

## RINGKASAN

Tanaman jagung manis merupakan salah satu tanaman yang responsif terhadap pemupukan. Oleh karena itu, ketersediaan unsur hara yang cukup selama fase pertumbuhannya perlu diperhatikan. Unsur hara terutama nitrogen dalam tanah mudah tercuci sehingga tidak tersedia bagi tanaman. Oleh sebab itu, diperlukan penambahan unsur hara. Salah satu sumber utama unsure hara yaitu NPK. Kelebihan unsure hara terlebih nitrogen dapat menyebabkan tanaman mudah patah dan mudah terserang hama sedangkan kekurangan hara mengakibatkan tanaman mengalami penyimpangan pertumbuhan daun, jaringan mati atau mengering, dan pertumbuhan tanaman menjadi kerdil dan juga terjadi gejala klorosis. Salah satu bahan organik yang diharapkan dapat memperbaiki sifat-sifat tanah dan hasil tanaman adalah bokashi. Pupuk organik bokashi adalah hasil fermentasi bahan organik dengan teknologi EM-4. Pupuk bokashi dapat digunakan sebagai pupuk organik yang dapat meningkatkan kesuburan tanah dan memperbaiki pertumbuhan dan hasil tanaman

ketersediaan N tanah 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 pada ketinggian tempat  $\pm 25$  meter dpl, dengan topografi datar. Penelitian ini dimulai bulan Oktober 2022 sampai dengan Bulan Januari 2023.. Penelitian bertujuan untuk mengetahui pengaruh bokasi jerami padi dan pupuk NPK serta interaksinya terhadap pertumbuhan dan produksi tanaman jagung manis serta pada tanah Inceptisol.

Hasil penelitian menunjukkan bahwa bokashi jerami padi berpengaruh nyata terhadap tinggi tanaman, diameter batang, panjang tongkol, diameter tongkol, bobot buah pertanaman, bobot buah per plot, bobot tongkol pertanaman dan bobot tongkol per plot serta kandungan N total tanah. Dosis pemberian bokashi jerami padi tertinggi pada dosis 4.5 kg/plot. Pemberian pupuk NPK berpengaruh nyata terhadap tinggi tanam diameter batang, panjang tongkol, diameter tongkol, bobot buah pertanaman, bobot buah per plot, bobot tongkol pertanaman dan bobot tongkol per plot serta kandungan N total tanah. Dosis pemberian pupuk NPK tertinggi pada dosis 45 g/plot. Interaksi bokashi jerami padi dan pupuk NPK nyata terhadap tinggi tanaman, panjang tongkol, bobot buah pertanaman, bobot buah per plot, bobot tongkol pertanaman dan bobot tongkol per plot serta kandungan N total tanah. Dosis pemberian bokashi jerami padi dan pupuk NPK tertinggi pada perlakuan  $B_3N_3$  (4.5 kg bokashi/plot dan 45 g pupuk NPK/plot).

*Kata Kunci: Tanaman Jagung Manis, Bokasi Jerami Padi, Pupuk NPK,*

## SUMMARY

Sweet corn plant is one of the plants that is responsive to fertilization. Therefore, the availability of sufficient nutrients during the growth phase needs to be considered. Nutrients especially nitrogen in the soil are easily leached so they are not available to plants. Therefore, it is necessary to add nutrients. One of the main sources of nutrients is NPK. An excess of nutrients, especially nitrogen, can cause plants to break easily and be susceptible to pests, while a lack of nutrients causes plants to experience deviations in leaf growth, tissue death or drying, and plant growth to become stunted and symptoms of chlorosis also occur. One of the organic materials that is expected to improve soil properties and crop yields is bokashi. Bokashi organic fertilizer is the result of organic matter fermentation using EM-4 technology. Bokashi fertilizer can be used as an organic fertilizer that can increase soil fertility and improve plant growth and yield

soil N availability This research was conducted at the Experimental Field of the Faculty of Agriculture, Islamic University of North Sumatra, Jln. Lecture Tour, Johor Building, Medan Johor District, Medan Municipal City, North Sumatra Province at an altitude of  $\pm 25$  meters above sea level, with a flat topography. This research began in October 2022 until January 2023. The research aims to determine the effect of rice straw and NPK fertilizer and their interactions on the growth and production of sweet corn plants and on Inceptisol soil.

The results showed that rice straw bokashi had a significant effect on plant height, stem diameter, cob length, cob diameter, planting fruit weight, fruit weight per plot, cob weight planting and cob weight per plot and total soil N content. The highest dose of rice straw bokashi was at a dose of 4.5 kg/plot. The application of NPK fertilizer had a significant effect on plant height, stem diameter, cob length, cob diameter, fruit weight per plot, cob weight per plot, cob weight per plot and total soil N content. The highest dose of NPK fertilizer was at a dose of 45 g/plot. The interaction of rice straw bokashi and NPK fertilizer was significant on plant height, cob length, fruit weight planted, fruit weight per plot, cob weight planted and cob weight per plot and soil total N content. The highest dose of rice straw bokashi and NPK fertilizer was in the B3N3 treatment (4.5 kg bokashi/plot and 45 g NPK fertilizer/plot).

*Keywords: Sweet Corn Plants, Rice Straw Bocation, NPK Fertilizer,*