UTILIZATION OF BLOTONG FERTILIZER, SUGAR CANE ROOT BACTERIA, SUGAR CANE LAND EXPLORATION BACTERIA AND AMINO ACIDS AS INORGANIC FERTILIZER SUBSTITUTIONS FOR VEGETATIVE GROWTH OF SUGAR CANE PLANTS (*Saccharum officinarum* L.)

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ABSTRACT

The purpose of this study was to determine the effect of blotong fertilizer, sugarcane root bacteria, sugarcane land exploration bacteria and amino acids as a substitute for inorganic fertilizers on the vegetative growth of sugarcane (Saccharum officinarum L.) This study was conducted from May 2023 to June 2024 at PG. Jatiroto and Alas Malang village, Lumajang Regency. This study used the T test consisting of 40 plant samples in each treatment consisting of 3 Plots. The treatments include Plot 0: Dose of inorganic fertilizer according to SOP (900 kg Za + 200 kg SP36 + 200 kg KCl) (Control), Plot 1: 50% inorganic fertilizer (450 kg Za + 100 kg SP36 + 100 kg KCl), BC fertilizer (240 liters), Amino Acids (40 liters), 20 tons of Blotong Fertilizer. Plot 2: 50% inorganic fertilizer (450 kg Za + 100 kg SP36 + 100 kg KCl), BC Fertilizer (360 liters), Amino Acid (80 liters), 20 tons of Blotong Fertilizer. The results of the study showed that the treatment of P0 treatment against P1 had no significant effect on the parameters of the number of tillers at the ages of 1, 2, and 3 BST and stem diameter at the age of 9 BST. And affected the height of plants 6 and 9 BST and stem diameter at the age of 6 BST. While P2 did not significantly affect the parameters of the number of tillers at the age of 2 BST, plant height 6 and 9 BST and stem diameter 9 BST. And affected the number of tillers at the ages of 1 and 3 BST and stem diameter 6 BST. The growth of sugarcane treatments P1 and P2 balanced the growth of sugarcane P0.

Keywords: amino acids, sugarcane root bacteria, land bacteria, blotong, sugarcane plants