



MARUMEGH

Kisaan E- Patrika

Available online at www.marumegh.com

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ISSN: 2456-2904



WASTE MANAGEMENT AND VALUE ADDITION

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Abstract:

Waste is a ceaselessly developing issue at worldwide and territorial just as at neighborhood levels. Due to vigorous globalization and product proliferation in recent years, more waste has been produced by the soaring manufacturing activities. Waste management is basically a social as well as ecological issue in current days. It is basically deals with human behavior in relation to the environment. So, social ecology of waste recycling implies the structural, functional and managerial intervention of waste generation process. The objective of the study was to identify waste management system and its value addition so that farmers can augment their income and improve their socio-economic condition.

Introduction:

Wastes are the product of a process called “Modernization and Urbanization” with the generation of urban amenities and livelihood. Due to rapid development the major problem is that- underestimation of generation rates and therefore, underestimation of resource requirements, lack of technical and managerial inputs, and lack of reliable and updated information to the public (Goel, 2008). Wastes are also generating with no exception to the agricultural modernization, wastes are being generated and entering the surrounding eco system. Wastes can make vindictive contamination to the earth. Inappropriate waste management can make genuine wellbeing perils to the human and creature also. Natural contamination and decrease in long haul flourishing of urban wellbeing (Ghosh *et al*, 2011). The social-ecology of waste recycling certainty implies the structural functional and managerial nature and intervention of the waste generated the live process including our daily life, livelihood and productive functions. Every year in India we are producing 133760tons of wastes comprising of both bio degradable and non bio degradable materials. Out of this total waste generation 91,152 tons of wastes are collected and 25,884tons of wastes are treated for

different purposes. Medical bio wastes drifted by Hospitals and private Nursing homes are also a serious concern. When wastes are properly recycled treated and managed it can add values and resources but incase it is not properly managed it contributes to pernicious pollution. Improper waste management leads to ecological damage and knowledge of waste recycling will reduce improper waste disposal and save our environment and ecology (Ghosh *et al.*, 2020). The bio wastes and residues from agriculture field a well are transformed into bio resources in the form of organic manure and different bio products, available and amenable to mobilizing sustainable agriculture.

Categories of Solid Waste

Table-1. Solid waste can be categorized based on source

Source	Typical facilities, activities, or locations where wastes are generated	Types of Solid waste
Agricultural	Field and row crops, orchards, vineyards, diaries, feedlots, farms etc	Spoiled food wastes, agricultural wastes, rubbish, and hazardous wastes
Industrial	Construction, fabrication, light and heavy manufacturing, refineries, chemical plants, power plants, demolition, etc	Industrial process wastes, scrap materials, etc.; nonindustrial waste including food waste, rubbish, ashes, demolition and construction wastes, special wastes, and hazardous waste.
Commercial and Institutional	Stores, restaurants, markets, office and buildings, hotels, auto repair shops, Institutional	Paper, cardboard, plastics, wood, food wastes, glass, metal wastes, ashes, special wastes, etc.
Municipal solid waste	Includes residential, commercial solid waste and institutions	Special waste, rubbish, general waste, paper, plastics, metals, food waste, etc.

Source: (Hester, R. E and Harrison, R. M., 2002)

Waste management and vermicomposting:

At present Vermicomposting is a very important and most popular technique of solid waste management. Vermicomposting is the bioconversion of organic waste into a bio-

fertilizer due to earthworms' activity. The earthworms feed on the organic waste and the earthworms gut acts as a bioreactor whereby the vermicasts are produced. By the time the organic waste is excreted by the earthworms as vermicasts, it will be rich in nitrogen (N), phosphorous (P) and potassium (K) as well as trace elements depending on the feedstock type used. It is a mesophilic process and operating conditions such as temperatures, pH, electrical conductivity and moisture content levels must be optimized. Normally, the vermicomposting process takes place in vermi-reactors which include plastic, earthed pots and wood worm bins. If we consider Municipal wastes then household wastes contribute maximum number of waste generation and Household wastes mostly are bio degradable in nature. It can be converted to organic manure which has a great nutritional value for plants and if these bio wastes can be converted into organic manure then amount of waste will be reduced (Ghosh *et al.*, 2020) and if we provide facilities of training on the techniques for vermicompost then every farmer can augment their family income.

Pictures of Municipal Waste collection



Pictures of Vermicomposting pit and Nursery



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