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Type and extent of participation of the farm women in post-harvest activities

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Abstract

Women play a significant and crucial role in agriculture and allied fields including main crop production, livestock, horticulture, post harvest operations etc. Sustainability in agriculture cannot be achieved without the partnership between men and women. They are like two wheels of a cart and together only they can move towards progress. The study was carried out from two agro – climatic zones. Nanded district was selected from Central Maharashtra Plateau zone and Nagpur district was selected from Central Vidarbha zone. This research consist sample of four hundred ten farm women from urban, rural and tribal areas. The respondents were interviewed personally. Type of participation of the respondent was measured on the basis, with whom she participated in the post-harvest activities and extent of participation was measured as whether the activity was completely performed by the respondent or partially. Independent participation of the women was noted in the activities management of surplus produce at household level and storage of the produce. Participation of the women jointly with female was noted in the activities cleaning and drying of the produce whereas their joint participation with male was observed in the activities threshing and winnowing. In case of extent of participation, it was noticed that women's complete participation was in the activities post- harvest processing of the produce at household level and retention of the produce for consumption while it was partial in threshing and management of surplus produce at commercial level.

Keywords: Type, extent, participation, women, post-harvest activities

Introduction

Women play a significant and crucial role in agriculture and allied fields including main crop production, livestock, horticulture, post harvest operations etc. It has been estimated that 86 per cent of the total rural women are working for various agricultural operations. They perform these activities in addition to long and arduous work in household maintenance, child rearing, cooking, fuel and fodder collection, fetching water etc. Their average daily input work is not less than 14-16 hours. Hence farm women have multifarious and multiple responsibilities in and outside the home. Ray and Chowdhury (1997)^[4] stated that rural women in India, besides spending a major part of their daily life in household chores assist their male counterpart in the crop husbandry, animal husbandry, poultry keeping and other related activities.

In villages, farm women are fully occupied and overburdened with three fold responsibilities of farm, agriculture and livestock management. It is understood that the women's responsibility in agriculture is far more than male because of their involvement in multifarious activities.

Sustainable agricultural development rests on the partnership between man and land so on farm and home. Sustainability cannot be achieved without the partnership between men and women. They are like two wheels of a cart and together only they can move towards progress. Rural and tribal women are the integral part of agricultural system. They live within the system to internalize their role and value in search of alternatives for better performance of their roles. Their potentiality can be witnessed in crop nurturing and care, post-harvest management, minimizing storage losses, value addition to farm produce by utilizing crop residue and byproducts and at times marketing of produce also. After receiving the harvested crops in the home, it is a woman who carries all the post-harvest tasks. It was commonly observed that the post harvest activities fall under women's purview. In view of this, the present study was carried out to investigate the role of urban, rural and tribal women in post- harvest activities with following specific objectives.

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1. To study general profile of the women.
2. To find out type participation of the women in different post-harvest activities.
3. To know the extent of participation of the women in different post-harvest activities.

Methodology

The study was carried out from two agro – climatic zones. Nanded district was selected from Central Maharashtra Plateau zone and Nagpur district was selected from Central Vidarbha zone. This research consist sample of 410 farm women from urban, rural and tribal areas. It was easy to get sample of farm women from rural and tribal areas but difficult from urban area. Hence the localities of the urban area, where farming was done by the women, were selected.

Data were collected by administering the pre-tested interview schedule. All the respondents were interviewed personally by the investigator at work spot, which enabled her to get the first hand information and gave an opportunity to observe the respondent's personality and to observe their work place. In the present study, type of participation of the respondent was measured on the basis, with whom she participated in the post-harvest activities. Such as whether it was independently done by the respondent, jointly done with female, jointly participated with male or whether she did not participate in that particular activity. Extent of participation was measured as whether the activity was completely performed by the respondent or partially. Frequencies and percentages were calculated for statistical analysis.

Results and discussions

General profile of the selected urban, rural and tribal women

Table 1 reflects about general or the back ground information of the respondents. It is clear from the table that less than half (47.31%) of the women were from the age category 31-45 years, followed by the category 18-30 years (32.69%) while 20.00 per cent women were from the age category 46-60 years.

As far as education of the respondents was concerned, it was seen that more than half (52.93%) of the women were educated up to school level, more than one third (37.31%) of them could read or write. The percentage of the higher education i. e. graduation and post graduation among selected women was found negligible (2.93 and 0.74% respectively). It was due the reason that majority of the sample was from rural and tribal area. It can be also observed from the table that 4.88 per cent of the women were educated up to Junior College or Diploma level. Only 1.21 per cent of them were illiterate. The study clearly indicates that educational level of the women in the study is fair.

As far as family type was concerned, nuclear type of families were seen to be predominant (54.14%), followed by joint families (45.12%) and lastly very negligible percentage of extended families (0.74%) were found. It is clear from the data that the trend of nuclear families has been increasing.

The trend of medium sized (5-8 members) families was found to be in more than half (54.15%) of the selected families, while small sized (up to 4 members) families were 37.81 per cent and lastly it was noted that few of them (8.04%) had large families comprising > 8 members.

It was observed that more than half (67.56%) of them had their annual income above Rs. 50,000/- whereas 27.56 per cent of them had their annual in between Rs. 25,001 to Rs. 50,000/- and only few of the families (4.88%) had their

annual income up to Rs. 25,000/-. It can be clearly stated that economic condition of the respondents was better.

When the respondents were classified according to their landholding categories, it was noted that less than half (42.43%) of them were landless. More than one fifth (21.21%) of them had marginal land (2.5 to 5 acres) and the respondents having medium land (5-10 acres) were 13.41 per cent. Respondents having large (> 10 acres) and small (up to 2.5 acres) lands were of same percentage i. e. 11.46 per cent.

Type of participation of the respondents in post-harvest activities

It can be depicted from table 2 that in the activity threshing, more than half (58.04%) of the respondents were participating with males. There was no independent participation and participation jointly with females while it was found that 41.95 per cent of the respondents were not involved in threshing.

The above finding is in accordance with the observations of Shilaja and Jayaramiah (1993)^[6] and also with Manju Suman (2002)^[2] who noticed in her study that threshing was the activity where nearly 60.00 per cent women were engaged. The results of Annual Report of AICRP–Extension Component (2003)^[3] also support this finding. The finding of Rodge and Bellurkar (2010)^[5] supported this finding who noted that joint participation of women with men was observed in threshing activity.

In the activity winnowing also joint participation of women was found with males (45.36%). More than one third (36.34%) of them were not participating whereas 16.34 per cent were jointly participating with females and very negligible percentage of them (1.96%) were performing winnowing independently.

The finding of the present study corroborates with the finding of Shilaja and Jayaramiah (1993)^[6] and Manju Suman (2002)^[2] and Girase *et al.* (2006)^[1].

As regards cleaning of the produce, it was noticed that 38.04 per cent of women jointly doing with females and 36.59 per cent of the respondents jointly doing it with males. Near about one fifth (19.28%) of them were not performing this activity and only 6.09 per cent were involved independently in cleaning.

The finding is matching with the results of Shilaja and Jayaramiah (1993)^[6] and Annual Report of AICRP–Extension Component (2003)^[3].

Drying is an important activity after post harvesting. It can be expressed that more than one third of the respondents were involved jointly with males (37.56%) and jointly with females (36.58%). Less than one fifth (18.29%) were not involved and 7.56 per cent were performing drying independently.

The same results were reported by Shilaja and Jayaramiah (1993)^[6], Ray and Chowdhury (1997)^[4], Annual Report of AICRP–Extension Component (2003)^[3] and Rodge and Bellurkar (2010)^[5].

Once the produce reaches home, the women get fully occupied with processing of the produce. It can be seen that more than one third (34.88%) of the women were not participating while more than one fourth (28.78%) were performing it jointly with females and independently (26.83%). It was observed that men were not much involved in this activity. Only 9.51 per cent of the women were found to be performing this activity with males.

The finding is matching with the result of Annual Report of AICRP – Extension Component (2003)^[3].

Post harvest processing of the produce at commercial level

was not done by 35.12 per cent of the respondents whereas near about equal percentages of the women were performing this activity jointly with females (31.71%) and jointly with males (31.21%). A meager percentage (1.96) of the women was found to be involved independently in this activity. This result is supporting to the study of Annual Report of AICRP–Extension Component (2003)^[3].

After the grain reaches home the women either independently or jointly with other female members or with the help of hired women attend to store the grains for household consumption. In this study as far as retention of produce for consumption was concerned, it was observed that more than one third (35.12%) of the respondents were not participating in the activity while more than one fourth of them were found to be performing this activity independently (27.56%) and jointly with females (25.86%). It can be also seen that 11.46 per cent of the women were participating with males in this activity. This result is comparable with study by Ray and Chowdhury (1997)^[4] and with the finding of Annual Report of AICRP–Extension Component (2003)^[3].

It was noted that majority of the farmers were buying the seed from market. Hence majority (78.29%) of the women were not involved in retention of produce for seed purpose whereas percentages of their participation with males (10.24), females (7.56) and their independent (3.91) involvement were very less for this activity.

The finding is comparable to the findings of Girase *et al.* (2006)^[1].

It was found that exactly 40.00 per cent of the respondents were not participating in the activity retention of the produce for sale purpose. Participation with males was noticed among 38.79 per cent of them and less than one fifth (19.75%) of them were involved with females in this activity. Only 1.46 per cent of them were doing this work independently.

Management of the surplus produce at household and also at commercial level is a critical job. It was found that more than one third (36.09%) of the respondents were not involved in this activity at household level while more than one fourth of them were performing this activity independently (28.04%) and jointly with females (27.07%). Only

9.02 per cent of the women were doing it jointly with males.

Management of surplus produce at commercial level was not performed by 37.31 per cent of the women. Near about one third (32.43%) of them were participating in this activity with males and more than one fourth (27.80%) of them were doing it jointly with females. Percentage of independent participation was negligible (2.43).

Storage is an activity which is done at household level; hence women's participation is major. In this study, less than one third (30.48%) of the respondents were not involved whereas near about equal percentages of them were performing this activity jointly with females (28.29%) and independently (28.04%). Joint participation of the women with males for this activity was less (13.17%). It can be stated that 69.52 per cent of the women participated in the activity storage of the produce. It may be due to the fact that this activity is generally performed inside the house.

This finding is in conformity with the observations of Shilaja and Jayaramiah (1993)^[6], Manju Suman (2002)^[2] Annual Report of AICRP–Extension Component (2003)^[3] and also with Girase *et al.* (2006)^[1].

In the activity marketing it was found that a huge majority (94.28%) of the women were not involved. Percentage of their involvement in this activity with males was very less (5.12%). It was also noted that independent and joint

participation with females was not observed for the activity marketing. Less participation of the women in marketing is due to the fact that women are not allowed to go to the market. Their less confidence and social customs not allow them for doing this activity. In case of management of revenue also the same pattern was found. In this activity a great majority (92.93%) of respondents were not involved while only 6.83 and 0.24 per cent of them were involved jointly with males and independently respectively. It was revealed that participation jointly with females was not observed as far as management of revenue was concerned.

Engagement of labour was another activity in which women's participation was found to be very less. Majority of them (83.91%) were not participating while 10.98 per cent of them were performing this activity jointly with males. Negligible percentages of them were participating in this activity independently (2.68%) and jointly with females (2.43%).

Extent of participation of the respondents in post-harvest activities

Table 3 reflects about extent of participation of the respondents in post-harvest activities. It was observed that threshing was the activity in which the women were found to be only in supportive role. It can be depicted that more than half (60.00%) of the respondents were partially participating while 39.76 per cent of them were not participating in the activity threshing and very meager percentage (0.24%) were doing it completely.

Winnowing was another post-harvest activity in which less than half (44.88%) of the women were involved partially, more than one third (35.61%) of them were having no participation whereas less than one fifth (19.51%) of the women were found to be performing this activity independently.

As far as extent of participation in the activity cleaning was concerned, it was found that 43.41 per cent of the respondents were performing it partially and 37.57 per cent of them were performing it completely. No participation of the women in this activity was 19.02 per cent. Same result was observed in case of the activity drying. In this activity 41.71 and 40.24 per cent of the women were involved partially and completely respectively while 18.05 per cent were not involved.

Complete participation of the respondents was major (55.36%) in the activity post harvest processing of the produce at household level. More than one third (34.14%) of the women were found to be not participating and only 10.50 per cent were doing it partially.

In post harvest processing of the produce commercially, it is clear from the table that more than half (55.61%) of the respondents were doing it partially, more than one third (34.63%) of them were not participating and only 9.76 per cent were found to be performing it completely.

It can be expressed that the activity retention of produce for consumption was dominantly performed by the women completely (54.15%). This activity was not participated by 34.63 per cent of the women whereas 11.22 per cent of the women were doing it partially.

Majority (79.27%) of the selected respondents were not involved in retention of the produce for seed purpose while 13.17 per cent were involved partially and 7.56 per cent were performing it completely.

More than half (55.85%) of the selected women were found to be involved in retention of the produce for sale, 38.78 per cent were not participating and a negligible percentage (5.37) of them were completely participating.

It was seen that post-harvest activities were dominantly performed by the women at household level. In case of the activity management of surplus produce at household level, more than half (53.66%) of the selected women were involved completely while more than one third (35.61%) of them were not involved and only 10.73 per cent were performing it partially.

The activity management of surplus produce at commercial level was performed partially by 56.34 of the respondents whereas 36.10 per cent of the women were not participating in this activity and only 7.56 per cent of the women were doing it completely. In this study majority of respondents were farm labourers. Management of surplus produce at commercial level was performed by the labourers; hence their major participation was noticed.

Complete participation of more than half (53.41%) of the selected women was observed in storage of the produce, no participation was noted in 30.49 per cent and of them and

partial participation was seen in 16.10 per cent of the respondents.

Marketing of the produce was the area in which a huge majority (94.64%) of the women was not participating. Only 5.12 per cent of them were found to be partially participating in marketing of the produce and a meager percentage (0.24) were involved completely in this activity.

The same results were observed in management of the revenue earned from the sale of produce. This activity was dominantly done by males. In this activity also a huge majority (92.69%) of the selected women were not participating while partial participation was found in 7.07 per cent of them and a negligible percentage (0.24) were doing it completely. Engagement of labour for the activities was not done by majority (82.93%) of the selected respondents. It was done partially by 12.68 per cent and completely by 4.39 per cent of the women.

Table 1: General profile of the respondents n = 410

Sr. No.	Particulars	Frequency	%
1	Age (Years)		
	18-30 yrs.	134	32.69
	31-45 yrs.	194	47.31
	46-60 yrs.	82	20.00
2	Education		
	Illiterate	05	1.21
	Can read / write	153	37.31
	School level	217	52.93
	Jr. College/ Diploma	20	4.88
	Graduate	12	2.93
	Post Graduate	03	0.74
3	Family Structure		
	<i>a) Family Type</i>		
	Nuclear	222	54.14
	Joint	185	45.12
	Extended	03	0.74
	<i>b) Family size</i>		
	Small (Up to 4 members)	155	37.81
	Medium (5-8 members)	222	54.15
	Large (> 8 members)	33	8.04
4	Family income (Rs.) Per yr.		
	Up to Rs. 25,000.00	20	4.88
	Rs. 25,001.00 to 50,000.00	113	27.56
	> Rs. 50,000.00	277	67.56
5	Land holding		
	Landless	174	42.43
	Small (Up to 2.5 acres)	47	11.46
	Marginal (2.5 to 5 acres)	87	21.21
	Medium (5 to 10 acres)	55	13.41
	Large (> 10 acres)	47	11.46

Table 2: Type of participation of the respondents in Post-Harvest activities n = 410

Sr. No.	Activity	Independent	Independent	Independent	Independent	Independent	Independent	Independent	Independent
		Fre.	(%)	Fre	(%)	Fre	(%)	Fre	(%)
1	Threshing	0	0.00	0	0.00	238	58.04	172	41.95
2	Winnowing	8	1.96	67	16.34	186	45.36	149	36.34
3	Cleaning	25	6.09	156	38.04	150	36.59	79	19.28
4	Drying	31	7.56	150	36.58	154	37.56	75	18.29
5	Post-harvest processing of produce-								
	i) Household level	110	26.83	118	28.78	39	9.51	143	34.88
	ii) Commercial level	8	1.96	130	31.71	128	31.21	144	35.12
6	Retention for – i)	113	27.56	106	25.86	47	11.46	144	35.12
	ii) Seed	16	3.91	31	7.56	42	10.24	321	78.29
	iii) Sale	6	1.46	81	19.75	159	38.79	164	40.00
7	Mgt. of surplus produce- i) Household level	115	28.04	111	27.07	37	9.02	147	36.09

	ii) Commercial level	10	2.43	114	27.80	133	32.43	153	37.31
8	Storage	115	28.04	116	28.29	54	13.17	125	30.48
9	Marketing of produce	0	0.00	0	0.00	21	5.12	389	94.88
10	Mgt. of revenue earned from sale of produce	1	0.24	0	0.00	28	6.83	381	92.93
11	Engagement of labour for the activities	11	2.68	10	2.43	45	10.98	344	83.91

Table 3: Extent of participation of the respondents in Post-Harvest activities n = 410

Sr. No.	Activity	Complete		Partial		No participation	
		Freq.	(%)	Freq.	(%)	Freq.	(%)
1	Threshing	1	0.24	246	60.00	163	39.76
2	Winnowing	80	19.51	184	44.88	146	35.61
3	Cleaning	154	37.57	178	43.41	78	19.02
4	Drying	165	40.24	171	41.71	74	18.05
5	Post-harvest processing of produce-						
	i) Household level	227	55.36	43	10.50	140	34.14
	ii) Commercial level	40	9.76	228	55.61	142	34.63
6	Retention for						
	i) Consumption	222	54.15	46	11.22	142	34.63
	ii) Seed	31	7.56	54	13.17	325	79.27
	iii) Sale	22	5.37	229	55.85	159	38.78
7	Mgt. of surplus produce						
	i) Household level	220	53.66	44	10.73	146	35.61
	ii) Commercial level	31	7.56	231	56.34	148	36.10
8	Storage	219	53.41	66	16.10	125	30.49
9	Marketing of produce	1	0.24	21	5.12	388	94.64
10	Mgt. of revenue earned from sale of produce	1	0.24	29	7.07	380	92.69
c11	Engagement of labour	18	4.39	52	12.68	340	82.93

Conclusions

The investigation concludes that less than half of the women were from the age category 31-45 years, more than half of the women were educated up to school level. The families were nuclear type with 5-8 members. It was observed that more than half of them had their annual income above Rs. 50,000/-. Less than half of them were landless.

As regards type of participation of the respondents in post-harvest activities, independent participation of the women was noted in the activities management of surplus produce at household level and storage of the produce. Participation of the women jointly with female was noted in the activities cleaning and drying of the produce whereas their joint participation with male was observed in the activities threshing and winnowing. Major areas of no participation of the women were marketing of produce and management of revenue earned from the sale of produce. In case of extent of participation, it was noticed that women's complete participation was in the activities post-harvest processing of the produce at household level and retention of the produce for consumption while it was partial in threshing and management of surplus produce at commercial level.

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