

AGRICULTURAL SITUATION IN INDIA

AUGUST, 2014



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Officials of the Publication Division, Directorate of Economics and Statistics, Department of Agriculture and Co-operation, New Delhi associated in preparation of this publication.

D.K. Gaur — *Technical Asstt.*

S.K. Kaushal — *Technical Asstt. (P)*

UMA RANI — *Technical Asstt. (P)*

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NOTE TO CONTRIBUTORS

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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

(i) Trends in Foodgrain Prices:

During the month of June, 2014 the All India Index Number of Wholesale Price (2004-05=100) of Foodgrains increased by 0.48 percent from 230.7 in May, 2014 to 231.8 in June, 2014.

The Wholesale Price Index(WPI) Number of Cereals increased by 0.52 percent from 230.1 to 231.3 and WPI of Pulses increased by 0.17 percent from 233.4 to 233.8 during the same period.

The Wholesale Price Index Number of Wheat declined by 0.67 percent from 208.1 to 206.7 while that of Rice increased by 1.39 percent from 237.8 to 241.1 during the same period.

(ii) Weather, Rainfall and Reservoir Situation during July, 2014.

Cumulative Monsoon (June to September) Rainfall for the country as a whole during the period 01st June to 30th July, 2014 is 23% lower than LPA. Rainfall in the four broad geographical divisions of the country during the above period was lower than LPA by (-) 33% in North West India, (-) 16% in Central India, (-) 22% in South Peninsula and (-) 25% in East & North East India.

Out of a total of 36 meteorological subdivisions, 15 subdivision received excess/normal rainfall and 21 subdivisions received deficient/Scanty rainfall.

Central Water Commission monitors 85 major reservoirs in the country which have a total live capacity of 155.05 BCM at Full Reservoir Level (FRL). Current live storage in these reservoirs as on 31st July, 2014 was 70.93 BCM as against 94.79 BCM on 31.07.2013 (last year) and 62.87 BCM of normal storage (average storage of the last 10 years). Current year's storage is 75% of the last year's and 113% of the normal storage.

As per latest information available on sowing of crops, around 67% of the normal area under Kharif crops have been sown upto 01.08.2014. Area sown under all Kharif crops taken together has been reported to be 706.25 lakh hectares at All India level as compared to 820.47 lakh hectares in the corresponding period of 2013.

A statement indicating comparative position of area coverage under major Kharif crops during 2014-15 (Second Advance Estimates 2014-15) and the corresponding period of last year is given in the following Table:

ALL INDIA CROP SITUATION - KHARIF (2014-15) AS ON 01-08-2014

(in lakh hectares)

Crop Name	Normal Area for whole Kharif Season	Normal Area as on date	Area sown reported		Absolute Change over (+/-)		
			This Year 2014	% of Normal for whole season	Last Year 2013	Normal as on date	Last Year
1	2	3	4	5	6	7	8
Rice	391.06	240.56	221.56	56.7	237.89	-19.0	-16.3
Jowar	28.50	22.77	11.46	40.2	18.70	-11.3	-7.2
Bajra	86.69	62.12	45.53	52.5	59.37	-16.6	-13.8
Maize	71.67	67.61	57.85	80.7	74.81	-9.8	-17.0
Total Coarse Cereals	207.50	162.54	120.78	58.2	162.77	-41.8	-42.0
Total Cereals	598.56	403.10	342.34	57.2	400.66	-60.8	-58.3
Tur	38.22	30.02	25.39	66.4	32.81	-4.6	-7.4
Urad	23.12	18.36	16.34	70.7	19.45	-2.0	-3.1
Moong	24.26	18.67	14.52	59.8	19.35	-4.2	-4.8
Kulthi		0.13	0.06	#DIV/0!	0.01	-0.1	0.0

ALL INDIA CROP SITUATION - KHARIF (2014-15) AS ON 01-08-2014—*CONTD.*

(in lakh hectares)

Crop Name	Normal Area for whole Kharif Season	Normal Area as on date	Area sown reported		Absolute Change over (+/-)		
			This Year 2014	% of Normal for whole season	Last Year 2013	Normal as on date Last Year	
1	2	3	4	5	6	7	8
Others	22.11	14.97	10.90	49.3	11.23	-4.1	-0.3
Total Pulses	107.71	82.16	67.19	62.4	82.95	-15.0	-15.8
Total Foodgrains	706.27	485.26	409.53	58.0	483.61	-75.7	-74.1
Groundnut	46.25	34.93	28.37	61.3	36.85	-6.6	-8.5
Soyabean	99.59	98.57	95.39	95.8	117.43	-3.2	-22.0
Sunflower	4.16	1.93	1.17	28.2	1.80	-0.8	-0.6
Sesamum	18.88	9.95	10.25	54.3	10.12	0.3	0.1
Nigerseed	3.63	0.62	0.14	4.0	0.66	-0.5	-0.5
Castorseed	10.37	2.67	2.03	19.6	2.86	-0.6	-0.8
Total Oilseeds	182.89	148.66	137.36	75.10	169.71	-11.3	-32.4
Cotton	109.60	107.33	104.84	95.7	108.54	-2.5	-3.7
Sugarcane	47.02	48.36	46.42	98.7	50.32	-1.9	-3.9
Jute	8.89	8.41	8.11	91.2	8.29	-0.3	-0.2
All Crops	1054.67	798.03	706.25	67.0	820.47	-91.8	-114.2

Source: Crops & TMOP Divisions, DAC

ARTICLES

A Comparative Analysis of Economic Viability of Organic and Inorganic Farming with Special Reference to Nagapattinam District, Tamil Nadu

D. MURUGAN* S. VENKATESAN** B. CHITHIRAIRAJAN***

Abstract

This paper is concerned with a comparative analysis of economic viability of organic and inorganic farming in Nagapattinam district of Tamil Nadu. To examine the economic viability of organic farming, the cost and return structure of organic and inorganic farming has been taken into the study under different sizes of land holdings in the study region. Thus, the result of the study exhibits that the medium farmer category has been observed to reap a higher return as compared to other categories of farmers. Most specifically, while comparing the cost and return the cost is less and the return is high from organic farming as compared to inorganic farming. Therefore, it may be inferred from the results of the study that economic viability is high under organic farming as compared to inorganic farming.

Key words: Organic farming, Inorganic farming, farm size, economic viability.

I. Introduction and Background Information

With a view to increase agricultural production and to meet requirement of expanding population, the New Agricultural Technology was introduced in 1966 in the name of Green Revolution in Indian agriculture. It involved high yielding varieties, intensive cropping, changes in cropping sequences, increasing irrigated area, higher doses of fertilizer, pesticide and weedicide. In addition, it has a significant adverse impact on the organism on the soil and under the soil and led to deterioration of ecological environment of Indian traditional and natural way of doing agriculture. One may notice that as the modern agricultural inputs involve a higher cost, the farmers are pushed into indebtedness in Indian agricultural scenario. It is important to note that since most of the farmers in India are marginal and small farmers, the sustainability and viability of conventional agriculture have become highly challengeable for them. To overcome all the worsening conditions from economic, ecological and environmental perspectives, organic farming is emerging as an alternative agriculture practice in Indian agriculture. The term organic farming is not directly related to the type of inputs used, but refers to the concept of the farm as an organism and in which all the components *viz.*, the soil minerals, organic matter, micro organism, insects, plants and animals interact to create a congenial ambience to the sustainable agriculture. Under organic farming, one may perceive that it is concerned with

the whole farming system and it relates to the interaction with climate, environment, social and economic condition, rather than considering the farming as an enterprise. It specially represents the restructuring of whole farming system and the farm inputs used under this practice attract less cost as compared to the modern chemical inputs. However, under the organic farming practice irrespective of different categories of farmers, the farming becomes viable from the cost and return perspective. In this context, the present study makes an attempt to examine comparatively the economic viability of organic and inorganic farming in Nagapattinam district of Tamil Nadu.

II. Objectives

1. To examine and compare the economic viability of different categories of farmers under organic farming with inorganic farming.
2. To suggest suitable policies for the economic viability of organic farming in the study region.

III. Methodology

This study is based on primary data. The primary data relating to the total cost of production and gross return under organic and inorganic agricultural production, by the farm households have been collected by using a well-structured interview schedule from the study region.

As far as the survey design of the study is concerned, it is based on multi stage sampling method and it involves four different stages, so as to acquire accurate information by the field of enquiry in Tamil Nadu *viz.*, selection of Nagapattinam district, selection of Sirkazhi block in the selected district, selection of a few villages from the block selected and selection of organic and inorganic farm households from the selected villages. In selection of the district, the number of organic farmers has been considered as a prominent indicator. The same indicator has been used to select the block from the district. The crucial stage in the sampling process is the selection of farm households in the villages selected from the selected block. About 200 farm households have been selected and interviewed for the present study. Among them, 100 farm households are organic and the remaining 100 are inorganic farm households. An important observation, which is to be made here, is that the selection of organic farm households in Sirkazhi block is supported by the institution *viz.*, CIKS (Centre for Indian Knowledge System) which is supporting

*Assistant Professor, Department of Economics, Annamalai University, Annamalai Nagar-608002, Tamil Nadu. E-Mail Id: dmeco1971@gmail.com

**Assistant Professor, Department of Economic Annamalai University, Annamalai Nagar-608002, Tamil Nadu. E-Mail Id: venkateco1979@gmail.com

***Project Fellow and Ph.D Reserch Scholar, Department of Economics, Annamalai University, Annamalai Nagar-608002, Tamil Nadu. E-Mail: chithirairajan89@gmail.com

and disseminating the organic farming practice and they are experimental group in the study. More importantly, by recalling method what has been observed is that they have been practicing the organic farming method for more than five years. In addition, they are employing Nammazhvar approach in their organic farming method. In regard to the period of the study, it has covered one agricultural year starting from 1st July 2013 to 30th June 2014.

IV. Framework of Analysis

To examine and compare the economic viability of organic

farming with inorganic farming, the simple averages and one way ANOVA model have been employed.

V. Results and Discussions

In order to examine the economic viability of organic farming under different sizes of land holdings, the organic farming has been compared with inorganic farming in terms of total cost of production, gross return, net return and cost — benefit ratio. Besides, the results are discussed under this section.

TABLE 1. COST STRUCTURE OF AGRICULTURAL PRODUCTION: PER ACRE COST AND RETURN FROM ORGANIC FARMING

Sl. No.	Source	Marginal	Small	Medium	Large
1	2	3	4	5	6
1.	Total operating Cost A	12639.84	14484.00	13451.31	10326.00
2.	Cost on working capital	1345.18	1448.74	1345.18	1263.24
3.	Land Revenue	150.00	150.00	150.00	150.00
4.	Rent	4000.00	4000.00	4000.00	4000.00
5.	Depreciation cost on machinery	187.62	451.14	1549.63	2584.71
6.	Total cost of production (C)	28926.00	30533.66	34684.00	35412.23
7.	Gross Return	46436.72	50208.72	50616.71	40284.43
8.	Net Return over cost (A)	33796.9	29958.40	36132.74	36757.41
9.	Net Return over cost (C)	13903.08	11358.39	15932.72	14796.49
10.	Input output ratio (Cost-A)	2.44	2.45	3.47	3.11
11.	Input output ratio (Cost-C)	1.69	1.33	1.99	5.14
12.	Cost Benefit ratio (C)	0.31	0.21	0.88	0.31

Source: Computed.

TABLE 2. COST STRUCTURE OF AGRICULTURAL PRODUCTION: PER ACRE COST AND RETURN FROM ORGANIC FARMING

Sl. No.	Source	Marginal	Small	Medium	Large	F	P	CDV
1.	Total operating Cost A	12639.84	114484.00	13451.31	10326.00	29.6*	0.00	124.29
2.	Cost on working capital	1345.18	1448.74	1345.18	1263.24	5.93*	0.00	37.16
3.	Land Revenue	150.00	150.00	150.00	150.00	-	-	-
4.	Rent	4000.00	4000.00	4000.00	4000.00	-	-	-
5.	Depreciation cost on machinery	187.62	451.14	1549.63	2584.71	7.24*	0.00	18.63
6.	Total cost of production (C)	28926.00	30533.66	34684.00	35412.23	0.26	0.62	8171.26
7.	Gross Return	46436.72	50208.72	50616.71	40284.43	10.3*	0.00	1991.63
8.	Net Return over cost (A)	33796.9	29958.40	36132.74	36757.41	8.1*	0.00	2493.45
9.	Net Return over cost (C)	13903.08	11358.39	15932.72	14796.49	6.7*	0.00	4514.34
10.	Input output ratio (Cost-A)	2.44	2.45	3.47	3.11	0.6	1.32	2.11
11*.	Input output ratio (Cost-C)	1.69	1.33	1.99	5.14	4.1*	0.00	1.62
12.	Cost Benefit ratio cost (C)	0.31	0.21	0.88	0.21	3.8*	0.00	1.21

Source: Computed

Significance of 'F' at 5 per cent level

Tables 1 and 2 explain the information of input-output ratio among different sizes of land holding classes under organic farming in the study region. It is noticed from the results presented in table 1 that the input-output ratio per acre in terms of operational cost (cost A) is Rs. 3.47 for medium farms, Rs. 3.11 for large farms, 2.45 for small farms and least for Rs. 2.44 is the marginal farms under organic farming, over a rupee spent on agricultural production in the study region. Therefore, it may be stated that the medium farmers have acquired highest return as compared to other categories. It is important to note that the input-output ratio in-terms of operational cost (Cost A) according to different sizes of land holdings under organic farming is found to be insignificant through 'F' ratio. It implies the fact that the net return per acre generated by spending one rupee of investment of operational cost according to different sizes of holdings is more or less the same, though the gross income differed significantly among land holding classes. This is attributed to the operational cost incurred by the farmers and their significant level is confirmed through "F" tests.

However, the input-output ratio in terms of total production cost (cost C) differed significantly among the size holding classes. The input-output ratio in terms of total production cost is higher for large farms at Rs. 5.14 followed by medium farms at Rs. 1.99, marginal farmers at Rs. 1.69 and small farms at Rs. 1.33. It means that the benefit generated by acquiring one rupee of total production cost is the maximum for large farms and it is the least for small farms. The significant difference of this indicator (input-output ratio cost - C) among the size holding classes under organic farming is mainly due to small holdings. However, it is quite surprising to note that all the important indicators viz., input-output ratio (cost-A), input output ratio (cost C), cost-benefit-Ratio (cost C) are found to be statistically significant among the different sizes of land holdings under organic farming practice in the study region. Further, it could be attributed to the fact that since the organic farmers are practicing the organic method of cultivation by applying eco-friendly natural manure and organic inputs, the return is quite high as compared the inorganic farming.

TABLE 3-COST STRUCTURE OF AGRICULTURAL PRODUCTION: PER ACRE COST AND RETURN FROM INORGANIC FARMING

Sl. No.	Source	Marginal	Small	Medium	Large
1.	Total operating Cost A	10400.65	10390.84	9284.29	8802.00
2.	Cost on working capital	1040.21	1039.45	7451.31	8141.61
3.	Land Revenue	150.00	150.00	150.00	-
4.	Rent	3000.00	3000.00	3000.00	3000.00
5.	Depreciation cost on machinery	187.26	842.33	3421.34	749.42
6.	Total cost of production (C)	11549.83	18804.80	27049.20	20998.71
7.	Gross Return	22990.69	30235.09	43302.51	38424.61
8.	Net Return over cost (A)	12590.04	19844.25	34500.52	29140.32
9.	Net Return over cost (C)	11440.86	11430.29	17425.9	16253.30
10.	Input output ratio (Cost-A)	2.66	1.34	3.66	2.79
11.	Input output ratio (Cost-C)	1.34	2.33	3.11	2.52
12.	Cost Benefit ratio cost (C)	0.16	0.60	0.93	0.72

Source: Computed

TABLE 4-COST STRUCTURE OF AGRICULTURAL PRODUCTION: PER ACRE COST AND RETURN FROM INORGANIC FARMING

Sl. No.	Source	Marginal	Small	Medium	Large	F	P	CDV
1	2	3	4	5	6	7	8	9
1.	Total operating Cost A	10400.65	10390.84	9284.29	8802.00	18.33*	0.00	104.33
2.	Cost on working capital	1040.21	1039.45	7451.31	8141.61	10.03*	0.00	99.56

TABLE 4-COST STRUCTURE OF AGRICULTURAL PRODUCTION: PER ACRE COST AND RETURN FROM INORGANIC FARMING—*CONTD.*

Sl. No.	Source	Marginal	Small	Medium	Large	F	P	CDV
1	2	3	4	5	6	7	8	9
3.	Land Revenue	150.00	150.00	150.00	-	-	-	-
4.	Rent	3000.00	3000.00	3000.00	3000.00	-	-	-
5.	Depreciation cost on machinery	187.26	842.33	3421.34	749.42	8.42*	0.00	105.63
6.	Total cost of production (C)	11549.83	18804.80	27049.20	20998.71	0.49	0.19	5416.63
7.	Gross Return	22990.69	30235.09	43302.51	38424.61	3.63*	0.00	264.63
8.	Net Return over cost (A)	12590.04	19844.25	34500.52	29140.32	4.33*	0.00	188.33
9.	Net Return over cost (C)	11440.86	11430.29	17425.9	16253.30	5.63*	0.00	298.66
10.	Input output ratio (Cost-A)	2.66	1.34	3.66	2.79	3.3*	0.00	1.63
11.	Input output ratio (Cost-C)	1.34	2.33	3.11	2.52	3.9*	0.00	1.36
12.	Cost Benefit ratio cost (C)	0.16	0.60	0.93	0.72	4.8-	0.00	1.18

Source: Computed

Significance of 'F' at 5 per cent level

Table 3 and 4 shows the information of input-output ratio among the different sizes of land holdings under inorganic farming. It may be brought out that the results from table 3 that the input-output ratio per acre in terms of operational cost (cost A) is Rs. 3.66 for medium farms, Rs. 2.79 for large farms, 2.66 for marginal farms and least for Rs. 1.34 is small farms under inorganic farming, over a rupee spent on agricultural production in the study region. Therefore, it may be stated that the medium farmers have acquired highest return as compared to other categories. It is seen that in the input-output ratio in terms of total cost, it is noted that medium farms gained the maximum to the tune of Rs. 0.93, followed by large farms at Rs. 0.72, marginal farms at Rs. 0.60 and the least in the case of small farms at Rs. 0.16. It is astonishing to note that all the important indicators viz., input-out ratio (cost-A) input-output ratio (cost-C) and cost benefit ratio (cost C) are not found to be statically significant among the different sizes of land holdings under inorganic farming and the gross return is also not statistically significant among the different sizes of land holdings under inorganic farming in the study region. It is quite obvious to note that since inorganic farming practice largely depends on synthetic chemical fertilizer, pesticide, a large among of mechanization, the practice of inorganic farming is not encouraging as compared to organic farmers in the study region.

VI. Conclusion

A comparative analysis of economic viability of organic farming among the different sizes of land holdings brings out the following conclusion.

- i. It may be inferred from the result of the study, the cost-benefit ratio, it is higher for medium farms followed by marginal and large and small farms under organic farming practices. Further, in the case of inorganic farming, the medium farms have recorded higher amount of input output ratio as compared to rest of the farmers and moreover, the medium farms have also contributed the cost-benefit ratio as compared to other categories of farmers.
- ii. To conclude, when organic and inorganic farms are compared under different sizes of land holdings, organic farming is found to be economically viable in the current scenario. It is highly interesting to note that yield per acre in organic farming has been increasing and that will further increase in the ensuing years. By and large, the organic farming has been considered economically more viable as compared to inorganic farming under different sizes of land holdings in the study region.

VII. Policy Implications

- i. In order to bring economic viability among marginal and small farmers, they should be given more importance in terms of training to practice organic farming and preparation of organic inputs.
- ii. The Government should supply organic input at subsidized rate to the marginal and small

farmers who start practicing organic farming at the initial stage.

- iii. The growing demand for organic products in the global market should be made known to not only the organic farmers but also the inorganic farmers. This will have a significant impact on the viability of organic farming among the different sizes of land holding classes in the study region,
- iv. If organic farming practice is given proper importance, all the adverse consequences could be overcome in the years to come.

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NOTE TO CONTRIBUTORS

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A New Approach on the Estimation of Fair Value of Future Return from Present Income *Vis-A-Vis* Discounting Factor of Acquired Standing Trees

B.B. SHARMA^A AND M.M. GUPTA^B

"How valuable is my acquired standing tree"? is a question that is asked by every grower. Estimation of fair value of standing trees requires consideration of variations in heterogeneity in soil, sigmoidal tree growth, sigmoidal yield response, tree size, varieties, planting site, seasonal environment, biomass and timber produced, useful life estimates, market demand, supply, bank rates and inflation etc. It is generally accepted that the rate of bole growth, accumulation of biomass and yield decline as trees age.

It has been frequently stated that there can be no rule or formula for the determination of fair value for tree assessment purposes. Each case be considered on its own merit and the value arrived should be "just and right in each case". It is not a matter of formulas but there must be judgment with proper consideration of relevant facts.

A study on highlighting grossly inappropriate value of compensation paid by Haryana government on acquired standing trees was undertaken for the first time in 2011 (Gupta at al. 2011). The government agency invariably deduct 75% amount from the assessed value, the reason being advanced is onetime payment on account of earned bank interest and zero maintenance expenditure.

This study is an attempt to analyze the desirability of using a discount factor of 1/4th by the tree valuation agency (Director of Horticulture, 2001, Haryana) on the

assessed value of an acquired tree *vis-a-vis* yield, yearly income and girth patterns in the bearing life of fruit trees, bank rates on fixed deposits and effect of inflation on accumulated amount. Although the study is conducted on acquired trees in the state of Haryana, yet the results are applicable wherever the practice of onetime discounted payment is followed.

Methodology

This paper is based on records of owners of the productive plantations of mango trees (*grafted, Mangifera indica*), during 2005-2012 in the course of preparation of valuation reports in acquired trees in legal cases. The fruit trees were of class 1 under scientific management with very good conditions of growth and fruit production and good size and appearance of fruits. Data were based on the averages of ten trees randomly selected in mango (*Mangifera indica*) in a yield class based on a age group as available from a location and averages from whole lots (14 classes X 10 trees) were estimated to study the yield pattern. The selection of trees was based on girth sizes which differed only within a range of 0.15 m (6.6%). The age of trees was estimated from the revenue records as far as possible and also from the records of the tree owners and fellow growers including the purchase receipts from nurseries.

TABLE 1—LOCATIONS OF MANGO TREE ORCHARDS OF THIS STUDY

State	Place	No. of sites	Ownership
Haryana	Shikhopur (Gurgaon), Bari Thali and Thana Kalan Sonapat, Oonchagaon, Chandanvali, Sihi, Ajrona, Jharsently, Shahpur	15	Jain Temple Trust and private
U.P.	Hastinapur (Merut)	2	Jain Temple Trust and private
Delhi	Mandi, Gadaipur (Mehrauli) Pansali (Alipur) villages, Shalimar Bagh (Pitampura)	7	Private

The yield response of a tree is given by

$$Y_t = Y_0 + (dy/dt) t$$

where Y_t = yield at time 't' Y_0 = yield at time 'zero' *i.e.* when fruiting begins and dy/dt is the rate of increase of yield with time.

^A Former Professor (Horticulture) and Head, Division of Fruits and Horticultural Technology, Indian Agriculture Research Institute, New Delhi-110012 Email:sonarekha2011@gmail.com

^B Former Associate Professor (Physics), Ramjas College, University of Delhi, Delhi-110007 E-mail: sbcs2005@yahoo.in

TABLE 2—EVALUATION OF A MANGO FRUIT TREE (DIRECTOR OF HORTICULTURE, 2001)

Basic value		Age at which the tree comes into bearing (year)	Average bearing life in (years)	Yearly income from Class-I tree (Rs.)	Yearly discounted value of Class-I tree (Rs.)
Non-recurring expenditure (Rs.)	Recurring expenditure per year (Rs.)				
50	260	5 th	50	2000	500

The formula used by Director of Horticulture, 2001 is:

Net Present value=

Basic value + (Remaining years × Annual Income × 1/4) + Fuel or timber value.

In order to estimate the time value of money from the effect of bank interest on fixed deposit and the effect of rate of inflation on accumulated gains from bank rates, the information supplied by Central Bank of India and

Economic Adviser, Government of India was utilized. The equation $FV = PV(1+r)^n$ gives the future value (FV) of an investment's present value (PV) accruing at a fixed interest rate (r) for n years.

TABLE 3: AVERAGE BANK AND INFLATION RATES FROM 2003 TO 2012

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bank rates %	5	5.50	6.25	7	8.25	8.75	8.31	8.22	9.50	9.00
Inflation rates %	5.46	6.48	4.47	6.59	4.74	8.05	3.81	9.56	7.75	7.81

Results and Discussion:

In an acquired mango tree of class 1, the value of Rs. 2000 is discounted by 1/4th Table 4 shows the growth of principal discounted amount of Rs 500 in a given year in future based earnings from bank rates and effect of inflation on earnings (from bank rates). The value of Rs. 500 was reduced to Rs 497.7 (2003), 495.1 (2004) and 493.3 (2010). Meager gains ranging from Rs. 3.5 to Rs. 22.5 were noticed in 2005 to 2009. From 2003 to 2012, the principal amount of

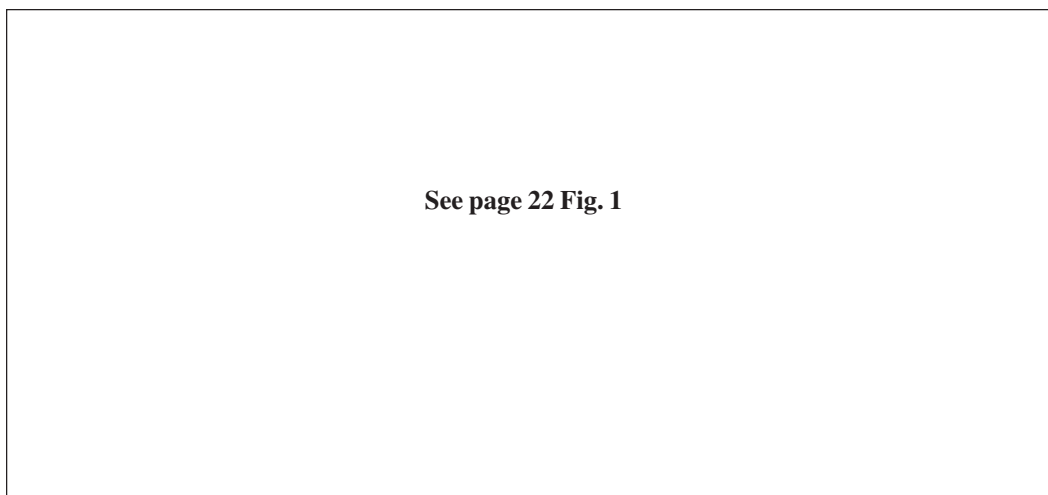
Rs. 500 could gain an increased value by Rs. 69.15 only. It is thus clear that onetime payment suffers from dynamic inconsistency as a result of fluctuations in rates of inflation and bank rates. It shows misprediction of future value of present discounted amount by assuming that growth of current value of money will remain at present levels highlighting arbitrariness in the payment of compensation to the farmer. The returns are too volatile.

TABLE 4: FUTURE VALUE OF CURRENT INVESTMENT (Discounted Value is Rs. 500)

Future value of current investment Rs. 500 in	Annual interest rate%	Annual inflation Rate%	Effect of inflation on value of initial investment Rs.	Total interest earned	Interest earned after inflation effect	Total future value of investment Rs.
2003	5.00	5.46	27.30	25.00	-2.30	497.70
2004	5.50	6.48	32.40	27.5	-4.90	495.10
2005	6.25	4.47	22.35	31.25	8.90	508.90
2006	7.00	6.59	32.95	35.00	2.05	502.05
2007	8.25	4.74	23.70	41.25	17.55	517.55
2008	8.75	8.05	40.25	43.75	3.50	503.50
2009	8.31	3.81	19.05	41.55	22.50	522.50
2010	8.22	9.56	47.80	41.10	-6.70	493.30
2011	9.50	7.75	38.75	47.50	8.75	508.75
2012	9.00	7.81	39.05	45.00	5.95	505.95

Yield estimates on tree basis are essential not only from marketing point of view but also for precise planning for the producers as well as for tree acquiring agencies. When fruit yield is plotted against time, a simple sigmoid or "S"-shaped curve was obtained (Fig.1). The analysis of this curve shows three distinct regions, indicating a lag phase, a log phase and a slow down phase which results as limiting factors are encountered until a level is

approached asymptotically. The middle region of the curve shows the grand period or exponential period of increase in yield up to 55 years after which yield starts declining. The trees exhibit maximum rate of increase in yield from 5th years to 35 years (6 kg/tree to 98 kg/tree). Similar simple sigmoid curves in fruit tree yields have been also reported in previous studies (Abutia, 1987-1990).



See page 22 Fig. 1

In an analysis of estimating yearly income on acquired mango fruit trees as seen from sigmoid yield curve of this investigation, an anomalous situation is clearly seen in the methodology followed by Director of Horticulture, 2001. The trees yielding 6 kg to 101 kg are provided similar discounted values on yearly income *i.e.* Rs. 500. When the yearly income is related with the age and yield of trees, the situation becomes further clear. As the tree advances in age, it is valued

lower (Table 5). At the age of year 5, the value of a kilogram of fruits is Rs. 83.3 but when the tree reaches the age of 49, the rate per kilogram of fruits is reduced to Rs. 4.9. This is an inconsistency in the assessment of compensation in acquired trees as the compensation is determined based not on reason, or principle. This is a question of equity and is also a social issue which leads to social turmoil as has been witnessed in recent times.

TABLE 5: RELATIONSHIP BETWEEN AGE, YIELD AND YEARLY INCOME AND RATES FROM DISCOUNTED VALUE IN GRAFTED MANGO TREES

Serial no	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Age (years)	1	5	9	14	20	25	29	35	39	45	49	55	58	65
Yield (kg)	0	6	30	63	74	80	90	98	102	105	101	110	98	95
Yearly Income (Rs.)	0	500	500	500	500	500	500	500	500	500	500	500	500	500
Rate per kg derived from discounted value (Rs.)	0	83.3	16.6	7.9	6.8	6.2	5.6	5.1	4.9	4.8	4.9	4.5	5.1	5.3

See Page 23 for Fig. 2

It appears that there is an area that lacks transparency due to the absence of any explicit logic in the method adopted by Director of Horticulture, Haryana, 2001. Further, the income from fruits from standing trees has been kept constant irrespective of year of acquisition with no provision of escalation due to rise in market price of fruits as the same is calculated from the year of publication of official document i.e. 2001.

Conclusions

Determination of fair value of acquired standing trees is the most pertinent question before the growers. it affects their income security. This paper presents a new logical approach in the determination of the fair value of fruits from standing trees as related with Haryana state. A discounting factor of 1/4th on assessed value of an acquired tree is used citing the argument of onetime payment. Our analysis shows this approach is not aligned to estimation of fair value of fruits from the standing mango trees. The value of Rs. 500 was reduced to Rs. 493.3 to Rs. 497.7 in 2003, 2004 and 2010 as a result of effect of inflation on gains from bank rates on the principal amount of discounted value of Rs. 500 in acquired mango trees. Further, yearly income from fruits from standing trees has been kept constant with no consideration of increase in wholesale price index, sigmoidal yield curve and age of a tree. The calculations are done from the year of publication of official document i.e. 2001.

One solution in providing fair value to standing trees for fruits may lie in eliminating association between both factors i.e. an increasing wholesale price index and the discounting of the future stream of income because both tend to move in opposite directions. But in certain situations their effects may be equalizing when the bank rates of interest on fixed deposits and the changes in the wholesale price index may not differ much. it is expected that the

determination of the fair value of fruits may be more realistic in the above situation. But ignoring both the factors i.e. discounting and bank rates becomes more important under wide and unpredictable fluctuations in bank deposit rates and in the wholesale price index. This implies that the farmer may be paid compensation equal to the aggregate value of the future stream of income from the produce at current market price without any discounting and without any provision for increase in the market price of fruits in future.

It is concluded that a possible solution to the problem may be to ignore both factors (discounting and inflation) and to consider the aggregate value of the future stream of income from the produce at current market prices over the remaining bearing life of a fruit trees as a fair value.

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AGRO-ECONOMIC RESEARCH

Impact of NREGA on Wage Rates, Food Security and Rural Urban Migration in Sikkim*

1.1: Background

Since Independence the country's strength is derived from the achievements of planning. The policies and programmes have been designed with the aim of alleviation of rural poverty which has been one of the primary objectives of planned development in India. But employment programmes were not perceived as major instrument of poverty alleviation until the beginning of the 1980s in most states of the country. They were expanded in the sixth plan period with the introduction of the National Rural Employment Programme (NREP) and the Rural Landless Employment Guarantee Programme (RLEGP). Subsequently, some other public employment programmes were adopted *viz.* Jawahar Rozgar Yojana (JRY), Employment Assurance Scheme (EAS), Sampoorna Grameen Rozgar Yojana (SGRY), National Food for Work Programme (NFFWP). The programmes were targeted at the poor and were generally identified with poverty alleviation programmes. Such programmes were treated as schemes which did not involve any legal entitlements. But contrast, for the first time, the National Rural Employment Guarantee Act, 2005 provides employment opportunities of rural labourers as a matter of right. The NREGA goes beyond poverty alleviation and recognizes employment as a legal right. It is a step towards legal enforcement of the right to work, as an aspect of the fundamental right to live with dignity.

National Rural Employment Guarantee Act (NREGA) was passed in the year 2005. The ongoing programmes of Sampoorna Grameen Rozgar Yojana and National Food for Work Programme were subsumed within this programme in the 200 of the most backward districts of the country. The act was enacted to enhance livelihood security in rural areas by providing 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work.

In the state of Sikkim, NREGA became operational from February 2006. The scheme had been introduced in phases. Initially, in the first phase, the scheme was introduced in north Sikkim. In the second phase, from 1st April 2007 two more districts namely, East and South Sikkim districts were brought under its coverage. One more district *viz.* West Sikkim was added in the third phase from 1st April 2008. Thus the scheme is operational in all districts of the state of Sikkim *w.e.f.* 1st April, 2008.

There has been a dearth of studies designed to assess the performance of National Rural Employment

Scheme ever since the Act came into force in the country. While some studies have drawn attention to huge leakage in the implementation of the scheme, namely inflated or fake muster roll entries, embezzlement of funds, non-payment of minimum wages, delayed wage payments beyond the stipulated period of 15 days, non-payment of unemployment allowance, irregularities in conduct of social audit etc., others are not that critical, rather have been hopeful recognizing that the programme effectiveness will increase with experience. With the guarantee of demand-driven fund allocation, NREGA scheme opens up tremendous possibilities of creating a livelihood resource base of the rural poor. The scheme has high expectations in terms of employment generation, alleviation of poverty, food security, halting migration and overall rural development. As the scheme is in its initial stages, there is a need for the study to evaluate the performance of the scheme for its impact on rural poor. Based on this background, the present study is undertaking in the state of Sikkim with the following objectives:—

1.2: Main Objectives of the Study

- * To measure the extent of manpower employment generated under NREGA, their various socio-economic characteristics and gender variability in all the districts implementing NREGA since its inception in the state.
- * To compare wage differentials between NREGA activities and other wage employment activities.
- * To examine the effect of NREGA on the pattern of migration from rural to urban areas.
- * To find out the nature of assets created under NREGA and their durability.
- * To identify the factors determining the participation of people in NREGA scheme and to see whether NREGA has been successful in ensuring better food security to the beneficiaries.
- * To assess the implementation of NREGA, its functioning and to suggest suitable policy measures to further strengthen the programme.

1.3: Data Base and Methodology

The study is based on both primary and secondary data. Secondary data is obtained from the official website of NREGA (www.nrega.nic.in). Data used in the study relate to the years 2008-09, 2009-10 and 2010-11. Primary data is collected from four districts of the state of Sikkim namely North Sikkim, East Sikkim, South Sikkim and West Sikkim districts. From each district, primary survey is carried out on 40 participants in NREGA and 10 non-participants

*Agro-Economics Research Centre, Vishva Bharati, Shantiniketan.

working as wage employed and thus a total of 200 households spread over 4 districts in the state are surveyed in detail with the help of structured household questionnaire.

In addition to household questionnaire, a Village Schedule is canvassed in order to capture the general changes that have taken place in the village during the last decade and to take note of increase in labour charges for agricultural operations after the implementation of NREGA. The collected data is analysed through performing tabular analysis. Statistically, in order to find out the determinants of participation in NREGA, Logit-probit analysis has been done in addition to OLS analysis.

1.4: Major findings

Analysis Based on Secondary Data

Total Employment Generated—Their Socio-Economic Characteristics

Primarily the implementation of NREGA can be evaluated in terms of jobs demanded and provided. The official data in this connection show that during the financial year 2010-11, a cumulative total of 52,082 household demanded employment and among them 50,615 households (97.2 per cent), were provided wage employment under the scheme in the state. The performance shown in terms of jobs demanded and provided has varied from 94.7 per cent in phase 1 district to 98.9 per cent in phase 3 district in 2010-11. In fact in terms of jobs demanded and provided, phase 1 and phase 2 districts which have more experience, of running the programme have lagged behind the phase 3 districts in 2010-11 which do not show any variation in the year 2009-10 providing jobs to the extent of cent percent households in response to demand during the year.

In terms of person days of employment generated under the scheme, the secondary data reveals that the state of Sikkim generated a cumulative total of 29.96 lakh person days during the financial year 2010-11 under NREGA out of which 1.32 lakh person days (4.4 per cent) has been for scheduled caste, 11.80 lakh days (39.4 per cent) for schedule tribe and the rest 16.84 lakh days (56.2 per cent) for people belonging to other castes. The act mandates that at least one-third of the workers should be women. Notably, in the state of Sikkim, 13.45 lakh days of employment were generated for women during the financial year 2010-11 which imply that women obtained 44.9 per cent of the wage opportunities with their male counterpart getting the remaining 55.1 per cent.

Importantly, there is a consistent increase in total person days generated in all the districts of Sikkim in 2010-11 compared to the year 2009-10.

The state of Sikkim as a whole had generated 15.65 lakh person days in 2009-10 and made significant improvement

in the following year 2010-11 creating 29.97 lakh person days. In respect of person days of employment generated per household (by those households who demanded work), the state of Sikkim shows 58 person days of work had been generated during the financial year 2010-11 which was 44 days in 2009-10. Across the districts, in terms of average person days generated per household, North Sikkim district stood first (64 days) and East Sikkim district stood last (50 days) among the 4 districts in Sikkim during the year 2010-11. Phase 3 district called west Sikkim obtained employment to the tune of 60 days during the year. The year 2009-10 however, experienced relatively less employment generated under NREGA, whereas average person days generated for the state as a whole during the year was 44 days, the range of employment being varied from 30-58 days across the districts.

The primary objective of the scheme is to provide 100 days guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. The quota of 100 days per household per year can be shared between adult members of the household provided their combined days of employment do not exceed 100 days in the financial year. However, despite making provision of 100 days of employment in a financial year, there has been wide deviation in term of actual employment generation in all the districts of the state. Among the four districts, North Sikkim, phase 1 district, provided largest number of households (27.7 per cent of households who got employment) with full 100 days of employment in the year 2010-11 followed by South Sikkim district (18.6 per cent), West Sikkim district (16.2 per cent) and East Sikkim district (6.7 per cent). During the period between 2009-10 and 2010-11, households completing 100 days of work in the state was highest in 2010-11 when the figure was 7950 (15.7 per cent of households who got employment) as against the figure of 2753 (7.8 per cent of households who got employment) in 2009-10. That the actual employment generation is much below than 100 days in a year has been experienced by all the districts in the state.

Number of Projects Completed and Total Amount Spent

The work carried out under the scheme suggested that a total 252 works in different work categories have been accomplished during the financial year 2010-11 in the state. The corresponding figure was 101 for the year 2009-10. The works undertaken and completed during the financial year 2010-11 indicated that drought proofing accorded top priority which accounted for the maximum share (44.8 per cent) in total number works completed during the year. The next in importance was the emphasis on rural connectivity which constituted 17.9 per cent of total works accomplished during the year. Other works included land development (13.9 per cent), flood control (11.5 per cent) and micro irrigation 9.5 per cent). Across the districts, all the works

undertaken in north Sikkim, phase 1 district during the year 2010-11 are on-going projects. Among other districts drought proofing was given utmost priority (60.6 per cent) in phase 2 districts followed by rural connectivity (11.9 per cent) and micro irrigation (11.3 per cent). In phase 3 district called west Sikkim district, rural connectivity (28.3 per cent), land development (22.8 per cent), flood control (19.6 per cent) drought proofing (17.4 per cent) constituted the major share of works undertaken and completed during the year 2010-11.

In terms of amount spent, an amount of Rs. 734.97 lakhs was spent for completed works under NREGA during 2010-11 in the state against the figure of 91.21 lakhs in the previous year 2009-10. As recorded for the year 2010-11, rural connectivity accounted for the largest share (24.7 per cent) in total expenditure incurred for carrying out different activities in the state followed by micro irrigation (21.8 per cent), land development (19.1 per cent), flood control (18.6 per cent), and drought proofing (13.6 per cent). In the year 2009-10, similar type of works were undertaken and completed with different degrees of priority.

Performance of NREGA-some Quantitative Indicators:

Social Auditing

An innovating feature of the National Rural Employment Guarantee Act is that it gives a central role to 'social audits' as a means of continuous public vigilance. One simple form of social audit is a public assembly where all the details of a project are scrutinized.

In respect of conducting social audits, it is seen that social audits of NREGA have been conducted in all the gram panchayats in the state during the year 2010-11 and 2009-10. Notably, social audits have been done in all the districts uniformly.

In the matter of muster roll verification, out of the total 9601 muster rolls for the year 2010-11, a total of 9406 (97.97 per cent) muster rolls are verified in the state as a whole. The corresponding figures for verified muster roll for the year 2009-10 was 6909 (98.64 per cent). Across the districts, phase 2 and phase 3 districts have progressed much showing cent per cent muster roll verification in both the year *viz.* 2010-11 and 2009-10. In this respect, phase 1 district lagged behind other districts where verified muster rolls accounted for about 80 per cent in both the years under study.

For effective implementation of NREGA scheme the state, district and block level officers are supposed to monitor programme at every stage of implementation through field visit. Each district is supposed to draw a schedule of inspection to ensure that district level and sub-divisional/block level officers together inspect the works separately. In the state of Sikkim, it was found that about 47.01 per cent and 99.48 per cent of works in 2010-11 were inspected by district level and block level officers

respectively as against the figures of 33.53 per cent and 94.72 per cent respectively in 2009-10. Across the districts, there exists variation in respect of muster rolls verification. Here phase 3 district has gone much ahead than phase 1 and phase 2 districts and as between phase 1 and phase 2 districts the former district performed much better than the latter districts. The state of Sikkim is a good performer in respect of monitoring the execution of works by the block level officers where the proportion of works inspected accounted for about cent per cent having no variation across the districts.

Social audits and vigilance works must be institutionalized in the sense that they must be regularly carried out by Gram Sabhas through the participatory process. So far official data is concerned, Gram Sabha meeting held in ensuring transparency in planning and implementation of scheme is good in number in 2010-11 as well as in the previous year 2009-10. Across the districts there exists wide variation in this respect. During the year 2010-11 and 2009-10 phase 3 district took lead in holding gram sabha meeting.

One critical finding relates to conduct of VMC meetings (gram unnayan samiti or beneficiary committee meetings) in running the programme of NREGA. As per the provision of NREGA, VMC meeting needs to be conducted for the participation of all affected persons in the process of decision making and validation. Evidently however, in the state, the participatory process, the main route to insuring transparency has not been taken seriously by the implementing authority. During the year 2010-11, only a total of 23 VMC meetings were held as against the corresponding figure of 59 in 2009-10. In phase 2 and phase 3 districts, VMC (beneficiary committee) meetings were not held at all during the year 2010-11. Again in phase 2 districts such meeting were not held at all in 2009-10.

Bank Accounts

The NREGA introduced bank payments or post office payments as safeguards against corruption in wage payments to the labourers. Official data for the year 2010-11 shows that bank accounts constituted the major which accounted for 62.52 per cent of total accounts opened. Further a larger majority of the accounts are individual accounts either at banks (88.82 per cent) or at post office (86.39 per cent) and the rest are joint accounts (11.18 per cent for banks and 13.61 per cent for post offices).

In the year 2009-10, total accounts opened numbered 57769 as against the figure of 63337 for the year 2010-11. Thus the year 2010-11 recorded an improvement of 9.64 per cent compared to the previous year in terms of opening of accounts with the financial institutions. In both the years under review, bank accounts accounted for the major share in the total number of accounts opened. With regard to

type of accounts, a large majority of workers' accounts are individual bank or post office accounts.

Unemployment Allowance

Under the Act, there is a provision for paying unemployment allowance by the State Government in case the employment demanded is not provided during the stipulated period. The unemployment allowance is to be paid not later than fifteen days from the date on which it became due for payment. However, official data in this regard shows the reluctance of the State Government to disburse unemployment allowance. In the state of Sikkim, unemployment allowance was due for payment to the tune of 30230 days in 2010-11 but it was not paid at all.

Analysis Based on Primary Data

Sample Household Characteristics and their Income and Consumption Pattern

Among beneficiary households across castes, 5.00 per cent beneficiary households belong to scheduled castes, 53.75 per cent of the households belong to scheduled tribes, 40.62 per cent belong to other backward castes whereas the balance 0.63 per cent of the households goes to general castes. Caste composition of non-beneficiary households is not exactly similar to those of beneficiary households.

Beneficiary households holding BPL and APL card accounted for 93.75 per cent and 6.25 per cent respectively. Thus beneficiary households are either BPL or APL card holders.

The scheme of NREGA has the transformative potential for women in enhancing economic and social security and thus the scheme can alter the balance of power in the rural family. However, empowerment of women would be easier for the families where the decision maker in the family is the female member. In our sample households, in case of both beneficiaries and non-beneficiaries male members are the decision makers in majority of the families (86.25 per cent for beneficiary families and 92.50 per cent for non-beneficiary families).

Household Net Income

Across the beneficiary and non-beneficiary households, income per non-beneficiary households is higher by 9.50 per cent from Rs. 32425.90 for beneficiary households to Rs. 35508.30 for non-beneficiary households. For beneficiary households income from regular job/salary/pension pursuits accounted for the major (19.60 per cent) share in total household income. Importantly, net income from works under NREGA accounted for 25.00 per cent of the total household income and the remaining receipts are from agriculture including livestock (19.10 per cent), income from wages in non-agriculture (17.50 per cent), income from wages in agriculture (8.60 per cent) and income from self-

employed in non-farming (5.70 per cent) in order of importance. In case of non-beneficiary households, income per household obtained from regular job/salary/pension accounted to Rs. 9750.00 and constituted the major accounting for 27.50 per cent of total household income followed by income from self-employed non-farming (24.50 per cent), income from agricultural pursuits (20.80 per cent), wage income from non-agriculture (15.70 per cent), wage income from PWP (6.60 per cent) and income from wages in agriculture (4.80 per cent) in order. Notably, non-beneficiary households on account of their non-participation in NREGA works relied more on non-farm activities and derived considerably higher income (24.60 per cent) as compared to beneficiary households (5.7 per cent).

Household Consumption

The item-wise distribution of expenditure shows that consumption of confectionery of the household population is the largest component of expenditure on food items both for beneficiary and non-beneficiary households. Among cereals, rice intake is the major followed by wheat. This pattern does not vary across the beneficiary and non-beneficiary households in terms of the level of monthly consumption per capita. However, there are little difference when the comparison is made by specific non-cereal food items *viz.* liquid milk and sugar & gur. The monthly per capita expenditure on these food items is little higher for beneficiary households with no difference in the consumption of vegetables, poultry-meal and egg, and edible oils. In terms of cereals consumption per capita per month, NSS data (2004-05) gives relatively lower figure by about 11.81 per cent for beneficiary households and 10.40 per cent for non-beneficiary households. As a whole NSS estimates of food-grains consumption is lower than implied in our survey estimate.

The pattern of expenditure distribution by broad commodity groups as food and non-food appear somewhat different across the beneficiary and non-beneficiary households. Although, the pattern shows a larger share of expenditure on food items in case of both beneficiary and non-beneficiary households, the observed behavioral tendency of non-beneficiary households has been to expend more on non-food items as compared those of beneficiary households. In case of non-beneficiary households, more consumption on non-food consumer goods involves greater sacrifice in food consumption as compared to beneficiary households.

Evidently, NSS data on consumption expenditure (food and non-food) are not in agreement with our survey data in respect of total monthly per capita consumption expenditure of households. The NSS figure of per capita monthly consumption expenditure is estimated at Rs. 657.90 as against our estimate of Rs. 581.60 combining beneficiary and non-beneficiary households together, NSS estimate for cereal consumption is on the lower side by nearly 44.68

per cent than the figure derived from our estimate. Both the beneficiary and non-beneficiary household ranked ahead of NSS estimate in respect of per capita cereals consumptions of households.

Variability (CV) and Gini Ratios of Income and Consumption

Broadly, the average household consumption expenditure is lower than household income both for beneficiary and non-beneficiary households. There are however variations in income and consumption across the households as captured by the co-efficient of variation, the extent of variation being greater for non-beneficiary households in income and lower in consumption. Higher household income is associated with higher degree of variance as happened in the case of non-beneficiary households. In contrast, beneficiary households with comparatively lower level of consumption are accompanied by higher variance and low level of variation in income. As between household income and consumption, the extent of variation tended to be lower in consumption than in income both in the case of beneficiary and non-beneficiary households.

The Gini ratio as a measure of inequality does not vary much between income and consumption. In fact, there are no major instances of savings or dissavings (transfer of income through loans) that could cause the measures of inequality for consumption and income to diverge. The degree of inequality both in income and consumption is low but somewhat varied across the beneficiary and non-beneficiary households. The Gini ratio shows relatively greater inequality in the income earned in case of non-beneficiary households which is indicative of the fact that non-beneficiaries have derived income from occupations diversified in nature. In contrast, beneficiary household through their participations in NREGA activities derived more or less same income and thus produced lower degree of inequality in income within the group of beneficiaries.

Determinants of Participation in NREGA-Functional Analysis

The Logit Probit analysis conducted at both household and member levels suggest that a set of socio-economic characteristics of households such as caste, sex, educational attainment, number of members in the household (household size) and employment other than NREGA explain the households' participation status (whether participating in NREGA or not).

OLS estimates at the household level reveal that the variables which are positively and significantly related to the dependent variable are dummy for BPL card holding and caste dummies for SC, ST and OBC. The positive coefficient for BPL card holding implied that holding of BPL cards influenced employment under NREGA. Caste dummies have positive coefficient suggesting that SC, ST and OBCs have more participation days in NREGA relative to other castes.

The statistically significant variable, employment other than NREGA has negative influence on NREGA employment suggesting that households having employment other than NREGA are likely to have lesser NREGA working days relative to others. At the individual member level, the variables which were found to be statistically significant included age, household size, and sex dummy. Of them household size is found to statistically influence NREGA employment negatively suggesting that larger the household size, the lower is the NREGA participation days. The positive coefficient for age implied that aged persons participated more in NREGA employment. Sex dummy has positive coefficient suggesting that male members participated more in NREGA than females.

Work Profile under NREGA, Wage Structure and Migration Issues How Successful has been NREGA Providing 100 Days Employment (to the Registered Families at their Door Steps)

On an average, the size of working members employed per household numbered 2.8 on an average in the state. Across the districts the number of workers per household employed in the NREGA works varied from 2.0 to 3.6. Households employing 2 workers are observed in the North District and 3.6 workers in the South District. Across the caste categories, greater size of worker employed under NREGA is located in case of scheduled caste households followed by schedule tribe and OBC households respectively.

Evidently, despite making provision of 100 days of employment in a financial year, it is seen that there have been a deviation in terms of actual employment generation. In terms of person days employed under NREGA works, the average number of person days employed per household was of the order of 81.2 days in the state. Person days employed per household was highest for scheduled tribe households (46.4 days) followed by OBC (29.7 days), scheduled caste (4.7 days) and General (0.4 day). The number of person days employed per household for women was about 37 days which remained well below their male counterpart (44 days).

The district wise figures for person days of employment per household show considerable variations across the districts. Among the selected districts, North District in phase-I is showing the highest number of person days of employment (94.4 days per household) followed by West District in phase-III (85.3 days per household) and South and East Districts in phase-II (81.9 days and 63.1 days per household respectively).

Households completing 100 days of work was 26.9 per cent in the state. However, district wise the proportion of households varied from 7.5 per cent in South Sikkim district (Phase-II district) to 72.5 per cent in North Sikkim district, (Phase-I district).

The average distance of the work places from the residences of workers was found to be within 5 km. as provided under the Act. The average distance of work place from residence is on an average 1.1 km. The distance is relatively higher in South District (1.9 km.).

Nature of Assets Created and Their Durability

Eight types of works are permitted to be carried out under the NREGA. Evidently, the works undertaken in the state and also in the districts are consistent with the types of works listed in the NREGA. The works undertaken consisted of (i) rural connectivity (ii) Flood control and protection and drought proofing. Overall in the state, the works undertaken mainly related to rural connectivity (50.6 per cent) followed by flood control and protection (42.9 per cent) and drought proofing (6.4 per cent). However, there existed variation across the districts in respect of works undertaken under NREGA. Notably in all the districts of the state *viz.* East, North, South, and West equal importance was attached to rural connectivity, where almost half of the sample households were found to be employed in the activity.

As far as quality of assets is concerned, the majority of households in all districts ranked 'very good' about the assets created under NREGA.

With regard to unemployment allowance received by the households, evidently, there was no instance of receiving unemployment allowance in the state.

Wage Differentials under NREGA and its Comparison with Minimum Wage Act

According to NREGA Act, persons working under the scheme are entitled to receive the statutory minimum wage fixed by the state government applicable to agricultural workers in the state.

The primary data collected from the sample districts reveals that the wages received under NREGA scheme by beneficiaries, irrespective of castes and sex, in all the districts of the state were the same as stipulated minimum wage of Rs. 100.00. However, NREGA wages were higher than market wages for agricultural workers in the state and this has led to distort the wage labour market by exerting upward pressure on market wages.

Wage Differentials in Different Activities, among Beneficiaries and non-Beneficiaries

Evidently, non-agricultural casual labour wage rates compares unfavorably to agricultural wage rates both for males and females. The ratio of non-agricultural to agricultural wage rates of both the males and females worked out of 1.12. Across the category of households, the ratio stood at 1.11 for male beneficiary and 1.14 for male non-beneficiary counterpart. In case of females' non-agricultural-agriculture wage ratio also varied across beneficiary and non-beneficiary households, the ratio being

1.11 for beneficiary and 1.13 for non-beneficiary households.

The gender issue was figured prominently in respect of receiving wage rate both in agricultural and non-agricultural activities. For agriculture operation on an average, female wage rate formed 86.38 per cent of male wage rate and the same for non-agricultural activities worked out to 88.20 per cent. Across the beneficiary and non-beneficiary categories of households gender difference is quite sharp for beneficiary household both for agricultural and non-agricultural activities. Evidently, there is no instance of migration in Sikkim. Under the NREGA, females are paid the same wage rates as males which stood at Rs. 100.00. It is also noticeable that NREGA wage rates are higher than market wage rates for agricultural and non-agricultural casual labour. This is especially noticeable in the case of females who are paid markedly lower market wage rates as compared to males in agricultural activities working as casual labourer. As a whole, gender disparity is noticed in respect of female-male wage ratio for agricultural non-agricultural wages while under NREGA wage payments, gender disparity is totally removed.

How has NREGA Affected Labour Migration?

NREGA scheme provides local opportunities for employment and thus workers do not need to migrate to other areas. Manual works provided under NREGA are thus expected to bring down the level of out-migration. As noted earlier, there was no instance of in-migration or out-migration in the state of Sikkim both before and after implementation of NREGA.

The Functioning of NREGA—Qualitative Aspects

Job Card Issues and Work Applications

In response to the questions related to the issuance of job cards, cent per cent of the households reported that they had not paid any fees or bribes for getting job card. Majority of the households (70.6 per cent) reported no irregularity in the job card in entries of work done and in putting signature of the concerned authorities (55.0 per cent). Some of the households however informed that they are not sure about of the correctness of the entries made in the job card and whether the signature was put in. It is worth-mentioning that cent per cent of the sample beneficiary households kept their job cards with the holder themselves.

In response to the questions related to work application, cent per cent of the respondents reported that they got employed in response to application for work. Out of those who applied, only 78.1 per cent got a dated receipt for the application and 85.00 per cent got employment under NREGA within the stipulated time period of 15 days of application. Thus as per provision in the Act, unemployment allowance became due for payment to 15.00

per cent of households. Notably, all these (15.00 per cent of households) did not get any unemployment allowance.

Payment of Wages and Related Issues

In respect of payment of wages under NREGA, men and women are entitled to receive the same wages. In fact, any form of gender discrimination is prohibited under the NREGA. Based on the information received from the sample participant households, no gender bias is noted in the responses of all households (cent per cent). With regard to the mode of wage payment, cent per cent of the sample households reported that wages were paid on daily wage basis.

The Act provides that wages are to be paid on time; disbursement of wages to workers has to be done on weekly basis and not beyond fortnight from the date on which work was done. In our survey data, 73.10 per cent of the total sample beneficiary households received wage payment within the stipulated time—within a fortnight and the rest 26.9 per cent were paid wages within a month.

As an effective check against the embezzlement of NREGA wages and to prevent defrauding of workers, the government has shifted from cash of bank/post office payments of wages. In our survey data, the responses of households show that the NREGA wage payments have been made either through banks (25.00 per cent) or through post offices (75.00 per cent).

Worksite Facilities and Economic Usefulness of the Work

As per the NREGA, it is mandatory to provide the basic facilities at the worksite inclusive of safe drinking water, shade for children and for periods of rest, first-aid box with medicines for emergency treatment. In case of facilities at the worksite, 50 per cent of the households reported drinking water facility. Shade for periods of rest and first-aid kit/medicines were the facilities available as reported by 50 per cent beneficiaries. The availability of child care facility was reported by 50 per cent of sample households. In respect of economic usefulness of the works executed under NREGA, majority expressed satisfaction about usefulness of works, although some of the households (2.5 per cent) questioned about the usefulness of works.

Monitoring of the Work

In response to the questions relating to monitoring of NREGA works, the sample households unanimously (cent per cent) reported that the concerned officials made frequent visits at the worksite and monitored the execution of works. No one lodged complaint relating to implementation and functioning of NREGA.

Nature of Assets Created and Their Durability

With regard to the durability of assets created under NREGA, mixed responses were received. Some of the

households (34.4 per cent) reported that the quality of structures created was good and these would last up to 10 years. About 25.6 per cent of households perceived that the quality of created structures was so good that they could last more than 10 years. About 15 per cent of households were of the view that assets created under NREGA could last up to 5 years. About 25 per cent of the households reported that the structures created would last up to one year. Hence, these structures require timely repairs and maintenance to be capable of lasting more and generating expected benefits.

Labour Migration and NREGA

One of the objectives of NREGA is to arrest out-migration of rural labour households who go outside villages in search of employment. In order to know the impact of NREGA on rural labour migration, related data were collected from the sample beneficiary households. It was revealed from the responses that after implementation of NREGA, there was no instance of out-migration or in-migration.

Respondent's Awareness about NREGA Implementation

Awareness about NREGA among people in all its aspects is an important ingredient for success of NREGA. However the responses received from the sample households in the sample villages show that although, all the people were aware about the implementation of NREGA, many of them were not aware about the specific aspects of NREGA, specifically right based aspects such as right to apply for work and get employed within 15 days, minimum wages, wages, calculation method, unemployment allowance, minimum worksite facilities, mandatory availability of muster rolls at the worksite and the list of permissible works under NREGA.

NREGA and Food Security

NREGA through generating incremental income is expected to bring about changes in the food security situation at least making available the minimum quantity of food for the entire members of the family. Evidently, 70 per cent of households reported that they got full two meals throughout the year 2009 while the rest 30 per cent of households did not get full two meals throughout the same year. Out of the households who are not having full two meals, 4.17 per cent did not get sufficient food for one month, 95.83 per cent for two months. To cope with the worsening situation of food security, some of the households (33.3 per cent) suffering from food security took loans from different sources whereas many of the households (56.3 per cent) reduced food consumption taking meal only once a day and about 10.4 per cent of households resorted to begging. However, although some of the households reported worsening situation of food security even after the introduction of NREGA, the overall impact NREGA on food security is positive as it has

improved the food security for majority of households. In the context of ensuring food security, the potential benefit of NREGA might have been greater if households are provided with full one hundred days of employment during the financial year.

Suggestions for Improving the Functioning of NREGA

Suggestions were invited from the beneficiary households for improving functioning of NREGA. Nearly, 24.4 per cent of households suggested the need for increasing work site facilities under NREGA. About 25.6 per cent of households suggested for making arrangement for immediate wage payment at the end of the day's work. About 32.5 per cent of households emphasized the need for proper monitoring of the execution of works in the context of improving functioning of NREGA.

NREGA Impact on Village Economy

Changes in Occupational Structure in the Selected Villages

The occupational structure has undergone changes during the period between two counts, one in 2001 and another in 2009. An important aspect of occupational shift has been the decline in the proportion of households engaged in cultivation of land. It has got reduced from 51.3 per cent in 2001 to 48.5 per cent in 2009. There is a definite tendency among them to move on to non-agricultural occupations *viz.* households small industry, transport & communications and other services. The pattern of distribution did not undergo notable change in favour of agricultural labour. The proportion in this occupation increased from 36.1 in 2001 to 36.4 percent in 2009.

How has NREGA Affected Wage Rates in the Selected Villages

Due to the implementation of NREGA there has been sharp increase in the wage rates during the reference periods pertaining to the years 2005 and 2009. The present study finds that both male and female wages have gone up after the implementation of NREGA. The wage disparity between male and female persisted both in agricultural and non-agricultural works, even after the introduction of NREGA. The prevailing wage received by male agricultural workers prior to the introduction of NREGA was Rs. 55.00 which increased to 85.00 after the introduction of NREGA implying that wage rate increased by 54.55 per cent during the reference period. The rate of increase of wages for female agricultural workers was of the order of 60.00 per cent from Rs. 50.00 to Rs. 80.00 during the same period. In general non-agricultural wages was higher than agricultural wages both for males and females. Here again, there have been noticeable increase in wage rates both for males and females during the reference period.

How has NREGA Affected Changes in Wage Rates for Agricultural Operations?

Evidently, in the state, there was a rising trend in the wage rates uniformly for all the agricultural operations between 2001 and 2005, that is, during the pre-introduction period of NREGA. After the introduction of NREGA, there was a sharp increase in the wage rates again uniformly for all the agricultural operations of principal crops *viz.* paddy, wheat, maize, potato etc. Notably, the gap in the wages in the post NREGA period between 2005 and 2009 appeared to have widened as compared to the pre NREGA period between 2001 and 2005. The rate of increase in wages was uniform across the all agricultural operations and across crops. It was 25.69 per cent between 2001 and 2005 while it was 59.13 per cent between 2005 and 2009.

Various Changes in the Village Economy after Implementation of NREGA

Implementation of NREGA is expected to bring about various changes in the village economy.

As revealed from the qualitative information, a good majority of households (75.00 per cent) reported that there has been shortage of agricultural wage labour at some point of time during last year.

After implementation of NREGA, the same proportion of households (75.00 per cent) reported that there has been a shortage of agricultural labour. Responses show varying degrees of shortage of agricultural labour over the months. Notably after implementation of NREGA, shortage of agricultural labour is largely confined in the months of July, Aug. as reported by 62.50 per cent of households. Some of the households (12.50 per cent) reported labour shortage in the month of March.

Labour cost being the important component of cost of production, all households unanimously (cent per cent) reported that cost of production in agriculture increased because of scarcity of labour. Regarding the magnitude of increase in cost of production, majority of households (62.50 per cent) believed that cost of production increased at the rate of 20—50 per cent while 25.00 per cent households reported that cost of production recorded an increase of 20 per cent. The remaining 12.50 per cent replied that cost of production increased by 10 per cent. One of the important goals of NREGA is to reduce rural-urban migration. On the questions relating to migration, cent per cent of households believed that there has been no change in labour migration by NREGA activities.

All households unanimously reported that wages of casual labourers have increased after implementation of NREGA. The reasons cited are shortage of labour availability caused by NREGA (31.50 per cent), higher wage rate in NREGA activities compared to other activities in the village

(65.00 per cent), increased job opportunities due to the introduction of NREGA (35.50 per cent).

All households unanimously pointed out that after introduction of NREGA there has been no change in the trend of people living in village and going to work outside daily or to go to work outside daily for longer period.

NREGA is expected to bring about changes in the standard of living of village people. In this regard, all respondents feel that living standard in general improved after the introduction of NREGA. The responses show that due to incremental income obtained from NREGA activities, household consumption is increased. Households were able to spend more on food, clothing, housing and education and thus improvement in the living standard after the introduction of NREGA. After introduction of NREGA, household daily consumption is increased as reported by 50.20 per cent of households. About 28.60 per cent of households reported improvement in health treatment condition through increased medical expenses. Notably in the education front more children are going to school after NREGA implementation as reported by 56.30 per cent of the beneficiaries.

Village households were asked to offer suggestions for improvement of NREGA implementation in the interest of benefits accruable to both labourers as well as cultivators. Village households offered their suggestions mainly in three important aspects of NREGA for improvement of NREGA functioning. Firstly, as reported by 68.50 per cent of household, action plan of NREGA works should be worked out on the basis of opinion/perception of local people. Secondly, according to the opinion of 56.30 per cent households, NREGA works should be made available throughout the year and thirdly, 100 days work limit should be enhanced under NREGA as reported by 48.20 per cent of households. If the work is continuously available in the villages for longer periods, the labourers can afford the delay in wage payment depending on lump sum amount of wages which they receive after every few days. About 26.40 per cent of households reported that payment of wages should be at the close of the day's work. Among others, some of the village respondents (30.10 per cent) suggested hike in wage rates under NREGA as compared to the same in the plains, while some others (12.40 per cent) suggested wage payments entirely through banks.

1.5: Policy Implications

Although there has been a debate about the effectiveness of NREGA, the experience of Sikkim show a mixed picture. The scheme is successful in terms of coverage of weaker sections of society (94.37 per cent) and asset creation under the scheme. The major problem however relates to the employment generation in terms of person days employed per household. As evidenced by survey data, despite making provision of 100 days of employment in a financial year, average number of person

days employed per household was of the order of 81 days in the state. For women households it was 37 days, well below their male counterpart (44 days). Obviously, NREGA works should be made available throughout the year. This has been reported by 56.30 per cent of village households. The implementing agency should take up proper planning of work for both short-term and long-term benefits for the villagers. Further, 100 days limit of guaranteed wage employment under the Act should be increased. This has been suggested by 48.20 per cent of village households in the surveyed villages. Thus actual employment generation under the scheme as per the provisions of NREGA apart from the enhancement of 100 days limit of guaranteed wage employment needs particular attention for better functioning of the NREGA. **(attn: Ministry of Rural Development Government of Sikkim, Department of Rural Development, Government of India, New Delhi).**

The participatory process, the main route to ensuring transparency has not been taken seriously by the implementing authority in the state. As is evident, during the year 2010-11 only a total 23 VMC meetings were held as against the corresponding figure of 59 in 2009-10. Notably, in phase 2 and phase 3 districts VMC meetings were not held at all during the year 2010-11. Again in phase 2 districts, such meetings were not held at all in 2009-10. **(attn: Ministry of Rural Development, Government of Sikkim).**

The projects/works undertaken in the NREGA were consistent with the eight categories of works listed under NREGA. However, for the fulfilment of the quota of 100 days of employment per household per year, the state government should be empowered to expand the list of permissible works in the light of local conditions. New innovative works need to be found out to fulfil the quota of 100 days of employment per household per year as also to provide productive employment. **(attn: Ministry of Rural Development Government of Sikkim, Department of Rural Development, Government of India, New Delhi).**

Regarding the quality of assets created under NREGA, about 15 per cent of households were of the view that assets created under NREGA could last up to 5 years. About 25 per cent of the households reported that the structures created under NREGA would last only up to one year. Hence, these structures would require timely repairs and maintenance to be capable of lasting more and generating expected benefits. Thus quality and maintenance of assets need more attention in future so that investments made would not go futile. In fact, employment guarantee and durable assets creation have to be seen as two sides of the same coin. **(attn: Ministry of Rural Development, Government of Sikkim).**

In our survey data, irregularity in wage payments is noticed in some cases. About 26.9 per cent of sample beneficiary households were paid wages beyond fortnight and accordingly they are entitled to receive compensation as

per the provision of the act. However, no compensation is paid to labourers in the state in respect of delayed payment of wages beyond the stipulated period of 15 days. Obviously, in the long run, much more sustained effort will have to be put in to ensure continued compliance with norms laid down in the NREGA Act. **(attn: Ministry of Rural Development, Government of Sikkim).**

The reluctance of State Government to disburse unemployment allowances is noted in the study. Official level secondary data shows that unemployment allowances due for payment were for 30230 days in 2010-11 but it was not paid at all. Further the primary data shows that the unemployment allowance became due for payment to 15.00 per cent of households. Notably, no unemployment allowance is paid. In this context, it is suggestive that the Central Government should pay a part of the unemployment allowance after amendment of NREGA rules so that workers could draw unemployment allowance as per the provisions of the Act in the event of failure to provide unemployment allowance by the State Government **(attn: Ministry of Rural Development, Department of Rural Development, Government of India, New Delhi).**

The rural labour markets have been influenced by the introduction of NREGA and have had a decisive impact on agriculture. Nearly 62.50 per cent of households in the surveyed villages believed that cost of production in agriculture is increased in the range of 20—50 per cent due to scarcity of labour caused by the introduction of NREGA leading to rise in wages. In fact wage rise caused by NREGA could only be maintained if productivity rises too in agriculture. NREGA works must be such as to contribute to raising agricultural productivity. This has to be taken seriously by the administration which calls for innovative thinking and action. **(attn: Ministry of Rural Development, Department of Rural Development, Government of India, New Delhi).**

The NREGA holds the powerful prospect of bringing major changes in the social and economic well-being of women. As is evident from secondary data, women workers shared 44.90 per cent of total person days generated under NREGA. What is however frustrating is that the issue of child care is overlooked. Under the

NREGA, it is clearly stated that in the event where there are at least five children under the age of six years at the worksite, one of the female workers should be deputed to look after them and she should be paid the same wage as other NREGA workers receive. Yet in our survey data only 50 per cent of the sample households reported the availability of child care facility at the worksite. Disturbingly many of the respondents were unaware of this basic entitlement (53.10 per cent). Thus the provision of effective child care facilities at NREGA worksites is an important issue that calls for creative thinking and action **(attn: Ministry of Rural Development, Government of Sikkim).**

Conclusion

Overall, the Scheme of NREGA has the great potential in enhancing income and livelihood security of the rural poor. The present study, in an attempt to evaluate the impact of NREGA has identified the key areas of progress as well as the shortcomings of the programme. Notably, NREGA has not been able to provide the employment that one would have expected. Despite making provision of 100 days of employment in a year, actual employment generation has been below than 100 days in a year. In the matter of wage payment, in many cases, delay in wage payment is noticed. Procedural irregularities are also noticed at the stage of implementation of the scheme such as irregularities in conducting VMC meetings which needs to be conducted for the participation of affected persons in the process of decision making and validation. True that NREGA addressed many of the weaknesses of the earlier wage employment programmes through introducing several features in its design. However, as evidenced by the present study, NREGA is also not free from limitations despite having its positive impact on income generation, asset creation and above all improving standard of living. Obviously, if the remedial measures are taken to address the limitations, the effectiveness of NREGA would increase with experience and would go a long way in ensuring livelihood security to the rural poor in a sustainable manner and in altering the balance of power in rural society. The key lies in proper implementation ensuring participation of affected persons and planning of the scheme as per the guidelines laid down in the Act.

Foodgrains

During the month of July, 2014 the Wholesale Price Index (Base 2004-05=100) of pulses increased by 0.13%, Cereals increased by 1.17% and foodgrains increased by 0.99% respectively over the previous month.

ALL INDIA INDEX NUMBER WHOLESALE PRICES

(Base: 2004-2005=100)

Commodity	Weight %	WPI for the Month of July 2014	WPI for the Month of June 2014	WPI A year ago	Percentage change during	
					A month	A year
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Rice	1.793	241.8	241.1	226.3	0.29	6.85
Wheat	1.116	208.7	206.7	206.6	0.97	1.02
Jowar	0.096	295.5	280.9	245.7	5.20	20.27
Bajra	0.115	258.7	257.1	261.9	0.62	-1.22
Maize	0.217	253.7	235.0	254.9	7.96	-0.47
Barley	0.017	215.1	213.7	208.6	0.66	3.12
Ragi	0.019	325.4	330.5	348.8	-1.54	-6.49
Cereals	3.373	234.0	231.3	224.0	1.17	4.46
Pulses	0.717	234.1	233.8	226.6	0.13	3.31
Foodgrains	4.09	234.1	231.8	224.4	0.99	4.32

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

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

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

Procurement of Rice

0.727 million tones of Rice (including paddy converted into rice) was procured during July, 2014 as against 0.568 million tones of rice (including paddy converted into rice) procured during July, 2013. The total procurement of Rice

in the current marketing season *i.e.* 2013-2014, up to 31.07.2014 stood at 31.10 million tones, as against 33.60 million tones 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)			
	(up to 31.07.2014)		2012-13		2012-13		2011-12	
	Procure- ment	percentage to Total	Procure- ment	Percentage to Total	Procure- ment	Percentage to Total	Procure- ment	Percentage to Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andhra Pradesh	3647	11.73	6366	18.94	6464	19.00	7548	21.53
Chhattisgarh	4290	13.80	4804	14.30	4804	14.12	4115	11.74
Haryana	2406	7.74	2609	7.76	2609	7.67	2007	5.72
Maharashtra	161	0.52	190	0.57	192	0.56	190	0.54
Punjab	8106	26.07	8558	25.47	8558	25.16	7731	22.05
Tamil Nadu	618	1.99	479	1.43	481	1.41	1596	4.55
Uttar Pradesh	1127	3.62	2286	6.80	2286	6.72	3357	9.58
Uttarakhand	463	1.49	497	1.48	497	1.46	378	1.08
Others	10279	33.05	7815	23.26	8129	23.89	8138	23.21
Total	31097	100.00	33604	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	Percentage to Total	Procure- ment	Percentage to Total	Procure- ment	Percentage to Total	Procure- ment	Percentage 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 214.1 in July, 2014 showing an increase of 0.9 percent and 6.4 percent over the previous month and previous year respectively. The Wholesale Price Index (WPI) of all individual oilseeds showed a mixed trend. The WPI of Gingelly Seed (6.8 percent), Copra (3.8 percent), Niger Seed (2.9 percent), Rape & Mustard Seed (1.0 percent) and Cotton Seed (0.8 percent) increased over the previous month. However, the WPI of Soyabean (1.0 percent), Sunflower Seed (0.9 percent) and Groundnut Seed (0.8 percent) decreased over the previous month. The WPI of Safflower Seed remained unchanged over the previous month.

The Wholesale Price Index (WPI) of Edible Oils as a group stood at 145.4 in July, 2014 showing an increase of 0.2 percent and 0.3 percent over the previous month and previous year respectively. The WPI of Groundnut Oil (0.8 percent), Soyabean Oil (0.8 percent), Sunflower Oil (0.3 percent) and Mustard Oil (0.3 percent) increased over the previous month. However, the WPI of Gingelly Oil (0.9 percent), Cottonseed Oil (0.8 percent) and Copra Oil (0.2 percent) decreased over the previous month.

Fruits & Vegetable

The Wholesale Price Index (WPI) of Fruits & Vegetable as a group stood at 285.3 in July, 2014 showing an increase of 15.5 percent and 12.0 percent over the previous month and over the previous year.

Potato

The Wholesale Price Index (WPI) of Potato stood at 340.7 in July, 2014 showing an increase of 12.1 percent and 46.4 percent over the previous month and over the previous year.

Onion

The Wholesale Price Index (WPI) of Onion stood 409.1 in July, 2014 showing an increase of 35.1 percent over the previous month. However, it is lower by 8.1 percent over the previous year.

Condiments & Spices

The Wholesale Price Index (WPI) of Condiments & Spices (Group) stood at 296.9 in July, 2014 showing an increase of 6.3 percent and 28.3 percent over the previous month and over the previous year. The WPI of Black Pepper, Chillies (Dry) and Turmeric increased by 3.7 percent, 3.5 percent and 0.3 percent over the previous month.

Raw Cotton

The Wholesale Price Index (WPI) of Raw Cotton stood at 227.8 in July, 2014 showing a fall of 0.3 percent and 5.0 percent over the previous month and over the previous year, respectively.

Raw Jute

The Wholesale Price Index (WPI) of Raw Jute stood at 278.5 in July, 2014 showing a fall of 5.0 percent over the previous month. However, it is higher by 9.5 percent over the previous year.

Wholesale Price Index of Commercial Crops

(Base year : 2004-05 = 100)

Commodity	Latest	Month	Year	%Variation over	
	July, 14	June, 14	July, 13	Month	Year
<i>Oil Seeds</i>	214.1	212.2	201.3	0.9	6.4
Groundnut Seed	204.7	206.2	229.2	-0.8	-10.7
Rape & Mustard Seed	190.0	188.2	187.8	1.0	1.2
Cotton Seed	182.4	180.9	180.4	0.8	1.1
Copra (Coconut)	187.1	180.3	97.3	3.8	92.3
Gingelly Seed (Sesamum)	436.2	408.3	380.9	6.8	14.5
Niger Seed	186.4	181.1	169.7	2.9	9.8
Safflower (Kardi Seed)	150.4	150.4	163.5	0.0	-8.0
Sunflower	186.3	187.9	193.3	-0.9	-3.6
Soyabean	241.9	244.4	231.2	-1.0	4.6
<i>Edible Oils</i>	145.4	145.1	144.9	0.2	0.3
Groundnut Oil	161.9	160.6	177.5	0.8	-8.8
Cotton Seed Oil	177.8	179.3	172.2	-8.0	3.3
Mustard & Rapeseed Oil	154.7	154.2	152.6	0.3	1.4
Soyabean Oil	156.5	155.3	157.9	0.8	-0.9
Copra Oil	131.5	131.8	117.7	-0.2	11.7
Sunflower Oil	126.2	125.8	133.9	0.3	-5.8
Gingelly Oil	181.0	182.6	171.0	-0.9	5.8
<i>Fruits & Vegetables</i>	285.3	247.1	254.8	15.5	12.0
Potato	340.7	304.0	232.7	12.1	46.4
Oinon	409.1	302.8	445.3	35.1	-8.1
<i>Condiments & Spcies</i>	296.9	279.3	231.5	6.3	28.3
Black Pepper	755.4	728.6	521.1	3.7	45.0
Chillies (Dry)	287.0	277.4	247.3	3.5	16.1
Turmeric	216.4	215.8	218.9	0.3	-1.1
Raw Cotton	227.8	228.6	239.9	-0.3	-5.0
Raw Jute	278.5	293.3	254.3	-5.0	9.5

PART-II-STATISTICAL TABLES

Wages

1. DAILY AGRICULTURAL WAGES IN SOME STATES (CATEGORY-WISE)

State	District	Centre	Month & Year	Daily Normal Working Hours	Field Labour		Other Agri. Labour	Herdsman	Carpenter	Skilled Labour	
					M	W				Black Smith	Cobbler
Andhra Pradesh	Krishna	Ghantasala	Dec, 13	8	300	200	M 250	M 140	M 275	M 250	M 180
	Guntur	Tadikonda	Dec, 13	8	300	245	300	250	NA	NA	NA
	Rangareddy	Arutala	Dec, 13	8	220	170	250	NA	275	250	NA
Karnataka	Bangalore	Harisandra	Sep, 13	8	250	200	200	200	300	250	NA
	Tumkur	Gidlahali	Nov & Dec, 13	8	175	165	180	180	200	180	NA
Maharashtra	Nagpur	Mauda	Feb, 12	8	100	100	NA	NA	NA	NA	NA
	Ahmednagar	Akole	Feb, 12	8	NA	NA	NA	NA	NA	NA	NA
	Ranchi	Gaitalsood	April, 12	8	100	100	NA	90	58	58	NA

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

(In Rs.)

State	District	Centre	Month & Year	Type of Labour	Normal Daily Working Hours	Ploughing	Sowing	Weeding	Harvesting	Other Agri. Labour	Herdsman	Skilled Labours		
												Carpenter	Black	Cobbler
Assam	Barpeta	Loharapara	March, 12	M	8	180	180	180	180	180	180	180	180	180
Bihar	Muzaffarpur	Bhalui Rasul	April to June, 12	M	8	130	120	80	130	150	120	200	180	250
Chhattisgarh	Dhamtari	Sihaba	March, 14	M	8	NA	NA	185	NA	185	NA	245	NA	NA
Gujarat	Rajkot	Rajkot	Jan, 13	M	8	209	225	150	170	147	150	360	360	240
Haryana	Panipat	Ugarakheri	March, 14	M	8	300	300	300	300	300	NA	NA	NA	NA
Himachal Pradesh	Mandi	Mandi	Dec, 13	M	8	NA	162	162	162	162	162	260	240	240
Kerala	Kozhikode	Koduvally	Jan, 14	M	4-8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Madhya Pradesh	Palakkad	Elappally	Jan, 14	M	4-8	400	350	NA	450	433	NA	550	NA	NA
Odisha	Bhadrak	Chandbali	May, 14	M	8	250	130	150	150	125	100	300	300	200
Punjab	Ludhiana	Pakhawal	June, 08	M	8	NA	200	200	200	200	200	200	200	200
Rajasthan	Bharmer	Vishala	Feb, 14	M	8	310	310	NA	NA	NA	NA	400	300	300
Jalore	Panwa	Panwa	Feb, 14	M	8	NA	NA	NA	NA	NA	NA	350	300	300

Tamil Nadu*	Thanjavur	Pulvarnatham	Apr, 14	M	8	NA	300	NA	300	305.33	NA	NA	NA
				W	8	NA	120	126	124	133.33	NA	NA	NA
	Tirunelveli	Malayakulam	Apr, 14	M	8	NA	130	300	275	395	NA	NA	NA
				W	8	NA	125	133.33	NA	NA	NA	NA	NA
Tripura	State Average		Mar, 12	M	8	238	201	203	209	207	199	253	240
				W	8	NA	154	152	154	154	149	NA	NA
Uttar Pradesh*	Meerut	Ganeshpur	Apr, 14	M	8	250	231	231	NA	234	NA	365	NA
	Auraiya	Auraiya	Apr, 14	M	8	NA	181	196	181	191	NA	NA	NA
				W	8	NA	NA	NA	NA	150	NA	250	NA
	Chandauli	Chandauli	Apr, 14	M	8	NA	NA	NA	150	150	NA	NA	NA
				W	8	NA	NA	200	200	200	NA	350	NA
				W	8	NA	NA	200	200	200	NA	NA	NA

M-Man W-Woman NA-Not Available

NR-Not Reported

*States reported district average daily wages

Prices

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	Jul-14	Jun-14	Jul-13
Wheat	PBW 343	Quintal	Punjab	Amritsar	1500	1405	1450
Wheat	Dara	Quintal	Uttar Pradesh	Chandausi	1430	1410	1500
Wheat	Lokvan	Quintal	Madhya Pradesh	Bhopal	1750	1500	1511
Jowar	-	Quintal	Maharashtra	Mumbai	2400	2600	2650
Gram	No. III	Quintal	Madhya Pradesh	Sehore	2321	2470	3665
Maize	Yellow	Quintal	Uttar Pradesh	Kanpur	-	1160	1350
Gram Split	-	Quintal	Bihar	Patna	4560	4560	4825
Gram Split	-	Quintal	Maharashtra	Mumbai	3800	4200	5700
Arhar Split	-	Quintal	Bihar	Patna	6850	6850	6220
Arhar Split	-	Quintal	Maharashtra	Mumbai	6600	7100	6550
Arhar Split	-	Quintal	NCT of Delhi	Delhi	6000	6150	6200
Arhar Split	Sort II	Quintal	Tamil Nadu	Chennai	6900	6400	6345
Gur	-	Quintal	Maharashtra	Mumbai	3600	3400	3400
Gur	Sort II	Quintal	Tamil Nadu	Coimbatore	4600	4000	3400
Gur	Balti	Quintal	Uttar Pradesh	Hapur	NA	3170	3150
Mustard Seed	Black (S)	Quintal	Uttar Pradesh	Kanpur	3220	3225	3315
Mustard Seed	Black	Quintal	West Bengal	Raniganj	3400	3400	3500
Mustard Seed	-	Quintal	West Bengal	Kolkata	3800	3750	3750
Linseed	Bada Dana	Quintal	Uttar Pradesh	Kanpur	4110	4125	4325
Linseed	Small	Quintal	Uttar Pradesh	Varanasi	-	3810	3550
Cotton Seed	Mixed	Quintal	Tamil Nadu	Virudhunagar	1750	1750	1750
Cotton Seed	MCU 5	Quintal	Tamil Nadu	Coimbatore	1550	1550	1550
Castor Seed	-	Quintal	Andhra Pradesh	Hyderabad	3775	3800	3250
Sesamum Seed	White	Quintal	Uttar Pradesh	Varanasi	8020	6350	6470
Copra	FAQ	Quintal	Kerala	Alleppey	10250	9800	4875
Groundnut	Pods	Quintal	Tamil Nadu	Coimbatore	4800	4800	4000
Groundnut	-	Quintal	Maharashtra	Mumbai	5100	5700	7400
Mustard Oil	-	15 Kg.	Uttar Pradesh	Kanpur	1191	1224	1200
Mustard Oil	Ordinary	15 Kg.	West Bengal	Kolkata	1215	1185	1200
Groundnut Oil	-	15 Kg.	Maharashtra	Mumbai	1170	1125	1470
Groundnut Oil	Ordinary	15 Kg.	Tamil Nadu	Chennai	1200	1275	1365
Linseed Oil	-	15 Kg.	Uttar Pradesh	Kanpur	1395	1470	1275
Castor Oil	-	15 Kg.	Andhra Pradesh	Hyderabad	1253	1290	1088
Sesamum Oil	-	15 Kg.	NCT of Delhi	Delhi	1860	1855	1400
Sesamum Oil	Ordinary	15 Kg.	Tamil Nadu	Chennai	2175	2175	2400
Coconut Oil	-	15 Kg.	Kerala	Cochin	2295	2235	1050
Mustard Cake	-	Quintal	Uttar Pradesh	Kanpur	1740	1800	1725
Groundnut Cake	-	Quintal	Andhra Pradesh	Hyderabad	3029	3000	3214
Cotton/Kapas	NH44	Quintal	Andhra Pradesh	Nandyal	4500	4700	4500
Cotton/Kapas	LRA	Quintal	Tamil Nadu	Virudhunagar	3800	3800	NT

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	Jul-14	Jun-14	Jul-13
Jute Raw	TD 5	Quintal	West Bengal	Kolkata	2750	2985	2675
Jute Raw	W 5	Quintal	West Bengal	Kolkata	2700	2935	2605
Oranges	-	100 No.	NCT of Delhi	Delhi	NA	NA	NA
Oranges	Big	100 No.	Tamil Nadu	Chennai	650	650	640
Oranges	Nagpuri	100 No.	West Bengal	Kolkata	-	-	-
Banana	-	100 No.	NCT of Delhi	Delhi	417	375	167
Banana	Medium	100 No.	Tamil Nadu	Kodaikkanal	472	463	398
Cashewnuts	Raw	Quintal	Maharashtra	Mumbai	55000	55000	55000
Almonds	-	Quintal	Maharashtra	Mumbai	62000	62000	45000
Walnuts	-	Quintal	Maharashtra	Mumbai	65000	65000	54500
Kishmish	-	Quintal	Maharashtra	Mumbai	15000	15000	13000
Peas Green	-	Quintal	Maharashtra	Mumbai	4700	4600	4500
Tomatoes	Ripe	Quintal	Uttar Pradesh	Kanpur	2560	910	2715
Ladyfinger	-	Quintal	Tamil Nadu	Chennai	3000	2400	2635
Cauliflower	-	100 No.	Tamil Nadu	Chennai	1800	2050	1800
Potatoes	Red	Quintal	Bihar	Patna	1595	1580	990
Potatoes	Desi	Quintal	West Bengal	Kolkata	1480	1450	820
Potatoes	Sort I	Quintal	Tamil Nadu	Mettupalaya	3728	3457	2726
Onions	Pole	Quintal	Maharashtra	Nashik	2000	1400	2000
Turmeric	Nadan	Quintal	Kerala	Cochin	10000	9500	10000
Turmeric	Salam	Quintal	Tamil Nadu	Chennai	9800	9800	9770
Chillies	-	Quintal	Bihar	Patna	8800	8580	8100
Black Pepper	Nadan	Quintal	Kerala	Kozhikode	70500	70000	37000
Ginger	Dry	Quintal	Kerala	Cochin	30000	31000	15500
Cardamom	Major	Quintal	NCT of Delhi	Delhi	135000	135000	1125000
Cardamom	Small	Quintal	West Bengal	Kolkata	110000	115000	85000
Milk	Cow	100 Liters	NCT of Delhi	Delhi	NA	NA	NA
Milk	Buffalo	100 Liters	West Bengal	Kolkata	3600	3600	3400
Ghee Deshi	Deshi No. 1	Quintal	NCT of Delhi	Delhi	30682	30682	29015
Ghee Deshi	-	Quintal	Maharashtra	Mumbai	34000	35000	26000
Ghee Deshi	Desi	Quintal	Uttar Pradesh	Kanpur	32850	33200	29500
Fish	Rohu	Quintal	NCT of Delhi	Delhi	10000	9800	9500
Fish	Pomphrets	Quintal	Tamil Nadu	Chennai	35000	36500	32500
Eggs	Madras	1000 No.	West Bengal	Kolkata	4000	3500	3700
Tea	-	Quintal	Bihar	Patna	21300	21300	20000
Tea	Atti Kunna	Quintal	Tamil Nadu	Coimbatore	13000	13000	9000
Coffee	Plant-A	Quintal	Tamil Nadu	Coimbatore	26000	26000	26000
Coffee	Rubusta	Quintal	Tamil Nadu	Coimbatore	14000	14000	14000
Tobacco	Kampila	Quintal	Uttar Pradesh	Farukhabad	4800	4870	2750
Tobacco	Raisa	Quintal	Uttar Pradesh	Farukhabad	3800	3815	2700
Tobacco	Bidi Tobacco	Quintal	West Bengal	Kolkata	3900	3900	3600
Rubber	-	Quintal	Kerala	Kottayam	12700	13600	18000
Arecanut	Pheton	Quintal	Tamil Nadu	Chennai	29700	29700	28600

3. MONTH-END WHOLESALE PRICES OF SOME IMPORTANT AGRICULTURAL COMMODITIES IN INTERNATIONAL MARKETS DURING YEAR 2014

Commodity	Variety	Country	Centre	Unit	Jan	Feb	Mar	Apr	May	Jun	Jul
CARDAMOM	Guatemala Bold Green	U.K.	-	Dollar/M.T.	9000.00	9000.00	9000.00	9000.00	9000.00	9000.00	9000.00
				Rs./Qtl	56079.00	55818.00	54216.00	55008.00	53010.00	54072.00	54054.00
CASHEW KERNELS	Spot U.K. 320s	U.K.	-	Dollar/lbs	3.46	3.44	3.46	3.40	3.48	3.55	3.55
				Rs./Qtl	47516.61	47022.08	45938.06	45800.88	45175.83	47007.79	46992.15
	Spot U.K. 320s	U.K.	-	Dollar/M.T.	7648.65	7614.88	7623.07	7497.06	7673.14	7837.34	7802.62
				Rs./Qtl	47658.74	47227.49	45921.37	45822.03	45194.79	47086.74	46862.54
CASTOR OIL	Any Origin ex tank Rotterdam	Netherlands	-	Dollar/M.T.	1600.00	-	1700.00	1675.00	1650.00	1655.00	1675.00
				Rs./Qtl	9969.60	-	10240.80	10237.60	9718.50	9943.24	10060.05
CELERY SEED	ASTA cif	India	-	Dollar/M.T.	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	-
				Rs./Qtl	9346.50	9303.00	9036.00	9168.00	8835.00	9012.00	-
CHILLIES	Birds eye 2005 crop	Africa	-	Dollar/M.T.	4100.00	4100.00	4100.00	4100.00	4100.00	4100.00	4100.00
				Rs./Qtl	25547.10	25428.20	24698.40	25059.20	24149.00	24632.80	24624.60
CINNAMON BARK		Madagascar	-	Dollar/M.T.	1100.00	1100.00	1100.00	1276.00	1276.00	1276.00	1276.00
				Rs./Qtl	6854.10	6822.20	6626.40	7798.91	7515.64	7666.21	7663.66
CLOVES	Singapore	Madagascar	-	Dollar/M.T.	13250.00	13250.00	12600.00	12600.00	12600.00	12800.00	12800.00
				Rs./Qtl	82560.75	82176.50	75902.40	77011.20	74214.00	76902.40	76876.80
COCONUT OIL	Crude	Netherlands	-	Dollar/M.T.	1280.00	1420.00	1355.00	1375.00	1385.00	1360.00	1285.00
	Phillipine/Indonesia,			Rs./Qtl	7975.68	8806.84	8162.52	8404.00	8157.65	8170.88	7717.71
COPRA	Phillipines cif Rotterdam	Phillipine	-	Dollar/M.T.	806.50	895.50	851.00	867.00	873.00	854.00	806.50
				Rs./Qtl	5025.30	5533.89	5126.42	5299.10	5141.97	5130.83	4843.84
CORRIANDER		India	-	Dollar/M.T.	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00
				Rs./Qtl	9346.50	9303.00	9036.00	9168.00	8835.00	9012.00	9009.00
CUMMIN SEED		India	-	Dollar/M.T.	2250.00	2250.00	2250.00	2250.00	2250.00	2250.00	2250.00
				Rs./Qtl	14019.75	13954.50	13554.00	13752.00	13252.00	13518.00	13513.50
FENNEL SEED		India	-	Dollar/M.T.	2600.00	2600.00	2600.00	2600.00	2600.00	2600.00	2600.00
				Rs./Qtl	16200.60	16125.20	15662.40	15891.20	15314.00	15620.80	15615.60
GINGER	Split	Nigeria	-	Dollar/M.T.	1800.00	1800.00	2300.00	2300.00	2300.00	2300.00	2300.00
				Rs./Qtl	11215.80	11163.60	13855.20	14057.60	13547.00	13818.40	13813.80
GROUNDNUT KERNELS	US 2005, 40/50	European Ports	-	Dollar/M.T.	1250.00	1250.00	1220.00	1200.00	1180.00	1180.00	1180.00
				Rs./Qtl	7788.75	7752.50	7349.28	7334.40	6950.20	7089.44	7087.08
GROUNDNUT OIL	Crude Any Origin cif Rotterdam	U.K.	-	Dollar/M.T.	1500.00	1500.00	1500.00	1180.00	1180.00	1180.00	1180.00
				Rs./Qtl	9346.50	9303.00	9036.00	7212.16	6950.20	7089.44	7087.8
LENTILS	Turkish Red Split	U.K.	-	Pound/M.T.	606.12	599.09	602.12	594.90	597.93	588.72	-
	Crop 1 + 1 water			Rs./Qtl	6230.91	6201.78	6023.61	6112.00	5890.21	6022.02	-

3. MONTH-END WHOLESALE PRICES OF SOME IMPORTANT AGRICULTURAL COMMODITIES IN INTERNATIONAL MARKETS DURING YEAR 2014

Commodity	Variety	Country	Centre	Unit	Jan	Feb	Mar	Apr	May	Jun	Jul
MAIZE		U.S.A.	Chicago	C/56 lbs	427.50	455.50	484.50	503.50	472.50	441.00	362.50
OATS		CANADA	Winni-peg	Rs./Qtl	1046.85	1110.23	1147.02	1209.42	1093.73	1041.26	855.63
PALM KERNAL OIL	Crude	Netherlands	-	Rs./Qtl	2900.41	3530.30	2680.92	2728.09	2170.35	2177.30	355.63
PALM OIL	Malaysia/Indonesia, Crude	Netherlands	-	Dollar/M.T.	1170.00	1375.00	1350.00	1300.00	1245.00	1235.00	2135.91
PEPPER (Black)	Malaysia/Sumatra, Sarawak Black lable	Malaysia	-	Rs./Qtl	7290.27	8527.75	8132.40	7945.60	7333.05	7419.88	6726.72
RAPESEED	Canola	CANADA	Winni-peg	Dollar/M.T.	855.00	950.00	923.00	903.00	875.00	873.00	820.00
RAPESEED	Malaysia/Indonesia, U.K. delivered	Malaysia	-	Rs./Qtl	5327.51	5891.90	5560.15	5519.14	5153.75	5244.98	4924.92
RAPESEED OIL	rapeseed, delivered	CANADA	Winni-peg	Rs./Qtl	-	-	-	-	-	-	9600.00
SOYABEAN MEAL	Refined bleached and deodorised	U.K.	-	Can	423.80	415.50	458.20	445.80	466.50	483.30	57657.60
SOYABEAN OIL	U.K. produced 49% oil & protein	U.K.	-	Dollar/M.T.	2366.92	2316.83	2502.23	2472.41	2535.43	2715.66	438.00
SUNFLOWER SEED OIL	Refined bleached and deodorised	U.K.	-	Pound/M.T.	278.00	304.00	325.00	330.00	273.00	269.00	2448.42
TALLOW	High grade delivered	U.K.	London	Rs./Qtl	2857.84	3147.01	3251.30	3390.42	2689.32	2751.60	258.00
TURMERIC	Madras finger spot/cif	U.K.	-	Pound/M.T.	668.00	681.00	706.00	711.00	675.00	657.00	2632.89
WALNUTS	Indian light halves	India	-	Rs./Qtl	6867.04	7049.71	7062.82	7304.81	6649.43	6720.45	607.00
WHEAT	Indian light halves	U.K.	-	Pound/M.T.	366.00	410.00	412.00	384.00	371.00	343.00	6194.44
		U.S.A.	-	Rs./Qtl	3762.48	4244.32	4121.65	3945.22	3654.72	3508.55	3173.76
		U.S.A.	-	C/lbs	37.10	41.20	40.73	42.50	39.63	40.65	36.20
		U.K.	-	Rs./Qtl	5094.99	5631.71	5407.68	5725.11	5144.59	5382.72	4791.88
		U.K.	-	Pound/M.T.	652.00	695.00	683.00	686.00	645.00	646.00	614.60
		Netherlands	Chicago	Rs./Qtl	6702.56	7194.64	6832.73	7047.96	6353.90	6607.93	6365.87
		U.S.A.	-	Dollar/M.T.	563.90	492.20	504.70	517.30	523.00	512.30	463.60
		U.S.A.	-	Rs. Qtl	3513.66	3052.62	3040.31	3161.74	3080.47	3077.90	2784.38
		U.K.	-	C/60 lbs	1269.25	1407.25	1440.00	1468.50	1497.75	1415.75	1201.00
		U.K.	-	Rs./Qtl	2902.49	3203.09	3183.56	3294.00	3237.58	3121.64	2647.25
		U.K.	-	Pound/M.T.	710.00	732.00	696.00	720.00	693.00	680.00	683.00
		U.K.	London	Rs./Qtl	7298.80	7577.66	6962.78	7397.28	6826.74	6955.72	6970.02
		India	-	Pound/M.T.	465.00	445.00	445.00	445.00	420.00	405.00	400.00
		U.K.	-	Rs./Qtl	4780.20	4606.64	4451.78	4571.93	4137.42	4142.75	4082.00
		U.K.	-	Dollar/M.T.	850.00	850.00	850.00	850.00	850.00	850.00	850.00
		U.K.	-	Rs./Qtl	5296.35	5271.70	5120.40	5195.20	5006.50	5106.80	5105.10
		U.S.A.	Chicago	Pound/M.T.	8130.00	8130.00	8130.00	8130.00	8130.00	8130.00	-
		U.S.A.	-	Rs./Qtl	83576.40	84161.76	81332.52	83527.62	80088.63	83161.77	-
		U.S.A.	Chicago	C/60 lbs	551.50	600.00	696.75	676.50	638.75	575.50	530.75
		U.S.A.	-	Rs./Qtl	1261.16	1365.68	1540.38	1517.46	1380.74	1268.94	1169.88

Source: Public Ledger
 Exchange Rate
 US Dollar
 CAN Dollar
 UK Pound

Crop Production

4. SOWING AND HARVESTING OPERATIONS NORMALLY IN PROGRESS DURING THE MONTH OF SEPTEMBER, 2014

State	Sowing	Harvesting
(1)	(2)	(3)
Andhra Pradesh	Paddy, Jowar, Maize, Tobacco, Groundnut, Mesta and Linseed.	Paddy, Bajra, Ragi, Groundnut, Sesamum and Ginger.
Assam	Paddy, Gram, Pulses, Potato and Linseed.	Paddy and Mesta.
Bihar	Wheat, Barley, Gram, Rapeseed & Mustard, Linseed and Potato.	Paddy, Jowar, Bajra, Maize, Ragi and Sesamum.
Gujarat	Paddy, Gram, Pulses and Potato	Paddy, Jowar, Groundnut, Bajra and Cotton.
Himachal Pradesh	Wheat, Barley, Gram, Rapeseed & Mustard.	Paddy, Bajra, Maize, Pulses, Potato and Groundnut.
Jammu & Kashmir	Wheat, Barley, Rapeseed & Mustard and Onion.	Paddy, Bajra, Maize, Small Millets, Pulses, Potato and Chillies.
Karnataka	Jowar, Potato, Tobacco, Linseed, Sweet Potato and Onion.	Kharif Jowar, Ragi, Small Millets, Chillies and Groundnut.
Kerala	Paddy, Pulses and Sesamum.	Paddy, Sweet Potato and lemongrass
Madhya Pradesh	Wheat, Barley, Gram, Jowar, Rabi Pulses, Potato, Chillies, Rapeseed & Mustard and Onion.	Paddy, Ragi, Kharif Pulses, Potato, Ginger Chillies and Groundnut.
Maharashtra	Wheat, Gram, Jowar, Barley and Pulses.	Kharif Paddy, Jowar, Bajra, Maize, Groundnut and Sesamum.
Manipur	Wheat, Potato and Rapeseed & Mustard.	Sugarcane and late Paddy.
Orissa	Wheat, Jowar, Gram, Rapeseed & Mustard and Linseed.	Paddy, Kharif, Jowar and Sesamum.
Punjab	Wheat and Gram.	Paddy, Cotton, Pulses and Early Sugarcane.
Rajasthan	Wheat, Barley, Rapeseed & Mustard and Linseed.	Jowar, Bajra, Maize, Cotton and Sannhemp.
Tamil Nadu	Paddy, Jowar, Groundnut, Small Millets, Tobacco and Cotton.	Kharif Paddy, Jowar, Maize, Cotton, Tapioca, Mesta and Ginger.
Tripura	Pulses and Potato.	Til.
Uttar Pradesh	Wheat, Barley, Gram, Linseed and Rapeseed & Mustard.	Paddy, Jowar, Bajra, Sesamum and Groundnut.
West Bengal	Wheat, Barley, Rapeseed & Mustard, Tobacco, Chillies, Til, Potato and Pulses.	Paddy, Jute and Red Chillies.
Delhi	Wheat, Barley and Pulses.	Paddy, Jowar, Bajra, Maize and Sugarcane.
(K) Kharif		(R)-Rabi

LIST OF PUBLICATIONS

Journal

Agricultural Situation in India (Monthly)

Periodicals

Agricultural Prices in India

Agricultural Wages in India

Cost of Cultivation of Principal Crops

Land Use Statistics at a Glance

District-wise Area and Production of Principal Crops in India

Year Book of Agro-Economic Research Studies

Farm Harvest Prices of Principal Crops in India

Agricultural Statistics at a Glance

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