

**INVESTIGATING THE UNDERLINE CAUSES FOR
POOR CONTROL OF (*Crassocephalum crepidioides*)
THANDAM PILLU BY GLYPHOSATE IN THE UVA
REGION**

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ABSTRACT

An experiment was carried out to investigate the underline causes for poor control of Thandam pillu (*Crassocephalum crepidioides*) weed by Glyphosate (36%) herbicide in the Uva region. There are complaints that this weed is poorly controlled at varying degrees of Glyphosate. It is suspected that such poor control is attributed in the dosage of Glyphosate used or the age or maturity of the weed. Therefore, the objective of the present study is to investigate the dosage response of Glyphosate on the control of *C. crepidioides* at different growth phases.

Two Glyphosate (36%) dosages (5 and 3 ml/L) were sprayed on *C. crepidioides* at five different growth phases such as 3-4, 5-6, 7-8, 9-10 and > 10 leaves per plant.

The degree of chlorosis, wilting, scorching and drying of leaves and leaf fall occurred at 7, 14 and 21 day after application (DAA) of Glyphosate was observed and rated. Percentage of dead plants was assessed and dry weight of viable plants were measured at 21DAA.

Chlorosis was more prominent at 7DAA and it occurred at significantly higher rate with Glyphosate @5ml/L than @3ml/L at 3-4 and 5-6 leaf phases. Wilting was more prominent at 14 and 21DAA and it occurred at a significantly higher rate with Glyphosate @5 ml/L at all five growth phases. Leaf scorching and drying took place in similar rate with both Glyphosate @ 5 ml/L and @ 3 ml/L at 3-4, 5-6 and 9-10 leaf growth phases, whereas symptoms were more severe with Glyphosate @5 ml/L than @ 3ml/L at 7-8 and >10 leaf phases. Leaf fall also occurred more severely with Glyphosate @ 5 ml/L than @ 3 ml/L at 7-8 leaf phase.

Mean percentage of dead plants of *C. crepidioides* was significantly higher with Glyphosate @ 5ml/L than that of 3ml/L at all growth phases. There was no death of the weed after phase 3 onwards with Glyphosate @ 3ml/L and at phase 4 and 5 with Glyphosate @ 5ml/L. Mean per plant dry weight was not recorded at 3-4 and 5-6 leaf phases, but a lower weight was recorded at mature phases. But there was no significant different in weight between herbicide treatments and the Control. Finally, *C. crepidioides* at early growth phases with 4-5 leaves per plant is more susceptible to Glyphosate herbicides and it is more susceptible for Glyphosate at a higher dosage.

Key words: *C. crepidioides*, Growth phase, Tolerance to Glyphosate, Dosage response