

Effectiveness of Pendimethalin and Glyphosate Herbicides on Weed Control and Mung Bean (*Vigna radiata* L.) Yield

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ABSTRACT

The study was conducted to test the effectiveness of pendimethalin and glyphosate herbicides to control weeds in mung beans. The study was conducted from May to July 2024 at the Experimental Garden of the Faculty of Agriculture, UPN "Veteran" Yogyakarta. The design used was a Randomized Complete Block Design (RAKL), consisting of 10 treatments with 3 replications, namely P0 = No application (control), P1 = Pendimethalin 500 g/ha and Glyphosate 480 g/ha, P2 = Pendimethalin 500 g/ha and Glyphosate 720 g/ha, P3 = Pendimethalin 500 g/ha and Glyphosate 960 g/ha, P4 = Pendi methalin 750 g/ha and Glyphosate 480 g/ha, P5 = Pendimethalin 750 g/ha and Glyphosate 720 g/ha, P6 = Pendimethalin 750 g/ha and Glyphosate 960 g/ha, P7 = Pendimethalin 1000 g/ha and Glyphosate 480 g/ha, P8 = Pendimethalin 1000 g/ha and Glyphosate 720 g/ha, P9 = Pendimethalin 1000 g/ha and Glyphosate 960 g/ha. The parameters observed were vegetation analysis, phytotoxicity levels, herbicide effectiveness, and observations on plants including growth and harvest time. The observation data were analyzed using a 5% level of variance, then further tested using Scott-Knott at a 5% level. The results showed that Pendimethalin 750 g/ha and Glyphosate 960 g/ha and Pendimethalin 1000 g/ha and Glyphosate 480 g/ha were able to control weeds and produce the best number of leaves, plant height, number of pods per plant, number of seeds per plant, and dry weight of seeds per harvest plot when compared to other doses and controls.

Keywords: Mung beans, Weeds, Herbicide Pendimethalin, Glyphosate