

RINGKASAN

Kubis bunga merupakan tanaman sayuran yang bergizi tinggi. Kubis bunga mengandung vitamin A, B3, B5, B6, dan C. Penanaman kubis bunga masih banyak menggunakan pupuk anorganik yang memiliki sisi negatif bagi lingkungan. Kegiatan pertanian saat ini lebih banyak diarahkan pada lahan marjinal. Penggunaan pupuk mikotricho bertujuan untuk meningkatkan produktivitas lahan marjinal. Pupuk mikotricho adalah pupuk kombinasi dari jamur mikoriza dan trichoderma. Penelitian ini ditujukan untuk mengetahui dosis pupuk mikotricho yang terbaik terhadap pertumbuhan, hasil dan kualitas kubis bunga, mengetahui pengurangan dosis pupuk anorganik yang baik terhadap pertumbuhan, hasil dan kualitas kubis bunga, dan mendapatkan kombinasi terbaik antara dosis pupuk mikotricho dan pengurangan dosis pupuk anorganik terhadap pertumbuhan, hasil dan kualitas kubis bunga.

Penelitian ini dilaksanakan mulai Mei sampai dengan September 2021 di lahan *Exfarm* Fakultas pertanian Universitas Jenderal Soedirman, dan analisis dilakukan di Laboratorium Perlindungan Tanaman dan Laboratorium Agronomi dan Hortikultura. Rancangan yang digunakan yaitu Rancangan Acak Kelompok Lengkap (RAKL) dengan dua faktor. Faktor pertama adalah dosis pupuk mikotricho, yaitu H0 = tanpa pupuk mikotricho, H1 = 20g (10g mikoriza+10g trichoderma), H2 = 40g (20g mikoriza+20g trichoderma). Faktor kedua adalah pengurangan dosis pupuk anorganik, yaitu K0 = 0%, K1 = 25%, K2 = 50%. Kedua faktor dikombinasikan dan diperoleh sejumlah 9 kombinasi perlakuan. Perlakuan diulang sebanyak 3 kali dan tiap unit percobaan terdapat 3 tanaman sampel sehingga diperoleh 81 unit percobaan. Variabel yang diamati yaitu persentase akar terinfeksi mikoriza (%), tinggi tanaman (cm), jumlah daun (helai), luas daun (cm^2), bobot bunga (*curd*) tanpa daun (gram), bobot bunga (*curd*) dengan daun (gram), diameter bunga (*curd*) (cm), dan kandungan vitamin C (mg/100g).

Hasil penelitian menunjukkan pemberian dosis pupuk mikotricho berpengaruh terhadap variabel bobot bunga tanpa daun, bobot bunga dengan daun, dan persentase akar terinfeksi mikoriza. Pengurangan dosis pupuk anorganik berpengaruh terhadap akar terinfeksi mikoriza, pertumbuhan, hasil, dan kualitas tanaman kubis bunga. Pengaruh interaksi antara dosis pupuk mikotricho dan pengurangan pupuk anorganik terjadi pada variabel kandungan vitamin C dengan kombinasi terbaik pada perlakuan 40g (20g mikoriza+20g trichoderma) dan 50% pengurangan dosis pupuk anorganik. Bobot bunga tanpa daun pada dosis pupuk mikotricho 40g (20g mikoriza+20g trichoderma) meningkat sebesar 22,81% dibandingkan dengan kontrol. Bobot bunga dengan daun pada dosis pupuk mikotricho 40g (20g mikoriza+20g trichoderma) meningkat sebesar 21,82% dibandingkan dengan kontrol. Persentase akar terinfeksi mikoriza pada dosis pupuk mikotricho 40g (20g mikoriza+20g trichoderma) meningkat sebesar 427%. Akar terinfeksi mikoriza pengurangan dosis pupuk anorganik 50% meningkat sebesar 42,22%.

Kata kunci : kubis bunga, pupuk mikotricho, pengurangan pupuk anorganik

SUMMARY

Cauliflower is a highly nutritious vegetable crop. cauliflower contains vitamins A, B3, B5, B6, and C. Planting cauliflower still uses a lot of inorganic fertilizers that have a negative side to the environment. Agricultural activities today are more directed at marginal land. The use of mycotricho fertilizer aims to increase the productivity of marginal land. Mycotricho fertilizer is a combination fertilizer of mycorrhizal fungi and trichoderma. This study is aimed at determining the best dose of mycotricho fertilizer against the growth, yield and quality of cauliflower, knowing the reduction of the dose of inorganic fertilizer that is good against growth, yield and quality of cauliflower, and obtaining the best combination between the dose of mykotricho fertilizer and the reduction of the dose of inorganic fertilizer to the growth, yield and quality of cauliflower.

This research was carried out from May to September 2021 on the Exfarm land of the Faculty of Agriculture, Jenderal Soedirman University, and the analysis was carried out at the Plant Protection Laboratory and the Agronomy and Horticulture Laboratory. The design used is a Randomized Complete Block Design (RCBD) with two factors. The first factor is the dose of mycotricho fertilizer, which is H0 = without mycotricho fertilizer, H1 = 20g (10g mycorrhiza + 10g trichoderma), H2 = 40g (20g mycorrhiza + 20g trichoderma). The second factor is a reduction in the dose of inorganic fertilizers, namely K0 = 0%, K1 = 25%, K2 = 50%. The two factors combined and obtained a total of 9 treatment combinations. The treatment was repeated 3 times and each experimental unit had 3 sample plants so that 81 experimental units were obtained. The variables observed were the percentage of roots infected with mycorrhiza (%), plant height (cm), number of leaves (leaves), leaf area (cm²), flower weight (curd) without leaves (g), flower weight (curd) with leaves (g), flower diameter (curd) (cm), and vitamin C content (mg / 100g).

The results showed that the dosing of mycotricho fertilizer affected the variables of flower weight without leaves, flower weight with leaves, and the percentage of roots infected with mycorrhiza. Dose reduction of inorganic fertilizers affects the roots infected with mycorrhiza, growth, yield, and quality of cauliflower plants. The effect of the interaction between the dose of mycotricho fertilizer and the reduction of inorganic fertilizers occurred in the variable content of vitamin C with the best combination at the treatment of 40g (20g mycorrhiza + 20g trichoderma) and 50% reduction in the dose of inorganic fertilizers. The weight of flowers without leaves at a dose of mycotricho fertilizer 40g (20g mycorrhiza + 20g trichoderma) increased by 22,81% compared to the controls. The weight of flowers with leaves at a dose of mycotricho fertilizer 40g (20g mycorrhiza + 20g trichoderma) increased by 21,82% compared to the controls. The percentage of roots infected with mycorrhiza at a dose of mycotricho fertilizer 40g (20g mycorrhiza + 20g trichoderma) increased by 427%. Mycorrhizal-infected roots at dose reduction of inorganic fertilizers by 50% was increased by 42.22%.

Keywords : *cauliflower, mycotricho fertilizer, reduction of inorganic fertilizers*