

ABSTRACT

Pakcoy (*Brassica rapa* L.) is a leafy vegetable valued for its high nutritional content, but its production in Aceh Province has declined due to heavy dependence on costly inorganic fertilizers that degrade soil quality over time. Organic fertilizers such as cow manure and trembesi (*Samanea saman*) green manure offer a sustainable alternative to restore soil fertility and support plant growth. This study aimed to determine the effect of cow manure, trembesi green manure, and their interaction on the growth and yield of pakcoy. The research was conducted at the experimental field of the Faculty of Agriculture, Universitas Malikussaleh, from February to March 2026, using a two-factor Randomized Block Design with three replications, consisting of cow manure at three levels (0, 100, 150 g/polybag) and trembesi green manure at three levels (0, 50, 100 g/polybag), yielding nine treatment combinations and 108 plants. Observed variables included plant height, leaf number, leaf chlorophyll, leaf area, root length, total fresh weight, shoot fresh weight, root fresh weight, and *root shoot ratio*. Cow manure alone had no significant effect on any variable observed. Trembesi green manure alone significantly increased plant height, leaf number, chlorophyll content, leaf area, and fresh weight, with the best results at 100 g/polybag. A significant combination between cow manure and trembesi green manure was found for plant height, leaf area, root length, and root fresh weight, with the combination of 150 g/polybag cow manure and 100 g/polybag trembesi green manure giving the highest root fresh weight.

Keywords: dosage, leaf chlorophyll, organic, rain tree, *root shoot ratio*