

Effect of Wedusan Leaf Herbicide (*Ageratum Conyzoides* L.) on Weed Population Dynamics in Maize Crops (*Zea mays* L.)

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ABSTRACT

*The reduction in corn production caused by weeds can reach 20-80%, where one of them is teki-teki which reduces yields by 46%. Utilization of vegetable herbicides wedusan leaves (*Ageratum conyzoides* L.) can be one solution to suppress weed populations. The purpose of this study was to compare wedusan leaf treatment with synthetic herbicides to control weeds in corn cultivation. There are two test stages in the study, toxicity tests using 6 concentration levels (0, 10%, 20%, 30%, 40%, and 50%) which to get field reference concentrations and field tests by comparing 40% wedusan leaf and synthetic herbicides. Weed sampling used the randomized quadrat method at 5 sample points with 3 replicates in 1x1 m sample ring. Summed Dominance ratio (SDR) of wedusan leaf field was dominated by teki-teki while synthetic field was by broadleaf weeds. Absolute dominance, absolute density, and population dynamics of weeds in the two treatment are classified in the low category. The mean height of corn plants in the wedusan leaf herbicide treatment 63.78 cm and synthetic 63.93 cm. In the yield parameter, the fresh weight of corn showed no significant between the wedusan leaf herbicide (144.30 g/plant) and synthetic (145.64 g/plant). The intensity of weed attack in the low category is because wedusan leaf herbicide contains allelopathic compounds that can suppress weed populations so that do not affect the growth and yield of corn plants. It can be concluded that wedusan leaf herbicide can used as an alternative to corn plant weed control besides synthetic herbicides.*

Keywords: Controlling, Allelopathic, Summed Dominance Ratio.