

ABSTRACT

Aris Setiawan. *Fertilizer Use D.I. Grow Red For Growth and Production of Sweet Corn (*Zea mays saccharata* Sturt).* Under the guidance of Ir. Erwin H. Pane, MS as Chairman of the Supervising Committee and Ir. Azwana, MP as the Supervising Committee Members.

*This research was conducted in the experimental farm of the Faculty of Agriculture, University of Medan Area is located on the street No. pool. 1 Medan Estate, District Percut Sei Tuan with altitude of approximately 12 m above sea level, flat topography and alluvial soil types. This study was conducted from March to July 2013. For research purposes to determine the effect of fertilizer use D.I Red Grow the growth and yield of sweet corn (*Zea mays saccharata* Sturt)*

This study was designed with a randomized block design (RAK) Non factorial consisting of one factor: Dose fertilizer D.I Grow (D) consists of 5 levels, namely: D0 = Without fertilizer D.I Grow, D1 = Fertilizer D.I. Red Grow as much as 2 cc / l of water, D2 = Fertilizer D.I. Red Grow by 4 cc / l of water, D3 = Fertilizer D.I. Red Grow as much as 6 cc / l of water and fertilizer D.I = D4 = Red Grow by 8 cc / l of water.

The parameters measured were plant height, stem diameter, number of leaves, flowering, ear length, weight of cobs per plant, and production hectare.

The results showed that the use of fertilizers D.I Red Grow can increase the growth and yield of sweet corn to a certain dose, kemudian decreases after passing through the optimum concentration for the parameters plant height, stem diameter, ear length, weight of cobs per plant, weight of cobs per plot and per hectare. Fertilizer treatment D.I. Red Grow does not affect the number of leaves and flowering plant sweet corn.

RINGKASAN

Aris Setiawan. *Penggunaan Pupuk D.I. Grow Merah Untuk Pertumbuhan dan Produksi Tanaman Jagung Manis (*Zea mays saccharata* Sturt).* Di bawah bimbingan Ir. H. Erwin Pane, MS sebagai Ketua Komisi Pembimbing dan Ir. Azwana, MP sebagai Anggota Komisi Pembimbing.

*Penelitian ini dilakukan di kebun percobaan Fakultas Pertanian Universitas Medan Area yang berlokasi di jalan Kolam No. 1 Medan Estate, Kecamatan Percut Sei Tuan dengan ketinggian tempat kira-kira 12 m dari permukaan laut, topografi datar dan jenis tanah alluvial. Penelitian ini dilaksanakan mulai bulan Maret sampai dengan Juli 2013. Tujuan penelitian untuk mengetahui pengaruh penggunaan pupuk D.I. Grow Merah terhadap pertumbuhan dan produksi tanaman jagung manis (*Zea mays saccharata* Sturt)*

Penelitian ini dirancang dengan Rancangan Acak Kelompok (RAK) Non factorial yang terdiri dari satu faktor yaitu : Dosis pupuk D.I. Grow (D) terdiri atas 5 taraf, yaitu : D₀ = Tanpa pupuk D.I. Grow, D₁ = Pupuk D.I. Grow Merah sebanyak 2 cc/l air, D₂ = Pupuk D.I. Grow Merah sebanyak 4 cc/l air, D₃ = Pupuk D.I. Grow Merah sebanyak 6 cc/l air dan D₄ = Pupuk D.I. Grow Merah sebanyak 8 cc/l air.

Parameter yang diamati adalah tinggi tanaman, diameter batang, jumlah daun, umur berbunga, panjang tongkol, berat tongkol per tanaman, dan produksi per hektar.

Hasil penelitian menunjukkan bahwa penggunaan pupuk D.I. Grow Merah dapat meningkatkan pertumbuhan dan produksi tanaman jagung manis sampai dosis tertentu, kemudian menurun setelah melewati konsentrasi optimum untuk parameter tinggi tanaman, diameter batang, panjang tongkol, berat tongkol per tanaman, berat tongkol per plot dan per hektar.

Perlakuan pupuk D.I. Grow Merah tidak berpengaruh terhadap jumlah daun dan umur berbunga tanaman jagung manis.