

# **APPLICATION OF AB MIX AND AZOLLA LIQUID BIOFERTILIZER IN THE CULTIVATION OF ROMAINE LETTUCE (*Lactuca sativa* L.) USED BOTTLE WICK HYDROPONICS**

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## **ABSTRACT**

*The use of AB Mix in hydroponics is costly, leading to the need for alternative nutrients. One option is liquid organic fertilizer (POC) from Azolla. This study aimed to find the best concentrations of AB Mix and POC Azolla for growing romaine lettuce. A field experiment was conducted using a Complete Randomized Design (CRD) with two factors. The first factor was the concentration of AB Mix at 0 mL/L, 4 mL/L, 8 mL/L, and 12 mL/L. The second factor was the concentration of POC Azolla at 5 mL/L, 10 mL/L, and 15 mL/L. Data were analyzed using Analysis of Variance (ANOVA) at 5% significance level, followed by Duncan's Multiple Range Test (DMRT). Results showed an interaction between AB Mix and POC concentrations on leaf height at 14 days after planting with the best combinations included AB Mix at 12 mL/L with POC Azolla at 5 mL/L, AB Mix at 12 mL/L with POC Azolla at 10 mL/L, and AB Mix at 12 mL/L with POC Azolla at 15 mL/L. The 12 mL/L AB Mix concentration showed highest results in plant height, fresh weight, leaf area, and root volume, while POC concentrations did not improve growth across all parameters.*

**Keywords:** *Lettuce Romaine, AB Mix, Liquid Organic Fertilizer*