

CHAPTER 19



OBJECTIVES

At the end of this chapter, students should be able to:

- â—† list the basic economic principles.
- â—† discuss the basic economic principles.

19.1 Introduction

Economic principles are applied in agriculture from the point of view of the producer (farmer), the consumer and the nation. Agriculture requires adequate knowledge of these principles in order to survive in a competitive world.

19.2 Meaning of Economics

Economics deals with production, distribution, exchange and consumption of agricultural goods. It studies human behaviour as a relationship between ends and scarce means which have alternative uses. It also deals with how to make use of limited resources to get maximum satisfaction.

19.3 Basic Economic Principles

Listed below are the basic economic principles:

1. Wants
2. Scarcity
3. Choice
4. Scale of Preference
5. Opportunity Cost

19.3.1 Wants

These are goods and services desired by the farmer. The goods needed are unlimited. For example, farmer may need inputs such as fertilizers or chemicals (pesticides, fungicides or herbicides), tools and implements, land for cultivation, feeds for livestock and many others.

However, the farmer may not have enough money (resource) to acquire all these inputs and so the means of acquiring them are limited.

19.3.2 Scarcity

Scarcity refers to the condition whereby the resources available to the farmer are limited in supply. This occurs when there is a shortage of goods and services compared to wants. The limited nature of resources affects the production of crops and animals; so farmers are forced to make use of what

they have. This will eventually affect the distribution and consumption of agricultural products.

19.3.3 Choice

This is the point where farmer takes a decision on what to buy and how much to spend on a particular commodity (input). The farmer also decides on what to produce because his resources are not enough to produce all. The farmer therefore makes choices since wants are unlimited but resources are limited. The farmer decides on the various things to buy and use for production. Even after production he also decides on the channel for marketing the produce. Every decision made is a choice between alternatives

19.3.4 Scale of preference

This refers to the listing or arrangement of wants in order of importance or priority. The farmer has to choose since the resources to satisfy all wants are limited. For example a farmer may decide to use manual or family labour and forego the use of tractor. Similarly he may decide to plant maize and forego cowpea. When all the wants of the farmer are arranged in the order of importance that order represents his scale of preference.

19.3.5 Opportunity cost

It is often referred to as the "real cost of the forego alternative". Economic choice involves the satisfaction of one's wants at the expense of the others foregone. The cost of the one he enjoys is the one he fails to enjoy. It helps farmers in allocating their scarce resources deciding what to produce and what methods or techniques to use in producing it.

19.4 Law of Diminishing Returns

This law states that if increasing amount of one input is added while other inputs remain fixed, the output will increase to a point where further increase in the amount of the input will result in decrease of marginal return per unit of the varying input of production. For example, if fertilizer application to a crop growing on a fixed area of land is increased, the yield will increase at first. But it will reach a point when further addition of fertilizer will be increasing the yield at a diminishing rate. Further increase of fertilizer application may be excessive as to reduce yield or even damage the crops.

Table 19.1 can be used to explain the law of diminishing returns.

In Table 20.1, the yield of maize grown on the land increased at first, then steadied and then began to decline.

The marginal physical product (MPP) of a resource such as fertilizer and labour is the change in total product resulting from one unit change in the quantity of that resource used per unit of time.

TABLE 19.1 Changes in output resulting from increased use of fertilizer while land is held constant

Land (ha)	Fertilizer Application (kg)	Total Physical Product (TPP)	Marginal Physical Product (MPP)	Average Physical Product (APP)
1	1	15	-	15
1	2	30	15	15
1	3	49	19	16.3
1	4	57	10	14.8
1	5	66	7	13.2
1	6	70	4	11.7
1	7	67	-3	9.6
1	8	65	-2	8.1

- â The law of diminishing returns can be called the law of diminishing marginal physical product.
- â The average product per unit of resource used (APP) can be determined by dividing total output at that level by the total number of units of the input.

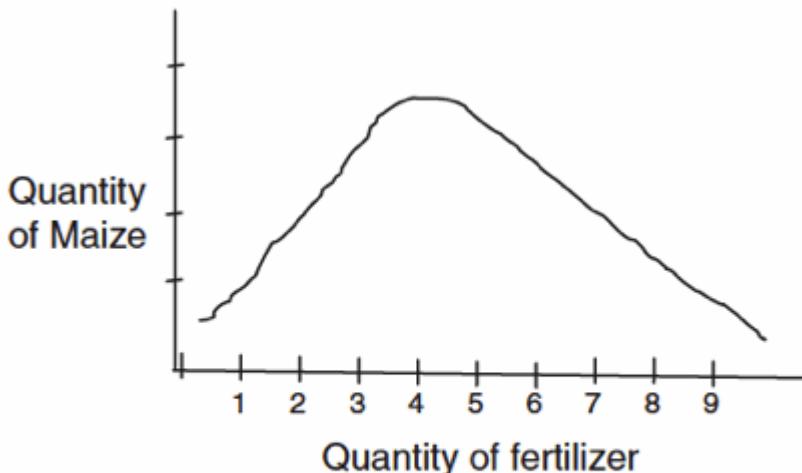


FIGURE 19.1 Graph showing the law of diminishing returns

There are three stages of the curve marked

- â In stage I, very small quantities of resource fertilizer are combined with a large unit of land and the result is that the variable resource (fertilizer) is inefficiently applied or underutilized. Each added unit will tend to bring higher marginal returns. There is increase in marginal productivity as the total physical product curve (TPP) turns upwards.
- â In stage II, enough fertilizer is combined with the fixed resource (land) and this is the efficient stage of production.
- â In stage III, there is excess of fertilizers and diminishing returns are obtained.

There is absolute decline in output even when fertilizer is increasing.

Importance of Law of Diminishing Returns in Agriculture

- â The farmers will know the best proportion in which the various factors of production should be combined.
- â It helps the farmers to know how to minimise cost and maximise profit.
- â The time to stop adding inputs will also be known.
- â It helps in taking decisions as regards to use of factors of production.

Activity

Make a list of ten things that you desire to have between now and the end of the year. Rank them in order of priority. What are the factors that will govern your choice? Comment.

SUMMARY

- â—† The basic economic principles applicable to agricultural production include wants, scarcity, choice, scale of preference, opportunity cost and diminishing returns.
- â—† The farmer desires certain goods and services for his production, but the resources to satisfy these wants are limited in supply.
- â—† Decisions are based on the scale of preference deciding to have the most pressing needs satisfied at the expense of the others that are forgone.
- â—† The law of diminishing returns states that as more and more of a variable factor of production

is added upon a fixed factor, the output tends to increase up to a certain point above which each successive unit of a variable factor makes smaller and smaller addition to the total output and finally total output may even decline.

Revision Questions

Essay

1. Explain the following terms:

- (a) Scarcity
- (b) Choice
- (c) Scale of Preference

2. Illustrate with practical examples the principles of diminishing returns. Give well-labelled diagram to illustrate your answer.

3. (a) State the law of diminishing returns.

(b) Enumerate three importance of the law of diminishing returns to farmers.

4. (a) What is MPP?

(b) Explain the concept "wants" as related to agricultural production.

Objective Questions

1. To which of the following factors of production does the law of diminishing returns relate?

- (a) unit factor.
- (b) fixed factors.
- (c) variable factors.
- (d) labour force.

2. The law of diminishing returns helps in

- (a) determining the proportion of production factors to combine.
- (b) determining the quantities of fixed resources to use in production.
- (c) indicating economic wages to pay farm workers.
- (d) indicating the quantity of fixed factors to employ.

3. Scarcity in economics means that resources

- (a) are not enough to share among the producers of goods and services.
- (b) needed to satisfy human wants are limited.
- (c) are never enough to share among consumers of goods and services.
- (d) can be managed if those who use them behave rationally.

4. Choice is necessary because resources

- (a) are available.
- (b) can be found everywhere.
- (c) are constant.
- (d) are scarce.

5. A farmer needs a cutlass, the radio would be regarded as the

- (a) marginal cost.
- (b) inferior item.
- (c) opportunity cost.
- (d) prime cost.

Answers to Objective Questions Objective Questions

- 1. c 2. a 3. b 4. d 5. c