Practical Manual

on

Agricultural Marketing Trade and Prices

AEC– 227 Credit Hours 3(2+1)
(For Undergraduate Agricultural students)

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2020

College of Agriculture
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Syllabus

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.

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Batch .....

Session .....

Semester .....

Course Name : .....

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Date: Course Teacher

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14	collection of data regarding marketing costs, margins and price spread and presentation of report in the class		
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16	Visit to market institutions – CWC, SWC		
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Exercise No: 1

Objective: To study demand and supply curves and calculate elasticities.

Problem: Draw the individual demand curves and the market demand curve

Price (Rs. per Kg)	Individual demand schedule /week		
	A	B	C
20	0.25	0.5	0
16	0.50	1.0	0
12	0.75	1.5	0
8	1.0	2.0	1
4	1.25	2.5	2
2	1.50	3.0	3

Solution: ……...

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Exercise No: 2

Problem: Draw supply curve of rice and find out elasticity of supply

Rice Price (thousand Rs/qtl)	5.0	4.5	4	3.5	3.0	2.5
Quantity supplied (in Quintals)	20	16	12	10	8	4

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Exercise No: 3

Problem: Draw demand and supply curves and find out elasticity of demand and supply and market equilibrium.

Price (Rs/kg)	Market demand (tonnes)	Market supply (tonnes)
9.00	100	1000
8.50	300	800
8.00	400	600
7.50	500	500
7.00	700	400
6.50	1000	200

Solution: ……..

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Exercise No: 4

Objective: Study of relationship between market arrivals and prices of some selected commodities

Aim: To assess the relationship between the agricultural commodity arrivals to the market prices. In order to analyse the behaviour of market arrivals and prices over time, supply response behaviour to the agricultural commodity price can be studied using linear or non linear model relationship

$$Yt = a + bPt$$

where Y indicates the arrivals, Pt indicates the Price at time t (years)

Exponential growth form also can be applied to assess the response of arrival to the market price. by using the following formula:

$$Y = ab^t$$

where Y indicates the arrivals, t Indicates the time (years) and Compound growth rate (CGR) is Antilog (b - 1) x 100.

Problem: Collect data on Arrivals and prices for various agricultural commodities and analyse the relationship and behaviour of arrivals and prices using above method of analysis.

1. Name of Commodity……..……..
2. Name of market……..…….
3. Selling quantity of commodity……..……..
4. Time of arrival commodity……..……
5. Time of selling…….…….
6. Price of commodity at arrival time ……
7. Price of commodity at selling time……..…….
8. Price of commodity at occasion time……..……..
9. Other Information ……..……..

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Problem: Collect secondary data on seasonal cyclic variation in prices for six month and plot it on the graph.

Solution: ……...

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Exercise No: 5

Objective: Computation of marketable and marketed surplus of important commodities

AIM

- To expose the students on the concepts of Marketable and Marketed surplus
- To introduce the students on the methods of estimating the marketable and marketed surplus
- To highlight the significance and the relationship between the marketable and marketed surplus.

Problem: A farmer has cultivated onion in 3 acres. He gained yield @ 30 quintals/acre @ Rs. 40/kg. He needs 100 kg for seed, 300 kg for kind wages and 200 kg for own consumption. But he has sold entire quantity since he has to repay the loan immediately. Work out the marketed surplus and marketable surplus.

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Exercise No: 6

Problem: A farmer in Amarpur Village, near Laltipur has planted Tomato in one acre and obtained a yield of 15 tonnes per acre. He sold 95 baskets each 15 kg to the Commission Agent in 10 harvests period in nearby market. He retained 250 kgs for seed purpose, 100 kgs for own consumption and 200 kgs for their relatives and 100 kgs for wages and remaining as waste. Work out the marketable and marketed surplus of agricultural commodities and write your comments.

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Comments:……

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Exercise No: 7

Problem: Consider the following data of a case farm of Mr. X for next year.

Crop	Area Under Crop (Ha)	Productivity (q/Ha)	Seed requirement (q)	Consumption requirement/ adult Unit (q)	Requirement for livestock and artisans (q)
Wheat	7	20	6.0	2.00	2.00 for artisans
Barley	2	12	1.0	0.50	-
Mustard	5	3	0.4	0.10	-
Gram	5	7	2.0	0.25	1.00 for artisans
Bajra	7	6	2.0	1.00	-
Guar	5	8	2.0	-	2.50 per milk cow

There are five adult units in the family of Mr. X. He also maintains two milch animals. He sold 130 quintals of wheat, 15 quintals of barley, 11 qtls. of mustard, 35 qtls. of gram, 40 qtls. of bajra and 35 qtls. of guar at different times between July 2019 and June 2020. Given this information, estimate the marketable and marketed surplus of the different crops and state whether there is any distress sale on the farm.

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Exercise No: 8

Problem: The information on area under crops cultivated, quantity requirements for different purpose and quantity sold by the farmer Mr. Y is given below.

Crop	Area (Ha)	Total Production (q)	Seed requirement (q)	Consumption requirements (q)	Requirement for livestock (q)	Requirement for artisans (q)	Quantity Sold (q)
Paddy	3	34	1	13	0	5	13
Sugarcane	3	1200	20	0	0	0	1180
Green gram	0.25	0.5	0.1	0.4	0	0	0
Maize	1	18	0.5	0	2	0	18
Mulberry/ cocoon	1	2.75	0	0	0	0	2.75
sorghum	0.5	5	0.1	1	2	0	1.5

Given this information, estimate the marketable and marketed surplus of the different crops and give inference.

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Exercise No: 9

Objective: study of price behaviour over time for some selected commodities

Aim: To study the price behaviour over time for some selected commodities

Year	Arrival			Prices		
	Mean	CV	Index No.	Mean	CV	Index No.
2005-06	678.00	115.16		1622.25	3.86	
2006-07	741.00	139.09		1512.41	47.73	
2007-08	597.33	97.69		1939.58	49.97	
2008-09	461.33	68.05		2624.75	12.52	
2009-10	784.33	153.78		3354.16	34.16	
2010-11	1543.08	128.73		3451.00	9.46	
2011-12	1026.08	140.55		2466.66	60.75	
2012-13	599.16	74.91		3653.08	6.66	
2013-14	331.16	153.68		2464.58	75.50	
2014-15	678.91	121.20		4194.75	20.88	
2015-16	317.25	93.62		6514.58	23.15	
2016-17	1140.25	139.96		5795.83	24.52	

Calculate the Inter-year arrival price behaviour of Tur from the following data:

Solution: ……...

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Exercise No: 10

Problem: Calculate the Inter-year arrival price behaviour of sorghum from the following data:

Year	Arrival			Prices		
	Mean	CV	Index No.	Mean	CV	Index No.
2005-06	3.41	346.41		94.75	346.41	
2006-07	76.83	116.98		1172.58	32.41	
2007-08	218.25	292.60		987.42	90.19	
2008-09	90.58	155.23		2139.92	15.88	
2009-10	13.00	177.09		759.33	147.83	
2010-11	865.16	255.03		1037.17	105.27	
2011-12	1182.41	252.43		1649.33	61.18	
2012-13	569.00	219.15		1025.00	147.72	
2013-14	1690.91	190.77		3034.92	32.39	
2014-15	464.83	224.01		3314.00	9.14	
2015-16	448.00	292.29		2265.58	73.98	
2016-17	2459.41	138.52		2714.58	35.73	

Solution: ……...

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Exercise No: 11

Objective: construction of index numbers

AIM: to understand the concept of index numbers and calculate the simple and weighted index numbers

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Price (Rs./ q)	510	530	550	560	570	580	850	870	950	1000

Using given data, compute the Price Index Number by considering the first year as a base year period and write your comments.

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Exercise No: 12

Objective: Visit to a local market to study various marketing functions performed by different agencies

Aim: visit a local market to study various marketing functions performed by different agencies

Problem: Collect the following information and write a report

1. Name of the Institute: ……
2. Location……..
3. Area of operation: ……
4. Year of establishment and organizational pattern: ……..
5. Notified commodities and notified area: ……..
6. Functions and Objectives of the market: ……

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7. Constitution of market committee: ……
8. Source of funds to run the committee: ……..
9. What are the facilities provided in the local market to farmers in terms of storage, grading, finance and others? ……..
10. Is commercial grading facility provided for grading the farmer's produce? ……

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11. Do the farmers make use of the commercial grading facility? ……

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12. How traders are selected to operate within the market ……

    ……
13. Is storage facilities provided to farmers to store the produce till they get expected price: ……

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14. What are the special schemes in operation to help the farmers: ……

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15. What is the percentage of utilization of regulated market by the farmers in the locality? ……

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16. What are the difficulties faced in providing facilities to serve the farmers in marketing their produce: …..

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17. What help do you expect from the government to help the farmers in a better way to market their produce

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18. Contact five farmers visiting the market and elicit their response on facilities provided, problems faced in marketing through regulated markets. ……

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19. Any other information: ……

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Exercise No: 13

Objective: Identification of marketing channels for selected commodity

Aim: to identify the marketing channels for selected commodity.

Problem: Collect the information involved in different marketing channels for some commodities:

Solution: ……...

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Producer: ……

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Wholesaler: ……

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Retailer: ……

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Consumer: ……

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Exercise No: 14

Objective: Collection of data regarding marketing costs, margins, price spread and presentation of report in class

AIM:

1-To expose the students on what is price spread and how to estimate the same by using the formulae and

2-To introduce the students on how to estimate the marketing efficiency.

3-To train the students on drawing appropriate inference by utilizing the results.

Problem: A farmer in Keshavpur block planted Tomato in one acre of his land and obtained a yield of 12.50 tonnes per acre. He sold 100 baskets each 20 kg to the wholesaler during the last harvest in Wholesale market. The farmer incurred the following expenses.

Transport	: Rs. 2 /basket
Packing and loading	: Rs. 1/basket
Unloading	: Rs. 0.50/ basket
Commission Charges	: 10% on the value of the produce

The wholesaler purchased the same @ Rs.10/kg and spent Rs.2 per basket for transport to his destination. Retailer purchased @ Rs.13/ kg and incurred Rs.3 per basket towards transport. The consumer price is Rs.15 per kg. Work out the following.

i) Trace out the Marketing channel and work out the price spread.

Solution: ……..

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ii) Work out the Farmer's share in the Consumer price and interpret the efficiency of the channel

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ii) Find out the producers' price per kg and his marketing costs and draw the inference.

Solution: ……

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Exercise No.: 15

Objective: Visit to market institutions – NAFED

AIM: To introduce the students on the activities and functions of NAFED

Problem: Collect the following information and write a report

1 Name of the Institute: ……..

2 Location: ……

3 Area of operation: ……

4 Year of establishment and organizational pattern: ……

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5 Notified commodities and notified area: ……...

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6 Functions and Objectives of the market: ……

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7 Constitution of market committee: ……

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8 Source of funds to run the committee: ……

9 What are the facilities provided in the regulated market to farmers in terms of storage, grading, finance and others?

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10 Is commercial grading facility provided for grading the farmer's produce? ……

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11 Do the farmers make use of the commercial grading facility? ……..

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12 How traders are selected to operate within the market yard…….

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13 Is storage facilities provided to farmers to store the produce till they get expected price……

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14 What are the special schemes in operation to help the farmers……

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15 What is the percentage of utilization of by the farmers in the locality? ……

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16 What are the difficulties faced in providing facilities to serve the farmers in marketing their produce……

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17 What help do you expect from the government to help the farmers in a better way to market their produce.

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18 Contact five farmers visiting the market and elicit their response on facilities provided, problems faced in marketing.

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19 Any other information:……..

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Exercise No: 16

Objective: Visit to market institutions – CWC, SWC

AIM: To introduce the students on the importance of Central ware housing Corporation and state ware housing corporation.

Problem: Collect the following information and write a Report on CWC, SWC

1. Name of the Warehousing Corporation: ……..
2. Organisational set-up: ……
3. Objectives: ……

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4. Functions of the corporation:……..

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5. Lay out of the warehouse structure: ……

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6. Storage methods and commodities stored at present: ……..

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7. Capacity utilization of the warehouse & Percentage of utilization of the warehouse: ……..

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8. Methods of staking: ……

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9. Storage pest control measures followed: ……

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10. Storage loss if any; / Storage charges: ……

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11. Difficulties faced in providing warehouse facilities to farmers and agricultural input traders: ……

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12. Warehouse management:

    a. Labour: ……..

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    b. Customers: ……

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c. Employees: ……..

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d. Others: ……..

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Exercise No: 17

Objective: To study the roles and functions of market institution- cooperative marketing society

Aim: Visit to market institution- cooperative marketing society

Collect the following information and write a Report on Co-operative Market

1. Name of the Cooperative society: ……..
2. Organisational set-up: ……..

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3. Objectives: ……

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4. Functions of the co-operative society: ……...

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5. Lay out of the society structure: ……

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6. Storage methods and commodities stored at present: ……...

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7. Capacity utilization of the warehouse & Percentage of utilization of the society: ……..

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8. Methods of staking: ……..

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9. Storage pest control measures followed: ……..

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10. Storage loss if any; / Storage charges: ……

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11. Difficulties faced in providing facilities to farmers and agricultural input traders: ……

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Exercise No: 18

Objective: Application of principles of comparative advantage of international trade

Aim: To apply the principle of comparative advantage of international trade

Problem: India can produce 4 tonnes of wheat or 8 tonnes of maize. USA can produce 3 tonnes of wheat or 9 tonnes of maize.

Country	Wheat	Maize
India	4	8
USA	3	9

What is the opportunity cost for producing one of each product?

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Who has comparative advantage in Wheat?

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Who has comparative advantage in Maize?

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What is the terms of trade for both the countries?

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Exercise No: 19

Problem: India takes 4 hrs to make bread and 12 hours to prepare jam. China takes one hour to make bread and 5 hours to prepare jam.

Country	Bread	Jam
India	4hrs	12 hrs
China	1 hr	5 hrs

What is the opportunity cost for producing one of each product?

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Who has comparative advantage in Bread?

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Who has comparative advantage in Jam?

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What is the terms of trade for both the country?

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