

IMPACT OF DIFFERENT PRE-WEEDING CONTROL METHODS ON *Centella asiatica* L. (GOTU KOLA) CULTIVATIONS.V.E.D.P. Suriyapperuma¹, K. Prasannath² and S. Keerthika^{2*}¹Department of Biosystems Technology, Faculty of Technology, Eastern University, Sri Lanka²Department of Agricultural Biology, Faculty of Agriculture, Eastern University, Sri Lanka**Abstract**

Gotu kola (*Centella asiatica* L.) is one of the notable leafy vegetables of Sri Lanka. From ancient times on, it has been widely used for its distinct flavour, therapeutic value and nutritive value, particularly iron. Therefore, it has strong market demand. The emergence of the weed is a vital impediment to *C. asiatica* cultivation, which reduces growth and yield while generating laborious and expensive weed management techniques. The current study was conducted to evaluate the performance of different pre-weeding approaches to address this problem. Five different pre-weeding methods, such as solarization, lifeline glufosinate ammonium chemical pre-emergence weedicide application, paddy husk burning, UV-treated polythene mulching, and banana stem mulching were tested along with the untreated control. The experimental units were laid out using a Randomized Complete Block Design with four replicates. The experiment evaluated weed density, weeding time per plot, and weight of weeds at 12 weeks after planting. Plots treated with polythene mulching reduced weed weight, density, and weeding time by 94.5%, 88.9% and 86.9%, respectively, compared with the control. The study concluded that using a UV-treated polythene mulching pre-weeding approach can potentially control the weeds in *C. asiatica* cultivation.

Keywords: Eco-friendly weeding, Polythene mulching, Solarization, Weed density, Weed management

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