THE EFFECT OF GUANO FERTILIZER AND COCONUT WATER APPLICATION ON THE GROWTH AND YIELD OF KAILAN PLANT (*Brassica oleraceae* L.)

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ABSTRACK

Efforts to increase kailan production can be achieved through the use of guano organic fertilizer and coconut water as eco-friendly natural plant growth regulators (PGR). The research aims to determine the appropriate dosage of guano fertilizer and concentration of coconut water as natural PGR for the growth and yield of kailan plants. The research was conducted from August – September 2024 in Karangasem, Lorog, Tawangsari, Sukoharjo, Central Java. The field experiment was arranged using a factorial Completely Randomized Design (CRD) (3x3)+1 control. The first factor, 3 levels of guano fertilizer dosage, namely 5 tons/ha, 10 tons/ha, and 15 tons/ha. The second factor, 3 levels of coconut water concentration, namely 5%, 10%, and 15%. The control treatment used manure and urea. The observed parameters included plant height, number of leaves, stem diameter, leaf area, fresh plant weight, and economic weight. Data were analyzed using Analysis of Variance (ANOVA) at a test level of 5%, followed by orthogonal contrast and Duncan's Multiple Range Test (DMRT) at the 5%. The results showed that the combination of guano fertilizer and coconut water had a better effect compared to the control on the growth and yield of kailan plants. There was no interaction between guano fertilizer and coconut water treatmentst. The guano fertilizer at a dose of 10 tons/ha produced the best results in plant height, number of leaves, and fresh plant weight while different concentrations of coconut water had no significant effect.

Keywords: Kailan, Guano Fertilizer, Coconut Water