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INFLUENCE OF SOME NATURAL ORGANIC ADDITIVES ON THE QUALITY OF VEGETAL COMPOST

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Abstract

Composting is one of the most used biowaste recycling method. The paper highlights the influence of some natural organic additives such as cattle and poultry manure on the quality of compost and especially on the content in microelements and heavy metals. The mature compost showed the following macro and microelements concentrations: total N 1.12-1.38%, P 0.56-0.90%, K 0.68-0.92%, Ca 1.18-1.70%. Mg 0.38-0.66%. The compost that included cattle manure showed the highest content in humic substances, i.e. about 24.6%.

The sequential analysis of metals revealed that the mobilisable sulphides had the largest share of the total content in metals, i.e. Pb 51.05% in the compost with cattle manure; Cd 55.78% in the compost with poultry manure, and As 48.92% in the vegetable compost without additives.

The very low percentage of available metals for plant uptake proves the efficiency of the organic additives.

Key words: compost, heavy metals, manure, nutrients, vegetal

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