

ABSTRAK

EFIKASI HERBISIDA METIL METSULFURON 20% TERHADAP PENGENDALIAN GULMA UMUM PADA BUDIDAYA KELAPA SAWIT (*Elaeis guineensis* Jacq.) TANAMAN BELUM MENGHASILKAN DI PERKEBUNAN RAKYAT

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Pengendalian gulma pada tanaman kelapa sawit belum menghasilkan (TBM) dapat dilakukan secara kimiawi menggunakan herbisida berbahan aktif metil metsulfuron 20%. Penelitian bertujuan mengetahui dosis herbisida metil metsulfuron 20% yang efektif dalam mengendalikan gulma pada pertanaman kelapa sawit belum menghasilkan (TBM), mengetahui terjadinya perubahan komposisi gulma pada piringan tanaman kelapa sawit belum menghasilkan (TBM) setelah aplikasi herbisida metil metsulfuron 20%, mengetahui fitotoksisitas pada tanaman kelapa sawit belum menghasilkan (TBM) setelah aplikasi herbisida metil metsulfuron 20%. Penelitian dilaksanakan di perkebunan sawit di Desa Gaya Baru, Kecamatan Seputih Banyak, Kabupaten Lampung Tengah, dan di Laboratorium Gulma Fakultas Pertanian Universitas Lampung, dari Februari hingga Mei 2025. Rancangan percobaan yang digunakan adalah Rancangan Acak Kelompok (RAK) dengan empat ulangan dan enam perlakuan, yaitu dosis herbisida metil metsulfuron 15, 20, 25, dan 30 g/ha, penyiangan mekanis, dan kontrol (tanpa pengendalian). Homogenitas ragam diuji dengan uji Bartlett, aditivitas data diuji dengan uji Tukey, jika asumsi terpenuhi data dianalisis ragam dan perbedaan nilai tengah perlakuan diuji dengan Uji Beda Nyata Terkecil (BNT) taraf 5%. herbisida metil metsulfuron 20% dosis 15-30 g/ha mampu mengendalikan gulma golongan daun lebar *Borreria alata*, *Praxelis clematidea*, dan *Chromolaena odorata* dan tidak mampu mengendalikan gulma golongan rumput *Ottobachloa nodosa*, herbisida metil metsulfuron 20% dengan dosis 15-30 g/ha menyebabkan terjadinya perubahan komposisi gulma pada 12 MSA, aplikasi herbisida metil metsulfuron 20% pada dosis 15-30 g/ha pada piringan tidak menimbulkan keracunan pada tanaman kelapa sawit belum menghasilkan (TBM).

Kata kunci : *kelapa sawit, gulma, herbisida, metil metsulfuron*

ABSTRACT

EFFICACY OF 20% METHYL METSULFURON HERBICIDE ON THE CONTROL OF COMMON WEEDS IN IMMATURE OIL PALM (*Elaeis guineensis* Jacq.) CULTIVATION IN SMALLHOLDER PLANTATIONS

By

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Weed control in immature oil palm (TBM) plantations can be carried out chemically using herbicides containing 20% methyl metsulfuron as the active ingredient. This study aimed to determine the effective dosage of 20% methyl metsulfuron herbicide for controlling weeds in immature oil palm (TBM) plantations, to identify changes in weed composition in the palm circles after the application of 20% methyl metsulfuron herbicide, and to observe any phytotoxicity symptoms on immature oil palm (TBM) following the application of 20% methyl metsulfuron herbicide.

The research was conducted in an oil palm plantation located in Gaya Baru Village, Seputih Banyak Subdistrict, Central Lampung Regency, and in the Weed Laboratory of the Faculty of Agriculture, University of Lampung, from February to May 2025. The experimental design used was a Randomized Block Design (RBD) with four replications and six treatments, consisting of 15, 20, 25, and 30 g/ha doses of 20% methyl metsulfuron herbicide, mechanical weeding, and a control (no weed control). Homogeneity of variance was tested using Bartlett's test, and data additivity was tested using Tukey's test. If the assumptions were

met, the data were analyzed using ANOVA, and treatment means were compared using the Least Significant Difference (LSD) test at the 5% level.

*The 20% methyl metsulfuron herbicide at doses of 15–30 g/ha was able to control broadleaf weed species such as *Borreria alata*, *Praxelis clematidea*, and *Chromolaena odorata*, but was ineffective against the grass weed *Ottochloa nodosa*. The application of 20% methyl metsulfuron at 15–30 g/ha also caused changes in weed composition at 12 weeks after application. Furthermore, application of the herbicide at these doses in the palm circles did not cause phytotoxicity to immature oil palm (TBM) plants.*

Keywords : oil palm, weeds, herbicide, methyl metsulfuron.