

RINGKASAN

DEDDY PANCARA JUNIELDO, 2024. Pengaruh Pemberian Mulsa dan Pupuk NPK terhadap Pertumbuhan dan Produksi Tanaman Jagung Manis (*Zea mays saccharata*)

Penelitian ini dilaksanakan di Lahan Percobaan Fakultas Pertanian Universitas Islam Sumatera Utara, Jln. Karya Wisata, Gedung Johor Kecamatan Medan Johor Kota Madya Medan, Provinsi Sumatera Utara dengan ketinggian Tempat ± 25 meter dpl, dengan topografi datar. Penelitian ini dimulai Bulan November 2021 Bulan Februari 2022 dibawah bimbingan Ibu Dr. Yayuk Purwaningrum, S.P.,M.P. selaku ketua komisi pembimbing dan Ibu Ir. Chairani, M.P. selaku anggota komisi pembimbing. Penelitian ini bertujuan untuk mengetahui pengaruh mulsa dan pupuk NPK terhadap pertumbuhan dan produksi tanaman jagung manis (*Zea mays saccharata*). Serta interaksi dari perlakuan mulsa dan pupuk NPK terhadap pertumbuhan dan produksi tanaman jagung manis (*Zea mays saccharata*).

Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) Faktorial dengan dua faktor yang diteliti yaitu: faktor pertama pemberian pupuk NPK yang terdiri atas 4 taraf yaitu $P_0 = 0$ ton/ha (kontrol), $P_1 = 100$ kg/ha (20 g/plot), $P_2 = 200$ kg/ha (40 g/plot), $P_3 = 300$ kg/ha (60 g/plot) dan faktor kedua pemberian jenis mulsa yang terdiri atas tiga perlakuan yaitu: $M_0 =$ tanpa mulsa (kontrol), $M_1 =$ jerami padi (10 ton/ha = 2 kg/plot), $M_2 =$ mulsa pelastik. Parameter yang diukur meliputi tinggi tanaman, jumlah daun, bobot tongkol berklot, bobot tongkol tanpa klot, panjang tongkol dan diameter tongkol.

Hasil penelitian menunjukkan bahwa perlakuan pemupukan NPK P_2 dosis (40 g/petak) berpengaruh terhadap variabel pengamatan tinggi tanaman, jumlah daun, berat tongkol dengan sekam, berat tongkol tanpa sekam, dan panjang tongkol, namun tidak berpengaruh terhadap variabel diameter tongkol. Pemberian mulsa jerami padi M_1 (2 kg jerami padi/petak) berpengaruh terhadap variabel pengamatan jumlah daun dan berat tongkol dengan sekam, namun tidak berpengaruh terhadap variabel pengamatan tinggi tanaman, berat tongkol tanpa sekam, panjang tongkol dan diameter tongkol. Interaksi antara pupuk NPK dan jenis mulsa hanya berpengaruh terhadap variabel jumlah daun yang diamati, namun tidak berpengaruh terhadap variabel pengamatan tinggi tanaman, berat tongkol dengan sekam, berat tongkol tanpa sekam, panjang tongkol dan diameter tongkol. Perlakuan terbaik diperoleh pada P_2M_1 (pupuk NPK 40 g/petak dan jerami padi 2 kg/petak).

Kata Kunci : Pupuk, mulsa, pertumbuhan, perkembangan tanaman jagung manis

SUMMARY

DEDDY PANCARA JUNIELDO, 2024. Pengaruh Pemberian Mulsa dan Pupuk NPK terhadap Pertumbuhan dan Produksi Tanaman Jagung Manis (*Zea mays saccharata*)

*This research was conducted at the Experimental Field of the Faculty of Agriculture, Islamic University of North Sumatra, Jln. Karya Wisata, Johor Building, Medan Johor District, Medan City, North Sumatra Province with an altitude of ± 25 meters above sea level, with a flat topography. This research began in November 2021 in February 2022 under the guidance of Dr. Yayuk Purwaningrum, S.P., M.P. as chairman of the supervisory commission and Mrs. Ir. Chairani, M.P. as a member of the advisory committee. This study aims to determine the effect of mulch and NPK fertilizer on the growth and production of sweet corn (*Zea mays saccharata*). As well as the interaction of mulch and NPK fertilizer treatment on the growth and production of sweet corn (*Zea mays saccharata*).*

This research used a Factorial Randomized Block Design (RAK) with two factors studied, namely: the first factor was NPK fertilizer application which consisted of 4 levels, namely $P_0 = 0$ ton/ha (control), $P_1 = 100$ kg/ha (20 g/plot), $P_2 = 200$ kg/ha (40 g/plot), $P_3 = 300$ kg/ha (60 g/plot) and the second factor was the provision of a type of mulch consisting of three treatments, namely: $M_0 =$ no mulch (control), $M_1 =$ straw rice (10 tons/ha = 2 kg/plot), $M_2 =$ plastic mulch. Parameters measured included plant height, number of leaves, weight of cobs with husks, weight of cobs without husks, ear length and ear diameter.

The results of the research showed that the NPK P_2 fertilizer treatment dose (40 g/plot) had an effect on the observed variables of plant height, number of leaves, weight of cobs with husks, weight of cobs without husks, and cob length, but had no effect on the cob diameter variable. Providing M_1 rice straw mulch (2 kg rice straw/plot) had an effect on the observed variables of number of leaves and weight of cobs with husks, but had no effect on the observed variables of plant height, cob weight without husks, cob length and cob diameter. The interaction between NPK fertilizer and mulch type only affected the variable number of leaves observed, but had no effect on the observed variables of plant height, cob weight with husks, cob weight without husks, cob length and cob diameter. The best treatment was obtained at P_2M_1 (40 g NPK fertilizer/plot and 2 kg rice straw/plot).

Keywords: Fertilizer, mulch, growth, sweet corn plant development