

**Pengaruh Berbagai Dosis dan Aplikasi Pemberian Pupuk Organik Cair
(*Azolla pinnata*) Terhadap Pertumbuhan dan Produktivitas Tanaman
Sawi Pagoda (*Brassica narinosa* L.) dengan sistem Vertikultur**

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ABSTRAK

Tanaman sawi pagoda merupakan sayuran yang tergolong ke dalam jenis sawi. Ciri khas tanaman ini adalah permukaan daun keriting dan berwarna hijau. Berat tanaman bisa mencapai 200 gram. Faktor yang mempengaruhi produktivitas tanaman sawi pagoda salah satunya adalah ketersediaan hara. POC *Azolla sp.* adalah larutan dari hasil pembusukan atau fermentasi yang berasal dari tanaman *Azolla sp.* Kelebihan dari pupuk organik ini adalah mampu mengatasi diferensiasi hara secara cepat. Penelitian ini bertujuan untuk mengetahui pengaruh berbagai dosis dan cara aplikasi pemberian POC (*Azolla pinnata*) terhadap pertumbuhan dan produktivitas tanaman sawi pagoda (*Brassica narinosa* L.). Penelitian ini dilaksanakan bulan Desember 2021 - Maret 2022 di Lahan Percobaan Fakultas Pertanian Universitas Muhammadiyah Jember. Penelitian ini menggunakan Rancangan Acak Kelompok Faktorial (RAKF) yang terdiri dari dua faktor. Dua faktor tersebut yaitu berbagai dosis pemberian POC *Azolla* (D) dalam 4 taraf, yaitu : D0 = 0 ml, D1 = 10 ml/tanaman, D2 = 40 ml/tanaman, D3 = 70 ml/tanaman dan cara aplikasi POC *Azolla* (C) dalam 3 taraf, yaitu C1 = disiram ketanah, C2 = disemprot kedaun, C3 = disiram ke tanah + di semprot ke daun, yang masing – masing diulang 3 kali. Hasil penelitian menunjukkan perlakuan berbagai dosis dan cara aplikasi POC *Azolla* berpengaruh terhadap pertumbuhan dan produktivitas tanaman sawi pagoda, dan terdapat interaksi perlakuan D3C3 (dosis 70ml/tanaman, disiram dan disemprot) merupakan perlakuan terbaik pada variabel jumlah daun, bobot basah persampel, dan bobot basah per plot tanaman.

Kata kunci : Sawi Pagoda (*Brassica narinosa* L.), berbagai Dosis, Cara Aplikasi POC *Azolla*, Vertikultur.

Effect of Various Doses and Applications of Liquid Organic Fertilizer (*Azolla pinnata*) on Plant Growth and Productivity (*Brassica narinosa L.*) with Verticulture system

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ABSTRACT

Brassica narinosa L. plant is a vegetable belonging to the mustard type. Characteristic of this plant is the surface of the leaves curly and green. The weight of the plant can reach 200 grams. One of the factors that affect the productivity of the Pagoda mustard plant is the availability of nutrients. *Azolla sp.* liquid organic fertilizer is a solution of the results of decay or fermentation derived from the plant *Azolla sp.* The advantage of this organic fertilizer is that it is able to overcome nutrient differentiation quickly. Objective this study to determine the influence of various doses and application of (*Azolla pinnata*) liquid organic fertilizer on the growth and productivity of (*Brassica narinosa L.*) with a verticulture system. This research was conducted in December 2021 - March 2022 at the Experimental Field of the Faculty of Agriculture, completely University of Muhammadiyah Jember. This study used a randomized completely block design (RCBD) consisting of two factors. First factor were various doses of *Azolla* liquid organic fertilizer (D) in 4 levels, namely: D0 = 0 ml, D1 = 10 ml/plant, D2 = 40 ml/plant, D3 = 70 ml/plant and second factor of application of *Azolla* liquid organic fertilizer (C) in 3 levels, C1 = sprayed on the ground, C2 = sprayed on the leaves, C3 = was sprayed on the ground + was sprayed on the leaves, each of which was repeated 3 times. The study results showed that treatment with various doses and application methods of *Azolla* liquid organic fertilizer had an significantly on the growth and productivity of *Brassica narinosa L.* plants, and there is an interaction treatment D3C3 (dose of 70ml/plant, watered and sprayed) is the best treatment on the variables of number of leaves, wet weight per sample, and wet weight per plant plot.

Key words : *Brassica narinosa L.*, Various Doses, Method of Application of *Azolla* liquid organic fertilizer, Verticulture.