

**RESPON PERTUMBUHAN DAN HASIL TANAMAN BAYAM
BRAZIL (*Alternanthera sissoo*) AKIBAT PEMBERIAN DOSIS
PUPUK ORGANIK CAIR *DI GROW GREEN*® PADA SISTEM
*DEEP FLOW TECHNIQUE***

SKRIPSI

Oleh

**FADHIL KHEMAL PASHA
NIM. 2110211032**



Pembimbing :

- 1. Prof. Dr. Ir Warnita., MP**
- 2. Elara Resigi., SP. MP**

**FAKULTAS PERTANIAN
UNIVERSITAS ANDALAS
PADANG
2025**

RESPON PERTUMBUHAN DAN HASIL TANAMAN BAYAM BRAZIL (*Alternanthera sissoo*) AKIBAT PEMBERIAN DOSIS PUPUK ORGANIK CAIR *DI GROW GREEN*[®] PADA SISTEM *DEEP FLOW TECHNIQUE*

Abstrak

Bayam brazil merupakan sayuran memiliki antioksidan dan nutrisi beragam dan berguna bagi kesehatan manusia. Banyaknya kandungan dan manfaat tanaman bayam brazil, sehingga bayam brazil mulai dikembangkan oleh masyarakat di daerah perkotaan. Salah satu upaya untuk mengoptimalkan lahan yang sempit di daerah perkotaan, dapat menggunakan teknik hidroponik dengan sistem *Deep Flow Technique* (DFT). Sistem DFT umumnya menggunakan nutrisi AB Mix. Selain AB Mix, pupuk organik cair juga dapat menjadi alternatif lainnya untuk nutrisi pada sistem DFT, karena lebih murah dan mudah diserap oleh tanaman jika diaplikasikan melalui daun. Salah satu jenis pupuk organik cair yang digunakan yaitu POC *DI Grow Green*[®]. Penelitian ini bertujuan mendapatkan dosis POC *DI Grow Green*[®] terbaik terhadap pertumbuhan dan hasil bayam brazil pada sistem DFT. Penelitian telah dilaksanakan pada bulan Oktober hingga November 2024 di Arif Hidrofarm dan Laboratorium Teknologi Benih, Universitas Andalas. Penelitian ini menggunakan rancangan acak lengkap yang terdiri dari 4 perlakuan dengan masing-masing diulang sebanyak 5 kali sehingga didapat 20 satuan percobaan. Adapun perlakuan dosis POC *DI Grow Green*[®] yang terdiri atas 4 taraf, yaitu: Dosis 0, 5, 10 dan 15 ml/L. Data hasil pengamatan, dianalisis dengan uji F pada taraf 5%. Uji lanjut dilakukan dengan menggunakan DNMRT (*Duncan's Multiple Range Test*) pada taraf 5%. Hasil penelitian menunjukkan bahwa dosis 15 ml/L POC *DI Grow Green*[®] mampu memberikan pertumbuhan dan hasil terbaik pada parameter jumlah daun, bobot segar tanaman, bobot kering tanaman, bobot segar tajuk, dan bobot kering tajuk tanaman bayam brazil pada sistem DFT.

Kata kunci: Bayam brazil, DFT, *DI Grow Green*[®], Hidroponik.

RESPONSE TO GROWTH AND YIELD OF BRAZILIAN SPINACH (*Alternanthera sissoo*) DUE TO THE APPLICATION OF *DI GROW GREEN*[®] LIQUID ORGANIC FERTILIZER IN A DEEP FLOW TECHNIQUE SYSTEM

Abstract

Brazil spinach is a vegetable that has antioxidants and various nutrients and is useful for human health. The many contents and benefits of brazilian spinach plants, so that brazilian spinach began to be developed by people in urban areas. One of the efforts to optimize the narrow land in urban areas, can use hydroponic techniques with the Deep Flow Technique (DFT) system. The DFT system generally uses AB Mix nutrients. In addition to AB Mix, liquid organic fertilizer can also be another alternative for nutrition in the DFT system, because it is cheaper and easily absorbed by plants when applied through the leaves. One liquid organic fertilizer used is POC *DI Grow Green*[®]. This study aimed to get the best dose of POC *DI Grow Green*[®] on the growth and yield of brazilian spinach in the DFT system. The research was conducted from October to November 2024 at Arif Hydrofarm and Seed Technologi Laboratory, Andalas University. The study employed a completely randomized design (CRD) consisting of four treatments, each with five replications, resulting in 20 experimental units. The treatments consisted of four levels *DI Grow Green*[®] Doses of 0, 5, 10 and 15 ml/L. Observation data were analyzed with F test at 5% level. Further testing was conducted using Duncan's Multiple Range Test (DNMRT) at the 5% level. The results showed that a dose of 15 ml/L POC *DI Grow Green*[®] was able to provide the best growth and yield in the parameters of the number of leaves, fresh weight of plants, dry weight of plants, fresh weight of the crown, and dry weight of the crown of brazilian spinach plants in the DFT system.

Keywords: Brazilian spinach, DFT, *DI Grow Green*[®], Hydroponic.