

Mirna Aprilianita 180311100096. Pengaruh Kombinasi Pupuk NPK dengan Pupuk Organik Cair Terhadap Pertumbuhan dan Kadar Antosianin Tanaman Bayam Merah (*Amaranthus tricolor* L.). **Pembimbing Ir. Sinar Suryawati, M.Si. dan Dr. Catur Wasonowati, SP., M.Si.**

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh pemberian kombinasi dosis pupuk NPK dengan pupuk organik cair (POC) terhadap pertumbuhan dan kadar antosianin tanaman bayam merah (*Amaranthus tricolor* L.). Penelitian dilaksanakan di *Screenhouse* Program Studi Agroekoteknologi dan Laboratorium Terpadu Universitas Trunojoyo Madura, yang terletak pada ketinggian ± 5 meter dpl pada bulan Januari hingga Maret 2022. Rancangan penelitian menggunakan Rancangan Acak Kelompok dan perlakuan yang diaplikasikan adalah kombinasi dosis pupuk NPK dengan pupuk organik cair (POC) terdiri dari : NPK 0 g/polybag + larutan POC 300 mL/polybag (P0), NPK 1 g/polybag + larutan POC 250 mL/polybag (P1), NPK 2 g/polybag + larutan POC 200 mL/polybag (P2), NPK 3 g/polybag + larutan POC 150 mL/polybag (P3), NPK 4 g/polybag + larutan POC 100 (P4), NPK 5 g/polybag + larutan POC 50 mL/polybag (P5), NPK 6 g/polybag + larutan POC 0 mL/polybag (P6). Pupuk NPK diaplikasikan sekali sedangkan POC diaplikasikan 4 kali sesuai perlakuan selama siklus hidupnya dengan konsentrasi 10 mL/liter air. Hasil penelitian menunjukkan bahwa perlakuan kombinasi dosis pupuk NPK dengan pupuk organik cair berpengaruh nyata terhadap parameter tinggi tanaman, jumlah daun, dan luas daun tanaman bayam merah, namun tidak berpengaruh nyata terhadap parameter panjang akar, bobot basah dan bobot kering tanaman. Perlakuan kombinasi dosis pupuk NPK 3 g/polybag dengan larutan POC 150 ml/polybag (P3) memberikan pengaruh terbaik dibandingkan perlakuan lainnya dan menghasilkan kadar antosianin daun sebesar 5,14 mg/100 g.

Kata kunci: *Amaranthus tricolor* L., pupuk NPK, pupuk organik cair

Mirna Aprilianita 180311100096. *Effect of Combination of NPK Fertilizer with Liquid Organic Fertilizer on Growth and Anthocyanin Levels of Red Spinach Plants (*Amaranthus tricolor* L.).* Supervisor Ir. Sinar Suryawati, M.Si. and Dr. Catur Wasonowati, SP., M.Si.

ABSTRACT

*This study aims to determine the effect of the combination of doses of NPK fertilizer with liquid organic fertilizer (POC) on the growth and anthocyanin levels of red spinach (*Amaranthus tricolor* L.). The research was conducted at the Screenhouse of the Agroecotechnology Study Program and the Integrated Laboratory of Trunojoyo Madura University, which is located at an altitude of ± 5 meters above sea level from January to March 2022. The research design used a Randomized Block Design and the treatment applied was a combination of doses of NPK fertilizer with liquid organic fertilizer (POC) consists of : NPK 0 g/polybag + POC solution 300 mL/polybag (P0), NPK 1 g/polybag + POC solution 250 mL/polybag (P1), NPK 2 g/polybag + POC solution 200 mL/polybag (P2), NPK 3 g/polybag + POC solution 150 mL/polybag (P3), NPK 4 g/polybag + POC solution 100 (P4), NPK 5 g/polybag + POC solution 50 mL/polybag (P5), NPK 6 g /polybag + 0 mL POC solution/polybag (P6). NPK fertilizer was applied once while POC was applied 4 times according to the treatment during its life cycle with a concentration of 10 mL/liter of water. The results showed that the combination treatment of NPK fertilizer dose with liquid organic fertilizer had a significant effect on the parameters of plant height, number of leaves, and leaf area of red spinach plants, but did not significantly affect the parameters of root length, wet weight and plant dry weight. The combination treatment of NPK fertilizer dose of 3 g/polybag with POC solution of 150 ml/polybag (P3) gave the best effect compared to other treatments and resulted in leaf anthocyanin levels of 5,14 mg/100 g.*

Keywords: *Amaranthus tricolor* L., NPK fertilizer, liquid organic fertilizer