SPECIAL REPORT

Golden harvests in tilapia, seaweed, milkfish: fish farmers improve their livelihood because of SEAFDEC technology and training program

Tilapia cages in Dumarao

Mr. Jose Basamot is not new to hard work. To sustain his family, he has been farming a plot of land in Dumarao, a land-locked municipality on Panay island in west central Philippines, when he has to halt operations after the reservoir of a small dam permanently flooded his farm. This placed him, and 35 other rice farmers in his neighborhood, in a quandary: what to do with the water on the land?

The simple answer – aquaculture – was provided by the provincial government of Capiz who gave funds and tapped SEAFDEC Aquaculture Department (AQD) in the Philippines for technical assistance.

Mr Basamot tells of his experiences after training with AQD on tilapia culture

Now, two years later, and after the rice farmers trained with AQD in freshwater aquaculture all throughout 2007-2008 in four season-long training modules, eight of the 36 trainees or 22% has put up their own tilapia hatchery and cage farms. Their income from tilapia culture has made up for their lost income in agriculture.

The tilapia farmers of Dumarao say they estimate their profit from tilapia to be about 50% of operating costs, and that this is much better than raising pigs. The individual holding ranges from five units of 4 x 10 m cages to 18 units of 4 x 4 m cages whose nets are framed with indigenous bamboo. They harvest every three-and-a-half to four months, and the size is about 200 g tilapia. Some are now in their third cycle of grow-out culture. Though they have formed into a cooperative, recording of production and cost for each member is still a learning process. Nonetheless, the rice-turned-tilapia farmers are proud of their "bayanihan" spirit (esprit d' corps), that is, they help each other build the cages and sew the net cages (techniques demonstrated by AQD), and often consult each other on minor problems. They are also most happy about the fact that running a tilapia farm means less walking on mud and less bearing the heat of the sun.

All eight farmers attribute their success to AQD's technology and the provincial government of Capiz. They wish for their other 28 co-trainees to do business as they now do, but the initial capital of around Php 9,000 (US$ 200) is still not affordable to most.

Similarly in the often-troubled island of Mindanao in southern Philippines, AQD training made an impact on poor villagers, this time on young people whose families cannot afford to send them to school and who have to fend both for themselves and their families.

Mr. Ummik Sabung is one fine example, and one of the 130 youth trainees that joined the seaweed training program run by the Philippine Development Assistance Programme Inc in 2007. He became the most successful of them all, harvesting from 100 lines the seaweeds valued at Php 100,000 (US$ 2,200), and to think that his initial capital was only Php 1,000 (US$ 22). Mr. Sabung attributed his success to his AQD mentor – scientist Dr. Anicia Hurtado – and his determination to implement the AQD technology as taught to the youth group. It helped that the training enabled him to understand the principles of sustainable seaweed farming, and he was able to avoid diseases brought about by stock overcrowding and stress.

Youth go into seaweed farming using SEAFDEC technology

Mr. Sabung is now considered as one of the wealthiest seaweed farmers in his island of Sikulan, Sulu, and has ventured into providing quality seaweed seedlings to his neighbors.

In the oil spill affected island of Guimaras in central Philippines, fisherfolk turned fishfarmers – trained by AQD in season-long training modules on milkfish cage culture beginning October 2007 and up to the present – are enjoying their collective profits and have set about strengthening their people's cooperatives.

Early this year, AQD handed over to communities in Nueva Valencia, Guimaras the profits of the community-run, AQD-supervised, and Petron/Citi-funded milkfish cage culture. The project income amounted to Php 267,855 (nearly US$5,700) and was divided among the four participating communities who plan to use the money to fund more livelihood projects of their own.

Income came from more than 9 tons of milkfish – each weighing about half a kilo – that were harvested after seven months of culture from three cages situated at AQD's Igang Marine Station.

AQD hands over project income in milkfish culture to community leaders

Says village leader Ms. Julie Mojedo of Brgy. Magamay of Nueva Valencia: "The Petron-Citi-SEAFDEC milkfish project is really a big help to us. We were taught by SEAFDEC a lot of skills and knowledge in rearing fish in cages. In fact, some of the training graduates have been hired and/or are managing the floating cages owned by private investors in the area. The successful production has also sparked more interest, and more people want to participate, including the local government."

The above three cases are just a few hard examples of the effectiveness of SEAFDEC technologies and training & information programs. To date (1975 to 2008), AQD has trained and transferred technology to 12,106 stakeholders in 365 training sessions that are a few days to a month to season long. The training courses are conducted at AQD's four stations, on-site at the stakeholders' facilities, or through the internet as distance learning courses. AQD's most attended courses before 1992 have been tiger shrimp hatchery–nursery operations and brackishwater pond culture. After that, the most attended are abalone, mudcrab and milkfish mariculture. Except the online courses (principles of fish health management and fish nutrition), the courses are 80% practical sessions. Courses in 1987-2008 (total trainees = 3,697) have been attended by 71% male and 29% female who are from national government agencies of SEAFDEC Member Countries (41%), private sector (18%), academe (17%), research & development sector (10%), local government units in the Philippines (6%) and others. Making up the bulk of trainees are Filipinos (57%) as AQD is hosted by the Government of the Philippines, followed by Thais (8%) and Malaysians (8%). Trainees also come from Vietnam (6%), Myanmar (4%), Cambodia (4%), Indonesia (3%) and 32 other countries.

"It is important to note that AQD's research output (over 600 papers in ISI-journals) for the past 36 years are what goes into the technology and training course packages," AQD Chief Dr. Joebert Toledo sums it up.