

Conjunctive use of compost tea and inorganic fertiliser on the growth, yield and terpenoid content of *Centella asiatica* (L.) urban.

Abstract

The conjunctive use of a compost tea (CT) and an inorganic fertiliser (NPK) on the growth, yield and terpenoid content of *Centella asiatica* (L.) urban was evaluated. CT and NPK applied at half the recommended concentration resulted in the significant enhancement of vegetative growth, yield and antioxidant content. The synergistic effect of CT50 and NPK50 was highly pronounced on the bioactive components Asiatic acid, madecassoside and asiaticoside. The distribution of the total antioxidants was highest in roots (80%), followed by leaves (66%) and petioles (54%). There was a strong positive correlation ($r = 0.990$) between fertility and total antioxidant content, suggesting an enhanced synthesis of bioactive components resulting from the treatment. This response by *C. asiatica* to the integrated experimental treatment suggests a viable option for the commercial cultivation of the herb. Augmenting the vegetative biomass production and bioactive components will increase the availability of this medicinal herb for the treatment of various human ailments.

Keyword: Antioxidant; Asiatic acid; Asiaticoside; *Centella asiatica*; Organic fertilizer.