

## RINGKASAN

Jagung manis (*Zea mays Saccharata* Sturt L.) termasuk famili gramineae sub famili panacoidae. Jagung manis termasuk tanaman monokotiledonus. Jagung manis memerlukan unsur hara yang cukup banyak selama proses pertumbuhannya. Pupuk Organik Cair mengandung unsur hara yang dapat meningkatkan pertumbuhan tanaman. Pemberian kombinasi pupuk organik padat dan POC dapat meningkatkan porositas tanah, bobot tanah, permeabilitas tanah, dan pertumbuhan tanaman, penggunaan pupuk organik cair dan padat pada tanaman jagung manis dapat meningkatkan pertumbuhan dan produksi jagung manis. Salah satunya adalah penggunaan pupuk organik cair dari pepaya yang memiliki kadar Nitrogen (0.05%), Fosfor (0.12%), Kalium (0.37%) dan Kompos Ampas Tahu: Nitrogen (3.32%), Fosfor (0.163%), Kalium (1.16%).

Penelitian dilaksanakan di kebun Percobaan Fakultas Pertanian Universitas Islam Sumatera Utara, Jln. Karya Wisata, Kecamatan Medan Johor, Kota Medan, Provinsi Sumatera Utara Ketinggian tempat  $\pm 25$  mdpl, dengan Topografi datar. Penelitian ini dilaksanakan pada bulan Januari sampai dengan bulan april 2023. Penelitian ini bertujuan untuk menguji pengaruh pemberian POC Pepaya dan Kompos Ampas terhadap pertumbuhan dan produksi tanaman jagung manis di tanah inceptisol. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) Faktorial dengan dua factor perlakuan yaitu POC Pepaya dan Kompos Ampas Tahu. Faktor pertama yaitu : POC Pepaya terdiri 4 taraf yaitu :  $P_0 =$  Kontrol,  $P_1 = 50$  ml/l/plot,  $P_2 = 100$  ml/l/plot,  $P_3 = 150$  ml/l/plot. Faktor kedua yaitu : Kompos Ampas Tahu terdiri 3 taraf yaitu :  $K_0 =$  Kontrol,  $K_1 = 4,5$  kg/plot,  $K_2 = 9$  kg/plot. Parameter yang diamati adalah Tinggi Tanaman (cm), Diameter Batang, Jumlah Daun (Helai), Bobot klobot Per Tanaman (g), Bobot klobot Per Plot (kg), Bobot Tongkol Per Tanaman (g), Bobot Tongkol Per Plot (kg), C- Organik Tanah. Hasil Penelitian menunjukkan Pemberian POC pepaya berpengaruh nyata terhadap tinggi tanaman, diameter batang, jumlah daun, bobot kelobot per tanaman dan per plot, bobot tongkol per tanaman dan per plot serta kandungan C organik tanah, Pemberian POC pepaya terbaik diperoleh pada dosis 150 ml/L/plot ( $P_3$ ). Pemberian kompos ampas tahu berpengaruh nyata terhadap tinggi tanaman, diameter batang, jumlah daun, bobot kelobot per tanaman dan per plot, bobot tongkol per tanaman dan per plot serta kandungan C organik tanah, Pemberian kompos ampas tahu terbaik diperoleh pada dosis 9 kg/plot ( $K_2$ ).

*Kata Kunci : Tanaman Jagung Manis, Pupuk Organik Cair Pepaya, Kompos Ampas Tahu*

## SUMMARY

Sweet corn (*Zea mays Saccharata* Sturt L.) belongs to the gramineae family, sub-family Panacoidae. Sweet corn is a monocotyledonous plant. Sweet corn requires quite a lot of nutrients during its growth process. Liquid Organic Fertilizer contains nutrients that can increase plant growth. Giving a combination of solid organic fertilizers and POC can increase soil porosity, soil weight, soil permeability, and plant growth. The use of liquid and solid organic fertilizers on sweet corn plants can increase the growth and production of sweet corn. One of them is the use of liquid organic fertilizer from papaya which contains Nitrogen (0.05%), Phosphorus (0.12%), Potassium (0.37%) and Tofu Dregs Compost: Nitrogen (3.32%), Phosphorus (0.163%), Potassium (1.16%) ).

The research was conducted at the Experimental Garden of the Faculty of Agriculture, Islamic University of North Sumatra, Jln. Field Trip, Medan Johor District, Medan City, North Sumatra Province. The elevation is  $\pm 25$  meters above sea level, with a flat topography. This research was conducted from January to April 2023. The aim of this study was to examine the effect of giving POC Papaya and Dregs Compost on the growth and production of sweet corn plants in inceptisol soil. This study used a factorial randomized block design (RBD) with two treatment factors, namely POC Papaya and Tofu Dregs Compost. The first factor was: Papaya POC consisted of 4 levels, namely: P0 = Control, P1 = 50 ml/l/plot, P2 = 100 ml/l/plot, P3 = 150 ml/l/plot. The second factor was: Tofu Dregs Compost consisted of 3 levels, namely: K0 = Control, K1 = 4.5 kg/plot, K2 = 9 kg/plot. Parameters observed were Plant Height (cm), Stem Diameter, Number of Leaves (strands), Klob Weight Per Plant (g), Clob Weight Per Plot (kg), Cob Weight Per Plant (g), Cob Weight Per Plot (kg) , C- Soil Organics. The results showed that giving papaya POC had a significant effect on plant height, stem diameter, number of leaves, husk weight per plant and per plot, cob weight per plant and per plot and soil organic C content. The best papaya POC administration was obtained at a dose of 150 ml/L /plot (P3). Application of tofu dregs compost significantly affected plant height, stem diameter, number of leaves, husk husk weight per plant and per plot, cob weight per plant and per plot as well as soil organic C content. Best tofu dregs compost was obtained at a dose of 9 kg/plot ( K2).

*Keywords: Sweet Corn Plants, Papaya Liquid Organic Fertilizer, Dregs Compost Know*