

ENHANCING THE GROWTH, YIELD AND PRODUCTION OF ESSENTIAL OIL AND CITRAL IN LEMONGRASS BY THE APPLICATION OF TRIACONTANOL

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ABSTRACT

Cymbopogon flexuosus (Steud.) Wats. (lemongrass) is an important source of citral that is used for the preparation of ionones and artificial perfumes. Keeping in mind, the importance of this plant, a pot experiment was carried out according to a factorial randomized design to study the effect of four levels of foliar spray of triacontanol (TRIA) on the performance of two varieties (Krishna and Neema) of lemongrass. Four levels of spray (0 , 10^{-7} , 10^{-6} and 10^{-5} M TRIA) were applied each at 75, 90 and 105 days after sowing (DAS). The foliar application of 10^{-6} M TRIA proved best for all characteristics studied, including essential oil and citral content particularly of Krishna. It increased the essential oil content and yield by 42.0, 110.8% respectively and citral content and yield by 10.8 and 134.1% respectively in Krishna and Neema at 120 DAS. However, higher concentration of TRIA (10^{-5} M) proved deleterious.

KEYWORDS: Triacontanol, *Cymbopogon Flexuosus*, Essential Oil, Citral Content, Plant Growth Regulator