

INTISARI

Penelitian ini mengkaji pengaruh kandungan mangan pada pertumbuhan awal tanaman nanas klon MD2, menentukan batas toleransi mangan tanaman nanas klon MD2 pada pertumbuhan awal, dan mengkaji serapan kalsium terhadap pemberian kalsium dan pengaruh kandungan mangan yang cukup tinggi pada pertumbuhan awal tanaman nanas klon MD2. Penelitian ini menggunakan dua media yaitu media air dan media tanah. Rancangan percobaan yang digunakan rancangan acak lengkap (RAL) faktorial (5x3) dengan 3 ulangan. Pengamatan agronomi dan tanah dilakukan sampai vegetatif awal. Berdasarkan penelitian yang telah dilakukan kandungan mangan dengan konsentrasi tertentu mampu menghambat pertumbuhan tanaman meliputi panjang akar, jumlah akar, persentase rambut akar, berat segar akar, berat kering akar, panjang D-leaf, berat D-leaf, dan berat tanaman. Batas kandungan mangan yang dapat menghambat pertumbuhan nanas klon MD2 pada media air mulai 75-100 g/kg, media tanah kandungan Mn sekitar 25 g/kg cenderung menghambat perakaran nanas, serta Mn sekitar 50 g/kg cenderung dapat menghambat pertumbuhan nanas dalam parameter panjang D-leaf, berat D-leaf, dan berat tanaman. Penurunan serapan kalsium terjadi pada kandungan Mn sebesar 75 g/kg ketika pemberian sumber kalsium tidak menunjukkan peningkatan serapan kalsium yang beda nyata.

Kata kunci: mangan, kalsium, ultisol, nanas, MD2.

ABSTRACT

This study aims to examine the effect of manganese content in the vegetatif growth of pineapple clon MD2, determine tolerance limits in vegetatif growth of pineapple clon MD2, and asses calcium uptake on calcium addition and the effect of high manganese content in vegetative growth of pineapple clon MD2. This study used two media, solution culture and soil culture. The experimental design used a completely randomized design (CRD) factorial (5x3) with 3 replications. Agronomic and soil observations were carried out until the vegetative growth. The results of this study indicated that the high content of manganese was able to inhibit vegetative growth including root length, root hair proportion, root fresh weight, root dry weight, D-leaf length, D-leaf weight, and plant weight. The limit of manganese content that can inhibit the growth of pineapple clon MD2 in solution culture starts from 75-100 g / kg, while in the soil culture the Mn content is around 25 g / kg tends to be able to inhibit pineapple rooting, and the Mn content is around 50 g / kg tends to inhibit vegetative growth included of D-leaf length, D-leaf weight, and plant weight. The decreased calcium uptake occurred in the Mn content of 75 g / kg where the calcium addition did not increase the significantly different calcium uptake.

Key word: manganese, calcium, ultisols, pineapple, MD2.