

**APLIKASI PUPUK ORGANIK CAIR *Azolla microphylla* DAN KOMPOSISI MEDIA TANAM TERHADAP PERTUMBUHAN DAN HASIL TANAMAN KALE (*Brassica oleracea* L.)**

**Oleh : Dewi Anggraeni Sekarwati  
Dibimbing oleh : Rina Srilestari dan Heti Herastuti**

**ABSTRAK**

Kale memiliki nutrisi penting bagi manusia dan mempunyai permasalahan pada penurunan produktivitas usaha peningkatan hasil tanaman. Tujuan penelitian adalah menentukan konsentrasi POC *Azolla microphylla* dan komposisi media tanam yang tepat terhadap pertumbuhan dan hasil tanaman. Metode penelitian dengan polibag menggunakan RAL faktorial (3x3)+1 kontrol. Faktor pertama adalah konsentrasi POC *Azolla microphylla* 50 ml/L, 100 ml/L, dan 150 ml/L. Faktor kedua adalah komposisi media tanam tanah regosol: arang sekam: *cocopeat* (2:1:1), (1:2:1), dan (1:1:2). Pupuk phonska (15-10-12) dosis 11,16 g/tanaman sebagai kontrol. Data dianalisis menggunakan ANOVA 5% dan kontras orthogonal serta diuji lanjut dengan DMRT 5%. Hasil penelitian terjadi interaksi perlakuan POC *Azolla microphylla* 100 ml/L dengan komposisi media tanam (2:1:1) pada tinggi tanaman 40, 50 HST, jumlah daun 50 HST, volume akar, semua parameter bobot segar, dan bobot kering akar /5 tanaman. Konsentrasi POC *Azolla microphylla* 100 ml/L memberikan hasil terbaik pada tinggi tanaman 10, 20, 30 HST, jumlah daun 20, 30, 40 HST, bobot kering /5 tanaman, dan bobot kering konsumsi /5 tanaman. Komposisi media tanam (2:1:1) memberikan hasil terbaik pada tinggi tanaman 10, 20, 30 HST, jumlah daun 20, 30, 40 HST, rasio tajuk akar, dan indeks panen. Kombinasi perlakuan nyata lebih baik dari kontrol pada semua parameter.

Kata kunci : *kale*, *POC*, *azolla microphylla*, *media tanam*

**APPLICATION OF LIQUID ORGANIC FERTILIZER *Azolla microphylla*  
AND COMPOSITION OF PLANT MEDIA ON THE GROWTH AND  
RESULTS OF KALE (*Brassica oleracea* L.)**

By: Dewi Anggraeni Sekarwati

Supervised By: Rina Srilestari and Heti Herastuti

**ABSTRACT**

Kale has important nutrients for humans and has problems with decreasing productivity in efforts to increase crop yields. The research aimed to determine the concentration of *Azolla microphylla* POC and the composition of the planting medium which were appropriate for plant growth and yield. The research method with polybags using factorial RAL (3x3) + 1 control. The first factor was the concentration of POC *Azolla microphylla* 50 ml/L, 100 ml/L, and 150 ml/L. The second factor was the composition of the regosol soil planting medium: husk charcoal: cocopeat (2:1:1), (1:2:1), and (1:1:2). Phonska fertilizer (15-10-12) dose of 11.16 g/plant as a control. Data were analyzed using 5% ANOVA and orthogonal contrast and further tested with 5% DMRT. The results of the study showed an interaction between the treatment of POC *Azolla microphylla* 100 ml/L and the composition of the planting medium (2:1:1) at plant height 40, 50 HST, number of leaves 50 HST, root volume, all fresh weight parameters, and root dry weight /5 plants. *Azolla microphylla* POC concentration of 100 ml/L gave the best results at plant height of 10, 20, 30 HST, number of leaves 20, 30, 40 HST, dry weight /5 plants, and dry weight consumption /5 plants. The composition of the planting medium (2:1:1) gave the best results for plant height of 10, 20, 30 HST, number of leaves 20, 30, 40 DAP, root canopy ratio, and harvest index. The combination treatment is significantly better than the control on all parameters

Keywords : *kale, POC, azolla microphylla, growing medium*