EFFICACY OF A MIXTURE OF NICOSULFURON AND PARAQUAT DICHLORIDE HERBICIDES ON SUPPRESSION OF WEED AND MAIZE YIELD

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ABSTRACT

Maize production has decreased, one of which is due to ineffective and inefficient weed control. The use of a mixture of active herbicide ingredients is an effective control to suppress weed growth and weed resistance. This study aims to determine the effect and best dosage of herbicides containing nicosulfuron, paraquat dichloride, and their mixtures on weed suppression and maize crop yields. This research was conducted in September-Desember 2024 in Donotirto, Bantul, using a Complete Randomized Block Design (CRBD) with one factor and 9 treatments, consisting of Nicosulfuron 40 g b.a/ha, Nicosulfuron 80 g b.a/ha, Paraquat dichloride 70 g b.a/ha, Paraquat dichloride 140 g b.a/ha, Nicosulfuron 40 g b.a/ha + Paraquat dichloride 70 g b.a/ha, Nicosulfuron 40 g b.a/ha + Paraquat dichloride 140 g b.a/ha, Nicosulfuron 80 g b.a/ha + Paraquat dichloride 70 g b.a/ha, Nicosulfuron 80 g b.a/ha + Paraquat dichloride 140 g b.a/ha, and control. Observation results were analyzed using ANOVA at 5% significant level, a Least Significant Difference test at 5% level. The research findings indicate that mixture of herbicide Nicosulfuron 80 g b.a/ha + Paraquat dichloride 70 g b.a/ha produced the highest value for weed population per species, dry weight of weeds per species, vegetation analysis, weed control efficiency, length of cob with husk, length of cob without husk, weight of cob with husk per plant, weight of cob without husk per plant, weight of cob with husk per yield plot, and weight of cob with husk per hectare. The herbicide mixture dosage of nicosulfuron 80 g a.i./ha and paraquat dichloride 70 g a.i./ha can be used for weed control in corn crops.

Keywords: Hybrid maize, Dose, Nicosulfuron, Paraquat dichloride, Weed