

# Human Labour Utilization on Various Types of Farms in Bharatpur Region



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## Abstract

The study was conducted to find out participation of human labour in agricultural activities in Bharatpur Region of Rajasthan on different types of farms. Study was mainly based on Primary data, which were collected through interview method from selected sample respondents (148 small, 57 medium and 35 large) for the agricultural year 2016-17. The result revealed that the existing monthwise human labour utilization on small sized, medium sized and large sized farms were 124, 149 and 190 labour days respectively. It was found that the average human labour employment was much higher during October-November 2016 and April – May 2017. The possible reasons for it could be because of sowing of Rabi crops (Wheat and Mustard) in October-November and harvesting & threshing of Wheat crop in April-May, which are labour intensive crop. And these two rabi crops (Wheat and Mustard) are the major crops in Bharatpur Region which covered more than 65 percent to gross cropped area.

**Keywords:** Human Labour Utilization, Labour Intensive Crop, Female Participation.

## Introduction

The importance of agriculture in the context of the Indian Economy is paramount. Not only is it a pivotal component in achieving several of India's goals-attaining food security, GDP growth rate and enhancing rural income but it is also the sector with highest share of workers in the country. Human labour plays important economic and social roles in an agricultural economy. The availability of human labour has been found to have impact on planting precision, weed control system, timely harvesting and crop processing. Human labour is an essential factor of Production that contributes to agriculture development and variation in its quality as well as quantity affects specialization and market for agriculture goods and services. The utilization of human labour mainly depends on the supply and demand for the labour in agricultural activities. In agriculture human labour employment are positively affected by use of farm power, fertilizer, irrigation and value of agricultural output while adversely affected by farm size, use of weedicide, mechanization and increase of wage rate. Where as rge effect of farm mechanization in considered to be as labour displacing and capital intensive in nature. Therefore, the present study has taken to make an examination of human labour employment on different types of farms in Bharatpur Region.

## Review of Literature

Ajmal, M.P.A.et.al. (2017) outlines that the agricultural scenario in rural India presents a very intricate picture of role of women and activities related to complete farm production. In fact, rural women and agriculture seems to be synonymous terms. Many experts on evolution opined that it was the women who are responsible for settled agriculture. Farming is a family enterprise in which both men and women work shoulder to shoulder in the fields. Women's participation in agriculture production includes a variety of tasks ranging from preparatory tillage to the harvesting and post harvesting tasks. Almost 70-80 per cent of the agricultural operations are done by women. Empowerment of the farm women in income generating activities is a current need of the time in an agrarian country like, India. Addressing these issues how Empowerment of farm women doubling the income activities are discussed in the paper.

Asiwal, R.C.,Sharma (2016) conducted an investigation in Jaipur district of Rajasthan. Out of the total, Chomu and Phulera tehsils were selected randomly for study purpose. Three un-irrigated villages from Chomu tehsil and three irrigated villages from Phulera tehsil were selected

purposely for study purpose. A sample of 120 agricultural labourers was selected at random with probability proportion from the selected list of farm households. These data were collected for two consecutive seasons of the agricultural year 2010-11 i.e., Rabi season and Kharif season. The simple correlation matrices as well as variance inflation factor (VIF) were worked out to test the presence of multicollinearity and the multiple regression coefficients were estimated to investigate the factors responsible for labour migration. The significance of the regression coefficients was tested by student's t-test. The study results revealed that the degree of correlation between labour work-days with education of the family head was positively non-significant in both the tehsils i.e. Phulera and Chomu and with household work was negatively non-significant in both the tehsils. The estimated coefficients of family size, family income and farm size with labour work-days were positively non-significant in Chomu tehsil and negatively non-significant in Phulera tehsil. The regression results indicated that out of the six hypothesized variables i.e. family size, farm size, family income, education of the family head, general living condition of the family and household work, only two variables, namely family income and household work of the family emerged as important factors responsible for perpetuating migration of agricultural labour in Jaipur district of Rajasthan.

Tarak Patel .et.al. (2015) estimated that Participation of farm women in decision making about different agriculture activities is different from practice to practice. Women were more participated in decision making regarding interculturing and marketing. As participation of farm women in decision making certainly effect by their various constraints prevailing in their residence among them social/cultural norms, lack of self confidence in decision are major constraints, to encounter such constraints major suggestions were offered by farm women are more technical guidance regarding scientific farming should be given to farm women, training should be imparted at village level. The farm women have a lot of potential for the development but they are unable to identify their own strength. All that required is to motivate them to participate in economic activities needed for their development.

Dipika Basu and Nandi, A.K.(2014) examined the effective and efficient use of labour in Indian agriculture in the context of farm mechanisation. It explores the rationality of labour use in paddy production across states with the help of Stochastic Frontier Production Function analysis based on plot level data under the Cost of Cultivation Scheme during 2009-10. The study analyses the productivity, unit cost and farm income differentials and the variation in the extent of farm mechanisation and other inputs use in paddy production between and within states during 2004-05 to 2010-11. It also examines the impact of machine use on the production, productivity, cost and profitability in paddy production in India based on aggregated and

disaggregated data. It is observed that there is no rational use of human labour in Indian agriculture (i.e., the present study rejects the hypothesis of equality between marginal productivity of labour and average wage rate). Machine use in agricultural production plays an important role in the increase in productivity and reduction of unit cost of production resulting profitable making farming viable in India.

Arya, Sarangi and Srivastava (2012) conducted a survey under coastal district Khorda in Odisha to study the perception on the participation of men and women in various activities of crop production. The study revealed that both men and women of a farming family took part in different activities of crop production and women participated in 26 out of 31 farming activities. Participation of men exceeded women in all activities of rice cultivation except transplanting, drying harvest at threshing floor, drying produce at home, storing seed and aftercare of seeds. Mutual understanding among family members recorded the highest (46.84%) score of perception followed by easiness of operation (28.85%). Activity wise perception recorded against various reasons of participation revealed that out of 26 activities where women had participation, 17 activities were perceived on mutual understanding and 9 activities on easiness. The correlation between participation of women in various field operations revealed that the correlation between participation and reasons of participation like easiness of operation, suitability of technology to human body and distribution of work on mutual understanding was positive and highly significant even at  $p=0.001$  (0.1%) level. The correlation between participation and socially assignment of work among men and women was also positive and significant at  $p=0.05$  (5%) level. Whereas correlation between participation and skill specificity or traditionalism was not significant.

Pratibha Singh and Poonam Tewari (2010) examined that Gender role demarcates responsibilities between men and women in social and economic activities, access to resources and decision making authority. Assessing gender role differences helps in identifying the constraints and opportunities within the farming system. Present study was conducted in five villages of two blocks of Haridwar district of Uttarakhand state. From each village 30 households were selected, thereby, making a total of 150 households. Findings shows that all the farm activities i.e land preparation, transplanting, irrigation, application of manure and fertilizers, weeding, harvesting, marketing, management of revenue were independently performed by rural men in majority of the families and they were having complete responsibility of it. Women performed few farm activities like transplanting, weeding, harvesting jointly with men in 40.67%-60.78% households.

### Objectives of the Study

1. To examine the human labour engaged on various types of farms.
2. To study the male and female participation in human labour utilization.

3. To analysis the share of owned and hired labour in total human labour on different types of farms.

### Material and Methods

#### Sampling Structure

A four stage sampling design was adopted for the selection of sample farms. The area of the study was Bharatpur Region of Rajasthan state. Bharatpur Region consisted four district namely: Bharatpur, Dholpur, Karauli and Sawamadhapur. From the four sistrict Eight tehsils were selected tehsils twenty four villages (three from each tehsils) and ten farmers from each village were selected randomly (total 240 farmers). The small, medium and

#### Human Labour Utilization on Small Sized Farms

large farmers categorized on the basis of their operational holdings.

#### Collection of Data

The present study was mainly based on the Primary data which were collected through interview method from selected sample respondents for the agriculture year 2016-17. The data was collected with the help of specially developed interview schedule to know the human labour participation in from activities of bharatpur region in Rajasthan.

#### Result and Discussion

The data collected were tabulated and presented herewith:

**Table No.1**

**Monthwise per Hectare Human Labour Utilization on small sized farms in Bharatpur Region (2016-17)**

S.No	Month	Owned	Hired	Total
1	July	5	2	7
2	August	4	1	5
3	September	9	3	12
4	October	9	4	13
5	November	10	5	15
6	December	9	5	14
7	January	4	1	5
8	February	8	4	12
9	March	7	3	10
10	April	8	6	14
11	May	7	6	13
12	June	4		4
	<b>Total</b>	<b>84</b>	<b>40</b>	<b>124</b>

The existing human labour utilization on small sized farms is presented in the table 1. The table shows that monthwise per hectare human labour utilization was treated out to be 124 labour days. The highest (15 days) human labour utilization was in November. The reason cited was that the Rabi crops are winter crops and are sown in the months of October and November. In the month of June only 4 labour days per hectare were estimated which was the lowest human labour utilization. In small sized

farms participated of owned human labour was higher than the hired human labour.

#### Human Labour Utilization on Medium Sized Farms

The table-2 exhibits that the per hectare human labour utilization was foundout to be 149 labour days. The highest human labour utilization was in the month of October, November and April i.e 17 labour days. This could be because of sowing of Rabi crops

**Table No. 2**

**Monthwise per Hectare Human Labour Utilization on Medium sized farms in Bharatpur Region (2016-17)**

S.No	Month	Owned	Hired	Total
1	July	5	3	8
2	August	5	2	7
3	September	10	4	14
4	October	12	5	17
5	November	12	5	17
6	December	10	4	14
7	January	5	2	7
8	February	8	6	14
9	March	8	6	14
10	April	10	7	17
11	May	8	7	15
12	June	5		5
	<b>Total</b>	<b>98</b>	<b>51</b>	<b>149</b>

(wheat and mustard) in the month of October and November along with harvesting and threshing of wheat crop in the month of April and May. The lowest utilization of human labour of 5 labour days was noted in the month of June.

### Human Labour Utilization on Large Sized Farms

It can be observed from the table 3 that the per hectare total human labour employment was 190 labour days in Bharatpur Region. The highest human labour employment was in the month of April (24 labour days). The second highest human labour utilization was observed in November (22 labour

days), next being October (20 labour days), May (20 labour days) and February (19 labour days). The reason behind this can be that the harvesting and threshing of wheat crop operations were performed during March to May and this crop was sown in the month of October and November along with kharif crop Bajra harvested in the month of September and October. Which were labour intensive on these large sized farms. The, lowest utilization of human labour was in the month of January (7 labour days per hectare).

**Table No.3**  
**Monthwise per Hectare Human Labour Utilization on Large sized farms in Bharatpur Region (2016-17)**

S.No	Month	Labour Days		
		Owned	Hired	Total
1	July	7	4	11
2	August	7	2	9
3	September	11	7	18
4	October	13	7	20
5	November	14	8	22
6	December	10	5	15
7	January	7		7
8	February	12	7	19
9	March	10	6	16
10	April	14	10	24
11	May	12	8	20
12	June	7	2	9
	<b>Total</b>	<b>124</b>	<b>66</b>	<b>190</b>

### Participation of Male and Female Labourers on three types of farms

**Table No.4**

### Participation of Male and Female Labourers on different categories of farms in Bharatpur Region (2016-17)

S.No	Farm Category	(Labour days per hectare)					
		Male Labour		Female Labour		Total	
		Owned	Hired	Owned	Hired	Owned	Hired
1	Small sized farms	40	16	44	24	84	40
2	Medium sized farms	50	22	48	29	98	51
3	Large sized farms	78	28	46	38	124	66

The participation of male and female labour on small sized, medium sized and large sized farms is exhibited in the table-4. The table shows that in the total human labour used, the contribution of female labour was 54.8 percent on the small sized farms. It can also be observed that female owned labour was much higher in comparison to female hired labour as well as owned and hired male labour.

On the medium sized farms the share of female labour in the total human labour used turned out to be an average of 51.70 percent. It was also revealed from the table that the share of owned female labour was less than that of the owned male

labour, but was higher than that of hired male labour on medium sized farms.

Further the table-4 indicates that the participation of female labour was 44.2 percent of the total human labour used on large sized farms. It was also noticed that the share of owned female labour was lesser than that of owned male labour, but was higher than that of hired male labour. Hence the study revealed that as the size of farm increase, participation of both owned as well as hired labour increased.

### Conclusion

It can be concluded from the study that human labour were found to be playing an important

role in all the agricultural activities, throughout the year. It was cleared that mustard and wheat was found most dominating crops of Bharatpur region. Thus highest human labour utilization was in rabi season. It was also seen that the total number of workers in labour supply is highly affected by the contribution of the women with their dual responsibilities of home maker and worker.

## References

1. Ajmal, M. P. A., Kandan, S. M., Deepika Tiwari and Meena, S. S. (2017): "Farm women empowerment through income generating activities: a study of Bikaner district of Rajasthan", *Indian Journal of Economics and Development* Vol. 13, No. 2a, pp. 600-604
2. Arya, M. P. S., Sarangi, D. N. and Srivastava, S. K. (2012): "Study on participation behaviour of men and women in rice production activities", *Agricultural Science Digest*, Vol. 32, No. 3, pp. 229-232
3. Asiwai, R. C., Sharma, R. C. and Sharma, B. K. (2016): "Factors affecting migration of agricultural labourers in Rajasthan", *Indian Journal of Economics and Development*, Vol. 12, No. 4, pp. 803-806
4. Dipika Basu and Nandi, A. K. (2014): "Farm mechanisation and rationality of labour use in Indian agriculture: a frontier analysis of cost of cultivation data", *Indian Journal of Agricultural Economics*, Vol. 69, No. 3, pp. 336-346
5. Deshpande, S. K., Raut, V. D. and Raut, D. D. (2011): "Involvement of farm women in agriculture extension programme", *Green Farming*, Vol. 2, No. 5, pp. 629-630
6. Pratibha Singh and Poonam Tewari (2010): "Participation profile of rural women in farm activities", *Pantnagar Journal of Research*, Vol. 8, No. 2, pp. 236-242
7. Tara Negi and Rajshree Upadhyay (2012): "Participation of rural women in selected entrepreneurial activities", *Asian Journal of Home Science*, Vol. 7, No. 1, pp. 14-18
8. Tarak Patel, Patel, J. K., Amit Shukla and Dr. M N Khan, (2015); "Participation of farm women in decision making process in relation to different agriculture practices", *Journal of Pure and Applied Microbiology*, Vol. 9, No. Special Edition 2, pp. 623-625