

**EFFICACY OF DIFFERENT FORMULATIONS OF
LEMONGRASS LEAF RESIDUE MULCHES FOR WEED
CONTROL IN POTTED ORNAMENTAL PLANT OF *Cordyline*
*fruticosa***

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DECLARATION

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ABSTRACT

EFFICACY OF DIFFERENT FORMULATIONS OF LEMONGRASS LEAF RESIDUE MULCHES FOR WEED CONTROL OF POTTED PLANT *Cordyline fruticosa*

Weed control is required to produce high-quality of potted *Cordyline fruticosa* plant. Typically chemical control and manual weeding are the common methods selected for weed control of potted *C. fruticosa*. However, these practices have several drawbacks where application of high and excessive dosage of chemical herbicides could lead to environmental contamination whereas hand weeding issue arises due to high cost expenditure for labor cost. Thus, the aims of this study were to examine a different formulation of lemongrass leaf residue mulch for weed control in potted *C. fruticosa* plant and to determine the mulches effect on the quality of potted *C. fruticosa* plant using different formulations of mulch in the nursery: the treatment applied such as T1, without mulch (control negative), T2, non-treated lemongrass leaf residue mulch mat, T3, oxygenated monoterpene-treated lemongrass leaf residue mulch mat, and T4, oxygenated monoterpene-treated lemongrass leaf residue powdered mulch. The data of weed density, weed coverage, ornamental plant quality such plant height, canopy width and foliage color were evaluated at one-month interval for three months. The results demonstrated that lemongrass leaf residue mulches have potential to provide complete inhibition of weed emergence. All formulations of mulches could enhance rate of color change in *C. fruticosa* foliage from yellowish red to dark red but the height and canopy width of the plants were not influenced by the lemongrass leaf residue mulches regardless of any formulations within three months of assessment period. Visual observation showed that the powdered mulch was degraded markedly whereas the mulch mat remained intact with limited degradation three months after treatment. These findings indicate that lemongrass leaf residue mulch mat added with or without oxygenated monoterpene are potential alternatives for weed control of potted *C. fruticosa* plant.

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