Efficacy of Mixed Herbicide Pendimethalin + Metolachlor + Oxyfluorfen and Weeding Time on Weed Control for The Result of Bean Plants Upright Type (*Phaseolus vulgaris* L.)

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ABSTRACT

Weed control can be done chemically and mechanically. Farmers often use herbicides and weed control. This study aims to determine the effectiveness of the mixed herbicide Pendimethalin + Metolachlor + Oxyfluorfen and the weeding time for weed control in upright bean plants. The study was conducted from February to April 2025 in Cepor Hamlet, Sendangtirto, Berbah, Sleman, DIY. The research conducted RCBD model. The first factor was the herbicide dose, namely 2.5; 3,0 and 3.5 L/ha. The second factor was the weeding time, namely 14, 21, and 28 DAP. The research data were analyzed using Analysis of Variance (ANOVA) at the 5% level and Orthogonal Contrast, followed by the Least Significant Difference (LSD) test at the 5% level. The results showed that there were significant differences between the treatment and control in the parameters of weed dry weight per species, plant height, root volume, plant dry weight, number of pods per plant, pod weight per plant, pod fresh weight per plot, and pod fresh weight per hectare. There was an interaction in the parameters of plant height 14 DAP, fresh weight of pods per plot, and fresh weight of pods per hectare. The effective herbicide dose in the treatment was 3.0 L/ha. The effective weeding time was at 21 DAP.

Keywords: Bean Plants, Dose, Mixed Herbicide, Pendimethalin, Metolachlor, Oxyfluorfen, Weeding