PENGARUH PEMBERIAN KOMPOS KULIT UBI KAYU DAN NPK ORGANIK TERHADAP PERTUMBUHAN BIBIT KAKAO BL-50 (*Theobroma cacao* L.)

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ABSTRAK

Penurunan produktivitas kakao nasional menuntut perbaikan teknik pembibitan melalui peningkatan kualitas media tanam, khususnya pada tanah Ultisol yang umumnya masam dan miskin hara. Penelitian ini bertujuan mengkaji pengaruh pemberian kompos kulit ubi kayu dan pupuk NPK organik terhadap pertumbuhan bibit kakao (*Theobroma cacao* L.) klon BL-50. Bahan organik dapat memperbaiki sifat fisik, kimia, dan biologi tanah, serta peran pupuk NPK organik adalah menyediakan unsur hara makro esensial. Penelitian dilakukan menggunakan Rancangan Acak Lengkap (RAL) faktorial dengan dua faktor, yaitu dosis kompos kulit ubi kayu (0–300 g/polybag) dan dosis NPK organik (0–80 g/polybag), masing-masing dengan tiga ulangan. Data dikumpulkan melalui analisis kimia tanah sebelum dan sesudah inkubasi, serta pengamatan pertumbuhan bibit hingga umur 16 MST. Hasil penelitian menunjukkan bahwa kombinasi perlakuan tidak memberikan pengaruh nyata pada seluruh parameter, namun secara tunggal kompos kulit ubi kayu berpengaruh dalam memperbaiki kandungan C-organik dan KTK tanah, sedangkan NPK organik meningkatkan tinggi bibit, diameter batang, jumlah daun, dan bobot kering tanaman. Dosis NPK organik 60 g/polybag merupakan perlakuan terbaik untuk mendukung pertumbuhan bibit kakao. Dengan demikian, aplikasi pupuk organik berkualitas terbukti mampu memperbaiki kesuburan Ultisol dan meningkatkan pertumbuhan bibit kakao.

Kata kunci: Bibit, kakao, pupuk, Ultisol

THE EFFECT OF CASSAVA PEEL COMPOST AND ORGANIC NPK FERTILIZER ON THE GROWTH OF BL-50 CACAO (Theobroma cacao L.) SEEDLINGS

ABSTRACT

The decline in national cocoa productivity requires improvements in nursery techniques such as by enhancements in the quality of growing medium, particularly in Ultisol, which generally acidic and poor of nutrient. The objective of this study was to determine the effect of cassava peel compost and organic NPK fertilizer on the growth of BL-50 cacao clone (Theobroma cacao L.) seedlings. Organic matter can improve the physical, chemical, and biological properties of the soil, and organic NPK fertilizer plays a role in providing essential macronutrients. The present study was conducted using a completely randomized design (CRD) with two factors, i.e., the dose of cassava peel compost (0–300 g/polybag) and organic NPK dose (0–80 g/polybag), each with three replicates. Data were collected through soil chemical analysis before and after incubation, as well as observations of seedling growth until to 16 weeks after planting (WAP). The results showed that the combination of treatments had no significant effect on all parameters. However, single cassava peel compost significantly improved soil organic carbon content and soil cation exchange capacity (CEC), while organic NPK increased seedling height, stem diameter, leaf number, and plant dry weight. A dose of 60 g/polybag of organic NPK was the best treatment for supporting cacao seedling growth. Thus, the application of high-quality organic fertilizer has been proven to improve Ultisol fertility and enhance cacao seedling growth.

Keywords*: Seedlings, cocoa, fertilizer, Ultisol*