

RINGKASAN

Penelitian ini bertujuan untuk: 1) mengetahui pengaruh formula nutrisi terhadap sifat kimia larutan nutrisi dan hasil kailan pada sistem hidroponik rakit apung, 2) mengetahui pengaruh media tanam terhadap sifat kimia larutan nutrisi dan hasil kailan pada sistem hidroponik rakit apung dan, 3) mengetahui adanya interaksi antara formula nutrisi dan media tanam terhadap sifat kimia larutan nutrisi dan hasil kailan pada sistem hidroponik rakit apung. Penelitian dilaksanakan di *screen house*, di Laboratorium Agronomi dan Hortikultura, dan di Laboratorium Tanah Fakultas Pertanian, Universitas Jenderal Soedirman. Waktu pelaksanaan bulan Juli 2018 sampai dengan Oktober 2018.

Penelitian ini disusun menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan dua faktor, yaitu faktor formula nutrisi : K0 (kontrol AB mix N 22,5%); K1 (N 40%); K2 (N 32,5%); K3 (N 17,5%); K4 (N 10%); dan faktor media tanam : rockwool; rockwool + zeolit. Variabel yang diamati meliputi pH, DHL, kadar P larutan nutrisi, kadar N larutan nutrisi, jumlah daun, luas daun, bobot akar segar, bobot tajuk segar, bobot tanaman segar, dan bobot tanaman kering. Data yang diperoleh kemudian dianalisis menggunakan uji F pada taraf 5% dan 1%, dan apabila berbeda nyata maka dilanjutkan dengan uji *Duncan Multiple Range Test* (DMRT) dengan taraf 5%.

Hasil penelitian menunjukkan bahwa pemberian formula nutrisi memberikan pengaruh nyata pada semua variabel hasil tanaman, serta pada variabel sifat kimia, yaitu kadar P dan kadar N larutan nutrisi, formula nutrisi terbaik adalah AB-mix (22,5% N), sedangkan perlakuan media tanam memberikan pengaruh nyata pada semua variabel hasil tanaman, media tanam terbaik adalah rockwool + zeolit. Interaksi pada kedua perlakuan memberikan pengaruh nyata terhadap variabel luas daun, bobot akar segar, bobot tajuk segar, bobot tanaman segar, dan bobot tanaman kering, kombinasi terbaik yaitu AB-mix (22,5% N) dan rockwool + zeolit.

SUMMARY

This study aims to: 1) find out the effect of nutrient formula towards the chemical properties of nutrition solutions and yield of kailan in floating hydroponic system, 2) find out the effect of planting media towards the chemical properties of nutrition solutions and yield of kailan in floating hydroponic system, 3) and to find out the effect of interaction between nutrient formula and planting media towards the chemical properties of nutrition solutions and yield of kailan in floating hydroponic system. Research had been carried out at Screen House and the Laboratory of Agronomy and Horticulture, and Laboratory of Soil, Faculty of Agriculture of Jenderal Soedirman University, Purwokerto. This study lasted from July 2018 to October 2018.

This study used a Randomized Complete Block Design (RCBD) with 2 factors namely nutrient formula factor: K0 (control AB-mix 22,5% N); K1(40% N); K2 (32,5% N); K3 (17,5% N); and K4 (10% N); and the planting media: rockwool; rockwool + zeolite. The variables observed were: pH, Electrical Conductivity (EC), total P, total N nutrition solutions, number of leaves, leaf area, fresh root weight, fresh canopy weight, fresh plant weight, and dry plant weight. Data were analyzed using the F test (ANOVA) at the level of 5% and 1%, and continued with 5% Duncan Multiple Range Test (DMRT).

The result of the study showed that the kind of nutrient formula gave a significant effect on all yield of kailan and as well as on chemical properties of total P and total N Nutrition Solutions, best nutrient formula is AB-mix (22.5% N), and the plant media had a significant effect on all yield of kailan, best plant media is rockwool + zeolite. Interactions in both treatments gave a significant effect on leaf area, fresh root weight, fresh canopy weight, fresh plant weight, and dry plant weight, best combination is AB-mix (22.5% N) and rockwool + zeolite.