

ABSTRACT

THE EFFICACY OF A SINGLE METSULFURON METHYL PREEMEGENCE HERBICIDE AND ITS COMBINATIONS WITH 2.4-D, AMETRYN, OR DIURON IN CONTROLLING WEEDS IN UPLAND SUGAR CANE PLANTATION

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The objectives of the research were to know the single metsulfuron methyl herbicide effectiveness and its tank mixed with 2.4-D, ametryn, or diuron which is applied in upland sugar cane plantation and to get the information of the change of community after the herbicides application.

This research was conducted in Hajimena, Subdistric of Natar, South Lampung and in Weeds Science of Lampung Agriculture Faculty Laboratory. This research was compiled by twelve treatments with three replications.

The treatments are metsulfuron-methyl at 4 g ha^{-1} , 8 g ha^{-1} , 12 g ha^{-1} and 16 g ha^{-1} , combinations of 4 g ha^{-1} metsulfuron-methyl with $0,865 \text{ kg ha}^{-1}$ 2.4-D; $0,75 \text{ kg ha}^{-1}$ ametryn; or $1,6 \text{ kg ha}^{-1}$ diuron; 2.4-D at $1,3 \text{ kg ha}^{-1}$; ametryn at 1 kg ha^{-1} ; diuron at 2 kg ha^{-1} , manual treatment and control plot. The comparison of mean were tested by Honestly Significant Difference (HSD) test at 5% level.

The result of the research showed that: (1).The single metsulfuron methyl application at rates of 12 g ha^{-1} and 16 g ha^{-1} g/ha could suppress the total weeds growth until 8 weeks after application (WAA).(2).The metsulfuron methyl tank mixed with diuron could suppress the total weeds growth until 12 WAA.(3).The whole tested herbicide application just could suppressed the growth of *Richardia brasiliensis* and *Mimosa invisa* (5).The whole tested herbicide did not influence the growth and the formation of sugar cane seedling.(6).The whole herbicide application caused the change of weeds composition.