Farm Planning and Management

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Factors to be considered for establishing a farm

Before establishment of a farm the following factors should be kept in consideration:

1. Objective of the farm:

First of all one should know the objective of the farm before establish a farm because, everything are to be selected on the basis of objective. Various farms are established based on various objectives.

2. Site selection:

Site is selected on the basis of various factors such as:

A. Physical factors
B. Economic factors
C. Social factors

A. Physical factors:

It includes climate, soil, land, labour etc.

i. Climate:

Among all climatic parameters temperature and precipitation are especially considerable to establish a farm.

a. Temperature:

The world is classified into 4 regions on the basis of temperature as follows:

- ✓ Megatherm: They are the equatorial region. Rain forest or deserts are in this region. Rubber, coffee is mostly grown here.
- ✓ Mesotherm: Tropical and sub-tropical climates are in this region. Rice, jute etc are well grown here.
- ✓ Microtherm: It includes temperate region which is 1200 feet higher than tropical region. Vegetables, wheat are well grown here.
- ✓ Hekistotherm: Polar region comprise this climate. Pines are grown here.

b. Rainfall:

The world climate is classified into 5 groups on the basis of rainfall as follows:

- ❖ Arid: Here annual rainfall is less than 25.4 cm. Cactus, date palm, etc crops are grown here.
- ❖ Semi-arid: Here annual rainfall is 25.4-50.8 cm. Millets, pulses, oilseeds are grown here.
- ❖ Sub-humid: Here annual rainfall is 50.9-101.6 inch. Potato and vegetables are grown here.
- ❖ Humid: Here annual rainfall is 101.6-203.2 cm. Here rice, jute, sugarcane are grown here.
- ❖ Wet: Here annual rainfall is more than 203.2 cm. Coffee is well grown here.

ii. Soil:

Soil texture and pH are specially considered.

a. Texture:

Various soil textures favor various crops. So, texture must be considered. For example- every crop are well grown in loamy soil. On the other hand, rice is well grown in clayey soil.

b. pH:

Neutral and slightly acidic or slightly alkaline soils are suitable for most of the crops.

iii. Land:

Availability of land is also affect the establishment of a farm. For example- extensive farming can be practiced if land is available. On the other hand, where there is deficit of land then intensive farming is practiced.

iv. Labor:

Diversified cropping can be practiced when labors are available. But when labor is unavailable then specialized or monofarming is practiced.

B. Economic factors:

The economic factors which affect the farming system are the following:

i. capital:

When capital is enough then mechanized farming, commercial farming, and capitalist farming can be done. When capital is not enough then mono farming or specialized farming is done.

ii. Market:

Enterprises will be selected on the basis of market.

iii. Communication:

It is related with market.

iv. Storage facility:

Where storage facilities are good, perishable fruits, vegetables can be grown.

C. Social factors:

Social factors are as follows that affect the establishment of farm:

i. Population density:

In highly dense area for increasing population mixed farming, diversified farming should be practiced to meet their requirements. In sparse populated area specialized farming is sufficient.

ii. Literacy:

Mechanized or intensive farming can be practiced among literate peoples. Among illiterate people diversified or rainfed farming is suitable.

iii. Behaviour:

Behaviour also affects the farming system because behaviors vary man to man.

iv. Association:

Mechanized farming is possible when association and helps can be found from various organizations.

3. Biotic factors:

A. Birds, B. Insects, C. Diseases, D. Evil people (thief)

Farm Layout

Layout

Layout is the physical arrangement of farm lands and livings for proper and efficient use of production factors.

Planning of layout

1. Making the sub-farm

If farm comprises more than 100 hectares of land then sub-farm should be made according to the nature of crops. For example – sub-farm for orchard, sub-farm for seed multiplication etc.

2. Making block

Each sub-farm or the farms comprising less than 100 hectares of land divided into block according to topography or land elevation. Block may be Block-A, Block-B, Block-C etc

3. Making plots

Each block is further sub divided into a number of plots which is multiple of the years of rotation schedule. Then number of plots will be according to the numbers of crops.

4. Size and shape of plots

Size of plots depends on the farm size, nature of farm and nature of crop grown. For mechanized farm, the size is bigger than non-mechanized farm. Similarly, farm of field crops is larger than vegetables.

Shape of plots should be uniform; square or rectangular. Rectangular is preferable than square for convenience of intercultural operations. In rectangular size, generally length is double of breadth.

5. Arrangement of farm sheds and buildings

For efficient or proper running of farm, there is necessary of farm physical structure such as farm office, godown, implement shed, work shed, stores, cowshed, labor sheds pot yard, glass or green house etc. these structure may be placed in a compact way or scattered way. In case of scattered placement, there is less chance for the misuse of fertile soil where the cost is comparatively higher and supervision is not economic. In case of compact placement, there is no possibility of misuse of fertile soil and supervision is more economic. In case of compact placement of the entire farm structures other than labour shed or resident somewhere of the center of the farm. Labour shed is placed in the entrance or in the border. Resident is in the side of the land. Deep tube well should be located at an elevated area either of the building or at one side of the farm. Size of the farm structures depends on farm size, nature of the farm and also nature of the crops.

6. Roads

Roads are two types' *viz*. main road and sub-road. Main roads should run to the center of the land connecting the village road or in highway if available. Sub-roads run by connecting plots with main road. Sub-roads should perpendicular to the main road.

7. Channels

Channels are two types *viz*. main channel and sub-channel. Main channel should run originating from water sources through sub-channels which will run through two rows of plots. Sub-channels will run parallel to sub-rows.

8. Fencing

For protection of the farm products or the damages caused by stay animals and from loss due to theft by the miscreants there is necessary for construction of fences outside the farm. Fencing are of different type, such as-

a. Wall fencing
b. Wire fencing
c. Wood wall fencing
d. Bamboo fencing

Among these, burbles wire fencing is most economic.

9. Gate

There should be one main gate over the main road and the entrance of the farm. One or more pocket gate for public entrance is also needed.

Beside these, there might be the arrangement of lath house, dung pit, compost heap, nursery etc.

Farm Budgeting

Farm budget

Farm budget may be defined as the written statement showing estimated cost to be needed to run a farm and expected return thereon'. It is the blue print to farm authority.

Type of budget

On the basis of duration budget is of two types-

1. Short run/term budget
2. Long run/term budget

1. **Short term budget**: the budget prepared for one year or less is called short term budget. It is needed for a farm in spite of having a long term budget. It helps to adjust the annual income-expenditure. So, it is only a break-up of long term budget.
2. **Long term budget**: the budget prepared for long duration is called long term budget. It may be for 5-35 years. It is needed for proper development and conduction farming activities for long duration.

On the basis of content/completeness budget is of two types-

1. Partial budget
2. Complete budget

1. **Partial budget**: the budget prepared for special need is called partial budget. e.g. budget for shallow tube well for irrigation, for cultivation of new crops, etc.

2. **Complete budget**: the budget prepared for making decision for all issues of the farm. It may be detailed. It may contain following:

Purposes or objectives of budget:

1. To make decision about establish a new farm.
2. To conducting an old farm efficiently which have no budget.
3. To take decision about introduction a new crop or technology.
4. To rearrange land, office of an old farm.
5. To reduce or inclusion of workers.
6. To introduce irrigation in rainfed farming.
7. To develop roads of old farm.
8. To introduce a crop/technology/implement in place of another.
9. To assume the requirement of credit if necessary.
10. To estimate the time of recovering the credit.
11. To evaluate the performance of farm.
12. To the farming activity either profitable or no.
13. To get an idea about inputs needed and probable profit.
14. To mitigate misuse of money, time and other resources.
15. To increase/ decrease the size or production of a farm.
16. To create a good impression about the farming activities to others, especially to bank authority.
17. To take lease or give lease on a land.
18. To estimate probable cost or profit about specific or all the farming activities.
19. To determine income tax.
20. To fulfill interest of visitors.

Steps of preparing a budget

1. Calculation of total asset of farm.
2. Total land, cultivated land, uncultivated land, soil texture, topography etc.
3. Consideration of cash money as capital, necessity of loan, its possibility and conditions should be kept in consideration.
4. Determination of distribution of crops of different plots.
5. Determination of required amount of recruitment of workers.

6. Cost of cultivation, others cost, amount of products and bi-products and target of probable income should be determinate.

After considering these elements, a rough account of income-expenditure should be prepared.

It may be justified with the help of experienced peoples. Then final account should be prepared considering cost of cultivation and probable income.

Proforma of a short term budget:

Estimated short term budget from ……..to ……..

A. details of Fixed cost:

Heads of present cost	Proposal of introduction new head of cost (if any)	Estimated cost		If 10% or more difference between cost of running year and proposed year its cause
		Running year	Proposed year	
1. Salary and allowance of permanent officers				
2. Salary and allowance of permanent staffs.				
3. Salary and allowance of permanent workers.				
4. Taxes				
5. Contingencies				
6. Depreciation on implements				
7. Depreciation on buildings				
8.taxes municipality/union)				
9. Income tax				
10. Insurance premium				
11.Miscellaneous (electricity, fuel)				

(Name of submitter, designation, signature and date.)

B. Details of variable cost:

Heads of present cost	Proposal of introduction new head of cost (if any)	Estimated cost		If 10% or more difference between cost of running year and proposed year its cause
		Running year	Proposed year	
1. Wages of temporary labourers.				
2. Fertilizers				
3. Seed/ seedlings/ cuttings				
4. Pesticides				
5. Miscellaneous (Boundary, Fodder)				

(Name of submitter, designation, signature and date)

C. Details of Gross income:

Heads of present cost	Proposal of introduction new head of cost (if any)	Estimated cost		If 10% or more difference between cost of running year and proposed year its cause
		Running year	Proposed year	
1. Paddy				
2. Rice straw				
3. Jute				
4. Jute stick				
5. Wheat				

(Name of submitter, designation, signature and date)

D. Net profit:

Net profit = Total income or revenue – Cost (Fixed + Variable)