RINGKASAN

Bayam merah termasuk salah satu jenis tanaman yang mempunyai harga cukup tinggi dibandingkan jenis bayam lainnya. Salah satu fungsi bayam merah untuk digunakan sebagai bahan pangan yang memiliki nilai protein tinggi, vitamin A dan C dan vitamin B meskipun kandungan tidak sebanyak vitamin A dan C, antosianin termasuk senyawa fenolik yang masuk kelompok flavonoid dan berfungsi sebagai antioksidan. Penelitian ini bertujuan untuk (1) Mendapatkan kombinasi media tanam yang tepat untuk pertumbuhan dan hasil tanaman bayam merah, (2) Mendapatkan dosis pupuk kascing yang baik agar diperoleh hasil tanaman bayam merah yang baik, (3) Mendapatkan kombinasi media tanam dan dosis pupuk kascing yang dapat meningkatkan pertumbuhan dan hasil tanaman bayam merah. Penelitian ini dilaksanakan pada bulan November 2020 sampai dengan Januari 2021 di *Green House* Fakultas Pertanian dan Laboratorium Agronomi Hortikultura Fakultas Pertanian, Universitas Jenderal Soedirman. Rancangan percobaan yang digunakan yaitu Rancangan Acak Kelompok Lengkap (RAKL) dengan 2 faktor. Faktor pertama adalah kombinasi media tanam, yaitu M1 = 50 % tanah + 25% kompos + 25% arang sekam, M2 = 25 % tanah + 50% kompos + 25% arang sekam, M3 = 25% tanah + 25% kompos + 50% arang sekam. Faktor kedua adalah dosis pupuk kascing yaitu, K0 : Kontrol (tanpa kascing), K1: 22,5 g/tanaman setara dengan 10 t/ha, K2: 45 g/tanaman setara dengan 20 t/ha, dan K3: 67,5 g/tanaman setara dengan 30 t/ha. Variabel yang diamati yaitu tinggi tanaman, jumlah daun, bobot akar segar, bobot akar kering, bobot tajuk segar, bobot tajuk kering, bobot tanaman segar, bobot tanaman kering. Hasil penelitian menunjukkan bahwa dosis kascing 30 t/ha atau setara dengan 67,5 g/polibag memberikan produksi terbaik dibandingkan yang lain. Hal ini nampak pada variabel-variabel pertumbuhan yang diamati. Variabel tinggi tanaman 71,20 cm, jumlah daun 33,85 helai/tanaman, bobot akar segar 31,59 g, bobot akar kering 3,44 g, bobot tajuk segar 57,54 g, bobot tajuk kering 24,78 g, bobot tanaman segar 115,07 g, dan bobot tanaman kering 32,8 g. Pemberian macam media tanam 25% tanah + 50% kompos + 25% arang sekam menghasilkan tinggi tanaman sebesar 68,79 cm, jumlah daun 33,72 helai/tanaman, bobot akar segar 33,50 g, bobot akar kering 3,88 g, bobot tajuk segar 56,11 g, bobot tajuk kering 25,11 g, bobot tanaman segar 112,2 g, dan bobot tanaman kering 31,67 g. Tidak terdapat interaksi antara perlakuan dosis pupuk kascing dengan kombinasi media tanam untuk pertumbuhan dan hasil tanaman bayam merah.

SUMMARY

Red spinach is one type of plant that has a high price compared to other types of spinach. One of the functions of red spinach is used in foodstuffs that have high protein values, vitamins A and C and B vitamins, although the content is not as much as vitamins A and C, anthocyanins include phenolic compounds that are included in the flavonoid group and function as antioxidants. This study aims to (1) get the right combination of planting media for the growth and yield of red spinach, (2) get a good dose of vermicompost fertilizer in order to obtain a good yield of red spinach, (3) get a combination of planting media and dosage of vermicompost fertilizer which can increase the growth and yield of red spinach. This research was conducted from November 2020 to January 2021 at the Green House of the Agriculture Faculty and Horticultural Agronomy Laboratory, Faculty of Agriculture, Jenderal Soedirman University. The experimental design used was a completely randomized block design (RAKL) with 2 factors. The first factor is the combination of planting media, namely M1 = 50% soil + 25% compost + 25% husk charcoal, M2 = 25% soil + 50% compost + 25% husk charcoal, M3 = 25% soil + 25% compost + 50% husk charcoal. The second factor is the dose of vermicompost fertilizer, namely, K0: Control (without vermicompost), K1: 22.5 g/plant equivalent to 10 t/ha, K2: 45 g/plant equivalent to 20 t/ha, and K3: 67.5 g/plant is equivalent to 30 t/ha. The variables observed were plant height, number of leaves, fresh root weight, dry root weight, fresh shoot weight, dry shoot weight, fresh plant weight, and dry plant weight. The results showed that the vermicompost dose of 30 t/ha or equivalent to 67.5 g/polybag gave the best production compared to the others. This can be seen in the observed growth variables. Variable plant height 71.20 cm, number of leaves 33.85 leaves/plant, fresh root weight 31.59 g, dry root weight 3.44 g, fresh shoot weight 57.54 g, dry shoot weight 24.78 g, weight fresh plants 115.07 g, and dry plant weight 32.8 g. Giving a variety of planting media 25% soil + 50% compost + 25% husk charcoal produced a plant height of 68.79 cm, number of leaves 33.72 strands/plant, fresh root weight 33.50 g, dry root weight 3.88 g, fresh shoot weight 56.11 g, dry shoot weight 25.11 g, fresh plant weight 112.2 g, and dry plant weight 31.67 g. There was no interaction between the dosage treatment of vermicompost fertilizer and the combination of growing media to the growth and yield of red spinach.