1993

Boom or bust indices of the family farm

Aquaculture Department, Southeast Asian Fisheries Development Center

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the nursery, it is important that the temperature inside the transport bag is the same as that of pond water. Place the unopened bags in the pond for 10-15 min. Open slowly and introduce small quantities of pond water to equalize the temperature. The fry are then allowed to swim into the pond.

Feeding

It is often difficult to maintain a high level of natural food for growing fry and supplementary feeds become necessary (Day 31). A mixture of finely powdered oil cake (soya beans, mustard, etc.), rice or wheat bran, and fish meal in the ratio of 5:4:1 can be supplied to fry daily.

Care of fry or fingerlings

Check the pond daily and see if there is an excess of green algae, then stop application of supplementary feeds. Increase feed if fish growth is not good. Remove frogs, snakes, and other predators from the pond.

Harvest and transport

Harvest the fry or fingerlings with a net either in the morning or late afternoon and keep them in enclosures (*hapa)* or cistern at least 3-4 h before transport (Day 60).

It is important that fingerlings are conditioned before transport. They must have time to empty their guts before being packed in high densities, so that the transport water is not polluted by excreta. Clean water from a well should be used for conditioning the fingerlings.

Transport the fry or fingerlings in oxygenated plastic bags. About 5 liters of water and 15 liters of oxygen is placed in each bag of 20 liters capacity. Density of fish (30- mm size) during transport:

Species	*Fry per liter*
Rohu	50
Bighead carp	50
Catla	33
Silver carp	60

Source: International Institute for Rural Reconstruction and International Center for Living and Aquatic Resources Management. 1992. ***Farmer-proven integrated agriculture-aquaculture: an information kit.***

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The farm budget, monthly cash flow, and other economic considerations are important to the family business. Here is how the farm's economic potential and performance are analyzed:

The farm budget

First, make a **cost sheet**
- List the things that are required for you to do business.
- Write down how much is needed, the price, and the amount paid.
- Add all amounts paid to find out the total costs.

Second, make an **income sheet**
- List all the products from the business that can be sold.
- Write down how much is sold, at what price, and the amount received.
- Add all amounts received to find out the total income.

Third, work out your **balance** or **profit sheet**
- Write down the total income received from the business.
- Write down the total costs that were required in doing the business.
- Subtract the total amount paid from the total amount received from the sales of the business.

The monthly cash flow

First, work out your **cash outflow**
- Note down the activities of the business that required money. Write down the costs involved.
- Record on the calendar the activities that needed money and the amounts paid during each month.
- Add all money required to do business each month to get the total monthly cash outflow.

Second, work out your **cash inflows**
- Note down the products sold and the money

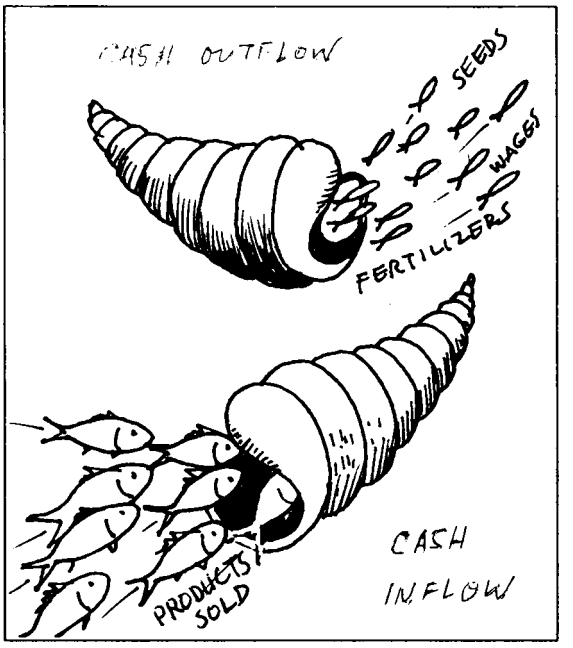
received from these sales.

- Add all the money received from the sales of the products of the business each month to get the total monthly cash inflow.

Third, compute the **cash netflow**

- The monthly cash netflow is computed by subtracting the monthly cash outflow from the monthly cash inflow.

A negative cash netflow during the first few months of business means that the farmer spends money to buy and pay for things that are required. When he starts getting cash inflows but has a negative netflow, more money is required to pay for the business than what is received from the sales of his products. When there are cash inflows and outflows in a particular month, a positive netflow means that the farmer receives more money from the sales of his products than he needs to pay for the farm expenses that particular month.



Opportunity costs

The farmer may have several alternative uses for his resources such as labor, land or cash capital. He must know whether using his resources for a particular business would give him better income than investing in others. The opportunity cost is the value of the best use of a particular resource. A new technology is worth adopting if the income earned from the use of the farmer's resources are greater than the opportunity costs of what could have been earned from other activities.

Equity and income distribution

Is the new technology or business going to place significant demand for the labor and time of family members? Who will meet such labor demand? What is the opportunity cost of additional labor hours in terms of leisure, children's schooling, and house work by women? A farmer's wife may have to spend more time in the farm -- feeding the fish with rice bran and cleaning the dikes instead of cooking at home for the family. Children may also have to help in the farm chores and spend less time studying.

Risks and markets

Is the produce meant for household and local consumption or for export? How diversified will the farm operations become when a new component technology is adopted? Will it increase or reduce risks of crop failure? Will the products of the new technology be subject to price uncertainty because of an unstable market? How sensitive is the net return to changes in input costs and output prices?

Source: International Institute for Rural Reconstruction and International Center for Living Aquatic Resources Management. 1992. ***Farmer-proven integrated agriculture - aquaculture: a technology information kit.***