Milkfish fry shortage may not be a problem for long

This was the conclusion of the *Milkfish Forum* held June 14 in Lapu-lapu City, central Philippines. The forum was organized to discuss the results of the project on *Bangus fry resource assessment* implemented jointly by BFAR, SEAFDEC/AQD, PCAMRD, and ICLARM.

"The assessment project started in 1996," says AQD Chief Dr. Rolando Platon. It seeks to examine the implication of the demand for milkfish fry which ICLARM economists have pegged at 1.65 billion fry a year. The project also aims to review existing municipal catch and effort data on fry production and monitor fry production in selected regions in the country for one year.

Although this fry requirement volume is big, fishfarmers now have options to get fry: one is from natural sources though the supply is seasonal; second is from legal (and illegal) imports from Taiwan and Indonesia which the Philippine government allowed in 1995; and third is from emerging milkfish hatcheries who picked up the technology generated by AQD.

The forum participants point out that the issue may not be of fry scarcity *per se*, but of getting the fry to the fishfarmers who need it.

AQD fish expert Joebert Toledo presents a resource assessment of wild-caught milkfish fry during the June milkfish forum in Lapu-lapu City. Among those present are the Chief of SEAFDEC, and the Directors of PCAMRD and BFAR

Supply from the wild

I.R. Smith of ICLARM was the first to study the economics of milkfish fry collection. He estimated in 1982 that Philippine waters can supply 1.15 billion milkfish fry. This obviously is no longer the case today.

"All project sites -- Currimao in Ilocos Norte, Puerto Princesa in Palawan, Dauis-Guindulman-Jagna-Loay-Tagbilaran in Bohol, Pandan in Antique and Kiamba in Sarangani -- have experienced declining catch when compared with historic data available in some sites," notes AQD researcher Joebert Toledo. The 194 fry gatherers who were the respondents of the project attributed this declining trend to the reduction in *sabalo* (mother milkfish) population, overexploitation of fishery resources, and pollution, loss or degradation of coastal areas.

The project found that during the peak months of fry production-- April to July -- as low as 5,000 to as much as 200,000 fry are purchased **daily** by fry concessionaires from gatherers in the project sites; and in the lean months, between 100-300,000 fry are traded daily. The high numbers are mostly from the fry grounds off Antique and Palawan.

"A fry gatherer usually operates 3-7 hours, catching a little more than 1,000 fry a day," Toledo says. "What is alarming is that up to 50% of the fry gathered is not milkfish but other commercially important species like grouper, anchovy, siganid, or shrimps, and that the gatherers just throw them on the beach."

Nemencio Arevalo of BFAR says that concessionaires and traders in turn sell to milkfish producers operating brackishwater ponds, freshwater pens, and marine cages. Stocking density in these systems, he says, are as low as 1,500 fingerlings per ha (extensive ponds) to as high as 35,000 per ha (intensive ponds).

Imported fry

Nelson Lopez of BFAR reports that from 1996 to early 1999, the Philippines imported more than 33.6 million milkfish fry from Taiwan, 74.5 million from Indonesia, and 1 million from Palau. There were also milkfish eggs and *sabalo* imported in 1998.

The importation is made possible by the low tariff (3%) imposed on these products in November 1995, a significant reduction of the previous 30% tariff. Good or bad, the general agreement on tariffs and trades (GATT) will (now or later) provide for free trade / impor-

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Milkfish hatchery is the future, and will later give the fry gathering industry a run for their money

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tation of hatchery-bred fry and breeders from Taiwan, and wild fry from Indonesia and other sources.

The hatchery source

The hatchery technology for milkfish fry production is already here, though the pick up by the industry is rather slow.

Among the first entrepreneurs to pick up AQD's technology is the Rojas TRC hatchery in Aklan which raised tiger shrimp prior to its conversion to milkfish. The biggest problem owner Luis Rojas encountered is marketability. Milkfish producers still prefer naturally caught over hatchery-raised fry although researchers have established that there's no difference in the growth rate in grow-out ponds between wild and normal-looking hatchery fry.

Perhaps the most successful so far of the hatchery operators is the Alson's Aqua Technologies, Inc. Ramon Macaraeg of Alson's says that they were able to produce 100 million fry in 1997, 160 million in 1998, and 120 million up to mid-1999 from one of their hatcheries using AQD technology. Their other hatchery uses Taiwanese technology but production data is not available. Alson's operates an integrated hatchery-grow-out farm-processing plant (see related story).

What next?

The forum basically establishes that:

(1) the milkfish supply from the wild is decreasing. This supply is also highly seasonal, with the annual fry production being variable. Sporadic scarcity may exist because of these factors

(2) fry supply from the hatchery is increasing

(3) the demand for fry will continue to increase because of intensification of milkfish culture and the increasing use of milkfish as bait in the tuna industry. Fry importation could help meet future demand but it has problems of its own

The forum therefore recommends:

(1) monitoring fry supply and the health of the resource over time must be institutionalized; the involvement of fry gatherers in this is critical. The lack of good statistics seems to be a perennial problem

(2) some technical problems need to be solved, e.g., reducing fry mortality due to improper handling, transport and rearing; also some more socio-economic data need to be gathered, e.g., understanding the dynamics of fry movement and the role of middlemen

(3) BFAR may have to help the industry "hold on" to fry during the peak months by stocking them in nursery ponds, thereby lessening the impact of seasonality and stabilizing prices. This concept has been practiced by fishfarmers for years in their "bansutan" or stunting ponds though a large-scale effort has not been done. The industry also needs continuous technology support (especially for starting hatcheries) and more incentives to increase profits

(4) proper implementation and enforcement of fishing rules and regulations

(5) better coastal resources management by local government units especially over fry gathering

(6) taking a closer look on import-export laws; policy reforms may be necessary.

- By M Castaños