

Women in Agriculture: An Ecological and Socio-economic Study of Meghalaya, North East India

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ABSTRACT: Agriculture is the backbone of socio-economic development of India. Women occupies a major part of the society and contribute a remarkable part of agricultural production system in North East Region of India. Although they performed as farmers, laborers and entrepreneurs in the agrarian sector which is linked to the food security and natural resource management, they suffer inequality and discrimination of rights. Maximum of the times the customary rules and practices prevailing in rural areas creates preventive consequences for women which limits the access to the key resources such as land and credit. So, there is a need to address the significance of involvement of women in agriculture analytically for rural development which leads to economic growth of the region. The present study was conducted at Ri-Bhoi district of Meghalaya during the year 2017 and 2018 through a cross sectional study on 357 women selected randomly to study the status and involvement of women in agriculture for ecological and socio-economic development of the region. After the demographic study it is seen that the women farmers of the study area were less literate and were economically poor. Most of them are doing agriculture for their livelihood as primary occupation (69.47%) except doing their house hold activities like home management, cooking, child rearing etc. as unpaid care work. Due to lack of land ownership (94.11%) women are getting inadequate attention by many development agencies for financial assistance and other developmental activities. Some of the women of the study sites are not aware about any developmental programme and are less access to capital (55.2%), production inputs (41.44%) and new technologies (68.32 %). Due to lack of skills, land, capital and limited their labour time in economic activities due to heavy commitment to domestic chores the women farmers were lacking behind to make them self-sufficient which may otherwise be utilized for socio-economic development of the nation. It is imperative to adopt gender specific interventions and adopt women friendly strategies for empowering them.

Keywords: Women in Agriculture, Socio- economic study, Meghalaya, North East India.

INTRODUCTION

Agriculture is the most important engine of rural development with growth and poverty reduction as well as socio-economic development of North East Region of India (Bordoloi, 2021). The perspective on women's issues and gender equality has become a global concern for development of any society. Women and girls are over represented among those who are food-insecure. Gender equality can make a substantial contribution to a country's economic growth and it is the single most important determinant of food security. Worldwide, an estimated 60% of undernourished people are women or girls (Anonymous, 2007). Women are mostly engaged in unorganized sector for work and mostly they served as unpaid family labour and engaged in household-based activities of agriculture, animal husbandry, sericulture etc. The nature and extent of women's involvement in agriculture varies greatly from region to region but maximum of the areas women are involved in entire activities of agricultural production system

except ploughing (Sanjay-Swami, 2019). In organized sector also where women are employed are found as marginal and casual employment due to illiteracy, inadequacy of skills and restricted mobility. Moreover, in many cases women are paid two-third or even half of the wages earned by men in many countries including India (Anonymous, 1995). In developing countries 43 percent of the agricultural labour force is women (Doss, 2001). The women participation in agriculture is very high in rural areas of India (84%). The women participation as cultivators is about 33% and as agricultural labour is 47% (Rao, 2006). Women constitute a remarkable part of the population of North East Region of India and contribute a significant share of agricultural production system. So, it is very much important to mainstreaming women's concerns into effective agricultural and rural development policies, plans and programmes in order to ensure household and national food security and to ensure adequate livelihood for the rural women. The rural population of India is 68.84% and in Meghalaya it is 79.93% (Anonymous,

2011). Moreover, out of 29,66889 population of Meghalaya, 14,75057 numbers are (49.71%) female. As more than 71% of the population is depends on agriculture for their livelihood so, feminisation of agriculture and empowerment of rural women is very much essential for socio-economic advancement of the region. If the gender gap in agriculture could be closed it would gain significant increase in agricultural production which will lead to socio-economic development of the society. Around 20-30% yield improvement can be achieved if women had the same access to the inputs and other productive resources similar to men. Moreover, it can increase the total agricultural output by 2.5-4% in developing countries and in turn it will help to reduce the number of hungry people in the world by 12-17% (Anonymous, 1995). While highlighting the rural women's contributions to food security and natural resource management despite of inequality and discrimination, these stylized facts promote stereotypes of women as either victims or saviours which treat women as a monolithic group and provide a simplistic and even misleading basis for the design, implementation and evaluation of policies and programs to promote food security and advance gender equality (Doss *et al.*, 2018).

MATERIALS AND METHODS

A cross sectional study was conducted on 357 women selected randomly from three villages of Ri-Bhoi District of Meghalaya namely Kyrdem, Liarkhla and Kdonghulu of Bhoirymbong Block in order to study the status and role of women in agriculture for ecological and socio- economic development. Secondary data

were collected from Department of Agriculture, Meghalaya, Department of Agriculture, Ri-Bhoi, ICAR (RC) for NEH Region, Umiam, Krishi Vigyan Kendra Ri-Bhoi, District Library, different Journals, books and from internet. A survey was conducted in the study site to study the literacy rate, employment, involvement in agriculture, resources available with the women, support and assistance getting from the Government and Non-Government organization etc. The methods used were visual observation, questionnaire method and personal interview. A pre-tested questionnaire schedule was used for necessary data collection. The collected data were analysed by standard statistical tools for giving a proper conclusion of the study.

RESULTS AND DISCUSSION

The analysis of the data collected from the study site gave a clear picture about the women belonging to the Khashi community of Ri-Bhoi District. The demographic study of the area gave a precise and accurate information about of the socio economic, cultural, educational and demographic life of the women of the study site (Fig. 1). Maximum of the respondent (19.89 %) were of age group of 26 to 30 years and out of which 38.65 % are unmarried and 61.35% married who they are involve in agricultural activities for their livelihood (Table 1 and 2). The females of the study sites were doing their house hold activities like home management, cooking, child rearing *etc.* as unpaid care work except doing the agriculture. The participation of women in agriculture is increasing gradually in India who doing their work on farms owned by others (Anonymous, 2020).



Fig. 1. Involvement of women in agricultural activities in Ri-Bhoi District.

Table 1: Age distribution of women respondent of the study sites.

Age group (years)	Unmarried	Percentage (%)	Married	Percentage (%)	Total no of women respondent	Percentage (%)
16-20	22	15.94	03	1.37	25	7.00
21-25	46	33.33	18	8.22	64	17.93
26-30	42	30.43	29	13.24	71	19.89
31-35	08	5.80	37	16.89	45	12.61
36-40	11	7.97	42	19.18	53	14.85
41-45	02	1.45	36	16.44	38	10.64
46-50	0	0	22	10.05	22	6.16
51-55	5	3.62	16	7.31	21	5.88
56-60	2	1.45	15	6.85	17	4.76
61, above	0	0	01	0.46	1	0.28

Table 2: Proportion of married and unmarried women of the respondent.

Total number of unmarried women	Percentage (%)	Total number of married women	Percentage (%)
138	38.65	219	61.35

From the study it is also seen that most of the women farmers are economically poor and most of them are having very less educational qualifications. Table 3 shows that maximum of the women farmer was left their study in class V to X (36.97 %) followed by Class I to LP (23.81 %). Some women farmers were found who completed their HSLC (19.33%) and HS (8.4 %), few of them continuing both agriculture as well as their education. So, it is seen that 9.8% female farmers were found as completely illiterate and 60.78 % females were found who left their education before Matriculation. But it is also seen that some educated females were also performed agricultural activities as

their livelihood. Education is the most powerful tools for women's empowerment. So, there is a need for educating the girl of the study site for their development which will lead to the socio-economic development of the nation. So, there is a need for deepening gender mainstreaming and for direct investments in women and girls to close remaining gender gaps and achieve better gender equality outcomes by investments in women's and girls' education, health, and economic empowerment, as well as in public transport facilities, better water services, and clean energy sources especially in rural areas that benefits women (ADB, 2013).

Table 3: Educational qualifications of the women respondent of the study sites.

Education qualification	Continuing study	(%)	Discontinuing Study	(%)	Total	(%)
Class I-LP	0	0	85	25.84	85	23.81
V-X	05	17.86	127	38.60	132	36.97
HSLC	15	53.57	54	16.41	69	19.33
HS/PU	08	28.57	22	6.69	30	8.40
Graduate	0	0	06	1.82	06	1.68
Mater degree	0	0	0	0	0	0
Illiterate	0	0	35	10.64	35	9.80
Total	28	100	329	100	357	100

Table 4: Resources available with the women farmers of the study site.

Resources	Husband's name/ In-laws' name/ Family members name	Own name	No Name	Total	Not available
Land	132 (36.6 %)	21 (5.89 %)	86 (24.1 %)	239 (66.9 %)	118 (33.5 %)
Capital	87 (24.4 %)	08 (2.2 %)	65 (18.2 %)	160 (44.8 %)	197 (55.2 %)

The 'land and capital' are two most powerful tools for the development of women farmer. Although the Khasi community is based on Matrilineal society (Roy, 2018), the land ownership is less in the hand of women farmer of the study site. From the Table 4 it is seen that only 5.89 % of the women were having land by their own name, 36.6% women had the land ownership in their husband's name/in-law's name/family members name, rest 24.1% of women had land without any proper document and 33.5 % women found as landless. They are getting inadequate attention by many development agencies for financial assistance and other developmental activities. Due to unawareness about the financial institution and unavailability of land ownership by the own name, only 17.08% of women got financial assistances from Govt. and non-Govt. organizations (Table 7). It led to a serious constraint on getting credit from financial institution and other agencies for increased their productive capacity. Majority of the women respondent (69.47%) had taken the agriculture as their primary and secondary occupations (Table 5). Among that a total of 156 members has taken up agriculture as primary occupation that is 43.70%. The respondent who they were taken agriculture as secondary occupation a total of 86 members were engaged in daily labour, 18 were engaged in business, 6 were engaged in government services as their primary occupation. So, it is clear that

maximum numbers of women respondent were prefer agriculture as primary occupation. From the Table 6 it is clear that the women were involved in all types of major agricultural activities. But in sowing and transplanting women participation is very high (79.83 %). So, it is clear that the involvement of women in agriculture in Ri-Bhoi District of Meghalaya is very prominent and they contribute in every stage of the agricultural production system which is very much laborious. During most of agricultural work performed by women especially transplantation and sowing, they remained bent or squatting for most of the day. A study done on drudgery of women points out that the rural women engaged in farm labour face high mortality and morbidity risks (Gawade, 2018) In a study done by Garcia-Winder (2018) reported that mainly the farm activities undertaken by women are typically seasonal and labour intensive such as sowing, transplanting, weeding, harvesting, winnowing *etc.* which are important part of agricultural production system. Data contained in Table 5 and 7 shows that the respondents had better access to agricultural activities (69.47 %) but their access to extension services and trainings, technologies, formal or informal institutions, land and inputs for production were limited. The introduction of modern technologies can improve the benefit cost ratio of the crop cultivated in the Ri-Bhoi district (Bordoloi, 2020, Bordoloi, 2021). Training and

other educational tools makes the women efficient for getting better paid work otherwise they always force to do low-skill work segregation between women and men. Moreover, access to extension services and other modern technologies are also helps for the

empowerment of rural women farmers. The financial constraints of the study area stopping the respondents using and securing land, doing high value agriculture, marketing and transportation to distant place for achieving higher price of their produce.

Table 5: Distribution of women according to the primary and secondary occupational pattern.

Occupations	Primary	%	Secondary	%	Total	%
Agriculture	156	43.70	92	25.77	248	69.47
Daily Labourers	86	24.09	52	14.57	138	38.66
Business	18	5.04	06	1.68	24	6.72
Service	06	1.68	00	0	06	1.68
Others	11	3.08	15	4.20	26	7.28

Table 6: Involvement of women respondent in agricultural activities.

Sr. No.	Agricultural Activities	Total No. of Respondent	Percentage (%)
1.	Land Preparation	196	54.90
2.	Procurements of Inputs	205	57.42
3.	Sowing/ Transplanting	285	79.83
4.	Irrigation/ Pest and Disease Management	98	27.45
5.	Weeding	234	65.55
6.	Harvesting	287	80.39
7.	Threshing/winnowing	189	52.94
8.	Packaging/ Storage	226	63.31
9.	Marketing	207	57.98
10.	Finance and Accounts Keeping	308	86.27
	Total	357	

Table 7: Extent of support getting from Government and Non-government organizations by the women respondents.

Resources	Extent of access (%)				
	Frequently	Occasionally	Rarely	Total	Not at all
Training and other extension services	47 (13.16)	112 (31.36)	102 (28.56)	261 (73.08)	96 (26.88)
Technologies	15 (4.2)	41 (11.48)	57 (15.96)	113 (31.64)	244 (68.32)
Access to rural institutions	165 (46.2)	69 (19.32)	32 (8.96)	266 (74.48)	91 (25.48)
Production inputs from Govt. and Non-Govt. Org.	39 (10.92)	97 (27.16)	73 (20.44)	209 (58.52)	148 (41.44)
Financial assistances getting from Govt. and Non-Govt. Organizations	03 (0.84)	22 (6.16)	36 (10.08)	61 (17.08)	296 (82.88)
Financial assistance getting from money lenders, friends and relatives with high rate of interest	42 (11.76)	117 (32.76)	83 (23.24)	242 (67.76)	115(32.2)

The extents of women's access to productive resources were also seen limited (Table 7). Only 39% of respondents had little access to important inputs (e.g., seed and saplings) for production purposes. Only few numbers of women farmers were got frequent training and other agricultural services as support for doing agricultural activities (13.16%) and 31.36 % of respondent attended training and other programme occasionally. Some respondents were not aware and did not achieve any support till now (26.88 %). As a result, they lack modern avenues of knowledge and information, new technologies and opportunities for increased their farm productivity and income. From the Table 7, it is also seen that 74.48 % of respondents were involved in co-operatives, self-help groups and other rural institutions, which created opportunities for savings, taking loans, discussions and participation of women in social events like agricultural activities. A total of 68.42% of respondents had no access to modern technologies. They used traditional tools and practices for production and household purposes.

CONCLUSION

Social and political factors have a significant influence on women's ability to participate in the economy. Recruitment of women in all phases of developmental programme to modernise the agriculture for increased production will help for socio-economic development of the society. Strategies and government policies should be there for equal pay for both women and men for the same job, accessible to agricultural inputs by women, increase the literacy rate for empowering women, establishment of formal and non-formal institutions for make them productive and capable to participate in all types of activities link to ecological and socio-economic development of the region. There is a need for mainstreaming women's concerns into effective agricultural and rural development policies, plans and programmes, promotion of women friendly technologies, ensuring women's rights to land and property are very much essential for ensure household and national food security and for an adequate livelihood for rural women.

A vast technological gap was found in the study site in between the rural women and the developmental programmes. So, further research and extension strategies suitable for women farmers are required for make them self-sufficient which may be helpful for increase the productivity of agriculture and other related sector which will lead to ecological and socio-economic development of the region.

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