

## INTISARI

Penelitian ini bertujuan untuk mengetahui kandungan N, P, dan K dari pupuk organik cair berbahan bayam, mengetahui metode dan perlakuan mana yang paling efektif dalam pembuatan pupuk organik cair berbahan dasar bayam, serta mengetahui apakah pupuk organik cair berbahan bayam mempengaruhi pertumbuhan tanaman. Metode penelitian yang digunakan yakni eksperimental yakni melakukan percobaan pembuatan POC dengan melakukan kombinasi perlakuan berupa beberapa ukuran bahan serta penambahan biochar. Penelitian ini menggunakan rancangan acak lengkap dengan pola non faktorial. Proses pengomposan dilakukan selama 30 hari kemudian diuji untuk mengetahui kandungan dari N,P,K. Pengaplikasian pada tanaman sawi dilakukan dengan menggunakan media tanam inceptisol Cangkringan untuk mengetahui pengaruh POC terhadap pertumbuhan tanaman. Hasil penelitian menunjukan Kadar Nitrogen tertinggi terdapat pada perlakuan ukuran cacah + biochar sebesar 0,035%, sedangkan terendah pada perlakuan ukuran utuh tanpa biochar sebesar 0,0012%. Kadar Fosfor tertinggi terdapat pada perlakuan ukuran cacah + biochar sebesar 0,0086%, sedangkan terendah pada perlakuan ukuran 10cm + biochar sebesar 0,0036 %. Kadar Kalium tertinggi terdapat pada perlakuan ukuran 5cm + biochar sebesar 0,09%, sedangkan terendah pada perlakuan ukuran utuh tanpa biochar sebesar 0,07 %. Berdasarkan hasil uji parameter N, P, dan K, terlihat bahwa perbedaan ukuran ternyata tidak secara signifikan memengaruhi kualitas POC. Meskipun demikian, penambahan biochar terlihat dapat meningkatkan kualitas POC. Pemberian POC pada setiap perlakuan memberikan dampak pada pertumbuhan tanaman jika dibandingkan dengan perlakuan kontrol.

**Kata kunci : POC, ember tumpuk, ukuran, biochar,sawi**

## ABSTRACT

*This research aims to determine the N, P, and K content of liquid organic fertilizer made from spinach, identify the most effective method and treatment in the production of liquid organic fertilizer based on spinach, and investigate whether liquid organic fertilizer made from spinach affects plant growth. The research method used is experimental, involving the production of POC through a combination of treatments such as varying sizes of raw materials and adding biochar. The study employs a completely randomized design with a non-factorial pattern. The composting process is carried out for 30 days, followed by testing to determine the N, P, and K content. Application to mustard plants is conducted using Cangkringan inceptisol growing media to assess the impact of POC on plant growth. The research results show that the highest Nitrogen content is found in the treatment with shredded size + biochar at 0.035%, while the lowest is in the treatment with whole size without biochar at 0.0012%. The highest Phosphorus content is in the treatment with shredded size + biochar at 0.0086%, while the lowest is in the treatment with 10cm size + biochar at 0.0036%. The highest Potassium content is in the treatment with 5cm size + biochar at 0.09%, while the lowest is in the treatment with whole size without biochar at 0.07%. Based on the testing results of the N, P, and K parameters, it appears that the size difference does not significantly affect the quality of POC. However, the addition of biochar seems to improve the quality of POC. The application of POC in each treatment has an impact on plant growth when compared to the control treatment.*

**Keywords:** *POC, stacked bucket, size, biochar, mustard greens*