RESPON PERTUMBUHAN DAN HASIL TANAMAN *BABY* KAILAN (*Brassica oleraceae* var TF CKL 09) TERHADAP KOMPOSISI NUTRISI PADA SISTEM HIDROPONIK RAKIT APUNG

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ABSTRAK

Tujuan penelitian adalah mengkaji respon berbagai macam nutrisi dan menentukan nutrisi yang terbaik terhadap pertumbuhan dan hasil tanaman *baby* kailan. Penelitian dilaksanakan di *greenhouse* Easparc hotel di Ngentak, Caturtunggal, Depok, Sleman, Daerah Istimewa Yogyakarta pada bulan Januari sampai Maret 2020. Metode penelitian yang digunakan adalah percobaan lapangan yang disusun dengan rancangan lingkungan RAL (Rancangan Acak Lengkap) faktor tunggal. Terdapat sebelas perlakuan yaitu A0: 100% Nutrisi AB Mix, A1: 75% Nutrisi AB Mix+12,5% ekstrak ampas kopi+12,5% ekstrak ampas teh, A2: 50% Nutrisi AB Mix+25% ekstrak ampas kopi+25% ekstrak ampas teh, A3: 25% Nutrisi AB Mix+37,5% ekstrak ampas kopi+37,5% ekstrak ampas teh, A4: 75% Nutrisi AB Mix+25% ekstrak ampas kopi, A5: 75% Nutrisi AB Mix+25% ekstrak ampas teh, A6: 50% Nutrisi AB Mix+50% ekstrak ampas kopi, A7: 50% Nutrisi AB Mix+50% ekstrak ampas teh, A8: 50% ekstrak ampas kopi+50% ekstrak ampas teh, A9: 100% ekstrak ampas kopi, A10: 100% ekstrak ampas teh. Setiap perlakuan diulang sebanyak tiga kali. Data hasil pengamatan dianalisis dengan menggunakan *Analysis of Varian* (ANOVA). Perbedaan antar perlakuan dilakukan uji lanjut menggunakan uji gerombol (*scott-knott*) pada taraf uji 5%. Hasil penelitian menunjukkan terdapat beda nyata pada komposisi nutrisi hidroponik. Perlakuan 50% Nutrisi AB Mix+25% ekstrak ampas kopi+25% ekstrak ampas teh memberikan respon hasil terbaik dan hasil sama dengan 100% AB Mix pada pertumbuhan yaitu tinggi tanaman dan jumlah daun, serta hasil tanaman yaitu volume akar, bobot segar tajuk, bobot kering tajuk, berat kering akar, kandungan klorofil daun, dan rasio tajuk akar pada tanaman *baby* kailan secara hidroponik rakit apung.

Kata kunci: *Baby* kailan, rakit apung, AB Mix, ampas kopi, ampas teh.

GROWTH AND YIELD RESPONSE OF BABY KAILAN (*Brassica oleraceae* var TF CKL 09) TO THE NUTRITION COMPOSITION IN WATER CULTURE HYDROPONIC SYSTEM

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ABSTRACT

The purpose of this study was to determine the response of various kinds of nutrients and determine the best nutrition for the growth and yield of baby kailan plants. The study was conducted at the Easparc Hotel greenhouse in Ngentak, Caturtunggal, Depok, Sleman, Yogyakarta Special Region from January to March 2020. The research method used was a field experiment that was compiled with a single factor CRD (Completely Randomized Design) environmental design. There are eleven levels of treatment, namely A0: 100% AB Mix Nutrition, A1: 75% AB Mix Nutrition+12.5% coffee pulp extract+12.5% tea pulp extract, A2: 50% AB Mix Nutrition+25% coffee pulp extract+25% tea pulp extract, A3: 25% AB Mix nutrition+37.5% coffee pulp extract+37.5% tea pulp extract, A4: 75% AB Mix nutrition+25% coffee pulp extract, A5: 75% AB Nutrition Mix+25% tea pulp extract, A6: 50% AB Nutrition Mix+50% coffee pulp extract, A7: 50% Nutrition AB Mix+50% tea pulp extract, A8: 50% coffee pulp extract+50% tea pulp extract, A9: 100% coffee pulp extract, A10: 100% tea pulp extract. Each treatment was repeated three times. Observation data were analyzed by using Analysis of Variants (ANOVA). Differences between treatments were carried out by further tests using a scott-knott test at a test level of 5%. The results showed there were significant differences in the composition of hydroponic nutrients. Treatment of 50% AB Mix Nutrition+25% coffee pulp extract + 25% tea pulp extract gives the best response and results equal to 100% AB Mix in growth i.e plant height and number of leaves, as well as the yield of the plant root volume, fresh weight of the crown, shoot dry weight, root dry weight, leaf chlorophyll content, and root shoot ratio in baby kailan plants in water culture hydroponic system.

Keywords: Baby Kailan, water culture, AB Mix, coffee pulp, tea pulp.