

ABSTRACT

The decline in mustard green production and excessive use of inorganic fertilizers can negatively affect soil quality and agricultural sustainability. This study aimed to determine the response of mustard greens (*Brassica juncea* L.) to goat manure and trembesi leaf compost and their interaction on plant growth and yield. The study used a factorial Randomized Complete Block Design with two factors and three replications. Goat manure consisted of 0, 125, and 187.5 g/polybag, while trembesi leaf compost consisted of 0, 60, and 70 g/polybag. The observed parameters included plant height, number of leaves, leaf length, leaf width, chlorophyll content, root length, and fresh weight. The results showed that goat manure and trembesi leaf compost affected several growth and yield parameters. The highest plant height was 18.56 cm with 125 g/polybag of goat manure and 18.66 cm with 70 g/polybag of trembesi leaf compost. The highest number of leaves reached 9.59 leaves with 187.5 g/polybag of goat manure, while the highest chlorophyll content was 28.04 CCI with 60 g/polybag of trembesi leaf compost. The highest root length reached 19.54 cm with goat manure and 19.84 cm with trembesi leaf compost. The highest fresh weight was 54.75 g with 187.5 g/polybag of goat manure and 53.56 g with 70 g/polybag of trembesi leaf compost. Interactions occurred in several growth parameters, while fresh weight showed no significant interaction. The recommended treatment combination was 187.5 g/polybag of goat manure and 70 g/polybag of trembesi leaf compost

Keywords: *Brassica juncea* L., Trembesi leaf compost, Vegetative growth.