Metabolomics-2013
OMICS Group Conferences
Accelerating Scientific Discovery
2nd International Conference and Exhibition on
Metabolomics & Systems Biology
April 8-10, 2013 Hilton Chicago/Northbrook, USA

Quality evaluation of biocomposts prepared utilizing water hyacinth: An aquatic weed as substrate

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Abstract

Water hyacinth, an aquatic weed, is widely known for causing a series of problems for aquatic life. Random destruction of this weed by application of mechanical or chemical means is neither economical nor effective, as the robust plant continues to survive and proliferate as s stable component of the tropical region. With an aim to solve the problem of water hyacinth disposal and management, the current study was focused on exploiting the nutritive qualities of water hyacinth by production of biocompost which is both economical and eco-friendly. Seven different types of composts were prepared by combining water hyacinth with different amendments such as rock phosphate, lime, urea, gypsum, microbial cultures, earthworms and their compost quality evaluated. The highest percentage of N 1.32 and 1.27 were evaluated in phospho-nitro compost and in phospho-compost with lime respectively. The highest percentage of P and K were found in phospho-sulpho nitro compost: P 0.89 and K 1.04 respectively. The C: N ratio of different composts was observed in the range from 17:1 to 20:1 indicating good maturity of the compost. The present research indicates that utilization of these amendment and water hyacinth in proper amount and way can act as boon in agriculture.