

INTISARI

TANGGAPAN DELAPAN HIBRIDA KELAPA SAWIT (*Elaeis guineensis* Jacq.) TERHADAP KERACUNAN TEMBAGA

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Penelitian bertujuan untuk mengelompokkan delapan hibrida kelapa sawit ke dalam kategori rentan, moderat-tahan, dan tahan terhadap keracunan tembaga. Percobaan disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) faktorial dua faktor dengan tiga blok sebagai ulangan. Faktor pertama adalah hibrida kelapa sawit, terdiri dari delapan hibrida, yaitu Yangambi, Avros, Langkat, PPKS 239, Simalungun, PPKS 718, PPKS 540 dan Dumpy. Faktor kedua adalah keracunan tembaga, yaitu tanpa dan keracunan tembaga. Keracunan tembaga diaplikasikan menggunakan CuSO_4 dengan konsentrasi 300 ppm. Variabel yang diamati meliputi karakter morfologis, fisiologis, dan pertumbuhan hibrida kelapa sawit. Data yang diperoleh dianalisis varian (ANOVA) pada level 5%, dan dilanjutkan dengan uji beda nyata terkecil (BNT) apabila terdapat beda nyata antar perlakuan. Hasil penelitian memberikan informasi bahwa Avros masuk dalam kategori tahan terhadap keracunan tembaga sedangkan Yangambi, Langkat, PPKS 239, Simalungun, PPKS 718, PPKS 540, dan Dumpy termasuk dalam kategori rentan atau tidak tahan. Gejala toksisitas Cu parah, ditandai dengan pelunakan, pemendekan dan penyempitan akar, klorosis dan nekrosis daun, penurunan kandungan klorofil dan ANR, penurunan laju fotosintesis, serta penghambatan pertumbuhan tanaman.

Kata kunci: keracunan, tembaga, hibrida, dan kelapa sawit

ABSTRACT

RESPONSES OF EIGHT OIL PALM (*Elaeis guineensis* Jacq.) HYBRIDS TO COOPER TOXICITY

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The objectives of study were to grouping the eight of oil palm hybrids into three categories, sensitive, moderate-tolerant, and tolerant to cooper toxicity. The experiment was arranged in Randomized Complete Block Design (RCBD) two factors with three blocks as replications. The first factor was oil palm hybrid, consisting of eight hybrids, namely Yangambi, Avros, Langkat, PPKS 239, Simalungun, PPKS 718, PPKS 540, and Dumpy. The second factor was cooper toxicities, namely without and cooper toxicities. The cooper toxicity applied using CuSO₄ with a concentration of 300 ppm. The observations were done on several morphological, physiological and growth variables of oil palm hybrids. Data were analyzed with Analysis of Variance (ANOVA) at 5% levels, and continued with the Least Significant Difference (LSD) test if there were significant differences among treatments. The results showed that Avros was a hybrid that was tolerant to cooper toxicity, whereas Yangambi, Langkat, PPKS 239, Simalungun, PPKS 718, PPKS 540, and Dumpy were the sensitive to cooper toxicity. Symptoms toxicity of cooper characterized by softening, shortening and narrowing of the root, chlorosis and necrosis of leaf, decreased content of chlorophyll and ANR value, a decrease in the rate of photosynthesis, as well as the inhibition of plant growth

Key words: cooper, toxicity, hybrids, and oil palm