

**FIELD PRACTICE REPORT ON METHODS OF GIANT CLAM (*Tridacna spp.*) HATCHERY AT THE BUREAU OF FISHERIES AND AQUATIC RESOURCES - GUIUAN MARINE FISHERIES DEVELOPMENT CENTER GUIUAN, EASTERN SAMAR**

by

**JEFFREY ANUTA MANANSALA**

**Department of Aquaculture  
COLLEGE OF FISHERIES  
CENTRAL LUZON STATE UNIVERSITY  
Science City of Muñoz, Nueva Ecija  
Philippines**

2017

**FIELD PRACTICE REPORT ON METHODS OF GIANT CLAM (*Tridacna spp.*) HATCHERY AT THE BUREAU OF FISHERIES AND AQUATIC RESOURCES - GUIUAN MARINE FISHERIES DEVELOPMENT CENTER GUIUAN, EASTERN SAMAR**

by

**JEFFREY ANUTA MANANSALA**


**Undergraduate Field Practice Report presented to the faculty of College of Fisheries, Central Luzon State University in partial fulfilment of requirements for the degree**

of


**BACHELOR OF SCIENCE IN FISHERIES**

Approved:

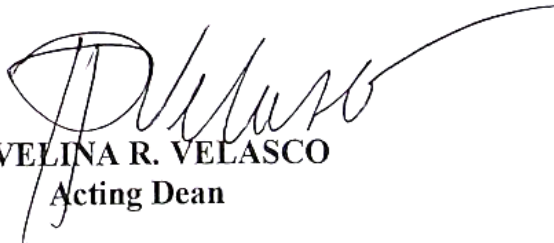
  
**APOLINARIO V. YAMBOT**  
Adviser

  
**CLAIRE SAMANTHA T. JUANICO**  
Critic

  
**KARL MARX A. QUIAZON**  
Department Chairperson

  
**CLAIRE SAMANTHA T. JUANICO**  
Field Practice Coordinator

Accepted:

  
**RAVELINA R. VELASCO**  
Acting Dean

**Department of Aquaculture  
COLLEGE OF FISHERIES  
Central Luzon State University  
Science City of Muñoz, Nueva Ecija  
Philippines**

2017

## BIOGRAPHICAL DATA



### Personal Data

Name	Jeffrey A. Manansala
Birthday	September 5, 1986
Birth Place	Malolos, Bulacan
Address	P7 Frances Bukid Calumpit, Bulacan
Parents	Caridad A. Manansala

### Educational Attainment

Elementary	Santisima Trinidad Elementary School Santisima Trinidad, City of Malolos, Bulacan
Secondary	Frances National High School Frances Bukid Calumpit, Bulacan
Tertiary	Central Luzon State University Science City of Muñoz, Nueva Ecija

## ACKNOWLEDGMENTS

The author would like to express his sincere appreciation to all individuals who helped the trainee in accomplishing this report:

To his adviser, Dr. Apolinario V. Yambot, for his enthusiastic guidance and advice throughout this report;

To his critic and Field Practice Coordinator, Ms. Claire Samantha T. Juanico, for her thorough review and critical comments;

To the BFAR Guian Station especially to the Giant Clam Hatchery; Ma'am Candi and Kuya Rusty, for their assistance and for sharing their knowledge during the field practice;

To his bestfriend, Mr. Paulo R. Cruz, for his everlasting support and trust, especially in his studies;

To his beloved girlfriend, Ma. Reinalyn V. Tercias, who worked as hard as him on this report; for her constant love and faith in him through all those hard times together;

To his mother, Mrs. Caridad A. Manansala, for her love, care and untiring support in providing all his needs during the field practice.

Finally, to Almighty God, for spiritual guidance, hope, wisdom and patience that He constantly endowed upon him so he could successfully complete this report.

**JEFFREY ANUTA MANANSALA**

## TABLE OF CONTENTS

	<u>Page</u>
<b>LIST OF APPENDIX TABLES</b>	vi
<b>LIST OF FIGURES</b>	vii
<b>EXECUTIVE SUMMARY</b>	viii
<b>BACKGROUND OF THE PLACE OF THE FIELD PRACTICE</b>	1
Nature of the Field Practice	1
Location and Description of the farm	1
Organization and Management of the Farm	2
Cultured Species	3
Biology of Giant Clams	5
Reproduction	6
Feeding	6
Distribution	6
<b>ACTIVITIES UNDERTAKEN</b>	8
Broodstock Collection and Management	8
Induced Spawning	9
Natural Food Culture	12
Feeding	13
Larval Rearing and Water Management	14
<b>OTHER ACTIVITIES</b>	15
Re-seeding of Giant Clams	15
Induced Spawning of Sea Cucumber	16
Grafting of Pearl Oyster	17
<b>STRENGTHS AND WEAKNESSES OF THE FARM</b>	19
Strength of the Giant Clam Hatchery	19
Weaknesses of the Giant Clam Hatchery	20
<b>REFERENCES</b>	21
<b>APPENDICES</b>	22

## LIST OF APPENDIX TABLES

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
1	List of Daily Activities during the OJT	23
2	Number of Broodstocks Managed by the Hatchery	25

## LIST OF FIGURES

<u>Figure No.</u>	<u>Title</u>	<u>Page</u>
1	BFAR-GMFDC station satellite view	2
2	Organizational chart of the hatchery	2
3	<i>Tridacna gigas</i>	4
4	Life cycle of giant clam	5
5	Collecting of <i>Tridacna crocea</i> broodstocks	9
6	Collected <i>Tridacna crocea</i> broodstocks	9
7	<i>Tridacna gigas</i> injected with serotonin	11
8	Serotonin (SIGMA) and syringe used in induced spawning of <i>Tridacna gigas</i>	11
9	<i>Isochrysis galbana</i> inoculant for mass culture	12
10	Algafer fertilizer for mass culture of <i>Isochrysis galbana</i>	13
11	Feeding <i>Tridacna derasa</i> juvenile in tanks	13
12	Monitoring <i>Tridacna derasa</i> larvae using microscope	14
13	<i>Tridacna derasa</i> juveniles ready for transport	16
14	Transferring of <i>Tridacna derasa</i> juveniles in tanks to the ocean nursery	16
15	Grafting of pearl oyster	18

**FIELD PRACTICE REPORT ON METHODS OF GIANT CLAM (*Tridacna spp.*) HATCHERY AT THE BUREAU OF FISHERIES AND AQUATIC RESOURCES- GUIUAN MARINE FISHERIES DEVELOPMENT CENTER GUIUAN, EASTERN SAMAR**

**EXECUTIVE SUMMARY**

The field practice was undertaken at the Bureau of Fisheries and Aquatic Resources- Guiuan Marine Fisheries Development Center in Guiuan, Eastern Samar from June 18, 2016 July 23, 2016, exactly a month of training. The training was focused on the hatchery of giant clams. The hatchery aimed to increase the number of giant clam wild stocks. The hatchery is headed by Ms. Candelaria A. Salamida who is also the hatchery technician; she is aided by her only one staff, Mr. Jose Rusty Benablo.

The trainee's activities involving the giant clam hatchery included broodstock collection and management, induced spawning, natural food culture, feeding, larval rearing and water management. His other activities included re-seeding of giant clam, induced spawning of sea cucumber, and grafting of pearl oyster.

In addition, he evaluated the strength and weaknesses of the giant clam hatchery. His assessment shows that the strengths of the hatchery included complete materials for culture, sufficient water and good power supplies. On the other hand, he observed that the weaknesses of the hatchery included lack of manpower as well as insufficient technical knowledge, and need to techniques.

---

Undergraduate Field Practice Report presented in partial fulfilment of the requirements for graduation with the degree of Bachelor of Science in Fisheries. Prepared at the Department of Aquaculture, College of Fisheries, Central Luzon State University under the supervision of Dr. Apolinario V. Yambot.

## REFERENCES

- Ellis, S. 2009. Spawning and early larval rearing of giant clam (Bivalva: Tridacnidae). Center for Tropical and Subtropical Aquaculture Publication No. 130.
- Braleley, R. D. 1984. Reproduction in the ginat clams *Tridacna gigas* and *T. derasa* in situ on the North- Central Great Barrier Reef, Australia, and Papua New Guinea. *Coral Reefs* 3: 221-227.
- Lucas, J.S. 2014. Giant clam. *Current Biology*, 24(5), R183 - R184.
- Neo, M.L., Eckman, W., Vicentuan, K., Teo, S.L., & Todd, P.A. 2015. The ecological significance of giant clams in coral reef ecosystems. *Biological Conservation*, 181, 111-123.
- <http://clamsqu4d.weebly.com>
- <http://www.bnhs.org>
- <http://www.insights-philippines.de/giantclam.htm>
- <http://www.medicalnewstoday.com>
- <http://www.spc.int>