



São Paulo - Brazil - May - 22nd to 24th - 2013

Agenda 4th INTERNATIONAL WORKSHOP ADVANCES IN CLEANER PRODUCTION

“INTEGRATING CLEANER PRODUCTION INTO SUSTAINABILITY STRATEGIES”

Growth of Basil from Inoculated Organic Household Solid Refuse

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Abstract

One of the main environmental issues in Córdoba (Argentina) is the large volume of urban solid refuse produced that pollutes soil, surface and groundwater streams, and affects flora and fauna. From this problem, a need of a sustainable strategy arises, such as biodegradation of organic household solid refuse using microorganisms, and its reuse as amendment in aromatic plants production. The aim of this study was to evaluate the effect of organic household solid refuse biodegraded by aerobic microorganisms inoculation in the growth of basil *Ocimum basilicum* L. var. Genovese. 1.7 kg of waste of vegetables and fruits were inoculated and after twelve days of microcomposting process microcompost was obtained which dried at room temperature weighed 0.249 kg. Different quantities of the amendment thus produced were applied to an entic haplustoll soil, and the effect on basil plants was studied. Significant differences were found in plant height both the time elapsed since the emergency as using the substrate T5 with highest amendment application respect to the other treatments. This substrate has higher content of organic matter, N, P, K⁺ and Ca²⁺+Mg²⁺. An advancement of reproductive stages was observed in treatments T3, T4 and T5 with higher amendment dose. These substrates have higher content of organic matter, N, P and K⁺. Thus, a sustainable strategy was achieved, consisting in the reduction of organic household solid refuse and its reuse as amendment in growing basil var. Genovese.

Keywords: *organic household solid refuse, basil organic production, microcompost, inoculation*

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