

## ABSTRAK

Fernando Bonatua Manik, Pengaruh Aplikasi Limbah Cair Pabrik Kelapa Sawit Terhadap Pertumbuhan Bibit *Mucuna bracteata*. Dibimbing oleh Bayu Pratomo, SST., M.P.

Penelitian ini bertujuan untuk mengetahui pengaruh aplikasi dan taraf dosis Limbah Cair pabrik Kelapa Sawit (LCPKS) terhadap pertumbuhan bibit *Mucuna bracteata*. Penelitian ini dilakukan pada bulan Maret hingga Mei 2020 menggunakan metode eksperimen dengan Rancangan Acak Kelompok (RAK) Non Faktorial dengan tiga ulangan dan 7 taraf perlakuan LCPKS: (L<sub>0</sub>) Kontrol/tanpa perlakuan LCPKS, (L<sub>1</sub>) 25 ml/L larutan, (L<sub>2</sub>) 50 ml/L larutan, (L<sub>3</sub>) 75 ml/L larutan, (L<sub>4</sub>) 100 ml/L larutan, (L<sub>5</sub>) 125 ml/L larutan, (L<sub>6</sub>) 150 ml/L larutan. Data penelitian dianalisa menggunakan analisa sidik ragam (*Analisis of variance*) dan uji lanjut Tuckey pada taraf 5%. Hasil penelitian menunjukkan bahwa pemberian LCPKS terhadap pertumbuhan bibit *mucuna bracteata* berpengaruh nyata terhadap pertumbuhan panjang sulur, jumlah daun, berat segar tajuk, dan berat kering tajuk. Sedangkan pada berat segar akar, berat kering akar, rasio tajuk akar, jumlah bintil akar, dan persentase hidup tidak memberikan pengaruh yang nyata. Pemberian LCPKS (L<sub>6</sub>) 150 ml/L larutan merupakan perlakuan yang memberikan hasil tertinggi pada pertumbuhan panjang sulur 120,81 cm, jumlah daun 41,75 helai, berat segar tajuk 9,69 g, berat kering tajuk 1,88 g, dan jumlah bintil akar 20,58 butir.

Kata kunci : LCPKS, *Mucuna bracteata*, Pertumbuhan.

## **ABSTRACT**

Fernando Bonatua Manik, *The effect of Application Palm Oil Mill Effluent (POME) on The Growth of Mucuna bracteata Seedlings*. Supervised by Bayu Pratomo, SST., M.P.

*This research aims to determined the effect of application and dosage levels Palm Oil Mill Effluent (POME) on the growth of Mucuna bracteata seedlings. This research was carried out from March to May 2020 using experimental method with non-factorial Randomized Complete Block Design (RCBD) with three replications and seven levels of POME treatment: (L<sub>0</sub>) Control/do not use POME, (L<sub>1</sub>) 25 ml/L solution, (L<sub>2</sub>) 50 ml/L solution, (L<sub>3</sub>) 75 ml/L solution, (L<sub>4</sub>) 100 ml/L solution, (L<sub>5</sub>) 125 ml/L solution, (L<sub>6</sub>) 150 ml/L solution. The research data were analyzed using analysis of variance and a further test Tuckey at 5% level. The result of research indicates that application POME on the growth of Mucuna bracteata seedlings significantly effect on growth of trendil length, number of leaves, canopy fresh trendil, shoot fresh weight and shoot dry weight. While on the root fresh weight, root dry weight, root shoot ratio, number of root nodules, and life percentage not significantly effect. Application POME (L<sub>6</sub>) 150 ml/L solution is the treatment that give the highest on growth of trendil length 120,81 cm, number of leaves 41,75 sheet, shoot fresh weight 9,69 g, shoot dry weight 1,88 g, and number of root nodules 20,58.*

*Key words : POME, Mucuna bracteata , Growth.*