FARM MANAGEMENT

Meaning

Farm Management comprises of two words i.e. Farm and Management.

Farm means a piece of land where crops and livestock enterprises are taken up under common management and has specific boundaries.
Farm is a socio economic unit which not only provides income to a farmer but also a source of happiness to him and his family. It is also a decision making unit where the farmer has many alternatives for his resources in the production of crops and livestock enterprises and their disposal.
Management is the art of getting work done out of others working in a group.
Management is the process of designing and maintaining an environment in which individuals working together in groups accomplish selected aims.
Management is the key ingredient. The manager makes or breaks a business. Management takes on a new dimension and importance in agriculture which is mechanized, uses many technological innovations, and operates with large amounts of borrowed capital.

Farm management is concerned with resource allocation. On one hand, a farmer has a set of farm resources such as land, labour, farm buildings, working capital, farm equipments, etc. that are relatively scarce. On the other hand, the farmer has a set of goals or objectives to achieve may be maximum family satisfaction through increasing net farm income and employment generation. In between these two ends, the farmer himself is with a specific degree of ability and awareness. The study of farm management would be useful to impart knowledge and skill for optimizing the resource use and maximizing the profit.

DEFINITIONS

"Farm management is an art of organization and operation of the farm successfully as measured by the test of profitableness". - Andrew Boss, H.C.Taylor and L.C. Gray

"It is a science of organization and operation of the farm enterprises for the purpose of securing the maximum profit on a continuous basis". - G.F. Warner and J.N. Effersen

"It is a study of the business phase of farming". - L.A. Moorehouse and W.J. Spillman

Scope of Farm Management

1. Farm Management Research
2. Farm Management Teaching
3. Farm Management Extension

1. Farm Management Research

a) Delineation of homogeneous type-of farming-areas in various regions of the country,

b) Generation of input-output coefficients and working out comparative economics of various farm enterprises

c) Formulation of standard farm plans and optimum cropping patterns for different areas and types of farming,

d) Developing suitable models of mechanization and modernization

e) Evaluation of agricultural policies having a bearing on development and growth of the farm-firms.

Importance of Farm Management

1) Increase in farm income
2) Technical progress of farm
3) Industrial development of country
4) Farm management as educational tool

Objectives of Farm Management

1) To study existing resources
2) To outline conditions for profit maximaization,family satisfaction & income distribution
3) To workout costs & returns of farm enterprise

Nature Of Farm Management

1. Farm management deals with the business principles of farming from the point of view of an individual farm.

2. Its field of study is limited to the individual farm as a unit and it is interested in maximum possible returns to the individual farmer.
3. It applies the local knowledge as well as scientific finding to the individual farm business.
4. Farm management in short be called as a science of choice or decision making.

TYPES OF FARMING

On the basis of similarity in crop production and livestock rearing.

1.SPECIALIZED FARMING:

When a farm is organized for the production of a single commodity and this commodity is the only source of income, the farm is said to be specialized. The major enterprise contributes more than 50% of the total farm income.
Examples are sugarcane farm, cotton farm, poultry farm, dairy farm, wheat farm etc.

Advantages:

1. Better use of land - It is more profitable to grow a crop on a land best suited to it. For example, jute cultivation on a swampy land.
2. Better Marketing – Specialization allows better assembling grading, processing, storing, transporting and financing of the produce.
3. Better management – The fewer enterprises on the farm are liable to be less neglected and sources of wastage can easily be detected.
4. Less equipment and labour are needed - A fruit farmer needs only special machinery and comparatively less labour for raising fruits.
5. Costly and efficient machinery can be kept – A wheat harvester and combine can be maintained in a highly specialized wheat farm.
6. Efficiency and skill are increased - Specialization allows a man to be more efficient and expert at doing a few things.
5. Economical to maintain costly machinery

Disadvantages:

1. Greater risk – Failure of crop and market together may ruin the farmer.
2. Productive resources-Land, labour and capital are not fully utilized.
3. Fertility of soil cannot properly be maintained for lack of suitable rotations.
4. By-products may not be fully utilized for lack of sufficient livestock on the farm.
5. Farm returns in each are not generally received more than once a year.
6. General knowledge of farm enterprises becomes limited.

2.DIVERSIFIED FARMING:

When a farm is organized to produce several products (commodities), each of which is itself a direct source of income, the farm business is said to be diversified. In diversified farming, no single enterprise contributes 50% of the total farms income.

Advantages:

1. Better utilization of productive resources.
2. Reduction of risks.
3. Regular and quicker returns.
4. Proper utilization of by products.

Disadvantages:

1. Supervision will become difficult.
2. Marketing problems.
3. Not economical to maintain costly machinery.

3. MIXED FARMING:

It is the type of farming under which crop production is combined with livestock raising. At least 10 per cent of gross income must be contributed by the livestock. This contribution in any case should not exceed 49%.

Advantages:

1. Maintenance of soil fertility
2. Proper use of by products
3. Facilitates intensive cultivation
4. Higher income
5. Milch cattle provide drought animals.
6. Employment of labour.

4.RANCHING:

The practice of grazing animals on public lands is called ranching. Ranch land is not used for raising of crops. Ranching is followed in Australia, America and Tibet

5. A. Dry farming:

Cultivation of crops in regions with annual rainfall of less than 750 mm. Crop failure is most common due to prolonged dry spells during crop period.
B. **Dry land farming :** Cultivation of crops in regions with annual rainfall of more than 750mm. Moisture conservation practices are necessary for crop production.
C**. Rain fed farming** : Cultivation of crops in regions with an annual rain fall of more than 1150 mm.

FACTORS AFFECTING TYPES OF FARMING:

A) **Physical factors:** Climate, soils, topography.
B) **Economic factors:**

1. Marketing cost
2. Relative profitability of enterprises
3. Availability of capital
4. Availability of labour
5. Land values
6. Cycles over and under production
7. Competetion between enterprises
8. Personal likes and dislikes of farmer

SYSTEMS OF FARMING.

The system of farming refers to the organizational set up under which farm is being run. It involves questions like who is the owner of land, whether resources are used jointly or individually and who makes managerial decisions. Systems of farming, which are based on different organisational set up, may be classified into five broad categories:

a) Capitalistic farming b) State farming c) Collective farming d) Peasant farming e) Co-operative farming

1. Capitalist or Estate farming:

In what is known as capitalistic or estate or corporate farming, land is held in large areas by private capitalists, corporations or syndicates. Capital is supplied by one or a few persons or by many, in which case it runs like a joint stock company. In such farms, the unit of organization is large and the work is carried on with hired labour; latest technical know how is used and extensive use of machines are made and hence they are efficient. Examples of this type of farming are frequently found in USA, Australia, Canada and few in India too. Such types of farms have been organized in the states of Bombay, Madras and Mysore for the plantation of coffee, tea and rubber and sugarcane. The advantages of such farming are good supervision, strong organizational set up, sufficient resources etc. Their weaknesses are that it creates socio-economic imbalances and the actual cultivator is not the owner of the farm.

2.State farming:

State farming as the name indicates is managed by the government. Here land is owned by the state. The operation and management is done by government officials. The state performs the function of risk bearing and decision making, which cultivation is carried on with help of hired labour. All the labourers are hired on daily or monthly basis and they have no right in deciding the farm policy. Such farms are not very paying because of lack of incentive. There is no dearth of resources at such farms but sometimes it so happens that they are not available in time and utilized fully.

3.Collective farming:

The name, collective farming implies the collective management of land where in large number of families or villagers residing in the same village pool their resources eg: land, livestock, and machinery. A general body having the highest power is formed which manages the farms. The resources do not belong to any family or farmer but to the society or collective. Collective farming has come into much prominence and has been adopted by some countries notably by the Russia and China. The worst thing with this system is that the individual has no voice. Farming is done generally on large scale and

thereby is mostly mechanized. This system is not prevalent in our country.

4.Peasant farming:

This system of farming refers to the type of organization in which an individual cultivator is the owner, manager and organizer of the farm. He makes decision and plans for his farm depending upon his resources which are generally meager in comparison to other systems of farming. The biggest advantage of this system is that the farmers himself is the owner and therefore free to take all types of decisions. A general weakness of this system is that the resources with the individual are less. Another difficulty is because of the law of inheritance. An individual holding goes on reducing as all the members in the family have equal rights in that land.

5.Cooporative farming:

Co-operative farming is a voluntary organization in which small farmers and landless labourers increase their income by pooling land resources. According to planning commission, Co-operative farming necessarily implies pooling of land and joint management. The working group on co-operative farming defines a co-operative farming society as “a voluntary association of cultivators for better utilization of resources including manpower and pooled land and in which majority of the members participate in farm operation with a view to increasing agricultural production, employment and income.” A co-operative farming society makes one of the following four forms

I. Co-operative better farming

II. C-operative Joint farming

III. Co-operative tenant farming

IV. Co-operative collective farming

I.Co-operative better farming:

These societies are based on individual ownership and individual operation. Farmers who have small holdings and limited resources join to form a society for some specific purpose eg: use of machinery, sale of product. They are organized with a view to introduce improved methods of agriculture. Each farmer pays for the services which he receives from the society. The earnings of the member from piece of land, after deducting the expenses, his profit.

II.Co-operative Joint farming:

Under this type, the right of individual ownership is recognized and respected but the

small owners pool their land for the purpose of joint cultivation. The ownership is individual but the operations are collective. The management is democratic and is elected by the members of the society. Each member working on the farm receives daily wages for his daily work and profit is distributed according to his share in land.

III.Co-operative tenant farming:

Such societies are usually organized by landless farmers. In this system usually land belongs to the society. The land is divided into plots which are leased out for cultivation to individual members. The society arranges for agricultural requirements eg: credit, seeds, manures, marketing of the produce etc. Each member is responsible to the society for the payments of rent on his plot. He is at liberty to dispose of his produce in such a manner as he likes.

IV.Co-operative collective farming:

Both ownership and operations under this system are collective. Members do not have any right on land and they can not take farming decisions independently but are guided by a supreme general body. It undertakes joint cultivation for which all members pool their resources. Profit is distributed according to the labour and capitals invested by the members.

System of farming	Type of ownership	Types of Operation ship
I. Co-operative farming		
a. Coop. better farming	Individual	Individual
b. Coop. joint farming	Individual	Collective
c. Coop. tenant farming	Collective	Individual
d. Coop. collective farming	Collective	Collective
II. Collective farming	Society/state	Society/State
III. Capitalistic farming	Individual	Individual
IV. State farming	State	Paid Management
V. Peasant farming	Individual	Individual

FARM PLANNING

Farm planning refers to setting the objectives and actions to be taken in directing or controlling the organization of farm business and it precedes all other managerial functions on the farm to achieve the desired results.

It is deciding in advance, the production management problems viz., what to produce, how to produce, when to produce; financial management problems viz., how to borrow, how much to borrow, when to borrow, where to borrow, and marketing management problems viz., where to buy and sell, when to buy and sell, how to buy and sell, etc.

Definition

farm planning may be defined as the process of making decisions regarding the organization and operation of a farm business so that it results in a continuous maximization of net returns of a farm business.

Farm planning is a decision making process in the farm business, which involves organization and management of limited resources to realize the specified goals continuously.

Importance of farm planning to farmer

It helps the farmers in the following manner:

1. Choose different farm activities suited to the given farm conditions.

2. Look into the future and decide on suitable course of action.

3. Select appropriate enterprise combinations that results in the better use of resources.

4. Timing various jobs and operations for smooth conduct of operations without competition.

5. Avoid wastages that occur in the resource use.

6. Provide guidance and flexibility for ensuring better use and growth of the farm business.

7. Provide allocation of resources for producing the requisite products for marketing and household consumption.

Objective of farm planning

1) The improvement in the living standards of the farmers
2) Immediate goal is to maximize the net incomes from the farming operations through improved resource planning.
3) farm planning could be secure incomes
4) farm planning minimizing risk
5) farm planning minimizing labour requirements.

Types of farm plans

1) Simple or Annual Farm Plan
2) Complete or Long Farm Plan

Simple farm plan implies planning for minor changes or for a particular enterprise.

Complete farm planning envisages more number of changes in the existing organization. It is adopted for the farm as a whole.

Characteristics Of Good Farm Plan

1. Plans should aim at efficient utilization of all the available resources on the farm.
2. Plans should be flexible i.e., they should be adaptable to changing environmental conditions.
3. Farm plans should be simple and easily understood.
4. Considering the available resources, farm plans should ensure balanced production program consisting of food crops, commercial crops and fodder crops.
5. The production program included in the farm plan should aim at improving soil fertility.
6. Farm plans should facilitate efficient marketing of farm products.
7. It should take into account up-to-date technology.
8. Farm plans should consider the goals, knowledge, training and experience of the farmers, and their attitude towards risk.

9. Farm plans should avoid too risky enterprises.
10. Farm plans should provide for borrowing, using and repaying the credit.

Limitations of farm planning

1) Farm planning is considered time consuming and expensive exercise.
2) Good farm plans should be based on the actual recorded facts, particularly giving the data on the availability and requirement of resources.
3) The records provide adequate information for planning process.
4) The pertinent information on farms particularly in respect of climate, water supply, markets, etc., is not found in the required form.
5) The sources of data for diagnosis and planning are also lacking.

Tools of farm planning

1. Production function models
2. Farm budgeting techniques
3. Linear programming
4. Operational research techniques

Steps in Farm Planning

a) **Planning:**

This includes the identification and definition of the problem, collection of information, identifying alternative solutions and analyzing each alternative. Planning is the basic management function as it means deciding on a course of action, procedure or policy. The control function is a source of new information, as the results of the initial plan become known.

b) **Implementation:**

Once the planning process is completed, the best alternative must be selected and action should be taken to place the plan into operation. This requires the acquisition and organization of necessary land, labour, capital and other inputs. An important part of the implementation function is the financing of the necessary resources.

c) **Control:**

This provides for observing the results of the implemented plan to see if the specified goals and objectives are being met. Many things can cause a plan to go “off its track”. Price and other changes, which occur after the implementation of

the plan, can cause the actual results to deviate from the expected. Control requires a system for making regular checks on the plan and monitoring progress and results as measured against the established goals

Financial Analysis

Financial analysis is one of the roots of management used to carry out its controlling function. Proper interpretation of data presented by the financial statement helps in judging the profitability of operations during given time periods, in determining the soundness of financial condition at a specific date. The term financial statement refers to two basic statements that an accountant prepares at the end of a specified period of time for a business enterprise.

1. **Balance sheet :** It is a statement of financial position of a firm at a particular point of time.
2. **Income statement**: It is also called profit-loss statement. It shows firm‟s earnings for the period covered, usually half yearly or yearly.

Balance sheet

Balance Sheet From an analyst point of view, it is a written representation of resources and liabilities of the business firm. It shows the financial condition of the business firm at a given date. The balance sheet contains and reports on assets, liabilities and net worth of a firm. Assets must always equal the sum of liabilities and net worth. What is owned by or owed to firm (assets) must equal what the firm owes to its creditors plus what is owed to its owners (net worth). Balance sheet indicates the sources from which business obtained capital for its operations and the form in which that capital is invested on a specific date.

Limitation :

It is an interim statement between two operating periods. It summarizes solvency of business at a given time rather than financial transactions occurred in business during an accounting period.

Income Statement

Income Statement It is also called profit and loss statement. It states the source of firm‟s incomes, describes the nature of the expenses, and shows the net profit earned (or net loss incurred) during an accounting period. It is supporting evidence to balance sheet, in the sense, that it explains the change in retained earnings on the balance sheet. This is an important financial record because it measures the financial progress and profitability over a period of time. It is a summary of both cash and non-cash transaction of the farm business. In non-cash financial transaction, we get capital gain and depreciation. Income statement is divided into two major categories, viz., income and expenses. Income includes cash receipts, capital sales of business and changes in inventory value of items produced in the

farm. Expenses include operating and fixed expenses._____

Uses of Income Statement

1. Can determine what profit is earned by the business.
2. Can find particular causes of low profit or operating losses.
3. Management can take action to prevent the occurrences of future losses or to prevent further decline in profits

Comparison Of Balance Sheet And Income Statement

No	Balance sheet or Net worth statement	Income statement or profit or loss statement
1	Net worth statement is a summary of assets, liabilities and owner's equity at a given point of time	Income statement is a summary of both cash and non cash financial transactions of farm business accrued during the selected accounting period
2	The most commonly requested document by a lender in reviewing a loan request.	It is used to measure the financial profitability of business during a period of time.
3	It is used in preparation of income statement and tax returns	It is used in making an analysis of the business profitability, efficiency and financial stability.
4	Net worth statement offers a little insight into financial transactions of accrued in business during an accounting period.	Information from this document is used in preparation of cash flow summary.

Financial Tests Ratio analysis:

It has the following advantages

1. Has no units
2. Compares numerator with respect to denominator
3. Relative and comparable

Ratio analysis will explain what strength, weakness, pressures and forces are currently at work in your business operation farm business managers will need a full

time job accountant for the change accruing in his capital structure and net worth as revealed in his balance sheet.

FARM BUDGETING

It may be defined as a detailed physical and financial statement of a farm plan over a certain period of time. Farm budgeting is a method of analyzing plans for the use of agricultural resources at the command of the decision-maker. In other words, the expression of farm plan in monetary terms through the estimation of receipts, expenses and profit is called farm budgeting.

Types of Farm Budgeting:

The following are the different types of farm budgeting techniques:

a) Partial Budgeting.

b) Enterprise Budgeting.

c) Complete/Total/Whole Budgeting.

a) Partial Budgeting:

This refers to estimating the outcome or returns for a part of the business, i.e., one or few activities. A partial budget is used to calculate the expected change in profit for a proposed change in the farm business. Partial budgeting technique is generally used to evaluate the profitability of input substitution, enterprise substitution and scale of operation. It consists of four important elements viz., added costs, added returns, reduced returns and reduced costs.

Partial change does not always provide a complete solution.

b) Enterprise Budgeting:

Enterprise is defined as a single crop or livestock commodity. Most farms consist of a combination of several enterprises. An enterprise budget is an estimate of all income and expenses associated with a specific enterprise and an estimate of its profitability.

c) Complete Budgeting

It is a method of estimating expected income, expense and profits for the farm as whole. It is a technique for assembling and organizing the information about the whole farm in order to facilitate decisions

Uses:

i) It provides a basis for comparing alternative plans for profitability. This can be particularly useful when planning is carried out for growth and expansion.

ii) A detailed whole farm budget showing the estimated profit can be used to borrow the necessary operating capital

Steps in Farm Planning And Budgeting

1. Statement of objective.

2. Diagnosis of the existing organization

3. Assessment of resource endowments on the farm.

4. Identification of enterprises to be included.

5. Preparation of enterprise budgets.

6. Identification of risks

7. Preparation of a plan.

1. Statement of objective: The objective of the farmer may be profit maximization or cost minimization. In selecting enterprises and their combinations, the farmer aims at maximization of profits. On the other hand, 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 loopholes 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, fertility status, drainage, soil and water development, soil and water conservation methods, etc.

b) Labour: The extent of family labour available with the farmer viz., women, men and children along with their age, household work and farm work done by them should be indicated. Permanent labourers if any engaged by the farmer, type of work done and amount of remuneration paid should be indicated. Labour supply, in the village and demand for labour for different crops in different seasons should be assessed. The supply position with reference to livestock should be assessed correctly.

c) Capital: Working capital required for raising crops should be indicated. Owned funds available and the amount of funds borrowed, from different sources, interest paid, etc.,

need to be clearly specified. Specification of repayment dates, terms and conditions, etc., is also required. Fixed capital relates to information on farm buildings, farm equipment, farm machinery, etc.

d) Organization: The farmer's knowledge in farming, his expertise, his experience in farming and confidence in adapting new potential technology should be assessed. Based on this information relevant farm plan should be devised. If the farmer is risk-averse, farm plans, which provide stable income under risk, should be generated.

e) Irrigation sources: Availability of different sources of irrigation, area covered under different sources, period of availability of irrigation, quantity of irrigation water available, crop demands
for irrigation water, accessibility of land to the irrigation sources such as canal and tank, etc., should also be indicated. In addition to this cost of irrigation needs to be mentioned.

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 acre or hectare or head of livestock for all the enterprises, which we propose to include. Information on input and output prices should be collected so as to work out the costs and returns.

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 incidence of pests, rodents and diseases, frequency of drought occurrence over time, cyclones, floods and their havoc caused to farm plans. Marketing risks comprising of risk emanating from price fluctuations and failure of markets to arrest the malpractices of middlemen should be indicated.

7. Preparation of a plan: The first step is indentifying the scarcest resources and selecting that enterprise which yields maximum returns per unit of scarcest resource. This process is repeated till all the scarce resources are put to the best use which results in optimum combination of the enterprises.

Cost Concepts in Farm Management

Production costs play an important role in the decisions of the farmers. Explicitly or implicitly, most of the producers keep in mind the cost of producing additional units of output. In general, at given level of prices, a farmer can increase his farm income in two ways, i.e., i) by increasing production ii) by reducing the cost of production. Since cost minimization is an individual skill, degree of success in this direction directly adds to the profits of the farm.

Costs refer to the money value of effort extended or sacrifice made in producing an article or rendering a service or achieving a specific purpose. Costs, thus, are the expenses incurred in organizing and carrying out the production process.

1. **Fixed cost (FC):**

   Fixed costs are those costs which do not change in magnitude as the amount of output produced changes and are incurred even when production is not undertaken. These are also called sunk costs. These could be fixed cash costs such as land taxes, interest, insurance premiums, permanently hired labour, etc. Non-cash fixed costs include depreciation on buildings, machinery interest on capital investment, cost of family labour & management, etc.

2. **Variable costs (VC):**

   The costs that are incurred on variable inputs and hence vary with the level of production are called variable costs. Higher the production more will be VC and vice-versa. Expenses on fertilizer, seed, chemical fuel consumption, etc.

3. **Total cost (TC)**

   The total cost comprises of two components, i.e., fixed and variable costs.

   TC= FC+VC

   Total costs (TC) are required to compute net revenue (NR)

   NR = TR-TC

4. **Opportunity cost**:

   Farm resources are limited but these can be put to different uses. When these are used in our product, some alternative usage is always forgone. The opportunity cost is the value of best alternative forgone.

FARM RECORDS

Farm records-

"A farm record is a document or book that is used to keep account of different activities, events, materials etc. regarding the farm operations".

Farm accounts –

"Farm Accounts are statements of money paid out or received for goods and services used in farming business".

Importance Of Farm Records And Accounts

1. Farm records help a farmer to keep stock and manage each aspect of the farm properly.

2. They are important for planning and budgeting. They provides a farmer with enough

information needed for proper planning and budgeting at every point in time.

3. They help farmers know the progress and contributions of each aspect of the farm to its

overall success.

4. They are important for proper farm management.

5. They can be very helpful when a farmer needs to access financial aids from banks or

other financial institutions.

Advantages of Farm Records and Accounts

a) They are the means to increase the farm income.

b) They are the basis for diagnosis and planning.

c) They show the ways to improve the managerial ability of the farmer.

d) They are useful for credit acquisition and management.

e) They provide database for conducting research in agricultural economics.

f) They form the basis for designing government policies - land policy, price policy, national farm policies, etc.

Problems in Farm Records & Accounting

a) As Indian farmers carry out only subsistence nature of farming, recording is not essential to them.

b) Indian farmer acts as an owner, manager and labourer. Hence, recording becomes complex.

c) Illiteracy and lack of business awareness of farmers prohibit them to have farm records.

d) Fear of taxation prevents farmers from recording and accounting the information.

e) Forecasting becomes complicated because of very high risk and uncertainties involved in farming.