ABSTRACT

The demand for vegetable commodities in Indonesia continues to increase along with population growth and per capita consumption. In mustard greens, the part that has economic value is the leaves, so increasing production is focused on vegetative growth. Therefore, fertilization is one of the important efforts to increase the growth and yield of mustard greens. This study aims to determine the effect of the application of gamal leaf LOF and NPK fertilizer on the growth and yield of green mustard greens. This study was conducted at the experimental garden of the Faculty of Agriculture, Malikussaleh University from May to July 2026. The design used was a two-factor Randomized Block Design (RBD) with three replications. The first factor was the concentration of gamal leaf LOF which consisted of three levels: G1 (60 ml/l), G2 (120 ml/l), and G3 (180 ml/l). The second factor was the dose of NPK fertilizer, which consisted of three levels: N0 (0 g/polybag), N1 (2 g/polybag), and N2 (3 g/polybag). The results showed that the treatment of gamal leaf LOF concentration alone had a very significant effect on the variable of leaf chlorophyll content at the age of 14 and 28 DAP. The best treatment was obtained with the application of 180 ml/L of gamal leaf LOF. The dose of NPK fertilizer alone had a significant effect on the variable of plant height at the age of 21 DAP and had a very significant effect on the variable of leaf chlorophyll content at the age of 14 and 28 DAP. The best treatment was obtained with the application of 3 g/polybag of NPK fertilizer. There was an interaction between the combination of gamal leaf LOF and NPK fertilizer treatments on the variable of chlorophyll content at the age of 14 and 28 DAP. The best treatment was obtained with the application of 180 ml/L of gamal leaf LOF + 3 g/polybag of NPK fertilizer. Based on the results of the study, it can be concluded that the application of 180 ml/L of gamal leaf LOF and 3 g/polybag of NPK fertilizer is the best treatment in increasing the leaf chlorophyll content of mustard greens, while 3 g/polybag of NPK fertilizer also increased plant height at the age of 21 DAP.

Keywords: concentration, dosage, *Gliricidia sepium*, horticulture, inorganic