

## Production of Soil Amendment from Sewage Sludge by Composting Process



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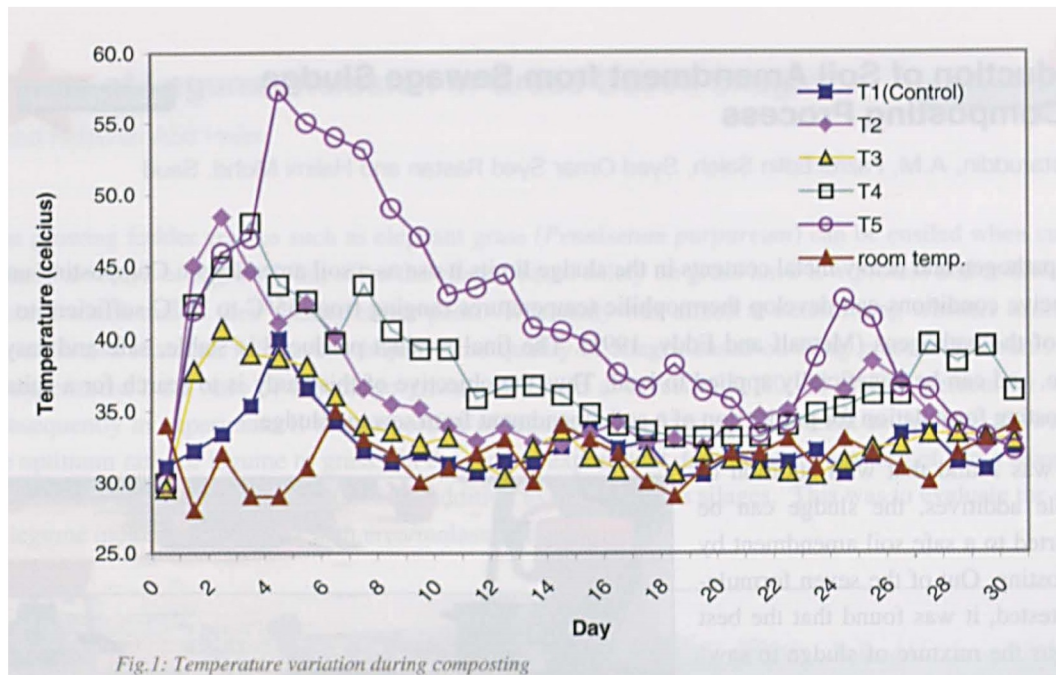
High pathogen and heavy metal contents in the sludge limits its use as a soil amendment. Composting under conducive conditions can develop thermophilic temperatures ranging from 55°C to 75°C sufficient to kill most of the pathogens (Metcalf and Eddy, 1991). The final product produced is stable, safe and easy to handle, and can be beneficially applied to land. Thus the objective of this study is to search for a suitable composting formulation for production of a soil amendment from sewage sludge.

It was found that with addition of suitable additives, the sludge can be converted to a safe soil amendment by composting. Out of the seven formulations tested, it was found that the best one was the mixture of sludge to sawdust (2:1, sludge: sawdust)+Beneficial Microorganism+Molasses+Rice bran. This composting formulation was able to increase the composting temperature >55° C for an extended period. This high compost temperature resulted in substantial reduction in microbial



Plate 1: Preparation of compost mixture

population in the sludge compost especially the pathogenic coliforms. The resultant compost is also friable and easy to handle and bagging.



In conclusion, it is possible to convert the raw sewage sludge into a safe soil amendment by composting. The composted sludge is low in pathogens, friable and easy to handle and has potential to be used for reclamation of degraded land and as bulking and mulching material in landscaping and hydro seeding for slope stabilization.

#### Reader Enquiry

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