ABSTRAK

PENGARUH KOMBINASI VOLUME *EFFLUENT* PETERNAKAN SAPI DAN TAKARAN PUPUK ANORGANIK TERHADAP PERTUMBUHAN DAN HASIL JAGUNG MANIS (*Zea mays saccharata* Sturt L.)

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Effluent dapat memberikan dampak positif maupun negatif terhadap lingkungan. Dampak negatif pada lingkungan disebabkan oleh adanya polutan organik sedangkan dampak positif sebagai sumber unsur hara. Penelitian ini dilakuan untuk mengetahui kombinasi volume *effluent* peternakan sapi dan takaran pupuk anorganik terhadap petumbuhan dan hasil tanaman jagung manis. Percobaan dilaksanakan di lahan peternakan Mifama *farm* yang terletak di Kelurahan Ciherang, Kecamatan Cibereum, Kota Tasikmalaya, Jawa Barat dari bulan Februari sampai bulan April 2024. Penelitian menggunakan Rancangan Acak Kelompok (RAK) yang terdiri dari 6 kombinasi perlakuan, A = *Effluent* 0% kapasitas lapang + 300 kg/ha Urea + 150 kg/ha SP36 + 100 kg/ha KCl, B = *Effluent* 100% kapasitas lapang, C = *Effluent* 100% kapasitas lapang + 225 kg/ha Urea + 112,5 kg/ha SP36 + 75 kg/ha KCl, D = *Effluent* 100% kapasitas lapang + 150 kg/ha Urea + 75 kg/ha SP36 + 50 kg/ha KCl, E = *Effluent* 50% kapasitas lapang + 225 kg/ha Urea + 112,5 kg/ha SP36 + 75 kg/ha KCl, F = *Effluent* 50% kapasitas lapang + 150 kg/ha Urea + 75 kg/ha SP36 + 50 kg/ha KCl diulang sebanyak 4 kali. Kombinasi volume *effluent* peternakan sapi dan takaran pupuk anorganik berpengaruh terhadap panjang tongkol tanpa kelobot, berat tongkol berkelobot per tanaman dan berat tongkol tanpa kelobot per tanaman. Tapi tidak memberikan pengaruh terhadap tinggi tanaman, jumlah daun, diameter batang dan diameter tongkol tanpa kelobot. Kombinasi volume *effluent* peternakan sapi 50% kapasitas lapang dan takaran pupuk anorganik 150 kg/ha Urea + 75 kg/ha SP36 + 50 kg/ha KCl berpengaruh paling baik terhadap pertumbuhan dan hasil jagung manis.

Kata kunci :*Effluent*, Jagung Manis, Pupuk anorganik

ABSTRACT

EFFECT OF THE COMBINATION OF CATTLE FARM EFFLUENT VOLUME AND INORGANIC FERTILIZER MEASURES ON SWEET CORN GROWTH AND YIELD
(*Zea mays saccharata* Sturt L.)

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Effluent can have a positive or negative impact on the environment. The negative impact on the environment is caused by the presence of organic pollutants, while the positive impact is as a source of nutrients. This research was carried out to determine the combination of cattle farm *effluent* volume and inorganic fertilizer dosage on the growth and yield of sweet corn plants. The experiment was carried out on the Mifama farm located in Ciherang Village, Cibereum Sub District, Tasikmalaya City, West Java from February to April 2024. The research used a Randomized Block Design (RBD) consisting of 6 treatment combinations, A = *Effluent* 0% capacity field + 300 kg/ha Urea + 150 kg/ha SP36 + 100 kg/ha KCl, B = *Effluent* 100% field capacity, C = *Effluent* 100% field capacity + 225 kg/ha Urea + 112.5 kg/ha SP36 + 75 kg/ha KCl, D = *Effluent* 100% field capacity + 150 kg/ha Urea + 75 kg/ha SP36 + 50 kg/ha KCl, E = *Effluent* 50% field capacity + 225 kg/ha Urea + 112.5 kg /ha SP36 + 75 kg/ha KCl, F = *Effluent* 50% field capacity + 150 kg/ha Urea + 75 kg/ha SP36 + 50 kg/ha KCl repeated 4 times. The combination of cattle farm *effluent* volume and inorganic fertilizer dosage influences the length of cobs without husks, the weight of cobs with husks per plant and the weight of cobs without husks per plant. But it has no effect on plant height, number of leaves, stem diameter and cob diameter without husks. The combination of cattle farm *effluent* volume of 50% field capacity and inorganic fertilizer dosage of 150 kg/ha Urea + 75 kg/ha SP36 + 50 kg/ha KCl has the best effect on the growth and yield of sweet corn.

Keywords: *Effluent*, Sweet Corn, Inorganic Fertilizer