COMPARATIVE STUDY ON THE GROWTH AND YIELD PERFORMANCE OF TOMATO *(Solanum lycopersicum var.* Diamante max) PLANT FERTILIZED WITH ORGANIC AND INORGANIC FERTILIZER

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ACCEPTANCE SHEET

This undergraduate thesis entitled **"COMPARATIVE STUDY ON THE GROWTH AND YIELD PERFORMANCE OF TOMATO (*Solanum Lycopersicum var.* Diamante max) PLANT FERTILIZED WITH ORGANIC AND INORGANIC FERTILIZER,"** prepared and submitted by **JONAS O. CAIL**, in partial fulfillment of the requirements for the degree of **BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE (ENVIRONMENTAL BIOLOGY)**, is hereby accepted:

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BIOGRAPHICAL SKETCH

The researcher, Jonas Otacan Cail, was born on October 15, 1996 in Muritula, San Luis Agusan Del Sur and now current living at Christ of the Worker Chaplaincy, CLSU, Science City of Muñoz, Nueva Ecija. He is the seventh child of Luzviminda O. Cail and Dorotheo B. Cail.

He took his primary education at Doña Maxima Elementary School and his secondary schooling at San Luis Lumad Community High Shool where he was a consistent scholar student of the Missionaries of the Assumption. Jonas may not be academically inclined but he is also good in other fields such as music and sports. Rev. Fr. Tito Maratas sponsored has schooling in 2015, when he was admitted at Central Luzon State University and took up Bachelor of Science in Environmental Sciences major in Biology.

He grew up serving God by singing with his harmonic voice in several catholic churches. To date, he still continues to serve God with a scholarship grant privilege.

He is also a member of various organizations namely; the Singles for Christ (CLSU Chapter), YOUCAT and Campus Youth Ministry (CYM).

Finally, he is also a basketball player of the university.

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ABSTRACT

CAIL, JONAS O., Department of Environmental Science, College of Arts and Sciences, Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines, **June 2019, COMPARATIVE STUDY ON GROWTH AND YIELD PERFORMANCE OF TOMATO (*Solanum lycopersicum var.* Diamante max) PLANT FERTILIZED WITH ORGANIC AND INORGANIC FERTILIZER**

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In the growth of tomato, fertilizers are needed to serve as supplement for its growth and development. Chemical fertilizers are made from any inorganic material of synthetic origin. Farmers may use either chemical or organic fertilizers depending on their preference. This study aimed to compare the growth and yield performance of tomato fertilized by inorganic and organic fertilizers. It also determined their agronomic characteristics, as relate to environmental parameter.

The study used tomato for comparison because it grows easily, less expensive, adapted to well-drained soils that have good air and water infiltration rates and the availability of its seedlings in the market. Moreover, tomato is the most popular home garden and the third most consumed crop in the world.

In the current study, tomato seedlings were subjected to two fertilizers treatment with three replicates. Treatment I utilized inorganic fertilizer; while treatment II an organic fertilizer was applied, Growth related parameters namely; the plant height, size of fruits, weight of fruits, and number of marketable and non-marketable fruits, growth and yield performance were compared using t-test.

Results disclosed that in terms of yield, plant height, size of fruits, weight of fruits, and number of marketable fruits, Treatment I (inorganic) has a better result compared to Treatment II (organic). The study revealed that treatment II resulted better to a lesser number of days to flower, days to fruit set and roots system.

High temperature, low humidity, pH, and precipitation can affect the growth of tomato because it produce low yield of crops.

Keywords: Organic fertilizer; Inorganic fertilizer; Tomato, Diamante max

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