RINGKASAN

Laurensius Tobing, Pengaruh Kombinasi Pupuk Organik Sludge, Pupuk N,P,K dan Pupuk Kotoran Ayam Terhadap Pertumbuhan Dan Hasil Jagung Manis Pada Tanah Podsolik Merah Kuning Di Kabupaten Sekadau

Jagung Manis (*Zea mays saccharata Sturt* L) dikategorikan sebagai tanaman serealia yang banyak disukai oleh masyarakat karena mempunyai rasa manis. salah satu prospek masa depan dari budidaya jagung manis ialah nilai ekonomis yang tinggi. Tanah Podsolik Merah Kuning (PMK) dicirikan oleh pH tanah <5, C-organik dan tingkat kesuburan tanah rendah. Sludge merupakan hasil ahir dari pengolahan minyak kelapa sawit yang berasal dari pengolahan limbah cair maupun limbah padat yang telah diendapkan dan dimanfaatkan sebagai penambah kesuburan tanah. Kandungan unsur hara yang terdapat pada sludge yaitu: C-Organik 5,52%, C/N 30,81, N-total 0,18%, P-total 0,07%, K 0,06%, dan nilai pH 6. pupuk kandang ayam berfungsi untuk meningkatkan daya menahan air, aktivitas mikrobiologi tanah, nilai kapasitas tukar kation dan memperbaiki struktur tanah. Penelitian ini bertujuan Mengetahui Pengaruh Pemberian kombinasi Pupuk Organik Sludge, NPK dan Pupuk kotoran ayam Terhadap Pertumbuhan dan Hasil Jagung Manis Pada Tanah PMK.

Penelitian ini menggunakan Acak Lengkap yang terdiri dari 1 faktor yaitu s= Pupuk Organik Sludge. Adapun perlakuanya sebagai berikut: S_1: Sludge 100%, S_2 : Sludge 100 % + 100 % Pupuk Kotoran Ayam, S_3 : Sludge 75 % + 25 % Pupuk Kotoran Ayam, S_4: Sludge 50 % + 50 % Pupuk Kandang + 50 % NPK, S_5: Sludge 25 % + 25 % Pupuk Kandang + 50% NPK, S_6: NPK 100% dan S_7 :Pupuk Kotoran Ayam 100% masing masing perlakuan di ulang sebanyak 4 kali sehingga di dapat 28 sampel perlakuan dan masing-masing perlakuan terdapat 4 sampel tanaman sehingga sampel keseluruhan adalah 112 sampel tanaman amatan.

Hasil penelitian menunjukkan pemberian pupuk organik sludge, NPK dan Pupuk Kotoran Ayam berpengaruh nyata terhadap semua variabel pengamatan. Pemberian Sludge 25% + 25% Pupuk Kotoran Ayam + 50% NPK mampu memberikan hasil rata-rata panjang 19,17 cm, rata-rata berat tongkol tanpa kelobot 275,34 gram, rata-rata berat tongkol dengan kelobot 356,59 gram, rata-rata diameter tongkol 4,18 cm, dan rata-rata berat kering tanaman 274,25 gram

SUMMARY

Laurensius Tobing, The Effect Of Combination Of Sludge Organic Fertilizer, N,P,K Fertilizer And Chicken Manure Fertilizer On The Growth And Production Of Sweet Corn In Red Yellow Podsolic Soil In Sekadau District

Sweet corn (Zea mays saccharata Sturt L) is categorized as a cereal plant that is much liked by the public because it has a sweet taste. One of the future prospects of sweet corn cultivation is its high economic value. Red Yellow Podsolic Soil (PMK) is characterized by soil pH <5, C-organic and low soil fertility. Sludge is the final product of palm oil processing that comes from processing liquid waste and solid waste that has been deposited and used as an increase in soil fertility. The nutrient content of the sludge is: C-Organic 5.52%, C/N 30.81, N-total 0.18%, P-total 0.07%, K 0.06%, and a pH value of 6. The function of chicken manure fertilizer is to increase water holding capacity, soil microbiological activity, and value of cation exchange capacity and improve soil structure. This study aims to determine the effect of the combination of organic fertilizer sludge, NPK and chicken manure fertilizer on the growth and the yield of sweet corn in PMK soil. This study used Completely Randomized consisting of 1 factor, namely s= Organic Sludge Fertilizer. The treatments are as follows: S1: Sludge 100%, S2: Sludge 100% + 100% Chicken Manure Fertilizer, S3: Sludge 75% + 25% Chicken Manure Fertilizer, S4: Sludge 50% + 50% Manure + 50% NPK, S5: 25% Sludge + 25% Manure + 50% NPK, S6: 100% NPK and S7: 100% Chicken Manure Fertilizer Each treatment was repeated 4 times so that 28 treatment samples were obtained and each treatment contained 4 samples of the plants so that the total sample is 112 observed plant samples. The results showed that the application of organic sludge fertilizer, NPK and Chicken Manure had a significant effect on all observation variables. The application of 25% Sludge + 25% Chicken Manure + 50% NPK was able to give an average length of 19.17 cm, an average weight of cobs without hulls 275.34 grams, an average weight of cobs with an average weight of 356.59 grams, the average diameter of the cob is 4.18 cm, and the average dry weight of the plant is 274.25 grams