

RINGKASAN

Melon (*Cucumis melo* L.) merupakan salah satu komoditas buah penting bagi masyarakat Indonesia yang nilai permintaannya cukup tinggi. Salah satu kendala yang dapat dijumpai pada budidaya melon adalah ketergantungan pada pupuk anorganik yang harganya semakin mahal dan terbatasnya lahan pertanian. Penggunaan pupuk anorganik masih menjadi andalan petani untuk memenuhi kebutuhan unsur hara bagi tanaman, tetapi jika digunakan secara berlebihan akan berdampak buruk bagi tanaman dan lingkungan, upaya meningkatkan produksi melon dapat dilakukan dengan sistem budidaya hidroponik substrat dan aplikasi bahan campuran organik yang mudah dijangkau seperti urine kelinci, kulit pisang, kulit nanas dan bonggol pisang yang ramah lingkungan. Tujuan penelitian ini untuk memperoleh jenis nutrisi organik dan media tanam yang paling ideal untuk mendukung produktivitas tanaman melon secara hidroponik substrat.

Penelitian dilaksanakan di rumah kaca, Flos Hidroponik, Bansari, kabupaten Temanggung, selama 7 bulan dari November 2022 hingga Mei 2023. Penelitian ini menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dua faktor dengan 9 kombinasi perlakuan dan 3 ulangan. Variabel yang diamati yaitu tinggi tanaman, jumlah daun, jumlah bunga, luas daun, kadar klorofil total, umur panen awal, bobot buah, diameter buah, ketebalan daging buah dan total padatan terlarut.

Hasil penelitian menunjukkan bahwa perlakuan nutrisi diperkaya bahan organik urine kelinci dan kulit nanas menunjukkan hasil berbeda nyata terhadap kandungan klorofil total. Namun, ketiga perlakuan nutrisi tidak berbeda nyata terhadap tinggi tanaman, jumlah daun, jumlah bunga, luas daun, total padatan terlarut, ketebalan daging buah, bobot buah, diameter buah, dan umur panen awal. Perlakuan M3 [kombinasi cocopeat dan arang sekam (1:1)] menunjukkan pengaruh yang nyata terhadap variabel tinggi tanaman, jumlah daun, jumlah bunga. Rekomendasi penelitian lanjutan agar menguji kualitas buah untuk mengetahui pengaruh komposisi nutrisi organik dan media tanam terhadap fisiologis buah.

SUMMARY

Melon (Cucumis melo L.) is one of the important fruit commodities for Indonesian people whose demand is quite high. One of the obstacles that can be found in the cultivation of melon is the increasingly expensive price of an-organic fertilizers and the limited of agricultural land. The used of an-organic fertilizer is still the mainstay of farmers to meet the need for nutrients in plants, Efforts to increase melon production can be done with a substrate hydroponic cultivation system and applications with a combination of easily accessible organic mixtures such as rabbit urine, banana peel, pineapple peel and banana stump which are environmentally friendly. The research purposed for getting the right composition of the organic nutrition and the media composition to support the growth and yield of melon (Cucumis melo L.) in hydroponics substrates.

This Reasearch was conducted at the Screen house Flos hidroganik, Bansari, kabupaten Temanggung, for 7 months from November 2022 to May 2023. This study used two factors Completely Randomized Design (CRD) with 9 combine treatments and 3 replications. The variables observed were plant height, number leaves, number of flowers, leaf area index, total chlorophyll content, first harvesting, diameter of fruit, average fruit weight, diameter of fruit flesh, and time total dissolved solids.

The results showed that nutrition enriched with organic ingredients from rabbit urine and pineapple peel showed different results in terms of total chlorophyll content. However, the three nutritional treatments were not significantly different on plant height, number of leaves, number of flowers, leaf area, total chlorophyll content, early harvest age, outer diameter, fruit weight thickness of fruit flesh and total soluble solids,. The M3 treatment [a combination of cocopeat and husk charcoal (1:1)] showed a significant effect on the variable plant height, number of leaves, number of flowers. Recommendations for further research to test fruit quality to determine the effect of organic nutrient composition and planting media on fruit physiology.