

Course :	ECON 353		Credit:	3(2+1)	Semester-V
Course title:	Agricultural Marketing Trade and Prices				

Syllabus

Theory

Agricultural Marketing: Concepts and definitions of market, marketing, agricultural marketing, market structure, marketing mix and market segmentation, classification and characteristics of agricultural markets; demand, supply and producer's surplus of agri-commodities: nature and determinants of demand and supply of farm products,

Producer's surplus – meaning and its types, marketable and marketed surplus, factors affecting marketable surplus of agri-commodities; product life cycle (PLC) and competitive strategies: Meaning and stages in PLC; characteristics of PLC; strategies in different stages of PLC; pricing and promotion strategies: pricing considerations and approaches – cost based and competition based pricing; market promotion – advertising, personal selling, sales promotion and publicity – their meaning and merits & demerits; marketing process and functions:

Marketing process-concentration, dispersion and equalization; exchange functions – buying and selling; physical functions – storage, transport and processing; facilitating functions – packaging, branding, grading, quality control and labeling (Agmark); Market functionaries and marketing channels: Types and importance of agencies involved in agricultural marketing; meaning and definition of marketing channel; number of channel levels; marketing channels for different farm products; Integration, efficiency, costs and price spread: Meaning, definition and types of market integration; marketing efficiency; marketing costs, margins and price spread; factors affecting cost of marketing; reasons for higher marketing costs of farm commodities; ways of reducing marketing costs;

Role of Govt. in agricultural marketing: Public sector institutions- CWC, SWC, FCI, CACP & DMI – their objectives and functions; cooperative marketing in India; Risk in marketing: Types of risk in marketing; speculation & hedging; an overview of futures trading; Agricultural prices and policy: Meaning and functions of price; administered prices; need for agricultural price policy;

Trade: Concept of International Trade and its need, theories of absolute and comparative advantage. Present status and prospects of international trade in agri-commodities; GATT and WTO; Agreement on Agriculture (AoA) and its implications on Indian agriculture; IPR.

Practical

Plotting and study of demand and supply curves and calculation of elasticities; Study of relationship between market arrivals and prices of some selected commodities; Computation of marketable and marketed surplus of important commodities; Study of price behaviour over time for some selected commodities; Construction of index numbers; Visit to a local market to study various marketing functions performed by different agencies, identification of marketing channels for selected commodity, collection of data regarding marketing costs, margins and price spread and presentation of report in the class; Visit to

market institutions – NAFED, SWC, CWC, cooperative marketing society, etc. to study their organization and functioning; Application of principles of comparative advantage of international trade.

Teaching Schedule

a) Theory

Lecture	Topic/Lesson	Weightage
1	Market and Marketing – Meaning – Definitions – Components of market – Market structure – Meaning – Components – Market conduct – Market performance	2
2	Agricultural Marketing – Meaning – Definition – Scope – Subject matter – Importance of Agricultural Marketing in economic development.	2
3	Classification of markets – On the basis of location, Area of coverage, time span, volume of transaction, nature of transaction, number of commodities, degree of competition, nature of commodities, stage of marketing, extent of public intervention, type of population served, accrual of marketing margins	4
4	Marketing mix and market segmentation,	2
5	Demand, supply and producer's surplus of agri-commodities: nature and determinants of demand and supply of farm products,	2
6	Producers surplus- Meaning- Marketable surplus- Marketed surplus-importance- factors influencing marketable surplus-Marketing channels - Definition	3
7	Product life cycle (PLC) and competitive strategies: Meaning and stages in PLC; characteristics of PLC;	4
8	Strategies in different stages of PLC; pricing and promotion strategies:	3
9	Pricing considerations and approaches –cost based and competition based pricing;	3
10	Market promotion – advertising, personal selling, sales promotion and publicity – their meaning and merits & demerits;	4
11	Marketing process and functions: Marketing process-concentration, dispersion and equalization;	3
12	Marketing functions – Meaning -exchange functions – buying and selling;	2
13	Physical functions – storage, transport and processing	3
14	Facilitating functions – packaging, branding, grading, quality control and labeling (Agmark);	4
15	Market functionaries and marketing channels: Types and importance of agencies involved in agricultural marketing;	5
16	Meaning and definition of marketing channel; number of channel levels; marketing channels for different farm products;	4

Lecture	Topic/Lesson	Weightage
17	Market integration-definition-types of market integration-horizontal, vertical and conglomeration-	4
18	Marketing efficiency-meaning-definitions-technical or physical or operational efficiency-pricing or allocative efficiency	5
19	Marketing cost-margins-price spread-factors affecting the costs of marketing-reasons for higher marketing costs of agricultural commodities- ways of reducing marketing costs for farm products.	3
20	Role of Govt. in agricultural marketing- Remedial measures-Regulated markets-definition-important features of regulated markets, functions, progress and defects	4
21	Public sector institutions- Warehousing-meaning- warehousing in India - Central Warehousing Corporation(CWC)- working of warehouses -advantages- State Warehousing Corporations (SWC)- Food Corporation of India(FCI)-objectives- functions	3
22	Characteristics of agricultural product prices-agricultural price stabilization-need for agricultural price policy- commission for Agricultural cost and Prices (CACP)- administered prices-minimum support price, procurement price and issue price.	3
23	Cooperative marketing- meaning-structure- Functions of cooperative marketing societies-.	2
24	National Agricultural Cooperative Marketing Federation (NAFED) and State Agricultural Cooperative Marketing Federations (MARKFED)- State Trading-objectives-Types of state trading.	4
25	Risk in marketing: Types of risk in marketing;	3
26	Speculation & hedging; an overview of futures trading;	2
27	Characteristics of agricultural product prices-agricultural price stabilization-need for agricultural price policy- commission for Agricultural cost and Prices (CACP)- administered prices-minimum support price, procurement price and issue price	4
28	Trade: Concept of International Trade and its need, International trade-definition-difference between international and inter-regional trade- free trade vs protection.	3
29	Theories of absolute and comparative advantage.	3
30	Present status and prospects of international trade in agri-commodities; GATT and WTO;	2
31	Agreement on Agriculture (AoA) and its implications on Indian agriculture;Trade Related Intellectual Property Rights(TRIPS)	2
32	Market and Marketing – Meaning – Definitions – Components of market – Market structure – Meaning – Components – Market conduct – Market performance	3
	Total	100

b) Practical

Exercise	Topic
1	Plotting and study of demand and supply curves
2	Calculation of elasticities
3	Study of relationship between market arrivals and prices of some selected commodities
4	Computation of marketable and marketed surplus of important commodities
5	Study of price behaviour over time for some selected commodities;
6	Visit to a local market to study various marketing functions performed by different agencies,
7	Visit to regulated market
8	Identification of marketing channels for selected commodity
9	Collection of data regarding marketing costs, margins and price spread.
10	Presentation of report in the class.
11	Visit to market institution – NAFED to study their organization and functioning.
12	Visit to SWC to study their organization and functioning.
13	Visit to CWC to study their organization and functioning.
14	Visit to cooperative marketing society to study their organization and functioning.
15	Application of principles of comparative advantage of international trade.
16	Final practical exam.

Suggested Readings:

- 1) Acharya S.S and Agarwal NL, 2006, Agricultural Marketing in India. Oxford & IBH Publishing Co.Pvt.Ltd. New Delhi
- 2) Kahlon, A.S and Tyagi.D S, 1983 Agricultural Price Policy in India. Allied Publishers Pvt. Ltd., New Delhi.
- 3) Kulkarni, K R.1964, Agricultural Marketing in India. The Co-operators Books Depot, Mumbai.
- 4) Mamoria, C.B. and Joshi. R L.1995, Principles and Practices of Marketing in India, Kitab Mahal, Allahabad
- 5) Mamoria, C.B., 1973., Agricultural Problems in India, Kitab Mahal, Allahabad
- 6) Subba Reddy, S., P.Raghu Ram., P. Sastry, T.V.N. and Bhavani Devi I. 2010. Agricultural Economics., Oxford & IBH Publishing Company Private Ltd., New Delhi, 2010

**STUDY OF LAW OF DEMAND AND SUPPLY AND DETERMINATION OF PRICE
EQUILIBRIUM****Demand**

Meaning: The word demand usually refers to the quantity of a product or Services which the buyers are likely to purchase at different prices in a given market at a given time. It must be understood that demand represents the willingness and ability to buy under specified conditions.

The law of demand formalizes the relationship between the quantities purchased and their prices. The law states that the price and quantity demanded are inversely related, other things remaining the same. The usually law of demand may be depicted either through a demand schedule or demand curve on a two dimensional space.

Table 1.1**Hypothetical Market Demand Schedule for milk in 'A' Market**

Price of milk (Rs. Per litre)	Quantity demanded (Thousands litre)
4.00	10
6.00	9
8.00	8
10.00	7
12.00	6
14.00	5
16.00	4
18.00	3
20.00	2

The graphical presentation of demand schedule give a curve, which is known as the Demand Curve. The demand curve shapes downward form left to right. The demand schedule as well as the demand curve illustrate the nature of the relationship between to quantity and price.

The following concepts of demand should be under stood thoroughly.

Fig 1.1 Hypothetical Demand Curve for milk

a) Effective Demand :

Effective demand is the desire of the consumer for the commodity backed by his purchase power. Therefore the pertinent question in marketing is how much will be bought at a price? And not “How noted is that a the income elasticity of demand for all the agricultural commodities of urban population is generally lower than that of rural population.

b) Derived Demand :

The demand for some commodities exists only because they are used in producing other commodities which satisfy human wants. The demand for such commodities is termed as a derived demand e.g. Farmyard manure and fertilizers are demanded not because they satisfy any human count directly but because they are used in the producing goods crops.

c) Reservation Demand and Price :

The term reservation demand refers to the quantity of a product a seller would like to retain (rather than sell) at a given price At each price, the seller himself has a demand keep a certain quantity with himself for later sale he may not like to sell a particular “lot” if the price offered for it is lower than some preconceived price which is known as the reservation price.

d) Demand Function :

The demand for a commodity is not affected by price alone cob ether one thinks of a individual consumer or a group of consumer. Factor such income tastes, habits, weather, the prices of substitutes and incentives for saving affects demand in the sense that they shift the whole range of price quantity relationship.

A demand schedule is usually expressed as

$$Q = F (P q)$$

Where,

Q = Quantity demanded

Pq = Price per unit of Q

The demand function for the same commodity is expressed as

$$Q = f (Pq, Ps, P, Y, W \dots)$$

Where,

Q = Quantity demanded

Pq = Price per unit of Q

Ps = Price per unit of Q

P = Population

Y = Income

W = Weather

Supply:

The term supply refer to schedule or quantities of a products that will be affected for sale at different prices at the given time and in a given market. There are a logical relationship between supply and price. The higher the price, the larger the quantity that is offered for sale and vice versa.

A hypothetical Supply schedule for milk is given in Table 1.2

Table 1.2 Hypothetical Market Supply for milk in 'A' Market

Price (Rs. Per litre)	Quantity offered for sale (Thousands litre)
20	10
18	9
16	8
14	7
12	6
10	5
8	4
6	3
4	2

The graphical presentation of the supply schedule is known as the supply curve. The supply curve is positively sloped. And it always slopes upward left to right on a graph as shown in fig 1.2

quantity (Thousand liters)

Fig 1.2 Hypothetical Supply curve for milk.

Time is a very important consideration in supply analysis. The given supply exists at a given time. The time periods can be of different lengths.

a) Short Run :

This means that the existing production is already on hand and that the cost incurred on its production does not influence its price. The response of the quantity offered for sale to a change in price is very low.

b) Intermediate Run :

This refers to time during which goods can be produced only with the existing production facilities. The existing capacity puts an upper limit on the quantity that can be offered for sale.

c) Long Run

The term long run refers to the time during which production facilities themselves may be expanded or contracted. In the long run, Supply is more responsive to price and other incentives. The time element greatly complicates the process of the analysis of agricultural supply.

Simple Market Model and Price Determination

The simplest of the simple market models is one where it is assumed that the quantity demanded and quantity supplied are different and affected by the price of the commodity. The price and quantity which satisfy both the buyer (S) and sellers (s) are called the equilibrium price and equilibrium quantity. Price determination in the case of this simplified model is illustrated below by three alternative approaches.

Tabular Approach:

The hypothetical demand and supply schedules given in table. It is evident from the table that at the price of Rs. 12 per litre the quantity demanded by consumer (6,000 litres) is equal to the quantity offered for sale by the sellers. The equilibrium price, therefore, is Rs.12 the quantity demanded by exceeds the quantity supplied there is thus a pressure on the price to rise At a price higher than Rs. 120, the quantity supplied exceeds the quantity demanded, there is thus a downward pressure on price.

Equilibrium price and Quantity of milk.

Price (Rs. Per litre)	Quantity Demanded (000 litres)	Quantity Supplied (000 litres)
4	10	2
6	9	3
8	8	4
10	7	5
12	6	6 (Equilibrium)
14	5	7
16	4	8
18	3	9
20	2	10

Graphical Approach:

Graphs of demand and supply schedule drawn in fig. The intersection of the demand and supply curves indicators the equilibrium price and quantity since the demand and supply curves represents the same demand and supply schedules as were used in the tubular analysis, the equilibrium price and equilibrium quantity obtained by the graphical analysis are the same are those obtained from the tabular analysis i.e. Rs. 12 per litre and 6,000 litres respectively.

Simultaneous Equations Approach

The simplified market model may also be expressed in three equations. :

Demand : $Q_d = f(P_q)$

Supply : $Q_s = f(P_q)$

Equilibrium Conditions: $Q_d = Q_s$

Assuming a linear and exact demand and supply relationship the hypothetical market model may be as follows.

General

$$Q_d = a + bP$$

$$b < 0$$

$$Q_s = c + dP$$

$$d > 0$$

$$Q_d = Q_s$$

Specific

$$Q_d = 12 - 0.5 P$$

$$Q_s = 0 + 0.5 P$$

$$Q_d = Q_s$$

Where,

Q_d = Quantity demanded in '000' liters

Q_s = Quantity supplied in '000' liters

P = Price per unit of milk in Rs. per litre

From the equilibrium condition stated in the last equation the equilibrium value of P may be calculated as follows.

General

$$a + b\bar{P} = c + d\bar{P}$$

or

$$b\bar{P} - d\bar{P} = -a + c$$

Specific

$$12 - 0.5 \bar{P} = 0 + 0.5 \bar{P}$$

or

$$-0.5 \bar{P} - 0.5 \bar{P} = 0 - 12$$

$$\bar{P} = \frac{-a + c}{b - d} \quad \bar{P} = \frac{-12}{d - 1} = 12$$

By substituting the equilibrium value of P (Rs.12) in either the demand or the Supply relation, the equilibrium value of Q may be calculated as follows.

General

$$\bar{a} = a + b \left[\frac{-a + c}{b - d} \right]$$

or

$$\bar{Q} = c - d \left[\frac{-a + c}{b - d} \right]$$

Specific

$$\bar{Q} = 12 - 0.5 (12) = 6$$

$$\bar{Q} = 0 - 0.5 (12) = 6$$

CALCULATION OF ELASTICITY OF DEMAND

There is an inverse relation between demand and price. A change (rise or fall) in price leads generally to a change (contraction or extension) of demand. This attribute of demand by virtue of which it stretches or contracts under the pressure of a change in price is known as Elasticity of Demand. “The term elasticity expresses the degree of correlation between demand and price.” It is the rate at which the quantity demanded varies with a change in price.

Accredits to Joan Robinson: “The elasticity of demand, at any price or at any output, is the proportional change of amount purchased in response to a small change in price, divided by the proportional change in price.” Other things are assumed to remain constant, e.g. other prices, consumer’s income.

Elastic and Inelastic Demand

A change in demand is not always proportionate to the change in price. A small change in price may lead to a great change in demand. In that case, we shall say that the demand is elastic or sensitive or responsive. If, on the other hand, even a big change in price is followed only by a small change in demand, it is said to be a case of inelastic demand. For example, even if the price of salt varies by, we continue to buy almost the same quantity, demand is inelastic. But, if the price of radio sets many people, who could not afford to buy, may now be induced to buy; the demand will stretch or expand; it is elastic.

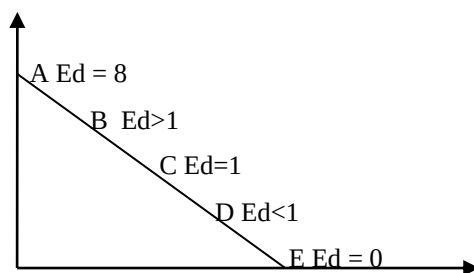
Five Cases of Elasticity. It is usual to display between five cases of elasticity: (i) Perfectly or Infinite Elasticity; (ii) Perfectly Inelastic or Elasticity; (ii) Relatively Elastic; (iv) Relatively Elastic; and (v) Unit Elasticity. They can be represented diagrammatically

Necessity of Estimation:

1. For structural analysis
2. To study the forecasting analysis
3. Impact of various policies that may affect the demand for commodity.

1) Point elasticity of Demand :

It is a geometrical method for measuring elasticity at a point on the demand curve. Point method is used when price changes are extremely small this method is applicable only when we possess information on the minute changes in price quantities



Point Elasticity of demand

A straight line demand curve joining the two axes is considered to show the measurement of point elasticity at any point on demand curve is the ratio of the lower part of straight line to the upper part. It is important to note that point elasticity of demand on straight line is different at every point.

At any point to the right of mid-point the point elasticity is less than unity. At any point to left of mid-point the point elasticity is more than unity. At the mid-point the elasticity is unity. At point where the linear demand curve intersects the vertical axis (A) the point elasticity is infinity while at point where demand curve intersects the x-axis point elasticity is zero.

2) Arc elasticity of Demand :-

The price elasticity of demand measured between two distinct points on the demand curve is called arc elasticity of demand. This method is used to find the mid-point between the old & New data in the curve of price and quantity. It studies the portion of demand curve between two points. An arc is a segment or portion of a curved line. Arc elasticity is employed in order to compute price elasticity coefficient from discrete data.

The following formula is used to compute arc elasticity.

$$\text{Arc elasticity} = \frac{\frac{\text{change in Qty demanded}}{\Delta \text{ve quantity}}}{\frac{\text{change in price}}{\Delta \text{ve price}}}$$

$$\frac{Q_1 - Q_2 / [(Q_1 + Q_2)/2]}{P_1 - P_2 / [(P_1 + P_2)/2]} = \left(\frac{\frac{\Delta Q}{Q_1 + Q_2}}{\frac{\Delta P}{P_1 + P_2}} \right)$$

$Q_1 = \text{First Quantity}, \quad P_1 = 1^{\text{st}} \text{ obs price}$

$Q_1 = \text{Second Quantity}, P_2 = 2^{\text{st}} \text{ obs price}$

$\Delta Q = \text{Change Quantity}, \Delta P = \text{Change in price}$

Formula for estimation of elasticity of demand

$$\text{Arc elasticity} = \frac{\text{Change in quantity demanded} / \text{Avs qunatity}}{\text{Change in price} / \text{Avs price}}$$

Problem:

With the help of following demand schedule estimate point & Arc elasticity of demand for commodities with respect to its price.

Sr. No.	Price / qt	Quantity demanded
1	900	40
2	1000	38
3	1100	35
4	1200	33
5	1300	37
6	1400	30
7	1500	28
8	1600	26

First calculate Price elasticity

$$\text{Point elasticity} = \frac{\text{change in quantity demanded} / \text{original qts}}{\text{change in price} / \text{original price}}$$

$$\text{Point elasticity} = \frac{\text{change in qts demanded}}{\text{original qts}} \times \frac{\text{original price}}{\text{change in price}}$$

$$1) ep = \frac{40-38}{900-1000} \times \frac{900}{40} = \frac{2}{100} \times \frac{90}{4} = \frac{-9}{20} = -0.45$$

$$2) ep = \frac{38-35}{1000-1100} \times \frac{1000}{38} = \frac{3}{-100} \times \frac{1000}{38} = \frac{-30}{38} = -0.7894$$

$$3) ep = \frac{35-33}{1100-1200} \times \frac{1100}{35} = \frac{2}{100} \times \frac{1100}{35} = \frac{-22}{35} = -0.6285$$

$$4) ep = \frac{33-31}{1200-1300} \times \frac{1200}{33} = \frac{2 \times 1200}{100 \times 33} \times \frac{221}{33} = -0.7272$$

$$5) ep = \frac{31-30}{1300-12100} \times \frac{1300}{31} = \frac{1}{1000} \times \frac{1300}{31} = \frac{-13}{31} = -0.4193$$

$$6) ep = \frac{30-28}{12100-1500} \times \frac{1400}{30} = \frac{2 \times 12100}{100 \times 30} \times \frac{28}{30} = -0.9333$$

$$7) ep = \frac{28-26}{1500-1600} \times \frac{1500}{28} = \frac{2 \times 1500}{100 \times 28} = \frac{30}{28} = -1.07142$$

Arc Elasticity:-

$$\frac{\text{Change in dry demanded/Avg Qts}}{\text{Arc elasticity} = \text{change in price/Avg price}}$$

$$= \frac{\text{Change in qty demanded}}{\text{Avg Qty}} \times \frac{\text{Avg price}}{\text{Change in price}}$$

Sr. No.	Price / Qty	Qty demanded	Point elasticity	Arc elasticity
1	900	40	-0.45	-0.04871
2	1000	38	-0.7854	-0.8519
3	1100	35	-0.6285	-0.6761
4	1200	33	-0.7272	-0.7812
5	1300	37	-0.4799	-0.212126
6	1400	30	-0.930	-0.1.00
7	1500	28	-1.0714	-1.1481
8	1600	26	--	--

$$1) ep = \frac{40-38}{39} \times \frac{950}{900-1000} = \frac{2}{39} \times \frac{950}{-100} = \frac{1900}{3900} = -0.4871$$

$$2) ep = \frac{38-35}{37} \times \frac{1050}{1000-1100} = \frac{3}{37} \times \frac{1150}{-100} = \frac{-3150}{-3400} = -0.8513$$

$$3) ep = \frac{35-33}{34} \times \frac{1150}{1100-1200} = \frac{2}{34} \times \frac{1150}{-100} = \frac{2300}{-3400} = -0.6704$$

$$4) ep = \frac{33-31}{32} \times \frac{1250}{1200-1300} = \frac{2}{32} \times \frac{1250}{-100} = \frac{-2500}{3200}$$

$$5) ep = \frac{31-30}{30.5} \times \frac{1350}{1300-1400} = \frac{1}{30.5} \times \frac{1350}{-100} = 0.4426$$

$$6) ep = \frac{30-28}{29} \times \frac{12150}{1400-1500} = \frac{2 \times 1450}{-2900} \times \frac{2900}{-2900} = -1$$

$$7) ep = \frac{28-26}{29} \times \frac{1650}{1500-1600} = -1.481$$

STUDY OF SEASONAL INDICES OF ARRIVALS AND PRICES OF CEREALS**Definition of Time Series**

When we observe numerical data at different points of time, the set of observations is known as time series. For example, if we observe production, sales, population, imports, exports etc. at different points of time, say over the last 5 or more years, the set of observations formed shall constitute time series.

1. A time series is a set of statistical observations arranged in chronological order
2. When quantitative data are arranged in the order of the occurrence the resulting statistical series is called a time series.

There are four types of components or elements of time series

1. Secular trend
2. Seasonal variations
3. Cyclical variations
4. Irregular variations

Seasonal variations

Price have to play an important role in economic planning. Price determine not only what should be produced, but how much should be produced and their distribution.

The wide fluctuation in prices affects the grower's capacity for increasing production. These fluctuations in the prices of agricultural products are the greatest hurdle in the way of agricultural development as they bring ruin to many. Besides, annual variations in productions and low prices elasticity of demand, another contributory factor to the instability of farm prices is the seasonality in agricultural production.

It is therefore, necessary to study the farm prices, which form an essential requirement for policy formulation

On the bases of price studies the cultivators can make decisions for proper allocation, of the crops areas by anticipating future prices based on the prices which prevailed in the past. From the time series data on arrivals and prices of pulses we can examine the extent and nature of seasonal fluctuations in arrivals and prices.

Seasonal variations are those periodic movements in business activity which occur regularly every year and have their origin in nature of the year itself. Since, these variations repeat during a period of 12 months they can be predicted fairly accurately.

A seasonal variation in time series is the repetitive, recurrent pattern of change which occurs within a year.

Measurement of Seasonal variations

Most of the phenomenon in economics and business show seasonal pattern. When the data are expressed annually, there is no seasonal variation. However, monthly or quarterly data frequently exhibit strong seasonal movements.

There are many techniques available for computing an index of seasonal variations. The following are some of the methods more popularly used for measuring seasonal variations.

1. Ratio to monthly averages / method of simple averages (weekly / monthly / quarterly)
2. Ratio to 12 months moving average method
3. Ratio to Trend method
4. Link relative method

Seasonal indices of arrivals of jowar in Solapur market are worked out and presented in table as below.

Example: Calculate the seasonal indices with the help of following data

Year	2001	2002	2003	2004	2005	2006	2007
January	265	288	306	327	351	378	411
February	262	288	307	326	353	384	410
March	269	289	309	331	358	385	415
April	267	287	307	333	357	387	422
May	265	286	308	333	360	391	424
June	265	290	308	335	363	395	426
July	267	290	311	338	366	402	429
August	274	293	317	314	369	204	434
September	279	299	321	340	369	407	430
October	285	303	325	343	374	409	431
November	289	305	327	346	376	409	437
December	290	304	329	349	378	411	431
Total							
Average							
Seasonal indices							

Assignment

Collect the Monthly data of arrivals and prices of cereal crop from nearest APMC for last 7 years and estimate the seasonal indices

ESTIMATION OF MARKETABLE AND MARKETED SURPLUS FOR DIFFERENT AGRICULTURAL COMMODITIES

Producers surplus

It is the quantity of produce which is or can be, made available by the farmers to the non-farm population. Producers surplus is of two types

1) Marketable surplus

Marketable surplus is the residual left with the producer-farmer after meeting his requirement for family consumption, farm needs, for seed and feed for cattle, payment to Labour in kind, payment to artisans-carpenter, blacksmith, potter and mechanic, payment to land lord as rent and social and religious payments in kind. This may be expressed as follows

$$MS = P - C$$

Where,

MS = Marketable surplus

P = Total productions

C = Total requirement (family consumption)

Farm needs, payment to labour, artisans, landlord, and payment for social and religious work.

2) Marketed surplus

Marketed surplus is that quantity of the produce which the producer- farmer actually sells in the marketed irrespective of his requirements for family consumption, farm needs and other payments.

The marketed surplus may be more, less or equal to the marketable surplus depending upon the condition of farmer and type of crop. The relationship between the two terms may be stated as follows:

$$\begin{array}{l} > \\ \text{Marketed surplus} < \text{Marketable surplus} \\ = \end{array}$$

1. The marketed surplus is more than the marketable surplus when the farmer retains a smaller quantity of the crop than his actual requirements for family and farm needs. This is true especially for small and marginal farmers, whose need for cash is more pressing and immediate. This situation of selling more than the marketable surplus is termed as distress or forced sale. Such farmers generally buy the produce from the market in a later period to meet their family and/or farm requirements. The quantity of

distress sale increases with the fall in the price of the product. A lower price means that a larger quantity will be sold to meet some fixed cash requirements.

2. The marketed surplus is less than the marketable surplus when the farmers retain some of the surplus produce. This situation holds true under the following conditions.
 - a. Large farmers generally sell less than the marketable surplus because of their better retention capacity. They retain extra produce in the hope that they would get a higher price in the later period. Sometimes, farmers retain the produce even up to the next production season.
 - b. Farmers may substitute one crop for another crop either for family consumption purpose consumption purpose or for feeding their livestock because of the variation in prices. With the fall in the price of the crop relatives to a competing crop, the farmers may consume more of the first and less of the second crop.
3. The marketed surplus may be equal to the marketable surplus when the farmers neither retain more nor less than his requirement. This hold true for perishable commodities and of the average farmer.

Estimation of marketable and marketed surplus

In India production activity is carried out by millions of farmers which are spatially scattered, the estimate of marketable / marketed surplus of agricultural products at the national level is not easy especially of the food grains and other food items such as milk which are consumed by the producing families also.

Estimation of marketed and marketable surplus at the level of individual farmer is easy.

Problem 1 :

There are six adult units in the family of a farmer. He also maintains two milch animals. Farmer has sold 120 quintal of wheat, 15 quintals of soybean, 48 quintals of gram, 60 quintals of jowar and 30 quintals of paddy at different times between July 2007 and June 2008, for the given information, the marketable and marketed surplus of the different crops can be worked out total production and the requirements of the farm and family are as under.

Crops	Area under crop (ha)	Productivity (qtl/ha)	Seed required (qtl)	Consumption requirement/ adult (qtl)	Other requirements
Wheat	8	30	8	12	10
Soybean	2	20	1.5	--	--
Tur	5	12	1	1.8	0.5
Gram	5	15	3	1.8	0.5
Jowar	15	20	1.5	6	10
Paddy	5	40	2	9.5	10

The marketable and marketed surplus of different products:

Crops	Total production in qtls.	Total requirement in qtls.	Marketable surplus	Marketed surplus	Percentage of	
					Marketable surplus	Marketed surplus
Wheat						
Soybean						
Tur						
Gram						
Jowar						
Paddy						

Problem 2

There are 3 adults unit in the family of Mr. Rama. He also maintain 4 milk animal. Mr. Rama sold 70 qtls. of wheat, 25 qtls. bajara, 10 qtls. gram, 8 qtls. tur at primary wholesale market during the year 2008. Workout Marketed and Marketable surplus with percentage share from following information.

Crops	Area (ha)	Yield (qtl/ha)	Seed requirement (qtl)	Consumption per adult (qtl)	Requirement for Artisan & Livestock (qtls.)
Wheat	8	12	4.5	1.0	1 for artisan
Bajara	5	8	0.5	0.5	3 for artisan
Gram	3	4	3.0	1.0	2 for artisan
Tur	3	4	0.5	0.5	0.1 qtl. per milk animal

Exercise No. 5**Date :****VISIT TO A LOCAL MARKET: VEGETABLE MARKET**

Students should visit the vegetable market and record information about vegetable market on following points

1. Place of vegetable market
2. Kinds of vegetable for sale-
3. Objectives of study -
4. Methods of sale-
5. Selection criteria of vegetable-
6. Market charges / cost
7. Payment of the value

8. Licensing of market functionaries

9. Supervision

10. Give the management body (Market committee)

11. Number of agents

11. Settlement of disputes

12. Provision of amenities and facilities in the market

13. Vegetable wise arrivals and prices

STUDY OF REGULATED MARKET AND RYTHU BAZAR**A) Regulated Market**

Under the traditional system of marketing of the agricultural products, producer sellers incurred a high marketing cost and suffered from unauthorized deductions of marketing charges and the prevalence of various malpractices. To improve marketing conditions and with a view to creating fair competitive conditions, the increase in the bargaining power of producer-sellers was considered to be the most important prerequisite of orderly marketing. Most of the defects of, and malpractices under, the then existing marketing system of agricultural products have been more or less removed by the exercise of public control over markets, i.e. by the establishment of regulated markets in the country.

Definition

There are those markets in which business is done in accordance with the rules and regulations framed by the statutory market organization representing different sections involved in markets. The marketing costs in such markets are standardized and marketing practices are regulated.

Objectives

The specific objectives of regulated markets are as follows

1. To prevent the exploitation of farmers by overcoming the handicaps in the marketing of their products
2. To make marketing system most effective and efficient so that farmers may get better prices for their produce and the goods are made available to consumers at reasonable prices.
3. To provide incentive prices to farmers for better production programme, both in quantitative and qualitative terms.
4. To promote an orderly marketing of the agricultural produce by improving the infrastructure facilities.

Features of Regulated Market**a) Method of Sale**

In regulated markets, the sale of agricultural produce is undertaken either by open auction or by the close tender method. These methods of sales ensure a fair and competitive price for the produce and prevent the cheating of farmers by market functionaries. By these methods, the sale is carried out under the supervision of an official of the market committee,

and the signature of the buyer are taken as soon as the auction is over. The business is done during fixed hours. Generally, different commodities are traded at different times of the day. Bidding is kept open to all authorized traders, and the highest bidder is given the produce. The farmer has the option to refuse to accept the sale even at the highest bid, if he so desires.

b) Weighment of produce

Weighment of the produce is done by a licensed weighment with standard weights and a platform scale. In some markets, a weighbridge has been installed. This eliminates short weights and malpractices which arise out of weighing with a hand balance. Electronic weighing balances/machines have also been installed in some markets.

c) Grading of produce

The produce in the regulated markets is expected to be sold only after grading; but because of the absence of facilities, such as space, funds for the employment of technical experts for grading and the purchase of grading equipment, the grading scheme could not be implemented in all the markets in the country. The scheme is in operation only in some markets. There is, therefore, a need for the extension of grading facilities to all the markets in the country.

d) Market news service

In regulated markets, there is an arrangement for a proper and correct dissemination of market prices through various media, such as loudspeakers and notice-boards.

e) Market charges

With the regulation of markets, such market charges as *darmada*, *charity karda*, *dhalta* and *muddat*, were abolished, while the rates of other market charges, such as commission, brokerage, *hamali* and weighing charges were specified in proportion to the extent of the service rendered by different middlemen. Recently, the market charges payable by sellers have been transferred to the buyer, the seller has to pay only for the activities undertaken prior to marketing of the produce, i.e. for transportation, octroi and *hamali* only. There is, thus, some saving for the producers. The extent of saving varies from market to market and from commodity to commodity.

f) Payment of the value

It is obligatory on the buyer to make prompt payment for the produce without deductions of any *muddat* in unregulated markets, the payment of the price of the produce is made by the buyer after 3 to 15 days of the sale of the produce in accordance with local market rules. In the past, if the seller insisted on cash payment, the buyer would deduct

muddat (cash discount) in the extent of Re. 0.50 for the produce worth Rs. 100 while making the payment. This practice has been stopped with the regulation of markets.

g) Licensing of market functionaries

All the market functionaries, from the *hamals* to traders working in the regulated market, have to obtain a license from the market committee; after paying the prescribed fees, to carry on their business. The licensed traders have to keep proper records and maintain accounts in accordance with the bye-laws of the market committee. This facilitates the exercise of a proper control on the accounts of the traders and the collection of the correct amount of the market fee by the market committee. Any violation of rules by middlemen may lead to the cancellation/suspension of the license by the market committee or to the filing of challans in a court of law.

h) Supervision

The day-to-day functioning of regulated markets is supervised by the officials of the market committee, i.e., the secretary, auction clerks, and other staff. The administrative decisions are taken by the nominated/elected market committee.

i) Market committees

The market committee consists of representatives of all sections, i.e., farmers, traders, co-operative marketing societies, co-operative or commercial banks, autonomous bodies (panchayat samiti and municipal board of the area), and governments officials. Prior to the establishment of regulated markets, the rules for the conduct of the business in the market were framed by traders without any consideration for the interests of other groups of persons i.e., farmers and consumers. The composition of the market committee varies from State to State.

The market committee is nominated in the first instance for a period of two years. Subsequent committees are elected for a term of three years each. The members of the market committee elect their own Chairman and Deputy Chairman. The market committees are the main instruments under the Market Act. The Committees are corporate bodies comprising the representatives of various groups.

j) Finances

To meet its administrative expenditure and in order to create infrastructural facilities in the market area, the market committee gets funds from the following sources

1. Market fee on the produce brought for sale in the market yard/market area.
2. License fee/renewal fee of market middlemen functioning in the area
3. Subsidy from the government

k) Functions of market committees

The functions of the market committee vary from state to state.

1. To manage the main and sub-market yards and run them in the interest of the agriculturists and traders
2. To prescribe the hours of trading with a view to controlling and regulating transactions
3. To issue, renew or withdraw licenses of market functionaries with a view to regulating the entry of persons in the market.
4. To fix market charges for various functions and services
5. To realize market fee from either buyers or sellers
6. To collect and disseminate market news among the farmers and buyers
7. To settle disputes, which arise out of the sale and purchase of notified agricultural commodities, among farmers, traders and other market functionaries
8. To control and regulate the behaviour of those who enter the market for transactions
9. To provide facilities for grading and standardization and to take steps for the prevention of adulteration of agricultural produce
10. To bring, prosecute and defend any suit on behalf of the market committee
11. To create amenities in the market yard as well as in the market area which are necessary for the smooth functioning of the marketing of agricultural commodities.

l) Settlement of disputes

Disputes arising between producer-seller and traders by reason of the quality of the produce, accounts and deductions of unauthorized charges are solved by the sub-committee of the market committee. This avoids the legal complications and unnecessary expenditure. Prior to regulation, no such facility existed. If a farmer was not satisfied, he had to go to a court of law to get his due share, which involved a lot of expenditure and wastage of time.

m) Eliminating malpractices

Regulated markets have brought about a general awakening among producer-sellers. This awakening enables them to protect themselves against a number of malpractices which were formerly prevalent in the unregulated markets. Now the sale slips of the produce sold are given to farmers, showing the details of the quantity sold the rate of sale and deductions, if any. A copy of the sales slip is supplied to the market committee for purposes of checking. The malpractice of the taking away of samples by the bidders has also been stopped.

n) Provision of amenities in the market

The market committee provides the amenities required for a smooth and efficient marketing of the produce of farmer-sellers. These amenities encourage the farmers to bring their produce for sale in the regulated market and check the tendency on their part to sell locally. There is also a check on the tendency to aversion of city markets for one reason or the other.

The various amenities provided by the market committee are:

1. Link roads and culverts in the area
2. A spacious market yard
3. Rest house, cattle shed and water troughs
4. Light, watchman, drinking water and parking space for carts in the market yard
5. Infrastructure facilities, such as banks, canteens and post office in the market yard.

B) Rythu Bazars

Rythu Bazars have been established in the major cities of Andhra Pradesh state with the prime objective to provide direct link between farmers and consumers in the marketing activity of fruits, vegetables and other essential food items.

Advantages

1. Producers are benefited from Rythu Bazars as producers share in the consumers rupee is more by 15 to 40 per cent.
2. Consumers get fresh vegetables, fruits and food items at 20 to 35 per cent less price than the prevailing prices in nearby market
3. Marketing costs are at the minimum level as middlemen are completely eliminated from the marketing activities in Rythu Bazar.

Working

There is no government involvement in price fixation, this function is left to farmers who organize themselves into committees and these committees are fixing sale prices daily after taking into consideration the whole sale and retail prices prevailing in the nearby towns, Generally prices are fixed 20 per cent over the wholesale prices and 15 to 20 per cent less than local marketing price. Prices fixed are displayed at several places all over the Rythu Bazars for the benefit of these markets is being met from financial sources of APMC nearer to Rythu Bazars.

Majors highlights of Rythu Bazars

1. District collector make the land available for these Bazars.
2. Permanent infrastructures with all support systems are being constructed in these Bazars by concerned APMS.
3. Vegetables cultivators in the identified village are provided photo identity card and only these cultivators are permitted to sell vegetable in these Bazars.
4. For transport of vegetable State Government arranges special buses on most routes.
5. Temporary storage facilities are an anvil.
6. Co-ordination exists between revenue, marketing and horticulture departments for smooth functioning
7. Other essential commodities like pulses and edible oils are also are sold in these markets at reasonable prices.
8. Vegetable production programme in the area is also undertaken by horticulture department of the state to ensure regular supply of vegetables to the consumer.

Assignment

- 1) During visit students are instructed to record information on above features of the Regulated Market
- 2) Write a note on unregulated market

STUDY OF MARKETING CHANNELS FOR DIFFERENT CROPS**Marketing Channels**

Marketing channels are routes through which agricultural products move from producers to consumers. The length of the channel varies from commodity to commodity, depending on the quantity to be moved, the form or consumer demand and degree of regional specialization in production.

Definition

A marketing channel may be defined in different ways according to Moore, the chain of intermediaries through whom the various food grains pass from producers to consumers constitutes their marketing channels.

‘Kohls and Uhl²’ have defined marketing channel as alternative routes of product flows from producers to consumers.

A) Marketing channels for Cereals

Marketing channels for various cereals in India are more or less similar, except the channel for paddy (or rice) where rice millers come into the picture. For pulse crops, *dal* mills appear prominently in the channel.

Some common marketing channels for wheat have been identified as follows:

1. Farmer to consumer
2. Farmer to retailer or village trader to consumer
3. Farmer to wholesaler to retailer to consumer
4. Farmer to village trader to wholesaler to retailer to consumer
5. Farmer to co-operative marketing society to retailer to consumer
6. Farmer to a government agency (FCI, etc.) to fair price shop-owner to consumer
7. Farmer to wholesaler to flour miller to retailer to consumer

The channels for paddy-rice and pulses are broadly the same, except that the rice millers or *dal* millers come into the picture before the produce reaches retailers or consumers.

B) Marketing channels for Oilseeds

Marketing channels for oilseeds are different from those for food grains mainly because the extraction of oil from oilseeds is an important marketing function of oilseeds.

The most common marketing channels for oilseeds in India are:

1. Producer to consumer (who either directly consumes the oilseeds or gets it processed on custom basis).

2. Producer to village trader to processor to oil retailer to consumer
3. Producer to oilseed wholesaler to processor to oil wholesaler to oil retailer to oil consumer
4. Producer to village trader to processor to oil consumer
5. Producer to government agency to processor to oil wholesaler to oil retailer to oil consumer

C) Marketing channels for Fruits and Vegetables

Marketing channels for fruits and vegetables vary from commodity to commodity and from producer to producer. In rural areas and small towns, many producers perform the function of retail sellers. Large producers directly sell their produce to the wholesalers or processing firms. Some of the common marketing channels for vegetables and fruits are:

1. Producer to consumer
2. Producer to primary wholesaler to retailers or hawkers to consumer
3. Producer to processors (for conversion into juices, preserves, etc.)
4. Producers to primary wholesalers to processors
5. Producers to primary wholesalers to secondary wholesalers to retailers or hawkers to consumers
6. Producers to local assemblers to primary wholesalers to retailers to hawkers to consumers

D) Marketing channels for pulses

1. Farmer → Consumer
2. Farmer → Retailer → Consumer
3. Farmer → Village Trader → Consumer
4. Farmer → Village Trader → Retailer → Consumer
5. Farmer → Village Trader → Wholesaler → Retailer → Consumer
6. Farmer → Village Trader → Wholesaler → Government agency
7. Farmer → Village Trader → Wholesaler → Processor → Retailer → Consumer
8. Farmer → Village Trader → Wholesaler → Processor → Dal wholesaler → Retailer → Consumer

Assignment

1. Draw flow charts for marketing channels for paddy, wheat, groundnut, mango, cashew nut and tur.

ESTIMATION OF MARKETING COST, MARKET MARGIN AND PRICE SPREAD FOR FOODGRAINS

Marketing cost

Marketing cost are the actual expenses required in bringing goods and services from producer to consumer. Accordingly costs in case of field crops begin when they leave the farm and end at the point where they finally reach the consumer.

Constituents of marketing costs:

The marketing costs normally includes

1. Handling charges at local point
2. Assembling charges
3. Transport and storage costs
4. Handling charges by wholesalers and retailers
5. Expenses on secondary services i.e. financing, risk taking and market intelligence.
6. Profit margins taken out by different agencies.

Peculiarities of agriculture production affecting marketing cost

The common experience is that the marketing of Agricultural products is more expensive than marketing of manufactured industrial goods on account of certain peculiar features of Agricultural products.

1. Agricultural produce is scattered over wide areas, assembling of small lots into sizeable one is an additional job
2. Agricultural products vary much in quality and hence they need to be graded as to conform to certain well established standards
3. Agricultural products are bulky and perishable in nature and therefore they are more difficult to transport and to store
4. Longer period of waiting is involved in case of agricultural production before the money invested in agriculture could be realized
5. The margin of marketing agencies appears to be more

The objectives of studying marketing costs

1. To ascertain the total cost of marketing of a commodity
2. To ascertain as to what intermediary agencies intervene between the producer and the final consumer of a commodity, the service they render and margin they get for such services and to examine whether such services are necessary

3. To ascertain the total cost of marketing of a commodity
4. To see whether there is an alternative in order to lower the cost of marketing
5. To compare the price paid by consumer with that received by the grower

Meaning of market margin

It refers to the difference between the price paid and price received by the specific marketing agency such a single retailer or wholesaler etc. or combinations of marketing agencies

Meaning of price spread

Distribution of the market price paid by the ultimate consumer (consumer price) among the producer and various intermediaries involved in marketing is termed as price spread. Distribution of price spread give us fair idea about relative efficiency of various marketing system and channels.

Formulae

1. Total marketing cost or price spread (P.S.) = Price paid by consumer – price received by producer
2.
$$\text{Producer's share in consumer rupee (\% share)} = \frac{\text{Net price received by producer}}{\text{Amount paid by consumer}} \times 100$$

Example

From the following hypothetical information work out marketing margin of each marketing agency, total marketing cost, price spread and producer's share in consumers rupee.

A farmer Mr. Patil in Roha tahsil comes to APMC, Panvel with 150 bags of rice (each weighing 100 kg net). He takes the produce to M/s Jain Brothers, a commission agent. Immediately on arrival, Mr. Patil requests M/s Jain Brothers to make payment on his behalf to the truck owner for transporting the produce and for octroi charges. The produce is unloaded from the truck by licensed labourers, who are paid by the commission agent on behalf of the farmer. The produce is put on the auction plat form and the farmer takes his empty gunny bags. The rates of payments made so far by the commission agent, on behalf of the farmer are :

- | | |
|---------------------------|--------------------|
| i. Transportation charges | @ Rs. 5.00 per bag |
| ii. Octroi | @ Rs. 0.20 per bag |
| iii. Labour for unloading | @ 0.15 per bag. |

Now the produce is auctioned and one wholesaler M/s. Mool Chand Sagar Mal, purchases this lot of a price of Rs. 495/- per quintal. The commission agent makes the

payment to the farmer at rate of Rs. 495/- per quintal after deduction shown in (i), (ii) and (iii) above, which are to be borne by the farmer.

Meanwhile, the wholesaler M/s Mool Chand Sagar Mal, has decided to send this lot to Pune market in a hired truck. This wholesaler pays for following items in Panvel

- iv. Cost of gunny bags @ Rs. 4 per bag
- v. Labour charges for filling and stitching bags @ Rs. 0.25 per bag
- vi. Weighing @ 0.20 % of the value of the produce
- vii. Commission to the commission agent @ 1 % of the value of the produce
- viii. Market fee to the market committee @ 1 % of the value of produce
- ix. Labour charges for loading the bags into truck @ Rs. 0.25 per bag
- x. Truck transport charges (Panvel to Pune) @ Rs. 5 per kg

After arriving in Pune market, the wholesaler for M/s Mool Chand Sagar Mal, pays for the following items

- xi. Labour charges for unloading @ Rs. 0.25 per bag
- xii. Octroi @ Rs. 0.35 per kg

The unloading in Pune is done at the shop of a commission agent, through him, this lot is sold to M/s. Daulat Chand & Co. @ Rs. 520 per quintal. The empty gunny bags are also sold @ Rs. 3.00 per bag. The commission agent collects the following amount from the buyer (i.e. M/s. Daulat Chand & Co.)

- xiii. Commission @ 1 % of the value of produce
- xiv. Market fee (to be paid to the market committee Pune) @ 1 % of the value of produce
- xv. Weighing charges @ 0.40 % of the value of produce

M/s. Daulat Chand & Co. take the produce to the shop and while doing this, he incurs the following expenses.

- xvi. Labour charges for transporting the produce to his shop @ Rs. 0.60 per bag

Now M/s. Daulat Chand & Co. sells rice to consumers @ Rs. 550 per quintal, together with gunny bags, for which an extra charge of Rs. 2.00 per bag is realized.

It has been assumed that there is no physical loss during the handling of the produce and the no significant time elapses between various transactions.

Solution: Marketing Costs

a) Incurred by the farmers, Mr. Patil

Sr. No.	Particulars	Quantity (bags)	Rate (Rs./bag)	Amount (Rs.)
1.	Transport charges	150	5.0/bag	
2.	Octroi	150	0.20/bag	
3.	Labour charges for unloading	150	0.15/bag	
	Sub Total (a)			(Rs.)

b) Incurred by the wholesaler M/s. Mool Chand Sagar Mal of Panvel market

Sr. No.	Particulars	Quantity (bags)	Rate (Rs./bag)	Amount (Rs.)
4.	Cost of gunny bags (Rs. 4-3) (his purchase price minus sale price)	150 bags	Rs. 1.00 per bag	
5.	Labour charges for filling & stitching of bags	150 bags	Rs. 0.25 per bag	
6.	Weighing charges	Rs. 74.250 worth of produce	0.20% of the value of the produce	
7.	Commission to agent	Rs. 74.250 worth of produce	1 % of the value	
8.	Market fee	Rs. 74.250 worth of produce	1% of the value	
9.	Labour charges for loading on the truck	150 bags	Rs. 0.25/bag	
10.	Transportation (Panvel to Pune)	150 bags	Rs. 5/bag	
11.	Octroi at Pune	150 bags	Rs. 0.35/bag	
12.	Labour charges for unloading at Pune	150 bags	Rs. 0.25/bag	
	Sub Total (b)			(Rs.)

c) Incurred by M/s. Daulat Chand & Co. of Pune.

Sr. No.	Particulars	Quantity (bags)	Rate (Rs./bag)	Amount (Rs.)
13.	Cost of gunny bags (Rs. 3-2)	150 bags	Rs. 1.00 per bag	
14.	Commission on value of the produce	Rs. 81,000 worth of the produce	1% of the value of the produce	
15.	Market fee at Pune	Rs. 81,000 worth of the produce	1% of the value of the produce	
16.	Weighing charges	Rs. 81,000 worth of the produce	0.40% of the value of produce	
17.	Transport charges from market to shop	150 bags	RS. 0.60 per bag	
	Sub Total (c)			(Rs.)
	Total Marketing Cost (a + b + c)			

Marketing margin

Profit/margin of a trader = Receipts (sale value) – [purchase value + cost incurred]

Profit margin of M/s. Mool Chand Sagar Mal of Panvel (in Rs.)

=

Market margin / profits of M/s. Daulat Chand & Co. of Pune

=

Total margin for both traders =

Price received by the farmer

Gross price received =

Cost borne by the farmers =

Net price received =

Total net income of the farmer =

Price spread

Sr. No.	Particulars	Gross for whole lot of 150 quintals (Rs.)	Per quintal (Rs.)	% share in the price paid by the consumer
1.	Farmers share or net receipt of the farmer			
2.	Market cost			
3.	Marketing margins (for both traders)			
4.	Price paid by the consumer			

Production share in consumer rupee = $\frac{\text{Net price received by producer}}{\text{Price paid by consumer}} \times 100$

Conclusion: 

STUDY OF THE NATIONAL AGRICULTURE CO-OPERATIVE MARKETING FEDERATION OF INDIA (NAFED)

The Genesis

The NAFED is an apex organization of the co-operative marketing structure founded in 1958; it functions as the leader in the field of co-operative marketing within the country as well as in the export markets. Its membership consist of state level federation, commodity federations and selected districts and primary marketing federation. It has 121 member institution. Membership is open to primary marketing societies with a turnover of Rs. 20 lakhs in advanced states and Rs. 10 lakh and above in co-operatively backwards areas. 3370 primary marketing societies have affiliated to NAFED as its members. NAFED has 31 branches located in all major port towns and capital cities of the states. These branches under take procurement operations of NAFED which are undertaken by the state co-operative marketing federations and co-operative marketing societies in various states.

Objectives

1. To facilitate, co-ordinate and promote the marketing and trading activities of the co-operatives in agricultural and other commodities.
2. To undertake / promote on its own or on behalf of it member institution or the government organization, interstate, intra state, international trade and undertake sale, purchase, import, export and distribution of agricultural commodities horticultural and forest produce.
3. To undertake purchase, sale and supply of agricultural products, marketing and processing machinery for agricultural, dairy, wool and other animal product.
4. To own and construct its own godowns and cold storages.
5. To act as an agent of government agency or co-operative institution for the purchase, sale, storage and distribution of agricultural, horticultural, forest and A.H.D. products.
6. To act as an insurance agent
7. To organize consultancy work in various fields for the benefit of the co-operatives.
8. To undertake manufacture of agricultural machinery, implements, processing and packing.
9. To maintain transport units of its own or in collaboration with other organization.

10. To collaborate with any international agency for development of co-operative marketing, processing activities.
11. To undertake marketing research and dissemination of market intelligence
12. To subscribe to the share capital of other co-operatives
13. To advanced loans to its members and other co-operatives on the security of goods
14. Arranging training to employees of co-operative society

Management

The management of the NAFED vests in the Board of Directors comprising one representative from each state, two from NCDC, three representative of the Govt. of India and one each from RBI, SBI, STC, National co-operative union of India and Bharat Krishak Samaj.

Share Capital Funds

The NAFED raises funds from 1) Admission fee 2) Share capital 3) Grants in aid and donations 4) Loans and deposits 5) Profits

The share capital of NAFED consists of an undetermined number of shares of the value of Rs. 5000/- each.

Operation of the NAFED

1. Price support operations
2. Internal trade
3. Foreign trade – Export and Import of agricultural commodities
4. Production and marketing of agricultural inputs
5. Promotional activities
6. Developing co-operative marketing of tribal produce
7. Setting of scientific storage system
8. Processing of fruits, vegetables and others
9. Distribution of agricultural machinery
10. Establishment of processing unit

STUDY OF THE STATE WAREHOUSING CORPORATION (SWC) AND CENTRAL WAREHOUSING CORPORATION (CWC)

The Genesis

The need for regulated warehousing in India had been felt for long. Therefore the Central Warehousing Corporation was established in the public sector by an act of parliament viz., the Agricultural Produce (development of warehousing) corporation act, 1956. The act was enacted on the recommendations of the all India Rural Credit Survey Committee Report 1954 with a view to bring improvement in the economic condition of the agriculturist and thereby to bring about rural upliftment under the act, warehouses were to be established. In 1962 the act was replaced by the warehousing corporation act 1962.

Separate warehousing corporation were also set up in different states of Indian Union. The first state warehouse was set up in different states warehouse was set up in Bihar in 1956. At the end of March 2001, state warehousing corporation were operating 1440 warehouses with a total capacity of over 131.38 lakh tones. The area of operation of the State warehousing corporation are centres of district. The total share capital of SWC is contributed equally by the concerned State Governments and the Central Warehousing Corporation.

Working Operation of SWC and CWC

The central warehousing corporation operates warehouses at Central of All India importance, it has 16 associates viz, the State ware housing corporation which operate warehouses at centre of state level importance.

The CWC made beginning in 1957 with 7 warehouses with a total capacity of 7000 tones, it gradually extended its operations to new centres and extended its capacity by hiring godowns and construction of modern warehouses. In 1980-81 it was operating 311 warehouses with a total capacity of 36 lakh tones.

The paid up capital of the corporation stood at Rs. 3657.80 lakh in 1979-80 and the number of persons employed in warehouses was 5957. The total capacity was of the order of 34389 lakh tones.

Working of Warehouses

a) Acts

The warehouses (CWC & SWC) work under the respective warehousing acts passed by the Central or State Governments. They are licensed under the provision of the act.

b) Eligibility

Any person may store notified commodities in a warehouse on agreeing to pay the specified charges. The person is required to bring his produce to the warehouses for storage. The commodity is inspected and the quality of the product is determined.

c) Warehouse receipt

This is a receipt issued by the warehouses manager / owner to the person storing his produce with them. This receipt mentions the name and location of the warehouses, the date of issue, a description of the commodities, including the grade, weight and approximate value of the produce based on the present price.

d) Use of Chemical

The produce accepted at the warehouse is preserved scientifically and protected against rodents, insects and pests and other infestation. Periodical dusting and fumigation are done at the cost of the warehouses in order to preserve the goods.

e) Financing

The warehousing receipt serves as a collateral security for the purpose of getting credit, commercial banks advanced up to 75 per cent of the value of the produce stored in the warehouses.

f) Delivery of Produce

The warehouse receipt has to be surrendered to the warehouses owner before the withdrawal of goods. The holder may take delivery of a part of the total produce stored after paying the storage charge.

Contribution of CWS and SWC to the economy of the country

1. Provided storage facilities all over the country
2. Preservation of stocks, minimizing losses in storage
3. Specialized storage for highly hygroscopic and delicate commodities
4. Storage of imported metals on behalf of MMTC, STC.
5. Handling, clearance and distribution of imported cement
6. Air cargo complex for import / export and accompanied baggage at the airports
7. Managing an air conditioned warehouses for exportable and delicate commodities

8. Purchase, storage, sales and distribution services
9. Orderly marketing through proper receipt handling, grading, care and delivery of goods
10. Disinfestations service to farmers, traders, co-operatives and miller
11. Farmers extension services
12. Training of personnel and expert advice
13. Bonded warehousing facilities for export and import cargo.

Exercise No. 11

Date:

**VISIT TO COOPERATIVE MARKETING SOCIETY TO STUDY THEIR
ORGANIZATION AND FUNCTIONING.**

**APPLICATION OF PRINCIPLES OF COMPARATIVE ADVANTAGE OF
INTERNATIONAL TRADE****Concept:**

The economist David Ricardo in his book “ Principles of Political Economy and Taxation” systematically represented the Comparative Cost Theory, He emphasized that countries can gain from trade not only if they had an absolute advantage as put forward by Adam Smith but also if they had a comparative advantage in production. Ricardo demonstrated that trade could take place even in the absence of absolute advantage provided there is a comparative advantage.

The theory of comparative or (relative) advantage shows that relative costs are important in determining which products are imported and exported. A country will export a product for which it has relatively low costs of production and will import products for which it has a relatively high cost of production. Comparative advantage is the ability of a country to produce a specific good at a lower opportunity cost than its trading partner. Opportunity cost refers of the most desired goods or services that are forgone in order to obtain something else. A country should produce and specialize in the good for which it has the lowest opportunity cost. By doing so the production forgone or sacrificed will be the lowest and world output will be maximized.

An advanced country may be more efficient than an underdeveloped nation in every line of production but its degree of superiority may differ from one commodity to another. According to Ricardo, the advanced country is said to have a Comparative Advantage in the commodity in which the degree of superiority is higher and a comparative disadvantage in the good in which the degree of superiority is lower.

General applicability of the comparative cost model or the logic of the argument can be understood with a simple example at a micro level. The logic can later be extended to international trade. A chartered accountant may be better than another individual X at auditing as well as maintaining books of account but he will still employ an accountant. Similarly Computer software professional may be better at his job as well as typing but he will still employ a typist who may be less efficient at typing. What is the reason for this? The answer is simple; the opportunity cost of spending time in the activity that pays less is too high. If the Chartered accountant, the software professional spend one hour in writing accounts, typing they will have to forgo the earning in the other activity in which their degree of superiority is higher.

Ricardo illustrates the comparative costs theory using a two country-two commodity model and shows that trade between two countries can be profitable even if one of the two nations can produce both the commodities more efficiently than the other nation. The necessary condition for this is that it should have a comparative advantage in the production of one of the commodities. This means that degree of superiority in the case of one good should be more than that for the other good. The time spent on the production of this good should more than make up for the loss of not producing the other good and importing it.

Ricardo's Comparative Model:

This is a two country two product model. Ricardo has taken England and Portugal as examples. The two goods that they produce in the example are wine and cloth as these were the main production areas in the two countries. He expresses the cost of production in labour time. The money value is introduced later. The student should clearly understand that less number of hours of work per unit of product represents a more efficient system.

Country	Labour cost of production in hours -1 unit of wine	Labour cost of production in hours-1 unit of cloth
Portugal	80	90
England	120	100

Terms of trade will depend upon the strength of each country in the international market. Each country will try to get the maximum possible import with a given amount of export.

England can import one unit of wine at prices less than 1.2 units of cloth it would gain, on the other hand Portugal could import more than 0.89 units of cloth for one unit of wine it will benefit. If the international price is between 1.2 and 0.89 units of cloth both the countries will gain from trade. The equilibrium rate of exchange for the two goods will be determined between the two values mentioned above.

Chart 2.2: Comparative Advantage

- a) Vertical axis represents production of wine.
- b) Horizontal axis represents production of cloth.
- c) AE represents the production possibility curve of England.
- d) AP represents the production possibility curve of Portugal.
- e) Distance PE is the area of mutual benefit.

Gains from Trade:

In the absence of any additional information about the strength of the countries let us assume that the international price of one unit of wine is equal to one unit of cloth. With this rate of exchange, both countries will benefit. England will benefit because it is able to get one unit of wine for a price less than 1.2 units of cloth, which is its domestic exchange ratio with wine. Portugal will benefit because it is able to get more than 0.89 units of cloth for one unit of wine, which is its domestic ratio. Thus trade offers each country the possibility of specializing in the line of its comparative advantage and then exchanging these products for those in which it has a comparative disadvantage. Both countries can reallocate its factors of production to the line in which it has a comparative advantage and then export this product to import the one in which it has a comparative disadvantage.

Law of Comparative Advantage:

When each country specializes in the production of that commodity in which it has a comparative advantage, it leads to specialization and division of labour. With this the total world output of every commodity involved necessarily increases and all the countries involved become better off, in short each country can consume more by trading than it can be remaining in isolation and the total cost of production will be lower for the world economy.

Lower Total Cost of Production for the World Economy under Comparative Cost: The total of production in the world economy will be much lower if both the countries produce the good which they have a comparative advantage. Let us look at both the cases. If the two countries do trade with each other and produce one unit each of wine and cloth, the total cost of producing units of wine and two units of cloth in terms of labour will be as shown below.

Country	Labour cost in hours -1 unit of wine	Labour cost in hours-1 unit of cloth	Total Labour cost in hours-1 unit of cloth
Portugal	80	90	170
England	120	100	220
Total cost	200 (80+120)	190 (90+100)	390

On the other hand if the two countries trade on the basis of comparative cost theory the total cost production of two units of each product will be as shown below.

Country	Labour cost of production in hours -1 unit of wine	Labour cost of production in hours-1 unit of cloth	Total Labour cost
Portugal	80 *2=160	0	160
England	0	100 *2=200	200
Total cost	160	200	360

As seen above the total labour cost is only 360 hours as against 390 when the two countries produced in isolation. This means that the same quantity of goods can be produced at a lower cost or a given amount of labour can produce a much higher level of output.

Exercise No. 13

Date:

Presentation of Report in Class on Visit to Cooperative Marketing Organization, NAFED, SWC/CWC, Regulated Market (APMC)