ABSTRACT

Shallot (*Allium ascalonicum* L.) is an economically important horticultural commodity in Indonesia whose demand continues to rise, yet its productivity in Aceh Province declined from 13,672.615 tons/ha in 2023 to 13,174.336 tons/ha in 2024, partly due to inappropriate fertilization practices. This study aimed to determine the effect of liquid organic fertilizer (LOF) from vegetable waste and cow manure, as well as their interaction, on the growth and yield of shallot. The research was conducted at the experimental field of the Faculty of Agriculture, Universitas Malikussaleh, from February to April 2026, using a factorial Randomized Block Design (RBD) with two factors and three replications. The first factor was LOF of vegetable waste (P) at three levels: P0 (0 mL/L), P1 (50 mL/L), and P2 (100 mL/L). The second factor was cow manure (S) at three levels: S0 (0 kg/plot), S1 (2.5 kg/plot), and S2 (5 kg/plot). The results showed that LOF of vegetable waste significantly to highly significantly affected plant height at 28-49 days after planting (DAP), with P1 (50 mL/L) as the best treatment. Cow manure significantly to highly significantly affected the number of leaves at 28-49 DAP and highly significantly affected bulb weight loss per clump, with S2 (5 kg/plot) as the best treatment for leaf number. A significant interaction between LOF of vegetable waste and cow manure was found on bulb weight loss per clump, in which the combination of LOF 50 mL/L without cow manure (P1S0) produced the lowest weight loss (10.51%), indicating the best storage quality. The number of tillers, number and diameter of bulbs, fresh and dry weight of bulbs per clump and per plot, bulb weight loss per plot, and yield per hectare (ranging 2.24-2.84 tons/ha) were not significantly affected by either treatment or their interaction.

Keyword: Fertilizer concentration, growth, production, vegetable waste