RINGKASAN

Kubis bunga merupakan salah satu jenis tanaman hortikultura komoditas sayuran yang dimanfaatkan sebagai bahan pangan bernutrisi tinggi. Seiring meningkatnya jumlah penduduk, permintaan kubis bunga meningkat namun peningkatan produksi belum diikuti secara maksimal. Berkurangnya lahan produktif di Indonesia menjadi salah satu permasalahan di bidang pertanian. Salah satu alternatif penggunaan lahan pertanian yaitu dengan pemanfaatan lahan sub optimal pasir pantai untuk bercocok tanam. Lahan pasir pantai masih dapat digunakan untuk budidaya kubis bunga untuk meningkatkan produktivitas melalui teknologi pemupukan yang seimbang. Pupuk petroganik merupakan pupuk yang mampu memperbaiki struktur dan tata udara tanah serta dapat meningkatkan daya sangga air sehingga ketersediaan air dalam lahan pasir lebih baik. Pupuk organik cair juga mengandung unsur hara makro dan mikro yang dibutuhkan oleh tanaman kubis bunga. Lahan pasir pantai mudah mengalami kehilangan unsur hara, oleh sebab itu pemberian dosis dan konsentrasi pupuk perlu diperhatikan. Tujuan dari penelitian yaitu untuk: (1) menentukan dosis pupuk petroganik yang paling efektif bagi pertumbuhan dan hasil tanaman kubis bunga, (2) menentukan konsentrasi pupuk organik cair NASA yang paling efektif bagi pertumbuhan dan hasil tanaman kubis bunga, dan (3) menentukan kombinasi perlakuan dosis pupuk petroganik dan konsentrasi pupuk organik cair NASA yang paling efektif bagi pertumbuhan dan hasil tanaman kubis bunga.

Penelitian dilaksanakan pada bulan Oktober sampai Desember 2018, di lahan pasir pantai Desa Banjarsari, Kecamatan Nusawungu, Kabupaten Cilacap. Penelitian menggunakan Rancangan Acak Kelompok Lengkap (RAKL) faktorial yang terdiri dari 9 kombinasi perlakuan dengan 3 ulangan. Perlakuan terdiri dari 2 faktor yaitu dosis pupuk petroganik yang terdiri dari 3 taraf yaitu 0 t/ha, 30 t/ha dan 60 t/ha. Faktor kedua yaitu konsentrasi pemberian pupuk organik cair yang terdiri dari 3 taraf yaitu 0 ml liter^{-1}, 5 ml liter^{-1} dan 10 ml liter^{-1}. Variabel yang diamati meliputi tinggi tanaman, jumlah daun, panjang akar, luas daun, kadar kehijauan daun, bobot akar segar, bobot akar kering, bobot daun segar, bobot daun kering, bobot tanaman segar, bobot tanaman kering, bobot batang segar, bobot batang kering, bobot bunga segar, bobot bunga kering, diameter bunga, umur pembungaan bunga dan hasil bunga segar.

Hasil penelitian menunjukkan bahwa dosis pupuk petroganik 47,67 t/ha mampu meningkatkan pertumbuhan dibanding kontrol pada panjang akar 2,02 cm atau 12,7 %, dosis pupuk petroganik 60 t/ha mampu meningkatkan hasil dibanding kontrol pada bobot bunga segar 85,16 g/tanaman atau 133%, diameter bunga 3,37 cm atau 47,5%, mempercepat umur pembungaan 4,67 hari/tanaman atau 12,93 % dan hasil bunga segar tertinggi 3,44 t/ha atau 133%. Pemberian konsentrasi pupuk organik cair Nasa 0 ml liter^{-1}, 5 ml liter^{-1} dan 10 ml liter^{-1} belum mampu meningkatkan pertumbuhan dan hasil kubis bunga. Kombinasi perlakuan dosis pupuk petroganik 60 ton/ha dan konsentrasi POC 2,91 ml/L

menghasilkan diameter bunga dan kombinasi perlakuan dosis pupuk petroganik 60 t/ha dan konsentrasi 3,86 ml/L menghasilkan bobot bunga kering.

Kata kunci: kubis bunga, lahan pasir pantai, dosis, konsentrasi.

SUMMARY

Cauliflower is a type of horticulture vegetable commodity which is used as a high nutritious food. As the population increases, the demand for cauliflowers increases but the increase in production has not been maximally followed. The reduction in productive land in Indonesia has become one of the problems in agriculture. One alternative to the use of agricultural land is by sub-optimal use of coastal sand for farming. Coastal sandy land can still be used for cauliflower cultivation to increase productivity through balanced fertilization technology. Petroganic fertilizer is a fertilizer that is able to improve the structure and structure of soil air and can increase the buffering capacity of water so that the availability of water in the sand field is better. Liquid organic fertilizer also contains macro and micro nutrients needed by flower cabbage plants. Coastal sandy land is easily deprived of nutrients, therefore the dosage and concentration of fertilizers need to be considered. The objectives of the study were to: (1) determine the most effective dose of petroganic fertilizer for growth and yield of cabbage flowers, (2) determine the concentration of NASA's most liquid organic fertilizer for the growth and yield of cabbage flowers, and (3) determine the combination the treatment of petroganic fertilizer dosages and the concentration of NASA liquid organic fertilizer are most effective for the growth and yield of cauliflower.

This research was carried out in the coastal sandy land of Banjarsari Village, Nusawungu District, Cilacap Regency in October to December 2018. The research design used was a Complete Randomized Block Design (RCBD) consisting of 9 treatment combinations with 3 replications. The treatment consisted of 2 factors, namely the dose of petroganic fertilizer which consisted of 3 levels namely 0 t/ha, 30 t/ha and 60 t/ha. The second factor is the concentration of liquid organic fertilizer which consists of 3 levels, namely 0 ml liter^{-1}, 5 ml liter^{-1} and 10 ml liter^{-1}. Variables observed included plant height, leaf number, root length, leaf area, leaf greenery, fresh root weight, dry root weight, fresh leaf weight, dry leaf weight, fresh plant weight, dry plant weight, fresh stem weight, stem weight dry, weight of fresh flowers, weight of dried flowers, diameter of flowers, flowering age and yield of fresh flowers.

The results showed that the dose of petroganic fertilizer 47.67 t / ha was able to increase growth compared to control at 2.02 cm root length or 12.7%, petroganic fertilizer 60 t / ha doses were able to increase yield compared to control at fresh flower weights 85.16 g / plant or 133%, flower diameter 3.37 cm or 47.5%, accelerating flowering age 4.67 days / plant or 12.93% and the highest fresh interest yield 3.44 t / ha or 133%. Giving the concentration of liquid organic fertilizer in the range of 0 ml liter-1, 5 ml liter-1 and 10 ml liter-1 has not been able to increase the growth and yield of flower cabbage. The combination of the

treatment of petroganic fertilizer dosage of 60 tons / ha and POC concentration of 2.91 ml / L produced a flower diameter and a combination of the treatment of petroganic fertilizer dose 60 t / ha and a concentration of 3.86 ml / L produced dry flower weight.

Keywords: cauliflower, coastal sandy land, dosage, concentration.