

**THE EFFECT OF MICROBIAL SYNERGY ON THE VEGETATIVE
GROWTH OF SUGARCANE PLANTS (*Saccharum officinarum* L.)
IN KEBUN RAMBAN WETAN 1 PG PRADJEKAN
BONDOWOSO**

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ABSTRAK

*Sugarcane plant (*Saccharum officinarum* L.) is a sugar-producing plant that is one of the producers of carbohydrates. This plant is needed so that its demand continues to increase in line with the increase in population. The purpose of this study was to determine the effect of microbial synergy (blotong fertilizer, sugarcane root bacteria, soil exploration bacteria and amino acids) on the vegetative growth of sugarcane plants in the Ramban Wetan 1 Bondowoso Garden. This study was conducted using the Independent Sample T-test method which consisted of 2 different treatments, namely A0 treatment (ZA = 7 kw / ha, SP36 = 2 kw / ha, KCL = 2 kw / ha) and A1 treatment (microbial synergy: blotong fertilizer 30 tons / ha, sugarcane root bacteria = 36 l / ha, soil exploration bacteria = 36 l / ha, amino acids = 36 l / ha + inorganic fertilizer with a dose of 50%). The A0 and A1 treatments each consisted of 50 samples of sugarcane plants. The results of this study showed that A0 and A1 treatment had a very real effect on the number of saplings, stem height and diameter of sugarcane stalks. While the chlorophyll content of sugarcane leaves A1 treatment is higher than A0 treatment. The highest number of leaves in A1 treatment (11.40 strands), the highest number of saplings in A1 treatment (3 saplings), the best stem height in A1 treatment (154.46 cm) and the best stem diameter in treatment (26.90 mm). While the best chlorophyll content in A1 treatment (2,281 mg / gr FW)*

Keywords: *sugarcane, blotong fertilizer, sugarcane root bacteria, soil exploration bacteria, amino acids.*