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## Gender mapping of the roles of Garo people of Meghalaya engaged in dairy farming

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### Abstract

In India, dairy farming is largely in the hands of women. In fact dairy farming is becoming feminized. Despite their considerable involvement and contribution, significant gender inequalities also exist in access to technologies, credit, information, inputs and services probably because of inequities in ownership of productive assets including land and livestock. Hence the study was conducted with the objective of 'Gender mapping of the roles of Garo people of Meghalaya engaged in dairy farming'. The study was conducted under University funded research project (IRP). A total of 120 respondents (60 couples) were selected from four villages (random) from the two randomly selected blocks of West Garo Hills district, Meghalaya. But only those couples who were engaged in dairy farming were considered for interview and data collection. Hence, the total no. of respondents for this study was 90 (45 couples). Among the routine activities, except for collecting fodder & animal grazing and cleaning & bathing of animals, women had a significant contribution in all other activities like feeding fodder (71.11 per cent), milking (77.78 per cent), distribution/ selling of milk (80.0 per cent) and cleaning of shed (88.89 per cent). The activities like fodder collection & animal grazing (43 nos.), cleaning and bathing of animals (36 nos.), selection of breeds (39 nos.) and disease management (35 nos.) are primarily carried out by young male while fodder feeding (32 nos.), milking (35 nos.), distribution/ selling of milk (38 nos.), cleaning of shed (40 nos.) are primarily carried out by young females. Two activities (fodder feeding and cleaning of shed) are exclusively feminine in nature and shouldered by the female members of the family. The routine activities of dairy farming are by and large carried out by women while non-routine activities are predominantly carried out by men folks.

**Keywords:** gender mapping, gender roles, cattle rearing, Meghalaya, Harvard analytical framework

### Introduction

India is an agriculture based country and livestock sector is an integral component of it. It is generally considered a key asset for rural livelihoods. The topography, climate and Socio-economic conditions of Meghalaya makes the people to depend more on animal husbandry activities mainly because, traditional agriculture in hilly areas allows only about 10% of the land in the State. Under such situation, livestock and poultry farming is the only alternative avocation on which the villager can fall upon for a subsidiary living.

In India, dairy farming is largely in the hands of women. In fact dairy farming is becoming feminized. Most of the dairy farming activities such as fodder collection, feeding, watering, and health care, management, milking and household-level processing, value addition and marketing are performed by women. Despite their considerable involvement and contribution, significant gender inequalities also exist in access to technologies, credit, information, inputs and services probably because of inequities in ownership of productive assets including land and livestock (Taneja, 2013) [3].

Gender refers to the socially constructed roles and status of women and men, girls and boys. It is a set of culturally specific characteristics defining the social behavior of women and men, and the relationship between them.

Gender-blindness is the result partly of a paternalistic bias, and partly due to the attitudes of

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the women themselves, who may be conditioned by their culture and society to underestimate the value of their work. (Niamir, 1994) [2]. Women face greater constraints than men in accessing natural resources, extension services, marketing opportunities and financial services as well as in exercising their decision-making powers. Gender disparities can also have negative consequences on women's ability to earn a stable income, and have an adverse impact on overall household income earned at the household level from livestock production. In addition, the nature of the work women and men perform within the livestock sector may expose them to various health and safety related concerns, such as heightened exposure to zoonotic diseases (WHO, 2009) [4].

With these points in view the present study was conducted with the objective of 'Gender mapping of the roles of Garo people of Meghalaya engaged in dairy farming'.

### Materials and Methods

The study was carried out in West Garo Hills district of Meghalaya State as a University funded research project, entitled "Gender Mapping of the People of West Garo Hills Engaged in Agriculture, Household and other Allied Activities". It was purposively selected because the college is situated in this district. There are six blocks in the revised map of West Garo Hills w.e.f. 2012. Out of these, two blocks i.e. Gambegre and Rongram were randomly selected. From each block two villages were selected randomly. The villages selected were Darak A. Kongre and Chekwatgre from Gambegre and Ganol Songma and Chibragre from Rongram. Since the study was carried out on "Gender Analysis", therefore equal number of male and female respondents was selected. Fifteen number of male and female each (couples) were randomly selected from each of the four selected villages. Thus the total sample size was 120 consisting of 60 male and female each. But only those couples who were engaged in dairy farming were considered for interview and data collection. Hence, the total no. of respondents for this study was 90 (45 couples). Gender roles were analyzed using Harvard Analytical Framework. The dairy activity was categorized into i.e. routine (on a daily basis) and non-routine (done sometimes or occasionally).

Data were collected from the respondents by using a structured interview schedule developed for this purpose as per Harvard Analytical Framework. The data so obtained were quantified and subjected to statistical analysis for drawing meaningful conclusions.

### Harvard Analytical Framework or Gender Roles Framework or Gender Analysis Framework

The framework consists of a matrix for collecting data at the micro (Community and household) level. It has four (three used) interrelated components:

- Activity profile-** which answers the question, "who does what?" including gender, age, time spent and location of the activity
- Access and control profile-** which identifies the resources used to carry out the work identified in the activity profile, and access to and control over their use, by gender
- Analysis of influencing factors-** which charts factors that influence gender differences in the above two profiles

### Results and Discussion

Gender roles of rural people of West Garo Hills, Meghalaya engaged in dairy farming were analyzed using Harvard Analytical Framework consisting of 'Activity Profile', 'Access and Control Profile' and 'Analysis of influencing factors'. The results of the study were tabulated and presented for meaningful interpretation.

Table no. 1 shows general information about animal rearing in the selected locale. The data collected from 60 couples reflects that piggery is the major (80.0 per cent) animal rearing practice in West Garo Hills district of Meghalaya followed by dairy (60.0 per cent). Goat rearing is practiced by only a small percentage of the respondents (13.33 per cent).

Piggery is a source of secondary income for majority of the rural poor people of West Garo Hills. It requires very less investment, minimal care in its upbringing but a good return through sale of meat and piglets.

**Table 1:** General information about animal rearing (n=60)

Sl. No.	Particulars	Cow		Pig		Goat	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
I	Type of animal reared	36	60.0	48	80.0	8	13.33
II.	No. of animals possessed	(n=36)		(n=48)		(n=8)	
	Up to 2	10	27.78	42	87.5	8	100
	3-5	20	55.56	6	12.5	0	0
	More than 5	6	16.67	0	0	0	0

The second feature which can be noted from the data of this table is the herd size of the animals possessed by them. It can be seen from this table that out of those respondents who possess these animals, majority (55.56 per cent) of the respondent had a herd size of cattle 3-5 while in case of pig, majority of them possessed up to 2 pigs at a time. Cent percent of the respondents who possessed goats, had up to 2 nos. only.

It can be inferred from this table that though piggery is the major animal husbandry practice in the selected locale, yet herd size of cattle is higher than that of pig. The reason for this is that piggery is mainly a poor people's source of livelihood, hence cannot go for large herd size. The

economically well-off families possess medium cattle herd size (3-5) as a dairy enterprise rather than just a means of livelihood.

**Table 2:** Distribution of respondents based on place of animal shed (n=60)

Sl. No.	Place of animal shed	Frequency	Percentage
1.	Backyard	40	66.67
2.	Front yard	8	13.33
3.	Away from home	12	20.0

The data of table no.2 shows distribution of respondents based on place of animal shed. It can be concluded from this table

that majority (66.67 per cent) of the respondents use their backyard for sheltering their animals, followed by 20.0% of the respondents who keep their animals away from their homes. This 20.0 % of the respondents are those who had medium size of cattle herd and cannot keep them either in front or back of their homes.

### I. Activity Profile

The activity profile of rural women of West Garo Hills district of Meghalaya engaged in dairy farming has been presented in table no.3. Data of this table depicts gender roles of Garo rural women engaged in dairy farming. From the results of this table it can be inferred that the contribution of rural women was more conspicuous in routine activities as against the non-routine activities in dairy farming.

Among the routine activities, except for collecting fodder & animal grazing and cleaning & bathing of animals, they had a significant contribution in all other activities like feeding fodder (71.11 per cent), milking (77.78 per cent), distribution/ selling of milk (80.0 per cent) and cleaning of shed (88.89 per cent).

**Table 3:** Gender roles of Garo rural women engaged in dairy farming

Sl. No.	Activity	Frequency (n=45)	Percentage
<b>I Routine</b>			
	Collecting fodder & animal grazing	11	24.45
	Feeding fodder	32	71.11
	Milking	35	77.78
	Distribution/selling of milk	36	80.0
	Cleaning of shed	40	88.89
	Cleaning and bathing of animals	15	33.33
<b>II Non-Routine</b>			
	Selection of breeds	8	17.78
	Disease management	13	28.89

Due to time constraints and pre-occupation with other household works they do not contribute in fodder collection & animal grazing. It requires good physical strength to control animals while cleaning and bathing. Women are also afraid of the unexpected behavior of the animals during cleaning and bathing. Hence their contribution in this activity is comparatively low.

Women play a significant contribution in distribution / selling of milk in the area under study. Most of the respondents sell milk through the local market outlet directly from their own

fruit & vegetable shop or through the middlemen. All other activities are carried out from the comfort of their home along with other household activities.

Women's role in non-routine activities in dairy farming is limited as can be seen from the data of table no.3. It shows that due to lack of their involvement in these activities, non-participation in extension and training activities and poor knowledge, their contribution is insignificant. Hence, officials of Veterinary department should focus on women participation in such training and extension activities to reduce gender disparities in these areas.

Gender Analysis of the respondents engaged in dairy farming with respect to gender and age was studied through Harvard Analytical Framework and the results presented in table no.4. It can be seen from this table that the activities like fodder collection & animal grazing (43 nos.), cleaning and bathing of animals (36 nos.), selection of breeds (39 nos.) and disease management (35 nos.) are primarily carried out by young male while fodder feeding (32 nos.), milking (35 nos.), distribution/ selling of milk (38 nos.), cleaning of shed (40 nos.) are primarily carried out by young females.

Children and old people have less contribution in these activities. The chief reasons are that the children go to school and hence busy in their studies while old people lead a sedentary life. Male children chiefly contribute in animal grazing and cleaning and bathing of animals before and after their school while the old male have little contribution in disease management of animals by virtue of their rich experience and pooled ITKs. Female children lend a helping hand to their mothers or other female members of the family in cleaning of animal shed while old females mainly contribute in feeding fodder which is easily carried out from their homes.

As far as time spent per day in various routine and non-routine activities are concerned, it can be noted from the data of this table that the time spent by male and female in each of these activities are more or less the same. But since most of the routine activities are carried out by women, hence total time spent per day by them in all of these activities is much more than their counterparts who mostly do non-routine activities.

Most of these activities are carried out within a distance of 2-3 kms which the respondents cover by walk while few of the routine activities like fodder feeding, milking and cleaning of shed are carried out from their homes at leisure along with other household chores.

**Table 4:** Gender Analysis of the respondents engaged in dairy farming-Harvard Analytical Framework (Activity Profile)

Sl. No.	Activity	Male (n=45)			Time spent/day	Distance of activity from home (km)	Female (n=45)			Time spent/day	Distance of activity from home (km)
		Children	Young	Old			Children	Young	Old		
<b>I Routine</b>											
	Collecting fodder & animal grazing	21	43	7	2-3 hours	2-3	0	11	0	1-2 hours	2-3
	Feeding fodder	0	23	2	10-15 min	0 (at home)	3	32	18	15-20	0 (at home)
	Milking	0	19	0	30 min	0 (at home)	0	35	4	30 min	0 (at home)
	Distribution/ selling of milk	6	22	0	2-3 hours	2-3	0	38	10	3-4 hours	4-5
	Cleaning of shed	0	8	0	15 min	0 (at home)	12	40	2	30 min	0 (at home)
	Cleaning and bathing of animals	10	36	0	30 min	2-3	0	18	0	1-2 hours	0 (at home)
<b>II. Non-Routine</b>											
	Selection of breeds	0	39	0	1 hour	4-5	0	8	5	1-2 hours	4-5
	Disease management	0	35	9	1-2 hour	2-3	0	13	6	1-2 hours	2-3

**Table 5:** Gender Analysis of the respondents engaged in dairy farming-Harvard Analytical Framework (Access and Control Profile) (n=90)

Sl. No.	Activity	Access by Gender*				Control by Gender*					
		M	F	F/m	M/f	M	F	F/m	M/f	M/F	
<b>I Routine</b>											
	Collecting fodder/ animal grazing	52 (57.78)	2(2.22)	4(4.44)	18 (20.0)	14 (15.56)	40 (44.44)	2(2.22)	3(3.33)	37 (41.11)	8(8.89)
	Feeding fodder	4(4.44)	40(44.44)	24(26.67)	8(8.89)	14(15.56)	6(6.67)	38(42.22)	29(32.22)	6(6.67)	11(12.22)
	Milking	32(35.56)	8(8.89)	5 (5.56)	20(22.22)	25(27.78)	14(15.56)	8(8.89)	11(12.22)	13(14.44)	44(48.89)
	Distribution/selling of milk	12(13.33)	22(24.44)	30(33.33)	9(10.0)	7(7.78)	7(7.78)	15(16.67)	35(38.89)	7(7.78)	26(28.89)
	Cleaning of shed	4(4.44)	40(44.44)	28(31.11)	8(8.89)	10(11.11)	6(6.67)	35(38.89)	29(32.22)	11(12.22)	9(10.0)
	Cleaning and bathing of animals	11(12.22)	9(10.0)	10 (11.11)	13 (14.44)	47 (52.22)	33 (36.67)	12 (13.33)	11 (12.22)	29 (32.22)	5(5.56)
<b>II Non-Routine</b>											
	Selection of breeds	52 (57.78)	4(4.44)	2(2.22)	27 (30.0)	5(5.56)	29 (32.22)	9(10.0)	6(6.67)	37 (41.11)	9(10.0)
	Disease management	48 (53.33)	7(7.78)	5(5.56)	20 (22.22)	10 (11.11)	20 (22.22)	13 (14.44)	22 (24.44)	31 (34.44)	4(4.44)

\* M = exclusively male; F = exclusively female; F/m = predominantly female; M/f = predominantly male and F/M = equally female/ male

\*\*= Figures in parenthesis indicate percentage

## II. Access and Control Profile

Access and control profile of the respondents with respect to dairy farming is presented in table no. 5, categorized into routine and non-routine activities. The data of this table depicts that access to and control over collecting of fodder & animal grazing lies exclusively with male at 57.78 % and 44.44 % respectively. Access to feeding fodder and cleaning of animal shed lies exclusively with females at 44.44 % each and their control also lies exclusively with female at 42.22 % and 38.89 % respectively. It signifies that these two activities are exclusively feminine in nature and shouldered by the female members of the family. Access to milking is exclusively with male as can be seen from the data of this table at 35.56 % but control over it is shared equally among male and female (48.89 per cent). The reason for it is that milking is done mainly by male members but sometimes in their absence or due to some busy schedule the female members also does milking. Hence control is equally shared among male and female members of the family. Access to and control over distribution and selling of milk lies predominantly with female at 33.33 per cent and 38.89 per cent respectively. Access to cleaning and bathing of animals is equally shared among male and female members of the family at 52.22% but its control lies exclusively with male members (36.67%). The reason for it is that controlling cows during cleaning and bathing requires good physical strength and hence considered masculine activity. Also the women are afraid of the unexpected behavior of the animals that might sometimes happen.

As far as the non-routine activities are concerned, the access to selection of breeds and disease management lies exclusively with males at 57.78% and 53.33% respectively while the control lies predominantly with males at 41.11 and 34.44 per cent respectively. It connotes that selection of breeds and disease management is chiefly a masculine work. The reason for it is that the trainings organized are attended mostly by male members of the family hence lacks knowledge in these areas.

## III. Analysis of influencing factors

Gender analysis of influencing factors that pose constraints and offer opportunities to Garo people engaged in dairy farming were analyzed using Harvard Analytical Framework. The result of the study is presented in table no.6.

The factors that pose constraints in way of dairy women to get involved in some of the activities of dairy farming are that cleaning and bathing of animals are done by male because females lack strength to control animals (68.89 per cent), lacks proper knowledge on breeding, health management and care of animals (82.22 per cent), women lack access to financial, extension services, new technologies and markets (60.0 per cent) and fodder collection and animal grazing not done by women due to time constraints and pre-occupation with other household work (68.89 per cent).

The factors that offer opportunities to dairy women are milking is done by women in absence of their spouse or male family members (47.78 per cent) and women have noticeable role in selling or distribution of milk (75.56 per cent). Most of the Garo women sell local fruits and vegetables in local markets. This offers them as the selling point of the milk without much hassle and need of a middleman.

The study is supported by the study of Malik *et al.* (2015) <sup>[1]</sup> who assessed role performance was assessed by documenting the contribution of both men and women family members in the routine activities (feeding, management, dung disposal and milking) and non-routine activities (healthcare, breeding and animal marketing) associated with animals. The results of their study show that the average time spent in animal husbandry activities by a household was 6.76 hours. Out of this women farmer's contribution was 5.17 hours. The contribution of the male members of the family was lesser and was restricted for most part to the feeding and management activities. They contributed a little in the dung and milk management. Women reportedly contributed significantly (64 % of the feeding, 76 % of the management, 100% in dung disposal and 89% in the milking of animals). And in case of non-routine activities there were distinct roles adopted by men and women. The roles appear strictly gender demarcated with women being assigned the activities that have to do with routine care of animals at home.

**Table 6:** Gender Analysis of the respondents engaged in dairy farming-Harvard Analytical Framework (Analysis of influencing factors) (n=90)

Sl No.	Constraints	Frequency	Percentage	Opportunities	Frequency	Percentage
1.	Cleaning and bathing of animals done by male because females lack strength to control animals	62	68.89	Milking done by women in absence of their spouse or male family members	43	47.78
2.	Lacks proper knowledge on breeding, health management and care of animals	74	82.22	Women have noticeable role in selling or distribution of milk	68	75.56
3.	Women lack access to financial, extension services, new technologies and markets	54	60.0			
4.	Fodder collection and animal grazing not done by women due to time constraints and pre-occupation with other household work	62	68.89			

### **Conclusion**

It is concluded from the results of this study that the routine activities of dairy farming are by and large carried out by women while non-routine activities are predominantly carried out by men folks. Routine activities being an on-going and daily activity demand more time and labor as against the non-routine activities. It can be inferred that women invests more time and labor in dairy farming as compared to the male counterparts. Hence there are definitely some gender issues in dairy farming which needs to be addressed in order to reduce gender disparities in dairy farming and bring women to the mainstream.

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