ABSTRACT

Eggplant (*Solanum melongena* L.) is a popular horticultural commodity with high nutritional content and various health benefits. However, efforts to increase its production still heavily rely on the excessive use of inorganic fertilizers, which can cause nutrient imbalances and damage soil structure. The use of organic fertilizers such as coffee husk waste compost is seen as an environmentally friendly approach to improving soil quality and reducing dependence on chemical fertilizers. This study aims to determine the effect of coffee husk compost and NPK fertilizer, as well as their interaction, on the growth and yield of eggplant (*Solanum melongena* L.). This research was conducted using a factorial Randomized Block Design (RBD) with three replications. The NPK fertilizer treatments consisted of 0, 15, and 25 g/polybag, while the coffee husk compost treatments consisted of 0, 70, and 160 g/polybag. The observed parameters included plant height, number of leaves, stem diameter, age at first flowering, leaf chlorophyll, number of fruits, fruit diameter, fruit length, and fruit weight. The results showed that NPK fertilizer significantly affected plant height at 21, 28, 35, and 42 Days After Planting (DAP), and had a significant effect on the number of leaves, stem diameter, and yield parameters. The application of coffee husk compost only had a significant effect on plant height at 7 DAP. The interaction between NPK fertilizer and coffee husk compost only showed a significant effect on the parameters of fruit diameter and fruit weight at the third harvest. The best treatment was found in the application of NPK fertilizer at a dose of 15 g/polybag, which was able to provide a maximum response in the vegetative growth and yield components of the eggplant. Nevertheless, most of the observed parameters in the coffee husk compost treatment and their interactions did not show a significant effect.

Keywords: coffee husk compost, fruit weight, NPK fertilizer, vegetative growth.