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Food waste composting: Natural fermentation method (Article)

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Abstract

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The scale of food waste globally has become an urgent environmental issue to address. Food and Agriculture Organization (“FAO”) of the United Nations estimated that about one third of the food production in the world is wasted. The purpose of this study is to show how raw food waste (RFW) can be composted naturally at source. Since 2014, AUTO-CITY Management has been composting RFW segregated and collected from its tenants. It uses a natural fermentation method which can conveniently compost and transform the RFW including meat, bones, shells, skins, vegetables, fruit peels, oil and sauces into matured food waste (MFW) compost within days. Semi-automated system is used to facilitate the composting process. From 2015 to 2018, the AUTO-CITY Management has produced about 105 tons of MFW compost. The MFW compost, which contains many types of nutrients and minerals, is used in the research on natural farming of vegetables at AUTO-CITY. The result shows that MFW compost can improve fertility of red earth soil and when the MFW compost is at least 30% of the total soil volume, vegetables can grow healthily with good yield. Red earth soil was chosen over other soils because of its low pH 3.5, poor nutrients, drainage and aeration. When demand for organic vegetables increases, it will naturally increase the demand for MFW compost and thus will encourage the composting of food waste. In conclusion, food waste composting using the natural fermentation method is a viable solution to address the global environment issue caused by food waste. © BEIESP.

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