

**INFLUENCE OF BLOTONG FERTILIZER, SUGAR CANE ROOT BACTERIA, LAND
EXPLORATION BACTERIA, AND AMINO ACIDS AS
SUBSTITUTES FOR INORGANIC FERTILIZERS ON
THE PRODUCTIVITY OF SUGAR CANE PLANTS
(*Saccharum officinarum* L.)**

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ABSTRACT

*The use of suitable varieties and the provision of appropriate nutrients are expected to be alternatives to increase sugar cane production. Sugar cane root bacteria and sugar cane field exploration bacteria are beneficial microbes that can improve soil fertility and minimize environmental damage. This study was conducted from April 2024 to July 2024 in Bondoyudo hamlet, Alas Malang village, Lumajang. This research used a quantitative method, T-test, and observation, which involved calculating harvest yields, brix value, productivity, and the organic carbon content of sugar cane (*Saccharum Officinarum* L.) of the bululawang variety. Observations were conducted on experimental plots with 40 plant samples for each treatment. The results of this study showed the highest productivity in treatment P5 with an inorganic fertilizer dosage of 30% (300 kg ZA + 67 kg SP 36 + 100 kg KCl), BC fertilizer (360 liters), Amino acid (80 liters), and Blotong fertilizer of 40 tons with a productivity value reaching 162.6 tons per hectare. The average highest brix value was in treatment P1 at 12 BST age with a brix value of 20.36%. Additionally, the content of materials from the decomposition results of treatments P1, P2, P3, and P4 increased by 3.88%.*

Keywords: Sugar cane, Production, Blotong, Amino acid, Sugar cane root bacteria, Sugar cane land exploration bacteria.