

ABSTRACT

Sweet potato (*Ipomoea batatas* L.) is a plant originating from tropical America and belongs to the tuber group. The demand for sweet potatoes continues to increase from year to year and population growth continues to increase can be overcome by optimizing dry land as sweet potato cultivation land with the help of the use of Biochar and *Eco-enzyme*. This study aimed to determine the effect of biochar and *eco-enzyme* and their interaction on the growth and yield of sweet potato plants. Experimental Garden, Faculty of Agriculture and Agroecotechnology Laboratory, Malikussaleh University, December 2023 to March 2024. This research was conducted using a Randomized Block Design (RBD) research method with 3 replications. The first factor consisted of B0 (control), B1 (1,1 kg/plot), B2 (2,2 kg/plot). The second factor was E0 (0 ml/l/plot), E1 (22.5 ml/l/plot), E2 (30 ml/l/plot). The provision of biochar and *eco-enzyme* affects the growth and yield of sweet potato plants. such as plant length and number of branches 20 DAP, number of tubers per plant, weight of tubers per tuber, production ton/ha, organoleptic test (taste and color). *Eco-enzyme* such as leaf area 50 DAP, number of branches 50 and 60 DAP, weight of tubers per tuber, organoleptic test (taste, texture and color). The results showed that there was an interaction between the use of biochar and ecoenzyme, namely the number of tubers planted, the weight of tubers per tuber, organoleptic tests (taste, color, texture). The best results in the application of biochar are B1 (1,1 kg/plot), E1 (22,5 ml/l/plot).

Keywords: *Concentration, Rice husk and Tubers*