Effect of Concentration of Fungicide and Nano Silica (Si) Fertilizer on the Growth of Sugarcane (*Saccharum Officinarum* L.) Variety VMC 86-550 Origin Bud Set

Supervised by Dr. Ir. Nanang Dwi Wahyono, M.M.

Azalia Ma'rufatul Aini

Study Program Plantation Cultivation Study
Program Department Agricultural Production Departmen

ABSTRACT

In addition to meeting the demand for sugar, sugar cane can also be used for the pharmaceutical industry, food industry, and other industries that use materials from the sugar industry. The large number of products that use sugar cane as an industrial raw material has resulted in the demand for sugarcane commodities also continuing to increase. This study aims to determine the effect of concentrations of fungicide and nano silica (Si) fertilizer on the growth of sugarcane shoots (Saccharum ofpacinarum L.) VMC 86-550 variety. The research was conducted from October to February 2023 in the Jember State Polytechnic research area. which is located on Jl. Mastrip, Krajan Timur, Kec. Sumbersari, Jember Regency, East Java. The method used was factorial randomized block design with 2 factors and 3 replications. The first factor was the fungicide flutriafol which consisted of 3 levels, namely F0 (control), F1 (1.5 ml/L), F2 (2 ml/L). The second factor was nano silica fertilizer which consisted of 3 levels, namely P0 (control), P1 (150 gr/L), P2 (300 gr/L). The results showed that the application of flutriafol fungicide and nano silica fertilizer had no significant effect on the number of tillers and stem diameter, the results were significantly different on the parameters of plant height and number of leaves.

***Keywords**: Sugarcane, Flutriafol Fungicide, Nano Silica Fertilizer, Bud Set*