

Training Course on Aquaculture Technologies for Seaweed and Oyster

August 31- September 2, 2016

Brgy. Old Kawayan, Tacloban City, Leyte



Date & Venue

Aug. 31- Sept. 2, 2016/

Facilitators & Trainor

Ma. Ruvilla J. Luhan

& Dr. Ma. Junemie Hazel Lebata-Ramos

Participants

There were three organizations present in the said event namely St. Vincent Women's Association from Brgy. 102, Cabalawan Fisherfolk Association, and Tacloban Urban Fisherfolks Association (TUFA). TUFA was represented by Emilio D. Onate while the Cabalawan Fisherfolks Association was represented by Lyric Earl Demain and Lito Balangbang. St. Vincent Women's Association was represented by Vevilyn C. Tranoza, Ilene M. Bonguet, Emelina B. Ojales, and Rebecca P. Bodanoza. Another participating body was a facilitator from BFAR named Catherine Mecaydor.

Aims & Objectives of the Training

1. To impart the skills and knowledge on how to increase the production of seaweeds and oysters
2. To illustrate the different types of seaweeds

3. To teach different methods of grow-out culture techniques of seaweeds and oysters
4. To demonstrate different seaweed post-processing techniques
5. To determine the most efficient method for seaweed and oyster farming.

Agenda & Activities

Day 1

- Registration or orientation
- Biology and ecology of seaweeds
- Status of the seaweed industry
- Common diseases of seaweeds
- Grow-out culture of seaweeds
- Seaweed culture

Day 2

- Seaweed post-processing
- Biology of oysters
- Oysters nursery and grow-out culture techniques
- Oyster culture
- Field visit to a seaweed or oyster farm

Day 3

- Discussion or Open forum
- Closing program or Awarding of Certificates

The Training Proper

Preliminaries

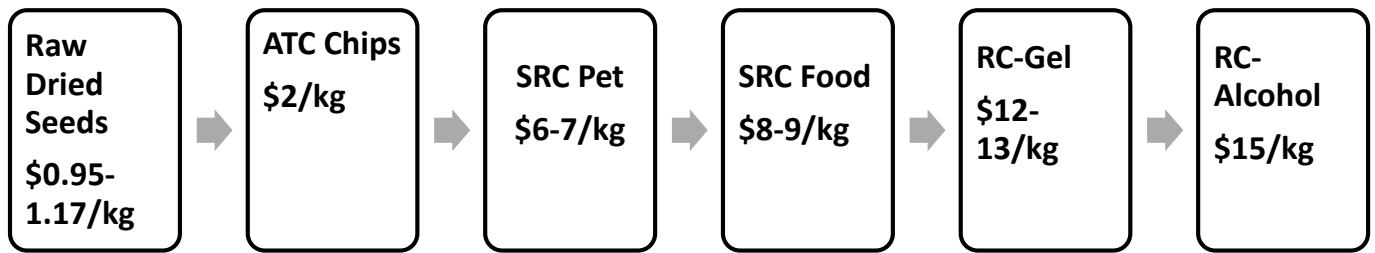
The training started at 9:00 AM. The resource persons and participants were welcomed by the NFR staff, Hannah Hipe.

SESSION 1: Seaweed

Trainer/Facilitator: Ma. Rovilla J. Luhan

Key Messages & Concepts of the Session & Activity

- There is a total of 10,000 species of seaweeds.
- Seaweeds convert light energy to chemical energy to reproduce and survive.
- Parts of seaweeds (hold fast, stipe, thallus, and vesicle).
- Seaweeds can be classified in terms of pigments, storage products, chloroplast, cell wall, and flagella.
- Tambalang or Alvarezii originated in Tawi-tawi Philippines.
- Physical determinants in seaweed production are site fertility, water motion or current, water quality, and temperature.
- Commonly used farming techniques: Fixed-off bottom, Hanging long-line (single), multiple raft, hanging long-line, spider web
- Do's in drying: removal of epiphytes, shells and other animals attached, immediate drying under the sun, sun drying for 4-5 days.
- Don'ts in drying- no contact with fresh water while sun drying, no adulteration.
- 2 major problems in culturing seaweeds are "Ice-Ice" or the whitening of the thallus and "Endophytes" or the epiphytes that penetrates the plants.



Seaweed or Carrageenan Value-Chain and Export Prices in the Philippines 2014



The training staff, Ma. Rovilla J. Luhan, explains to the participants the biology and ecology of seaweeds.



The participants listened to the lecture of the training staff.

Day 1 ends at exactly 2:10 PM, discussing everything about seaweeds. It is expected on day 2 to have hands-on training on seaweed post-processing and discuss about oysters.

The second day of the training course started at 9:10 AM.

SESSION 2: Seaweed post-processing

Trainer/Facilitator: Ma. Rovilla J. Luhan

Key Messages & Concepts of the Session & Activity

- The participants were trained how to cook the seaweeds in two different recipes.

Activity 1: Pickled Seaweeds

Ingredients:

- 450 g refined sugar
- 300 ml vinegar
- 60 g ginger
- 40 g onions
- 50 g garlic
- 120 g carrots
- 80 g bell pepper
- 3 tbsp salt
- 1 kg Kappaphycus (guso)

Procedures:

1. In a casserole boil vinegar, then add sugar and salt. Adjust according to desired taste.
2. After boiling, lower the heat and add the remaining ingredients except seaweeds.
3. After several minutes remove the added ingredients to avoid overcooking.
4. Set aside the mixture and let it cool.

Seaweed Preparation:

1. Bring to boil water.
2. Blanch seaweeds for 30-60 seconds.
3. Remove and add to the prepared mixture.



The participants helped in preparing the ingredients for the Pickled Seaweed.

One of the training staff from SEAFDEC added all the prepared ingredients.





The finished product of the 1st activity, Pickled Seaweeds.

Activity 2: Seaweed Fried Lumpia

Ingredients:

400 g seaweeds	3 tsp sugar
200 g ground pork/ beef	½ tsp salt
100 g carrots	Oil
20 g chopped onions	2 packs lumpia wrapper
20 g chopped garlic	50 pcs pepper
3 tsp seasoning	

Procedure:

1. Cook the filling
 - a. In a heated pan, add oil and allow to heat up
 - b. Sautee garlic and onions
 - c. Add pork
 - d. Add carrots and seaweeds
 - e. Season
 - f. Turn off the heat and drain the excess liquid

2. Wrap the filling

- a. Set the wrapper in a plate
- b. Place the pepper at the middle of the wrapper
- c. Spoon the filling and place it on the pepper
- d. Close the wrapper by initially folding the wrapper
- e. Fold both ends and continue folding/rolling until the wrapper is closed



Three of the participants prepared the ingredients for the seaweed fried lumpia.



One of the participants gently mixed the ingredients while other participants were observing.



The training staff, Ma. Rovilla J. Luhan, fried the prepared lumpia.

The finished product for Seaweed Fried Lumpia



SESSION 3, Activity 3: Oysters

Trainer/Facilitator: Dr. Ma. Junemie Hazel L. Ramos

Key Messages & Concepts of the Session & Activity

- The Philippines is ranked 6th in oyster production in Asia but is the top producer in Southeast Asia since 2011.
- Oysters are bivalves meaning 2 valves or shells.
- Oysters are used for food, spat collector, and reclamation or the production of calcium carbide, lime, and etc.

- Habitat of oysters: marine or brackish water (bays, coves, inlets, estuaries) and are attached to rough surfaces.
- Parts of oyster: Left valve, anterior, right valve, posterior, mantle, and gills.
- Culture methods of oyster: bottom/broadcast, stake, raft, rack, and long line.
- Factors to consider for oyster culture sites: culture system, availability of culture materials, availability of brood stock or seeds, wave or wind action, salinity, water depth, natural food supply, pollution, post-harvest and marketing facilities.



One of the participants, Mr. Emilio D. Onate, shared his experiences in oyster farming.



The resource speaker, Dr. Ma. Junemie Hazel L. Ramos, explained the culturing methods or techniques to the participants.

Activity 4: Field Visit to a Seaweed or Oyster Farm



One of the seaweed farmers in the local cleans his seaweeds to avoid “Ice-Ice” and “Endophytes”.



The participants and resource speaker went to see the mud crab farming station in Brgy. Old Kawayan, Tacloban City, Leyte.

The activities on the second day ended at exactly 4:10 PM.

SESSION 4/Activity 5: Open Forum

The said activity started at 9:00 AM.



Mr. Losanto Castillo Jr. shared his problems about the funds that were not given to them. “Kung gusto niyong tumulong sa amin, ideretso niyo nalang sa amin para hindi na matagalan pa at walang mababawas sa pondo.” he said.





Another participant adds up to what Mr. Losanto Castillo Jr. said.

Day 3 ends at 11:00 AM.

APPENDIX

APPENDIX A
The Trainors and Facilitators

TRAINER/ FACILITATOR	SESSIONS DISCUSSED	AGENCY/ ORGANIZATION & Designation
 <p>Ma. Rovilla J. Luhan</p>	<p>Seaweed</p> <ul style="list-style-type: none"> • Biology & Ecology • Status of the seaweed industry • Common diseases • Grow-out culture of seaweed • Seaweed pos-processing 	<p style="text-align: center;">SEAFDEC</p>
 <p>Dr. Ma. Junemie Hazel L. Ramos</p>	<p>Oyster</p> <ul style="list-style-type: none"> • Biology of Oysters • Oyster Nursery and grow-out culture techniques • Oyster culture 	<p style="text-align: center;">SEAFDEC</p>

APPENDIX B

Photos of the Participating Representatives of Fisherfolk Associations



APPENDIX C

PHOTOS FROM THE SITE VISIT AND TRAINING DEMO

