

ABSTRACT

This study aimed to determine the effects of *Imperata cylindrica* and *Cyperus rotundus* extracts on the growth of *Ageratum conyzoides* as potential bioherbicides. The experiment was conducted using a non-factorial Randomized Block Design with two separate trials, each consisting of five dosage levels and five replications (0, 100, 200, 300, and 400 g L⁻¹). The observed parameters included plant height, number of leaves, number of branches, percentage of weed damage, fresh weight, and dry weight. The results showed that both *I. cylindrica* and *C. rotundus* extracts significantly inhibited the growth of *A. conyzoides*. Higher extract concentrations produced greater inhibitory effects on all observed parameters. The 400 g L⁻¹ concentration was the most effective treatment, causing the greatest suppression of plant height, leaf formation, branch development, fresh weight, and dry weight, while also resulting in the highest percentage of weed damage. In conclusion, extracts of *I. cylindrica* and *C. rotundus* have strong potential as environmentally friendly bioherbicides for controlling *A. conyzoides*.

Keywords: *Ageratum conyzoides*, *Cyperus rotundus*, *Imperata cylindrica*, bioherbicide, allelopathy.