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WOMEN IN AGRICULTURE
A Case Study of the Mishing Tribe in Dhemaji District of Assam

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Introduction

Women bear the primary responsibility for actions needed for education, nutrition, health and family income. Over 70 per cent of India's population currently derive their livelihood from land resources, which includes a sizeable proportion of economically active women. Women's contribution to agriculture, when measured in terms of the number of tasks performed and time spent, is always substantial. Female work participation rate (FWPR) is defined as the proportion of female workers to the total female population. FWPR is highly correlated with the level of technology, occupational pattern and social groups particularly among the weaker sections of the society.

Agriculture is the dominant sector of the economy of Assam contributing about 56 per cent of the State's income (Das, 1984) and crop production occupies the most important part of agriculture. Agriculture in turn is dependent upon type of soil, rainfall and host of other natural factors. Moreover, the cultivable land is highly limited due to the peculiar physiographic conditions of the State. Intensity of cropping and yield per hectare are also very low in the State.

The rural women of Assam have a long tradition of doing various economic and productive activities although their role has

been visualised as a passive one. Since independence, various socio-economic changes have taken place in the rural society of Assam due to various developmental activities under successive planning. The impact of these changes has been noticed on their attitude and outlook. The changing role of rural women on the productive activities are also visible.

Assam is the homeland of many ethnic groups with different languages, customs and with different historical, economical, cultural traditions and religious beliefs. Although, most of them share a common mode of income from agricultural activities, even than there exists variation in the pattern of agricultural practices among different groups. Female work participation in this sector is also of varied nature and among tribal population the work participation of female is always higher than the non-tribal population.

Assam lies in the North-Eastern region of India and has a unique geographical condition as it is surrounded by hills in every direction and receives a very high annual rainfall combined with very high humidity creating a favourable atmosphere for various primary activities. Dhemaji district is located in the eastern most district of Assam and is the homeland of a large number of tribes, namely the Mishings, the Deoris, the Sonowal-Kacharis, the Bodos, the Tiwas besides other ethnic groups like the Chutiyas, the Ahoms and others. Agriculture is the main occupation of all the tribes.

The Mishings constitutes the bulk of the tribal population of the district and are mainly riverine dwellers. The tribe constitutes 21 per cent of the total population of the district. In the Mishing culture, men are highly regarded and play a dominant role as the heads of the household. On the other hand, women enjoy very low status and are considered inferior to men. As such, most of the women are lowly educated and are usually made to marry at a tender age. The tribe depends mainly on agricultural farming and fishing as their means of livelihood. In addition, they rear domestic animals such as pigs, cows, goats, buffaloes and fowls. A large proportion of female workers are engaged in the agricultural activities and perform certain activities which are generally not done by the males, such as transplantation, manual threshing, dehusking, etc.

In the light of the above discussion this chapter aims to explore the differential rate of participation of tribal women in agricultural activities with the following objectives:

1. To study the personal and socio-economic characteristics of the Mishing women.
2. To make a comparative study of the association between personal and socio-economic characters of the tribal women and contribution to family economy through their rate of participation in crop production.

Methodology

The present study is based on the data collected from the secondary sources, which ultimately have been authenticated by the primary data collected personally in the field in the form of interview and scheduled questionnaires. Primary data collected from five Mishing villages (selected from the dominant population in the villages with more than 80%) of the district through scheduled questionnaires. To make a comparative study five non-tribal populated villages were also sampled in a similar manner. Ten respondents were selected at random from each village to make a final sample size of 100. The source of secondary data is district census handbook, departmental records and other published articles. A geographical study of the environmental resources pertaining to agricultural crops and animal husbandry necessitated special reference to topography, soil type, climate and irrigation facilities.

Study Area

Dhemaji district is located in the eastern most part of Assam. The district has two sub-divisions and 5 revenue circles with 1,205 inhabited villages. The area of the district is 3,237 sq km with density of population of 148 persons per sq km. A substantial population in the district is constituted by the tribals (43.92%). The major tribes of the district include the Mishings, the Sonowal Kacharis, the Bodos and the Deoris. The district ranked 11th in literacy rate (65.96%) among the districts of Assam. The district has a fair proportion of women engaged in cultivation and agricultural activities (32.9%).

The district lies between Arunachal Pradesh in the north and in the east, river Brahmaputra in the south and the Lakhimpur district in the west. The district is situated between 94° and 95°3′ East longitude and 27°25′ and 27° 55′ North latitude.

The economy of Dhemaji is generally agro based. Sericulture, fishing and driftwood business is practiced in smaller scale. However, sand deposition and other adverse effects of chronic floods on fertile agriculture land have made even affluent farmers landless. Lack of good communication system, shortage of power and lack of proper irrigation and marketing facilities add to the poverty of the district.

The types of soil of Dhemaji district vary according to the topography. The soil is generally sandy to alluvial and clay loam. Forest occupies 19.67 per cent and agriculture is done on 39.48 per cent of the area. The mean temperature ranges between 10°C and 35°C, while the mean annual rainfall is around 2,626 mm. The rainfall is distributed throughout the year except for the months of November to January. In the summer months high rainfall is accompanied by flash floods and high floods, which besides destroying houses, destroys standing crops and disrupts the communication systems. Such fertile land turns into barren sand plots and became unfit for cultivation. In fact flood affected 28,084 hectares, 1,31,475 hectares and 56,432 hectares of cropped area in the years 1998, 2000 and 2001 respectively. The annual flood and silting by the river Brahmaputra is mainly responsible for making the district one of the poorest in Assam.

Agriculture and Agro-biodiversity

A traditional method of cultivation with a very low degree of agro-biodiversity is practiced in Dhemaji district of Assam. The net sown area is 55,821 ha. The major portion of this land has rainfed cultivation. About 6,233 ha of land have irrigation facilities and of these only 87.5 ha are utilised. Much of the land have medium to low water holding capacity suitable for rainfed or irrigated cultivation of paddy, pulses and vegetables.

Most of the traditional crops are photosensitive and thus the sowing time is the most important variable in determining the yield. The practice of inter-cropping, multiple cropping, mixed cropping and crop rotation are almost absent in the district. During the agricultural season the entire household is involved in agriculture in this area. Mishing women are involved right from selection of seeds to transplanting, weeding, threshing and winnowing. During the preparation of the land, the men folk go early to the fields while the

women do their household chores including cooking, cleaning, fetching water and caring of the children. Womenfolk then go to the field carrying food for the men. In the field, they assist in breaking the clods, building bunds, etc. Women's agricultural work takes place largely from July to November. Crops grown here are primarily rainfed. Paddy is the main crop. Cash crops and vegetables are grown in only a few isolated pockets of the district. The first peak period of work in agriculture is June to August, when women engage in breaking up sods of earth, transplanting and weeding. The second peak period is October through November, when women are involved in harvesting, drying, pounding/threshing and dehusking paddy. Participation of women in planting and weeding is significantly higher than that of men. The post-harvest work of women includes drying, cleaning and storing the grains.

The tribes residing in the district have simple indigenous methods of selecting seeds and protecting them from insects and pests. The harvested grains are carefully cleaned by winnowing. During the winnowing process, the off-colour and undersized grains are removed. The selected grains are then sun-dried for two or three days and stored as seeds. Seeds are also selected by collecting healthy ear heads with well-formed grains during the harvest and kept aside for the subsequent season's planting. Women play a major role in this process.

Analysis of the Case Study Area

The study of spatial distribution in work participation rate in the State indicates that this rate is high in the tribal dominated and economically backward districts like Lakhimpur (42.86%), Karbi Anglong (42.78%), etc. It might be said that the economic conditions and social prejudices play an important role in determining the female work participation in different parts of the State. Women contribute considerably to household income through farm and non-farm activities as well as through work as landless agricultural labourers. The Indian work force participation rate is 37.7 per cent (Census, 2001) the rate of women is 22.7 per cent which is lower than half the rate of man (51.6%). The work participation rate of female in the district is 34.80 per cent, which is much higher than State average (18.09%). The percentage of female main workers to

total female population in Dhemaji district is 17.18 per cent against 10.52 per cent for the State of Assam. The corresponding figures in female marginal workers are 17.62 per cent and 7.57 per cent in Dhemaji and Assam respectively. This indicates that most of the female workers in the district are underutilised. The proportion of main (Agricultural and Other) workers and marginal workers in the district is depicted in the Table 22.1.

Table 22.1: Distribution of Main and Marginal Workers in Dhemaji District of Assam

Workers category	Total	% to total population	% to gender population	% to total workers
Main Workers				
Agricultural Workers				
Total	1,36,164	28.44	—	63.24
	(44,04,081)	(19.65)		(54.45)
Male	91,417	19.09	36.79	42.45
	(35,53,156)	(15.85)	(30.48)	(43.93)
Female	44,747	9.35	19.42	20.78
	(8,50,925)	(3.80)	(7.91)	(10.52)
Other Workers				
Total	24,669	5.15	—	11.45
	(25,87,975)	(11.55)		(31.99)
Male	22,113	4.62	8.90	10.27
	(20,87,031)	(9.31)	(17.90)	(25.80)
Female	2,556	0.53	1.11	1.19
	(5,00,944)	(2.23)	(4.66)	(6.19)
Marginal Workers				
Total	54,494	11.38	—	25.31
	(10,96,879)	(4.89)		(13.56)
Male	5,977	1.25	2.41	2.78
	(1,24,213)	(0.55)	(1.07)	(1.54)
Female	48,517	10.13	21.06	22.53
	(97,266)	(0.43)	(0.90)	(1.20)

Note: Figures in parentheses indicates the All Assam averages.
Source: Statistical Handbook of Assam, 2002.

The proportion of population engaged in economic activities (Work Participation rate) and the occupational structure of the works indicate to a great extent the overall economic development scenario of a region. Within the State of Assam the work participation is

considerably higher in the rural areas (36.71%) than that of urban areas (30.92%). The main economic activities of the tribal population in Assam lie in the primary sector of agriculture. In rural areas including the Dhemaji district of Assam, agriculture and allied industrial sector employ most of the total female workers. Fig. 22.1 shows the comparative statistics of workforce of non-tribal and tribal women of the district. For the purpose villages were selected in such a way so that the ethnic population is 60-80 per cent and above 80 per cent.

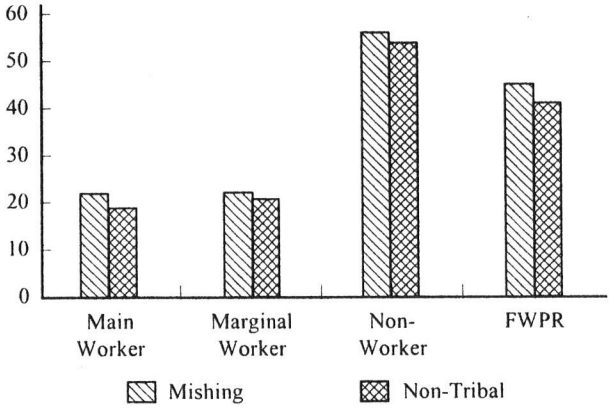

Fig. 22.1: Per cent of Female Workers in Villages having Ethnic Population more than 80 per cent.

This figure indicates that the work participation rate of tribal women is higher than the non-tribal population in the same geo-climatic and agro-economic condition prevailing in the district.

Demographic features of female population like age composition, age at marriage, health care, fertility and child care practices, rural-urban composition of population, nature of migration determine the potential labour force which can be utilised for productive purposes. Social status, customs, attitudes and religious beliefs affect the volume of female labour supply in the society. Educational standard also influence the nature of occupation of females. Table 22.2 and illustrations show the relationship of socio-economic characteristics of Mishing women with their work participation rate in terms of number of days spent in agricultural activities. For comparison

incorporation of the non-tribal component had also been done in Table 22.2 and illustrations.

It is evident from Table 22.2 that the percentage of workers of Mishing women is substantially higher than non-tribal women irrespective of age group. The percentage of non-workers (3.33%) of Mishing women reflects the higher FWPR of the tribe as compared to 31.67 per cent of non-workers in case of non-tribal women. Table 22.3 shows that the women remained economically active upto 45 years of age after which their economic contribution tends to decline. However, the economic contribution of women workers in case of non-tribal women is found to be higher than their tribal counterpart.

It is observed from Table 22.3 that educational status of women and their economic contribution towards family economy through participation in agricultural activities are inversely linked. The illiterate and primary educated women participate more in agricultural activities than the higher educated women. Although educated women are known to be more keen to assimilate the modern trends in agricultural technology for better production.

Table 22.4 shows that economic status of the family has a direct relationship with the women's work participation in agriculture. Further it is also observed from the Tables and illustrations that the non-worker component of women respondents is higher in non-tribal population. Thus it is clear that the female work participation rate of Mishing women has always been higher than the non-tribal women of the area irrespective of their age, education and land holding.

Conclusion

The agriculture scenario in Dhemaji district is characterised by a very low degree of agro-biodiversity with the practice of traditional methods of cultivation. It is clear that the Dhemaji district is no longer a closed tribal system. It is an agricultural system moving from subsistence to semi-commercial agriculture. It is a society marked by the breakdown of local self-sufficiency and moving towards increasingly more inclusive and complex systems.

Table 22.2: FWPR in Agriculture in relation to Age

No. of working days	Percentage of respondents and their economic contribution to total family income (in percentage) according to age group							
	Below 30 years		Between 30-45		Above 45		Total	
	% of respondents	Economic contribution	% of respondents	Economic contribution	% of respondents	Economic contribution	% of respondents	Economic contribution
Mishing Women								
Non-workers	1.67	0	—	—	1.67	0	3.33	0
Below 100	28.33	6.29	28.33	7.38	15.00	6.26	71.67	6.64
Between 100-150	1.67	19.09	11.67	21.72	—	—	13.33	20.40
Above 150	1.67	21.13	10.00	23.81	—	—	11.67	22.47
Total	33.34	46.51	50.00	52.91	16.67	6.26	100.00	49.51
Non-tribal Women								
Non-worker	11.67	0	1.67	0	18.33	0	31.67	0
Below 100	10.00	12.44	18.33	8.37	23.33	8.45	51.67	9.75
Between 100-150	1.67	22.97	6.67	22.17	5.00	16.31	13.33	19.31
Above 150	3.33	23.70	—	—	—	—	3.33	23.70
Total	26.67	59.11	26.67	30.54	46.66	24.76	100.00	52.76

Table 22.3: FWPR in Agriculture in relation to Education

No. of working days	Percentage of Respondents and their economic contribution to total family income (in percentage) according to the level of education									
	Illiterate		LP		High school		HSLC and above		Total	
	% of respon-dents	Economic contri-bution	% of respon-dents	Economic contri-bution	% of respon-dents	Economic contri-bution	% of respon-dents	Economic contri-bution	% of respon-dents	Economic contri-bution
Mishing Women										
Non-worker	—	—	—	—	1.67	0	1.67	0	3.33	0
Below 100	48.33	6.80	5.00	5.66	8.33	6.94	10.00	7.15	71.67	6.64
Between 100-150	10.00	20.16	1.67	21.04	—	—	1.67	20.00	13.33	20.40
Above 150	8.33	22.64	1.67	31.07	1.67	13.74	—	—	11.67	22.47
Total	66.66	16.53	8.34	19.26	11.67	6.89	13.33	9.05	100.00	12.38
Non-tribal Women										
Non-worker	20.00	0	1.67	0	8.33	0	1.67	0	31.67	0
Below 100	28.33	10.93	5.00	9.81	15.00	10.13	3.33	8.13	51.67	9.75
Between 100-150	8.33	18.36	3.33	20.45	1.67	19.09	—	—	13.33	19.31
Above 150	—	—	—	—	3.33	23.70	—	—	3.33	23.70
Total	56.66	9.76	10.00	10.09	28.33	13.23	5.00	4.07	100.00	13.19

Table 22.4: FWPR in Agriculture in relation to Land Holding

No. of working days	Percentage of respondents and their economic contribution to total family income (in percentage) according to Land Holding							
	Below 2 acres		Between 2-3 acres		Above 3 acres		Total	
	% of respondents	Economic contribution	% of respondents	Economic contribution	% of respondents	Economic contribution	% of respondents	Economic contribution
Mishing Women								
Non-worker	—	—	—	—	3.33	0	3.33	0
Below 100	1.67	6.31	—	—	70.00	6.97	71.67	6.64
Between 100-150	13.33	20.41	—	—	—	—	13.33	20.41
Above 150	5.00	25.96	6.67	18.98	—	—	11.67	22.47
Total	20.00	52.68	6.67	18.98	73.33	6.97	100.00	49.52
Non-tribal Women								
Non-worker	3.33	0	8.33	0	20.00	0	31.66	0
Below 100	10.00	11.65	8.33	9.80	33.33	7.80	51.66	9.75
Between 100-150	5.00	20.91	5.00	20.09	3.33	16.93	13.33	19.31
Above 150	3.33	23.70	—	—	—	—	3.33	23.70
Total	21.66	56.26	21.66	29.89	56.66	24.73	99.98	52.76

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