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Participation Pattern of Farm Women in Post Harvesting

Kiranjot Sidhu

Department of Extension Education, Punjab Agricultural University, Ludhiana 141 001, Punjab, India
Telephone: 09814098405, E-mail: sidhs64@hotmail.com

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ABSTRACT Post harvesting is an important component of farm activities and is mostly performed by women. They play a vital role in subsequent processing and storage of the produce. In order to understand the present participation pattern of farm women in post harvest activities an attempt was made under the Extension component of All India Coordinated Research Project on Home Science. The study conducted on 2999 farm families in rural Punjab represented by five agro-climatic zones and five distinct landholding categories clearly indicate an active participation of women in most of the selected activities in the area of post harvesting. The results varied between zones but the women were found to contribute substantially in drying, storage and cleaning. In other activities majority of the women were working with male members. However, least participation was reported in processing and marketing. Study points towards a need to technically arm women in post harvest know-how so as to help in reducing losses during storage. This shall not only reduce economic losses but help in maintaining family food security.

INTRODUCTION

Agricultural is family enterprise where each member plays an important role in production and post production activities. Women play the most vital role in post production stage beside her role as a keeper of the home, caretaker of the livestock and that of the consistent helper to the farmer in farm related tasks. Cleaning and storage of grains have always been considered a part of the domestic chores, hence never acknowledged. Sandangi et al. (1996) reported that farm women spent 0.63 hours per week in post harvest operations. However the shift in perceptions on methods of achieving and sustaining food security has led to revival in focus on reducing losses at the post harvest stages. There is a growing concern regarding the need to take care of both the quantitative and qualitative aspects of the produce. The mechanization in this field has also made women less competent in performing these tasks. An effort has been made in this study to understand the role of women belonging to different ago-climatic zones of Punjab in post harvest operation so as to know their present participation status. The data will enable for area based programmes to develop capacities of these women in this important area of their activity.

The project entitled 'Data Base on Rural Women and Indigenous Knowledge' was started under the extension component of All India Coordinator Research Project in Home Science at the national level to understand the role and status of rural women in diversified agro-climatic conditions. Under this project the data was collected in the state of Punjab for analyses of the participation pattern of rural women in post harvest activities.

METHODOLOGY

Locale and Sampling: The data were generated under the project titled 'Data base on rural women and indigenous knowledge' a part of the All India Coordinated Project on Home Science (Extension Component) from the state of Punjab. The state was represented by five agro-climatic zones namely Sub-Mountainous undulating Zone (Zone 1),Undulating plain zone (Zone 2), Central Plain Zone (Zone 3), Western plain zone (Zone 4)and Western zone (Zone 5).From each zone minimum of two districts were selected which were further represented by two blocks (from each district) and two villages from each block. Proportionate random sample of 2999 rural women representing five distinct landholding categories (landless, small, marginal, medium, large) was taken. The scoring was 3 for independent participation , 2 for joint participation with other women and I point was given for women jointly participating with men.

The data was collected through personal interviews using an interview schedule developed for the purpose at the national level for project. The schedule consisted of eight post harvest operations regarding which the response was sought

from the respondents who were the female heads to the selected families. Response was sought for participation pattern that was, independent participation, their participation along with male members of the family or participation along with female members.

Scoring: To study the participation profile the participation was further classified and scored.

Statistical Analysis: The data was analyzed using numbers and percentages**.** The percentages were worked out using the number of women participating in any given activity.

The mean score was calculated using the following formula:

$$\text{Mean score} = \frac{\text{Score obtained per activity (From the number of participant in that activity)}}{\text{No of participants in that activity (n)}}$$

RESULTS AND DISCUSSION

The data has been discussed zone wise and in comparison as follows.

Sub-Mountainous Undulating Zone (Zone 1): The participation of women of sub-mountainous zone of Punjab in post harvest activity as revealed in the Table 1 show that majority of the women that is 65.4 percent and 52.5 per cent cleaned, dried and stored the grains respectively with other women pointing towards a very significant role played by women. Independent participation by 42.2 per cent in drying and storage and 21.6 per cent in cleaning is also an indicator of a large number of women participating in this activity. However the participation was very low in marketing of produce.

The joint contribution of women in threshing 27.93 percent and dehusking (22.2 per cent), makes these operations women centered although 70.0 per cent of them were joined by man. Goyal et.al. (2003) in study conducted on participation profile of rural women in Balachaur and Saroya blocks of Nawanshahr districts of Punjab also found that farm women were participating in winnowing, cleaning of grains and storage. This district being located in the sub-mountaineous zone reflects on the important role being played by women in these post harvest activities.

A significant role of women in post harvesting in sub-mountainous terrain can be attributed to the fact that the land holdings being small, led men folk to seek employment outside the villages. They come home during the peak season of sowing and harvesting. They sell the produce in the market and leave the post harvest operations to be performed by women. Men perform some post

Table 1: Participation profile of women in sub-mountainous undulating zone (Zone 1)

Activities		*Type of participation (% of respondents)*		
		Joint with men	*Joint with women*	*Independent*
Threshing	(n=537)	67.00	27.93	4.47
Dehusking	(n=494)	74.90	22.27	2.83
Cleaning	(n=568)	12.85	65.49	21.65
Shelling	(n=394)	95.94	2.79	1.27
Grading	(n=394)	95.94	2.79	1.27
Drying and Storage	(n=558)	5.20	52.51	42.29
Parboiling/processing	(n=367)	96.73	2.18	1.09
Marketing	(n=474)	97.05	2.32	0.63

Table 2: Participation profile of women in undulating plain zone (Zone 2)

Activities		*Type of participation (% of respondents)*		
		Joint with men	*Joint with women*	*Independent*
Threshing	(n=464)	93.75	6.03	0.22
Dehusking	(n=492)	74.80	25.00	0.20
Cleaning	(n=500)	62.20	37.60	0.20
Shelling	(n=475)	90.74	8.63	0.63
Grading	(n=475)	90.74	8.63	0.63
Drying and Storage	(n=513)	2.92	74.66	22.42
Parboiling/processing	(n=470)	78.09	8.94	12.98
Marketing	(n=467)	99.36	0.00	0.64

harvest operations jointly with women as shelling, grading before taking the produce to the market.

Undulating Plain Zone (Zone 2): The data given in Table 2 reveals that majority of the rural women in zone 2 dried and stored the grains with the help of other women (74.6 %) who are usually the members of their own family or hired help. Cleaning and dehusking was also jointly done with other women by 37.6 and 25.0 per cent respectively. Independent participation of (22.4%) women in drying and storage points towards significant role of women in this post harvest activity. Marketing of produce was done mainly with male members and same was the case in threshing. As in case of zone 1, the men work with women on the produce to grade and shell the produce before taking it to the market and leave the rest to the women in the family.

Central Plain Zone (Zone 3): A trend similar to that of zone 2 can be observed in case of drying, storage and cleaning of produce with high percentage of participation of women independently or jointly with other women in these operations. Women did not perform marketing, shelling, grading and even processing operations independently or with other women, which is evident from a high percentage (98.8, 96.8, 96.8 and 95.9 % respectively) of them working jointly with men. (Table 3)

Very less participation in post harvest operations by women can be attributed to highest level of mechanization, cropping pattern (majority following paddy-wheat rotation) and involvement of women in other activities in this developed zone of Punjab.

Western Plain Zone (Zone 4): The data on post harvest operations in zone 4 reveal that women dried and stored grains with the help of other women (75.8 %) whereas 14.3 per cent worked independently (Table 4). Cleaning and threshing were done by 25.1 per cent and 15.5 percent women with other females. Sangwan et al. (1990) reported that storage of farm produce was the major activity performed by majority of the farm women besides threshing, winnowing and cleaning of grains. Higher percentage of women (more than 95.0 %) worked with men in dehusking, shelling and grading. This difference in comparison to zone 3 can be due to varied cropping pattern, physical and demographic differences. The participation in processing and marketing of produce was low in this zone too.

Western zone (Zone 5): The data from zone 5 related to post harvest activities depict a very high percentage of women (87.1%) involved in drying and storage, which leaves no room for participation of men in this operation. In all the remaining activities, majority of the women

Table 3: Participation profile of women in central plain zone (Zone 3)

Activities		*Type of participation (% of respondents)*		
		Joint with men	*Joint with women*	*Independent*
Threshing	(n=462)	93.94	5.19	0.87
Dehusking	(n=467)	86.72	12.42	0.86
Cleaning	(n=494)	68.62	28.34	3.04
Shelling	(n=449)	96.88	2.90	0.22
Grading	(n=449)	96.88	2.90	0.22
Drying and Storage	(n=522)	6.90	61.69	31.42
Parboiling/processing	(n=445)	95.96	2.25	1.80
Marketing	(n=450)	98.89	1.11	0.00

Table 4: Participation profile of women in western plain zone (Zone 4)

Activities		*Type of participation (% of respondents)*		
		Joint with men	*Joint with women*	*Independent*
Threshing	(n=587)	84.50	15.50	0
Dehusking	(n=585)	95.90	4.10	0
Cleaning	(n=592)	72.64	26.18	1.18
Shelling	(n=583)	96.40	3.43	0.17
Grading	(n=583)	96.40	3.43	0.17
Drying and Storage	(n=592)	9.97	75.68	14.36
Parboiling/processing	(n=552)	99.82	0.18	0
Marketing	(n=587)	100.00	0.00	0

worked jointly with men. Some contributions of women in cleaning are visible from the figures which reveal that 26.1 percent of them were working jointly with females in this activity (Table 5). However, marketing of the produce was the sole domain of the men folk.

Zone Wise Comparison between Participation of Women: The comparative analysis of women in post harvest activities between five zones of Punjab reveals that drying, storage and cleaning of grains is exclusively performed by majority of the women in all the zones with highest mean score of 2.21 in zone 1 and lowest of 1.96 in zone 3. The lowest scores for processing and marketing indicate a lesser participation of women in these operations.(Table 6) .The growing of maize and bajra in first and cotton in fourth zone makes threshing a significant operational area for participation which attained lower ranking in other zones.

Activity wise analysis reveal that threshing, cleaning and drying/storage scored highest in zone whereas dehusking, processing and marketing score was highest in zone 2 indicating a more of involvement of women in zone 2 in this otherwise male centered activity as compared to other zones. Similar findings were also reported by Kaur (1996) from a study conducted in selected agro-climatic zones of Punjab. This was mainly due to majority of men folk working outside the village thus more number of women involved in post harvest operations.

The mean score (Table 6) reveal that the participation of women in post harvest activity is highest in zone 4 (Mean score=1.17) and zone 2 (Mean score =1.16) followed by zone 2 (Mean score =0.15) and least in zone 3 (Mean score =0.98). This can be mainly due to the fact that crops grown in western plain, sub-mountainous undulating and undulating plain zones require post harvest operations, which can be handled by women.

CONCLUSIONS

Women play an important role in post harvest operations especially in drying, storage and cleaning of grains in all the zones proving that they are a major contributor to the family food and economic security. Their participation was however low in processing and marketing activities. The variations in participation pattern between zones can be attributed to difference in cropping , socio- personal and overall development pattern of the zone.

RECOMMENDATIONS

The high level of participation of women in

Table 5: Participation profile of women in western zone (Zone 5)

Activities		*Type of participation (% of respondents)*		
		Joint with men	*Joint with women*	*Independent*
Threshing	(n=583)	98.80	1.03	0.17
Dehusking	(n=585)	97.61	2.22	0.17
Cleaning	(n=638)	77.59	17.08	5.33
Shelling	(n=578)	94.81	2.94	2.25
Grading	(n=578)	94.81	2.94	2.25
Drying and Storage	(n=644)	1.24	87.11	11.65
Parboiling/processing	(n=569)	99.30	0.35	0.35
Marketing	(n=580)	100.00	0.00	0.00

Table 6: Zone wise comparison between participation of women in post harvest

Activities	*Zone 1*		*Zone 2*		*Zone 3*		*Zone 4*		*Zone 5*	
	Mean	*Rank*	*Mean*	*Rank*	*Mean*	*Rank*	*Mean*	*Rank*	*Mean*	*Rank*
Threshing	1.23	III	0.89	VII	0.82	IV	1.13	III	0.91	VI
Dehusking	1.05	IV	1.12	IV	0.89	III	1.02	IV	0.92	V
Cleaning	1.98	II	1.25	II	1.11	II	1.27	II	1.25	II
Shelling	0.69	VI	0.95	V	0.77	VI	1.01	V	0.96	III
Grading	0.69	VI	0.95	V	0.77	VI	1.01	V	0.96	III
Drying and storage	2.21	I	2.04	I	1.96	I	2.02	I	2.08	I
Parboiling/ processing	0.64	VIII	1.15	III	0.79	V	0.92	VIII	0.88	VIII
Marketing	0.82	V	0.86	VIII	0.76	VIII	0.98	VII	0.89	VII

activities like drying, storage and cleaning of grains makes it necessary to lay stress on transfer of technical know how on these aspects to women. The technical guidance will help in enhancement of their capabilities and capacities which in turn will lead to reduction in losses during storage. With more and more men taking up additional income generating activities along with farming, the women should be made efficient in handling those other post harvest activities independently in which they work jointly with men. This will enable women to play pro-active role in post harvest operations.

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