ABSTRAK

Gideon Marulitua Purba, NIM 4212520011 (2021), Pengaruh Pemberian Pupuk Taspu Terhadap Pertumbuhan dan Produksi Biomassa Tanaman Seledri (*Apium graveolens* l.) pada berbagai Konsentrasi.

Setiap ton buah kelapa sawit dapat menghasilkan limbah berupa tandan kosong sebanyak 23%. Limbah tanda kosong kelapa sawit biasanya hanya ditimbun sebagai mulsa di lahan perkebunan kelapa sawit dan tidak memanfaatkannya secara efektif. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian kompos Tandan Kosong Kelapa Sawit (TASPU) terhadap pertumbuhan dan produksi tanaman seledri (*Apium graveolens L.*) serta menentukan konsentrasi kompos yang paling efektif. Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan lima perlakuan, yaitu P0 (kontrol), P1 (1,5 kg/pot), P2 (2 kg/pot), P3 (2,5 kg/pot), dan P4 (3 kg/pot), masing-masing diulang sebanyak empat kali. Parameter yang diamati meliputi tinggi tanaman, jumlah daun, berat basah, berat kering, berat basah akar, dan berat kering akar. Hasil penelitian menunjukkan bahwa pemberian kompos TASPU dengan konsentrasi 3 kg/pot (P4) menghasilkan pertumbuhan tanaman seledri terbaik. Perlakuan P4 menghasilkan tinggi tanaman tertinggi yaitu 41,63 cm, jumlah daun terbanyak yaitu 94 helai, berat basah tanaman terbesar yaitu 43,93 g, berat kering tanaman tertinggi yaitu 7,95 g, berat basah akar tertinggi yaitu 3,21 g, dan berat kering akar terbesar yaitu 0,81 g. Pemberian pupuk organik TASPU berpengaruh nyata terhadap seluruh parameter pertumbuhan tanaman seledri, meliputi tinggi tanaman, jumlah daun, berat basah, berat produksi, berat basah akar, berat kering tanaman, dan berat kering akar.

Kata kunci: seledri, taspu, pertumbuhan, biomassa, produksi tanaman.

ABSTRACT

Gideon Marulitua Purba, NIM 4212520011 (2021), Effect of Taspu Fertilizer Application on the Growth and Biomass Production of Celery (*Apium graveolens L.*) at Different Concentrations.

Every ton of oil palm fruit produces approximately 23% waste in the form of empty fruit bunches (EFB). This waste is commonly underutilized, often only applied as mulch in plantations without effective processing. This research aims to investigate the effect of Oil Palm Empty Fruit Bunch (TASPU) compost on the growth and yield of celery (*Apium graveolens L.*) and to determine the most effective compost concentration. **T**he research utilized a Completely Randomized Design (CRD) with five treatment levels: P0 (control), P1 (1.5 kg/pot), P2 (2 kg/pot), P3 (2.5 kg/pot), and P4 (3 kg/pot), each replicated four times. Parameters observed included plant height, number of leaves, fresh weight, dry weight, root fresh weight, and root dry weight. The results showed that the application of TASPU compost at a concentration of 3 kg/pot (P4) yielded the best growth performance. The P4 treatment produced the highest plant height (41.63 cm), the highest number of leaves (94), the greatest plant fresh weight (43.93 g), the highest plant dry weight (7.95 g), the highest root fresh weight (3.21 g), and the greatest root dry weight (0.81 g). The application of TASPU organic fertilizer significantly affected all growth and production parameters of celery, including plant height, leaf count, fresh and dry weight, as well as root fresh and dry weight.

Keywords: celery, taspu, growth, biomass, plant production.

THE Character Building UNIVERSITY