR Sankar Cheela is perusing his PhD from IIT Kharagpur, India and Curtin University, Australia. His areas of interest include solid waste management, sustainability engineering and industrial ecology. He worked as a faculty in civil engineering department at MVGR College of Engineering, India for a period of 5 years. He is associated with councils in India and done consulting works in the field of solid waste management. He has published 8 journal articles and book chapters.

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