

## Status of farm women of Assam as clientele of the agricultural extension services

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**ABSTRACT :** A woman is the nucleus of the family, she share abundant responsibilities to perform wide spectrum of duties both at home and outside the home. She plays a significant role in agricultural development and allied fields. Despite their importance to agricultural production, agricultural development programmes are usually targeted at men. Women are generally by-passed in development efforts. A study was conducted in three agro-climatic zones of Assam to study the socio-economic status of farm women and to find out the status of farm women as clientele of the agricultural extension services. A multistage purposive cum random sampling design was followed. Altogether 1,200 farm women were included as sample of respondents. Data were collected with the help of structured interview schedule. 52.60 per cent of farm women belonged to low socio-economic status. 55.17 per cent of farm women contributed labour independently in cleaning. On an average women spent 13-15 hours a day in farm and domestic activities. 41.67 per cent of farm women had attended training on fruits and vegetables preservation. Lack of awareness of the extension programme was the first most importance problems faced by farm women for attending extension training and ranked as I. Management of pest and diseases was the first most important training need areas of farm women and ranked as I. Lack of knowledge on plant protection was the first most important problems faced by farm women in cultivation of rice and ranked as I. It can be conclude that the status of farm as clientele of the agricultural extension service was not satisfactory.

**KEY WORDS :** Status, Farm women, Agricultural extension service

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### INTRODUCTION

Women constitute nearly one half of the world's population having enormous potential and they are the builder and moulder of any nation's destiny. In the history

of human development, women were as important as man. In fact, the status, employment and work performed by women in society is the indicator of a nation's overall progress. Without the participation of women in national

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activities, the social, economical or political progress of a country will stagnate. A woman is the nucleus of the family, she share abundant responsibilities to perform wide spectrum of duties both at home and outside the home. She takes care of the children and members of the family, their health, orientation and education and attends to various income generation activities. She manages all the household matters, looks after the family assets, produce agricultural crops, manages livestock and works for almost 14-16 hours a day.

Women are the backbone of agricultural workforce also and make essential contributions to the agricultural and rural economies in all developing countries. Their roles vary considerably between and within regions and are changing rapidly in many parts of the world, where economic and social forces are transforming the agricultural sector. Compared to men, women are generally involved in a wider range in crops, livestock and agro-based activities. Many of these activities are not defined as “economically active employment” in national accounts but they are essential to the well-being of rural households.

Women are usually employed in most difficult field operations like sowing, transplanting, weeding, intercultural operations, harvesting, threshing and agro- processing. It can be seen that mechanization and modernization of agriculture have led to increased agricultural productivity and decreased drudgery, but mechanization has occurred for activities usually carried out by men, women continue to toil in labour intensive chores.

The crucial importance of women’s contribution to food security is widely recognized. Yet they faced with a number of constraints for participation in agriculture such as, there are (i) discrimination in wages, low wages for women, (ii) gender based technology, training and extension services, (iii) women have limited access to modern technical *viz.*, credit, training and to other facilities etc. (Rath *et al.*, 2007). Thus the important contribution made by women of Assam in agriculture, provides the necessary basis and justification for the present study with the following objectives to study the socio-economic status of farm women and to findout the status of farm women as clientele of the agricultural extension services

## METHODOLOGY

### Sample and sampling procedure :

The study was conducted in three agro-climatic

zones of Assam state in India : Upper Brahmaputra Valley Zone, Central Brahmaputra Valley Zone and North Bank Plain Zone. A multistage purposive cum- random sampling design was followed. From each selected agro-climatic zone two districts (total six) were selected purposively. Again from each selected district one sub-division (total six) were selected purposively considering the involvement of farm women in agricultural activities.

From each selected sub-division two blocks total (twelve) were selected purposively. From each selected block four villages were selected randomly. Thus 48 villages were selected for carrying out the study. From each selected village 25 farm women (total 1,200) were selected randomly.

### Variable and its measurements :

#### *Socio-economic status :*

This refers to the position of the respondent in society and was determined by various social and economic variables such as caste, land holding, education, type of house, main family occupation, family type, family size, material possession and organizational membership of farm women. The socio-economic status of farm women were measured by the socio-economic scale developed by (Trivedi, 1963) with slight modification. On the basis of score obtained by the farm women they were categorized into the 3- three categories: Low with score range below X- Sd, medium with X-Sd to X+Sd and high with above X+Sd.

#### *Status of farm women :*

It is operationally defined in the present study as the position of farm women within and outside home. The individual factors namely participation in different farm and non-farm activities, time utilization pattern, type of training attended, problem faced in attending training, need of agricultural advice and problems faced in cultivation of rice are considered for measuring this variable.

#### *Statistical analysis :*

A pre-tested interview schedule was used for getting the complete and desired information. The collected data were coded, tabulated and analyzed by using appropriate tests and techniques. The statistical techniques along with their uses were:

#### *Percentage:*

It is a fraction expressed with 100 as its

denominator. It is used to any set of data for comparison.

#### Mean:

It is the arithmetic average and was used to measure the type of the observation as a whole. The mean for all the readings were worked out as mentioned below.

$$\text{Mean } \bar{X} = \frac{\sum X}{n}$$

where  $\sum X$  = Summation of item values

N = Number of item

## OBSERVATION AND ASSESSMENT

The results obtained from the present investigation are summarized below :

### Socio-economic status of farm women :

Majority 55.08 per cent of farm women of the study areas belonged to middle age group *i.e.* 30-40 yrs. Large majority (91.66%) of farm women were married. 44.75 per cent of farm women belonged to general caste. 41.33 per cent of farm women belonged to the category of marginal farmer. 38.50 per cent of farm women had education upto middle school. 46.42 per cent farm women had mixed type of house. 46.50 per cent of the farm women's family occupation was farming. Majority (77.89%) of farm women belonged to nuclear family. The data reveals that majority (63.95%) of farm women belonged to small family. Cent per cent of farm families possessed hoe and hand tools, followed by desi plough (99.08%) and bullock (98.25%). Majority 60.91 per cent

**Table 1 : Distribution of farm women according to their participation in both farm and non-farm activities (n=1200)**

Sr. No.	Activities	Types of participation					
		Independent participation		Joint participation		No participation	
		f	%	f	%	f	%
<b>Farm based activities</b>							
1.	Land preparation	2	0.16	184	15.33	1014	84.50
2.	Seed treatment	7	0.58	109	9.08	1084	90.33
3	Sowing of seed	234	19.50	610	50.83	356	29.67
4	Nursery management	338	28.17	618	51.50	244	20.33
5.	Uprooting of seedling	562	46.83	324	27.00	314	26.17
6.	Transplanting	661	55.08	522	43.50	17	1.42
7.	Application of manure and fertilizer	2	0.16	102	8.50	1096	91.33
8.	Weeding	5	0.42	98	8.17	1097	91.42
9.	Irrigation and water management	-	-	56	4.60	1144	95.33
10.	Application of pesticides	6	0.50	158	13.17	1036	86.33
11.	Harvesting	657	54.75	532	44.33	11	0.92
<b>Post harvest activities</b>							
12.	Threshing	28	2.33	442	39.83	730	60.83
13.	Winnowing	613	51.08	424	35.33	167	13.91
14.	Cleaning	662	55.17	452	37.66	86	7.17
15.	Drying of grain	602	50.16	467	38.91	131	10.92
16.	Retention of grain for consumption	123	10.25	824	68.66	253	21.08
17.	Retention of grain for seed.	87	7.25	623	51.92	490	40.83
18.	Storage of grain	81	6.75	777	64.75	342	28.50
19.	Packaging of produce for marketing	69	5.75	503	41.91	628	52.34
<b>Non-farm activities</b>							
20.	Food processing	723	60.25	213	17.75	264	22.00
21.	Cooking	1030	85.83	152	12.67	18	1.50
22.	Fetching of water	757	63.08	303	25.25	140	11.67
23.	Care of children/elderly	832	69.33	360	30.00	8	0.66
24.	Maintenance of the house	681	56.75	524	43.66	25	2.08
25.	Weaving	1050	87.50	110	9.17	40	3.33
26.	Preservation of fruits and vegetables	618	51.50	225	18.75	357	29.75
27.	Collection of fuel wood	697	58.08	443	36.92	60	5.00

of farm families possesses two wheelers. 87.08 per cent of farm families possess mobile followed by television (70.42%). Large majority (95.42%) of farm families possess traditional chullah. 64.09 per cent of farm women were member of one organization. 52.60 per cent of farm women belonged to low socio-economic status.

**Participation of farm women in different farm and non-farm activities :**

The division of labour in agricultural activities should be taken as the starting point for determining who should participate in agricultural extension training. It is generally found that women and men are responsible for different agricultural productive activities. Their roles may differ by type of activity, such as crop, livestock and fishery production, as well as by stage of production such as land preparation, planting, weeding, harvesting, crop processing, marketing and so on.

The point of the activity profile is to produce a clear picture on “who does what”. Which agricultural activities are the predominant responsibility of women? Which activities are carried out predominantly by men or by both? Agriculture calendars are one simple way of documenting the roles of both women and men for different crops and other productive activities, highlighting seasonal patterns as well.

The participation of farm women both in farm and non-farm activities is presented in Table 1.

The data presented in Table 1 indicates that more than fifty per cent of farm women contributed labour independently in areas such as cleaning (55.17%), transplanting (55.08%), harvesting (54.75%), winnowing (51.08%) and drying of grain (50.16%) (Refer Plate 1 to 10).

Furthermore, joint participation were observed in retention of grain for consumption (68.66%), storage of grain (64.75%), retention of grain for seeds (51.92%) and nursery management (51.50%).

These findings are in agreement with Bordoloi (1997); Borkakoty (1999); Gogoi and Bhowmick (2003) and Deka *et al.* (2010). It stated that women were mostly involved in field works such as transplanting, harvesting and post harvest activities that does not require great physical efforts but adequate care and patience is highly required.

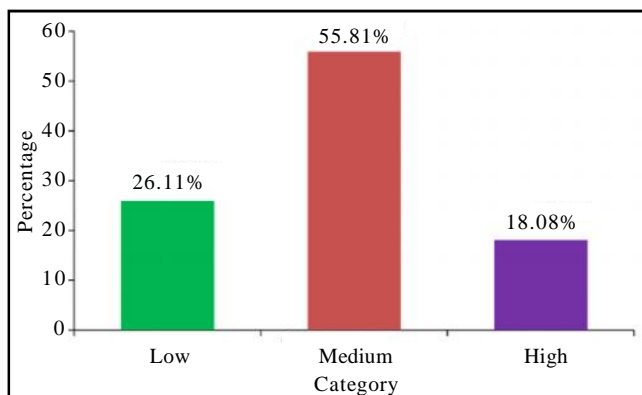
The table further shows that majority of farm women independently participated in weaving (87.50%), cooking (85.83%), care of children/elderly (69.33%),

food processing (60.25%), collection of fuel wood (58.08%), maintenance of the house (56.75%) and preservation of fruits and vegetables (51.50%) (Refer Plate 13 to 14). Again the Table 1 reveals that 50.25 per cent of farm women participate jointly in fetching water, 43.66 per cent in maintenance of the house, 36.92 per cent in collection of fuel wood, 30.00 per cent in care of children/elderly and 18.75 per cent in preservation of fruits and vegetables.

From the Table 1 it is seen that women and men are not only farmers; they are also wives/ husbands and mothers/fathers with responsibilities for both subsistence production and household maintenance These are particularly time-consuming and are often carried out with traditional tools and processes. These responsibilities also take time and effort. In almost all cases, women work more hours per day than men. For this reason, their reproductive and domestic activities also need to be taken into account by extension planners. Moreover, poor access to extension services by the farm women could be due to lack of proper attention to multiple roles performed by them at the time of planning extension programme for the farm women.

**Overall extent of participation of farm women in farm and non-farm activities :**

The Fig. 1 reveals that majority (55.81%) of farm women had medium level of participation followed by low (26.11%) and high level participation (18.08%) in farm and non-farm activities. This finding is in conformity with finding of Cherian *et al.* (2001) and Chaudhary and Singh (2003). The medium level participation of farm women in farm activities might be due to prevailing cultural practices of Assam.



**Fig. 1 : Distribution of farm women according to overall participation in farm and non-farm activities**

### Time utilization pattern of farm women :

Average number of hours, spent daily by farm women in farm and home related activities are presented in Table 2. In peak period farm women spent an average of 4:27 hours on farm activities followed by 3: 7 hours in kitchen, 3 hours in social and recreational activities followed by 2: 6 hours on kitchen work; 2:5 hours on entrepreneurial and farm related activities, 2 hours on house keeping in slack period. Further, it reveals that farm women had more leisure time in slack period. This is in agreement with the findings of Suman (1998) and Anonymous (2001).

It is seen that women perform more of the reproductive and domestic tasks than do men, in addition to their agricultural activities. When the time spent on farm activities was added to farm women's other responsibilities, women's working days became very long. This might be due to less access to labour saving, gender specific technologies by the farm women. This is consistent with the findings of Batish and Naurial (1998) who stated that the dual domestic and productive workload took up rural women's whole day.

### Training attended by farm women :

Table 3 shows that 41.67 per cent of farm women had attended training on fruits and vegetables preservation followed by 35.92 per cent and 29.75 per

cent on kitchen gardening and nursery raising. Further, 16.50 per cent attended training on SRI method, 10.50 per cent on floriculture. Very less per cent of farm women 9.33 per cent attended training on mushroom cultivation and on Pineapple and Banana cultivation (8.50%) .

The less percentage of attendance in farm women attended training programme might be due to lack of suitable time, overloaded work and immediate need which can support additional income. Moreover, they were not considered as a participant in agricultural training programme.

### Problem faced by farm women in attending training:

The data presented in Table 4 reveals that lack of awareness of the extension programme and lack of suitable venue for extension training /meetings were ranked I and II problems faced by the farm women for attending extension training of which mean score were 1.42 and 1.39. It is assumed that farm women might not be informed about the date and venue of extension programme. This is in line with Rao and Sarada (2006).

Further, organization of training in peak season of agriculture was ranked as III problem with mean score 1.34. In this period they were unable to attend the extension training programme for actively involved in farm activities. This finding is in agreement with Hassan (2008).

**Table 2 : Time utilization pattern of farm women**

Sr. No.	Type of work	Peak period hour/day	Slack period hour/day
1.	Farm related activities	4 : 27	2 : 5
2.	Kitchen work	3 : 7	2 : 6
3.	Family care	1 : 2	1 : 3
4.	House keeping	1 : 35	2 : 0
5.	Care of animals	2 : 48	1 : 0
6.	Entrepreneurial activities	1 : 0	2 : 5
7.	Social and leisure time	2 : 0	3 : 0
8.	Sleeping	8 : 0	9 : 10

**Table 3 : Training attended by farm women through agricultural extension**

Sr. No.	Topic	Attended (n=1200)	
		f	%
1.	Fruits and vegetable preservation	500	41.67
2.	Nursery raising	357	29.75
3.	Kitchen gardening	431	35.92
4.	Floriculture	126	10.50
5.	Pineapple and banana cultivation	102	8.50
6.	Training on SRI method	198	16.50
7.	Training on mushroom cultivation	112	9.33

The information shown on Table 4 on problems of attending training as perceived by farm women helps the extension agents for consideration at the time of organizing extension training.

**Training need areas of farm women for agricultural production :**

The objectives of a training is to develop human

resources so as to increase agricultural productivity. It provides a systematic improvement of knowledge and skill which in turn helps the trainees to function effectively and efficiently in their task on completion of the training. For success of any training one of the important factor is identification of training needs of the trainees. Some of the training needs of farm women of the study areas are presented in the Table 5.

**Table 4 : Ranking of problem faced by farm women in attending extension training**

Sr. No.	Problems	Mean score	Rank
1.	Lack of time	1.24	VI
2.	Too much household work	1.24	VI
3.	Lack of suitable venue for extension training/ meetings	1.39	II
4.	Lack of awareness of the extension programme	1.42	I
5.	Lack of incentives	1.29	IV
6.	Lack of transportation	1.17	VII
7.	Lack of importance on the subject matter of training	1.28	V
8.	Organization of training in peak season of agriculture	1.34	III
9.	Farm women are not allowed to take training from male person	0.79	VIII

**Table 5 : Preferences in rank of training need areas identified by farm women**

Sr. No.	Training areas for extension training	Mean score	Rank
1.	Preparation of land	1.09	XII
2.	Fertility of soil for cultivation	1.13	XI
3.	Selection of good varieties of seeds	1.78	VII
4.	Selection and application of fertilizers	1.88	V
5.	Management of pest and diseases	1.98	I
6.	Process of weed control	1.89	IV
7.	Harvesting techniques	1.23	X
8.	Improved method of storage of grain	1.47	IX
9.	Improved marketing system	1.54	VIII
10.	Credit advice	1.84	VI
11.	Production of vermin compost	1.96	II
12.	Method of organic farming	1.91	III

**Table 6 : Ranking of problem faced by farm women in cultivation of rice**

Sr. No.	Problem area	Mean score	Rank
1.	Less amount of cultivated land	1.03	XII
2.	Shortage of labour in the farm land	1.13	XI
3.	Lack of access to credit	1.77	VI
4.	Lack of knowledge on seed storage	1.79	V
5.	Lack of irrigation facility	1.89	II
6.	Lack of money for buying farm inputs	1.56	VIII
7.	High cost of fertilizers/ chemicals	1.42	IX
8.	Lack of knowledge on plant protection	1.90	I
9.	Lack of need based training	1.87	III
10.	Lack of women specific technology	1.82	IV
11.	Untimely supply of farm inputs	1.68	VII
12.	Lack of knowledge about processing	1.23	X

Table 5 reveals that management of pest and diseases ranked I with mean score 1.98. Farm women preferred this topic for training, may be due to the fact that they might have faced the problem of pest and diseases in their field and unable to control it, due to lack of knowledge on it.

Further, the Table 5 shows that production of vermin-compost ranked II (1.96) and method of organic farming ranked III (1.91). The farm women were interested to take training in these two topics, may be they were aware of importance of organic fertilizer and organic farming.

It was observed from the table that process of weed control ranked IV (1.89) and selection and application of fertilizers was ranked V (1.88). It may be due to fact that farm women might have no knowledge on control of weed and selection and application of fertilizers. This is in line with Hira *et al.* (1994) and Das (1995).

These findings could be useful for extension planners and implementers when setting up programmes targeting farm women. Training needs of farm women in different agro-climatic zones should be studied in order to enhance curriculum development and training methodologies.

#### **Problem faced by farm women in cultivation of rice:**

The data in the Table 6 reveals that lack of knowledge on plant protection ranked I with mean score (1.90) followed by lack of irrigation facility ranked II, lack of need based training ranked III, lack of women specific training ranked IV and lack of knowledge on seed storage ranked V with mean score (1.89), (1.87), (1.82) and (1.790).

It can be concluded that extension training programme could be planned considering the prioritized problems area perceived by the farm women in the study area. Similar finding were reported by Sinha *et al.* (1984); Das (1995) and Bharali (2003).

#### **Conclusion:**

The findings presented in this study show that farm women belong to low socio-economic status. More than fifty per cent of farm women contributed labour independently in cleaning (55.17%), transplanting (55.08%), harvesting (54.75%) and winnowing (51.08%). Joint participation were observed in retention of grain for consumption (68.66%) and storage of grain (64.75%). Majority (87.50%) of farm women independently participated in weaving and cooking (85.83%). 55.81 per cent of farm women had medium level of participation

in farm and non-farm activities. On an average women spent 13-15 hours a day in farm and domestic activities. 41.67 per cent of farm women had attended training on fruits and vegetables preservation. Lack of awareness of the extension programme, lack of suitable venue for extension training/meetings and organization of training in peak season of agriculture were the first three most importance problem faced by farm women for attending extension training and ranked as I, II and III. Management of pest and diseases, production of vermin compost and method of organic farming were the first three most important training need areas of farm women and ranked as I, II and III. Lack of knowledge on plant protection, lack of irrigation facility and lack of need based training ranked were the first three most important problem faced by farm women in cultivation of rice and ranked as I, II and III, which indicate that status of farm women as clientele of agriculture extension service was not satisfactory. Therefore, extension service should be more gender sensitive when organizing extension activities at different levels, so that women farmers have full and appropriate access to extension meetings, demonstrations, field days and other activities. A proportion of women farmers participants should be targeted in each extension activity that can specifically benefit them.

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