

## ABSTRACT

Herbicides are one of the solutions to overcome weeds, Nuisance plants that have physiological advantages such as germination power, Pollination time, and rapid environmental adaptation, So that they can interfere with the growth of cultivated plants. This study aims to determine the effect of glyphosate and paraquat herbicides on controlling *C. rotundus* in oil palm plantations. The study was conducted in January-March 2025 at the Plantation Land of PT Perkebunan Nusantara I Cot Girek, Cot Girek District, North Aceh Regency, and the Experimental Garden of the Faculty of Agriculture, Malikussaleh University. The research method used a non-factorial randomized block design with 5 replications. *C. rotundus* weeds were obtained from PT Perkebunan Nusantara IV Regional VI Cot Girek Plantation, North Aceh Regency. Glyphosate herbicide treatments included doses of 0 g/ha, 726 g/ha, 1.452 g/ha; and 2,176 g/ha. Meanwhile, Paraquat herbicide was given at doses of 0 g/ha, 552 gr/ha; 1.104 gr/ha, and 1.650 g/ha. The results showed that the application of glyphosate and paraquat herbicides had a significant effect on controlling field sedge weeds. Higher application doses provided a more optimal control effect. The provision of various application dose levels caused a decrease in weed height, number of leaves, stem diameter, and dry weight of weeds. The optimal dose for glyphosate herbicide application was 726 g/ha, while for paraquat it was 560 g/ha.

**Keywords:** *Cyperus rotundus*, doses, glyphosate, palm oil, paraquat