

PENGARUH MACAM SISTEM AKUAPONIK TERHADAP PERTUMBUHAN DAN HASIL BAYAM JEPANG

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INTISARI

Bayam jepang merupakan tanaman sayuran yang bernilai ekonomi tinggi yang mengandung zat gizi yang berkasiat bagi kesehatan. Permintaan bayam jepang cenderung meningkat sehingga perlu upaya peningkatan produksi. Akuaponik penting dilakukan untuk meningkatkan produksi tanaman sekaligus mendapatkan hasil ikan di daerah dengan ketersediaan lahan terbatas. Sistem akuaponik yang dipilih harus dapat menyediakan oksigen dan nutrisi dari air kolam bagi tanaman. Tujuan penelitian ini untuk mengetahui pengaruh berbagai macam sistem akuaponik terhadap pertumbuhan dan hasil bayam jepang. Penelitian dilaksanakan di Instalasi Akuaponik Wana-wana, Jalan Cendrawasih, Dayakan Ngaglik, Sleman, Yogyakarta. Penelitian ini merupakan penelitian faktor tunggal yang disusun dalam Rancangan Acak Lengkap dengan 3 perlakuan yaitu sistem rakit apung, *nutrient film technique* (NFT) dan *Ebb and Flow*. Parameter yang diamati meliputi tinggi tanaman, jumlah daun, panjang dan lebar daun, bobot segar, bobot ekonomis, bobot kering tanaman. Hasil penelitian menunjukkan bahwa perlakuan macam sistem akuaponik mempengaruhi pertumbuhan dan hasil bayam jepang, dengan sistem *Ebb and Flow* dan *NFT* memberikan pertumbuhan dan hasil lebih baik dari pada sistem rakit apung.

Kata Kunci : Bayam jepang, aquaponik, rakit apung, *nutrient film technique*,
Ebb and Flow.

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THE EFFECT OF KINDS OF AQUAPONIC SYSTEMS ON THE GROWTH AND RESULTS OF JAPANESE SPINACH

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ABSTRACT

Japanese spinach is a vegetable plant that has high economic value that contains nutrients that are beneficial for health. Demand for Japanese spinach tends to increase so it is necessary to increase production. Aquaponic is important to increase crop production as well as to get fish yields in areas with limited land availability. The selected aquaponic system must be able to provide oxygen and nutrients from pond water for plants. The purpose of this study was to determine the effect of various aquaponic systems on the growth and yield of Japanese spinach. The purpose of this study was to determine the effect of various aquaponic systems on the growth and production of Japanese spinach. The research was conducted at the Wana-wana Aquaponic Installation, Jalan Cendrawasih, Dayakan Ngaglik, Sleman, Yogyakarta. The study was arranged in a completely randomized design with 3 treatments, namely the floating raft system, nutrient film technique (NFT) and *Ebb and Flow*. Parameters observed included plant height, number of leaves, leaf length and width, fresh weight, economic weight, plant dry weight. The results showed that the type of aquaponic treatment affected the growth and yield of Japanese spinach, with the Ebb and Flow and NFT system providing the higher growth and yield of Japanese spinach

Keywords: *Japanese spinach, aquaponic, floating raft, nutrient film technique, Ebb and Flow.*

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