

RINGKASAN

Kubis bunga merupakan tanaman sayuran yang memiliki banyak manfaat dan nilai ekonomis tinggi. Peningkatan hasil tanaman kubis bunga dengan pemenuhan nutrisi yang cukup dapat dilakukan dengan pengaplikasian pupuk organik cair dan penggunaan varietas yang unggul. Penelitian ini bertujuan untuk mendapatkan kombinasi terbaik antara konsentrasi Pupuk Organik Cair (POC) kotoran kelinci dan varietas unggul.

Penelitian dilaksanakan pada September 2023 – Mei 2024 yang berlokasi di Desa Banjarsari Wetan, Kecamatan Sumbang, Kabupaten Banyumas. Rancangan percobaan yang digunakan adalah Rancangan Acak Lengkap (RAK) 2 faktorial dengan 9 kombinasi 3 kali ulangan dan terdapat 27 unit percobaan. Faktor pertama adalah POC kotoran kelinci dengan konsentrasi $K_0 = 0$ ml/L, $K_1 = 150$ mL/L, $K_2 = 300$ mL/L. Faktor kedua adalah varietas tanaman kubis bunga dengan $V_1 =$ Pm 126, $V_2 =$ Larisa, $V_3 =$ Bima 45. Variabel yang diamati adalah luas daun, kehijauan daun, kandungan klorofil, kerapatan stomata, bukaan stomata, laju pertumbuhan tanaman, laju asimilasi bersih, bobot segar tanaman, bobot segar bunga. Data kualitatif dianalisis deskriptif dan data kuantitatif dianalisis menggunakan sidik ragam dengan taraf kepercayaan 95%. Apabila menunjukkan hasil berbeda nyata maka dilanjutkan dengan uji *Duncan Multiple Range Test* (DMRT) dengan taraf kepercayaan 95%.

Hasil penelitian menunjukkan bahwa pengaplikasian POC kotoran kelinci konsentrasi 150 mL/L berpengaruh nyata terhadap variabel kehijauan daun 6 MST dengan nilai 46,63 SPAD, laju asimilasi bersih 4-5 MST dengan nilai 0,0142 g/cm²/hari, Laju pertumbuhan tanaman 4-5 MST dengan nilai 0,0194 g/cm²/hari, bobot segar tanaman dengan nilai 623,52 g. Konsentrasi 300 mL/L berpengaruh nyata terhadap variabel bobot segar krop dengan nilai 221,11g dan bukaan stomata 6 MST dengan nilai 8,73µm. Penggunaan varietas Bima 45 berpengaruh nyata terhadap variabel luas daun dengan nilai 201,66 cm², kehijauan daun 4 MST dengan nilai 44,9 SPAD, 6 MST dengan nilai 48,72 SPAD, kandungan klorofil 4 MST dengan nilai 26,76 mg/L, 6 MST dengan nilai 21,48 mg/L, kerapatan stomata 4 MST dengan nilai 327,31 unit/mm². Varietas Larisa berbeda nyata terhadap variabel bobot segar tanaman dengan nilai 663,15 g dan bobot segar krop dengan nilai 213,89 g. Varietas Pm 126 berbeda nyata terhadap variabel bukaan stomata dengan nilai 6,84 µm. penggunaan konsentrasi 150 ml/L dengan varietas Bima 45 kubis bunga menjadi kombinasi yang terbaik untuk laju asimilasi bersih 5-6 MST dengan nilai 0,0088 g/cm²/hari dan laju pertumbuhan tanaman 4-5 MST dan 5-6 MST dengan nilai 0,0290 g/cm²/hari dan 0,0215 g/cm²/hari.

SUMMARY

Cauliflower is a vegetable crop with many benefits and high economic value. Increasing the yield of flower cabbage plants by fulfilling adequate nutrition can be done by applying liquid organic fertilizer and using superior varieties. This study aims to determine the best combination between the concentration of liquid organic fertilizer (POC) rabbit manure and superior varieties.

The research was conducted from January 2024 - May 2024 located in Banjarsari Wetan Village, Sumbang Subdistrict, Banyumas Regency. The experimental design was a 2-factorial completely randomized design (CRD) with 9 combinations of 3 replications and 27 experimental units. The first factor was rabbit manure POC with concentrations of $K_0 = 0$ mL/L, $K_1 = 150$ mL/L, and $K_2 = 300$ mL/L. The second factor is the variety of cauliflower plants with $V_1 = Pm 126$, $V_2 = Larisa$, $V_3 = Bima 45$. The observed variables are leaf area, leaf greenness, chlorophyll content, stomatal density, stomata openings, plant growth rate, net assimilation rate, plant fresh weight, and flower fresh weight. Qualitative data were analyzed descriptively and quantitative data were analyzed using variance analysis with a 95% confidence level. If it shows significantly different results, it is continued with the Duncan Multiple Range Test (DMRT) test with a confidence level of 95%.

The results showed that the application of rabbit manure POC with a concentration of 150 mL/L had a significant effect on the variable greenness of leaves 6 weeks after planting with a value of 46.63 SPAD, net assimilation rate 4-5 weeks after planting with a value of 0.0142 g/cm²/day, plant growth rate 4-5 weeks after planting with a value of 0.0194 g/cm²/day, plant fresh weight with a value of 623.52 g. The concentration of 300 mL/L had a significant effect on the variable fresh weight of the crop with a value of 221.11 g and stomatal openings 6 weeks after planting with a value of 8.73 μm. The use of Bima 45 variety significantly affects the variable of leaf area with a value of 201.66 cm², leaf greenness 4 weeks after planting with a value of 44.9 SPAD, 6 weeks after planting with a value of 48.72 SPAD, chlorophyll content 4 weeks after planting with a value of 26.76 mg/L, 6 weeks after planting with a value of 21.48 mg/L, stomatal density 4 weeks after planting with a value of 327.31 units/mm². Larisa variety was significantly different from the variable fresh weight of plants with a value of 663.15 g and fresh weight of crops with a value of 213.89 g. The use of a concentration of 150 mL/L with the variety Bima 45 flower cabbage is the best combination for a net assimilation rate 5-6 weeks after planting with a value of 0.0088 g/cm²/day and plant growth rate 4-5 weeks after planting and 5-6 weeks after planting with a value of 0.0290 g/cm²/day and 0.0215 g/cm²/day.