

ABSTRACT

This study aimed to determine the effects of rice husk biochar and urea fertilizer, as well as their interaction, on the vegetative growth of cassava variety Mentega. The research was conducted at the Experimental Farm of the Faculty of Agriculture, Universitas Malikussaleh, Muara Batu District, North Aceh Regency, from January to April 2026. The experiment used a factorial Randomized Complete Block Design (RCBD) with two factors: rice husk biochar at 0, 300, and 400 g per experimental unit and urea fertilizer at 0, 80, and 96 g per experimental unit. The observed variables included plant height, stem diameter, leaf number, leaf chlorophyll, number of leaf fingers, stem internode number, leaf area, canopy diameter, stomatal length and width, and stem and petiole color. Rice husk biochar significantly affected plant height, leaf number, number of leaf fingers, and leaf area, with 400 g per experimental unit showing the best results. Urea fertilizer significantly affected plant height, stem diameter, leaf number, leaf chlorophyll, stem internode number, leaf area, stomatal width, and stomatal length, with 96 g per experimental unit showing the best results. The interaction significantly affected plant height, stem diameter, leaf number, and stem internode number. The combination of 400 g rice husk biochar and 96 g urea per experimental unit was the most effective treatment.

Keywords: Nitrogen, *Manihot esculenta* Crantz, soil conditioner, vegetative growth.