

Quality Comparison of Market Waste Compost

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Accumulation of a large amount of waste may create several problems to inhabiting populations. Composting is an environment friendly way of waste management. Good quality compost is essential to improve the soil fertility and to increase the yield of the crops which eventually contributes to the food security. Urban Council (UC), Vavuniya collected the market vegetable waste, tree loppings and other waste material within the UC and produced compost at Vepankulam, Vavuniya and sold to the farmers in the surroundings. Preliminary analysis was done to find out C/N ratio and low C/N ratio of 8:1 was reported for the compost produced by the UC. This study aims to find out the combination of different waste materials found in the environment to have good quality compost. There were six heaps prepared using market vegetable wastes, paddy husk ash and paddy straw with the dimension of 6' length and 2' width and 1.5' height each. Among the six heaps, three heaps were prepared using market vegetable waste and paddy husk ash with 1:1, 1:2 and 1:3 ratio where in each heap 1 part of market vegetable waste and 1 part, 2parts and 3parts of paddy husk ash on volume basis respectively and in another three heaps 1 part of paddy straw and 1 part, 2parts and 3parts of marketable waste on volume basis respectively. Organic carbon and total nitrogen were determined using Walkly and Black method and Kjeldahl procedure respectively, taking five samples from a representative sample of each heap. The results revealed that the compost produced with equal parts (1:1) of market vegetable waste and paddy straw produced good quality compost with C/N ratio of 23:1.

Keywords: Compost, Soil fertility, Organic carbon, Waste materials