

**GROWTH PERFORMANCE OF KAILAN (*Brassica oleracea* var.  
*alboglabra* L.) AS AFFECTED BY DIFFERENT RATES OF FISH  
AMINO ACID AS FOLIAR FERTILIZER**

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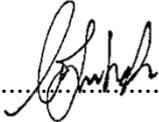
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## DECLARATION

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## ABSTRACT

### **GROWTH PERFORMANCE OF KAILAN (*Brassica oleracea* var. *alboglabra* L.) AS AFFECTED BY DIFFERENT RATES OF FISH AMINO ACID AS FOLIAR FERTILIZER**

Inorganic fertilizer applications are the most common practices in Malaysia due to the rapid growth of crops within short time. However, the usage of inorganic fertilizer for the vegetable crops is not recommended as it contribute to the health risk as human consume vegetables in daily life. Therefore, a field experiment was carried out to evaluate the effect of different rates of fish amino acid as foliar fertilizer on growth performance of Kailan (*Brassica oleracea* var. *alboglabra* L.). The experiment was set up in a complete randomized design (CRD) with four replications and five treatments. The different rates of Fish Amino Acid (FAA) as foliar fertilizer was prepared by fermenting 1 kg of fresh fish and 1 kg of molasses. Hence, the treatments served in this study were T1(Control) NPK Green, T2 (100 ml of FAA + 1 L of distilled water), T3 (200 ml of FAA + 1 L of distilled water), T4 (300 ml of FAA + 1 L of distilled water) and T5 (400 ml of FAA + 1 L of distilled water). The result revealed that the different rates of Fish Amino Acid (FAA) per treatment affected the plant height, number of branches and leaves, chlorophyll content, total leaf area, fresh weight and dry weight. Growth performance of *Brassica oleracea* var. *alboglabra* L., when treated with T4 (300 ml of FAA + 1 L of distilled water), showed significantly higher ( $p \leq 0.05$ ) in terms of plant height, leaves number, branches, total leaf area and plant biomass as compared to other treatments. As from this study, T4 (300 ml of FAA + 1 L of distilled water) was found to be the best and recommended treatment on Kailan (*Brassica oleracea* var. *alboglabra* L.). Fish Amino Acid (FAA) as organic fertilizer can be used as an effective replacement for inorganic foliar fertilizer.

**Keywords:** Kailan; Fish Amino Acid; growth; foliar fertilizer; organic farming

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