

ABSTRACT

The weed (*Echinochloa crus-galli*) is a dominant weed in rice fields, reducing plant growth through competition for resources. This study aimed to determine the effect of cogongrass (*Imperata cylindrica*) and sedge (*Cyperus rotundus*) extracts on the growth of this weed. The study used a non-factorial Randomized Block Design (RBD) consisting of two separate experiments: cogongrass extract and sedge extract, with five treatment levels: control, 100 g/L, 200 g/L, 300 g/L, and 400 g/L. Parameters observed included weed height, number of leaves, number of tillers, percentage of weed damage, fresh weight, and dry weight. Data were analyzed using analysis of variance (ANOVA) followed by Duncan's Multiple Range Test (DMRT) at the 5% level. The results showed that *Imperata cylindrica* extract had significant to highly significant effects on weed height, leaf number, tiller number, weed damage percentage, and dry weight, but had no significant effect on wet weight. The 400 g/L treatment was the most effective concentration in suppressing weed height to 7.20 cm. *Cyperus rotundus* extract had significant to highly significant effects on leaf number, weed damage percentage, and dry weight, but had no significant effect on weed height, tiller number, or wet weight. The 100 g/L treatment provided the best inhibition with weed damage percentage reaching 99.60% and the lowest dry weight at 0.03 g.

Keywords: allelopathy, bioherbicide, *Cyperus rotundus*, *Echinochloa crus-galli*, *Imperata cylindrica*.