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Rapid Decomposition of Solid Waste Material using Composting Culture Technique

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***Abstract*: Now-a-days population of world and developing countries are increasing and also the rate of solid waste generation is also increasing. So, we are developing advanced technique for decomposition of solid waste material.**

In this decomposition technique fast decomposition of solid waste is carried out for industrial and Domestic waste which plays major role in air pollution.by Rapid decomposition of solid waste by composting culture technique the solid waste which will decompose by composting culture technique and the final product is obtained is use for agriculture purpose for good fertilizer. The composting cultures like Rapid composter, Deodorant are used in this technique.

***Keywords*: Anti-insect, Deodorant, Composting culture, Solid waste.**

1. Introduction

Solid waste can be classified as organic and non-organic. It is associated with control of waste generation includes storage, collection, transfer, transport, processing and disposal. It encompasses planning, administration, origination, financial and legal aspect. It helps to reduced the load on environment. MSW contains household garbage, rubbish, construction waste (debris) and sanitation residue, ashes, dust. garbage includes all organic waste obtained from restaurant, hotels, kitchen also include grass, leaves, animal dung. Ashes are incombustible waste obtained from furnaces, industries and houses. In this technique, the decomposition of solid waste done by aerobically. As per municipal solid waste management and handling rules 2000, the landfilling shall be restricted to inert waste, medical waste, non-biodegradable waste solid waste management is obligatory function in urban bodies but in actual field solid waste management is given latest priority because of this city phase no of problem regarding environment and sanitation. Honorable supreme court of India as per repot of committee in march 1999 the lack of weak legislative measure, public interest awareness regarding waste management in proper machinery and technology because of this measure it is made unsatisfactory inefficient.

Quantity of waste generation in various cities:

1.Hydrabad = 55 Kg Per Capita Per Day
2.Banglore = 63 Kg Per Capita Per Day
3.Calcutta = 72 Kg Per Capita Per Day
4. Mumbai = 90 Kg Per Capita Per Day
5. Delhi = 75 Kg Per Capita Per Day

2. Literature review

1) Research paper by D.V.Wadkar

The composting process composting of agricultural waste and municipal solid waste has a long history and is commonly employed to recycle organic matter back in to the soil to maintain soil fertility the recent increase interesting composting however has arisen because of need for environmentally sound waste treatment technology. Composition is seen as an environmentally acceptable method of waste treatment (D.V.Wadkar IJEST .It is an aerobic biological process which buses naturally occurring microorganism to convert biodegradable organic matter into product

2) Research paper by Ester Valalmawii, Mamta Awasthi

The paper is all about generation of municipal solid waste continuous to rise, which leads to loss of resource and increase environmental risk. The conventional treatment of waste such as landfilling and open dumping causes environmental degradations. In India large amount of waste generated, composting is one of the best method.Composting besides reducing the volume of waste generated and providing nutrient to plants also helping in segregation of waste at source in this review.

3) Research paper by Meera T. Soseand Sunil J. Kulkarni

Aerobic co posting studies on variation in parameters has investigated in this paper studies are carried out on variation in parameter like Ph moisture content organic content and temperature. The parameters where measure by using conventional chemical analysis method in laboratory. Ph of composting material change from 6 at an ambient stage to 5.5at mesophilic stage the Ph rapidly increase to 8.5 during thermophilic phase if again fill to 6 during cooling period.

4) Research paper by K. Naresh Kumar, Sudha Goel

Has investigated characterization of municipal solid waste. In this paper data about survey of current status of MSW management practices in Kharagpur was conducted during 2007-2008 to determine the strength and deficiencies of the system. Municipal solid waste from Kharagpur municipality was characterized as part of survey.

Municipal solid waste management practices in Kharagpur a small citybin west Bengal in india where examine in detail and integrated solid waste management plant purpose best of study result at present the total solid waste Kharagpur municipality is 95metric ton/day but waste collected by municipal is about 50

metric ton/day.

3. Objective

The main aim of this research to improve the time required for decomposition of solid waste material using composting cultural technique and use of decompose material for agricultural purpose as good fertilizes.

1) Reduction of time required for decomposition for solid waste material comparing to other decomposition technique.
2) To decompose solid waste material and make it as use various agriculture purpose.
3) To study the existing system of storage, collection, transportation, treatment and disposal of MSW.

4. Conclusion

Under the project rapid decomposition of solid waste material using composting cultural technique we have performed experiment of composting and from that experiment we have concluded that,

If three is prper technique like rapid decomposition technique has been done, then the management of organic waste which causes abundant environmental pollution can be avoided with an efficient way. Our technique take only 1 month for decomposition of waste has been prove to be time saving technique than other decomposition technique

Under this project the organic waste not only decomposed rapidly but also it can be effectively used as a good fertilizer for the agricultural use.

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