

# AQUA Dept NEWS

Internal Newsletter of the SEAFDEC Aquaculture Department

Vol. XVIII No. 25 September 1, 2003

## First IRAP on-site training conducted



*Trainees selecting the Pangasius broodfish from Bati Station pond*

With funding support from the Aquaculture Component of the Special Five-Year Program, the first IRAP on-site training was conducted from August 4 to 17 at the Bati Fish Seed Production and Research Station in Prey Veng Province, Cambodia.

Four small-scale fish farmers and three Department of Fisheries (DOF) Cambodia technicians attended the training that focused on the seed production and rearing of *Pangasius hypophthalmus*. The Course Organizer and Lecturer, Ngan Heng, is also the Director of the Bati Station. He was assisted by Sujin Nukwan, Senior Fishery Biologist from DOF Thailand who served as the Resource Person. Serving as overall coordinator was Chin Da, Vice Chief of the Aquaculture Bureau of DOF Cambodia and Technical Coordi-

nator for Cambodia for Supply of Good Quality Seeds of the Special Five-Year Program.

The training course included lectures on the biology and breeding characteristics of *P. hypophthalmus*; general discussion on hormone calculation, identification of male and female, and priming injection; demonstration on

collecting fish ova, sperm collection and preservation, stripping, and fertilization; larvae mainte-

nance and releasing to nursery pond; pond preparation; feeding practices; and fish seed counting and harvesting.

It was the obligatory to hold the training in August because the window on the proposed farmers' training on *Pangasius* breeding would end in September. Otherwise, the training would have to be postponed until April 2004, quite late for the timing of the activities in Cambodia under the Special Five-Year Program.

Bati Fish Seed Production and Research Station is located in  
*to page 2*



*Fifteen participants of FARMC training course graduated on Aug 21. In the photo are graduates with – seated, from the left – Course Officer, Kaylin Corre; BFAR Region VI Assistant Director, Juliet Dimo-os; resource person, Dr. Wenresti Gallardo; and TID head, Pastor Torres, Jr. Standing at the back are participants with some BFAR, and AQD staff members.*

Prey Veng Province about 70 km from Phnom Penh at the other side of Tonle Sap River. A river ferry system enables vehicles from Phnom Penh to drive all the way to Prey Veng. The station was established in 1988 with the assistance of the Partnership for Development of Kampuchea (PADEK), a non-governmental group. Until 1997 the station operated under a PADEK funded program, after which the station operates under the Prey Veng provincial fisheries office. Since 2000 the station has been cooperating with the Mekong River Commission as part of its Aquaculture of Indigenous Mekong Fish Species (AIMS) project for the propagation of indigenous freshwater species.

In spite of its name the Bati station was established solely for fish propagation. Until 1997 it was capable only of propagating the silver barb (*Barbonymus gonionotus*). In 1998 the station succeeded in propagating the Mekong catfish (*Pangasius hypophthalmus*) when it produced 12 fingerlings. Survival rate has since improved and the station can now routinely produce *Pangasius* fingerlings. It is now working on the propagation of a Trey Krum (*Osteochilus melanopleurus*), a local carp species and the gourami

(*Trichogaster pectoralis*) as part of MRC's AIMS project. Also in the pipeline is the propagation of the giant gourami (*Osphronemus gouramy*) and a local bottom feeding carp species, *Puntioipilus falcifer*. As a sub-component of the World Bank assisted Agricultural Productivity Improvement Project (APEP) the station is also standardizing procedures for the propagation of a snakehead species, *Channa micropeltes*, with the aim of producing a manual for the species.

Way back in 2002, the Bati Station proposed to conduct a hands-on training on the propagation of *P. hypophthalmus*. The three-week training scheduled to start in April would have involved four farmers from three provinces, two from Prey Veng, one from Takeo, and one from Svay Rieng, and three technicians from DOF Cambodia. However, funds for the purpose have not been released by the DOF Cambodia. Since the last chance to hold the training is the month of August, funding was sourced from the Special Five-Year Program (Aquaculture Component).

Although the culture of *Pangasius* is being promoted in the country, the DOF Cambodia has apparently not given consideration on the problem of feeding them. *Pangasius* is a voracious feeder, which accounts for

its rapid growth. Promoting its culture could possibly result in farmers using up low-value and small fish, which could either grow to larger sizes or could be directly consumed as food. The use of fish biomass as food will likely make it economically not viable to produce. Fortunately, as an omnivore, it can subsist on a wide range of feed and when cultured in earthen ponds can feed completely on vegetable materials such as agricultural byproducts. It is only when cultured in cages that some amount of fish is necessary.

The Bati Station Director also expressed keen interest in seed quality improvement through selective breeding of *Pangasius* and in the capability building of the station staff. In this regard, the DOF Cambodia would like to continue bringing a limited number of technicians and promising fish farmers on study tour to Thailand and also to bring technicians for hands-on training on tilapia and carp breeding and culture possibly to the Philippines. The same concern was also reiterated by the Chin Da in his initial report about the training at the Bati Station. Once the proposal is approved, we will be meeting more Cambodians at AQD before the end of this year or early 2004. – **VT Sulit**

Ngan Heng



Left: Trainees checking broodfish for eggs, Center: Stripping the fish for breeding, Right: Trainees trying their hands at incubating the *Pangasius* eggs after stripping

# Current perspective in integrated aquaculture



Dr. Amir Neori

Dr. Amir Neori, Head of the Department of Algae, Water Quality and Biofilters, Israel Oceanographic and Limnological Research, National Center for Mariculture at Eilat, Israel gave a seminar at AQD on August 26.

Dr. Neori discussed their ongoing project in Israel regarding the development of practical and non-polluting land-based mariculture practices. They considered

the discharge of low-quality water from intensive land-based mariculture facilities, which causes environmental and economic concerns. Since fish excrete to the water 70 to 80% of their ingested protein Nitrogen, 80% of it in dissolved forms, it was imperative for the Center to develop practical and non-polluting innovations in mariculture practices.

At their National Center for Mariculture (NCM) in Eilat, they came up with the solution for solving the effluent problem by nutrient recycling. Water from fishponds recirculates through biofilters of seaweed, which remove most of the ammonia from water. The financial return from the low-value seaweed biomass by-product can be raised greatly by feeding it to valuable macroalgivores, such as abalone

and sea urchins.

The culture of abalone, a commercially valuable marine gastropod, is severely limited by supplies of suitable seaweed. In Dr. Neori's integrated mariculture technology, they added abalone (*Haliotis hannai*) to the integrated culture for fish and seaweed.

In integrating the culture of three organisms – abalone, fish (sea bream) and seaweed (*Ulva lactuca* and *Gracilaria conferta*) – they intend to fully integrate the fluxes of water and nutrients between the three modules that are adjusted to optimize water use, nutrient recycling, and marketable production. It is also intended to be sustainable – one that allows increased supply of marketable marine organisms with minimal increases in pollution and in burden on natural populations. – **AP**

**Surtida**

---

## Results of training-Need Survey

During the seminar on Business Opportunities in Aquaculture or AquaBiz from July 7 to 8, training-need survey questionnaires were distributed. There were 48 respondents. The survey aimed to determine relevance and duration of training program.

Results showed that 39 respondents expressed interest in undergoing training in aquaculture. Considering multiple entries selected, 41 would like to undergo training for the purposes of business, and employment credentials. Thirty preferred training duration of less than two weeks. Of the 18 aquaculture technologies, six significantly stand out. These

are grow-out culture systems of shrimp, and milkfish in ponds; seabass, grouper, snapper, and mud crab in pens or cages.

Future training programs of AQD would address these needs.

A parallel survey is ongoing at AQD website. The three-month survey will end in August. The results will be added to the existing data.

---

## Techno-caravan in Aurora

In an attempt to bring the latest aquaculture technologies closer to fisherfolk, a lecture/demonstration of the most recent technologies was held from August 17 to 19 in Baler, Aurora.

This is similar to the Annual Fisheries Caravan sponsored by BFAR. Resource persons from AQD were Dr. Emilia Quintio, Dr.

Zubaida Basiao, Dr. Fe Dolores Estepa, and Miguel de los Santos. Topics during the lecture were shrimp hatchery management, biology and grow-out of mud crab, biology and grow-out of tilapia, and environment-friendly schemes in intensive shrimp farming.

This activity was one of the

highlights of Baler's town fiesta. There were about 60 fisherfolk participants who came from Baler's coastal barangays.

Senator Edgardo Angara, who is native of the town, hailed the successful techno-caravan. He hopes that the technologies that were extended would boost fish production in coastal areas of Baler. - **JM Genzola**

## “Stock now pay later” in Jalajala



WG Yap

Engr. Lito Gonzal (extreme left), of BFS and ABCDEF, Inc hatchery manager hands ceremonial bag of SSt tilapia fingerlings to three initial recipients of the Stock Now Pay Later Plan. From left to right: Luzviminda Villaran, Leopoldo Salgatar, and Magusig Estrella, all members of the Sangguniang Bayan of Jalajala, Rizal.

In order to popularize the SEAFDEC Strain (SSt) tilapia developed by the AQD Binangonan Freshwater Station (BFS), and in order to encourage more people to go into tilapia farming within

Rizal province, the Aquaculture Based Countryside Development Enterprises Foundation Inc. (ABCDEF Inc.) in Punta, Jala-Jala, Rizal has launched a “Stock Now-Pay Later” plan for small scale fish farmers. Expected beneficiaries of the plan are agrarian reform beneficiaries in the area as well as Laguna de Bay fishers.

Although Jalajala is along the shore of Laguna de Bay and has large areas of irrigated ricefields there is surprisingly very little aquaculture activity. In order to encourage other townfolk into raising fish, three members of the Sangguniang Bayan of Jalajala, namely, Leopoldo Salgatar, Magusig Estrella, and Luzviminda Villaran offered to pilot the scheme to demonstrate its viability. Other future fish farmers have expressed interest but are still in the process of putting up their cages or digging their ponds to accommodate 10,000 fingerlings.

The program is the outcome of a meeting held at ABCDEF Inc. on August 19, which was attended by officers of the different local farmer cooperatives, members of

the Sangguniang Bayan, and Municipal Agrarian Reform Officers (MARO) from the towns of Jala-Jala, and Teresa, Rizal. Under the plan small fish farmers within Rizal province has to have ponds or cages ready for stocking. These are visited by ABCDEF staff members and once determined to be suitable and ready for stocking each operator is allocated 10,000 size 22 SSt tilapia fingerlings. Each recipient is responsible for picking the fingerlings up from the ABCDEF Inc. hatchery in Punta, Rizal.

ABCDEF Inc. is a joint undertaking of the Meralco Foundation Inc. (MFI), and AQD. It was established as a vehicle for countryside development through aquaculture. Its main activity now is the operation of the former MFI tilapia hatchery as a multi-species freshwater hatchery using the technical expertise of BFS personnel. In addition to tilapia, it now produces quality fingerlings of snakehead or mudfish, native *hito*, and bighead carp. The hatchery now maintains a standing stock of about 1.5 million fry and fingerlings of various stages at any one time. - **WG Yap**

---

## Seminar on Environment-Friendly Aquaculture in Cagayan de Oro City

An AQD team conducted a seminar on Environment-Friendly Aquaculture in Cogon, Cagayan de Oro City from July 22 to 23. The seminar was in line with DOST Region 10's National Science and Technology Week (NSTW) celebration with the theme “Empowering SMEs (small and medium enterprises) through Science and Technology.”

There were 82 participants from the private sector, government agencies, LGUs of Region 10 provinces, and academe. The resource persons, and topics discussed were the following: Dr. Celia Torres on health management in shrimp culture; Teresa de Castro-Mallare on culture of seaweeds; Nelson Golez on soil and water quality, and feeds and feeding management; Denny Chavez on tilapia and bangus culture; and Neil Raphael Jamon on environment-friendly shrimp culture systems, and shrimp culture methodology. Lectures and discussions were delivered in Cebuano, and Hiligaynon. Most of the participants were interested in cage culture of milkfish.

In a letter dated August 12, Regional Director Dr. Constancio Cañete thanked AQD Chief Dr. Rolando Platon for the expertise shared

by the resource persons.

After the seminar, Mallare, Golez, and Chavez visited seaweed, and shrimp farmers in Lanao del Norte, and Misamis Occidental from July 24 to 27.

This is the second invitation from Director Cañete. The first was in Tanguib City in March (See related story in ADN No. 10 & 11).

---

---

**AQUA DEP'T NEWS** is published weekly by DEVCOM, TID at the Tigbauan Main Station. **Editor this issue:** CB Lago; **Circulation:** E Gasataya; **Photography:** R Buendia (*unless otherwise credited*)

---

---