

THE EFFECT OF ORGANIC BLOTONG FERTILIZER, PGPR (*Plant Growth Promoting Rhizobacteria*), AND AMINO ACID ON THE GROWTH OF SUGARCANE (*Saccharum officinarum* L.) IN MRAWAN I PG PRADJEKAN PTPN XI PLANTATION

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ABSTRACT

*One of the problems faced by the Indonesian sugar industry is low sugar cane productivity caused by non-ideal cultivation techniques and low soil fertility. To anticipate this, research was carried out by utilizing the nutritional, microbial and nutrient contents in organic filter cake fertilizer, PGPR and amino acids by applying them to sugar cane plants. The aim of this research was to determine the effect of applying filter cake organic fertilizer, PGPR (*Plant Growth Promoting Rhizobacteria*), and amino acids on the growth of sugar cane (*Saccharum officinarum* L.). The research method used was to collect data for analysis using the T test for both treatments with 50 samples each. The treatment plots observed were the growth of sugar cane plants planted on land with and without microbial packages (organic filter cake fertilizer, PGPR, amino acids). The results of the research were that the application of organic filter cake fertilizer, PGPR, and amino acids had a very significant effect on stem diameter (36 MSA) with an average value of 3.34 cm, brix (36 MSA) with a value of 19.95%, and yield (36 MSA).) which reached a value of 8.41%.*

Key words: *Sugar Cane, Filter Cake Organic Fertilizer, PGPR (*Plant Growth Promoting Rhizobacteria*), Amino Acids*