RAPID COMPOSTING OF MUNICIPAL SOLID WASTE

BRIEF DESCRIPTION:

Rapid composting aims at enhancing the rate of organic matter degradation while keeping the nutrient content of the compost high. Most influential parameters on composting are: Temperature, pH, aeration, moisture, size, nature and volume of substrate, C/N ratio, C/P ratio etc. The approach of rapid composting is to keep all the vital parameters in optimum levels to speed up the process of composting. Rapid composting is achieved either by changing the working environment of degrading microbes or modifying the substrate for composting by physical, chemical or biological methods.

The four ton compost pilot plant for 240 houses and 1000 population employs aerobic composting process for organic fraction of municipal solid waste. Compost is used in campus gardens and colony as good quality soil conditioner. In a novel approach, the spores of Trichoderma reesei have been capsuled with suitable binder and bulking agents to simplify storage of this microbe and to use it in a user-friendly way.

ADVANTAGE:

- Rapid composting shortens the composting period with considerable reduction in C/N ratio
- The developed technology reduces composting period from 6 weeks to 2 weeks by employing cellulolytic fungi, Trichoderma reesei along with initial glucose supplementation

Scale of Development: Awaiting commercialization



Fig: Door to door waste collection from colony



Fig: Operation at compost Plant



Fig: Final Compost