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The hidden traps in aquaculture

By **MB Surtida**

New investors in aquaculture probably know that they can make mistakes as they continue to operate their farms. Whether the mistakes happen immediately or not are risks they take as long as the mistakes are manageable and can easily be corrected. But many aquaculturists who have long been in the business say that there are costly mistakes that can wipe out one's investment. This paper is based on interviews with experienced aquaculturists and some popular articles from other aquaculture newsletters (Lindberg and Pryor on ways to lose money in aquaculture, Proceedings, sustainable aquaculture 95) and shares some insights regarding mistakes that may be hidden to new investors but obvious to experienced aquaculturists.

1. It is a blunder not to think of aquaculture as a business enterprise. Aquaculture is business. Some investors who have technical know-how, such as retirees who have had a chance to observe aquaculture operations while still working, think that farming problems can be solved with high technology set-up, top biologists, and known consultants. But the real problems that cost money, say Lindberg and Pryor are bad weather that damages pens or cause flooding in ponds with mud, careless and drunken or absent employees, poaching (very serious if stocks are wiped out), stopped up pipes, broken trucks, delayed shipments, poor prices in the market, high cost of feed, parasites, and diseases. Lindberg and Pryor further add that academicians and scientists are inexperienced managers and that hardy, hard-headed, experienced overseers of laborers with mechanical skills and no fear of hard labor must be the kind of people to run a farm. The technical skills to run a farm may be immediately acquired but managerial skills especially in dealing with emergencies take years for research-oriented people to acquire. According to an experienced aquaculturist, long distance management is not workable in aquaculture and that "what you hear is different from what you see." The most effective type of management is for the owner who lives in the vicinity of his ponds. Most corporate-type management for prawn aquaculture, for example, have dismally failed.

Once aquaculture is considered business, budgeting and cost projections would be reflected. Important to consider are equipment breakdown, storms, theft and diseases, power brownouts, cold storage, travel to similar farms to observe farming practices, and other maintenance costs.

2. Buying unnecessary equipment. Complex equipment and unproven gadgets may cost heavy expenditure. Be sure to

invest only in equipment that is needed. It takes at least twice as long for the first cash crop to pay. By that time, salaries have to be paid, feeds bought, power and water utilized. The tendency to spend too much in the first operation phase is a mistake most new businesses experience.

3. Investing in relatively new farming species. It is dangerous to farm a species that has not yet been successfully bred and reared in captivity. Trying to learn a new technique, like growing fry at acceptable quantity can take up so much time.

4. Putting all investments in a single crop. If 10 hectares of ponds are available, initially stock 3 hectares with a crop whose technology has been proven to make profit. Stock other ponds with a commodity one is less confident in and slowly expand farming when profits are made until a degree of competence in a single crop is attained. Then perhaps, compare the economics and confidence level of farming of the various species being farmed.

5. Failure to consider international standards. Several years ago, shrimp farmers from Asia were taken by surprise when their imports to developed countries were slapped an embargo for not using turtle extruder devices. Other aquaculture products have various requirements. For value-added products, ISO and HACCP are required while smoked aquaculture products also have strict requirements (the smoked products are tested for presence of harmful chemicals that may have been formed in the smoking process). Other requirements are specific for size, bacterial load, etc.

6. Producing an aquaculture product with an uncertain profit margin. Sometimes, fishfarmers focus on producing large volumes of low-priced fish instead of high-priced ones that have been proven to make better profit. Lindberg and Pryor again attest to the success of raising high quality table items such as shrimp (extensive culture system), grouper, and mudcrab even in less developed countries. The state of aquaculture production is such that producing a large volume of low-priced fish cannot compete with wild fisheries in producing, for example, cheap fish meal for human or animal feed. Aquaculture activities for poverty alleviation or food security belong to government and research institutions and not to the commercial entrepreneur who hopes to

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water and fuel.

Before a product is placed inside cold storage facilities, it has to go through contact plate freezing. According to Engr. Elmer Figuracion, chief of the Ice Plant and Refrigeration Division, the procedure charges P2,800 per freezing cycle of about 3-4 hours. When the inner body temperature of the product drops to a range of about -18°C to -40°C or lower, this may now be transferred to the cold storage area which charges about P1,988 per m² per month. The facility consists of two rooms each capable of storing 250 metric tons at -35°C. Engr. Figuracion noted that with the decline of the prawn industry, the facility is not as fully occupied as it should be. While the first room is exclusively for marine products; the second is rented out to distributors of poultry and meat products.

The processing zones, on the other hand, are divided into two: open (uncovered) space which is rented out at P20 per m² per month and covered space, at P90 per m² per month. The engineer mentioned four processing plants operational at this time.

We had a chance to tour the facility of one such plant: AFI, which also has offices in Cebu and Tagig in Metro Manila. AFI is a fish processing and exporting company that specializes on Japan-bound *aso-os* fillets. It gets its fish mainly from Estancia and Banate fishers. After scaling and cleaning, the fish are packed and block frozen at 550 g each.

This is but a brief prologue to the long account that constitutes the story of the fish trade industry. But one really interested in aquaculture should not be content with just this mere introduction. Aside from knowing how to farm his products well, he should also know how to market them successfully. He should don a pair of rubber sneakers (or slippers) himself and get out one day, to savor the smells, the sights, the sounds of the very wet and squishy fish market. ###

ers, fishpond owners, fisherfolk cooperatives, small-scale operators, research institutions and the academe, and other potential stakeholders. DA may consult with specialized international organizations in the formulation of the code of practice.

At least in the Philippines, the future of aquaculture looks green. But to really make an impact in the greening of our planet, the governments of both developed and underdeveloped nations should strive to stamp out poverty globally.

As the late Indira Gandhi at the first Earth Summit in Stockholm said: "Poverty is the greatest polluter. Poor people in developing countries contribute to ecological destruction through everyday practices such as firewood burning. They are not being malevolent, they are simply living off the cheapest resources available.

"Galloping poverty is a global challenge, not just one for developing nations. Everything is interconnected these days - the rich, the poor, the environment and the economy."

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make a profit. In other words, before production, know your market wherein profit is certain and impressive.

7. Failure to provide for behavioral and environmental needs of the fish. Usually, livestock are kept safe, warm, and comfortable. But aquaculture farms seldom take care of aspects such as presence of too much noise, rough and unnecessary handling, and unsuitable water temperature. Seldom noticed, these

factors are usually causes of poor growth, low conversion ratio, low resistance to disease, and poor survival.

8. Lack of business experience. Again, experts agree that well meaning owners who are hardworking and well-trained as fisheries biologists are seldom competent to meet the normal problems of management of a business. ###