

ABSTRACT

Sweet potatoes (*Ipomoea batatas* L) are plants that originate from tropical regions of America and belong to the tuber family. Low productivity has led to a decline in sweet potato production. Efforts have been made to improve this by applying coconut husk compost and liquid organic fertilizer made from shallot skins. This study aims to determine the effect of coconut shell compost and liquid organic fertilizer made from onion skin on the growth and production of purple sweet potatoes. This study was conducted at the Experimental Garden, Faculty of Agriculture, Malikussaleh University, Reuleut, North Aceh, from March to July 2025 using a two-factor randomized block design with three replicates. The first factor was coconut husk compost with four levels (0, 300, 450, and 500 g/plot), and the second factor was liquid organic fertilizer from red onion skin with four levels (0, 200, 300, and 400 main plot). The results showed that coconut husk compost had a significant effect on stem length at 50 and 60 days after sowing (DAP), leaf area at 30, 40, 50, 60 DAP, chlorophyll content at 20, 30, 40, and 60 DAP, number of main branches at 50 DAP, number of tubers per plant, tuber diameter, tuber length, tuber weight per planting, tuber weight per plot, unit tuber weight, and production in tons/ha. Liquid organic fertilizer from shallot skins had a significant effect on stem length, leaf area, chlorophyll content, number of main branches, number of tubers per plant, tuber diameter per planting, tuber length per planting, tuber weight per planting, tuber weight per plot, unit tuber weight, and yield in tons/ha. The combination of coconut husk compost and liquid organic fertilizer from onion skins had a significant effect on leaf area and chlorophyll content. The best results were obtained with the (K3P3) treatment.

Keywords: Compost, liquid organic fertilizer, Tubers