

RINGKASAN

Sawi pagoda (*Brassica narinosa* L.) merupakan sayuran yang saat ini mulai banyak digemari tetapi masih jarang dibudidayakan. Strategi yang dapat dilakukan untuk meningkatkan produksi sawi pagoda adalah dengan menggunakan pot batang pisang dan pupuk organik cair azolla untuk budidayanya. Penelitian ini bertujuan untuk: 1. Mengetahui pemanfaatan batang pisang sebagai pot pada diameter terbaik terhadap pertumbuhan dan hasil tanaman sawi pagoda. 2. Mengetahui pengaruh aplikasi pupuk organik cair azolla terhadap pertumbuhan dan hasil tanaman sawi pagoda. 3. Mengetahui diameter pot batang pisang dan konsentrasi pupuk organik cair azolla terbaik terhadap pertumbuhan dan hasil tanaman sawi pagoda.

Penelitian ini dilaksanakan pada bulan Juli 2020 sampai dengan Oktober 2020 di *screenhouse* Desa Candirejo, Kecamatan Mojotengah, Kabupaten Wonosobo. Penelitian berupa percobaan pot faktorial 3 x 3 dengan menggunakan Rancangan Acak Kelompok Lengkap (RAKL) yang diulang 3 kali. Faktor pertama adalah diameter pot batang pisang yaitu 15, 20, 25 cm dan faktor kedua adalah konsentrasi pupuk organik cair azolla (POC) yaitu 0% (tanpa POC), 10%, dan 20%. Variabel yang diamati yaitu tinggi tanaman, jumlah daun, luas daun, bobot tajuk segar, bobot akar segar, bobot tanaman segar, bobot tajuk kering, bobot akar kering dan volume akar. Data yang diperoleh dianalisis menggunakan uji F, apabila terdapat keragaman maka dilanjutkan dengan *Duncan's Multiple Range Test* (DMRT) pada taraf 5%.

Hasil penelitian menunjukkan perlakuan semakin lebar diameter pot batang pisang menghasilkan pertumbuhan tanaman sawi pagoda yang semakin baik. Jumlah daun dan luas daun sawi pagoda dengan pot batang pisang diameter 25 cm meningkat 15,16% dan 11,28% dibandingkan dengan diameter 15 cm dan 20 cm. Pada pot batang pisang dengan diameter 25 cm menghasilkan tinggi tanaman 11,51 cm, jumlah daun 20,85 helai, luas daun 161 cm², berat akar segar 1,06 g, berat tanaman segar 11,29 g, bobot tajuk kering 1,30 g, dan volume akar 1,74 ml. Pengaplikasian pupuk organik cair azolla pada konsentrasi 10% dan 20% belum mampu meningkatkan pertumbuhan dan hasil sawi pagoda. Pupuk organik cair konsentrasi 10% menghasilkan bobot tanaman segar 11,99 g dan bobot tajuk akar 1,35 g. Pada pemberian pupuk organik cair konsentrasi 20% menghasilkan bobot tanaman segar 8,36 g dan bobot tajuk kering 0,98 g. Pot batang pisang dengan diameter 25 cm dan konsentrasi pupuk organik cair azolla konsentrasi 10% meningkatkan bobot tajuk segar 50,4% dengan hasil tertinggi yaitu 16,66 g/pot.

SUMMARY

Pagoda mustard plant (Brassica narinosa L.) is a vegetable that is currently becoming popular but is still rarely cultivated. The strategy that can be done to increase the production of pagoda mustard is to use banana stem pots and Azolla liquid organic fertilizer for cultivation. This study aims to: 1. determine the use of banana stems as pots at the best diameter for the growth and yield of mustard pagoda. 2. knowing the effect of the application of azolla liquid organic fertilizer on the growth and yield of pagoda mustard plant. 3. knowing the diameter of the banana stem pot and the best concentration of liquid organic fertilizer azolla on the growth and yield of pagoda mustard plant.

This research was conducted from July 2020 until October 2020 at the greenhouse of Candirejo Village, Mojotengah District, Wonosobo Regency. The research was a 3 x 3 factorial pot experiment used Randomized Complete Block Design (RCBD) which was repeated 3 times. The first factor was the diameter of the banana stem pot, namely 15, 20, 25 cm and the second factor was the concentration of azolla liquid organic fertilizer, namely 0% (without fertilizer), 10%, and 20%. The variables observed were plant height, number of leaves, leaf area, fresh canopy weight, fresh root weight, fresh plant weight, dry canopy weight, dry root weight and root volume. The obtained data was analyzed by using F test, if there were any diversities then it will be continued with Duncan's Multiple Test (DMRT) at the extent of 5%.

The results showed that the treatment, the wider the diameter of the banana stem pot, the better the growth of mustard pagoda. The number of leaves and leaf area of pagoda mustard with a banana stem pot with a diameter of 25 cm increased by 15.16% and 11.28% compared to the diameter of 15 cm and 20 cm. In a banana stem pot with a diameter of 25 cm, the plant height is 11.51 cm, the number of leaves is 20.85, leaf area is 161 cm², fresh root weight is 1.06 g, fresh plant weight is 11.29 g, dry shoot weight is 1.30 g, and root volume of 1.74 ml. The application of Azolla liquid organic fertilizer at concentrations of 10% and 20% has not been able to increase the growth and yield of pagoda mustard. The 10% concentration of liquid organic fertilizer produced 11.99 g fresh plant weight and 1.35 g root crown weight. The application of liquid organic fertilizer with a concentration of 20% produces fresh plant weight of 8.36 g and dry shoot weight of 0.98 g. Banana stem pot with a diameter of 25 cm and a concentration of liquid organic fertilizer azolla with a concentration of 10% increased the weight of the fresh canopy by 50.4% with the highest yield of 16.66 g / pot.