MADRE DE CACAO (*Gliricidia sepium*) LEAVES AS SOIL AMENDMENT FOR BAMBOO (*Bambusa blumeana Schult. & Schult. f.*) PROPAGATION

A Research Paper
Presented to the Faculty of the
Regional Science High School for Region I
Bangar, La Union

In partial fulfillment of the
requirements in the subject
Research Project

By

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June 2023

INDORSEMENT

This research entitled, **Madre De Cacao (*Gliricidia sepium*) Leaves as Soil Amendment for Bamboo (*Bambusa blumeana Schult. & Schult. f.*) Propagation**, prepared and submitted by **Yuri L. Kang, Catherine Lois O. Garcia, and Gwyneth U. Ramos** in partial fulfillment of the requirements for the subject, **Research Project**, has been examined and is recommended for Oral Examination.

JEROME MARQUEZ
Research Adviser

This is to certify that the research entitled, **Madre De Cacao (*Gliricidia sepium*) Leaves as Soil Amendment for Bamboo (*Bambusa blumeana Schult. & Schult. f.*) Propagation**, prepared and submitted by **Yuri L. Kang, Catherine Lois O. Garcia, and Gwyneth U. Ramos** in partial fulfillment of the requirements for the subject, **Research Project**, has been examined and is recommended for Oral Examination.

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DEDICATION

The researchers would like to dedicate this study to the Lord God Almighty, for giving them continued wisdom and inner peace. Lord, may it be blessed by Your virtue and become a keepsake of Your glory.

The researchers also dedicate this study to their parents, for their unwavering love, guidance, support, and encouragement; for the hard work and sacrifices that made the researchers able to sustain their needs toward the accomplishment of the study.

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- ***The Researchers***

RESEARCH ABSTRACT

Title:	MADRE DE CACAO (*Gliricidia sepium*) AS SOIL AMENDMENT FOR BAMBOO (*Bambusa blumeana Schult. & Schult. f.*) PROPAGATION
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Abstract: Bamboo holds a role in global development and sustainability. In the environment, it helps balance the atmosphere with its ability to reduce carbon dioxide and produce oxygen in greater amounts than other plants. On the other hand, it is an important non-wood fiber raw material for manufacturing and despite the presence of modern materials, the quantity of outputs from bamboo materials still increases. Contrastingly, the available area of land for bamboo planting continues to decrease due to rapid population growth, agricultural land expansion, and large-scale deforestation, and hence, the insufficient amount of raw materials being produced. This study aimed to assess the capability of Madre de Cacao leaves as a soil amendment for faster bamboo propagation. It maximized two setups, and the soil with Madre de Cacao leaves as the amendment was compared to one without soil amendment. It was conducted from October 2022 to June 2023 in Sengngat, Sudipen, La Union. The propagation lasted two months and data on the number of leaves, length of branches, number of roots, and the average length of roots of bamboo were subjected to Independent Samples *t-test*. The

results of the analyses indicated a significant difference between the treatments in all parameters measured, whereas the phosphorus and potassium content of Madre de Cacao served a significant contribution in amending the soil. It was concluded that Madre de Cacao leaves are considerable soil amendments for faster bamboo propagation. The study suggests pursuance on the development of information on its ability as a soil amendment.

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