

Chapter 3  
**Economics and the market**

## MAIN POINTS IN CHAPTER 3

### *What is a market?*

*The place where the exchange of products for money takes place.*

*Markets are made up of sellers and buyers.*

**Key concepts • Market • Seller • Buyer • Price •**

### *What is marketing?*

*Making decisions about the marketing of farm products is an important part of farm management.*

*To make these decisions, farmers need to understand the market, how it works, how prices are determined.*

**Key concepts • Marketing • Decision-making • Price •**

### *How does the market work?*

*Prices are determined by supply and demand.*

**Supply** is the amount available for sale at a certain price.

**Demand** is the amount people are prepared to buy at a certain price.

**Key concepts • Supply • Demand • Equilibrium •**

### *How are market prices determined?*

#### **(DEMAND)**

*The price of the product;*

*The price of substitutes;*

*Changes in tastes;*

*Increases in income;*

*Changes in population;*

*Future price changes;*

*Government policy;*

*Other factors affecting demand.*

**Key concepts • Market conditions •**

**• Price mechanism •**

*As farmers become more market-oriented they need to understand how prices are determined ...*

***How are market prices determined?  
(SUPPLY)***

*The price of the product;  
The conditions of supply;  
Changes in the cost of production;  
Change in interest of farmers;  
Improved techniques;  
Natural resource changes;  
Government policy;  
Other factors affecting supply.*

***Key concepts • Supply conditions •  
• Price mechanism •***

***Why do prices vary from time to time?***

*Changes in production and demand  
at different times of the year.  
Availability of competing products and inflation.*

***Key concepts • Inflation • Seasonality •***

***Why do some prices change sharply  
while others do not?***

*The nature of the products.  
Whether they are essential or non-essential.  
Whether there are substitutes.  
Length of time involved  
in making changes in production.*

***Key concepts • Elasticity • Inelasticity •***

*... and acquire an  
awareness of  
how economic  
concepts and  
principles relate  
to marketing*

***Farmers can improve  
the price of their products***

*Premium prices can be attained  
if product quality is assured by better  
production and post-production processes.*

*The organization of marketing groups  
can also provide negotiating advantages.*

***The key concepts here are quality  
and economies of scale.***



## ON MARKETING

### What is a market?

The word “market” is used in two ways ...

**First**, it is a place where the exchange of products for money takes place. Markets are made up of *sellers* and *buyers* and their relationship influences the amount of money received in exchange for products. Markets do not have to be physical locations. Exchange can also take place over the telephone and sometimes, these days, over the Internet.

**Markets  
are made up  
of sellers  
and buyers  
expressing  
collective  
demands  
for products**

**Second**, a “market” represents the collective demand for a product. When farmers understand the market for their products, it means that they understand the product that consumers want, how much they want, what price they are willing to pay and what qualities and other conditions they demand. We can talk about commodity markets, maize markets or rice markets in this way.

### What is marketing?

Making decisions about the marketing of farm products is an important part of farm management. If farmers are to treat farming as a business they need to understand marketing and how the market works. Marketing is a series of exchanges linking the farmers who produce and sell, and the consumers who buy. Buyers can take different forms. They include:

- Customers who buy for their own use and their families;
- Rural traders who sell the produce to others;
- Processors who transform the produce and then sell it to others;
- Wholesalers who buy and sell to retailers;
- Retailers who buy and sell to consumers;
- Exporters who buy and then sell abroad.

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A local village market – Burundi

*Although many farmers market their produce locally ...*

© Argentini



An assembly market – Pakistan

*... or transport their produce to assembly, wholesale or retail markets ...*

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A speciality supermarket – Thailand

*... more and more the trend is to high-value production destined for sales at supermarkets.*

Exchange takes place when two sides agree on a price. If they do not agree, no exchange will take place. The exchange mechanism of selling and buying depends on the price. Understanding how prices are set calls for an understanding of how the market works. It also calls for an understanding of the factors that affect supply and demand and cause prices to change. These are all parts of economics.

To make a profit, the farmer has to charge a high enough price to cover more than the costs of production and marketing. While there may be occasional price falls that cannot be foreseen, if these costs cannot be covered in the long run the product should not be produced.

When making plans  
a farmer needs to know ...

**WHAT PRICES TO EXPECT.**

When selling,  
a farmer needs to know ...

**WHAT PRICES CAN BE OBTAINED.**

## HOW DOES THE MARKET WORK?

In the simplest situation farmers take their products to markets to exchange them for money. Consumers take their money to markets to exchange it for products. The market sets the price at which those who want a product (buyers) can obtain it from those who have it to sell (farmers).

In a market-oriented system  
price is determined by supply and demand

### **Supply**

The amount farmers are prepared to sell.

### **Demand**

The amount buyers are able to buy.

### **Market price**

What both farmers and buyers  
are willing to accept.

*When prices  
are too high  
consumers  
will not buy  
the product*

*When prices  
are too low  
producers  
may not be  
willing to sell*

If supply increases but demand does not increase, the price will fall. This is often what happens in a market at the time of harvest, when there is an abundance of produce for sale and prices are low. Later in the season, when there is less for sale, the price often increases. If demand increases but the supply does not the price is likely to rise. Where a product is scarce consumers are willing to pay more for it. This will push up the price. Fruits and vegetables out of season are examples of scarce products. When the price of a product increases, profits tend to increase, which encourages farmers to produce more. On the other hand, if consumers do not want the product, its price falls and farmers make a loss. Such a situation may lead to farmers producing less of the product

## HOW ARE MARKET PRICES DETERMINED?

As noted in the previous section, prices are determined by supply and demand. But what does this really mean?

### Supply

Normally, the higher the price of a product, the greater the supply of that product. For example, farmers considering producing tomatoes would be encouraged by high prices. If they do produce tomatoes and the price increases, they would be encouraged to extend the area of land under the crop. They would also try to grow tomatoes with more or better quality inputs so that a higher yield could be produced. The table below shows the amounts of tomatoes that could be supplied at different prices by all producers in the market.

*High prices encourage farmers to grow more ...*

Tomatoes supplied change with the price

*Table 1*  
Supply  
of tomatoes  
at different  
prices

Price (\$/kg)	Supply (kg)
12	40 000
10	32 000
8	25 000
<b>6</b>	<b>20 000</b>
4	13 000
2	7 000

➡ = point of equilibrium

The **higher** the price the **greater** the supply  
The **lower** the price the **less** the supply

## Demand

The demand for a product normally rises when its price is lower. If the market price is high, consumers reduce their purchases. The table below shows the amount of tomatoes in demand at different prices. If tomatoes are very expensive, consumers may substitute other vegetables. If they are cheap, consumers will buy more.

*... but high prices also encourage consumers to buy less*

Demand for tomatoes changes with price

Price (\$/kg)	Demand (kg)
12	3 000
10	9 000
8	15 000
<b>6</b>	<b>20 000</b>
4	25 000
2	35 000

*Table 2  
Demand for tomatoes at different prices*

← = point of equilibrium

*The **lower** the price the **higher** the demand  
The **higher** the price the **lower** the demand*

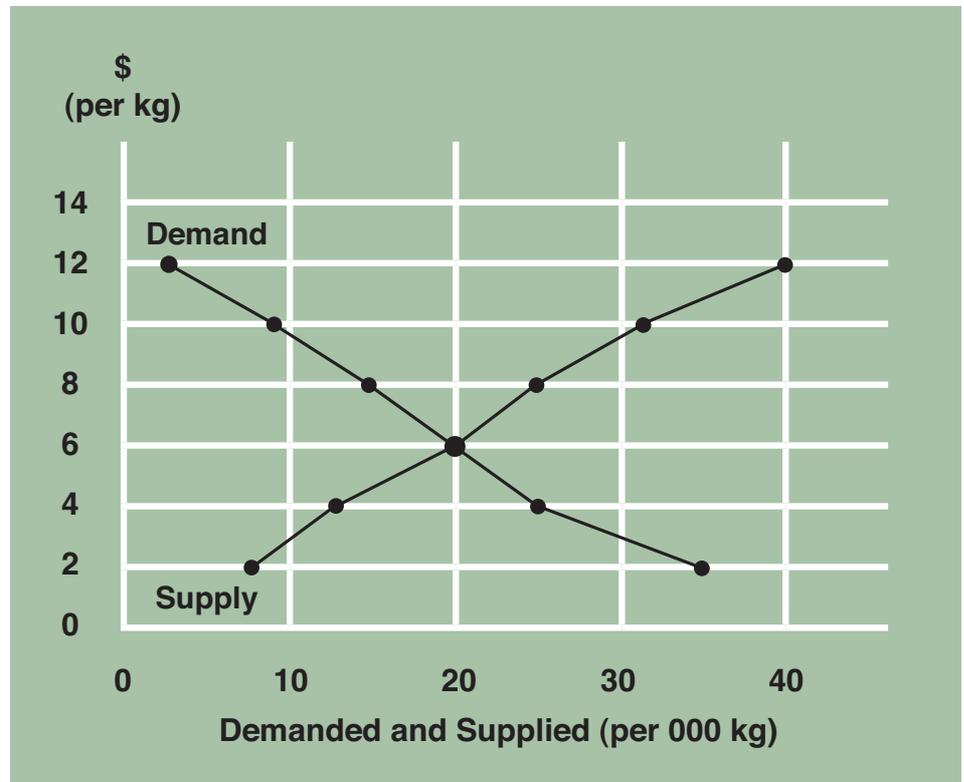
## Market price

The market price is set at a point where supply and demand are in balance. Economists call this the equilibrium price. That is the point where the amount in demand matches the amount supplied.

*From the tables of demand and supply for tomatoes  
**the equilibrium price is \$6 per kg**  
This price is the only one where there is  
**balance between buyers and sellers***

***At this price 20 000 kg of tomatoes  
are both in demand and offered for sale***

**The equilibrium price  
can also be plotted as shown below**



*Figure 1*  
**Market price  
determination  
for tomatoes**

*Suppose that initially the price of tomatoes is set at \$8 per kg. At that price 15 000 kg of tomatoes would be in demand and 25 000 kg for sale. There would be an excess supply of 10 000 kg of tomatoes over the demand. This means that farmers would be left with a surplus that could only be cleared once the price was reduced. As the price falls, demand gradually expands and supply slowly contracts until a price of \$6 per kg is reached. There is then no need for the price to fall further.*

*Similarly, if the initial price is \$4 per kg, 25 000 kg of tomatoes will be in demand but only 13 000 kg offered for sale. Consumers might even form queues to buy tomatoes. The price would then rise, giving an incentive for farmers to plant more. At \$6 per kg there is no need for prices to rise further.*

This is called the price mechanism. It indicates the wishes of consumers and allocates productive resources accordingly.

## WHY DO PRICES CHANGE?

As we have discussed, prices change depending on changes in supply and demand. As a result of such changes equilibrium prices and production levels also change. The farmer needs to recognize such changes and adjust the farm business to them.

*The following factors  
influence production or supply*

**Seasonality of production.** At peak season crops are more abundant than they are during the off-season.

**Changes resulting from climate.** Supply also varies from year to year. Changes in production frequently occur as a result of weather (including rainfall, floods and drought). Bad or good climatic conditions can decrease or increase the quantity supplied. Bumper harvests usually decrease prices, poor harvests usually increase prices. In these cases, the level of production is not affected by the price of the product but by climatic changes.

**Production problems.** The incidence of pests, diseases and other hazards, such as fire, can decrease the supply.

**Change in the cost of production.** A decrease in the cost of inputs or the introduction of more efficient technologies would decrease the cost of production. This makes it possible for the farmer to buy more inputs and produce more for the same cost of production. As a result more tomatoes could be supplied at the old price. Conversely, an increase in the cost of labour employed on the farm would have the opposite effect.

**Improved techniques.** The introduction of high yielding varieties could increase the level of production, resulting in a decrease in product price.

*Supply or  
production may  
be influenced  
by other factors  
as well as price*

**Expansion of a crop under cultivation.** Farmers may decide to plant more of a crop because of the prospect of greater profits.

**Changes in profitability of competitive products.** Changes in the profitability of competing products also cause a change in supply. If cabbage is more profitable than tomatoes, for example, farmers will gradually shift towards growing cabbages. This change would lead to a decrease in the supply of tomatoes.

For fresh produce, such as vegetables, there are often short-term fluctuations in supply, sometimes a result of bad weather which can affect the harvest. There may also be transport disruptions.

*The following factors  
affect the demand for a product*

**A change in the number of consumers.** Extra people coming into a market can increase demand. Development projects, housing developments and other programmes often cause people to move to a new area.

**A change in consumer demand.** Changes may occur that make consumers demand more or less of a product at each price. In other words the level of demand could change. For example, farmers could join together to promote their sales of tomatoes. They might advertise the good quality, freshness and availability at times of the year when tomatoes are not usually found in the market. This may appeal to consumers, increasing demand.

**An increase in income.** As countries get richer there will be a general increase in income and people will be able to afford new products. As people become richer they tend to reduce their consumption of staples, such as rice and maize, and increase consumption of dairy products, fruits and vegetables.

*Demand  
for a product  
may also be  
influenced by  
factors other  
than price*

**A change in the prices of products that are close substitutes.** In some diets spinach may be a substitute for tomatoes. If the price of spinach decreases, consumers may prefer to purchase it instead of tomatoes. Thus, even though there may have been no change in the price of tomatoes, the demand could decrease.

**Availability of competing products.** If a wider range of products competing with tomatoes comes onto the market, consumers have a wider choice. This may lead to a lower demand for tomatoes. However, a lower demand may lead to lower prices, which could cause demand to increase again.

**A change in taste.** A promotional campaign aimed at persuading consumers to purchase more of a product could also increase the demand. Similarly, changes in demand may come from changes in consumer tastes that take place gradually as a result of changes in diet.

**Safety concerns.** Quickly spreading consumer fears of contamination, as experienced in the Avian Flu epidemic, can have an immediate effect of decreasing demand.

**Expectations of future price changes or shortages.** The fear that the price of a product could rise considerably the following week, for example, because of a planned transport strike, would motivate people to increase their demand and stock up. Clearly, this would not happen so much with perishable products.

The relationship between supply and demand and prices of products is thus extremely complex. A change in the price of one product can affect the demand and, in turn, the price of an entirely different product. Supply is, however, likely to fluctuate much more than demand. Market prices are affected more by changes in production than by changes in demand.

Prices are also affected by what is called *inflation* which is the general increase of all prices throughout the country. Farmers cannot do anything directly about this. High inflation means that prices rise rapidly. Inflation affects both the price of inputs (seed, fertilizer, labour) and the price of products. For example, a bag of fertilizer which cost \$10 last year may cost \$15 a year later. Similarly a kilogram of tomato that sold for \$4 last year may now be sold for \$5. Farmers must be aware of inflation and its impact on farm input and market prices.

### ***CAN FARMERS SET THE PRICES FOR THEIR PRODUCTS?***

*In most cases, farmers do not set their own prices, they must accept the going price. They are called “price-takers”. Farmers generally grow products that are very similar to those that other farmers grow. If a farmer were to charge too high a price traders and consumers would refuse to buy the product. By lowering the price, the farmer adjusts it to the market conditions.*

*However, there are some situations where farmers may be able to influence the market price. In such situations they are called “price-makers”. This sometimes occurs when there are only a few farmers producing for a “niche market”. A niche market is a highly specialized market or when produce is produced at a specific time of the year when premium prices can be obtained. Being price-makers gives farmers a great advantage when it comes to negotiating with traders responsible for distributing their produce.*

## WHY DO SOME PRICES CHANGE SHARPLY WHILE OTHERS DO NOT?

Normally, demand increases as prices fall and supply increases as prices rise. More people are interested in buying products that have a low price. Farmers are interested in increasing their production to follow higher prices.

However, the supply of some products can be adjusted far more quickly than the supply of others. For example, the supply of mushrooms and tomatoes can be increased or decreased quickly in response to price changes. But other items such as fruit, coffee, tea and milk take longer to adjust. If the prices of such commodities fall, the decrease in supply does not come about immediately. First, changes in production would require significant changes, such as uprooting tree crops. A farmer would need to think through such changes very carefully. Second, even if the farmer were to make the required changes, it would take a long time for overall production to adjust.

### Elasticity

Elasticity is an economic concept that can help explain changes in product prices, supply and demand. It can especially help to explain why changes are more significant for some products than for others. Different products have different elasticities.

When supply or demand change a lot in response to a change in price, the product is said to be *elastic*. It is sensitive to price changes. When supply or demand does not change much in response to a change in price, the product is said to be *inelastic*. It is insensitive to price changes.

***To maintain profits farmers need to understand how markets function ...***

***... and acquire the knowledge and skills necessary to respond to price changes***

Salt is an example of an inelastic product. The demand for salt would change only by a small amount if there were a change in the price. There would have to be a very large change to cause a noticeable change in demand, because salt is both a very small expense for most families and a product for which consumption cannot be easily reduced and for which there are no significant substitutes. On the other hand, vegetables are generally elastic products. When prices change, supply and demand adapt relatively rapidly.



### **CAN FARMERS IMPROVE THE PRICE OF THEIR PRODUCTS?**

***The quality of a product is as important as supply and demand in setting the price of produce sold***

The *quality* of a product influences its market price. Consumers pay more for a product that is clean and free of dirt, insects and damage. Large eggs sell for a higher price than small eggs. Fat animals sell for a higher price than thin ones.

Farmers can improve the quality of crops and livestock by using better production and post-production practices. Using different breeds or varieties and improving practices on the farm can increase returns. By improving post-harvest handling practices, farmers will ensure better quality and could obtain higher prices. However, in order to make these improvements, it is sometimes necessary to make special efforts that may involve extra costs. These extra costs have to be covered by an increase in money received for the higher quality product. Examples are shown on the next page.

*Actions farmers can take  
to improve the price of their products*

### **Improved production**

Large eggs and creamier milk, for example, will bring higher prices compared with small eggs and milk with a lower cream content. But it is important that farmers consider the extra costs involved in the production change and compare them with the extra money that improvement will bring. If the profit is higher than that previously obtained, the extra effort will be worth it.

### **Organize marketing groups**

Farmers acting alone to improve their prices may not gain. A single farmer improving quality will have to sell to the same trader as all other farmers. The trader will probably not pay a premium as it will not be possible to keep good quality and poor quality produce of different farmers separate.

However, farmers working together can often increase their bargaining power. This helps them to deal with buyers and negotiate contracts. Marketing groups may also be in a position to offer their members other benefits such as better market information.

Farmers acting in groups may also be able to improve packaging. In some countries, working together has successfully increased prices by using a brand name or by stressing the geographical origin of the product. Farmers in groups can also work with retailers to ensure that produce reaches the store quickly and can thus command a premium for “freshness”.

### **Economies of scale**

Scale is used to describe differences in the overall size of farms or businesses. 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. They can also be achieved when farmers organize themselves into groups to buy

*Farmers  
in groups can  
often influence  
the prices of  
produce sold  
for the better*

inputs, use capital or market produce. These group activities can bring about a cost reduction per unit of inputs purchased or produce marketed.

Economies of scale can also come about through specialization. As output of one product increases there is a possibility of using more specialized management and introducing mechanization to take the place of labour in field operations. Increases in scale of output allow savings to occur in the time spent on these tasks.

The following are examples of some of the economies that can be achieved when working at a higher level of marketing and input purchases.

- Groups of farmers involved in marketing could share transport arrangements to sell their produce. This very often results in lower unit costs. If each individual farmer were to transport produce separately the amount of produce transported would be smaller and per unit transport costs would be higher than those of the collective effort.
- Farmers can look for ways to produce collectively. They could share a tractor, infrastructure for livestock production or mechanical harvesting.
- Collective buying of inputs could also result in economies of scale. By ordering in bulk, the farmers would be able to buy their materials at reduced prices and transport them more cheaply.