EFFECT OF DIFFERENT SEX RATIOS ON THE REPRODUCTIVE CAPACITY OF NILE TILAPIA (*Oreochromis niloticus*) BREEDERS REARED IN HAPA-IN-POND

By

JANESSA RAMIREZ TALANIA

An undergraduate Thesis presented to the faculty of the College of Fisheries,
Central Luzon State University 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
Philippines

2017

CF Thesis Form No. 8

COLLEGE F FISHERIES
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APPROVED:

RAVELINA R. VELASCO
Adviser
09-25-17
Date

KARL MARX A. QUIAZON
Critic
09-25-17
Date

NOTED:

REMEDIOS B. BOLIVAR
Department Chair
09-25-17
Date

RECORDED:

REMEDIOS B. BOLIVAR
College Research Coordinator

Date

ACCEPTED:

RAVELINA R. VELASCO
Dean

Date

BIOGRAPHICAL DATA

PERSONAL DATA

Name	Janessa Ramirez Talania
Birthday	April 22, 1997
Birth Place	Cabanatuan City, Nueva Ecija
Address	Bakal II, Talavera, Nueva Ecija
Parents	Reynaldo P. Talania and Gina R. Talania

EDUCATIONAL ATTAINMENT

Elementary	Bakal II, Elementary School Talavera, Nueva Ecija
Secondary	Muñoz National High School Science City of Muñoz, Nueva Ecija
Tertiary	Central Luzon State University Science City of Muñoz, Nueva Ecija

ACKNOWLEDGEMENTS

The author is sincerely grateful to the following people who have contributed in the completion of this paper:

All the praises are for Almighty God who provided the author strength, ability and potential to complete this thesis, for the good health, and all the protection throughout the conduct of the thesis, and for all the wisdom and knowledge to complete this paper.

To her parents, Mr. Reynaldo P. Talania and Mrs. Gina R. Talania and to his brother, Mr. Joshua R. Talania for giving the author love, encouragement, sacrifices, financial support, and assistance to all her needs. For helping the author through prayer that she can do it. Without them, it was impossible for her to complete this paper.

To her adviser, Dr. Ravelina R. Velasco, for understanding, time, patience, suggestions, and editing her paper, and helping her to know the things that she must do. The author is very thankful for her full support until the end of this paper.

To her critic, Dr. Karl Marx A. Quiazon, for his valuable advice and suggestions, and for patiently editing this paper and giving guidance to ameliorate this paper acceptable.

To the College Research Coordinator, Dr. Remedios B. Bolivar, for her comments, effort and knowledge for the betterment of the paper.

To all of her mentors, Dr. Emmanuel M. Vera Cruz, Dr. Jose S. Abucay, Prof. Rodora M. Bartolome, Dr. Apolinario V. Yambot, Prof. Janet O. Saturno, Ms. Claire Samantha T. Juanico, and Ms. Rea Mae C. Templonuevo for sharing their knowledge and wisdom to the author in her four years of study in the College of Fisheries.

To the workers of the $GIFT_{FF}$ Foundation facility, especially to Mr. Joseph Cruz, Mr. Julius Sabio and Mr. Ever Dela Cruz for their kindness, assistance and for helping the author in conducting her thesis. For Mrs. Tess C. Gonzales and Mr. Mar Danting of $GIFT_{FF}$, for providing the fish, conditioning hapa, feeds and digital weighing scale that the author used.

To the Supervising Aquaculturist, Mr. Ruben A. Reyes for supporting all her needs especially for the materials and Mr. Roniño del Pilar for the statistical analysis.

To Mr. Ruel Gabales, for helping the author to prepare the breeding hapa nets used in her thesis.

To her friends and classmates, Ms. Camille Cruz, Ms. Jemimah Ann Torrado, Ms. Grichelle Duque, Ms. Maricar Carbonel, Ms. Queenie Baysa, Ms. Xanrine Gomez, Ms. Nica Victoria Macabale, Ms. Jermaine Margate, Ms. Diana Mae Abaya, Ms. Angela Buenaventura, Mr. Albert Arcos and Ms. Jenica Bumanlag for the sad and cheerful days that they shared.

"I will instruct you and teach you in the way you should go;

I will guide you with my eye"

- Psalm 32:8

JANESSA R. TALANIA

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ABSTRACT

Fish farmers in the grow-out sector often face low fry production that could result to low profit and lack of sufficient knowledge on the best practice of brood stock production in hapa-in-pond.

The objective of the study was to determine the effect of using different sex ratios (male: female) on the reproductive capacity of Nile tilapia. The study had three treatments which were replicated thrice, namely: T1 (1:1), T2 (1:2) and T3 (1:3). Hapa-in-pond was used in conditioning the fish.

The study revealed that the tilapia fry production in T3 (1M:3F) had a highest survival rate, spawning rate, total number of fry produced, average fry produced, average number of fry produced/g body weight of breeders compared to other treatments. Despite these differences, analysis of variance of the three treatments did not show any significant differences ($P>0.05$).

The low production of fry can be attributed to unsuccessful spawning and possibly attributed to the stage of maturity of the female breeders chosen during the pairing stage. Furthermore, the males were larger than the female that may have caused aggression behavior.

This study recommends to investigate the timing of collection of eggs and fry in order to monitor the spawning success, hatchability and survival rate of fry of the fish at different sex ratios.

[1/]Undergraduate Thesis presented in partial fulfilment of the requirements for graduation with the degree of Bachelor of Science in Fisheries. Prepared at the Department of Aquatic Resources, Ecology and Management College of Fisheries, Central Luzon State University under the supervision of Dr. Ravelina R. Velasco.

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