

Alia Gwynne Putri Indrawati. 180311100140. Pengaruh Pupuk Organik Cair dan Jumlah Tanaman per Polybag terhadap Pertumbuhan dan Kadar Vitamin C Tanaman Bayam Merah (*Amaranthus tricolor* L.). Dibimbing oleh: Ir. Sinar Suryawati, M.Si dan Dr. Catur Wasonowati, SP., M.Si.

ABSTRAK

Bayam merah (*Amaranthus tricolor* L.) merupakan tanaman sayuran yang termasuk dalam famili Amaranaceae. Bayam merah merupakan sayuran daun yang bergizi tinggi yang banyak mengandung vitamin A, B, dan C, serta zat besi. Tujuan dari penelitian ini untuk mengetahui pengaruh kombinasi pemberian POC dan jumlah tanaman per polybag terhadap pertumbuhan dan kadar vitamin C tanaman bayam merah. Penelitian dilakukan di Green house Universitas Trunojoyo Madura, menggunakan Rancangan Acak Lengkap non factorial, diulang 3 kali dengan 8 kombinasi perlakuan yaitu perlakuan 0 mL POC 1 tanaman (P1), 0 mL POC 2 tanaman (P2), 0 mL POC 3 tanaman (P3), 0 mL POC 4 tanaman (P4), 500 mL POC 1 tanaman (P5), 500 mL POC 2 tanaman (P6), 500 mL POC 3 tanaman (P7), dan 500 mL POC 4 tanaman (P8). Data yang diperoleh dianalisis menggunakan *Analysis of Variance* dan dilanjutkan dengan uji *Duncan's Multiple Range Test* pada taraf 5% apabila ada pengaruh dari perlakuan. Hasil penelitian menunjukkan bahwa kombinasi perlakuan POC dan jumlah tanaman per polybag berpengaruh nyata terhadap pertumbuhan tanaman bayam merah. Perlakuan larutan POC 500 mL/ polybag yang diaplikasikan sebanyak 4 kali dengan jumlah 1 tanaman per polybag (P5) menghasilkan nilai tertinggi pada parameter tinggi tanaman, jumlah daun dan luas daun per tanaman namun tidak berbeda nyata dengan perlakuan P6 (2 tanaman/ polybag), sedangkan total bobot kering per polybag dihasilkan pada perlakuan P8 (4 tanaman/ polybag). Perlakuan tanpa pemberian POC cenderung menghasilkan vitamin C yang lebih tinggi (765 – 887.4 ppm) dibandingkan dengan perlakuan pemberian POC (656.5 – 767.8 ppm).

Kata Kunci : Bayam merah, pupuk organik cair (POC), jumlah tanaman per polybag

Alia Gwynne Putri Indrawati. 180311100140. Effect of Liquid Organic Fertilizer and Number of Plants per Polybag on Growth and Vitamin C Contents of Red Spinach Plants (*Amaranthus tricolor* L.) Supervised by: Ir. Sinar Suryawati, M.Si and Dr. Catur Wasonowati, S.P., M.Si

ABSTRACT

Red spinach (Amaranthus tricolor L.) is a vegetable plant that belongs to the Amaranaceae family. This plant has a highly nutritious leaf that contains vitamin A, B, and C, as well as iron. The purpose of this research was to study the effect of the combination of liquid of fertilizer (LOF) and the number of plants per polybag on the growth and vitamin C content of red spinach plants. This research was conducted in the Green house of Trunojoyo University of Madura, using a non-factorial Completely Randomized Design, repeated 3 times with 8 treatment combinations. The treatments were 0 mL LOF with 1 plant (P1), 0 mL LOF with 2 plants (P2), 0 mL LOF with 3 plants (P3), 0 mL LOF with 4 plants (P4), 500 mL LOF with 1 plant (P5), 500 mL LOF with 2 plants (P6), 500 mL LOF with 3 plants (P7), 500 mL LOF with 4 plants (P8). Data were analyzed by means of Analysis of Variance and the difference among means was assessed by Duncan's Multiple Range Test at 5. The results showed that the combination of LOF treatment and the number of plants per polybag significantly affected the growth of red spinach plants. The treatment of LOF solution 500 mL/ polybag applied 4 times with the number of 1 plant per polybag (P5) produced the highest value in the parameters of plant height, number of leaves and leaf area per plant but not significantly different from treatment P6 (2 plants/ polybag), while the total dry weight per polybag was produced in treatment P8 (4 plants/ polybag). The treatment without LOF tends to produce higher vitamin C (765 - 887.4 ppm) compared to the LOF treatment (656.5 - 767.8 ppm).

Keywords : Red spinach, liquid organic fertilizer, number of plants per polybag