

INTISARI

Penelitian ini untuk mengetahui efektivitas dan seberapa besar nano tulang sapi dan nano tandan kosong kelapa sawit dapat menggantikan pupuk SP-36 dan KCl terhadap pertumbuhan dan hasil padi pandan wangi Cianjur. Penelitian ini di laksanakan pada bulan Januari – Juli 2019, dengan menggunakan rancangan percobaan faktor tunggal yang disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan 4 perlakuan . Perlakuan – perlakuan yang diujikan yaitu : A = Kontrol (Pupuk P, K dosis anjuran), B = Pupuk P 50% dosis anjuran + Nano Tulang Sapi konsentrasi 0,2%, C = Pupuk K 50% dosis anjuran + Nano TKKS konsentrasi 0,2%, dan D = Pupuk P, K 50% dosis anjuran + Nano Tulang Sapi konsentrasi 0,2% dan Nano TKKS 0,2%. Setiap perlakuan di ulang 3 kali sehingga terdapat 12 unit percobaan. Parameter yang diamati meliputi tinggi tanaman, jumlah anakan, jumlah anakan produktif, luas daun, berat basah dan kering tajuk, panjang akar, berat basah dan kering akar, persentase gabah hampa dan isi, berat 1000 biji, jumlah gabah per malai, panjang malai, Hasil Padi.

Karakterisasi partikel pupuk nano tulang sapi dan TKKS masing – masing mempunyai ukuran diameter partikel dengan rata-rata ukuran 255,16 nm dan 283,16 nm. Hasil penelitian menunjukkan bahwa pemberian Pupuk P dan K 50% dosis anjuran + Nano Tulang Sapi konsentrasi 0,2% dan Nano TKKS konsentrasi 0,2% memberikan pengaruh yang tidak berbeda nyata pada pertumbuhan vegetatif tanaman, namun berpengaruh nyata meningkatkan persentase gabah isi dan hampa. Dan dapat meningkatkan hasil kering gabah giling mencapai 7,266 ton. Dan Dosis penyemprotan pupuk nano abu tulang sapi sebesar 15,38 % dan abu tandan kosong kelapa sawit sebesar 14,35% dengan konsentrasi 0,2 % dapat menggantikan dosis SP-36 sebesar 50% dan KCl sebesar 50%.

Kata Kunci : Nano Tulang Sapi, Nano TKKS, dan Padi Pandan Wangi.

ABSTRACT

This research is to find out the effectiveness and how much cow bone nano and oil palm empty fruit bunch nano can replace SP-36 and KCl fertilizer on the growth and yield of Cianjur fragrant pandan rice. This research was carried out in January - July 2019, using a single factor experimental design which was arranged in a Completely Randomized Complete Design (RCBD) with 4 treatments. The treatments tested were: A = Control (Fertilizer P, K recommended dosage), B = Fertilizer P 50% recommended dose + Beef Nano concentration 0.2%, C = Fertilizer K 50% recommended dose + Nano TKKS concentration 0, 2%, and D = Fertilizer P, K 50% recommended dose + Nano Bovine Bone concentration of 0.2% and Nano TKKS 0.2%. Each treatment was repeated 3 times so that there were 12 experimental units. The parameters observed were plant height, number of tillers, number of productive tillers, leaf area, canopy wet and dry weight, root length, root wet and dry weight, percentage of empty and filled grain, weight of 1000 seeds, number of grains per panicle, panicle length, Rice Results.

Characterization of bovine nano fertilizer particles and OPEFB each had a particle diameter size with an average size of 255.16 nm and 283.16 nm. The results showed that 50% recommended dosage of Fertilizer P and K + Nano Bovine Bone concentration of 0.2% and Nano TKKS concentration of 0.2% had no significant effect on plant vegetative growth, but had a significant effect on increasing the percentage of filled grains and empty grains . And can increase the yield of milled unhusked rice reaching 7,266 tons. And the dosage of spraying nano cow bone ash fertilizer by 15.38% and oil palm empty fruit bunch ash by 14.35% with a concentration of 0.2% can replace the SP-36 dose by 50% and KCl by 50%.

Keywords: Cow Bone Nano, Nano TKKS, and Pandan Wangi Rice.