SOIL FERTILITY EVALUATION OF RICE PRODUCTION AREAS UNDER CROP MODULE 1, UBAP, CLSU USING THE MINUS-ONE ELEMENT TECHNIQUE

CHRISTIAN ACOSTA MERCADO

An undergraduate thesis manuscript presented to the faculty of the Department of Soil Science, College of Agriculture, Central Luzon State University in partial fulfilment of the requirements for the degree

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BIOGRAPHICAL SKETCH

The author was born on the 21st day of September, 1996 at Brgy. Gabaldon Science City of Muñoz, Nueva Ecija. He is the only son among the three siblings of Mr. Monching Aquino Mercado and Mrs. Cecilia Acosta Mercado.

He finished his elementary education at Gabaldon Elementary School with honors and took his secondary education at Munoz National High School and got an athlete of the year award. When he entered college, he became a varsity player of badminton and a proud scholar of CHED-Tulong Dunong Scholarship Program in Central Luzon State University.

He took up Bachelor of Science in Agriculture major in Soil Science due to his dreams to give honor to his parents and family which became his inspiration other than the Almighty God to finish his studies and achieve more in life. He also became a member and an officer of their organization Soil Science Society.

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SOIL FERTILITY EVALUATION OF RICE PRODUCTION AREAS UNDER CROP MODULE 1, UBAP, CLSU USING THE MINUS-ONE ELEMENT TECHNIQUE[1/]

ABSTRACT

A study was conducted to evaluate the soil fertility status of the rice production areas under Crop Module 1, UBAP, CLSU using minus-one element technique. The study was conducted at the College of Agriculture, Central Luzon State University.

Soil samples from different areas used in this study were collected, air-dried and pulverized. The soil samples were analysed for the pH, nitrogen, phosphorus and potassium using STK. Results of the STK analysis showed that nitrogen were low in all areas while phosphorus is at medium level at LMU 7 (Sawmill A). On the other hand, potassium was found to be deficient at LMU 5 (PAGASA) and LMU 6 (Riles). All areas under Crop Module 1 were found to be acidic.

For the MOET experiment, two seedlings of twenty day-old NSIC Rc 222 were transplanted per container. The plants were grown for 45 days after transplanting. Starting on the 10th day after transplanting, the growth of the rice plants was observed and at 45 days, the growth of the plants in each pot was compared with that in the complete treatment.

Results showed that the rice production areas of LMU 1 (PNR) and LMU 7 (Sawmill A) were deficient in nitrogen, phosphorus, potassium and sulfur. On the other hand, rice production areas in LMU 2 (marketing), LMU 6 (riles), LMU 5 (PAGASA) and LMU 3 (waiting shed) were deficient in nitrogen, phosphorus and potassium. Results also revealed deficiencies in copper and zinc in LMU 4 (nursery) and LMU 8 (Sawmill B).

Specific fertilizer recommendations for the different LMU areas based on the nutrient deficiencies were also formulated.

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