**Abstract**

The experiment was conducted to test the efficacy of Diuron 500 g/l SC herbicide of weeds in sugar cane cultivation is inferred based on statistical analysis of the target weed species biomass data. The experiment was conducted at PT. PG. PG Rajawali II Unit, Subang is located in block Cidangdeur, Pasirbungur village, District Purwadadi, Subang regency, West Java, in January 2011 to March 2011. Experimental design used in this study was a randomized complete randomized design (RKLT) with one factor. This study used six treatments with four replications. The treatment given is: (P1) Diuron 500 g/l SC with a dose of 0.5 l/ha, (P2) Diuron 500 g/l SC with a dose of 1.0 l/ha, (P3) Diuron 500 g/l SC with a dose of 2.0 l/ha, (P4) Diuron 500 g/l SC at a dose of 3.0 l/ha, (P5) Manual Weeding, (P6) Control. Diuron 500 g/l SC herbicide effectively suppress weed growth by 10 MSA. In statistical calculations, the average herbicide treatment with a dose of 0.5 l/ha, 1.0 l/ha, 2.0 l/ha, and 3.0 l/ha showed no significant difference in controlling weed growth. So that the herbicide application with a dose of 0.5 l/ha is more effective to apply for a dose of 0.5 l/ha was able to control weed growth and significantly different from control treatment. During the trial found no symptoms of poisoning at treatment doses of 0.5-2.0 l/ha, but on treatment with a dose of 3.0 l/ha showed mild toxicity scoring or not too harmful.

Keywords: Herbicide, Diuron, Weeds, Sugar cane.