

Chapter 5  
**Summary**



## FINAL POINTS

As an extension worker, you have an important role to play in supporting farmers in their marketing and production decisions. You are in a position to guide them away from traditional farming practices towards a more market-oriented approach to farming.

Farmers need assistance to ensure that their produce satisfies the consumer. This calls for improved farm management skills so that farmers can better select new opportunities and have an understanding of how to deal with the market. The principles of economics as discussed in this guide have been prepared to assist you to understand some of the dilemmas facing farmers and ways that these problems can be addressed. An overview of the main economic concepts and principles follows.

- **Maximization of profit or satisfaction**
- **Variable and fixed inputs**
- **The margin**
- **Diminishing marginal returns**
- **Substitution**
- **Opportunity cost**
- **Efficiency: return to scarce resources**
- **Comparative advantage**
- **Economies of scale**
- **Supply and demand**
- **Elasticity**
- **Farm profit**
- **Net farm family income**
- **Optimum level of output**
- **Cash flow**
- **Depreciation**
- **Salvage value**
- **Return on capital**
- **Risk**

### **Maximization of profit or satisfaction**

It is generally assumed that farm businesses are planned for the maximum profit consistent with good husbandry. However, when objectives other than profit maximization are considered, such as the satisfaction of family interests, reduction of risks, or increased leisure, which might reduce the potential profit, the costs of meeting these objectives also need to be considered. Economic principles should be used to indicate the best allocation of resources for attaining the chosen objectives.

### **Variable and fixed inputs**

The distinction of farm resources between variable and fixed inputs underlies much of the economic thinking about farm production. Variable inputs are those that change with the amount of output over a given period (e.g. fertilizer, seeds, pesticides, fuel, harvest, labour). Fixed inputs are those that remain the same regardless of the volume of the output actually achieved (e.g. land rent, labour required for cultivation irrespective of final yield, livestock, tools, machinery, buildings). The same distinction lies between costs that vary with output and fixed costs that are incurred irrespective of the level of output.

### **The margin**

This is the added output, input or value (cost of product). It is measured either in physical (production) or financial terms. The marginal product per unit of input reflects to the yield added to the total production by adding one more unit of input. Similarly, the marginal value of production refers to the value added to the total value of production by adding one more unit of input. Other common marginal terms include: *marginal input* and *marginal cost*, which refer respectively to added inputs and the value of an added input.

### **Diminishing marginal returns**

The principle of diminishing marginal physical and financial returns is vital to understanding farm production economics. It is the use of the concept of diminishing returns that determines the best level for any production practice or activity on the farm.

**Substitution**

The principle of substitution applies whenever farm output can be produced by different combinations of inputs or different methods of production.

**Opportunity cost**

This principle notes that by transferring resources from one activity to another there is a cost that is often not measured. This is the income lost as a result of reducing the level of output from which resources are withdrawn. The strict definition of opportunity cost is the maximum income that the resource(s) could have given in an alternative use.

**Efficiency: return to scarce resources**

Farm efficiency is concerned with the wise use of the resources available to the farmer. One way to look at efficiency is from the point of view of the factors of production (i.e. natural resources, labour and capital). In most cases, one of these factors will be the one that limits profits the most. This is the most limiting factor or the *effective resource constraint*.

**Comparative advantage**

This principle refers to the distribution of physical resources, over space. That is, the best use of land in different locations for the production of different crops and livestock. It suggests that for greatest efficiency farm activities should take place in those locations where the factors of production (climate, soils, terrain, labour availability) provide advantages of the lowest costs compared with other sites.

**Economies of scale**

Economies of scale are achieved when the cost per unit of production or output marketed is reduced as the scale of the activity increases. Savings (economies) can be achieved by spreading costs over a larger scale of operation. Economies of scale can also be achieved among farmers when they organize themselves into groups to buy inputs, obtain capital or market produce.

**Supply and demand**

A market exists when buyers wanting to exchange money for goods or services are in contact with sellers wanting to exchange products or services for money. A market is made up of people who use, need or want a product and who have the money to buy it. Prices are set by producers and consumers coming together to exchange goods and services.

**Elasticity**

This is an economic concept that explains changes in product prices, supply and demand. It explains why the prices and quantities of some products supplied and demanded can vary more significantly than others. When the price of a product changes, the supply and demand for that product also change. The degree of change in the demand and supply in response to a change in price is called elasticity. Different products have different elasticities.

**Farm profit**

Farm profit refers to the money left over after paying for the variable and fixed costs. If the difference is positive, that farmer is making a profit; if the difference is negative the farmer is making a loss.

**Net farm family income**

Net farm family income is a concept that takes into account the value of family labour in calculating profit. The cost of family labour is done by valuing what it would cost to hire that labour instead of using it in production. After farm profit is calculated, family labour costs are deducted.

**Optimum level of output**

This concept explains how much of each resource a farmer should apply. The decision is based on the comparison of the costs and returns. The point of optimum level of output is where the value of the marginal product is just sufficient to cover the cost of the resources used.

**Cash flow**

Cash flow is a concept used to assess if the farmer has sufficient money available to make changes to the farming system. This may involve a change in farm enterprise composition or alternatively purchasing a capital asset, as examples. The cash flow enables the farmer to identify the time of the year when additional financial resources may be required. It is made up of the flow of money that comes into the farm from sales and the flow of money that leaves the farm through purchases and expenditures. The net cash flow is the difference between the cash inflows and outflows. The cash flow can help the farmer determine the financial performance of the farm as a whole.

**Depreciation**

Depreciation is a concept used to assess the loss of value of an asset over time. This occurs as a result of the asset being used or because it eventually becomes obsolete. As time proceeds there will always be a need to replace an asset.

**Salvage value**

Assets have a given life expectancy. The concept of salvage value expresses the value of an asset that is unused at the time that it is sold.

**Return on capital**

Return on capital is a concept used in economics to decide whether or not to buy a fixed asset such as machinery, equipment, an animal or establish a tree crop. These are all long term investments. The return on capital expresses the profit expected from the investment related to the capital required. It is expressed as a percentage rate of return on the cost of capital.

**Risk**

The concept of risk reflects the fact that future events cannot be known with complete certainty. Risk occurs when the outcome of a decision is not known in advance or cannot always be predicted. These risks need to be taken into account by farmers when making decisions.