

**UNIVERSITI TEKNOLOGI MARA**

**EFFECT OF DIFFERENT LEVEL  
COPPER CHELATE IN SOIL MIX ON  
GROWTH OIL PALM SEEDLING**

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Final year project proposal submitted for partial fulfilment  
requirement for the degree of  
**Bachelor of Science (Hons.) Plantation Technology &  
Management**

**Faculty of Plantation and Agrotechnology**

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## **APPROVAL SHEET**

This Final Year Project Report entitled “**Effect of Different Level Copper Chelate in Soil Mix on Growth Oil Palm Seedling**” was submitted by **Abdul Halim Bin Mohd Durahman**, in partial fulfilment requirement for the degree of Bachelor of Science (Hons.) Plantation Technology and Management, in the Faculty of Plantation and Agrotechnology, and was approved by

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## CANDIDATE DECLARATION

I declare that the work in this Final Year Project was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. The final year project report has not been submitted to any other academic institution or non academic institution for any other degree or qualification.

In the event that my Final Year Project is found to violate the conditions mention above, I voluntarily waive the right of conferment of my bachelor degree and agree to be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

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## ABSTRACT

This study was carried out to determine the effect of different levels of copper chelate in soil mix on the growth of oil palm seedling. This experiment was conducted at the rain shelter of UiTM Jasin, Melaka for one and half month. The secondary stage nursery of oil palm seedling are used. The treatments consist six different concentration of copper chelate that is T1 for 15ppm, T2 for 30ppm, T3 for 45ppm, T4 for 60ppm, T5 for 75ppm, and T6 for 90ppm. This experimental unit was put on the polybag 15cm x 23cm and 0.1 mm thickness and applied constantly 30gm of NPK blue 12:12:17:2 (33 g of N, 26.4 g of P<sub>2</sub>O<sub>5</sub>, 37.4 g of K<sub>2</sub>O and 6.6 g of MgO). The purpose of this study is to determine the minimum and maximum absorption levels of copper as a micronutrient in oil palm seedlings and to determine the morphology of oil palm seedling at different level of copper. The result of this study that were no significant different in leaf area diameter of the stem and mass of biomass of root of oil palm seedling response to the different level of copper chelate.

## ABSTRAK

Kajian ini dijalankan bertujuan untuk menentukan kesan perbezaan kadar pengelet kuprum (copper chelate) pokok anak benih dalam campuran tanah. Eksperimen ini telah dijalankan didalam rumah lindungan hujan di UiTM Jasin, Melaka selama satu bulan setengah. Anak benih kelapa sawit bagi peringkat kedua nurseri telah digunakan. Rawatan terbahagi kepada enam kadar pengelet kuprum yang berbeza iaitu T2 untuk 30ppm, T3 untuk 45ppm, T4 untuk 60ppm, T5 untuk 75ppm, dan T6 untuk 90ppm. Unit eksperimen ini telah diletakkan didalam poli bag yang bersaiz 15cm x 23cm dan 0.1 mm untuk ketebalannya dan 30gm of NPK blue 12:12:17:2 (33 g of N, 26.4 g of P<sub>2</sub>O<sub>5</sub>, 37.4 g of K<sub>2</sub>O dan 6.6 g of MgO) sebagai pemalar. Tujuan kajian ini telah dijalankan untuk menentukan kadar minimum dan maksimum penyerapan kuprum sebagai micronutrien dalam anak benih kelapa sawit dan untuk menentukan morfologi anak benih sawit dalam perbezaan kadar pengelet kuprum. Hasil kajian menunjukkan ketidak bezaan bagi luas daun, panjang diameter stem, dan berat biomassakar anak benih sawit kepada kadar kepekatan pengelet kuprum.