# ABSTRACT

Cocoa plants have strategic value in the national economy, but their production has been declining due to various factors, including poor seedling quality. This study aimed to determine the effects of chicken manure and NPK fertilizer on the growth of Sulawesi 1 cocoa seedlings. Chicken manure serves as an organic source rich in nutrients, while NPK fertilizer is an inorganic compound containing nitrogen (N), phosphorus (P), and potassium (K), all of which are essential for plant growth. The research was conducted at the Experimental Garden of the Faculty of Agriculture, Malikussaleh University, using a factorial Randomized Block Design (DAP) with two factors: doses of chicken manure (0, 150, and 225 g/polybag) and NPK fertilizer (0, 8, and 12 g/polybag), totaling 27 experimental units. Observed parameters included plant height, stem diameter, number of leaves, fresh and dry weight of the shoots and roots, root length and volume, and chlorophyll content. The results showed that: Chicken manure significantly affected chlorophyll content and height at 75 days after planting (DAP), while NPK fertilizer significantly increased stem diameter at 30, 45, 60, and 75 DAP, as well as dry weight and chlorophyll content. The interaction between chicken manure and NPK fertilizer had a significant effect on stem diameter (45 DAP) and root length (75 DAP). The best dose combination was 225 g/polybag of chicken manure and 8 g/polybag of NPK fertilizer. In conclusion, the application of chicken manure and NPK fertilizer, both individually and in combination, significantly influenced the growth of cocoa seedlings, although not all parameters showed significant differences. This study provides valuable information on optimizing fertilization for cocoa seedling production and can serve as a practical reference for farmers and cocoa plantation managers.



Keywords: Seedling, Growth, Organic Fertilizer, Inorganic Fertilizer.