GROWTH OF RED TILAPIA (*Oreochromis* sp.) AND LETTUCE (*Lactuca sativa*) IN AQUAPONICS SYSTEM USING TWO PLANT GROWING SYSTEMS

By

APRIL ANDAYA DORING

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
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APPROVED:

JOSE S. ABUCAY — 02-05-18
Adviser — Date

KARL MARX A. QUIAZON — 02-05-18
Critic — Date

NOTED:

REMEDIOS B. BOLIVAR — 02-05-18
Department Chair — Date

RECORDED:

REMEDIOS B. BOLIVAR
College Research Coordinator
02-05-18
Date

ACCEPTED:

RAVELINA R. VELASCO
Acting Dean
02-05-18
Date

BIOGRAPHICAL DATA

Personal Data

Name	April A. Doring
Birthday	April 13, 1997
Birthplace	St. Joseph Hospital, Delfin Albano, Isabela
Address	Capitol, Delfin Albano, Isabela
Parents	Manuel A. Doring and Luzviminda A. Doring

Educational Attainment

Elementary	Capitol Elementary School Capitol, Delfin Albano, Isabela
Secondary	Magsaysay Memorial High School Villaluz, Delfin Albano, Isabela
Tertiary	Central Luzon State University Science City of Muñoz, Nueva Ecija

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ABSTRACT

Aquaponics is the combined culture of fish and hydroponic plants inrecirculating systems. Two experiments were conducted with the objective of evaluating the growth and yield of red tilapia and lettucein aquaponics system. The experiments were carried out using 500 liters capacityfishtankwith 400 liter of water volume. Fish starter feeds were given to fish three times daily from 1-45 days. Result showed higher length gain and weight gain in treatment compared to treatment II with values 2.56 (±0.12) cm, 12.67 (±0.33) g, 2.08 (±0.05) cm and 9.49 (±.47) g, respectively. In the present study, survival rate was observed to be higher in treatment II compared to treatment I with values, 96.67 (±3.33) and 85.83 (±7.95), respectively. Statistically, significant difference was observed in both treatments in terms of length gain and weight gain, while there is no significant difference in terms of survival rate. Growth performance of lettuce was also evaluated in the two growing systems. It was found out that treatment has higher length and weight gain compared to treatment I with values 14.63 (±2.78) cm, 0.82 (±.87), 7.44 (±.75) cm and .35 (±.06) g, respectively. However, statistical analysis showed that there isno significant difference was observed in both treatments in terms of length gain and weight gain of lettuce.

The study suggested that both treatments are suitable growing systems with the improvement for better production.

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