YIELD OF WHITE CORN (*Zea mays* L.) SUPPLEMENTED WITH DIFFERENT RATES OF RICE HULL BIOCHAR DURING WET SEASON

LIEZEL CARIÑO PERALTA

An undergraduate thesis manuscript submitted to the faculty of the Department of Crop Science, College of Agriculture, Central Luzon State University, in partial fulfillment of the requirements for the degree

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BIOGRAPHICAL SKETCH

The author was born on September 01, 1996 in Abar 2nd, San Jose City, Nueva Ecija. She is second among the children of a loving couple, Mr. Sonny Garcia Peralta and Mrs. Leslie Cariño Peralta. She is a very hard working woman who helps her mother in the market to sell vegetables any time that she is free or every weekend. And every summer of April to May, she takes summer jobs to earn money to be used to the following semester of her study.

She graduated at Dep-Ed CLSU Elementary Laboratory School during her elementary education and finished her secondary education at Muñoz National High School (MNHS) and received an award of being 4th honorable mention during her graduation. She was a proud scholar of Vicente B. Bello Scholarship Program (VBBSP) and CHED-Tulong Dunong Scholarship Program since she entered in Central Luzon State University (CLSU) and had a consistent grade of not exceeding to the maintaining grade of her scholarship 'til she graduated.

She took up Bachelor of Science in Agriculture major in Crop Science specialized in Agronomy due to her dream to give honor to her parents which became her inspiration other than to the Almighty Father to finish her studies. She is not fond of joining in any of the organizations in and out of the college because she focuses more on her academics. But when she was on her second year in college, she became a member of the organization of their scholarship named Society for the Advancement of Volunteerism and Excellence-Nueva Ecija (SAVE-NE) where CHED scholars were all required to be a member of this organization.

When your heart speaks to you, you will never go wrong because it never lies. And it will push you forward and excel because at a certain point, your dream becomes like oxygen. You need it to breathe, to grow and to live. PAY IT FORWARD!

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YIELD OF WHITE CORN (*Zea mays* L.) SUPPLEMENTED WITH DIFFERENT RATES OF RICE HULL BIOCHAR DURING WET SEASON[1/]

by

LIEZEL C. PERALTA

ABSTRACT

The study was conducted to determine the growth response of white corn and the rate of biochar that can provide the highest yield and evaluate the most economical combination of treatments. The treatments evaluated were T1 (Inorganic Fertilizer); T2 (RHB); T3 (IF + 1.33 t ha^{-1} of RHB); T4 (IF + 2.67 t ha^{-1} of RHB); T5 (IF and RHB); T6 (IF + 5.33 t ha^{-1} of RHB); and T7 (IF+ 6.67 t ha^{-1} of RHB).

The agronomic and yield performance of white corn in terms of number of days to tasseling, silking, maturity, plant height, ear length and diameter, number of kernel per ear and the yield were significantly increased by the supplementation of the lowest amount of biochar (1.33 t ha^{-1}) to IF which had the best effect of all the treatments. This treatment also gave the highest yield of about 3.7 t ha^{-1} and highest net income. On the other hand, the lowest net income (negative) and yield was obtained on the treatment that was purely applied with RHB (4 t ha^{-1}) which was 0.14 t ha^{-1}.

This study revealed a promising result of biochar in increasing yield and net income of corn production particularly supplementation of rice hull biochar (RHB) lower than the recommended rate (1.33 t ha^{-1}). Hence, this amount of biochar was recommended as supplement to inorganic fertilizer to improve corn productivity during wet season.

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