CHAPTER 2:

MARKETS AND MARKETING

The market is the driving force for commercial aquaculture. Before deciding to invest into aquaculture, one must have identified a potential market to which the fish produced can be sold profitably. This is because the market influences the farm-gate price of the fish produced, what quantities one is able to sell at a time and how frequently sales can be done. Consequently, it is the target market that determines the levels of one’s investment in aquaculture, the species to grow, size of harvest and even the size of pond. Therefore, the optimum size of one’s operation, the technology one should adopt as well as what production management strategy the farmer should have is based upon the market they wish to enter.

The detail to which specific activities in the enterprise are undertaken is additionally governed by the physical and financial resources the farmer has at hand. For example, if a farmer has an acre of land and is to supply \( x \) amount of catfish per week to the market, the following are among the decisions the farmer would have to make:

1. How many ponds should I have in order to meet my market targets?
2. What size should the pond(s) be?
3. How many of these ponds can actually fit on my land?
4. How long should my production cycle be?
5. What kind of management should I adopt for timely harvest?
6. What would be the optimum size of fish to produce?
7. Should I co-opt other farmers with whom I can work collectively in order to meet the demand of the identified market and maintain it?

2.1. Identifying the Market and its Needs

Enquiries need to be made to identify the potential customers and traders. However, one should bear in mind that it is very easy for someone to respond, "Yes, if a product is available I would be interested in purchasing certain amount so many times per week or per month".

The best way to ascertain the market after an initial survey is to test it by actually selling the proposed product. If you do not have fish to do this, buy some fish from another farmer and sell it to the proposed market. In this way you will be able to interact with your would-be
customers more directly and observe who is actually coming to buy fish and why. You can also gauge the prices the market can offer, people’s opinions on the product, as well as their views and perceptions on the fish you have brought for sale. This is less costly than constructing your own fish farm only to discover you cannot get the price you thought for your fish.

After obtaining this information, one is in a better position to assess the size and preferences of the market in question as well as work out what marketing strategy would be best for penetrating, expanding or sustaining the market. Potential lenders or co-investors appreciate this type of practical research much more.

2.2. Know your Product

It is important to know exactly what product your customers will want because that is what you shall sell. Know the species they desire, what size they want and whether they would prefer it whole, fresh, filleted or smoked. All these factors define and encompass the quality of the product to be produced. Knowledge of the qualities of your product also give you advantage while marketing your product.

For example, if you would like to supply restaurants, as a fish farmer you should be in position to supply a uniform size of fish as specified by the customer as opposed to someone who sources their fish from the lake. A fish farmer can guarantee freshness because only farmed fish can be supplied alive to the customer. There is no fish fresher than one supplied live (see appendix 1 for criteria used to grade fish). Hence, the farmer can negotiate a better price. It is for among these reasons, that the processing plants are increasingly preferring to source farmed fish.

If you are supplying an intermediary, the quality requirements of the final market will be passed on to the producer because quality control starts at the point of production. Hence, the fish processors exporting catfish fillets prefer receiving the fish live because it enables them meet the fillet quality criteria their markets want. Also farmers intending to produce for organic markets are restricted not just from the general use of chemicals but also on what sort of ingredients are contained in the feed. Furthermore, a farmer who keeps the recommended records is able to show traceability in the production process which is a vital factor in quality assurance which gives advantage in penetrating certain markets, notably processing plants, restaurants and supermarkets.
Fish farmed and handled for market following Best Management Practice can be guaranteed as being of a superior quality (See appendix 1 for criteria used to grade fish quality based on physical characteristics).

2.3. Choice of Management Plan
The choice of what management plan and production technology would be most appropriate is best made after identifying the market and its needs. The production plan you adopt should enable you produce the desired quantity and quality at the frequency the market demands.

For example, does the market require you to supply \( x \) kg of fish product \( y \) daily, weekly, or monthly. One must be in position to produce the required product at a cost lower than the price the market can afford to pay so that a profit is made. The management practices you employ also affect the quality of your product and the price you can sell it at. For example the type of feed you use affects the fish quality; fat content, taste, etc (See Plate 2.1 for a picture of catfish fillets - fatty fish versus a lean fillet).

The choice of technology, location and management are therefore linked to your market’s needs as they determine what levels of production are achievable as well as the efficiency and costs of production. For example, choice of location affects one’s production and returns in the following ways:

1. The location determines what physical resources (such as soils, water quality, land) are available for production and the cost at which they are available for production. Therefore, if the farm is close to the city, the unit cost of land is likely to be high and it will probably be too expensive if one wanted to increase production by increasing the number or sizes of one’s ponds. It would be more viable in such a case to increase production by increasing the carrying capacity of the existing units (see Chapter 4 for more details).

2. When a farm is small, smaller amounts of fish are likely to be produced. Therefore, small farms need to get higher profit margins if their establishments are to be economically viable. Such farmers would therefore, rather directly retail to niche markets who can offer a higher price.
3. Farms located in remote areas where land is cheap, water and, labour are easily accessible at lower costs can afford to have large production units and produce for the bulk markets. Such farms can afford to opt to supply bulk markets at a lower profit margin because they have the capacity to produce large volumes and have a high turnover. Adopting lower levels of technology in such a case may be feasible. However, transport costs for inputs and for marketing fish can have quite an impact on profit.

See chapter 10 for an example on how one can tailor one’s production program to specified market requirements.

2.4. Siting the Farm

When siting the farm, the following are among the major considerations one should take into account:

1. **Availability of suitable land** with a reliable source of water and good climatic history e.g. no floods.

2. **Accessibility to the Site** for supply of inputs and for taking produce to the market. Accessibility and distances from one’s sources of inputs as well as to the market affect transporting costs. Being close to the market and sources of supply reduces ones transport costs and can make a difference on profit margins.

3. **Market availability and accessibility.** If one is retailing directly from the farm for example, it is much better to have the farm located as close to the market as possible. If, on the other hand, one intends to do bulk sales every so often, then the farm can be further away from the market as you would be transporting and delivering large amounts to one destination probably once a week or month. Also bear in mind that fish is a highly perishable commodity when fresh. If one is to supply fresh fish and does not have facilities for live transportation or holding fish alive – invest in this equipment. If the market requires smoked products, the farm would take into account easy access to the correct type of firewood and ability to process and smoke large amounts of fish in that environment.

4. **Other land uses in the vicinity.** All fish farmers should take note of what sort of activities go on in their surroundings because of their
potential impact on your production and product quality. Care should especially be given to activities that are likely to affect on the quality and volume of water to the farm. For example, it is not recommended to site a fish farm where the effluent from factories enters your water source, as most probably the effluent is likely to have a negative effect on the quality of water for fish production.

5. **Utilities.** Does the production technology you intend to adopt (e.g. for storage of fish) require that you need power? If it does, then the farm should be in a location easily accessible to power.

6. **Roads and other Transport Networks.** These influence accessibility and costs of getting to the farm.

7. **Social Aspects.** For example, it would not be wise to set-up a commercial smokery in the middle of a residential area as your neighbors might complain.

### 2.5. Profit Margins in Grow-Out Fish Farming

There is a limit on what the maximum price one is likely to get from a fish of a given size/weight depending on its perceived value by the market. This is because the customer can easily opt for other alternative sources of protein such as eggs, meat or milk if they find fish too expensive.

Generally the profit margins obtained from farming fish in Uganda range from 10% to 30% of operational (variable) costs. This means that cost of land and ponds has not yet been taken into account. The profit margin though, may be higher or lower depending on one's local markets and specific marketing strategy. It is not just the growth rates achieved that matter for profitable production, but also survival rates, feed conversion and total yield. What this tells an investor, though, is that if all investment is to be covered by a loan, the entire profit is likely to be used as interest payments, given that interest rates are often above 20% in Uganda. Most people do not wish to be merely "working for the bank".
2.5.1. Adding value

The other way of increasing profit margins and income from table fish production is to add value to the product. For catfish, locally this can be done by smoking and or filleting the fish (see Chapter 7.3.4. for more details). However, before deciding upon value addition, calculate the returns based on “live weight equivalent” (See example in Box 1 below).

Box 1: Example of How to Estimate Returns Obtained based on “Live Weight Equivalent”

A farmer sells a piece of catfish that has been gutted and smoked at USh. 10,000/= per kg. What is price the farmer is getting for the each unit weight of fish before processing?

One requires 4 kg of fresh (whole) catfish to produce 1 kg of smoked catfish. Therefore, if a farmer decides to sell a kilogram of smoked catfish at USh. 10,000/= per kg, then the value of 1 kg of fresh catfish = 10,000/4= 2,500 USh

The farmer is actually getting USh. 2,500/= per kg live weight of fish produced.

Note that labour and supplies are required to turn this into a smoked product. So the cost of production is higher as well.

Volume vs Profit Margin

What would you prefer to produce?

A. 1 ton per year of fish costing 1,500 USh per kg to produce and fetching 3,500 USh per kg?

OR

B. 10 tons per year that cost 1,800 USh per kg to produce and fetching 2,800 USh per kg.

In other words, would you prefer to make 10 million USh (option B) or 2 million USh (option A)? Most people would prefer to make 10 million USh instead of just 2 million but very few would select option B because the profit margin is lower.

Production costs are higher when intensity is increased. Selling price is often lower when total volume of a sale is high because a person is selling to middlemen or processors.
2.6. Sustaining the Market

As a producer, it is in your interest not just to be able to produce and sell fish once, but to continue to sell whatever you produce at a profit. This is because the investment one makes to establish a fish farm is large and the cost will have to be paid off with time from the products sold.

One of the surest ways of keeping and building up your market is through CONSISTENCY in supply and quality. The farmer (or group of farmers) should be in a position to guarantee consistent supply and product quality based on the market requirements.

The market’s needs therefore determine the ideal place to site a farm, the farms’ set-up and production plan (see Chapter 10 for more details). When seeking advice on planning your farm, a good advisor should ask the following key questions:

i. What your target market is?
ii. What product does the target market want?
iii. What quantity do you want to produce?
iv. At what frequency would you like to produce specified amounts?

The advisor should then ask you to explain how you came to these decisions and what resources you have at your disposal for producing the fish. Based on your answer, the advisor should be in position to let you know:

(i) whether or not you can achieve your production objectives,
(ii) what your management options are,
(iii) the viability of the enterprise as well as what challenges you might face.

And finally, you would decide whether or not you should invest in fish farming. Remember, if you aren’t sure, starting small means you can only make small mistakes. Making mistake when you start big can be very costly.
a. Lean Catfish Fillets, with the belly flap or “nugget”

b. Feeding catfish with feed high in energy or rich in fats results in the deposition of a lot of fat within the flesh. Sometimes the fillets can be unmarketable.

Plate 2.1: Flesh Quality