

RINGKASAN

Kubis bunga salah satu komoditas sayuran yang mempunyai nilai ekonomi tinggi. Budidaya kubis bunga di dataran tinggi pengembangannya masih sangat terbatas sehingga perlu adanya pengembangan ke dataran rendah termasuk lahan pasir pantai. Pemanfaatan lahan pasir pantai memiliki kendala yang cukup banyak seperti kandungan hara yang rendah, daya simpan air yang rendah dan suhu tanah yang tinggi. Pembenh tanah merupakan salah satu alternatif yang dapat dilakukan untuk memperbaiki sifat fisik dan biologi tanah. Penambahan pupuk nitrogen di lahan mampu memperbaiki sifat kimia tanah sehingga mampu mengoptimalkan hasil dan pertumbuhan tanaman kubis bunga yang ditanam di lahan pasir. Penelitian ini bertujuan (1) menentukan jenis pembenh tanah yang efektif terhadap pertumbuhan dan hasil tanaman kubis bunga di lahan pasir pantai, (2) menentukan pengaruh dosis pupuk nitrogen optimum bagi pertumbuhan dan hasil tanaman kubis bunga di lahan pasir pantai, (3) menentukan kombinasi jenis pembenh tanah yang efektif dengan dosis pupuk nitrogen optimum bagi pertumbuhan dan hasil tanaman kubis bunga di lahan pasir pantai.

Penelitian dilaksanakan di lahan pasir pantai Jetis, Desa Banjarsari, Kecamatan Nusawungu, Kabupaten Cilacap. Penelitian dilaksanakan selama tiga bulan, yaitu pada bulan Juli 2015 sampai dengan September 2015. Rancangan percobaan yang digunakan dalam penelitian ini adalah RAKL (Rancangan Acak Kelompok Lengkap). Faktorial pertama adalah jenis pembenh tanah yang terdiri dari tanpa pembenh tanah, vertisol, pupuk kandang, dan campuran (pupuk kandang dan Vertisol). Faktorial kedua adalah pemupukan nitrogen yang terdiri dari dosis pupuk nitrogen 90 kg N/Ha, 180 kg N/Ha, dan 270 kg N/Ha. Variabel yang diamati meliputi tinggi tanaman (cm), jumlah daun (helai), panjang daun (cm), kadar kehijauan daun (mg/g), panjang akar (cm), volume akar (ml), luas daun (cm²), bobot segar tanaman (g), bobot kering tanaman (g), bobot segar akar (g), bobot kering akar (g), bobot segar daun (g), bobot kering daun (g), bobot segar batang (g), bobot kering batang (g), umur pembentukan bunga (hst), diameter bunga (cm), hasil segar bunga dan hasil kering bunga (t/ha).

Hasil penelitian ini menunjukkan pembenh tanah campuran Vertisol dan pupuk kandang memberikan hasil yang terbaik pada variabel tinggi tanaman, panjang daun, luas daun, kadar kehijauan daun, bobot daun kering, bobot akar kering, bobot tanaman segar, umur pembentukan bunga, diameter bunga, hasil bunga segar (12,02 t/ha) dan kering (2,70 t/ha). Pemberian dosis pupuk 270 kg N/ha masih menunjukkan adanya peningkatan pada variabel tinggi tanaman, panjang daun, luas daun, bobot daun segar, bobot daun kering, bobot tanaman segar, bobot batang segar, umur pembentukan bunga, diameter bunga, hasil bunga segar (12,09 t/ha) dan kering (2,72 t/ha). Interaksi perlakuan pembenh tanah dengan dosis pupuk N berpengaruh nyata pada variabel volume akar dan bobot tanaman kering. Hasil terbaik diperoleh pada kombinasi perlakuan pembenh tanah campuran Vertisol dan pupuk kandang dengan dosis pupuk 270 kg N/ha.

SUMMARY

Cauliflower is one of vegetable commodities which has high economical value. The cultivation of Cauliflower in high lands is still limited, therefore it is necessary to expand its cultivation to lower lands especially on coastal sand. The use of coastal sand has many obstacles for instance low nutrients, low capilarity, low water absorption and high temperature sand. Soil conditioner is one of many alternative ways to solve the biological and physical characteristics of soil. Adding nitrogen conditioner may solve the soil's chemical characteristics and also optimize the result and growth of Cauliflower. This research aimed at finding out (1) determine the effective type of soil conditioner for the growth and yield of cauliflower on coastal sandy land (2) determine the optimum dose of nitrogen fertilizer on the growth and yield of cauliflower on coastal sandy land, (3) determine the interaction between the effective type of soil conditioner and the optimum dose of nitrogen fertilizer for the growth and yield of cauliflower on coastal sandy land.

This research was conducted on coastal sand in Jetis, Desa Banjarsari, Kecamatan Nusawungu, Kabupaten Cilacap. This research was conducted for three months which was from July to September 2015. The design of this research is Complete Randomized Block Design with 12 treatments and 3 replications. The soil conditioner materials that were used as the factors are :control, Vertisol, manure, and Vertisol with manure. Dosage of N fertilizer: 90 kg N/Ha, 180 kg N/Ha, and 270 kg N/Ha. The variables are plant height (cm), number of leaves (leaf), leaf length b(cm), leaf greenness (mg/g), root length (cm), root volume (ml). leaf length (cm²), fresh plant weight (g), dried plant weight (g), fresh root weight (g), dried root weight (g), fresh stem weight (g), dried stem weight (g), flower growth age (hst), flower diameter (cm), fresh and dried flower result (t/ha).

The result of this research shows soil conditioner material a better result in plant height, leaf length, leaf area, leaf greenness levels, leaf dry weight, root dry weight, fresh weight of the plant, the age of the formation of flowers, flower diameter, the results of fresh flowers (12,02 t/ha) and dried flowers results (2,70 t/ha). The dosage of fertilizer 270 kg N /ha still showed an increase in plant height, leaf length, leaf area, leaf fresh weight, dry weight of leaves, plant fresh weight, fresh weight of stem, root dry weight, the age of the formation of flowers, flower diameter, the results of fresh flowers (12,09 t/ha) and dried flowers results (2,72 t/ha). The interaction of addition soil conditioner material with N fertilizer dosage was significant of the volume root and plant dry weight. A better result were obtained on the combined treatment Vertisol and manure soil conditioner material with N fertilizer dosage 270 kg/ha