INTISARI

Faktor yang dapat mempengaruhi produktivitas tanaman kelapa sawit adalah umur tanaman, iklim, dan kesuburan tanah. Tujuan penelitian adalah mengetahui pengaruh umur tanaman dan kesuburan tanah terhadap produktivitas serta melakukan evaluasi terhadap manajemen pemupukan. Penelitian dilakukan pada bulan Februari-Mei 2024. Metode survey menggunakan *stratified random sampling*. Stratifikasi berdasarkan umur kelapa sawit yang terdiri atas: 9, 12, dan 15 tahun. Penentuan jumlah dan pengambilan sampel menggunakan metode slovin dan purposive sampling. Pengumpulan data meliputi suhu dan kelembaban udara, intensitas dan sekapan cahaya, dan kesuburan tanah. Analisis data menggunakan ANOVA, uji DMRT, dan uji korelasi. Hasil penelitian menunjukkan hasil produksi sesuai dengan tren kelompok umur. Umur tanaman berpengaruh nyata terhadap suhu, kelembaban udara, intensitas dan sekapan cahaya. Kondisi iklim mikro optimal untuk kelapa sawit, tetapi unsur hara yang tersedia di tanah tidak optimal. Rekomendasi dari hasil penelitian yaitu perlu dilakukan manajemen pemupukan yang lebih baik untuk menjamin kebutuhan unsur hara terpenuhi, sehingga hasil produksi dapat mencapai potensi maksimalnya.

Kata kunci: produksi, umur kelapa sawit, iklim, unsur hara, evaluasi.

ABSTRACT

Factors that can influence the productivity of oil palm are plant age, climate, and soil fertility. The purpose of the study was to determine the effect of plant age and soil fertility on productivity and to evaluate fertilizer management. The study was conducted in February-May 2024. The survey method used stratified random sampling. Stratification based on oil palm age consisting of 9, 12, and 15 years. The determination of the number and sampling using the slovin and purposive sampling methods. The data collection includes air temperature, relative humidity, light intensity and coverage, and soil fertility. The data was analysis used ANOVA, DMRT test, and correlation test. The results showed that production were in accordance with age group trends. The plant's age significantly affects air temperature, relative humidity, light intensity and exposure. Microclimate conditions were optimal for oil palm, but the nutrients available in the soil were not optimal. The recommendation from the study results was needed to ensure that nutrient needs were met so that production results can reach their maximum potential.

Keywords: production, oil palm age, climate, nutrients, evaluation.