USE OF VERMICAST IN THE PRODUCTION OF *Chlorella sorokiniana*

by

MARICAR VILLANUEVA CARBONEL

An Undergraduate Thesis presented to the faculty of the College of Fisheries in partial fulfillment of the requirements for the degree of

BACHELOR OF SCIENCE IN FISHERIES

Department of Aquatic Resources, Ecology and Management
COLLEGE OF FISHERIES
CENTRAL LUZON STATE UNIVERSITY
Science City of Muñoz, Nueva Ecija
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MARICAR VILLANUEVA CARBONEL

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ABSTRACT

Chlorella is a potential food source because it is high in protein and other essential nutrients. It is also abundant in calories and vitamins. The objective of the study was to evaluate the *Chlorella* production using vermicast as organic fertilizer. Specifically, this aim to determine the ideal dosage of vermicast in the production of *Chlorella* under the laboratory condition.

The study had six treatments, which were replicated thrice, namely: T1- 1 liter of stock solution and 10 ml inoculant of *C. sorokiniana*, T2- 2g of vermicast, T3- 4g of vermicast, T4- 6g of vermicast, T5- 8g of vermicast, and T6- 10g of vermicast, 1 liter of stock solution and 10 mL inoculant of *C. sorokiniana*. The study was conducted in wet laboratory using 18 wine bottles.

Analysis revealed that T1 (control) was significantly different($P<0.05$) among all treatment and this treatment obtained the lowest density count. However, T2 were significantly different ($P<0.05$) among all treatment except in T3 and this treatment with 2g of vermicast had a highest total density count.

This study was limited on the production of *Chlorella* using vermicast under laboratory condition. It is recommended to use lower dosage of vermicast and evaluate the distance of light source to the culture vessel.

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