# ChapterThree
# Farm Planning and Budgeting

## Farm Planning

- Is a key tool in farm management used to reduce the risk of failure and helps to establish a steady income.
- Once the farm manager has defined the goals for a farm business.
- The next logical step is to develop a plan to attain these goals.
- Depending on the situation farm plans can be on paper or mentally.
- **Planning** mean ***taking decisions in advance***.
- It stimulates ***thinking, broadens understanding & challenges*** the farmer ***to move forward***.

# Cont….

- Farm planning is a process:
- to allocate the scarce resources of the farm
- to organize the farm production in such a way that
- to increase =>The resource use efficiency,

=>The production and

=> The income of the farmer.

# 3.1.1 Objectives of farm planning

- Without planning, farm business decision would ***become random***.
- The following concrete ***reasons explain the paramount importance of farm planning.***

**i. Income improvement**

- Farm planning primarily concerned with ***making choices and decisions selecting the most profitable alternative*** from all possible alternatives, and ***seek to present an opportunity*** to cultivators his level of income.
- This ***opportunity of income maximization*** **induces farmers *to adopt desirable changes.***
- Such income maximization ***could be achieved from*** a given bundle of resources by:
  - Re-organizing present type of production
  - Introducing changes in technology.

# Cont....

**2. Focuses attention on the farm organization's goals**

- **Farm planning** helps the manager ***to focus attention on the organization's goals and activities.***
- This makes it ***easier to apply and coordinate the resources of the farm more effectively***.
- The whole organization is forced ***to embrace identical goals and participate in achieving*** them.
- It also enables the farm manager to outline in advance an orderly sequence of steps for the realization of organizations goals and to avoid a needless overlapping of activities.

- **iii. Educational process**
  - Farm planning is an ***educational tool to bring about a change in the outlook of the cultivators and the extension workers.***
  - ***Knowledge of the latest technological advances*** in agriculture is ***a pre- requisite for better farm planning;*** so farmers or farm managers keep their information up-to-date through this forced action situation of farm planning process.
  - **This act is used as a self-educating tool for the farmers.**
  - The farmers or farm managers can closely study their own business and see more clearly their ***opportunities and limitations, thus, improving*** their managerial ability.

**iv. Desirable organizational change**

- Planning helps ***to introduce desirable change in farm organization and operation*** .
- ***The advantage of farm planning lies*** in its ***treating the farm as an operational unit and tailoring the recommendation to fit into the individual farmers' opportunities, limitations, problems and resource position.***

**v. Minimizes risk and uncertainty**

- By providing a ***more rational and fact based procedure for making decision***;
- farm planning allows managers and organizations ***to minimize risk and uncertainty.***

**vi. Facilitates control**

- In planning, the farm manager gets ***goal and develops plans*** to ***accomplish these goals***.
- These goals and plans then become standards or benchmarks against which performance can be measured.
- The function of control is ***to ensure that the activities confirm to the plans.*** Thus, control can be exercised only if there are plans.

### 3.1.2 Features of good farm plan

- The main objective is **to obtain maximum returns**;
- Good farm plan provides a ***cropping scheme*** that includes a most profitable crop .
- It offers ***balanced combination of crops and live-stock*** enterprise leading to profit maximization.
- The plan must be able to ***fulfill the farm and family requirement*** of the farmer.
- The farm plan provides a ***regular employment and income to farm family*** through the development of sounds crop rotations.
- It is ***flexible enough to take advantage***

# Cont...

Steps in farm planning

- There are e important steps in developing a whole farm plan:

1. Formulate goals and objectives
2. 2. Inventory available resources

3. Identify possible enterprises and technical coefficients

4. Estimate gross margins

5. Choose a combination of enterprises

6. Prepare a whole farm budget

# Importance of farm planning to farmer

- It helps the farmers in the following manner:
- Choose different farm activities suited to the given farm conditions.
- Look into the future and decide on suitable course of action.
- Select appropriate enterprise combinations that results in the better use of resources.
- Timing various jobs and operations for smooth conduct of operations without competition.
- Avoid wastages that occur in the resource use.
- Provide guidance and flexibility for ensuring better use and growth of the farm business.
- Provide allocation of resources for producing the requisite products for marketing and household consumption.

# Budgeting

- Budgeting is powerful tool used for planning purposes.
- Budgeting is an estimation of the future outcome of the farm plan in quantitative terms.
- Farm budget is the physical and financial plan of a farm operation for some period usually one year (production cycle).
- Physical budget refers to what and how much to produce and what methods of production to use.
- Financial budget includes the expected cost and return budgeting is the most widely used method of farm planning.
- Budgeting as a problem solving tool is used

A farm budget basically consists of two steps

- Preparing a description and specification of the proposed plan (crop area).
- Estimating the expected costs & returns
- e.g. Specification – ecologically suitable crop for the area

The three common objectives of budgeting are

- To estimate the profitability of a particular pattern of organization.
- To determine the change in profit those are likely to follow a particular change in organization.
- To compare different organization or alternative changes in organization on a profit basis.

## 4.2.2. Types of budgeting

There are three types of budgeting

1. Enterprise budgeting

- An enterprise budget is an organization of projected income and expenses for a single enterprise.
- It is an organization of revenue, expenses, and profit for a single enterprise.
- They can be created for d/t levels of production or types of technology.

- Purpose of Enterprise Budgeting

- The primary purpose of enterprise budget is to estimate costs, returns, and profits per hectare or per head for the enterprise.

Specific uses:

- To make adjustment on the whole plan
- To identify the most profitable and less profitable enterprises from the whole farm plan.
- To undertake break-even analysis

# 2.Partial budgeting

- It provides a formal and consistent method for calculating the expected change in  profit from a proposed change in the farm business.
- It is capable of analyzing only two alternatives at a time, the current situation and a single, proposed alternative.
- Partial budgeting refers to the estimating the outcome or returns for a part of the business.

- .Partial budgeting technique is generally used to evaluate the profitability of input substitution, enterprise substitution and scale of operation.

1. **Added costs:**

- **Additional costs are incurred, if the proposed modification is the introduction of** a new enterprise or increase in the size of the existing enterprise.

**2. Added returns:**

- **Additional returns could be received when the proposed modification is the** addition of a new enterprise, or increase in the size of the existing enterprise or adoption of technology that results in higher productivity.

**3. Reduced returns:**

- **Decrease in the returns is observed when the proposed modification** involves the elimination of an existing enterprise or reduction in the size of the existing enterprise.

**4. Reduced costs:**

- **Decrease in the costs is found when the proposed modification involves the** elimination of existing enterprise or reduction in the size of the enterprise or adoption of a technology that uses fewer amounts of resources.

3.Whole farm Budget

- Fixed costs were ignored during the planning process but need to be included in estimating the profit.
- The whole farm budget is composed of income, variable expenses, fixed expenses and net farm income or profit.
- The total procedure of whole farm budget can be divided into:

- Developing the whole farm plan
- It includes taking inventory of the available resources
- organizing these resources into a plan which best meets the owner's goals and objectives.

# Cont...

- Whole farm plan
- A whole farm plan is outline or summary of the resources available and the types and volume of production to be carried out.
- **whole farm budget** is needed to provide additional details and the final estimate of farm profit.
- Therefore, a **whole farm budget** is a ***summary of the expected income,expenses, and profit for a given farm plan***.
- It considers the cost and returns of ***all the crop and livestock*** enterprises in order ***to drive the net return of the whole farm.***

- Using the plan to complete the whole farm budget
  - it includes estimating the total costs and returns for the whole farm plan and organizing them into a whole farm budget.
  - It is a rare case to have two farms to have identical goals and resource availability.
  - This difference in goals and resource availability makes whole farm planning a very individualized process.
  - Existing farm plans should be reviewed on a periodic basis. Changes in prices, technology and resource availability can quickly outdate the plan.
  - Procedures for developing a whole farm plan and budget

1. Inventory available resources
2. Organize resources into whole farm plan
3. Estimate total costs and returns for the plan
4. Organize costs and returns into a whole farm budget

# Cont…

Uses:

- A whole farm budget can be used for the following purposes:
- To estimate the expected income, expenses, and profits
- To estimate the cash inflows, cash outflows, and liquidity of a given farm plan
- To compare the effects of alternative farm plans on profitability and liquidity
- To evaluate the effects of expanding or otherwise changing the present farm plan
- To estimate the need for and availability of resources such as capital, labor.
- To communicate the farm plan to a lender, landowner, partner,

# steps

1. **Statement of objective:**

- **The objective of the farmer may be profit maximization or cost** minimization.
- the farmer aims at maximization of profits.
- while choosing resources and their combinations, he aims at cost minimization.

**2. Diagnosis of the existing organization:**

- **Diagnosis and prescription are the two important** components of planning.
- The planner has to examine the existing organization of farm business
- carefully and identify the weaknesses or defects or gaps in the current plan.
- Once mistakes are identified, corrective steps can be taken in future. Farm plans primarily prescribe remedies for the defects of the existing plan.

**3. Assessment of resource endowment on the farm:**

**a) Land: Here there is a need to spell out the land holding area, type of land i.e. wet land or dry** land, crops grown, type of soils available, topography, texture,

**4. Identification of enterprises to be included:**

- **List of enterprises not only grown by the** farmer but also enterprises grown in that area and also crop rotations are identified.
- Estimate the input-output coefficients in terms of hectare or head of livestock for all the enterprises,

**5. Preparation of enterprise budgets:**

- **Estimate the income, cost and profitability of each** enterprise to be included in the plan.
- The preparation of enterprise budgets facilitates comparison of profitability of different enterprises.

**6. Identification of risks:**

- **List out all types of risks viz., production risk, weather risk,**
- technological risk, institutional risk, marketing risk, etc., faced by the farmers. Particularly the

**7. Preparation of a plan:**

**The first step is identifying the scarcest resources and selecting that** enterprise which yields maximum returns per unit of scarcest resource.

# Chapter five

## Farm accounts and accounting analysis

- Balance sheet is a systematic organization of everything "owned" and "owed(payable)" by a business or individual at a given time.
- **statement of debits and credits:**
- Anything owned by business or individual is called ASSET(valuable thing).
- Any debt or other financial obligation owed to someone else is referred to LIABILITY (having legal responsibility for something)
- Balance sheet is list of ASSET and LIABILITY
- Owner's Equity = Asset – Liability
- Asset classified in to two i.e. Current asset and noncurrent asset.

# Current asset

- They are the product that produced to generate cash.
- is called liquid asset

- Noncurrent asset:
- this is asset other than current asset which can't easily liquidate(pay) to cover liability.
- **Liability:** is any debt owed to someone else.
- It is classified :current liability and noncurrent liability.
- **Current liability**: is liability which is payable with in less than one year or one accounting year.
- **Non Current Liability**: is the remaining balance of long term liability.
- It is a loan obtained to purchase noncurrent asset.
- **Solvency**: it is the ability of a business to pay off all its financial obligation
- **Liquidity**: measures the ability to generate cash needed to meet cash obligation without seriously disrupting the production activities of the business.

# Cont…

Balance Sheet Format

- General Format of balance Sheet
  - Asset — Liability
  - Current Asset. . x ….. — Current liability …
    A
  - Non Current asset …Y — Non Current liability. .B
  - Total asset……x+y — Total liability (TL) … A+B
  - Owners equity (OE)…….C
  - T L+ OE……A+B+C=X+Y

# Balance Sheet Analysis Method

- A. Analyzing Liquidity concentrate on current asset & current liability.
- 1) Current Ratio(CR); it is dividing current asset to current liability
- Current Ratio= Current asst/Current liability
- CR=1 ⇒Asset =Liability……Operate without safety margin
- CR>1 ⇒Asset>Liability……more Liquid business
- CR<1 ⇒Asset<Liability……Illiquid business
- Example; if the business have current asset equal with 10000 birr and current liability equal with 15000 birr.
- Calculate CR and interpret the result.

CR=CA/CL

CR=10000/15000

CR=0.666

## 2. Working capital:

- it is calculated by Current Liability from Current Asset.
- WC=CA-CL It shows what amount of birr remains after selling all current assets and paying all current liability.
- If WC is positive the business is liquid and if it is negative it is in liquid.
- Example if CA=15000 & CL =13000 WC= CA-CL WC= 15000-13000 WC=2000 so the business is liquid.

- Analyzing Solvency .
- 1. Debt /Asset Ratio= Total liability /Total Asset
- It shows part of total asset which owed to the lender.
- Here value less than 1 is preferred.
- Example; if the business have Total Asset equal with 10000 birr and total liability equal with 15000 birr.
- Equity /Asset Ratio= Total Equity/Total Asset
- It measure what part of total asset is financed by owner’s equity capital.
- 3. Debt/Equity Ratio= Total Liability /Owners Equity It compares the proportion of financing provided by lenders’ with that provided by owners.

# Income statement

- It is financial transactions that affected revenue and expenses over a period of time .
- It is called operating statement or profit or loss statement.

- Purpose

- To provide an estimate of net farm income or profits
- To measure the difference between revenue and expenses
- To construct an income statement showing the difference between revenue and expenses.

- Income Statement Format
- Income statement Analysis Method
- 1. Net farm Income: it shows revenue exceeds the expenses plus or minus gain or loss on sale of capital.
- It is the difference between the sale price and the cost of capital asset such as land.
- It is the measure of profitability. NFI=R-E ± Gain or loss Example; If farm business gets revenue of 25000 birr and incurred expense of 6000.
- It get a gain of 2000 birr from sell of asset. Calculate NFI? NFI=R-E ± Gain or loss NFI=25000-6000+2000 NFI=21000. So the farm business is profitable.

# Farm Inventory Valuation

- Meaning of Valuation
- Attaching prices to given assets like buildings, vehicles, growing crops, and stored products at the end of an accounting
- or at the time of sale period for a particular farm to show the price worth at the given period.
- Methods of Valuation and Consistency in Using Named Method
- Valuation at cost
- Valuation at market price
- Valuation at net selling price
- Valuation at cost less depreciation
- Valuation at reproductive value or replacement cost
- Consistency in choosing same method of

# Depreciation

- Depreciation involves the spreading of the cost of an asset over its useful life,
- It is considered an annual expense and as such is regarded as a variable cost.
- Cost less depreciation is an important factor in valuation.
- Methods for Estimating Depreciation
- The straight line or fixed installment method
- The declining balance method
- Sum of the year digit method
- The Annuity Method
- Use Adjusted Methods

# Farm Financial Analysis

- Financial analysis is a powerful management tool.
- It  use the basics of financial analysis to identify the main strengths and weaknesses of a farm operation.
- The ratios and measures  use uncover potential problems with the operation, whether it is cost control, debt management, marketing issues, or even production management problems.
- These cases have involved a wide variety of operations beef, dairy, hog, poultry, row-crop, equine, and on-farm marketing.

- A manager can use financial records to determine the most profitable level of input to use (marginal analysis).
- Breakeven analysis tells the manager minimum yield per acre
- the minimum price per unit needed to cover the costs of production.
- In farm planning a manager can use financial records to develop a long term operating plan for the farm.
- Enterprise analysis helps a manager determine the profitability of each enterprise.
- Enterprise analysis a manager compare d/t production systems.
- Whole farm planning is a method of determining the most profitable enterprise mix, given the

- financial analysis provides a manager with powerful aids in decision making.
- Two of my favorite decision making aids are **partial budgets** and **cash flow statements**.
- A partial budget is a quick, simple method for analyzing small changes in an operation.
- A cash flow statement is a monthly (or quarterly) listing of all the cash inflows and outflows, showing the expected cash surplus or deficit each period
- their record keeping system should allow you to generate the following financial statements:
  - balance sheet
  - income statement (or a Schedule F tax form)
  - cash flow statement
- information allows them to calculate all of the financial ratios and measures mentioned above.
- It will also enable marginal analysis and breakeven analysis and partial budgeting.

# Farm Efficiency Measures

- **The Efficiency Measures Based upon the Concept of Ratio:**
- **Following efficiency measures are generally used for farm management:**
  - (a) The Capital Ratios Income Ratios
  - (b) Cost Ratios
  - (c) Cropping Intensity Index
  - (d) Crop Yield Index
  - (e) System Index
- **The following paragraphs describe these efficiency measures in some detail:**

**(A) The Capital Ratio:**

- (Measures for comparing the financial safety of various farms)

**The following paragraphs describe these efficiency measures in some detail:**

- **Net capital Ratio:** Total asset

  Total liability

- **Working Capital Ratio = working asset and current asset**

**Intermediate liability and Current liability**

**(iii) Current Ratio: Current**