

Waste management for sustainable agricultural production - A brief review

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Received: 26.05.2018; Accepted: 29.11.2018

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■ **KEY WORDS:** Waste management, Sustainable agricultural production

■ **HOW TO CITE THIS PAPER :** Talukdar, Pallavi, Baruah, Moonty and Saikia, Pinky (2018). Waste management for sustainable agricultural production - A brief review. *Asian J. Home Sci.*, **13** (2) : 657-659, DOI: 10.15740/HAS/AJHS/13.2/657-659. Copyright@ 2018: Hind Agri-Horticultural Society.

Waste management is the collection, transport, processing, managing and monitoring of waste material which is produced by the act of human and generally carried out to reduce their detrimental effect on environment, human health and aesthetic. Waste management has been considered as one of the major problem in developing and developed country. Rapid urbanization and population growth contributes to generation of huge quantity of agricultural waste in the country, causing environmental degradation. Conversion of agricultural waste into organic resources or organic fertilizer is an effective approach to address proper waste management in urban and semi urban areas. A sustainable agricultural production in the country can be achieved either through low input sustainable agriculture or organic farming. Amongst the Asia and Pacific regions, Peoples' Republic of China produces highest quantity of agricultural waste, followed by India. It is estimated that nearly 700 million tonnes of organic waste is generated annually in India which is either burned or land filled (Mane and Smita, 2011), and nearly 700 million tonnes of annually generated organic agricultural waste can be easily converted to organic fertilizer through Vermicomposting, which in turn will

promote organic farming, employment generation and decrease pollution. Organic farming by vermicompost can sequesters huge amount of atmospheric carbon and bury them back into the soil as soil organic carbon, improving soil fertility and also mitigating global warming.

Organic farming is a science of agriculture that utilizes the biological means of cultivating crops with coordination to the nature. Organic farming is considered as the backbone of sustainable agriculture. Industrial agriculture chemicals like, fertilizers, pesticides, herbicides etc. are not used or used to minimum extent necessary in this kind of farming, rather it relies on ecological processes, biodiversity and cycles adapted to the local conditions. In 1950-60, Green revolution was started where the concept of agrochemical was introduced. It boosted food productivity. It increased food production but at the same time destroyed the physical, chemical and biological properties of soil. It killed the beneficial soil organism and also impaired the power of biological resistance in crops making them more susceptible to pests and diseases. No farm land of world is free toxic pesticides today. Over the years it has worked like a slow poison for the soil and the society. According to UNEP and WHO, nearly 3 million people