GENDER INVOLVEMENT IN VARIOUS OPERATIONS OF DIFFERENT CROPS

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Gender issue in agriculture has become particularly important in view of the neglect of rural women in our society on one hand and their multidimensional role in rural economy especially agriculture on the other. In Agrarian set-up, duties of women are further extended to work in the fields cultivation, plantation, forestry, fishery and little more skilled jobs in the farm of wearing, dyeing printing and household industry. The tasks generally performed by males are gradually getting mechanized while various labour intensive jobs continue to be performed by the women. In India, women labourers are mostly employed for weeding transplanting and harvesting for wages and they are engaged in much more jobs in crop production as family labourers. Employment of farm workers and agriculture is mostly seasonal and intermittent in character. It's duration varies upon a number of factors viz., rainfall and climate, type of crops grown, crop varieties, intensity of cropping and system of crop cultivation etc.

The study area of district-Farrukhabad of U.P. is well known for more intensity of cropping where more than two or three crops are taken in succession during a year, on the same piece of land. The farmers of the district have tiny holdings (average size being 0.77 hectare) assured means of irrigation facilities and fertility status of the soil enable them to grow 3-4 crops in a year, in which two successive crops of potato occupy an important place. Thus the farmers follow potato-based cropping pattern, which generally includes maize, wheat, cucurbits sunflower and vegetables besides two successive crops of potato. Crop like potato and other vegetables though being capital intensive in nature are also labour intensive in nature, which provide more employment opportunities as compared to other crops. Thus considering the above facts in view the present study was undertaken with the specific objective, "To study the rate of participation of farm workers in various field operations of different crops."

METHODOLOGY

The study was conducted in Farrukhabad district of U.P. Chhibramau and Barhpura blocks of the district was selected purposively to conduct the study. Five villages of each block were selected randomly for the purpose of investigation. Then a list of farm worker households was prepared for all the selected villages. Now from the list a sample of 100 farm worker households (50 from each block) was selected from 10 villages on the basis of their proportion falling under each village. Thus a three stage stratified random sampling technique was used to select the blocks, villages & farm workers in the district.

The data were collected with the help of a well-structured pre-tested interview schedule. The investigator visited the villages personally to collect the data. Data thus gathered were subjected to appropriate analytical framework to draw meaningful inferences.

RESULTS AND DISCUSSION

Employment of farm Workers– Employment of farm workers in different crops, operation-wise it has been worked out

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in Table 1, shows that causal labour (hired labour) employment in production of crops in the study area was worked out at 499.25 days, out of which male workers shared for 261.00 days and female workers 238.25 days. In terms of percentage share it worked out at 52.28 and 47.72 per cent respectively. Thus, farmwomen workers shared for 47.72 per cent of the total casual labour required in crop production activities.

When we look into crop-wise employment of women workers their participation varied from 45.46 per cent to 66.67 per cent in different crops. It was 46.56 per cent in early potato and 45.92 per cent in late potato. In maize, wheat, muskmelon, pumpkin and sunflower production, women workers shared for 49.08 per cent, 48.64 per cent, 45.46 per cent, 66.67 and 49.02 per cent respectively to total casual labour days spent on these respective crops.

So far as operation-wise employment of women workers is concerned, they got comparatively higher employment in farm operation like sowings, interculture and harvesting, as compared to those of male workers. It was highest in potato crop where more than 70 per cent of women workers were employed for performing sowing, interculture and digging operations.

Table 1. Employment of farm workers crop-wise and operation-wise (in days per hectare per household)

Farm operations	Maize			Early Potato			Late Potato			Wheat		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. Land preparation	-	-	-	18.25	-	18.25	17.00	-	17.00	-	-	-
2. Sowing	-	3.75	3.75	5.00	14.50	19.50	5.00	14.50	19.50	-	3.75	3.75
3. Application of manure & fertilizer	3.75	-	3.75	7.50	-	7.50	7.50	-	7.50	5.75	-	5.7
4. Interculture	12.00	13.00	25.00	10.50	27.00	37.50	10.00	26.50	36.50	7.50	17.50	25.00
5. Irrigation	2.00	-	2.00	10.50	-	10.50	12.00	-	12.00	5.00	-	5.00
6. Plant Protection	-	-	-	6.25	-	6.25	7.00	-	7.00	1.50	-	1.50
7. Harvesting	10.00	-	10.00	8.00	17.25	25.75	9.00	18.00	27.00	10.00	10.50	20.50
8. Threshing and Winnowing	-	10.00	10.00	-	-	-	-	-	-	8.00	4.00	12.00
9. Others	-	-	-	2.00	-	2.00	2.00	-	2.00	-	-	-
Total	**27.75**	**26.75**	**54.50**	**68.00**	**59.25**	**127.25**	**69.50**	**59.00**	**128.50**	**37.75**	**35.75**	**73.50**
Percentage	**50.92**	**49.08**	**100.00**	**53.00**	**46.56**	**100.00**	**54.08**	**45.92**	**100.00**	**51.36**	**48.64**	**100.00**

Farm operations	Pumpkin			Muskmelon			Sunflower			Total/Average		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. Land preparation	-	-	-	-	-	-	3.00	-	3.00	38.25	-	38.25
2. Sowing	-	-	-	-	-	-	-	1.00	1.00	10.00	37.50	47.50
3. Application of manure & fertilizer	-	-	-	-	-	-	2.00	-	2.00	26.50	-	26.50
4. Interculture	-	10.00	10.00	8.00	12.00	20.00	7.00	10.00	17.00	55.00	116.00	171.00
5. Irrigation	5.00	-	5.00	5.00	-	5.00	3.00	-	3.00	42.50	-	42.50
6. Plant Protection	-	-	-	-	-	-	-	-	-	14.75	-	14.75
7. Harvesting	-	-	-	12.00	10.50	22.50	8.00	10.00	18.00	57.00	66.75	123.75
8. Threshing and Winnowing	-	-	-	-	-	-	3.00	4.00	7.00	11.00	18.00	29.00
9. Others	-	-	-	2.00	-	2.00	-	-	-	6.00	-	6.00
Total	**5.00**	**10.00**	**15.00**	**27.00**	**22.50**	**49.50**	**26.00**	**25.00**	**51.00**	**261.00**	**238.25**	**499.25**
Percentage	**33.33**	**66.67**	**100.00**	**54.54**	**45.46**	**100.00**	**50.98**	**49.02**	**100.00**	**52.28**	**47.72**	**100.00**

Per Farm Workers Employment In Crop Production

After working out the employment of farm workers crop-wise and operations-wise, it will be worthwhile to workout employment per farm worker, taking all crops together, during a year in crop production activities. It has been given in Table 2.

Table 2. Per farm worker employment in crop production (in days/annum.)

Farm Operations	Average per worker employment in days per hectare			Percentage share in different operations		
	Male	Female	Total	Male	Female	Total
1. Land preparation	24.68 (14.65)	-	24.68 (8.07)	100	-	100
2. Sowing	6.45 (3.83)	30.00 (15.74)	36.45 (10.12)	17.70	82.30	100
3. Application of fertilizers	17.10 (10.16)	-	17.10 (5.20)	100.00	-	100
4. Interculture	35.48 (21.07)	92.80 (48.69)	128.28 (34.26)	27.65	72.35	100
5. Irrigation	27.42 (16.28)	-	27.42 (8.41)	100.00	-	100
6. Plant protection	9.52 (5.65)	-	9.52 (2.95)	100.00	-	100
7. Harvesting	36.77 (21.83)	53.40 (28.02)	90.17 (24.78)	40.78	59.22	100
8. Threshing & winnowing	7.10 (4.23)	14.40 (7.55)	21.50 (5.01)	33.02	66.98	100
9. Others	3.88 (2.30)	-	3.88 (1.20)	100.00	-	100
Total	**168.40(100.00)**	**190.60(100.00)**	**359.00(100.00)**	**46.90**	**53.10**	**100**

Figures in brackets show the percentage to their respective totals.

Table 2 reveals that on an average basis a women worker got employment for 190.60 days per hectare in crop production activities, on farms adopting multiple cropping system in the study area. Table also shows that women workers share for 53.10 per cent in total casual labour required for crop production, while share of male workers came lower being 46.90 per cent. The reason for higher rate of participation of women workers was due to the fact that (i) in certain farm operations like sowing, weeding and harvesting of crops (potato based cropping system) women workers were considered more efficient than men and (ii) higher use of women workers in crop production was due to the availability of women farm workers at low wage rates as compared to male workers. It was the reason that women workers participation came as high as 82.30 per cent in sowing, 72.35 per cent in interculture, 59.22 per cent in harvesting and 66.98 per cent in threshing & winnowing.

CONCLUSION

The study reveals that the average employment per female workers, per hectare basis was higher (190.60 days) than male workers (168.40 days) in crop production as whole. The rate of participation of female workers was higher than male workers in certain crop operations like sowing (82.30 per cent), interculture (72.35 per cent), harvesting (59.22 per cent) and threshing (66.98 per cent). In production of all crops in the study, the participation of male workers shared for 261 days (52.28 per cent) and female workers 238.25 days (47.72 per cent).

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