

**THE EFFECTIVENESS OF MIXED FORMULATION HERBICIDES
ATRAZINE, MESOTRIONE, NICOSULFURON FOR CONTROLLING
WEEDS AND THEIR IMPACT ON THE GROWTH AND YIELD OF
SWEET CORN (*Zea mays saccharata* Sturt)**

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ABSTRACT

Sweet corn is one of the horticultural crops widely cultivated by farmers. However, its cultivation often faces challenges, one of which is the presence of weeds. This study aims to determine the best dose and herbicide mixture for controlling weeds and its effects on the growth and yield of sweet corn. The research employed a Completely Randomized Block Design (CRBD) with a single factor consisting of nine treatments and three replications. The treatments were: P0 = No Treatment (Control), P1 = Herbicide mixture of Atrazine and Mesotrione 1.5 l/ha, P2 = Herbicide mixture of Atrazine and Mesotrione 2.0 l/ha, P3 = Herbicide mixture of Atrazine and Mesotrione 2.5 l/ha, P4 = Herbicide mixture of Atrazine and Mesotrione 3.0 l/ha, P5 = Herbicide mixture of Atrazine and Nicosulfuron 1.5 kg/ha, P6 = Herbicide mixture of Atrazine and Nicosulfuron 2.0 kg/ha, P7 = Herbicide mixture of Atrazine and Nicosulfuron 2.5 kg/ha, and P8 = Herbicide mixture of Atrazine and Nicosulfuron 3.0 kg/ha. The observation data were analyzed using Analysis of Variance (ANOVA) at a 5% significance level, followed by the Least Significant Difference (LSD) test at 5%. The results showed that the application of herbicide mixtures of atrazine and mesotrione, as well as atrazine and nicosulfuron, effectively controlled weeds and had a positive effect on the growth and yield of sweet corn, outperforming the control treatment. The herbicide mixture of atrazine and mesotrione at a dose of 2.5 l/ha had the highest weed control effectiveness at 86%.

Keywords: Sweet corn, Atrazine, Nicosulfuron, Mesotrione