

## FARM BUSINESS PLANNING AND BUDGETING FOR SMALL FISHERY AND ALLIED ENTERPRISES

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### Introduction

**F**ishery and allied enterprises have immense scope to support the livelihoods of small holders, especially the resource-poor coastal dwellers. There are wide variety of enterprises in the sector such as fresh water and brackish water fish farms, cage culture farms, ornamental fish farms, fish hatcheries and seed production units, mussel and oyster culture farms, clam processing units, pre-processing units and fish value added products units. Like any other small-holder enterprises, success of such units depends considerably on farm planning, budgeting, accounting as well as market analysis and business development. This chapter deals with the basic accounting and economic principles and practices based on which a successful fishery-based enterprise can be operated.

### Farm business planning

Farm business planning is integral to farming as it involves adoption of business methods in every phase of farm activity. It is an integrated, co-ordinated and advance programme of actions

which seek to present and opportunity to farmers to improve their level of income. A detailed farm business plan should show the enterprises to be taken up and the various practices to be followed in production, use of labour, investments to be made and other details. It enables the farmer to achieve his objective (profit maximization or cost minimization) in a more organized manner. As in crop farming, farm business planning is an important activity in fishery related enterprises as well. The following are the major rationale of farm business planning:

- Farm business planning is a necessary pre-requisite for running a profitable enterprise.
- Helps in systematic assessment of the resources in hand and schedule farm production accordingly.
- Guide to better management and future decisions.
- Helps in mid-term corrections.
- Helps in assessing production and marketing decisions.
- Aids in inventory management.
- Helps in keeping track of income and expenditure thus ensuring profitability.

### Types of farm plans

- a. Simple farm plan: It is adopted either for a part of the farm or for one enterprise or to substitute one resource with another. It is relative easy to implement. Changes in farm activities are generally initiated with such simple farm plans.
- b. Complete or whole farm planning: This involves planning for the whole farm. Such planning is adopted either at the beginning of farming or when major changes are contemplated in existing organization of farm business.

### Main elements of farm business planning

The main elements of farm business planning are the

following:

- Production analysis
- Resources at hand
- What is the scale of production and product mix?
- Quantity of inputs needed
- Source of inputs and supplies
- Technology available and source
- Where is the market?
- Harvest scheduling
- Marketing strategy
- Preparation of enterprise budget - costs and earnings estimates
- Record keeping
- Cash flow and accounting
- Farm inventory analysis
- Farm efficiency measures

**Farm budgeting**

Budget is essentially a presentation of costs and returns accompanied by a statement showing the physical quantities of inputs and output associated with each value figure. The objective of drawing up a budget is to measure the returns expected from the plan. Farm budgeting is a method of analyzing plans for the use of resources at the command of the decision maker. In nutshell, the expression of farm plan in monetary terms by estimation of receipts, expenses, and net income is called budgeting.

The three common objectives of farm budgeting are:

- a. To estimate the profitability of a particular pattern of organization.

- b. To determine the change in profits that are likely to follow a particular change in organization, and
- c. To compare different organizational patterns or alternative changes in organization on a profit basis.

**Type of farm budgeting**

a. Partial budgeting (Enterprise budgeting): It refers to estimating the outcome or returns for a part of business i.e., one or few activities. In situation where relatively small modifications have to be made to existing organization, a partial budget will suffice.

- b. Complete budgeting: This method is used to make out a plan for the whole farm. In situations involving extensive remodeling of the farm organization, a full budget is called for. This entails setting out all the individual costs and return items for the farm, so that overall net return is from the whole unit.

A typical example for an enterprise budget for small fishery unit is presented below.

A. Capital cost			
Cage 10m X 5m with GI frame	80,000	10	800000
Total A			800000
B. Operational Cost			
Asian Seabass seed	10000	40	400000
Pearl spot seed	2000	10	20000
Seabass feed	1344000		
Pearl spot feed	20000		
TOTAL B			1784000
C. COST-BENEFIT ANALYSIS			
C1. Annual fixed cost			
a. Depreciation on capital investment, @20%			160000
b. Insurance premium @ 2% of the capital investment			16000

c. Interest on 75% of the capital investment @12% per annum	72000
d. Administrative/Other expenses @ 1% of 75% capital investment	6000
Total Annual fixed cost C1 (a+b+c+d)	254000
C2. Annual Variable Cost	
a. Annual operational cost (B)	1784000
b. Interest on operational cost @ 12%	214080
TOTAL Annual variable cost C2 (a+b)	1998080
TOTAL OPERATIONAL COST (C1+C2)	2252080
D. INCOME	
a. Income from Sea bass production (6400 Kg @ Rs.500)	3200000
b. Income from Pearl spot production (240 Kg @ Rs.600)	144000
TOTAL INCOME	3200000
FINANCIAL ANALYSIS	
a. Operating cost	2252080
c. Total Cost	2534054
d. Gross Revenue	3200000
e. Net Operating income	947920
f. Net profit	693920
BC ratio	1.26

### Estimation of depreciation

Depreciation is a method of reallocating the cost of a tangible asset over its useful life span. In other words, it re-estimates the value of a fixed asset every year taking account of its loss value due to wear and tear. It is worked as per the following example:

Cost of cage = Rs. 60,000/-  
 Scrap value = Rs. 5000/-  
 Life time of machine = 10 years  
 Depreciation =  $(60,000 - 5000)/10$   
 = 55000/10  
 = Rs. 5500

### Cost concepts

Cost concept approach to farm costing is used widely in India. The three cost concepts in brief, are Cost-A1; Cost-A2 and Cost C. The different cost items that are to be included under each cost concept are detailed below.

#### Cost A1

- Casual hired labour
- Hired machine labour
- Imputed value of own machine labour
- Feed
- Chemicals
- Seeds
- Maintenance charges
- Interest on working capital
- Depreciation

Cost A2 = Cost A1 + Rent paid for leased in land

Cost B = Cost A2 + Imputed value of owned land + Interest on owned fixed capital

Cost C = Cost B + Imputed value of family labour

#### Farm record keeping

Farm record keeping is a system of records written to furnish a history of business transactions with special reference to its financial side. The objective of farm records and accounts is to provide control over business and improve the management of farm.

#### Type of farm records

- Physical farm records
- Financial farm records
- Supplementary farm records

#### Physical records

- Farm map

- Land utilization records
- Production and disposal record for crops/livestock/fishery
- Labour records
- Machinery records
- Feed records
- Stock and store register

**Financial records**

- Farm inventory
- Cash flow statement
- Capital asset and sale register
- Cash sale register
- Credit register
- Purchase register
- Wage register

**Supplementary records**

- Auction register
- Hire register
- Stationary register

**Cash flow statement**

Cash flow statement provides the details of receipts and payments. It is prepared for a specific period. It reflects net changes in cash balance and helps to capture the progress of farm business systematically. A hypothetical example for a typical cash flow statement in a small fish farm is presented below:

Cash flow statement: An example

**Balance sheet/ Inventory statement**

Balance sheet is a statement of physical properties pertaining to a farm business in terms of assets and liabilities. Assets and

Date	Particulars	Expenditure	Income
1-1-2018	Purchase of seeds	10,000	
5-1-2018	Purchase of feed	15,000	
10-1-2018	Sales revenue on fish		26500
12-1-2018	Purchase of farm implements	21200	
15-1-2018	Wage payment	25,000	
25-1-2018	Rent on leased-in land	4,500	
28-1-2018	Proceeds from sale of seeds/ fingerlings		65,000
	Total for January, 2018	75700	91500
1-1-2018	Opening balance	24500	
31-1-2018	Closing balance	40,300	
	Net change in cash		15800

liabilities include fixed/ working/current. Contrary to cash flow statement, it is prepared for a point in time. Balance sheet essentially reflects net changes in inventory. It helps to capture the financial health and stability of the business. A hypothetical example for a typical balance sheet in the context of a small fish farm is presented below:

**Balance sheet for a fish farm: An example**

**Farm efficiency measures**

An important element in farm business management or decision making relates to the manner in which available resources are

Liabilities (Rs)	Value (Rs)	Assets (Rs)	Value (Rs)
Current liabilities		Current assets	
Fertilizers	5,500	Current assets	
Feeds	8,500	Cash in bank	25000
ST loan	45,000	Cash in hand	15,000
working liabilities		Grains stored	20,000
MT loan on equipment	75,000	working assets	

Insurance payments	25,000	Machinery & equipment	1,50,000
Fixed liabilities		Standing fish stock	35,000
		Fixed assets	
		Land	10,00,000
Total liabilities	1,59,000	Farm sheds	2,50,000
		Total assets	14,95,000
Net worth			13,36,000

allocated. A measuring indicator is necessary to provide guides and standards for appraising accuracy of decisions regarding the use of resources. There are two broad types of efficiency measures, viz., physical efficiency measures and value efficiency measures. They can be further categorized into aggregate or absolute measures and ratio measures. Some of the farm efficiency measures widely used in the context of farm business planning are presented below:

**Aggregate measures:**

- Gross income = Value of main product + by-products
- Net operational income= Gross income – total operational cost
- Net profit = Gross income – (total fixed costs + total operational costs)
- Net worth = Total assets - total liabilities

**Ratio measures:**

- Cropping intensity =  $100 * (\text{Gross cropped area} / \text{Net cropped area})$
- Benefit-cost ratio (B:C Ratio) =  $(\text{Present value of gross benefits}) / (\text{present value of total cost})$
- Break-even point = The point where total costs equals total revenue =  $\text{Fixed costs} / (\text{Price per unit} - \text{operational cost})$

- Capital turnover rate =  $100 * (\text{Gross income} / \text{Total value of farm assets})$

**Suggested readings/References**

V.T. Raju and D.V.S. Rao (1990).Economics of Farm Production and Management, Oxford and IBH Publishing Company Ltd., New Delhi.

Johl, S.S. and Kapur, T.R. (1973).Fundmantals of Farm Business Management, Kalyani Publishers, Ludhiana.

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