PERTUMBUHAN DAN HASIL TANAMAN SELADA ROMAINE MERAH (*Lactuca sativa* var. *Longifolia* L.) PADA BERBAGAI KONSENTRASI THIAMINE DAN MACAM MEDIA TANAM SECARA HIDROPONIK SISTEM *Deep Flow Technique* (DFT)

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ABSTRAK

Sayuran daun merupakan salah satu hasil pertanian yang banyak dibutuhkan oleh masyarakat. Permintaan akan sayuran ini diperkirakan akan semakin meningkat dari tahun ke tahun. Oleh karena itu perlu dilakukan upaya untuk meningkatkan hasil dan kualitas dari sayuran terutama selada merah, salah satunya dengan hidroponik sistem *Deep Flow Technique* (DFT). Tujuan penelitian adalah untuk mengetahui konsentrasi thiamine dan jenis media yang paling baik untuk petumbuhan tanaman selada merah secara hidroponik sistem DFT. Penelitian dilaksanakan di Corah Farmhouse, Desa Corah, Kelurahan Rejomulyo, Kecamatan Kartoharjo, Kota Madiun, Jawa Timur pada bulan Maret sampai Mei 2019. Metode penelitian menggunakan Rancangan Petak Terbagi (*Split Plot Design*) dua faktor. Petak utama yaitu perlakuan konsentrasi thiamine yang terdiri dari 4 taraf yaitu tanpa thiamine, thiamine 35 ppm, thiamine 70 ppm dan thiamine 105 ppm. Anak petak yaitu jenis media tanam yang terdiri dari 3 taraf yaitu rockwool, hydroton dan vermikulit. Berdasarkan hasil penelitian menunjukkan terdapat interaksi antara perlakuan konsentrasi thiamine 70 ppm dengan media tanam rockwool pada parameter jumlah daun 35 HST, luas daun, bobot segar tanaman, bobot kering tanaman, dan bobot kering tajuk tanaman. Media tanam rockwool memberikan hasil paling baik pada tinggi tanaman, jumlah daun 14, 21 dan 28 HST, volume akar, bobot kering akar, dan rasio tajuk akar pada hidroponik sistem DFT. Konsentrasi thiamin 70 ppm dapat meningkatkan pertumbuhan tanaman selada merah, khususnya pada parameter tinggi tanaman, jumlah daun 14, 21 dan 28 HST, volume akar, dan bobot kering akar.

Kata kunci : hidroponik *Deep Flow Technique*, media tanam, selada merah, thiamine

THE GROWTH AND YIELD OF RED ROMAINE LETTUCE (*Lactuca sativa* var. *Longifolia* L.) ON VARIOUS CONCENTRATION OF THIAMINE AND GROWING MEDIA IN DEEP FLOW TECHNIQUE (DFT) HYDROPONIC SYSTEM

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ABSTRACT

Leafy vegetables are highly needed crops in society. The demand for the vegetable estimated to be increased from year to year. Therefore, efforts to improve the yields and the quality of the vegetables especially red lettuce are needed, and one of them is by using the Deep Flow Technique (DFT) hydroponic system. The research was aimed to find out thiamine concentration and the best growing media for red lettuce growth by using DFT hydroponic system. This research was conducted at Corah Farmhouse, Rejomulyo village, Kartoharjo district, Madiun, East Java from March until May 2019. Two factors Split Plot Design was used as the research method. The main plot was the treatment of thiamine concentration consists of 4 levels, without thiamine, thiamine 35 ppm, thiamine 70 ppm dan thiamine 105 ppm. The second plot was the growing media consist of 3 levels rockwool, hydroton dan vermiculite. The results showed that there was an interaction between the combination of 70 ppm thiamine concentration and rockwool media to the number of leaves at 35 days after planting, leaves width, fresh plant weight, dry plant weight, and dry crown weight. Rockwool media showed the best result in the parameter of plant height, the number of leaves at 14, 21 and 28 days after planting, root volume, dry root weight, and ratio of the crown root at DFT hydroponic system. The thiamine concentration 70 ppm could improve the growth of red lettuce especially in the parameter of plant height, number of leaves at 14, 21 and 28 days after planting, root volume, and dry root weight.

Keywords: DFT hydroponic system, growing media, red lettuce, thiamine