

Aceh Aquaculture Rehabilitation Project

Soft-Shell Crab Farming In Aceh



BBAP Ujung Batee (Aceh Besar), Langsa (Aceh Timur)

19-25 July 2009



Executive Summary

Ms May Myat Noe Lwin (C NN Aquaculture and Supply Company, Bangkok-Thailand) as a volunteer with Aquaculture without Frontiers (AwF) supported by AquaFish CRSP (Collaborative Research Program), Australian Centre for International Agricultural Research (ACIAR) in cooperation with Directorate General of Aquaculture-Balai Budidaya Air Payau Ujung Batee provided training in Soft-shell crab farming for crab farmers in Aceh Besar 21 July 2009 and East Aceh-Kota Langsa 23 July 2009.

Training was undertaken at two sites: BBAP ujung Batee and Kota Langsa. The total of five (5) BBAP Ujung Batee staff, 40 farmers, 11 Dinas Kelautan, Perikanan dan Pertanian Kota Langsa, two (2) SUPM Ladong staff and one (1) JFPR staff participated in this training.

The new technology for soft shell crab with natural system is a livelihood option activity that profitable economically, sustainable environmentally and equitable socially and religiously in Aceh.

Table of Contents

Executive Summary	1
Introduction.....	2
Training Program.....	3
Training Outcomes	
Feedback/ comments on training	4
Follow up and Future Training.....	5
Conclusion and Next Action	6
Appendix 1 – Participant List, Training in Soft-shell crab farming	
BBAP Ujung Batee	7
Hotel Kartika, Kota Langsa.....	8

SOFT-SHELL CRAB FARMING TRAINING

I. Introduction

Since the white spot syndrome virus (WSSV) infected the tiger prawn production in Aceh most of the farmers that rear shrimp have losses because of the mass mortality on shrimp production. Nowadays, the farmers start to grow out other species to get income such as milk fish, tilapia, grouper nursery, etc.

Another business that can also give benefit and increasing their income is production of soft shell crab. There are some advantages of culturing soft shell crab (*Noe Noe, Overview of Crab Farming Presented in Soft shell crab farming training*), such as:

1. Can be cultured all year round;
2. Has a daily income;
3. Generally prone to less disease; and
4. Stock is always known.

This farming has been started by some farmers in Aceh Besar, Aceh Tlmur and Kota Langsa. The technique that they are using in the production of soft shell crab is to remove the walking and swimming legs and also the claw of the crab. This technique has not been widely accepted among the community in ACEH, because it's not socially acceptable (religious and welfare reasons). This technique induces stress and increases the mortality of the crab.



Picture 1. Technique currently used by the soft shell crab farmer for removing the claw of the mud crab

The technology introduced by Ms May Myat Noe Lwin is production of soft shell crab that relies on natural processes which she learned from her

experience in her own farm in Thailand. Through this training the farmers also received detailed explanation about the biology of the crab, design and lay out of soft shell farming in Thailand, stocking technique, inspection, feed and feedings, water management, pond preparation, processing and packing and also business planning and management.

II. Training Program

Training was undertaken at two locations:

1. BBAP Ujung Batee; (Participants from around Aceh Besar and Kota Banda Aceh farmers, NGO, BBAP Staff and Fisheries High School); and
2. Hotel Kartika, Kota Langsa. (Participants from around Aceh Timur and Kota Langsa Farmers and Fisheries staff/government district level)

III. Training Outcomes

Number of participants and their affiliations are summarized below. A full list of participants is appended (Appendix 1).

Date	Location	Number	Organizations represented
21 July 2009	BBAP Ujung Batee	5	BBAP Ujung Batee
		2	SUPM Ladong
		1	JFPR
		9	Farmers
23 July 2009	Hotel Kartika, Kota Langsa	11	Dinas Kelautan, Perikanan dan Pertanian Kota Langsa (Fisheries staff of Kota Langsa and Aceh Timur district)
		31	Farmers

Feedback/ comments on training

BBAP Ujung Batee

All the participants were very satisfied with the materials that were delivered during the training course such as technique in selecting the seed, methods of acclimatization, feed and feeding, importance of doing inspections, etc.

Hotel Kartika-Kota Langsa

One collector of soft shell in Kota lungs (Mr. Muzakkir) is really interested with the technology that was delivered during presentation for production of soft shell crab, especially all the materials that presented were based on field experience not from books or journals. He organized a field visit to the biggest farm in Kota Langsa. During the field visit he tried to explain to other farmers about what he received in the earlier training course, and he invited some farmers to change the old technique to the new technology. He was also interested in buying the crab box that is produced by C NN Company in order to apply the new technology in the area because it's simpler, easier when doing inspection, profitable economically and also long-lasting with 10 year's useful life.

Mr. Muzakir wanted to know the exact price of the boxes delivered to Aceh. And if they already have the boxes could Ms Noe Noe come back again and stay for couple of days in Langsa for hands-on training with the soft shell crab farmers.

The soft shell crab farmers are really grateful because Ms Noe Noe, as trainer, gave all the information that she has based on her experience in running a soft shell crab farming operation. The farmers are very happy with the new technology because it is socially and religiously better in Aceh especially when the farmers compare with the previous technology that removed the swimming and walking legs of the crab. The farmers have heard about the technology with spinach extract injection system to speed up the molting process. In the training Ms Noe Noe has explained that spinach extract injection system is not profitable and not simpler because we don't know how much cost that we need to buy spinach extraction, how many labor/worker to do this, on the other hand the crab will automatically

molt by itself within a few days if in optimum condition, not stressful and also have enough energy/food to complete a molt. The market is more interested with the soft shell crabs that are produced naturally. Most farmers will try to implement the technique and knowledge that they got from this training in their own farm.

Good responses also came from head of Dinas Perikanan, Kelautan dan Pertanian Kota Langsa, which will support the soft shell farmers around their area to do this business as community livelihood. In the future, farmers will be applying this new technology, because before the fisheries department didn't want to support soft shell crab business to the farmers in their area caused contradictions, both socially and religiously. Now they are really happy because they found the solution, based on this new technology that was presented by Ms Noe Noe. This business is a community livelihood activity that is profitable economically, sustainable environmentally and equitable socially.

Follow up and Future Training

Balai Budidaya Air Payau Ujung Batee (BBAP Ujung Batee) supported by Australian Centre for International Agricultural Research will provide approximately 5,000 boxes that are produced by C NN Company and distributed to the soft shell crab farmers in Aceh Besar and Kota Langsa-Aceh Timur.

ACIAR also will invite Ms Noe Noe to come again and complete more hands-on training to the farmers for transferring the knowledge and skill base on success experience in Thailand.

Conclusion and Next Action

Conclusions

1. Weakness of removing leg system:
 - ~ Getting more stress and high mortality.
 - ~ Reduces marketable weight of crab.
 - ~ The crab will need more energy for re-growth and molting.

2. Natural System:
 - ~ Request of buyer for natural product/organic product.
 - ~ Maintains marketable weight of crab.
 - ~ There is no research result that leg removal will induce faster molting.
 - ~ Natural system with box will make more space to move, and is healthier, and provides substrate for edible algae and may induce faster molting.
 - ~ Survival rate better than removal system.

Next Actions

1. How to improve sustainability of this business:
 - ~ Providing crab seeds through hatchery production.
 - ~ Distribute the information to the farm through leaflet and poster to not use the mature female crab for soft shell in order for sustainability and availability of the crab seeds. At this time only a few hatcheries produce juvenile crabs. Aceh has great potential as a crab farming area with large brackish rivers and numerous shrimp farms looking for diversification.

Appendix 1 – Participant List, Training in Soft-shell crab farming

BBAP Ujung Batee (Aceh Besar)

No	Name	Organization
1	Nurbariah	BBAP Ujung Batee
2	Syafrizal	BBAP Ujung Batee
3	Tovan Marhcnnata	JFPR
4	Fajar Firmansyah	Farmer – Desa Lamjabat
5	Muhammad	Farmer – Desa Lamjabat
6	Arsil Azim	Farmer – Desa Lamjabat
7	Abd. Samad	Farmer – Desa Lamjabat
8	Rosmaini	Farmer – Desa Lamjabat
9	Nirwanasari P	Farmer – Desa Lamjabat
10	Rosman Jaya	Farmer – Desa Lamjabat
11	Safrizal	Farmer – Desa Lamjabat
12	Chairin Sofia	Farmer – Desa Lamjabat
13	M. Romi	SUPM Ladong
14	H. Arun	SUPM Ladong
15	Fitriana	BBAP Ujung Batee
16	Muhammad	BBAP Ujung Batee
17	Nasfuddin	BBAP Ujung Batee

Hotel Kartika (Kota Langsa – Aceh Timur)

No	Name	Organization
1	Ambia	Farmer – Desa Mesjid A. Beurawe
2	Tarfi	Farmer – Desa Sei Pauh
3	Khairul Ikhwan	Farmer – Desa Alue Beurawe
4	H. Muzakkir AA	Farmer – Desa Birem Puntong
5	Aris Gultom	Farmer – Desa Alut Beurawe
6	Aewinsyah	Farmer – Desa Alut Beurawe
7	Samsul Bahri	Farmer – Desa Alut Beurawe
8	Agustriady	Farmer – Desa Alut Beurawe
9	Abd. Taleb	Farmer – Desa Alut Beurawe
10	Abd. Kadir	Farmer – Desa Alut Beurawe
11	Idham	Farmer – Desa Jolok
12	Junaidi	Farmer – Desa Lhok Sentang
13	Talep Cek	Farmer – Desa Lhok Sentang
14	M. Salem	Farmer – Desa Lhok Sentang
15	Nurdin	Farmer – Desa Lhok Sentang
16	Hamdani	Farmer – Desa Alue Beurang
17	Drs. M. Dahlan MS	Farmer – Desa Lueng Sa Madet
18	Samsul Azhar JF	Farmer – Desa Lueng Sa Madet
19	Zarkasyi MS	Farmer – Kota Langsa
20	Husaini Saleh	Farmer – Desa Blang
21	July	Farmer – Desa Meutia
22	Taleb	Farmer – Desa Meutia
23	Dia Muthala	Dinas Kota Langsa
24	Muslimatus Sakdiah	Dinas Kota Langsa
25	Rosmiati Ismail	Dinas Kota Langsa
26	Zulkiram	Farmer – Desa Julok

No	Name	Organization
27	Vivi Fitriana	Dinas Kota Langsa
28	Mahdar	Dinas Kota Langsa
29	Mursida	Dinas Kota Langsa
30	Hendra Syah Putra	Farmer – Desa Alur Pinang
31	Riki	Dinas Kota Langsa
32	Maradoni	Dinas Kota Langsa
33	Kamalul Rusdi	Dinas Kota Langsa
34	Banta Ahmad	Dinas Kota Langsa
35	Muliati, SP	Dinas Kota Langsa
36	Agus Putra AS	Farmer – Desa Tunong
37	Muhammad Rusdi	Farmer – Desa Meutia
38	Budianto	Farmer – Desa Alur Brawe
39	Muhammada Amin	Farmer – Desa Matang Pajang
40	Warduku	Farmer – Desa Matang Payang
41	Asnawi	Farmer – Desa Mukhi
42	H. Muzakkir	Middle Man – Kota Langsa