

ABSTRAK

Melon (*Cucumis melo* L.) adalah tanaman semusim yang tergolong suku labu-labuan, dan memiliki rasa manis, sehingga banyak diminati masyarakat. Banyaknya peminat melon berpotensi meningkatkan kebutuhan pasar. Tingginya kebutuhan melon tidak sejalan dengan hasil produksi yang dihasilkan saat ini. Penurunan produktivitas melon dapat terjadi karena beberapa faktor salah satunya kurangnya perhatian terhadap kondisi media tumbuh melon, sehingga penyerapan nutrisi oleh akar tanaman untuk pertumbuhan dan kualitas buah kurang optimal. Tujuan penelitian ini dilakukan untuk mengetahui pengaruh pemberian biostimulan dan kompos baglog bagi pertumbuhan dan hasil melon. Penelitian ini dilakukan pada bulan Januari – Maret 2026 di Kebun RA Bakti Ds. Telang dan Ruang Laboratorium Program Studi Agroekoteknologi, Universitas Trunodjoyo Madura. Penelitian menggunakan Rancangan Acak Kelompok dengan faktor dosis baglog jamur B0 (0 ton/ha = 0 g/polybag), B1 (10 ton/ha = 55,9 g/polybag), B2 (20 ton/ha = 111,9 g/polybag) dan faktor biostimulan rumput laut G0 (0% = 0 g/L), G1 (0,2% = 2 g/L), G2 (0,4% = 4 g/L). Parameter yang diamati yaitu panjang tanaman, jumlah daun, bobot basah akar, bobot buah, lingkaran buah, ketebalan daging buah, kadar kemanisan buah (*brix*). Data dianalisis menggunakan ANOVA taraf 5% dan apabila berpengaruh nyata dilakukan uji lanjut DMRT taraf 5%. Hasil penelitian menunjukkan kompos baglog berpengaruh pada pertumbuhan panjang tanaman dan jumlah daun pada umur 2-6 MST dengan nilai tertinggi cenderung diperoleh pada B2 (20 ton/ha) dan B1 (10 ton/ha), baglog juga berpengaruh nyata pada kadar kemanisan buah, dimana dosis efisien yang meningkatkan kemanisan adalah B2 (20 ton/ha) dengan nilai 8,61. Biostimulan rumput laut berpengaruh nyata pada ketebalan daging buah, dimana nilai tertinggi diperoleh dengan taraf perlakuan G2 (0,4% biostimulan). Tidak terdapat interaksi nyata antara kombinasi perlakuan, hal ini diduga karena masing-masing memiliki faktor mekanisme kerja yang berbeda.

Kata Kunci: Tanaman Melon, Biostimulan Rumput Laut, Kompos Baglog, Melon Amanda Tavi, Pertumbuhan, Hasil, Brix.

Yulia Ayu Wulandari (220311100022). The Effectiveness of Seaweed Biostimulants and Baglog Compost in Enhancing the Growth and Yield of Melons (*Cucumis melo* L.). Supervised by Ir. H. Soehartono, M.P., and Ir. Slamet Supriyadi, M.Si.

ABSTRAK

Melons (*Cucumis melo* L.) are annual plants belonging to the gourd family; they have a sweet taste, making them very popular among consumers. The large number of melon enthusiasts has the potential to increase market demand. However, this high demand is not matched by current production levels. Declining melon productivity can result from several factors, one of which is a lack of attention to the conditions of the growing medium, as a result, the absorption of nutrients by plant roots for growth and fruit quality is less than optimal. The purpose of this study was to determine the effect of applying biostimulants and baglog compost on melon growth and yield. This study was conducted from January to March 2026 at the RA Bakti Farm in Telang Village and in the laboratory of the Agroecotechnology Study Program at Trunodjoyo University, Madura. The study used a Randomized Block Design with the following dose factors for B0 mushroom baglogs (0 metric tons/hectare = 0 g/polybag), B1 (10 metric tons/ha = 55.9 g/polybag), B2 (20 metric tons/ha = 111.9 g/polybag), and seaweed biostimulant as the treatment factor: G0 (0% = 0 g/L), G1 (0.2% = 2 g/L), G2 (0.4% = 4 g/L). The parameters observed were plant height, number of leaves, fresh root weight, fruit weight, fruit circumference, fruit flesh thickness, and fruit sugar content (Brix). The data were analyzed using ANOVA at the 5% significance level, and when a significant effect was found, a DMRT post-hoc test at the 5% significance level was conducted. The results showed that the baglog compost composition affected plant height and the number of leaves at 2–6 MST, with the highest values generally observed in treatments B2 (20 metric tons/hectare) and B1 (10 metric tons/hectare), baglog also had a significant effect on fruit sweetness levels, with the most effective dose for increasing sweetness being B2 (20 metric tons/ha), yielding a value of 8.61. The seaweed biostimulant had a significant effect on fruit flesh thickness, with the highest value obtained at treatment level G2 (0.4% biostimulant). There was no significant interaction among the treatment combinations; this is likely because each has a different mechanism of action.

Keywords: *Melon Plants, Seaweed Biostimulant, Baglog Compost, Amanda Tavi Melon, Growth, Yield, Brix.*