

ABSTRACT

Pakcoy is a vegetable crop belonging to the Brassicaceae family and is widely consumed due to its nutritional value. However, its productivity remains relatively low because of suboptimal cultivation practices, low soil fertility, and inefficient fertilizer use. The application of sonic bloom technology and mycorrhizal biofertilizer is considered a potential strategy to improve plant growth and yield. The objective of this study was to determine the effects of sonic bloom application timing and mycorrhizal biofertilizer dosage on the growth and yield of pakcoy. The study employed a Randomized Complete Block Design arranged in a split-plot. The main plot factor was the treatment of sonic bloom technology cycled of 3W0 (without sonic bloom), W1 (07:00–08:00 a.m.), W2 (12:00–01:00 p.m.), and W3 (04:00–05:00 p.m.). The subplot factor was the dosage of mycorrhizal biofertilizer, consisting of M0 (0 g/polybag), M1 (10 g/polybag), M2 (20 g/polybag), and M3 (30 g/polybag). The results show that the application time of sonic bloom as a single treatment significantly affected nearly all observed variables. The best treatment was obtained with the W3 application time, namely between 4:00 p.m. and 5:00 p.m. (WIB). The application of mycorrhizal biofertilizer at different doses as a single treatment significantly affected nearly all observed variables. The best treatment was obtained with the M3 dose, namely 30 g per polybag. An interaction between sonic bloom application time and mycorrhizal biofertilizer dosage was observed only in the lower stomatal length at 21 days after planting.

Keywords: dosage, leaf stomata, treatment