

## **ABSTRACT**

### **THE EFFECT OF MICRO FERTILIZER DOSAGE ON THE GROWTH AND PRODUCTION OF SOME CASSAVA (*Manihot esculenta* Crantz) CLONES IN TANJUNG BINTANG, SOUTH LAMPUNG**

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This research aims to evaluate the effect of micro fertilizer on the cassava growth and production. This research was conducted at the dry land of Sukanegara Village, Tanjung Bintang, South Lampung from July 2018 to May 2019. The clones used were CMM 252757 080915-15, Malang 6 240815-3, BW 1, Cimanggu 12 080915, BL 8 150815-3, Darul Hidayah 240815-4, Mulyo 240715-10 and UJ 5 as standard with a spacing of 1x0,5 m. The treatment was arranged in factorial (8x2) in a randomized block design with three replications. The first factor was eight cassava clones; CMM 252757 080915-15, Malang 6 240815-3, BW 1, Cimanggu 12 080915, BL 8 150815-3, Darul Hidayah 240815-4, Mulyo 240715-10 and UJ 5 (as standard). The second factor was two levels of *Zincmicro* fertilizer dosage, which were 0 kg ha<sup>-1</sup> and 40 kg ha<sup>-1</sup>. The variables observed were plant height, number of leaves, stem diameter, the leaf greenness, number of leaf lobes, above ground weight, number of roots per five plant, roots weight per

five plant, the diameter of root spread and starch content. Data were analyzed by using the SAS 9.0 application at significant level 5%. The results showed that on several variables such as plant height at 8 months, number of leaves at 8 months and above ground weight were affected by clones and the dosage of 40 kg micro fertilizer ha<sup>-1</sup>. The variables plant height, number of leaves at the age of 4 to 8 months after planting, the number of roots and the weight of roots per five plant were significantly affected by clones. Whereas, the dosage of 40 kg micro fertilizer ha<sup>-1</sup> significant by affected on plant height at the age of 4 and 10 months after planting then the dosage of micro fertilizer also significantly affected the number of roots per five plant, but did not affect the roots weight per five plant. The production of starch showed that the highest range of starch content was produced by Darul Hidayah 240815-4 clone, as 28% by the dosage of 40 kg micro fertilizer ha<sup>-1</sup>.

**Key words** : cassava, clones, micro fertilizer

## **ABSTRAK**

### **PENGARUH DOSIS PUPUK MIKRO TERHADAP PERTUMBUHAN DAN PRODUKSI BEBERAPA KLON UBIKAYU (*Manihot esculenta* Crantz) DI TANJUNG BINTANG, LAMPUNG SELATAN**

**Oleh**

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Penelitian ini bertujuan untuk mengevaluasi pertumbuhan dan produksi ubikayu akibat unsur hara mikro. Penelitian ini dilaksanakan di lahan Desa Sukanegara, Tanjung Bintang, Lampung Selatan dari Juli 2018 hingga Mei 2019. Klon yang digunakan yaitu CMM 252757 080915-15, Malang 6 240815-3, BW 1, Cimanggu 12 080915, BL 8 150815-3, Darul Hidayah 240815-4, Mulyo 240715-10 dan UJ 5 (sebagai klon pembanding) dengan jarak tanam 1x0,5 m. Perlakuan disusun secara faktorial (8x2) dalam rancangan acak kelompok (RAK) dengan tiga ulangan. Faktor pertama adalah 8 klon ubikayu; CMM 252757 080915-15, Malang 6 240815-3, BW 1, Cimanggu 12 080915, BL 8 150815-3, Darul Hidayah 240815-4, Mulyo 240715-10 dan UJ 5. Faktor kedua adalah dua taraf dosis pupuk *Zincmicro* yaitu 0 kg ha<sup>-1</sup> dan 40 kg ha<sup>-1</sup>. Variabel yang diamati adalah tinggi tanaman, jumlah daun, diameter batang, tingkat kehijauan daun, jumlah lobus daun, bobot berangkasan, jumlah ubi, bobot ubi per lima tanaman, diameter

penyebaran ubi dan kadar pati. Data dianalisis dengan menggunakan aplikasi SAS 9.0 pada taraf nyata 5%. Hasil penelitian menunjukkan bahwa beberapa variabel seperti tinggi tanaman dan jumlah daun pada umur 8 bulan setelah tanam serta bobot berangkasan terdapat interaksi nyata yang dipengaruhi oleh klon dan dosis pupuk mikro pada taraf 40 kg ha<sup>-1</sup>. Selanjutnya pada variabel tinggi tanaman, jumlah daun umur 4 hingga 8 bulan setelah tanam, jumlah ubi dan bobot ubi per lima tanaman terdapat variasi nyata yang dipengaruhi oleh klon. Pada variabel tinggi tanaman 4 dan 10 bulan setelah tanam serta jumlah ubi per lima tanaman terlihat adanya variasi nyata yang dipengaruhi oleh dosis pupuk mikro pada taraf 40 kg ha<sup>-1</sup>. Hasil produksi pada variabel kadar pati menunjukkan bahwa nilai kisaran kadar pati tertinggi dimiliki oleh klon Darul Hidayah 240815-4 yaitu sebesar 28% dengan pemberian dosis pupuk mikro pada taraf 40 kg ha<sup>-1</sup>.

**Kata kunci** : klon, pupuk mikro, ubikayu