

Microbial starter for the enhancement of biological activity of compost tea.

ABSTRACT

Compost tea is gaining importance as an alternative to chemical fertilizers and pesticides. The microbial population in the compost tea contributes toward its effectiveness. An attempt was made to enhance the biological activity of compost tea by fortification with microbial substrates. Humic acid and yeast extract (4:7 w/w 100 g-1 compost) when used as microbial starter during brewing of compost tea significantly (P less than or equal to 0.05) enhanced the microbial population. There was a ten to hundred fold percentage increase for total bacteria, fungi and actinomycetes compared to control. The stability of microbial enriched compost tea was maintained up to four months of storage based on significantly higher number of viable cell counts when compared to compost tea without substrates (control). The viable microbial cell counts over a storage period of six months was 8.5×10^9 , 4.6×10^6 , 3.5×10^4 , 3.9×10^4 , 1.4×10^5 , 4.8×10^4 and 7.3×10^5 for other bacteria.

Keyword: Compost tea; Microbial population; Humid acid; Yeast extract; Stability.