

ABSTRAK

Shallot (*Allium cepa* L.) is one of the most important horticultural crops with high economic value and plays a significant role in meeting food demand in Indonesia. Increasing shallot productivity can be achieved through the application of appropriate cultivation techniques, including the use of organic fertilizers and the selection of suitable cultivars. Coffee husk compost is a potential organic fertilizer because it can improve soil organic matter as well as enhance the physical, chemical, and biological properties of the soil. In addition, differences in the genetic characteristics among shallot cultivars are expected to produce different growth and yield responses. Therefore, this study was conducted to evaluate the effect of coffee husk compost application on several shallot cultivars. This study aimed to determine the effects of coffee husk compost application, shallot cultivars, and their interaction on the growth and yield of shallot (*Allium cepa* L.). The experiment was conducted at the Experimental Farm of the Faculty of Agriculture, Universitas Malikussaleh, from November 2025 to March 2026. The study employed a two-factor factorial Randomized Complete Block Design (RCBD). The first factor consisted of three rates of coffee husk compost: K_0 (0 kg plot⁻¹), K_1 (1.5 kg plot⁻¹), and K_2 (3 kg plot⁻¹). The second factor consisted of three shallot cultivars, namely Tajuk, Bima Brebes, and Batu Ijo. Each treatment combination was replicated three times, resulting in 27 experimental units. The observed parameters included plant height, number of leaves, number of tillers, fresh bulb weight per clump, dry bulb weight per clump, number of bulbs per clump, number of bulbs per plot, and yield per hectare. The results showed that the application of coffee husk compost had no significant effect on all observed growth and yield parameters. In contrast, cultivar significantly affected plant height at 21 and 35 days after planting (DAP), number of leaves at 7 DAP, and number of tillers at 7, 21, 28, and 35 DAP. The Tajuk cultivar exhibited superior vegetative growth, while the Bima Brebes cultivar produced the highest number of tillers. Meanwhile, the Batu Ijo cultivar showed relatively lower growth performance than the other two cultivars. No significant interaction was observed between coffee husk compost application and cultivar for all measured parameters. In conclusion, the rates of coffee husk compost applied in this study were not sufficient to improve the growth and yield of shallot. In contrast, cultivar had a greater influence on plant growth than coffee husk compost application. Therefore, selecting an appropriate cultivar is an important factor in shallot cultivation, while the utilization of coffee husk compost requires further research to determine more effective application rates for improving shallot growth and yield.

Keywords: Batu Ijo, Bima Brebes, tajuk, organic matter, soil fertility.