AGRICULTURAL SITUATION IN INDIA

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Note To Contributors

Articles on the state of Indian Agriculture and allied sectors are accepted for publication in the Directorate of Economics & Statistics, Department of Agriculture & Cooperation monthly Journal "Agricultural Situation in India". The Journal intends to provide a forum for scholarly work and also to promote technical competence for research in agricultural and allied subjects. Good articles in Hard Copy as well as Soft Copy in MS Word, not exceeding five thousand words, may be sent in duplicate, typed in double space on one side of fullscape paper in Times New Roman font size 12, addressed to the Economic & Statistical adviser, Room No.145, Krishi Bhawan, New Delhi-11 0001, alongwith a declaration by the author(s) that the article has neither been published nor submitted for publication elsewhere. The author(s) should furnish their e-mail address, Phone No. and their permanent address only on the forwarding letter so as to maintain anonymity of the author while seeking comments of the referees on the suitability of the article for publication.

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STATISTICAL TABLES

Abbreviations used

N.A. — Not Available.
N.Q. — Not Quoted.
N.T. — No Transactions.
N.S. — No Supply/No Stock.
R. — Revised.
M.C. — Market Closed.
N.R. — Not Reported.
Neg. — Negligible.
Kg. — Kilogram.
Q. — Quintal.
(P) — Provisional.
Plus (+) indicates surplus or increase.
Minus (-) indicates deficit or decrease.

GENERAL SURVEY OF AGRICULTURE

Rainfall

With respect to rainfall situation in India, the year is categorized into four seasons: winter season (January-February), pre monsoon (March-May), south west monsoon (June-September) and post monsoon (October-December). South west monsoon accounts for more than 75 per cent of annual rainfall. The actual rainfall received during the Monsoon period 01.10.2014 – 12.11.2014, has been 64.7 mm as against the normal at 95.6 mm.

Table 1 shows rabi area coverage as on November 7 of 2014-15 and 2013-14. There has been a decline in the overall kharif coverage (-15.54%) vis-à-vis the corresponding period of last year over the last week as on November 7.

Table 1 Rabi Area Coverage – as on 07.11.2014

S.No.	Crops	Area sown (In Lakh Hectares)		% change over
		2014-15	2013-14	2013-14
1.	Wheat	4.47	9.39	-52.40
2.	Total Coarse Cereals	20.32	26.21	-22.47
a)	Jowar	18.18	23.99	-24.22
b)	Bajra	1.55	1.51	2.65
c)	Maize	0.31	0.23	34.78
3.	Total Pulses	23.98	30.86	-22.29
a)	Gram	16.15	23.78	-32.09
b)	Lentil	3.12	2.55	22.35
c)	Fieldpea	1.63	2.13	-23.47
d)	Moongbean	0.25	0.08	212.5
e)	Uradbean	0.76	0.41	85.37
4.	Total Oilseeds	31.36	28.41	10.38
	Total Rabi Area	80.13	94.87	-15.54

Source: DAC.

All India Production of Foodgrains

As per the 1st advance estimates released by Ministry of Agriculture on 19.09.2014, production of total food grains during 2014-15 is estimated at 120.27 million tonnes compared to 129.32 million tonnes in 2013-14.

Table 2 Production of Major Agricultural Crops

S. No.	Kharif Crops	Production (In Million Tonnes)			
		2014-15	2013-14	2012-13	2011-12
		First Adv. Est.	First Adv. Est.		
1.	Rice	88.02	92.32	92.37	92.78
2.	Total Pulses	5.2	6.01	5.91	6.06
a.	Pigeon Pea(Tur/Arhar)	2.74	3.04	3.02	2.65
b.	Uradbean	1.15	1.33	1.43	1.23
c.	Moongbean	0.71	0.9	0.79	1.24
3.	Total Coarse Cereals	27.05	30.99	29.79	32.44
a.	Jowar	1.64	2.57	2.84	3.29
b.	Bajra	7.54	8.66	8.74	10.28
c.	Maize	16.03	17.78	16.19	16.49
4.	Total Oilseeds	19.66	23.96	20.79	20.69
a.	Groundnut	5.02	5.57	3.18	5.13
b.	Soyabean	11.82	15.68	14.66	12.21
5.	Sugarcane	342.78	341.77	341.2	361.04
6.	Cotton	34.62	35.3	34.22	35.2
7.	Total Kharif Foodgrains	120.27	129.32	128.07	131.27
	Total Rabi Foodgrains	-	-	129.06	128.01
	Total Foodgrains	-	-	257.13	259.29

Procurement

During the Kharif Marketing Season 2013-14 (Which spans from October, 2013 to September, 2014), the procurement of rice was 31.86 million tones as on 07.11.2014. During Rabi Marketing Season 2014-15 (Which spans from April 2014 to March 2015), the procurement of wheat was 28.02 million tones as on 11.07.2014.

Table 3 Procurement in Million Tonnes

Crop	2010-11	2011-12	2012-13	2013-14	2014-15
Rice	34.20	35.04	34.04	31.86 *	
Wheat	22.51	28.34	38.15	25.09	28.02 **
Total	56.71	63.38	72.19	56.95	

*Position as on 07.11.2014 ** Position as on 11.07.2014

Off-take

Off-take of rice during the month of August, 2014 was 31.08 lakh tones. This comprises 26.27 lakh tones under TPDS and 4.81 lakh tones under other schemes. In respect of wheat, the total off-take was 22.40 lakh tones comprising 19.40 lakh tones under TPDS and 3.00 lakh tones under other schemes.

Stocks

Stocks of food grains (rice and wheat) held by FCI as on October 1, 2014 were 51.19 million tones that is lower by 13.59 per cent compared to the level of 59.24 million tones as on October 1, 2013.

Table 4 Off-take and stocks of food grains (Million Tonnes)

Crop	Off-take				Stocks	
	2011-12	2012-13	2013-14	2014-15 (Till Aug.)	Oct. 1, 2013	Oct. 1, 2014
Rice	32.12	32.64	29.20	12.56	19.03	15.08
Unmilled Paddy #					6.13	4.87
Converted Unmilled Paddy in terms of Rice					4.11	3.26
Wheat	24.26	33.21	30.62	9.67	36.1	32.85
Total (Rice & Wheat)	56.38	65.85	59.82	22.23	59.24	51.19

Note: Buffer Norms for Rice & Wheat are 7.20Million Tonnes & 14.00 Million Tonnes as on 1.10.2014 respectively.

Since September, 2013, FCI gives separate figures for rice and unmilled paddy with FCI & state agencies in terms of rice.

ECONOMIC GROWTH

As per the Estimates of the Central Statistics Office (CSO), the growth in Gross Domestic Product (GDP) at factor cost at constant (2004-05) prices is placed at 5.7 per cent in the first quarter of 2014-15, which is the highest recorded in nine quarters, with agriculture, industry and services registering growth rates of 3.8 per cent, 4.2 per cent and 6.8 per cent respectively. The GDP growth was estimated at 4.7 per cent for the full year 2013-14.

Table 5 Growth of GDP at Factor cost by Economic Activity (at 2004-05 prices)

Sector		Growth			Percentage Share in GDP		
		2011-12	2012-13 (1R)	2013-14 (PE)	2011-12	2012-13 (1R)	2013-14 (PE)
1	Agriculture, forestry & fishing	5.0	1.4	4.7	14.4	13.9	13.9
2	Industry	7.8	1.0	0.4	28.2	27.3	26.1
a	Mining & quarrying	0.1	-2.2	-1.4	2.1	2.0	1.9
b	Manufacturing	7.4	1.1	-0.7	16.3	15.8	14.9
c	Electricity, gas & water supply	8.4	2.3	5.9	1.9	1.9	1.9
d	Construction	10.8	1.1	1.6	7.9	7.7	7.4
3	Services	6.6	7.0	6.8	57.4	58.8	59.9
a	Trade, hotels, transport & communication	4.3	5.1	3.0	26.7	26.9	26.4
b	Financing, insurance, real estate & business services	11.3	10.9	12.9	18.0	19.1	20.6
c	Community, social & personal services	4.9	5.3	5.6	12.7	12.8	12.9
4	GDP at factor cost	6.7	4.5	4.7	100	100	100

1R: 1st Revised Estimates; PE: Provisional Estimates

Source CSO

Table 6 Quarterly Estimates of GDP at Constant (2004-05) Prices

Sectors		2012-13				2013-14				2014-15
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
1	Agriculture, forestry & fishing	1.8	1.8	0.8	1.6	4.0	5.0	3.7	6.3	3.8
2	Industry	0.3	-0.4	1.7	2.1	-0.4	2.6	-0.4	-0.2	4.2
a	Mining & quarrying	-1.1	-0.1	-2.0	-4.8	-3.9	0.0	-1.2	-0.4	2.1
b	Manufacturing	-1.1	0.0	2.5	3.0	-1.2	1.3	-1.5	-1.4	3.5
c	Electricity, gas & water supply	4.2	1.3	2.6	0.9	3.8	7.8	5.0	7.2	10.2
d	Construction	2.8	-1.9	1.0	2.4	1.1	4.4	0.6	0.7	4.8
3	Services	7.2	7.6	6.9	6.3	7.2	6.3	7.2	6.4	6.8
a	Trade, hotels, transport & communication	4.0	5.6	5.9	4.8	1.6	3.6	2.9	3.9	2.8
b	Financing, insurance, real estate & business services	11.7	10.6	10.2	11.2	12.9	12.1	14.1	12.4	10.4
c	Community, social & personal services	7.6	7.4	4.0	2.8	10.6	3.6	5.7	3.3	9.1
4	GDP at factor cost	4.5	4.6	4.4	4.4	4.7	5.2	4.6	4.6	5.7

Sources CSO

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ARTICLES

An Economic Analysis on Sugarcane Cultivation in Madurai District of Tamil Nadu, India

K. PRAKASH [*], AND B. MUNIYANDI [**]

Abstract

This study was carried out in Chellampatti block of Madurai district, to find out the constraints of sugarcane cultivation in the area. A sample of 103 farmers was randomly selected from three villages Nattamangalam, Kovilankulam, and Valanthur Climatic constraint for sugarcane cultivation in Madurai district. The varieties already being grown were found to be recommended ones and some non-recommended with good sugar recovery, but a gap was found to be existing between potential and realized yield. The problems regarding the sugarcane cultivation were mainly related to the harvesting problems the prices were low; these were the two problems which led to the decline of sugarcane cultivation in the area.

Key words Socio-Economic, Sugarcane, Cost of Cultivation, Saccharum, Farmers.

Introduction

Sugarcane originally belongs to tropical South Asia and South East Asia. Different species originated in different locations. Saccharum barberi originated in India and Saccharum edule and Saccharum officinarum was originated in New Guinea. Around the eighth century A.D, Arabs introduced sugar to the Mediterranean, Mesopotamia, Egypt, North Africa and Spain. By the tenth century, sources that there was no village in Mesopotamia that grew sugarcane. It was among the early crops brought to the America by Spaniards. (Patil 2009).

Sugarcane is a renewable, natural agricultural resource because it provides sugar besides biofuel, fibre, fertilizer and myriad of byproducts / co-products with ecological sustainability. Sugarcane juice is used for making white sugar, brown sugar (khandhasari), jaggery (Gur) and ethanol. The main by-products of sugar industry are baggase, molasses and press mud. (Saravananan and Parvathi 2010).

Sugarcane juice in known for its medicinal value since the vedic period. It originated in New guinea about 10,000 years ago. (Shanmugam *et al.* 2011).

Molasses, the chief by-product, is the main raw material for alcohol and for alcohol based industries. Excess baggase is now being used in the paper industry. Besides, co-generation of power using baggase as fuel is considered feasible in most sugar mills. Press mud is used as fertilizer by most of the farmers. It is also used as burning material in so many industries like Brick Kiln. The leaves of sugarcane are used as fodder and in mulching which is important for increasing the fertilizer status, checking evaporation, maintaining humidity and suppressing weed infestation. (Padmanabhan 2009).

Objectives

To analyze the socio-economic conditions of the sugarcane growers of Chellampatti block of Madurai district.

To estimate the cost and returns in cultivation of sugarcane among the farms of Chellampatti block of Madurai district.

To identify the problems faced by the sugarcane farmers of selected area.

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Data Collection and Tool of Analysis

For the present study, the data were obtained from primary sources.

Selection of Respondents

The primary data were collected from the selected respondents of sugarcane growers. The sugarcane growers were selected from the purposively selected three villages predominantly cultivating sugarcane. From the selected three villages, about 50 per cent of sugar cane growers were selected. Totally, 103 sugarcane growers were selected.

Collection of Primary Data

The field investigation was carried out during 2010 and data were related to agricultural year 2009-2010. In, addition to the information related to sugarcane production data on general socio-economic profile such as age, education level, type of the family, type of the farmer etc, were also collected from the respondents.

Conventional Analysis

Simple tabular analyses were done to work out percentage and average values describe the socio-economic profile of the selected sample sugarcane cultivators.

Limitations

This study is confined to a particular region and hence the resuld may not applicable to other places. The respondent farmers from whom the data collected through survey method did not maintain any records and hence they had to recall from their memory and furnish the information for the queries put forth by the researcher. Hence, the data collected were subject to recall bias. However, in order to make the results reliable for drawing conclusions relevant for the universe of the study, care has been taken to minimize the recall bias through cross checks, if the accuracy and reliability of data given by the respondent were doubted.

Cost and Returns in Cultivation of Sugarcane

Before presenting cost and returns in the cultivation of sugarcane, the socio-economic profile of sample farmers are presented in this section so as to provide background information for drawing inferences. By analyzing the socio-economic indicators it will benefit the researcher to draw the inferences regarding the farmers. The age-wise classification of the respondents is presented below.

Table 1 Socio-Economic Conditions of Sugarcane Cultivators of Chellampatti Block-Madurai District

Category	Nattamangalam	Kovilankulam	Valanthur	Total
Gender				
Male	33 (33.33) [94.29]	43 (43.43) [95.56]	23 (23.23) [100.00]	99 (100.00) [96.12]
Female	2 (50.00) [5.71]	2 (50.00) [4.44]	0 (0.00) [0.00]	4 (100.00) [3.88]
Age Group				
Youth(<30)	1 (33.33) [2.86]	2 (66.67) [4.44]	0 (0.00) [0.00]	3 (100.00) [2.91]

Middle(31 – 60)	29 (34.52) [82.86]	38 (45.24) [84.44]	17 (20.24) [73.91]	84 (100.00) [81.55]
Old(>60)	5 (31.25) [14.29]	5 (31.25) [11.11]	6 (37.50) [26.09]	16 (100.00) [15.53]
Religion				
Hindu	35 (34.31) [100.00]	44 (43.14) [97.78]	23 (22.55) [100.00]	102 (100.00) [99.03]
Christian	0 (0.00) [0.00]	1 (100.00) [2.22]	0 (0.00) [0.00]	1 (100.00) [0.97]
Social Group				
BC	7 (25.93) [20.00]	13 (48.15) [28.89]	7 (25.93) [30.43]	27 (100.00) [26.21]
MBC	26 (37.14) [74.29]	29 (41.43) [64.44]	15 (21.43) [65.22]	70 (100.00) [67.96]
SC / ST	2 (33.33) [5.71]	3 (50.00) [6.67]	1 (16.67) [4.35]	6 (100.00) [5.83]
Types of Family				
Joint Family	10 (38.46) [28.57]	10 (38.46) [22.22]	6 (23.08) [26.09]	26 (100.00) [25.24]
Nuclear Family	25 (32.47) [71.43]	35 (45.45) [77.78]	17 (22.08) [73.91]	77 (100.00) [74.76]
Types of Farmers				
Marginal Farmer	18 (39.13) [51.43]	10 (21.74) [22.22]	18 (39.13) [78.26]	46 (100.00) [44.66]
Medium Farmer	12 (30.77) [34.29]	22 (56.41) [48.89]	5 (12.82) [21.74]	39 (100.00) [37.86]
Large Farmer	5 (27.78) [14.29]	13 (72.220) [28.89]	0 (0.000) [0.00]	18 (100.00) [17.48]
Total	35 (33.98) [100.00]	45 (43.69) [100.00]	23 (22.33) [100.00]	103 (100.00) [100.00]

( ) Parenthesis indicates Row Wise Percentage [ ] Parenthesis indicates Column Wise Percentage

Table 1 shows the socio-economic conditions of sugarcane cultivators of chellampatti block-Madurai district.

Sex of the Respondents

The sex wise clasification of the respondents in the table 1shows that of 103 respondents, male constitutes with 96.12 per cent and female of 3.88 per cent in total respondents.

Age - Wise Classification of the Respondents

The table 1 shows that the age-wise classifications of the respondents in the study villages are above the group-wise age classification in three categories such as youth (< 30), Middle (31-60) and old (> 60) categories. The Nattamangalam study village has youth population of (< 30) 2.86 per cent. Kovilankulam has (4.44) per cent and Valanthur has zero per cent of Youth. In the middle age group Nattamangalam has 82.86 per cent, Kovilankulam has 84.44 percentage and highest percentage of middle age population. In Valanthur has 73.91 per cent of middle age group and it stands in the third position. In continuation the old age group in Nattamangalam village is 14.29 per cent and Kovilankulam with 11.11 per cent. Valanthur is having highest population of old age group in which it has (26.09) per cent. The three age group were compared among the three villages. Particularly in the Kovilankulam study village middle age group is the highest level than in the other two villages.

Religion - Wise Classification of the Respondents

The table 1 shows the religion of the respondents in the study villages. It is surprising to note that none of the respondents belongs to Christian religion in Nattamangalam and Valanthur villages and only one per cent of the respondent belongs to Christian religion. In other three villages Hindu religion dominates all other religions in the present study with 99 per cent.

Social Group - Wise Classification of the Respondents

The table 1 shows that out of 103 respondents 26.21 per cent of them belong to Backward Class and 6 per cent belong to Scheduled Caste. None of the respondent belong to forward Community.

Types of Family of the Respondents

The table 1 shows that nearly two third of the farmers are living in a nuclear family. Among the villages also, the same picture could be seen. However, the proportion of joint family is very minimum which is 38.46 per cent, 38.46 per cent and 23.08 per cent in Nattamangalam, Kovilankulam and Valanthur villages respectively.

Classification of Farmers

The table 1 shows the types of farmers. In this table the selected farmers were categorized as marginal, small and large farmers based on their operational holding. The operational holding refers to the area cultivated by a single house hold i.e., area owned plus leased in an area mortgaged (with possession) minus area leased out and area mortgaged in (without possession) and defaulter. Farmers were classified as marginal farmers owning below 2.5 acres, 2.6 to 5 acres are medium farmers and large farmers are above 5 acres.

Table 2 Average Area Under Sugarcane Cultivation In Selected Farms.

Villages	Wet land		Total
	Area Owned in Wet Land (acre)	Area Leased in Wet Land (acre)	
Nattamangalam	3.07	0.43	3.50
Kovilankulam	4.21	0.42	4.63
Valanthur	2.30	0.08	2.38
Over all	3.40	0.35	3.75

Table 2 shows that average area under sugarcane in selected farm was 3.75 acres of wet land. The average area was highest in Kovilankulam villages with 4.63 acres. Next to this, farmers in Nattamangalam village posses 3.50 acres.

Table 3 Average Borrowings From Various Sources

Name of the Village	Amount Borrowed from Banks	Amount Borrowed from Private banks	Amount Borrowed from Friends and Relatives
Nattamanaglam	Rs.15457.1	Rs.10571.4	0.0
Kovilankulam	Rs.17755.6	Rs.15444.4	6111.1
Valanthur	Rs.9978.3	Rs.5652.2	3478.3
Total	Rs.15237.9	Rs.11601.9	3446.6

Table 3 shows the liabilities from various sources in the study village. The farmers availed loan mainly from banks, private banks, friend and relatives. Among the three study villages, In Nattamangalam study village average amount borrowed from the bank was Rs. 15457.1 where as the amount borrowed from private lender was Rs. 10571.4. Similarly the average amounts from banks were Rs. 17755.6 and 9978.3 in Kovilankulam village and Valanthur village respectively. The average amounts borrowed from private lenders were Rs. 15444.4 and 5652.2 in both the villages respectively. In all the three villages borrowings from bank was higher than all the three sources of financing.

Table 4 Quantum of Loanand The Numberof Cane Growers

Liabilities	Nattamangalam	Kovilankulam	Valanthur	Total
No Debt	23 (35.94) [65.71]	27 (42.19) [60.00]	14 (21.88) [60.87]	64 (100.00) [62.14]
<25,000	6 (27.27) [17.14]	10 (45.45) [22.22]	6 (27.27) [26.09]	22 (100.00) [21.36]
25,001 – 50,000	3 (25.00) [8.57]	6 (50.00) [13.33]	3 (25.00) [13.04]	12 (100.00) [11.65]
50,001 – 75,000	2 (66.67) [5.71]	1 (33.33) [2.22]	0 (0.00) [0.00]	3 (100.00) [2.91]
>1,00,000	1 (50.00) [2.86]	1 (50.00) [2.22]	0 (0.00) [0.00]	2 (100.00) [1.94]
Total	35 (33.98) [100.00]	45 (43.69) [100.00]	23 (22.33) [100.00]	103 (100.00) [100.00]

( ) Parenthesis indicates Row Wise Percentage [ ] Parenthesis indicates Column Wise Percentage

Table 4 shows the Quantum of loan and the number of cane growers. It shows that of the 103 selected cane growers, 64 farmers have not availed any loan, about 22 farmers vailed less that Rs. 25,000, and 12 farmers availed Rs. 25,000 to 50,000, five farmers availed bove Rs.50,001, and two farmers availed more than Rs. 1,00,000.

Table 5 Sugarcane Production In Chellampatti Block,Madurai District

Quantity Produced (tonnes)	Nattamangalam	Kovilankulam	Valanthur	Total
Less than100	25 (40.98) [71.43]	16 (26.23) [35.56]	20 (32.79) [86.96]	61 (100.00) [59.22]
101-< 150	5 (25.00) [14.29]	12 (60.00) [26.67]	3 (15.00) [13.04]	20 (100.00) [19.42]
151 - <200	2 (22.22) [5.71]	7 (77.78) [15.56]	0 (0.00) [0.00]	9 (100.00) [8.74]
200 & above	3 (23.08) [8.57]	10 (76.92) [22.22]	0 (0.00) [0.00]	13 (100.00) [12.62]
Total	35	45	23	103

( ) Parenthesis indicates Row Wise Percentage [ ] Parenthesis indicates Column Wise Percentage

Table 5 shows the production of sugarcane in the study villages. In total 61 farmers produced less than 100 tonnes of sugarcane, 20 farmers produced between 101 and 150 tonnes, 9 farmers produced between 151 and 200 tonnes and only 13 farmers produced 200 tonnes and above. In Kovilankulam village, maximum number (10) of farmers produced 200 tonnes and above.

Table 6 Sugarcane Variety Used By The Cane Growers

Variety	Name of the Village			Total
	Nattamangalam	Kovilankulam	Valanthur	
CO 86032	20 (19.42)	26 (25.24)	14 (13.59)	60 (58.25)
CO 9904	15 (14.56)	19 (18.45)	9 (8.74)	43 (41.75)
Total	35 (33.98)	45 (43.69)	23 (22.33)	103 (100.00)

( ) Parenthesis indicates Percentage

Table 6 shows reveals two types of sugarcane varieties (CO 86032 and CO 9904) that are used by the farmers. In total 58.25 per cent of the farmers used CO 86032 variety and 41.75 per cent used CO 9904 variety of sugarcane.

Table 7 Costs and Returns in Cultivation of Sugarcane in Chellampatti Block of Madurai District (Rs Per Acre)

Sl. No.	Particulars	Nattamangalam	Kovilankulam	Valanthur	Average
VARIABLE COST					
1	Ploughing	2243.81	2193.52	2357.25	2247.7
2	Seeds	8140.17	8100.23	8216.46	8140.15
3	Forming of Ridges	3203.47	2777.82	2628.38	2890.18
4	Fertilizers	4383.98	4367.45	4502.74	4403.63
5	Plantating	1182.57	1145.79	1155.48	1160.59
6	Weeding	3103.58	2753.41	2729.83	2868.25
7	Pesticide	93.19	96.08	93.12	94.42
8	Earthing Up	93.48	101.58	90.11	96.21
9	Detrashing & Propping	1142.14	1079.03	1169.35	1121.05
10	Harvesting	25218	25149.18	25190.43	25182.1
	Total variable Cost	48804.39	47764.09	48133.15	48204.28
FIXED COST					
1	Rental Value of Owned Land/Rent on Leased in Land	16112	17115	16800	16703
2	Depreciation of farmer assets	430	442	471	444.39
3	Interest on fixed investment	820	864	893	854.83
	Total fixed cost	17362	18421	18164	18002.22
	TOTAL COST	73776	78112	75408	75765.33
RETURNS					
a)	Yield Per Acre (Tonnes)	46.11	48.82	47.13	47.52
b)	Price Per Tonnes	1600	1600	1600	1600
c)	Gross Return	66166.39	66185.09	66297.15	66206.5
d)	Net Returns over Variable cost	24971.61	30347.91	27274.85	27561.05
e)	Net Returns over all costs	7609.61	11926.91	9110.85	9558.83

Table 7 shows the Costs and Returns in Cultivation of Sugarcane in Chellampatti Block of Madurai District . The average variable cost of cultivation of sugarcane in an acre in the study villages was Rs.48204.28. The cost of cultivation was higher (Rs.48804.39) in Nattamangalam village compared to other two villages. The cost spent on harvesting was maximum in all the three selected villages and it was around Rs 25000/-. Next to harvesting, seeds (i.e. setts) occupy the second position in the cost of cultivation. The average cost of cultivation of seeds in all the three villages together was Rs 8140.15. The third important cost in cultivation was cost of fertilizer which was at the average of Rs 4403.63 for all the villages together.

In the fixed cost, cost on spending on rental or leased was maximum in all the three villages. The overall average cost was Rs. 16,703 for each acre. Kovilankulam village rent value was comparatively higher than other two villages because the yield is higher than the other two villages. The investment in overall fixed cost was Rs 18,002.22.

The annual net return estimated for one acre of sugarcane cultivation was Rs. 27561.05. Considering the variable cost alone, the annual profit earned by the farmers of the selected villages was Rs. 9558.83 per acre. Therefore, the study indicates that the sugarcane cultivation was the profitable enterprise in the study area.

Table 8 Problems Faced By The Sugarcane Cultivators

Problem	Nattamangalam	Kovilankualm	Valanthur	Total
Non – Availability of Suitable Variety	18 (51.4)	22 (48.9)	11 (47.8)	51 (49.5)
Non – Availability of Required Fertilizer	24 (68.6)	28 (62.2)	13 (56.5)	65 (63.1)
Inadequate Loan Facilities	18 (51.4)	24 (53.3)	12 (52.2)	54 (52.4)
Inadequate Irrigation Facilities	23 (65.7)	28 (62.2)	13 (56.5)	64 (62.1)
Inadequate Modern Technique	20 (57.1)	23 (51.1)	11 (47.8)	54 (52.4)
Shortage of Labour in Harvesting	23 (65.7)	29 (64.4)	13 (56.5)	65 (63.1)
Wage Rate for Labour is High	23 (65.7)	28 (62.2)	12 (52.2)	63 (61.2)
Non Availability of Labour	22 (62.9)	29 (64.4)	12 (52.2)	63 (61.2)
Price is Low	31 (88.6)	42 (93.3)	20 (87.0)	93 (90.3)

( ) Parenthesis indicates the Percentages

Table 8 shows reveals the problems of sugarcane cultivators . It shows that majority of farmers (31 farmers) belonging to Nattamangalam village is reported that low price is the main problem faced by them. Similar trend was observed in case of other two villages also. In all the three villages, low price is the main problem faced by them and it was reported by 93 farmers out of the 103 farmers. The second main problem faced by them was inadequate availability of fertilizer, and shortage of labour in harvesting and

they were reported by 65 farmers each. Third main problem faced by them was inadequate irrigation facilities and it was reported by 64 cane growers.

Conclusion

As the cost of the setts and harvesting of sugarcane is high, the total cost of production is also very high. In order to reduce the cost of production, the farmers in the, area may go for mechanical harvester. The government may ensure fair price for the cane grower in order to have wider difference between cost of production and gross return there by, higher return will be obtained.

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Agricultural Export Performance of India: Since Liberalization

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Abstract

Emerging world demand for Indian agricultural commodities offers great opportunity and Indian agricultural exports have increased manifolds. However, the contribution of agricultural export in the total export of the country shown as declined. The study explores the performance of India's agricultural exports for the time period 1990-91 to 2011-12, by analyzing Magnitude, Direction and Composition. It has found that, even though, there is an increase in the absolute quantum of agricultural exports, there is consistent decline in the percentage share of agricultural products in total export during the study period. The analysis provided the conclusion that when marine product shows as the major commodity of export from allied sector, oil meals, cashew, and rice are the major exporting commodity from agricultural sector, where concerned to compound growth rate it is visible that meat and sugar made a substantial increase.

Introduction

The new economic policy was introduced with the objectives of Liberalization, Privatization and Globalization (LPG) which aims to substantial progressive reduction in support and protection so as to prevent restrictions and distortions in the world market. It includes establishment of WTO which came in to force on 1st January 1995 including proposals relating to agriculture such as market access, domestic support and export subsidies, removal of quantitative restrictions. The first half of 1990s was a period of explosive growth of agricultural trade. Share of export from agricultural sector to GDP has increased from 4.13per cent in1990-91 to 7.3 per cent in 1995-96. After 1995, under its commitments to WTO, India removes quantitative restrictions (QRs) and liberalizes imports. Unfortunately after 1997, international prices started falling, making a downward pressure on domestic prices of most of the agricultural commodities. Above all India was not able to meet the quality requirement of the importing countries.

After two decades of liberalization it is quite appropriate to analyze the impact of liberalization on Indian Agriculture export. The available literature reveals that economic environment in India has undergone qualitative changes as the import substitution inward oriented development strategy has been replaced with export promotion outward oriented strategy with implementation of economic reform in agriculture sector (Ramesh chand 2008). According to Subramanian (1993), Parikh, et, al (1995), Storm (1997) the outward orientation of the economy including that of the agricultural sector lead to higher growth of the economy. On the superiority of the export-promotion strategy over inward looking strategies, Ballasa (1990) put the view that inward oriented strategy of development is likely to permit rapid economic expansion initially. The reforms initiated in 1991, facilitated higher exports of a number of commodities. Prakash et al (1995**),** Arunachalam(2001) shows the growth rate of agricultural-export has accelerated from 11.9 percent per annum in 1980s to 18.6 percent during first half of 1990s. While it seemed to be strong initial response to liberalization, there was significant slowdown in the exports after 1995.During 1996-2000, agricultural exports have in fact shown a negative growth (kaushik). There is a marked decline in the percentage share of agricultural exports to total exports during1996-97 periods. However in 1996-97 agricultural export of India amounted to 20.40 percent of total exports, in 2000-01, it decline to 14.43 per cent, which further fall to 10.47 per

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cent in 2010-11(GOI, 2012). In this background this study is an attempt to analyze how far the trade liberalization affects export performance of principal agricultural commodities in India. Fifteen major agricultural commodities were selected for the analysis, based on their respective shares in India's total agricultural exports. They were tea, coffee, rice, spices, cashew, oil meals, fresh fruits, fresh vegetables, meat and meat preparations, and marine products. Thus the specific objectives of the study are to examine the trend and pattern of agricultural exports in India since reform period and to study the impact of liberalization on India's agricultural commodity export.

Methodology and Data Source

To analyze the effect of reform on agricultural commodity exports, the present study proposes to cover time series data for the period from 1991-92 to 2011-2012. The commodities such as tea, coffee, cotton, rice, wheat, tobacco, cashew, sugar, spices, fruits and vegetables, processed fruits, oil meals, meat, and marine products are selected for this study. The selection of these commodities is based on the importance of the share of each product in agricultural export and total export from India. The data gathered from various publications like Hand Book of Statistics on the Indian Economy, Reserve Bank of India, Economic Survey of India, CMIE reports, NSSO reports etc.

Trade performance of India

The process of trade liberalization and the market oriented economic reform that started in the early 1980s intensified in the 1990s as part of the globalization and liberalization strategy. The main focus of this reform is to improve the performance and also to integrate the external sector of the economy with the rest of the world. In this period (1990-91) India's export and import were US $18.14 billion and US $ 24.07 billion, respectively and it raise to US $ 44.6 billon and US $ 50.5 billion in 2000-01 and in 2010-11, US $ 251.1 billion and US$ 369.8 billion. According to the World Trade Report 2011, India has improved its rank both in merchandise trade and service trade, which placed India at 20th rank in merchandise export and 10th in service export in the global list of the year 2010. It was 22nd and 12th rank in 2009 respectively. This shows that India registered 31 per cent growth in merchandise export during 2010 which raised India's share in global export from 1.2 per cent to 1.4 per cent. Service export share of India at global front was 2.6 per cent in 2009 which become 3.0 per cent in 2010.

Composition of Export

The opening up of the economy since the early 1990s provided an impetus for higher growth for most export commodities, some products gained more than the others. Table (1) shows the share in the export composition of primary, manufacturing and the petroleum products. The share of petroleum products was only 2.88 in 1990-91; still, it is the most important item in India's export basket (18.21) in 2011-12. The share of manufacturing products shows an increasing trend from the period 1990-91(71.62) to 2000-01(77.05), and subsequently it starts to turn down. As in the case of primary product, agriculture and allied commodities showed a declining tendency. The share of its export declined from 18.49 per cent in 1990-91 to 12.28 per cent in 2011-12

Table 1 Commodity Composition Of India's Export Share In (In Per Cent)

Commodity /Group	1990-91	2001-01	2011-12
Primary Products	23.82	15.99	14.96
Agriculture and Allied Products	18.49	13.4	12.28
Ores and Minerals	5.38	2.58	2.67
Manufactured Goods	71.62	77.05	61.34
Leather and Manufactures	7.99	4.36	1.57

Table 1 Commodity Composition of India's Export Share in (In Per Cent)-*Contd.*

Commodity /Group	1990-91	2001-01	2011-12
Chemicals and Related Products	9.52	13.2	12.21
Engineering Goods	12.40	15.3	22.03
Textile and Textile Product	23.93	25.32	9.19
Gems and Jewells	16.12	16.57	15.40
Petroleum Products	2.88	4.19	18.21
Others	1.66	2.75	5.47

Source: Compiled from DGCI&S data

Composition of Import

The structure of India's imports has undergone changes since the opening up of the economic reform. Commodity wise analysis reveals that while petrol and petroleum products still continues to have a dominant presence in India's imports, capital goods and other intermediary products for export purposes have emerged as key items of imports. Table 2 shows, in 1990-91 major imports include petroleum, crude products (25.04) capital goods (24.24), other commodities (23.82), machinery except electrical and electronic (8.72) pearls, precious and semi precious stone (8.65). where in 2000-01the imports consisted of petroleum, crude products (30.65), pearls, precious and semi precious stone (9.51), gold and silver (9.17) machinery except electrical and electronic (5.36). In 2011-12, foremost imports include petroleum, crude products (31.6), capital goods (19.9), gold and silver (12.6).

Table 2 Composition of India's Major Imports (in per cent)

Commodity/group	1990-91	2000-01	2011-12
Petroleum, Crude and Products	25.04	30.56	31.6
Capital Goods	24.24	-	19.9
Transport equipment	3.87	1.38	2.86
Gold and silver	0.00	9.17	12.6
Machinery except electrical and electronic	8.72	5.36	6.17
Metalliferrous Ores, Metal Scrap, etc	3.54	1.53	2.8
Organic and Inorganic Chemicals	5.30	4.83	3.9
Pearls, Precious and Semi-Precious stone	8.65	9.51	6.7
Iron and Steel	4.89	1.53	2.5
Coal, Coke and Briquettes, etc	1.83	2.18	3.7
Fertilizers	4.09	1.48	2.6
Edible oil	0.75	2.58	1.97
Others	23.82	1.84	4.23

Source Compiled from DGCI&S data.

There has been significant market diversification in India's foreign trade in recent time. India's export to USA and Europe declined while in Asia, have increased. As per the data, foreign trade for 2012-13 maximum exports have gone to UAE (12.09 per cent) followed by USA (12.03 per cent), Singapore (4.53 per cent) and China (4.50 per cent). Whereas the import are concerned, china's share is maximum (10.64 per cent) followed by UAE (7.97 per cent) and Saudi Arab (6.93 per cent) during 2012-13.

Agricultural trade of India

India is predominantly an agricultural economy, absorbing two-third of the labour force and contributing one fourth of the total gross domestic products, still depend upon it. Agricultural exports by contributing about 13 percent of total export earnings, not only brings valuable foreign exchange but also benefits a large number of people involved in production, processing and export of such products. Most of the export earnings of agriculture came from the conventional items such as tea, cashew and spices. Until the beginning of the early seventies India has been an importer of a number of agricultural commodities like cereals and cereal preparations, edible oils, pulses, sugar cashew and fertilizers etc with the exception of a few commodities like rice, cotton, tea, coffee, oilseeds, oil cake, tobacco and spices the share of agricultural export of India in the world trade is insignificant, particularly fish, meat, chicken, vegetables and fruits.

Prior to trade liberalization policies adopted by the government during the early 1990s, most of the agricultural exports were subjected to controls of one kind or other. From the beginning the agricultural policy aimed at achieving self sufficiency in agriculture with little emphasis on agricultural exports. It seems that India has three different strategies for agricultural export. For traditional commodities like tea, coffee, tobacco, spices the trade regimes has been relatively open. The cereal sector remained largely insulted from world markets due to the fears of food security. With the emergence of WTO regime agricultural exports from India have plenty of opportunities and at the same time certain treats. A well defined strategy is needed to tap the potential and protect the traditional base of agricultural exports from India in the new trade environment.

Today, India is among the 15 leading exporters of agricultural products in the world, as per international trade statistics (2011) published by world trade organization (WTO), India's agricultural exports amounted to US $ 23.2 billion with a share of 1.7 percent of world trade in agriculture in 2010. During the period 2009-10 agricultural exports increased from Rs. 89341.50 crore to Rs 120185.95 crore in the year 2010-11, registering a growth of about 34.52 percent. Increase in value of agricultural exports during 2010-11 was primarily on account of higher exports of sugar, cotton, guar gum meal, spices, Niger seed, groundnut, maize, coffee, oil meal, castor oil, tea and jute compared to corresponding period of previous year. However, the share of agricultural exports in total exports decreased slightly from 10.57 percent in 2009-10 to 10.47 percent in 2010-11. In 1990-91 the share of agricultural export in total export was 18.49 per cent but it declined to 14.23 in 2000-01and it also declined to10.47 per cent in 2010-11, It indicates that the declining trend in the performance of India's agricultural exports.

Table 3 Performance of India's Agricultural Export, 1990-91 To 2010-11

(Value in Rupees Crore)

Year	Agriculture Imports	Total National Imports	%age Agriculture Imports to Total National Imports	Agriculture Exports	Total National Exports	%age Agriculture Exports to Total National Exports
1990-91	1205.86	43170.82	2.79	6012.76	32527.28	18.49
1991-92	1478.27	47850.84	3.09	7838.04	44041.81	17.80
1992-93	2876.25	63374.52	4.54	9040.30	53688.26	16.84
1993-94	2327.33	73101.01	3.18	12586.55	69748.85	18.05
1994-95	5937.21	89970.70	6.60	13222.76	82673.40	15.99
1995-96	5890.10	122678.14	4.80	20397.74	106353.35	19.18
1996-97	6612.60	138919.88	4.76	24161.29	118817.32	20.33
1997-98	8784.19	154176.29	5.70	24832.45	130100.64	19.09
1998-99	14566.48	178331.69	8.17	25510.64	139751.77	18.25
1999-00	16066.73	215528.53	7.45	25313.66	159095.20	15.91
2000-01	12086.23	228306.64	5.29	28657.37	201356.45	14.23
2001-02	16256.61	245199.72	6.63	29728.61	209017.97	14.22
2002-03	17608.83	297205.87	5.92	34653.94	255137.28	13.58
2003-04	21972.68	359107.66	6.12	37266.52	293366.75	12.70
2004-05	22811.84	501064.54	4.55	41602.65	375339.53	11.08
2005-06	21499.22	660408.90	3.26	49216.96	456417.86	10.78
2006-07	29637.86	840506.31	3.53	62411.42	571779.28	10.92
2007-08	29906.24	1012311.70	2.95	79039.72	655863.52	12.05
2008-09	37183.03	1374435.55	2.71	85951.67	840755.06	10.22
2009-10	59528.34	1363735.55	4.38	89341.33	845533.64	10.57
2010-11	56169.20	1605314.63	3.50	120185.48	1148169.56	10.47

Source Director General of Commercial Intelligence and Statistics

The performance of agriculture sector has been spectacular in the post-independence era. The country which faces serious food shortage has now started generating exportable surpluses. In 1990-91, share of agricultural export to total export was 18.49 percent and at the same time imports only at 2.79%, this may be due to large import of other goods and services. Further, this was largely influenced by India's self sufficiency in food production fronts. After a decade (2000-01) export was reduced to 14.23% but import increased to 5.29 per cent, whereas in 2010-11 export and import also declined to 10.47 and 3.58 per cent due to lower prices of agricultural commodities in foreign market, economic crisis in south Asian countries. The developed countries continued subsidizing export of farm products in the interest of food security, maintaining farm incomes and preserving the farming population (Gaulti, Ashock(2000) distorting agricultural trade unfavorable to the developing countries.

The changes in the composition of agricultural export from India in terms of their values and percentages are shown in table (6) among the various agricultural commodities exported, the export of marine product constituted the highest with18.35 per cent in 1991-92 and this increase eventually to reach 23.32 per cent in 2000-01, which stood highest in the year 1994-95, However, in 2000-01 declined slightly. Among the remaining commodities, tea(15.36 per cent),oil meals(11.07 per cent), rice(9.74 per cent), cashew(8.57 per cent), tobacco(4.75 per cent), spices(4.72 per cent), fruits and vegetables(4.41 per cent), coffee(4.19 per cent), cotton(3.84 per cent), meat(2.91 per cent), were in the order of increase. Though, the order in the year 2011-12 has changed for these commodities with a change in their share. For example, while the shares of rice(13.45 per cent), cotton(12.0 per cent), spices(7.35 per cent), processed fruits(3.04 per cent), sugar(5.01 per cent), and meat(7.87 per cent) has increased , and marine product(9.25 per cent), oil meals(6.56 per cent), fruits(3.18 per cent), coffee(2.53 per cent), cashew(2.48 per cent), tobacco(2.24 per cent) has declined.

Table 6 Trends in The Share of Principal Agriculture and Allied Commodities of India

(values in US $)

Commodity / Year	1990-91	1995-96	2000-01	2005-06	2011-12	CGR
Tea	596	350	391	390	863	4.37
	(17.8)	(5.76)	(6.55)	(3.82)	(2.31)	
Coffee	140	449	259	358	946	9.1
	(4.1)	(7.39)	(4.34)	(3.51)	(2.53)	
Rice	257	1365	641	1405	5032	14.5
	(7.67)	(22.47	(10.74)	(13.76)	(13.4)	
Wheat	17	109	90	125	213	12.1
	(0.5)	(1.79)	(1.5)	(1.22)	(0.57)	
Cotton	471	60	48	656	4512	10.6
	(14.07)	(0.98)	(0.8)	(6.43)	(12.0)	
Tobacco	146	133	189	300	836	8.2
	(4.36)	(2.18)	(3.16)	(2.94)	(2.24)	

Table 6 Trends in The Share of Principal Agriculture and Allied Commodities of India-*Contd*

(values in US $)

Commodity / Year	1990-91	1995-96	2000-01	2005-06	2011-12	CGR
Cashew	249 (7.43)	369 (6.07)	449 (7.52)	585 (5.73)	928 (2.48)	6.1
Spices	130 (3.88)	237 (3.9)	354 (5.93)	477 (4.67)	2749 (7.35)	14.9
Oil Meals	339 (10.1)	702 (11.5)	447 (7.49)	1101 (10.7)	2454 (6.56)	9.4
Fruits and Vegetables	118 (3.52)	157 (2.58)	184 (3.08)	481 (4.71)	1190 (3.18)	11.1
Processed Fruits,	118 (3.52)	265 (4.36)	288 (4.82)	359 (3.51)	1140 (3.04)	10.9
Marine Products	535 (15.98)	1010 (16.4)	1393 (23.3)	1589 (15.5)	3461 (9.25)	8.8
Sugar	20 (0.59)	151 (2.48)	110 (1.84)	135 (1.32)	1874 (5.01)	22.9
Meat	77 (2.3)	187 (3.07)	321 (5.38)	621 (6.08)	2944 (7.87)	18
Others	134 (4)	530 (8.72)	801 (13.42	1625 (15.0)	8273 (22)	20.6
Total	4221	16245	5965	10207	37415	

Source Hand Book of Statistics on the Indian Economy, Reserve Bank of India

Figure in the Parentheses indicate % share to total

Note CGR indicates Compound Growth Rate

Table also provides the compound growth rate of principal agricultural commodities. It is observed that , while the export of sugar registered a high growth (22.9%),and the other products like meat (18%), spices (14.9%) rice(14.5%), wheat(12.1%), fruits and vegetables (11.1%), processed fruits(10.9%), cotton(10.6%), oil meals(9.4%), marine product(8.8%), and tobacco(8.2%) have also experienced a positive growth.

Percentage Growth Rate of Selected Commodities

Tea

India is the largest tea producer in the world. During the year 1991, the country's tea production was to the tune of 741.7 million kg s, which accounted for about 28 per cent of the world production. In 1990-91, Russia was the main destination of Indian Tea exports and U K stands second. Germany, Iran, Iraq, Japan, Kazakhstan, Poland and UAE are other trade partners of India. Coming to 1995-96, UK's position was replaced by U A E holding around 11.22 percent of India's tea exports. In the year 2005-06, Russia, UA E, U K import more or less same amount of tea from India. Likewise, The United States is emerging as a major importer of tea nowadays. It is important to note that in the pre-liberalization period, the export of tea towards Kazakhstan was almost zero, at present it is the highest growing tea importing partner of India. It is because the bilateral trade relations between India and Kazakhstan have been improved during the last years. However, India's export of tea has been experiencing declining trend in export share except the periods 1997-98 and 1998-99 due to increase in domestic demand for tea, leading to an increase in domestic profitability, decrease in export in USSR and competition from Lanka, Kenya and China. These trends indicate that there are shifts in the magnitude and direction of the export of tea over the years.

Table 4 Export of tea to principal countries

(values in **US $**))

Commodity / Country	1990-91	1995-96	2000-01	2005-06	2010-11	2011-12
Germany	23.5 (3.94)	22.6 (6.46)	20.3 (5.18	25.5 (6.23)	32.5 (4.41)	41.6 (4.82)
Iran	34.4 (5.77)	1.6 (0.46)	11.6 (2.96)	18.3 (4.68)	67.3 (9.14)	48.0 (5.56)
Iraq	0	0.1 (0.03)	20.4 (5.21)	11.1 (2.84)	4.1 (0.56)	0.1 (0.01
Japan	13.2 (2.21)	8.6 (2.46)	11.2 (2.86)	15.7 (4.02)	24.8 (3.37)	25.8 (2.9)
Kazakhstan	-	6.6 (1.88)	19.9 (5.08)	22.3 (5.71)	50.8 (6.90)	49.0 (5.67
Poland	22.7 (3.81)	24.1 (6.88)	11.1 (2.87)	5.5 (1.41)	11.4 (1.55)	11.7 (1.35)
Russia	332.9 (55.82)	142.5 (40.70)	104.8 (26.7)	53.7 (13.747)	113.1 (15.36)	119.4 (13.8)
U.A.E.	16.8 (2.82)	39.3 (11.22	59.1 (15.09)	54.7 (13.99)	77.7 (10.55)	79.9 (9.25)
U.K.	63.3 (10.61	37.8 (10.79	45.9 (11.72)	50.2 (12.8)	79.1 (10.74)	101.9 (11.79)

Table 4 Export of Tea to Principal Countries -*Contd*

(values in US $)

Commodity / Country	1990-91	1995-96	2000-01	2005-06	2010-11	2011-12
U.S.A	7.3 (1.22)	8.8 (2.51)	23.4 (5.98)	33.4 (8.54)	61.1 (8.29)	67.1 (7.77)
Others	82.2 (13.78	58.2 (16.62	63.7 (16.27)	100.5 (25.71)	214.3 (29.11	319.2 (36.95)
Total	596.4	350.1	391.5	390.9	736.2	863.7

Source Hand Book of Statistics on the Indian Economy, Reserve Bank of India

Note Figure in the Parentheses indicate percentage share to total

Coffee

Out of the total exports, its share was 0.81 percent of the country in 1990-91. The top five export markets for Indian Coffee are the Russia, Italy, Germany, Belgium, and U.S.A. Major share of Indian coffee (36.25%) is directed to Russia, but after the liberalization it is declining. Reaching to 2011-12, 20.17 per cent of Indian coffee is exporting to Italy. There is a 32.20 fold growth is seen in the export to Belgium. Next to Spain, revealed the highest growth in the import of Indian coffee which was quite zero in the early nineties. As compared to the growth rate, it was seen that USA is the main importer of Indian coffee with 148.71 %, but, recently it declined to 20.63%. Though the striking trend is that Latvia was not an importing partner of India in the early reform periods, now it is the main importing partner of India, which contributes with an import growth of 102.56% in 2011-12. It is derived from the fact that, in the post WTO period, coffee experienced an increase in export share in 1995-96 due to failure of Brazilian coffee crop and decrease in export share in 1998-99 due to fall in unit value realization by 25 per cent . It is the responsible factor for the poor performance of coffee export of India.

Table 5 Exports of Coffee to Principal Countries

(values in US $)

Commodity / Country	1990-91	1995-96	2000-01	2005-06	2010-11	2011-12
Belgium	0.8 (0.56)	7.8 (1.73)	12.8 (4.93)	19.9 (5.53)	47.8 (7.24)	60.5 (6.39)
Germany	11.6 (8.25)	43.5 (9.68)	31 (11.95)	34.5 (9.62)	91.1 (13.78)	105.8 (11.1)
Italy	9.5 (6.75)	59.1 (13.15)	27.8 (10.71)	82.7 (23.03)	160.7 (24.3)	195.9 (20.7)
Latvia	0	1.4 (0.31)	8.4 (3.23)	4.5 (1.25)	3.9 (0.59)	7.9 (0.83)

Table 5 Exports of Coffee to Principal Countries-*Contd.*

(values in US $)

Commodity / Country	1990-91	1995-96	2000-01	2005-06	2010-11	2011-12
Netherlands	2.9 (2.06)	4.3 (0.95)	6.3 (2.42)	4.9 (1.38)	5.6 (0.83)	9.0 (0.94)
Russia	51.5 (36.25)	101.9 (22.67)	63.1 (24.32)	67.4 (18.75)	60.8 (9.20)	93.9 (9.92)
Spain	0.5 (0.35)	5.4 (1.20)	9.4 ()3.62	14.7 (4.09)	17.8 (2.69)	30.5 (3.22)
Switzerland	1.3 ()0.92	3.5 (0.77)	8.8 (3.39)	5.6 (1.57)	5.5 (0.83)	8.5 (0.90)
UK	0.6(0.42)	4.2 (0.93)	5.9 (2.27)	2.8 (0.75)	5.4 (0.83)	9.4 (0.99)
USA	3.9 (2.77)	49.3 (10.97)	17.1 (6.59)	5.6 (1.57)	18.9 (2.85)	22.8 (2.40)
Others	28.1 (19.98)	168.9 (37.59)	68.8 (26.52)	116.2 (32.1)	243.1 (36.84)	401.8 (42.46)
Total	140.6	449.3	259.4	358.8()	660.6()	946.0

Source Hand Book of Statistics on the Indian Economy, Reserve Bank of India

Note Figure in the Parentheses indicate % share to total

Cashew

India maintained its prime status as the largest exporter of cashew in the world, particularly through its comparative advantage in the international markets. Our main trade partners are Canada, France, Israel, Italy, Japan, Netherlands, Saudi Arabia, U.A.E and U.S.A. In the initial period of liberalization Netherlands is the major importer of Indian cashew with the percentage share of (14.6%) out of the total export of 220.8 US million $s, followed by U.S.A by 12.67. However in 1995-96, major part of Indian cashew is exported to U.S.A through the percentage share of 28.2 per cent. Though in 2005-06, the demand for Indian cashew is declining mainly because of international quality agreement and competition from Vietnam and Brazil affect cashew exports severely.

Table 7 Exports of Cashew to Principal Countries

(values in US $)

Commodity / Country	1990-91	1995-96	2000-01	2005-06	2010-11	2011-12
Canada	1.0 (0.40)	1.0 (0.27)	7.1 (1.57)	7.4 (1.27)	3.6 (0.59)	7.5 (0.80)
France	0 (0)	3.4 (0.91)	12.1 (2.69)	17.3 (2.96)	19.8 (.15)	22.8 (2.44)
Israel	0.3 (0.12)	4.3 (1.16)	6.4 (1.42)	4.1 (0.69)	3.0 (0.49)	5.1 (0.56)
Italy	1.3 (0.52)	1.3 (0.35)	5.7 (1.26)	5.6 (0.96)	6.4 (1.01)	11.7 (1.18)
Japan	20.0 (8.02)	30.1 (8.13)	26.7 (5.93)	24.9 (4.24)	35.4 (5.64)	50.4 (5.41)
Netherlands	36.6 (14.69)	62.5 (16.89)	83.2 (18.53)	92.8 (15.85)	63.5 (10.12)	76.4 (8.22)
Saudi Arabia	0.1 (0.04)	3.3 (0.89)	8.3 (1.84)	13.7 (2.35)	23.6 (3.78)	43.2 (4.62)
U.A.E.	3.0 (1.20)	11.5 (3.10)	18.3 (4.07)	42.7 (7.28)	86.3 (13.77)	126.5 (13.61)
U.K.	2.7 (1.08)	12.8 (3.46)	32.6 (7.25)	32.8 (5.59)	15.7 (2.52)	22.9 (2.47)
U.S.A	31.8 (12.76)	104.4 (28.22)	202.3 (45.00)	222.4 (37.98)	202.7 (32.35)	313.1 (33.73)
Others	152.4 (61.18)	135.3 (36.57)	46.7 (10.38)	122.0 (20.82)	166.2 (26.53)	249.0 (26.83)
Total	249.1	369.9	449.5	585.8	626.2	928.6

Source Hand Book of Statistics on the Indian Economy, Reserve Bank of India

Note Figure in the Parentheses indicate % share to total

Spices

India produces a variety of spices. Among spices, black pepper (king of spices) and cardamom (queen of spices), chilies, ginger, turmeric are the major items produced in India. In earlier decades, Europe was one of the major markets of the Indian spices. However this supremacy is lost due to changes in the food habit of the Europeans and also due to the availability of spices from other countries in the international market. At present South Africa stands first as per the growth trend with the 100.64%.In 1990-91, U.S.A is the highest importer of Indian spices (32.87) followed by U.K, U.A.E, Germany, and Singapore. There is a noted decline in the India's spice exports from0.47 in 1991 to 0.26 in 2004. Simultaneously with US, Europe, Japan, East Asia, Middle East, more than 120 countries are importing Indian spices with an impressive share of 46 percent. From table (8) it is seen that, in the first and the second generation period of the liberalization, US is the main destination of Indian spice with an export growth of 21.5 percent to 492 percent.

Table 8 Exports of Spices to Principal Countries

(values in US $)

Commodity / Country	1990-91	1995-96	2000-01	2005-06	2010-11	2011-12
Bangladesh	10.9 (8.34)	13 (0.54)	15.5 (4.3)	10.6 (2.21)	52.2 (2.95)	55.8 (2.02)
Germany	7.3 (5.61)	8.3 (3.49)	12.2 (3.44)	22.7 (4.74)	78 (4.41)	108.4 (3.94)
Japan	7.2 (5.53)	8 (3.37)	22.9 (6.46)	27.3 (5.71)	49.1 (2.78)	60.4 (2.19)
Saudi Arabia	4.5 (3.46)	6.9 (2.90)	12.6 (3.55)	13.4 (2.80)	46.3 (2.62)	92.9 (3.37)
Singapore	3.2 (2.46)	9.5 (4.00)	13.5 (3.81)	13.6 (2.84)	52.7 (2.98)	102.3 (3.72)
Spain	0.8 (0.61)	3.7 (1.55)	10.9 (3.07)	7.2 (1.50)	18.2 (1.03)	26.6 (0.96)
Sri Lanka	1.2 (0.92)	11.3 (4.76)	13 (3.67)	19.7 (4.12)	66.4 (3.76)	80.6 (2.93)
U.A.E.	2.9 (2.23)	18.4 (7.75)	20.8 (5.87)	24.6 (5.14)	93.1 (5.27)	147.7 (5.37)
U.K.	5.9 (4.53)	14.1 (5.94)	24.6 (6.94)	31.6 (6.61)	96.7 (5.47)	119.3 (4.33)
U.S.A	21.5 (16.53)	51.6 (21.75)	75.4 (21.29)	103.4 (21.63)	261.5 (14.81)	492 (17.89)
Others	65.1 (50)	92.4 (38.9)	132.7 (37.47)	203.9 (42.66)	951.2 (53.88)	1463.3 (53.22)
Total	130.4	237.2	354.1	477.9	1765.4	2749.3

Source Hand Book of Statistics on the Indian Economy, Reserve Bank of India.

Note Figure in the Parentheses indicate percentage share to total.

Rice

From the early decades itself, India had a prominent place in the rice exports and it is the second largest rice producing country in the world after china. In 1990-91, India's major portion of rice exported to Saudi Arabia (31.06%) followed by U.K (8.32%), U.A.E (5.55%). However in 1995-96, Saudi Arabia's position was replaced by Bangladesh holding around 20.2 percent of India's rice exports. In the year, 2000-01 export substantially improved until 2009-10 mainly attributed towards the substantial demand from Saudi Arabia and other countries. The upcoming market for Indian rice of U.A.E (820.9) that is 16.7 per cent, Saudi Arabia (763.9), i.e. 15.2 per cent and Kuwait (296.9) with the share of 5.89 (table: 9). At the same time, the country faces the problem of a reduction in area under rice because of the policy of commercialization of agriculture which results in the problem of food insecurity. A notable feature in the export scenario is that, before liberalization South Africa not came in to the scene as an importing partner. Nowadays, it is South Africa which stands in the first place as an importer of Indian rice. The overall trend in the rice export of the country shows a decline mainly due to the decreasing trend of international price of rice in the recent years.

Table 6 Exports of Rice to Principal Countries

(values in **US $**)

Commodity / Country	1990-91	1995-96	2000-01	2005-06	2010-11	2011-12
Bangladesh	0 (0)	284.5 (20.28)	65.1 (10.14)	124.8 (8.88)	2.6 (0.10)	56.7 (1.13)
France	1.4 (0.54)	7.6 (0.5)	12.7 (1.97)	6.3 (0.45)	9.1 (0.36)	16.3 (0.32)
Kuwait	7.3 (2.83)	26.8 (1.96)	52.3 (8.14)	60.0 (4.27)	239.6 (9.42)	296.9 (5.89)
Saudi Arabia	79.9 (31.06)	147.1 (10.77)	286.6 (44.65)	423.3 (30.12)	688.7 (27.08)	763.9 (15.17)
Singapore	0.6 (0.23)	2.4 (0.17)	7.2 (1.12)	14.7 (1.04)	8.0 (0.31)	44.1 (0.87)
South Africa	0 0	93.0 (6.81)	14.7 (2.29)	72.2 (5.12)	13.2 (0.51)	94.6 (1.88)

Table 6 Exports of Rice to Principal Countries-*Contd.*

(values in **US $**)

Commodity / Country	1990-91	1995-96	2000-01	2005-06	2010-11	2011-12
U.A.E.	14.3 (5.55)	54.6 (3.99)	24.8 (3.86)	90.3 (6.43)	624.4 (24.55)	820.9 (16.31)
U.K.	21.4 (8.32)	35.8 (2.62)	67.0 (10.43)	51.6 (3.66)	77.4 (3.05)	143.8 (2.85)
U.S.A	11.1 (4.31)	30.7 (2.24)	29.6 (4.61)	30.8 (2.18)	55.4 (2.18)	120.2 (2.38)
Yemen	0.2 (0.08)	8.2 (0.60)	7.3 (1.13)	31.8 (2.26)	65.2 (2.56)	120.7 (2.40)
Others	121.2 (47.12)	675.0 (49.42)	74.5 (11.61)	499.3 (37.79)	759.3 (29.85)	2554.7 (50.76)
Total	257.2	1365.7	641.8	1405.2	2542.9	5032.8

Source Hand Book of Statistics on the Indian Economy, Reserve Bank of India.

Note Figure in the Parentheses indicate % share to total

Marine product

Marine product is the important source of earnings of foreign exchange because India has an extensive coastal line, where the marine resources are abundant. India has strong ties with Japan as far as the exports of marine product are concerned. In 1990-91, Japan imported (9.9%) of marine products and it increased to (12.5%) in 2011-12. In 2011-12 U.S.A is the top most importers of marine products of India with the percentage share of (17.8). The export of marine products to other countries showed a substantial improvement since reform. However, overall picture shows marine product experienced a rapid decrease in export share since 1995-96 due to stiff competition in major markets like Japan and U.S.A. from countries like Thailand, china, Indonesia, Vietnam and Philippines due to abundant supply of farmed shrimps in these countries, decline in marine catches and widespread unrest among the small fisherman against automation in fishing techniques.

Table 9 Exports Of Marine Product To Principal Countries

(values in US $)

Commodity / Country	1990-91	1995-96	2000-01	2005-06	2010-11	2011-12
China	0	13.7 (1.35)	115.8 (8.3)	150.6 (9.4)	283.7 (10.8)	184.5 (5.3)
Chinese Taipei	0	7.2 (0.71)	34.8 (2.4)	10.6 (0.6)	70.1 (2.6)	52.8 (1.5)
Hong Kong	11.4 (2.1)	22.1 (2.18)	24 (1.7)	41.4 (2.6)	132.9 (5.0)	98.4 (2.8)
Italy	26.6 (4.9)	53.8 (5.32)	29.4 (2.1)	48.1 (3.0)	119.3 (4.5)	108.7 (3.1)
Japan	264.8 (9.9)	416.5 (41.20)	509.9 (36.5)	256.1 (16.1)	335.5 (12.8)	434.9 (12.5)
Spain	33.3 (6.22)	46.6 (4.61)	44.6 (3.1)	116.5 (7.3)	171.3 (6.5)	178.3 (5.1)
Thailand	1.2 (0.22)	15.7 (1.55)	28.5 (2.0)	25.7 (1.6)	102 (3.8)	127.0 (3.6)
U.A.E.	5.3 (0.99)	101 (9.99)	71.2 (5.8)	55.7 (3.5)	67.1 (2.5)	99.7 (2.8)
U.K.	40.5 (0.84)	54.7 (5.41)	60.9 (4.3)	79 (4.9)	78.9 (3.0)	99.4 (2.1)
U.S.A	63.2 (11.8)	98.5 (9.74)	239 (17.1)	351.4 (22.1)	399 (15.2)	616.7 (17.8)
Others	88.7 (16.5)	181.2 (17.92)	235.8 (16.9)	454 (28.5)	855.7 (32.7)	1461 (42.2)
Total	535	1010.8	1393.8	1589.2	2615.6	3461.4

Source Hand Book of Statistics on the Indian Economy, Reserve Bank

Note Figure in the Parentheses indicate % share to total

From these analysis, it can be seen that the commodity wise agricultural export shows as a highly fluctuated mainly on three major markets, i.e. UAE, USA and Russia`. In the case of certain agricultural commodities the export shows as coming down due to less competitive strength, limited quality, absence of grading and high cost of production. Whereas the compound growth rates worked out indicate that the growth in import of all commodities is positive. As indicated in the table, the import of fertilizers (71.44%) formed the highest share in 1991-92, followed by cashew(8.09%), pulses(7.71%) edible oil(7.49%), Cereals & cereal preparations(5.24%), But in 2011-12,the import of fertilizers (47.50%) and edible oil (39.81%) keep the highest as indicated in the year 1991-92, followed by pulses(7.55)cashew(4.59) Cereals & cereal preparations(0.29), sugar(0.27). The compound growth rate shows highest rate, the import of edible oil (23.06%), followed by sugar (18.96%), pulses (14.16%) fertilizers (11.82%), cashew (9.76%), Cereals & cereal preparation (0.56%).

Table 10 Import Of Principal Agricultural and Allied Commodities

(values in US $)

Items/ Year	1990-91	1995-96	2000-01	2005-06	2010-11	2011-12	CGR
Cereals & Cereal Preparations	101 (6.26)	24 (0.83)	19 (0.79)	36 (0.67)	119 (0.72)	70 (0.29)	0.50
Pulses	268 (16.61)	205 (7.12)	109 (4.54)	559 (10.42)	1569 (9.45)	1829 (7.55)	14.16
Sugar	5.2 (0.32)	64 (2.22)	6 (0.25)	147 (2.74)	612 (3.69)	65 (0.27)	18.98
Edible Oils	181 (11.22)	676 (23.49)	1308 (54.43)	2024 (37.73)	6553 (39.49)	9649 (39.81)	23.06
Cashew	74 (4.59)	227 (7.89)	210 (8.74)	471 (8.78)	581 (3.50)	1113 (4.59)	9.70
Fertilizers	984 (61.00)	1682 (58.44)	751 (31.25)	2127 (39.65)	7162 (43.15)	11514 (47.50)	11.82
Total	1613.2	2878	2403	5364	16596	24240	

Source Hand Book of Statistics on the Indian Economy, Reserve Bank of India

Note CGR indicates Compound Growth Rate

Figure in the Parentheses indicate % share to total

The agricultural sector has been playing a key role in the composition of Indian exports. Thus the promotion of agricultural exports is looked upon as an important instrument for boosting growth in the rural and "real economy" and creating conditions for improving the returns to the farmers. In the era of globalization, the agricultural exports from India have been facing many internal and external challenges. The internal problems include in the absence of production bottlenecks like cost diseconomies, poor quality and increasing domestic demand, inadequate supply of power, water and research and development support add to the constraints, lack of adequate incentives and appropriate institutions, the increased demand for agricultural land, for non-agricultural purposes and very slow rate of capital formation are the major hurdles to the Indian agricultural exports on the domestic front. Apart from this, declining world demand, competition from other countries, threat from substitutes, the problems in maintaining international quality standards, imposition of non-tariff barriers like sanitary and phytosanitary (SPS) conditions on imports from developing countries, lack of awareness and knowledge about the SPS measures and quality standards required to be adopted by the processing industry and exporters the limited integration with global markets and trends, the weak implementation of policies etc., are the major external constraints to Indian agricultural exports.

Conclusion

Due to the implementation of economic reforms since 1991 and India's joining of World Trade Organization (WTO) and acceptance of its commitments since 1994, the export sector of the country responded positively and experienced several fundamental changes in terms of its growth, composition, and direction. Agriculture export had been occupying the place of pride in the export basket of India. Even though, there is an increase in the absolute quantum of agricultural exports, there is consistent decline in the percentage share of primary products in total export during the study period. The commodity wise exports provided the conclusion that while marine product was the major commodity of export from allied sector, oil meals, cashew, and rice were the major exporting commodity from agricultural sector. Concerned to compound growth rate it is visible that meat and sugar made a substantial increase. However, Indian exports face many constraints in major importing countries on account of quality and food safety issues. The overview provided in this study suggests that a future road map for increase in agricultural export, diversification of agricultural exports, quality improvement, improvement of the cold storage facilities for the highly perishable agricultural exports, timely delivery of goods etc., are very crucial for the maximization of agricultural exports.

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AGRO-ECONOMIC RESEARCH

Hulling & Milling Ratio for Paddy in Madhya Pradesh*

Rice Production, processing and Marketing constitute the biggest industry in the state. Due to low productivity of rice, state has not receiving higher income, but there is one way to enhance the income by value added product/ processed products of rice like poha, boil rice and non parboiled rice. So, there is role of rice milling industry. Rice milling industry is the oldest and largest agro-based industry. Rice milling in India is carried out in small, medium and large size rice mills. The most of the small size mills are huller mills. It is estimated about 10 per cent of paddy/ rice is damaged and/ or lost in processing, storage and transport with the present methods and machinery. Sixty to eighty per cent head yield is obtained with 10-25 broken and admixture of bran and husk whereas with modern techniques, 68-72 per cent head rice with 5-7 percent broken and better utilizable by-products. The estimated loss in terms of money due to ill rice recovery and excess broken etc. with present methods would run into Crores of rupees. Since, paddy is the staple of practically all paddy growers and also it is seasonal with two harvests per year, there should be some facility in storage which can be protected from various hazards like damage caused due to spontaneous heating, damage by birds, rodents and insects.

The cultivation of rice covered 1603.00 thousand ha. of cultivated land of the state and produced 1363.00 thousand t of rice with an average yield of 896.00 Kg./ha. (2009-10). Balaghat (15.46%) had the highest area of rice followed by Rewa (7.79%), Seoni (7.29%), Mandla (6.91%), Shahdol (6.31%), Anuppur (6.06%), Satna (5.15%), Sidhi (4.39%), Katni (4.34%), Dindori (4.32%), Jabalpur (4.04%), Panna (3.64%), Damoh (3.47%), Singroli (2.88%), Betul (2.75%), Umariya (2.35%), Gwalior (1.31%), Raisen ((1.37%), Chindwara (1.17%), Hoshangabad (1.27%), Jhabua (0.82%), Narsinghpur (0.84%), Tikangarh (0.79%), Chhatarpur (0.61%) and Bhind (0.10%). These 25 districts covered 95.45 percent of rice area of the state. The remaining 25 other districts covered only 4.55 percent of total rice area. As far as production of rice concerned in different districts of Madhya Pradesh, Balaghat (24.81%) had the highest production of rice in the state followed by Seoni (8.98%), Shahdol (6.08%), Rewa (5.41%), Mandla (4.28%), Anuppur (4.14%), Gwalior (3.97%), Katni (9.93%), Satna (3.93%), Dindori (3.51%), Jabalpur (3.41%), Betol (3.37%), Sidhi (3.23%), Damoh (2.75%), Hoshangabad (2.42%), Singroli (2.16%), Panna (2.10%), Umariya (1.95%), Raisen (1.56%), Narsinghpur (1.09%), Chindwara (1.04%), Tikangarh (0.38%), Jhabua (0.37%), Chhatarpur (0.32%) and Bhind (0.26%). The cultivator of Gwalior harvested 202.46% more yield as compared to other districts of Madhya Pradesh. The yield of rice also found more than the state average in Katni, Balaghat, Seoni, Nasrsinghpur, Bhind, Raisen, Hosangabad and betul.

To augment the income from rice, one way is to sell it in processed and value added form. The present study seeks to answer the following questions.

What are numbers, trends, percentage distribution and variation and growth of rice mills in different districts of the state in the study area?

What is the processing cost incurred in paddy among different types of processing units?

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What are the problems faced by paddy processors?

What are the losses occurring during the paddy processing and what are the steps to be taken up to promote these industries in future?

What is the hulling milling ratio of rice mills in the state?

With the consideration of above aspects, the present study is undertaken with the following specific objectives

Objectives

To analyze the trends and pattern in the growth of modern rice mills in different districts of Madhya Pradesh.

To estimate conversion ratios of paddy to rice with varietal differences with or without parboiling in various paddy processing units.

To estimate the relative shares of different milling techniques in paddy processed with various types of processing technologies.

To examine the problems and prospects in paddy processing industry.

Research Methodology

The study has been based on both primary and secondary data. Primary data has been collected from 2 districts (Balaghat and Katni) selected purposively for the study in Madhya Pradesh. A total number of 20 modern and 20 traditional rice mills have been selected from each selected districts for detailed information. Thus, the total number of selection modern rice mills and hullers were 40 from each selected district. Out of the total modern rice mills. all were found to be trading on owner cum trader. As regards to hullers were concerned all the hullers (40) processed only non- parboiled rice on custom hiring basis.

The tradition rice mills, namely, huller have been randomly selected from the total numbers of hullers in each selected districts. A primary survey has been carried out with pre-tested interview schedule from each selected mill or unit provided by the coordinator of the study i.e. ADRT, Bangalore (Karnataka), which was prepared specifically indicating the quantity of paddy processed, hulled or milled in the mills. There are certain mills which fo11ow two step processes in which the first step involves hulling paddy to get brown rice and the second process includes polishing the brown rice to the fine white rice.

The primary data related to the reference year of 2007-08, 2008-09 and 2009-10 (financial year) to avoid yearly fluctuations. The secondary information has been collected from the Ministry of Food Processing Industries and Madhya Pradesh Government Departments on modernization of rice milling from 2000-2009. The Secondary information has also been collected on applied aspects of rice processing and by-product utilization like drying, storage, parboiling, milling, bran stabilization, etc.

In order to analyze the trend growth of rice mills, secondary information will be obtained from concerned Industrial Departments, Rice Millers Association etc. Data has been analyzed using suitable statistical techniques such as descriptive statistics and regression analysis etc.

The major findings of the study as follows

An average modern mill owner invested Rs. 54.7 lakhs for established a non-parboiled rice mill. An average capacity of modern rice mill was found to be of 2.87 thr. (non-parboiled). An average number of employees and average number of daily wage labourers were 9 and 7 in numbers respectively for an average non- parboiled rice mill existing in the area under study. An average huller invested only Rs. 1.35 lakhs to establish a hulling mill in the area under study. An average capacity of huller was found to be 0.36 t/hr. with an

average capacity of daily wage labourer of 1 only.

On owner-cum-trader basis, an average mill owner of the study area found to be got 15352.03 q. (58.07%) and 11761.75 q. (59.57%) from the processing of 26435.60 q. of grade A and 19745.53 q. of common non- parboiled rice respectively.

An average huller of study area processed 1238.03 q. and 5032.63 q. of grade A and common variety of paddy respectively at their huller mill and produced 46.80% (579.36 q.) and 47.05% (2367.69 q.) respectively of grade A and common non-parboiled rice at custom hiring basis. It is observed during investigation that hullers only hulling the non-parboiled rice on custom hiring basis.

Market incidental charges were found to be more in the processing of grade A rice (Rs. 96.97/q.) as compared to common rice (Rs. 90.58/q.). This was due to only high weight loss during processing, packing material cost for grade A rice as compared to common rice. The weight loss (40%) was the main component of market incidental charges followed by packing material (25%), transportation charges (12%), labour charges (8%), storage charges (8%) and handling/cleaning/packing charges (7%) to average market incidental charges in procuring raw materials (paddy).

The cost of packing material (Rs.36.40/q.) was found to main component of processing of non-parboiled rice followed by electricity charges (Rs. 12.35/q.) labour cost (7.84/q.), maintenance charges (Rs.3.94/q.) and storage cost (Rs. 2.02/q.) and other cost **(**Rs**.** 1.40/q.) in the study area.

Modern rice processing mills are quite profitable and provide Rs. 18.71 per quintals net return to mill owners. The total cost of processed paddy (A quintal) was to be Rs. 160.61 per quintals in which the cost of paddy (raw material) was found to be maximum (84.80%) followed by total market incidentals (8.86%), depreciation(4.44%), electricity (1.17%) and labour cost (0.74%) respectively. An average mill owner of the state received Rs. 1075.41 per quintal as gross return from processing of paddy in which the value of by products was Rs. 168.65 per quintals.

An average huller expenses Rs. 16.86/q. in processing of a quintal of non-parabolised rice on custom hiring basis, in which the share of variable cost and fixed cost were found to be Rs. 15.25/q. (90.47%) and Rs. 1.61/q. (9.53%) respectively. The labour cost (Rs. 9.61/q.) was found to be major component of variable cost followed by electricity charges (Rs. 5.77/q.) and maintenance and repair cost (Rs. 0.91/q.), while depreciation (Rs. 1.61/q.) was found to major component of fixed cost.

An average huller received gross return of Rs. 35791.83 and Rs. 127111.99 per year through processing of grade 'A' and common rice respectively. The share of gross income through common rice was found to be more as compound to grade 'A' rice as only marginal and small farmers preferred processing from the hullers. There were two types of option prevalent in the study area for payment of charges by the farmers viz. (a) custom hiring charges Rs. 24.12/q. or (b) left their by product with the hullers of the paying charges of hulling. In 30 percent cases the producer left their by product with them due to the reason that they do not have hard cash to pay them at the time of processing. The total cost involved in processing of grade 'A' **(**Rs**.** 17.24 /q.) was found to be more as compared to common rice (Rs. 17.16/q.) in hulling of paddy in the study area.

An average mill owner of the study area sold their 80.53% of non parboiled rice to the wholesaler and remaining to the retailer or direct to consumer (19.47%). In this particular situation there were no provision was found to levy to Govt. and other sources. An average rice mill owner of the study area got Rs.

52,585.76/- year from the non-parboiled fine rice. The share of fine rice, broken rice, paddy husk, rice barn and other cattle feed were 59%, 8%, 23% , 4% and 6% respectively.

An average traditional rice mill owner (hullers) of the study area received Rs. 5349.56/ year from the non-parboiled fine rice. He also received Rs. 1209.71 thousand and Rs. 344.45 thousand per year respectively from selling of non-parboiled broken rice and paddy husk, rice barn and other cattle feed. The share of fine rice, broken rice and paddy husk, rice barn and other cattle feed were found to 47%, 18% and 35% respectively.

The relative share of 40 millers and 40 hullers in processing of non-parboiled was found to be 85.89% and 14.11% in the total rice processing in the area under study.

An average modern mill owner utilized only 24.52% (4618.11 t) of the actual capacity (18834.00t) rice processing in the area under study. An average mill remained unutilized for 117 days in a year. The main reason of under utilization of these rice mills were found to be adverse climate condition (high moisture content in the atmosphere due to rainy season), sharp increase in number of rice mills, lack of storage facilities and lack of all weather roads as reported by 100%, 70%, 68% and 53% selected rice millers of the study area.

Irregular supply of electricity, irregular cut off and voltage fluctuation was the most important constraints in the proper processing of rice milling as reported by the cent percent respondents of the study area. Lack of good quality of all weather roads, high wages of skilled labour due to NAREGA, lack of skilled labour were the other major constraints in the processing of rice as reported by 68%, 78% and 53% of respondents respectively.

Reliable and regular supply of electricity (100%), preparation of long term policies for processing of the rice in the state (93%), reduction in the existing market fee and taxes (83%), simplicity in existing laws and Government policies (73%), credit available at cheaper rate (95%), relaxation in the limit of rate of interest of loan from Rs. 10000/- to Rs. 20000/- per year (93%) and increase the storage facilities of FCI godown (73%) were found to be the major suggestions received from the respondents m the area under study.

Hence, it is suggested that as it was found that the milling capacity in the state was not geographically properly distributed. Efforts are made to establish new and modern rice mills in remote areas for their development.

The poor quality of raw materials, due to higher moisture content, especially in the early arrival of paddy and harvesting of paddy through combine harvester, delay in announcing levy prices by the Central Government, demand for gratification while accepting rice by procurement agencies etc. Public agency on the owner hand faced difficulties in getting their paddy milled at proper time. These are the major problems faced by the rice mill owners.

As the nutritional qualities and health effects of rice bran oil are also established. Therefore, in recent years research interest has been growing in Rice Bran Oil processing to obtain good quality oil with low refining loss (Ghosh 2007).

As the capacity of rice mills and hullers are found to be underutilized, this creates need for the ability to hull at higher moisture contents at low noise levels.

There is a scope of improvement in various processes like parboiling, storage paddy drying, polishing and grading etc. The methods adopted by most of the units are traditional and unscientific/non professional. They give rise to the broken percentage and affect product quality and productivity.

About 60 per cent of modern and 48

per cent of traditional rice millers desired to reduce the existing rate of interest to 3 – 4 % which is with the international rates. Some of the non exporting units have desired to become exporters and but non exporting units demand for concession at par with exporter to effectively compete in the market. The relaxation in the limit interest of loan should be increased from Rs. 10,000/- to Rs.20,000/- per year.

In order to manage the industry in a professional manner to get optimum outputs there is an utter need to upgrade the competency of mill owners at various levels i.e. for technical, managerial and at top level as per the needs of changed environment.

The modern and traditional rice millers opined that uninterrupted power supply, avail duty free diesel for generators as per EXIM policy and concessional power supply will also help in boosting paddy processing industry in the state.

AGRICULTURAL PRICES IN INDIA

It is an old adage that Agricultural prices mirror the economy of a country. It is more true in the case of an agricultural country like India. Viewed from this angle, it is quite an important publication. It gives information on index numbers, farm (Harvest) prices, wholesale and retail prices of various agricultural commodities, etc.

COMMODITY REVIEWS

Foodgrains

During the month of September,2014 the Wholesale Price Index (Base 2004-05=100) of pulses increased by 0.84%, Cereals increased by 0.47% and foodgrains increased by 0.51% respectively over the previous month.

ALL INDIA INDEX NUMBER OF WHOLESALE PRICES

Base: 2004-2005=100

Commodity	Weight	WPI for the Month of August 2014	WPI for the Month of July 2014	WPI A year ago	Percentage change during Amonth	Ayear
1	2	3	4	5	6	7
Rice	1.793	247.3	244.1	231.4	1.31	6.87
Wheat	1.116	209.7	210.1	212.9	-0.19	-1.50
Jowar	0.096	296.1	299.4	241.6	-1.10	22.56
Bajra	0.115	258.6	256.4	252.4	0.86	2.46
Maize	0.217	239.8	249.1	260.4	-3.73	-7.91
Barley	0.017	227.5	222.0	212.4	2.48	7.11
Ragi	0.019	332.7	330.7	348.9	0.60	-4.64
Cereals	3.373	236.6	235.5	228.7	0.47	3.45
Pulses	0.717	240.9	238.9	225.8	0.84	6.69
Foodgrains	4.09	237.3	236.1	228.2	0.51	3.99

Source: Office of the Economic Adviser, M/o Commerce and Industry

Behaviour of Wholesale Prices

The following Table indicates the State wise trend of Wholesale Prices of Cereals during the month of September, 2014.

Commodity	Main Trend	Rising	Falling	Mixed	Steady
Rice	Rising	A.P.			Gujarat
		Assam			Haryana
		Jharkhand			
		U.P.			
Wheat	Falling		Gujarat		Karnataka
			Haryana		
Jowar	Mixed		Maharashtra	Karnataka	A.P.
				Rajasthan	
Bajra	Mixed & Steady	Rajasthan	Karnataka	Gujarat	A.P.
				Haryana	Maharashtra
Maize	Falling		Gujarat		Karnataka
			Haryana		
			Rajasthan		
			U.P.		

Procurement of Rice

0.297 million tonnes of Rice(including paddy converted into rice) was procured during September 2014 as against 0.046 million tonnes of rice(including paddy converted into rice) procured during September 2013 The total procurement of Rice in the current marketing season i.e 2013-2014, up to 30.09.2014 stood at 31.63 million tones, as against 33.87 million tonnes of rice procured, during the corresponding period of last year. The details are given in the following table :

PROCUREMENT OF RICE

(In Thousand Tonnes)

State	Marketing Season 2013-14		Corresponding period of last year		Marketing Year (October-September)			
	(upto 30.09.2014)		2012-13		2012-13		2011-12	
	Procure-ment	%age to Total	Procure-ment	%age to Total	Procure-ment	%age to Total	Procure-ment	%age to Total
1	2	3	4	5	6	7	8	9
Andhra Pradesh	3722	11.76	6455	19.05	6464	19.00	7548	21.53
Chhatisgarh	4290	13.56	4804	14.18	4804	14.12	4115	11.74
Haryana	2406	7.60	2609	7.70	2609	7.67	2007	5.72
Maharashtra	161	0.51	192	0.57	192	0.56	190	0.54
Punjab	8106	25.62	8558	25.26	8558	25.16	7731	22.05
Tamil Nadu	684	2.16	481	1.42	481	1.41	1596	4.55
Uttar Pradesh	1127	3.56	2286	6.75	2286	6.72	3357	9.58
Uttarakhand	463	1.46	497	1.47	497	1.46	378	1.08
Others	10678	33.75	7993	23.60	8129	23.89	8138	23.21
Total	31637	100.00	33875	100.00	34020	100.00	35060	100.00

Source: Department of Food & Public Distribution

Procurement of Wheat

The total procurement of wheat in the current marketing season i.e 2014-2015 up to June, 2014 is 27.99 million tones against a total of 25.04 million tones of wheat procured during last year. The details are given in the following table

PROCUREMENT OF WHEAT

(In Thousand Tonnes)

State	Marketing Season 2014-15		Corresponding period of last year		Marketing Year (April-March)			
	(Upto 30.06.2014)		2013-14		2013-14		2012-13	
	Procure-ment	%age to Total	Procure-ment	%age to Total	Procure-ment	%age to Total	Procure-ment	%age to Total
1	2	3	4	5	6	7	8	9
Haryana	6495	23.20	5873	23.45	5873	23.41	8665	22.71
Madhya Pradesh	7094	25.34	6325	25.26	6355	25.33	8493	22.26
Punjab	11641	41.58	10878	43.44	10897	43.43	12834	33.64
Rajasthan	2159	7.71	1268	5.06	1268	5.06	1964	5.15
Uttar Pradesh	599	2.14	683	2.73	683	2.72	5063	13.27
Others	6	0.02	13	0.05	16	0.06	1129	2.96
Total	27994	100.00	25040	100.00	25092	100.00	38148	100.00

Source: Department of Food & Public Distribution

Oilseeds and Edible Oils

The Wholesale Price Index (WPI) of nine major oilseeds as a group stood at 212.4 in September, 2014 showing a decrease of 2.5 percent over the previous month. However, it increased by 10.9 percent over the previous year. The Wholesale Price Index (WPI) of all individual oilseeds showed a mixed trend. The WPI of Safflower seed (15.8), Soyabean (12.6 percent), Gingelly seed (5 percent), Copra (3.1 percent), and Cotton Seed (0.1 percent) decreased over the previous month. However, the WPI of Groundnut seed (5.9 percent), Niger Seed (4.4 percent) and Rape & Mustard Seed (0.2 percent) increased over the previous month. The WPI of Sunflower Seed remained unchanged over the previous month.

The Wholesale Price Index (WPI) of Edible Oils as a group stood at 143.4 in September, 2014 showing a decrease of 1.4 percent and 0.9 percent over the previous month and over the previous year, respectively. The WPI of Sunflower Oil (3.9 percent), Soyabean Oil (2.7 percent), Gingelly Oil (2.1 percent), Cottonseed oil (0.9 percent) and Copra oil (0.1percent) decreased over the previous month. However, the WPI of Groundnut Oil (0.6 percent) and Mustard Oil (0.3 percent) increased over the previous month.

Fruits & Vegetable

The Wholesale Price Index (WPI) of Fruits & Vegetable as a group stood at 290.8 in September, 2014 showing showing a decrease of 4.5 percent over the previous month. However, it increased by 4.2 percent over the previous year.

Potato

The Wholesale Price Index (WPI) of Potato stood at 411.9 in September, 2014 showing an increase of 13.8 percent and 70 percent over the previous month and over the previous year, respectively.

Onion

The Wholesale Price Index (WPI) of Onion stood 354.7 in September, 2014 showing a fall of 11.3 percent and 52.7 percent over the previous month and over the previous year, respectively.

Condiments & Spices

The Wholesale Price Index (WPI) of Condiments & Spices (Group) stood at 304.8 in September, 2014 showing a decrease of 1.2 percent over the previous month. However, it increased by 30.9 percent over the previous year. The WPI of Turmeric and Chillies (Dry) increased by 1.9 percent and 1.2 percent over the previous month. However, The WPI of Black Pepper decreased by 4.2 percent over the previous year.

Raw Cotton

The Wholesale Price Index (WPI) of Raw Cotton stood at 215.0 in September, 2014 showing a fall of 2.7 percent and 13.3 percent over the previous month and over the previous year, respectively.

Raw Jute

The Wholesale Price Index (WPI) of Raw Jute stood at 267.9 in September, 2014 showing an increase of 0.2 percent and 9.5 percent over the previous month and over the previous year, respectively. However, it is higher by 9.5 percent over the previous year.

Wholesale Price Index Of Commercial Crops For The Month Of September, 2014

(Base Year: 2004-05=100)

Commodity	Latest September, 14	Month August, 14	Year September, 13	Percentage Variation Over	
				A Month	A Year
OIL SEEDS	212.4	217.8	196.4	-2.5	10.9
Groundnut Seed	220.7	208.5	210.3	5.9	-0.9
Rape & Mustard Seed	191.4	191.1	189.0	0.2	1.1
Cotton Seed	183.3	183.5	183.9	-0.1	-0.2
Copra (Coconut)	206.9	213.5	108.9	-3.1	96.1
Gingelly Seed (Sesamum)	437.0	460.0	396.4	-5.0	16.0
Niger Seed	203.9	195.3	172.4	4.4	13.3
Safflower (Kardi Seed)	126.6	150.4	155.1	-15.8	-3.0
Sunflower	185.1	185.1	202.7	0.0	-8.7
Soyabean	202.4	231.6	211.9	-12.6	9.3
EDIBLE OILS	143.4	145.5	146.8	-1.4	-0.9
Groundnut Oil	162.8	161.8	179.3	0.6	-9.8
Cotton Seed Oil	176.5	178.1	178.2	-0.9	-0.1
Mustard & Rapeseed Oil	155.4	155.0	152.9	0.3	1.4
Soyabean Oil	150.4	154.6	159.3	-2.7	-3.0
Copra Oil	136.8	136.9	123.3	-0.1	11.0
Sunflower Oil	121.9	126.8	136.5	-3.9	-7.1
Gingelly Oil	176.1	179.8	171.4	-2.1	4.9
FRUITS & VEGETABLES	290.8	304.5	292.3	-4.5	4.2
Potato	411.9	362.0	212.9	13.8	70.0
Onion	354.7	399.9	845.6	-11.3	-52.7
CONDIMENTS & SPICES	304.8	308.6	235.8	-1.2	30.9
Black Pepper	737.7	770.2	535.4	-4.2	43.9
Chillies(Dry)	292.9	289.5	253.4	1.2	14.2
Turmeric	223.5	219.4	210.2	1.9	4.4
Raw Cotton	215.0	221.0	254.8	-2.7	-13.3
Raw Jute	267.9	267.3	244.7	0.2	9.5

STATISTICAL TABLES

WAGES

1 DAILY AGRICULTURAL WAGES IN SOME STATES (OPERATION-WISE)

State	District	Centre	Moth & Year	Daily Normal Working Hours	Field Labour		Other Agri. Labour Carpenter		Herdsman Black Smith Cobbler		Skilled Labour		
					M	W	M	W	M	W	M	M	M
Andhra Pradesh	Krishna	Ghantasala	March, 14	8	262.5	190	300	NA	150	NA	NA	NA	NA
	Guntur	Tadikonda	March, 14	8	265	200	250	NA	250	NA	NA	NA	NA
	Ranga Reddy	Arutala	March, 14	8	237.5	187.5	275	NA	NA	NA	NA	NA	NA
Karnataka	Bangalore	Harisandra	Sep,13	8	250	200	200	175	200	180	300	250	NA
	Tumkur	Gidlahali	Dec,13	8	175	165	180	170	180	170	200	180	NA
Maharashtra	Nagpur	Mauda	Feb,12	8	100	100	NA	NA	NA	NA	NA	NA	NA
	Ahmednagar	Akole	Feb,12	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jharkhand	Ranchi	Gaitalsood	April,12	8	100	100	NA	90	90	NA	58	58	NA

1.1 DAILY AGRICULTURAL WAGES IN SOME STATES (OPERATION-WISE)

State	District	Centre	Month & Year	Type of Labour	Normal Daily Working Hours	Ploughing	Sowing	Weeding	Harvesting	Other Agri Labour	Herdsman	Skilled Labours		
												Carpenter	Black Smith	Cobbler
Assam	Barpeta	Loharapara	March,12	M	8	180	180	180	180	180	NA	180	180	180
				W	8	NA	NA	160	160	160	NA	NA	NA	NA
Bihar	Muzaffarpur	Bhalui Rasul	June,12	M	8	130	120	80	130	150	120	200	180	250
				W	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Shekhpura	Kutaut	June,12	M	8	NA	NA	185	NA	185	NA	245	NA	NA
				W	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chhattisgarh	Dhamtari	Sihaba	March,14	M	8	NA	NA	150	80	80	80	250	100	80
				W	8	NA	NA	80	80	70	80	150	NA	NA
Gujarat	Rajkot	Rajkot	Jan,13	M	8	209	225	150	170	147	150	360	360	240
				W	8	NA	169	150	179	145	142	NA	NA	NA
	Dahod	Dahod	Jan,13	M	8	100	100	100	100	100	NA	200	144	150
				W	8	NA	100	100	100	100	NA	NA	NA	NA

1.1 Daily Agricultural Wages in Some States (Operation-Wise)-*Contd*

State	District	Centre	Month & Year	Type of Labour	Normal Daily Working Hours	Ploughing	Sowing	Weeding	Harvesting	Other Agri Labour	Herdsman	Skilled Labours		
												Carpenter	Black Smith	Cobbler
Haryana	Panipat	Ugarakheri	June,14	M	8	350	350	350	300	300	NA	NA	NA	NA
				W	8	NA	250	250	250	250	NA	NA	NA	NA
Himachal Pradesh	Mandi	Mandi	Dec,13	M	8	NA	162	162	162	162	NA	260	240	240
				W	8	NA	162	162	162	162	NA	NA	NA	NA
Kerala	Kozhikode	Koduvally	Jan,14	M	4-8	NA	NA	NA	NA	NA	NA	NA	NA	NA
				W	4-8	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Palakkad	Elappally	Jan,14	M	4-8	400	350	NA	450	433	NA	550	NA	NA
				W	4-8	NA	NA	300	450	250	NA	NA	NA	NA
Madhya	Hosangabad	Sangarkhera	June,14	M	8	150	130	150	150	125	100	350	350	NA
				W	8	NA	130	150	150	125	100	NA	NA	NA
	Satna	Kotar	June,14	M	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
				W	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Shyopurkala	Vijaypur	June,14	M	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
				W	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Odisha	Bhadrak	Chandbali	June,14	M	8	250	250	NA	250	262.5	250	300	250	250
				W	8	NA	NA	NA	200	212.5	200	NA	NA	NA
	Ganjam	Aska	June,14	M	8	250	200	NA	250	270	200	400	300	200
				W	8	NA	100	100	150	110	100	NA	NA	NA
Punjab	Ludhiyana	Pakhowal	June,2013	M	8	265	270	270	270	260	NA	325	NA	NA
				W	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rajasthan	Barmer	Vishala	Feb,14	M	8	310	310	NA	NA	NA	100	400	300	300
				W	8	310	310	NA	NA	NA	NA	NA	300	NA
	Jalore	Panwa	Feb,14	M	8	NA	NA	NA	NA	NA	200	350	300	NA
				W	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tamil Nadu*	Thanjavur	Pulvarnatham	May,14	M	8	NA	300	NA	300	301.62	NA	NA	NA	NA
				W	8	NA	120	126	122	133.33	NA	NA	NA	NA
	Tirunelveli	Malayakulam	May,14	M	8	NA	130	NA	300	404.47	NA	NA	NA	NA
				W	8	NA	150	138	150	300	NA	NA	NA	NA
Tripura	State Average		March,12	M	8	238	201	203	209	207	199	253	235	240
			W	8	NA	154	152	154	154	149	NA	NA	NA	NA
Uttar Pradesh*	Meerut	Ganeshpur	Apr,14	M	8	250	231	231	NA	234	NA	365	NA	NA
				W	8	NA	181	196	181	191	NA	NA	NA	NA
	Aurraiya	Aurraiya	Apr,14	M	8	NA	NA	NA	NA	150	NA	250	NA	NA
				W	8	NA	NA	NA	150	150	NA	NA	NA	NA
	Chandauli	Chandauli	Apr,14	M	8	NA	NA	200	200	200	NA	350	NA	NA
				W	8	NA	NA	200	200	200	NA	NA	NA	NA

M-Man W-Woman NA- Not Available
NR- Not Reported * States reported district average daily

2 WHOLESALE PRICES OF CERTAIN AGRICULTURAL COMMODITIES AND ANIMAL HUSBANDRY PRODUCTS AT SELECTED CENTRES IN INDIA

(Month end Prices in Rupees)

Commodity	Variety	Unit	State	Centre	Sep-14	Aug-14	Sep-13
Wheat	PBW 343	Quintal	Punjab	Amritsar	1500	1500	1450
Wheat	Dara	Quintal	Uttar Pradesh	Chandausi	-	-	1500
Wheat	Lokvan	Quintal	Madhya Pradesh	Bhopal	1650	1732	1525
Jowar	-	Quintal	Maharashtra	Mumbai	2350	2350	2400
Gram	No III	Quintal	Madhya Pradesh	Sehore	2435	2551	3200
Maize	Yellow	Quintal	Uttar Pradesh	Kanpur	1315	1260	1340
Gram Split	-	Quintal	Bihar	Patna	4445	4520	4650
Gram Split	-	Quintal	Maharashtra	Mumbai	3900	4000	5700
Arhar Split	-	Quintal	Bihar	Patna	6890	6800	6390
Arhar Split	-	Quintal	Maharashtra	Mumbai	6750	6600	6300
Arhar Split	-	Quintal	NCT of Delhi	Delhi	6035	6010	6150
Arhar Split	Sort II	Quintal	Tamil Nadu	Chennai	7400	7800	6420
Gur	-	Quintal	Maharashtra	Mumbai	4300	4100	3480
Gur	Sort II	Quintal	Tamil Nadu	Coimbatore	4300	4500	4000
Gur	Balti	Quintal	Uttar Pradesh	Hapur	2700	2950	3340
Mustard Seed	Black (S)	Quintal	Uttar Pradesh	Kanpur	3325	3150	3200
Mustard Seed	Black	Quintal	West Bengal	Raniganj	3600	3600	3700
Mustard Seed	-	Quintal	West Bengal	Kolkata	3900	3850	3900
Linseed	Bada Dana	Quintal	Uttar Pradesh	Kanpur	4150	4170	4100
Linseed	Small	Quintal	Uttar Pradesh	Varanasi	-	-	3685
Cotton Seed	Mixed	Quintal	Tamil Nadu	Virudhunagar	1800	1900	1850
Cotton Seed	MCU 5	Quintal	Tamil Nadu	Coimbatore	2375	2375	1550
Castor Seed	-	Quintal	Andhra Pradesh	Hyderabad	3725	3850	3050
Sesamum Seed	White	Quintal	Uttar Pradesh	Varanasi	13000	13020	6600
Copra	FAQ	Quintal	Kerala	Alleppey	10150	10750	5825
Groundnut	Pods	Quintal	Tamil Nadu	Coimbatore	5000	-	3800
Groundnut	-	Quintal	Maharashtra	Mumbai	5400	5200	7000
Mustard Oil	-	15 Kg.	Uttar Pradesh	Kanpur	1200	1170	1164
Mustard Oil	Ordinary	15 Kg.	West Bengal	Kolkata	1230	1230	1215
Groundnut Oil	-	15 Kg.	Maharashtra	Mumbai	1163	1155	1350
Groundnut Oil	Ordinary	15 Kg.	Tamil Nadu	Chennai	1298	1298	1350
Linseed Oil	-	15 Kg.	Uttar Pradesh	Kanpur	1414	1380	1208

2 Wholesale Prices of Certain Agricultural Commodities and Animal Husbandry Products at Selected Centres in India-*Contd.*

(Month end Prices in Rupees)

Commodity	Variety	Unit	State	Centre	Sep-14	Aug-14	Sep-13
Castor Oil	-	15 Kg.	Andhra Pradesh	Hyderabad	1238	1275	1073
Sesamum Oil	-	15 Kg.	NCT of Delhi	Delhi	1860	1860	1400
Sesamum Oil	Ordinary	15 Kg.	Tamil Nadu	Chennai	2475	2325	2460
Coconut Oil	-	15 Kg.	Kerala	Cochin	2265	2430	1260
Mustard Cake	-	Quintal	Uttar Pradesh	Kanpur	1775	1725	1650
Groundnut Cake	-	Quintal	Andhra Pradesh	Hyderabad	3500	3429	2929
Cotton/Kapas	NH 44	Quintal	Andhra Pradesh	Nandyal	4300	4600	4500
Cotton/Kapas	LRA	Quintal	Tamil Nadu	Virudhunagar	-	3800	-
Jute Raw	TD 5	Quintal	West Bengal	Kolkata	2775	2535	2620
Jute Raw	W 5	Quintal	West Bengal	Kolkata	2725	2485	2570
Oranges	-	100 No	NCT of Delhi	Delhi	-	-	-
Oranges	Big	100 No	Tamil Nadu	Chennai	630	650	640
Oranges	Nagpuri	100 No	West Bengal	Kolkata	-	-	-
Banana	-	100 No.	NCT of Delhi	Delhi	375	333	208
Banana	Medium	100 No.	Tamil Nadu	Kodaikkanal	478	477	415
Cashewnuts	Raw	Quintal	Maharashtra	Mumbai	58000	57000	55000
Almonds	-	Quintal	Maharashtra	Mumbai	65000	64000	53000
Walnuts	-	Quintal	Maharashtra	Mumbai	65000	67000	66250
Kishmish	-	Quintal	Maharashtra	Mumbai	19000	17000	13100
Peas Green	-	Quintal	Maharashtra	Mumbai	4700	4600	4300
Tomatoes	Ripe	Quintal	Uttar Pradesh	Kanpur	2200	3000	1950
Ladyfinger	-	Quintal	Tamil Nadu	Chennai	1500	2500	2300
Cauliflower	-	100 No.	Tamil Nadu	Chennai	1425	1400	1700
Potatoes	Red	Quintal	Bihar	Patna	1890	1730	980
Potatoes	Desi	Quintal	West Bengal	Kolkata	1700	1780	800
Potatoes	Sort I	Quintal	Tamil Nadu	Mettuppa-layam	3100	3193	-
Onions	Pole	Quintal	Maharashtra	Nashik	1200	1600	4250
Turmeric	Nadan	Quintal	Kerala	Cochin	10000	10000	10000
Turmeric	Salam	Quintal	Tamil Nadu	Chennai	9300	9600	9400
Chillies	-	Quintal	Bihar	Patna	9200	9200	8000
Black Pepper	Nadan	Quintal	Kerala	Kozhikode	55000	66000	38500
Ginger	Dry	Quintal	Kerala	Cochin	23500	29000	15500
Cardamom	Major	Quintal	NCT of Delhi	Delhi	135000	135000	113000
Cardamom	Small	Quintal	West Bengal	Kolkata	120000	120000	95000
Milk	Cow	100 Liters	NCT of Delhi	Delhi	-	-	-
Milk	Buffalo	100 Liters	West Bengal	Kolkata	3600	3600	3600

2 Wholesale Prices of Certain Agricultural Commodities and Animal Husbandry Products at Selected Centres in India-*Concld.*

(Month end Prices in Rupees)

Commodity	Variety	Unit	State	Centre	Sep-14	Aug-14	Sep-13
Ghee Deshi	Deshi No 1	Quintal	NCT of Delhi	Delhi	30015	30015	28681
Ghee Deshi	-	Quintal	Maharashtra	Mumbai	36000	35000	30500
Ghee Deshi	Desi	Quintal	Uttar Pradesh	Kanpur	33000	32860	30250
Fish	Rohu	Quintal	NCT of Delhi	Delhi	10500	9000	7000
Fish	Pom-phrets	Quintal	Tamil Nadu	Chennai	28000	33000	28000
Eggs	Madras	1000 No.	West Bengal	Kolkata	4200	4200	3800
Tea	-	Quintal	Bihar	Patna	21350	21300	20000
Tea	Atti Kun-na	Quintal	Tamil Nadu	Coimbatore	13000	13000	9000
Coffee	Plant-A	Quintal	Tamil Nadu	Coimbatore	30000	30000	26000
Coffee	Rubusta	Quintal	Tamil Nadu	Coimbatore	15500	15500	14000
Tobacco	Kampila	Quintal	Uttar Pradesh	Farukhabad	4750	4875	2825
Tobacco	Raisa	Quintal	Uttar Pradesh	Farukhabad	3600	3750	2700
Tobacco	Bidi To-bacco	Quintal	West Bengal	Kolkata	3900	3900	3700
Rubber	-	Quintal	Kerala	Kottayam	10400	11500	16200
Arecanut	Pheton	Quintal	Tamil Nadu	Chennai	29800	29700	29000

3 SOWING AND HARVESTING OPERATIONS NORMALLY IN PROGRESS DURING THE MONTH OF NOVEMBER, 2014

State	Sowing	Harvesting
(1)	(2)	(3)
Andhra Pradesh	Paddy, Jowar (In some areas), Bengal Gram, horsegram, condiment, spices and potato	Kharif paddy, ragi, other kharif cereals, ginger and groundnut
Assam	Rabi paddy, gram, mustard, winter vegetables and potato	Kharif paddy, jute, tea and winter potato
Bihar	Wheat, Barley, Gram, rapeseed & mustard & sweet potato	Kharif paddy and Potato
Gujarat	Paddy, wheat, gram, pulses and potato	Paddy, Kharif, jowar, groundnut, bajra and cotton
Himachal Pradesh	Wheat, barley and gram	Winter paddy, rabi kharif, sugarcane, ginger (dry), chillies (dry), tobacco, cotton, turmeric and sannhemp
Jammu & Kashmir	Wheat(in Kashmir), barley, linseed, rapeseed and mustard	Maize (in Jammu)
Karnataka	Bengal gram, potato and rabi paddy	Kharif paddy, jowar, bajra, ragi, groundnut and sweet potato
Kerala	Paddy, pulses & Sweet Potato	Kharif paddy, sugarcane, ginger and tapioca
Madhya Pradesh	Wheat, barley, gram, rabi pulses, potato, rapeseed, mustard and castorseed	Kharif paddy, jowar, bajra, ragi, kharif, pulses, potato, chillies, tobacco, cotton, sweet potato and turmeric
Maharashtra	Wheat, gram, barley, jowar and pulses	Kharif paddy, jowar, groundnut, bajra, cotton and sugarcane
Manipur		Winter paddy, tur, groundnut, sesamum, sweet potato and turmeric
Orissa	Wheat, sugarcane, tobacco, mustard, gram and linseed	Kharif paddy, groundnut, sugarcane, cotton and sannhemp
Punjab	Wheat, Barley, gram & linseed	Jowar, bajra, maize, cotton and sugarcane
Rajasthan	Wheat, Barley, gram, potato, tobacco, rapeseed, mustard and linseed	Paddy, jowar, bajra, sugarcane and cotton
Tamil Nadu	Rabi paddy, jowar, cotton, tobacco, horsegram, chillies, rapeseed and mustard	Kharif paddy, kharif jowar, cumbu ragi, maize, groundnut(unirrigated), cotton,varagu,samai,tapioca & ginger
Tripura	Pulses, potato, rapeseed and mustard	Winter rice
Uttar Pradesh	Wheat, barley, gram, linseed and cotton	Kharif paddy, jowar, bajra, sugarcane, groundnut, cotton, tobacco and sannhemp
West Bengal	Wheat paddy, wheat, barley, linseed, rapeseed, mustard and potato	Winter paddy, sugarcane, sesamum and cotton
Delhi	Wheat, barley, gram, pulses, tobacco, linseed, rapeseed and mustard	Jowar, kharif pulses, Sugarcane, sesamum and sweet potato

(K) - Kharif (R) - Rabi