

**APPLICATION OF VERMICOMPOST FERTILIZER AND
PHOTOSYNTHETIC BACTERIA ON THE GROWTH AND YIELD OF
KALE (*Brassica oleracea* var. *Acephala*)**

By: Sophia Mia Dinata
Supervised by: Heti Herastuti

ABSTRACT

Kale is a plant that has good prospects in Indonesia, but the production of this kale plant is not yet optimal. The aim of this research is to determine the composition between vermicompost fertilizer dosage and PSB concentration that is appropriate for the growth and yield of kale plants. The experimental method used a Complete Randomized Block Design (RAKL) with three replications. The first factor is the dose of vermicompost fertilizer, consisting of 3 levels, namely: 100 g/plant, 125 g/plant and 150 g/plant. The second factor is the dose of photosynthetic bacteria consisting of 3 levels, namely: 10 ml/L, 20 ml/L, and 30 ml/L. The data obtained was processed using analysis of variance. If there is a significant difference between treatments then proceed with the Duncan Multiple Range Test at a test level of 5%. The results of the study showed an interaction between the treatment of vermicompost fertilizer 150 g/plant and PSB 30 ml/L on stem length, fresh weight per plant, fresh root weight and economic weight. Vermicompost fertilizer dose of 150 g/plant gave the best results on root length parameters. A PSB concentration of 30 ml/L gave the best results at leaf number parameters o. PSB concentration of 30 ml/L gave the best results on stem diameter parameters.

Key words: Kale, *Vermicompost fertilizer*, *photosynthetic bacteria*.