

Comparative analysis of role performed by rural women of Assam in Post-harvest management

■ M.B. Deka, Rekha Moni Saikia and Sangeeta Bora Saikia

Department of Extension Education, College of Home Science, Assam Agricultural University, JORHAT (ASSAM) INDIA
(Email: manoshi_d@rediffmail.com)

ARTICLE INFO :

Article history :

Received : 18.11.2011
Sent for revision : 08.01.2012
Accepted : 28.03.2012

Key words :

Post harvest management, Thrpsing,
Marketing, Storage, Food security

How to cite this Article :

Deka, M.B., Saikia, Rekha Moni and Saikia, Sangeeta Bora (2012). Comparative analysis of role performed by rural women of Assam in Post-harvest management, *Adv. Res. J. Soc. Sci.*, **3** (1) : 10 - 13.

ABSTRACT

Post harvest operations form 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 participation pattern of farm women in post harvest activities, an attempt was made under extension component of AICRP-on Home Science. The study was conducted in six agro-climatic zones of Assam, covering a sample size of 3000 farm women belonging to five different land holding categories. The findings clearly indicated a distinct participation of women in most of the selected activities. Though the result varied between zones but the women contributed in drying, cleaning and storage in all the zones. Least participation was reported in threshing and marketing. Study points towards a need to technically empower women in post harvest know how so as to reduce post harvest losses during storage.

INTRODUCTION

Agriculture is the most important activity in Assam. Women in rural Assam play major role in shaping the country's economy through their active participation in agriculture. At present the women work force in agriculture and allied sectors is estimated at about 61 million, which amounts to about 30 per cent of the total rural workers in the country. They actively participate in different crop production and post harvest activities such as seeding, uprooting, transplanting weeding, fertilizer application, plant protection, harvesting, threshing, and processing etc. However, most of the agricultural technologies used to increase the productivity of agricultural crops have traditionally been developed by considering men farmers as the main target audience than the women farmers. But women in rural areas produce over half of the food needed by the family, bear more responsibilities in household security

and its well being through their income generating activities. As a result women shoulder the bulk of both productive and reproductive works of the rural households and obliged to work longer working hours than their male counter parts (Hedija and Bezabih, 2003). In addition to traditional activities such as child bearing and rearing, cooking, collecting water and fuel wood etc., they are contributing more than 50 per cent of the total labour force in crop production and post harvest operations. Therefore the present study was undertaken with the following objectives : to study the zone wise participation profile of women in post harvest activities and to suggest recommendations for achieving food security.

METHODS

The state of Assam is divided in to six agro-climatic zones. For the purpose of the study, all the agro-climatic zones namely,

Upper Brahmaputra Valley Zone(UBVZ), Central Brahmaputra Valley Zone (CBVZ),North Bank Plain Zone (NBPZ), Hill Zone (HZ) , Barak Valley Zone (BVZ) and Lower Brahmaputra Valley Zone (LBVZ)were selected. The farmers were categorized into five land holding categories as per the state norms. From each zones one-two district were selected purposively which were further represented by two blocks from each districts and two villages from each block. 3000 farm families were selected through proportionate random sampling technique to represent five distinct land holding categories .One active female member from each family was included as the respondent. The participation pattern was studied in terms of independent participation , joint participation with female members and joint participation with male members, with a scoring of 3,2,and 1 assigned, respectively, to calculate the mean score of participation. Eight post harvest operations namely, threshing, dehusking, cleaning, shelling, grading, drying and storage, processing and marketing were included for the present study.

Data were collected through personal interview using the interview schedule developed at the national level for the purpose.

OBSERVATIONS AND ANALYSIS

The data have been presented according to different zones and in comparison among the zones.

Upper Brahmaputra Valley Zone (UBVZ):

The data on participation in post harvest activities for upper Brahmaputra Valley Zone is presented in Table 1, which revealed that 70 per cent cleaned paddy independently where as 22 per cent performed cleaning jointly with men. Grading was performed independently by 57 per cent and an equal percentage (57%) dehusked and processed independently. The independent participation in this zone may be attributed to the fact that the main crop of the study area is rice and Titabor from where the data were collected, is considered to be rice bowl of Assam.

Activities	Type of participation (% of respondents)		
	Joint with men	Joint with women	Independent
Threshing	32.00	53.00	15.00
Dehusking	31.00	11.00	57.00
Cleaning	22.00	8.00	70.00
Shelling	28.00	9.00	63.00
Grading	27.00	15.00	57.00
Drying and storage	23.00	10.00	67.00
Parboiling/processing	42.00	5.00	53.00
Marketing	80.00	12.00	7.00

North Bank Plain Zone(NBVZ)

The percentage distribution of participation of rural women in post harvest activities of North Bank Plain Zone is presented in Table 2. Independent participation by the rural women was highest in cleaning (37%) followed by drying and storage (31%). A very high percentage (80%) of the rural women participated jointly with male in marketing followed by threshing (62%.)

Activities	Type of participation (% of respondents)		
	Joint with men	Joint with women	Independent
Threshing	62.00	23.00	15.00
Dehusking	56.00	15.00	29.00
Cleaning	49.00	14.00	37.00
Shelling	55.00	17.00	29.00
Grading	61.00	15.00	24.00
Drying and storage	50.00	19.00	31.00
Parboiling/processing	55.00	16.00	30.00
Marketing	80.00	14.00	6.00

Central Brahmaputra Valley Zone :

The data given in Table 3, reveal that majority of the women in Central Brahmaputra Valley Zone dried and stored grains with men by 41 per cent and with women by 30 per cent who were their family members in most of the cases and hired helpers in few cases. Independent participation was in shelling (38%), cleaning (37%) and grading (37%). Significant role of women in post harvest activities though dehusking, cleaning, grading and processing was also done jointly with male members in this zone. An equal percentage (71%) performed marketing and threshing with their male counterparts.

Activities	Type of participation (% of respondents)		
	Joint with men	Joint with women	Independent
Threshing	71.00	21.00	8.00
Dehusking	45.00	23.00	32.00
Cleaning	44.00	18.00	37.00
Shelling	43.00	19.00	38.00
Grading	44.00	19.00	37.00
Drying and storage	41.00	30.00	29.00
Parboiling/ processing	44.00	28.00	29.00
Marketing	71.00	15.00	14.00

Lower Brahmaputra Valley Zone:

A trend similar to that of Central Brahmaputra Valley Zone

can be seen for drying and grading of grains for women of Lower Brahmaputra Valley Zone (Table 4). However, cleaning and shelling were performed independently by equal percentage (43%) of women of this zone. Only a small percentage performed marketing. One fourth to less than one fourth women performed dehusking and processing independently. Very less percentage of participation in post harvest operations can be attributed to the level of mechanization and cropping pattern followed in this zone.

Table 4 : Participation pattern of women in Lower Brahmaputra Valley Zone (n=500)

Activities	Type of participation (% of respondents)		
	Joint with men	Joint with women	Independent
Threshing	76.00	15.00	6.00
Dehusking	66.00	11.00	23.00
Cleaning	48.00	9.00	43.00
Shelling	50.00	7.00	43.00
Grading	58.00	7.00	35.00
Drying and storage	55.00	8.00	37.00
Parboiling /processing	72.00	3.00	25.00
Marketing	86.00	4.00	11.00

Barak Valley Zone:

The data (Table 5) on post harvest operations in Barak Valley Zone reveal that women of this zone dried and stored grains either independently or jointly with men of their own family. Only a small percentage performed other post harvest operations independently.

Table 5 : Participation pattern of women in Barak Valley Zone (n=500)

Activities	Type of participation (% of respondents)		
	Joint with men	Joint with women	Independent
Threshing	95.00	1.00	4.00
Dehusking	76.00	2.00	22.00
Cleaning	65.00	2.00	33.00
Shelling	67.00	2.00	31.00
Grading	71.00	3.00	26.00
Drying and storage	74.00	3.00	23.00
Parboiling/ processing	82.00	2.00	16.00
Marketing	94.00	2.00	4.00

Independent participation was very low (4%) in threshing and marketing. In all the remaining activities, majority of women worked jointly with men (Table 5). The findings may be attributed to the fact of prevailing social and religious custom of the zone.

Hill Zone:

In case of hill zone, the participation pattern was totally different from the other zones of the state and the data are presented in Table 6. The role of women in all the post harvest operation was very strong as drying and storage were performed independently by 74 per cent and 71 per cent in shelling grading cleaned, shelled and processing independently.

Table 6 : Participation pattern of women in hill zone (n=500)

Activities	Type of participation (% of respondents)		
	Joint with men	Joint with women	Independent
Threshing	73.00	17.00	10.00
Dehusking	34.00	13.00	54.00
Cleaning	20.00	11.00	68.00
Shelling	18.00	10.00	71.00
Grading	20.00	9.00	71.00
Drying and storage	19.00	7.00	74.00
Parboiling/ processing	22.00	7.00	71.00
Marketing	40.00	32.00	28.00

This significant contribution of this zone can be attributed to the fact that the land holdings being small, lead men folk to seek employment outside the villages. They come and thresh the produce, sale jointly with their counterparts and leave the rest of the post harvest operations to the women of the house.

Comparison of participation in post harvest activities zone wise:

The comparative analysis of women in post harvest activities among six agro-climatic zones of Assam reveals that cleaning, drying and storage of grains were exclusively performed by majority of women in all the zones with highest mean score 2.47 in Upper Brahmaputra Valley Zone, it ranked I in North Bank Plain Zone, Lower Brahmaputra Valley Zone, Barak Valley Zone too mean score 1.88, 1.94 and 1.67, respectively. The lower score in threshing and marketing indicated lesser participation of women in these activities.

Activity wise analysis revealed that drying and storage ranked II in North Bank Plain Zone and Upper Brahmaputra Valley Zone whereas shelling ranked II in Lower Brahmaputra Valley Zone , Barak Valley Zone and Hill Zone, which indicated more involvement of women in these activities in these three zones.

The mean score presented in Table 7 revealed that the participation of women in post harvest activities was highest in hill zone, mean score ranging from 1.35 to 2.55 followed by Upper Brahmaputra Valley Zone and is least in Barak valley zone, scores ranging from 1.09 to 1.67. This can be mainly due to the fact that of customs and socio-personal characteristics and overall developmental pattern of the zones.

Post harvest activities	Zone I (UBVZ)		Zone II (NBPZ)		Zone III (CBVZ)		Zone IV (LBVZ)		Zone V (BVZ)		Zone VI (HZ)	
	\bar{X}	Rank	\bar{X}	Rank	\bar{X}	Rank	\bar{X}	Rank	\bar{X}	Rank	\bar{X}	Rank
Threshing	1.83	VII	1.53	VII	1.36	VIII	1.31	VII	1.09	VII	1.35	VIII
Dehusking	2.26	V	1.73	V	1.83	V	1.57	V	1.46	V	2.18	VI
Cleaning	2.47	I	1.88	I	1.92	II	1.94	I	1.67	I	2.47	V
Shelling	2.35	III	1.74	IV	1.93	I	1.92	II	1.64	II	2.53	II
Grading	2.30	IV	1.63	VI	1.91	III	1.76	IV	1.54	III	2.51	III
Drying and storage	2.43	II	1.81	II	1.87	IV	1.80	III	1.48	IV	2.55	I
Parboiling/processing	2.11	VI	1.75	III	1.83	V	1.52	VI	1.33	VI	2.48	IV
Marketing	1.26	VIII	1.27	VIII	1.41	VII	1.24	VIII	1.09	VII	1.87	VII

Conclusion:

Women have extensive work loads with dual responsibility for farm and household production. They play an important role in post harvest specially in drying, storage and cleaning of grains. Incase of zone wise comparison in post harvest activities, it was reflected that participation in cleaning ranked I in almost all the zones except in Central Brahmaputra Valley Zone where shelling ranked I and drying and storage ranked I in Hill Zone. In all the zones proving that they were the major contributor to the family for food and economic security. Their participation was however low in threshing and marketing. The variations in participation pattern between the zones can be attributed to differences in cropping pattern, socio-personal characteristics and overall developmental pattern of the zone. The multiple roles of women in agriculture specially in food storage are generally, underestimated and undervalued. By and large, they have remained as invisible hands. But women play a significant role in grain storage. Therefore, it becomes essential to transfer appropriate food storage technologies to women at grassroot level so that they can adopt these for their continued use.

Recommendations for achieving food security:

- The high level participation of women in activities like drying, storage and cleaning of grains make it necessary to lay stress on transfer of technical know-how on these aspects to women.
- Rural women who are contributing to the rural economy should be supported by Govt and other policy makers to make them efficient in handling those other post harvest activities independently in which they work jointly with men.
- For a balance and sustainable growth women's role in the developmental process and activities should be recognized and should be adequately supported as well to achieve gender democracy and guarantee food security.
- Overall, there is a real need to take more holistic view of rice production system and offer a frame work for policy makers and planners to better understand the dynamics

- of operating at household and community level
- Post-harvest technology has to develop in consonance with the needs of each society to stimulate agricultural production; prevent post-harvest losses, improve nutrition and add value to the products.
- In this process of developing of post harvest technology and its purposeful use needs an inter-disciplinary and multi-dimensional approach which must include scientific creativity, technological innovations, commercial entrepreneurship and institutions capable of inter-disciplinary R. and D, all of which must respond in an integrated manner to the developmental needs.

It is only in this way Govt. and their partners will be able to support efforts to improve rice and other crop production in ways that are both sustainable and meet the food security needs of all the people enabling the women to play pro-active role in post harvest activities.

REFERENCES

- Anonymous (2007-08). Annual Report All India Coordinated Research Project on Home Science-FRM component. Punjab Agricultural University, LUDHIANA, PUNJAB (India).
- Deshpande, S. and Sethi, S. (2009). Women Entrepreneurship in India (Problems, Solutions and future prospects of Development), *South Samikha aur Mulayankan : Internat. Res. J.*, 9-10 (11) : 14-17.
- Haealkar, S., Budihal, R., Shivalli, R. and Biradar, N. (2004). Appropriate technologies for farm women in agriculture. Paper published in proceedings of national conference on women in development processes held at Sant Harchand Singh Longowal, CIET, Longowal From March 15-16, 2004, pp. 154.
- Kaur, Harjit (2004). Women and Society : changing roles and responsibilities. Paper published in proceedings of National conference on women in development processess held at Sant Harchand Singh Longowal, CIET, Longowal From March 15-16, 2004, pp. 216.
- Kumari, V. (1998). Socio economic status of women in India. *Southern Economist*, 37 : 3-4.