

RINGKASAN

Kebutuhan masyarakat terhadap sawi semakin lama semakin meningkat seiring dengan bertambahnya jumlah penduduk dan meningkatnya kesadaran masyarakat pentingnya mengonsumsi sayuran. Penelitian ini bertujuan untuk: 1) mengetahui pengaruh EC terhadap pertumbuhan dan hasil sawi pada hidroponik sistem rakit apung, 2) mendapatkan varietas sawi terbaik yang ditanam pada hidroponik sistem rakit apung, 3) mengetahui pengaruh interaksi antara EC dengan varietas terhadap pertumbuhan dan hasil tanaman sawi.

Penelitian ini dilaksanakan di *screen house* Pondok Pesantren Darussalam, Dukuhwaluh, Purwokerto dengan ketinggian 100 m di atas permukaan laut, dimulai bulan November 2016 sampai Januari 2017. Penelitian menggunakan percobaan faktorial terdiri dari 2 faktor dengan Rancangan Acak Kelompok. Faktor pertama adalah nilai EC (P) terdiri dari tiga taraf, yaitu EC 2,0 (P₁), 3,0 (P₂), dan 4,0 (P₃) mS cm⁻¹. Faktor kedua adalah varietas sawi (V) terdiri dari tiga taraf, yaitu Tosakan (V₁), Shinta (V₂), dan Christina (V₃). Variabel yang diamati meliputi tinggi tanaman, jumlah daun, luas daun, jumlah klorofil, volume akar, panjang akar, bobot akar segar, bobot tajuk segar, dan bobot tanaman segar.

Hasil penelitian menunjukkan bahwa taraf EC 3,0 mS cm⁻¹ memberikan hasil terbaik pada tinggi tanaman, jumlah daun, luas daun, volume akar, bobot akar segar, bobot tajuk segar, dan bobot tanaman segar. Varietas Shinta memberikan hasil terbaik pada tinggi tanaman, panjang akar, bobot tajuk segar, dan bobot tanaman segar. Interaksi antara EC dengan varietas berpengaruh terhadap jumlah klorofil.

SUMMARY

The society need for mustard is increases as long as the increasing number of population and the public awareness to consume vegetables. This research aimed to: 1) know the influence of EC on the growth and yield of mustard with floating hydroponics system, 2) get the best varieties of mustard were planted with floating hydroponics system, 3) know the influence of interaction between EC and varieties on the growth and the yield of mustard.

The research was carried out in screen house at Darussalam Boarding School, Dukuhwaluh, Purwokerto with altitude of 100 m above sea level, from November 2016 until January 2017. The experimental design used was a factorial treatment consist of 2 factors with Randomized Complete Block Design (RCBD). The first factor was EC value with 3 levels, there are EC 2.0 (P_1), 3.0 (P_2), and 4.0 (P_3) $mS\ cm^{-1}$. The second factor was 3 varieties of mustard, there are Tosakan (V_1), Shinta (V_2), and Christina (V_3). The variables observed were plant height, leaf number, leaf area, leaf color, chlorophyll number, root length, root volume, root's fresh weight, canopy's fresh weight, and plant's fresh weight.

The EC level of 3.0 $mS\ cm^{-1}$ was giving the highest results on the plant height, leaf number, leaf area, root volume, root's fresh weight, canopy's fresh weight, and plant's fresh weight. A variety of Shinta was giving the highest results on the plant height, root length, canopy's fresh weight, and plant's fresh weight. Interaction between EC and varieties affect on chlorophyll number.