APPLICATION OF BASISCROP TECHNOLOGY PACKAGE ON THE VEGETATIVE GROWTH OF SUGARCANE (Saccharum officinarum L.)

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ABSTRACT

This study aims to evaluate the effect of applying Basiscrop technology on the vegetative growth of sugarcane (*Saccharum officinarum L.*). Basiscrop technology is an innovation designed to enhance sugarcane productivity through the synergy of microorganisms, including sugarcane root bacteria, soil exploration bacteria, blotong fertilizer, and amino acids. This technology aims to improve soil quality, increase nutrient availability, and optimize plant growth.The research was conducted in Mojo Village, Padang District, Lumajang Regency, over ten months, from October 2023 to July 2024. An experimental method was employed by comparing two treatments: plots treated with Basiscrop technology and blotong fertilizer, and control plots treated with chemical fertilizers. Observed variables included plant height, tiller count, stem diameter, and root volume. Data from observations were analyzed using a T-test to determine the significance of differences between treatments.The results showed that the application of Basiscrop technology significantly affected all vegetative growth variables compared to chemical fertilizer treatment. Plants in the Basiscrop-treated plots exhibited an increase in stem height by 6–10%, tiller count by 8–12%, stem diameter by 15–20%, and root volume by 10–15%. Basiscrop technology also proved effective in enhancing soil microbial activity and improving the organic carbon content in the research area.In conclusion, Basiscrop technology is an effective and environmentally friendly alternative for increasing sugarcane production while supporting agricultural sustainability. This study contributes significantly to the development of innovative and efficient sugarcane cultivation methods and provides practical guidance for farmers to improve both the quality and quantity of their yields.

Keywords: Basiscrop Technology, blotong fertilizer, sugarcane root bacteria, vegetative growth, Saccharum officinarum L.