



Gender Analysis of Ginger Cultivation in Ri-Bhoi district of Meghalaya

Kankabati Kalai^{1*} • Loukham Devarani²

¹Department of Agricultural Extension, College of Agriculture, IGKV, Raipur,

²School of Social Sciences, College of Post Graduate Studies, CAU, Umiam, Meghalaya

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ABSTRACT

Gender has become key issue in agricultural research and activities which mostly focus on differences in gender role in agricultural production. Gender analysis is a tool for understanding and documenting the differences in gender roles, activities, needs, and opportunities in a given context. The study was carried out during 2014 in Nogladev village of Ri-Bhoi district of Meghalaya. Data were collected using Participatory Rural Appraisal (PRA) techniques and Focus Group Discussions (FGDs) from two groups, one each for women and men farmers. It was observed that both men and women actively participate in ginger cultivation. The extents of participation of the genders in different activities as well as the perception of the two genders regarding this vary but all do participate actively. Ensuring gender equity and gender balance in extension activities as well as gender mainstreaming of extension programmes is recommended.

1. Introduction

Meghalaya state of north east India is blessed with enormous potential for production of fruits, vegetables, spices, flowers and other horticulture crops. Ginger is one of the important spice crops of the state. Meghalaya is the third largest ginger producing state in our country, producing 63.0 thousand MT (Spice Board 2016) and is cultivated in almost all the districts of Meghalaya. Ginger is considered as traditional crop of the state and it is said to have been cultivated since ancient times (Mawlong 2017).

Ri-bhoi district is one of the important ginger hubs of the state. The main problems of ginger in the region are rhizome rot/soft rot, dry rot and bacterial wilt. The Indian Council of Agricultural Research for North Eastern Hill Region (ICAR-NER), Umiam, Meghalaya, College of Post-Graduate Studies (CPGS), CAU, Meghalaya, state departments, KVKs *etc.* are involved in providing advisory services, trainings, inputs and linkages to the farmers for improving their production, productivity and profitability.

Just like in any other crop, ginger cultivation is carried out in the region by both women and men farmers. So treating all the cultivators similarly and carrying out gender insensitive extension services in the form of training, input supply, technology refinement and evaluations will not be desirable. That, women contribute much of the labour in agriculture production but are constrained in terms of access and control over productive resources unlike men has been emphasised in many literatures. Increasing opportunities for women can have powerful impact on productivity and agriculture-led growth. They also receive only 5 per cent of all the extension services worldwide (FAO 2011) compared to men. FAO (2011) further estimated that if women had same access to productive resources as men they could increase yields on their farms by 20-30 percent. This increase could raise total agricultural output in developing countries by 2.5 percent and reduce the number of hungry people in the world by 12-17 percent, up to 150 million people. With this background the study was carried out in order to understand the gender differences in various aspects and dimensions of ginger cultivation in the region.

*Corresponding author: kankakalai@gmail.com

2. Methodology

The study was undertaken during 2014 in Nogladow village of Ri-Bhoi district of Meghalaya. The village was found to have more number of ginger farmers as well as vast area under ginger cultivation as per the various data generated by the Development and deployment of mobile based agro-advisory system in North-East India (m4agriNEI) project. Data were collected using Participatory Rural Appraisal (PRA) techniques and Focus Group Discussions (FGDs) from two groups, one each for women and men farmers. There were about 14-16 members in each group. The dimensions of ginger cultivation that were considered were participation to ginger production activities, decision making in production and utilization of production inputs, Control and access over use of resources and time allocation. The gender-disaggregated data generated from the two groups were compared and analysed using appropriate statistical methods.

3. Results and Discussion

I. Extent of Participation

a) Participation in ginger production activities:

Six ginger production activities were taken into consideration as presented in Table 1. The group of men farmers reported that about half of land preparation activities were performed by the men solely while another half is taken up jointly by men and women. Women group were of the opinion that most land preparation activities were carried out jointly by men and women. Both the two FGD groups were having almost similar opinion that planting, inter-cultural operation and harvesting were basically carried out jointly. However, in seed selection and treatment, though the men express it to be carried out mostly by them or jointly with women, women group believed that this is solely carried out by women. A study by Olagunju *et al.* (2013) on sweet potato reported that men were mostly involved in land preparation, while in weeding and fertilizer application, participation of women was more.

Table 1. Extent of participation of men and women farmers in ginger production, post-harvest, procurement of input and marketing related activities as responded by men and women group

S. No.	Activities	FGD Categories	Extent of Participation		
			Women solely	Men solely	Jointly
a. Production					
1	Land preparation	Men	*	****	*****
		Women	**	**	*****
2	FYM application	Men	*	**	*****
		Women	-	***	*****
3	Ginger planting	Men	-	***	*****
		Women	**	*	*****
4	Seed/rhizome selection and treatment	Men	-	*****	*****
		Women	*****	**	*
5	Inter culture operation	Men	*	**	*****
		Women	***	*	*****
6	Harvesting of ginger	Men	-	***	*****
		Women	*	**	*****
b. Post Harvest					
1	Transportation of harvest and storage	Men	-	***	*****
		Women	**	***	*****
2	Sorting and grading of ginger	Men	*	***	*****
		Women	****	***	***
c. Procurement and Marketing					
1.	Procurement of inputs	Men	*	*****	***
		Women	*****	*	*
2.	Disposal of harvested ginger	Men	*	****	*****
		Women	**	****	***

In crop production men were more involved in task which requires heavy physical labour alike ploughing, land preparation *etc.*, while women were more involved in tedious and time consuming work like weeding, harvesting *etc.* (FAO 2010; Tewe *et al.*, 2003; Adeyemi 2010). Around 95 per cent of the activities are carried out by women for bio-mulching in ginger starting from leaf collection while men participate in only carrying the load and spreading the mulch (Singh *et al.*, 2014). While Rahman *et al.* (2009) argued that the mulching is solely done by men and helped by women when required and the role of gender also depends on ethnicity and family situation. It is clear from the table that most activities are carried out jointly by both the genders. Differences in gender participation were prominent in case of land preparation where men dominated the participation. Seed selection and treatment activity seem to be a more of a women's activity though men had different view.

b) Participation in post-harvest related activities

The men's group agreed that sorting and grading, carrying of harvested produce from field to store, and storage of ginger are basically a joint activity, sometimes though in certain cases it is done solely by men only. According to men the participation of women in some activities like carrying of harvested produce from field to store and storage of ginger was negligible. Similar finding was reported by UNDP (2016) in case of carrying potato from field to nearest storage area was done solely by men. The women also agreed that their sole participation is less in carrying of harvested produce from field to store and storage of ginger however, they actively help the men whenever required. In sorting and grading of ginger, women farmers reported that their sole participation is more and men also seem to agree with this.

c) Participation in ginger input and marketing related activities

Interestingly there seems to be a huge discrepancy in the answers provided by the men and women regarding participation in procurement of inputs like seed/sett/rhizome. While men reported that they do most of the procurement, women expressed that women only procure inputs most of the time. Based on response from both the gender it has been found that mostly they used their own saved seed for planting and they participate in purchasing only when they the seeds they saved were of bad quality or the crop had failed in the previous year due to disease. They were not aware of any fungicide or pesticide might for this reason their participation in purchase of insecticide and pesticide was negligible.

Disposal of harvest which involves selling to middlemen or carrying to markets were carried out by men solely or by men and women jointly. Both the two groups seemed to have given similar responses in this regard.

II. Decision-making pattern

a) Decision-making pattern related to ginger cultivation.

Five areas of decision making in ginger cultivation were identified (Table 2). In all the five areas men expressed that women never or seldom make decisions solely. In most cases decisions are made by both men and women jointly and to a certain extent by men solely. However, women opined that in case of land utilisation, variety selection and deciding planting space and time, decisions are mostly taken by women solely, sometimes by men solely but hardly jointly. For intercultural operations and harvesting women claimed that decisions were taken jointly most of the time and sometimes by women solely. A prominent contradiction in responses by the two gender groups is observed here. Women's perception might be true in this case that women takes sole decision related to most ginger cultivation activities because their matrilineal system gives them the entitlement of the land. However, in most cases the designated household head is the man and therefore they do have decision making power. Whatever the case, it can be concluded that decisions making pattern regarding ginger cultivation varies from one household to another.

b) Decision-making pattern related to utilization of ginger cultivation inputs

In decision making pattern related to utilization of ginger cultivation inputs like seeds, nutrients plant protection inputs and labour men opined that decisions are made either by men solely or in consultation with women. However, women reported that it is women who make decisions most of the time. Only in few instances decisions are taken jointly with men or by men solely. The detail of the study is given in table 2.

a) Decision making pattern related to ginger marketing activities

As per response from men's group, men solely or jointly with women make decision on purchase of ginger seed/rhizome and disposal of harvest ginger. This might be due to the fact that men were culturally considered to be in charge of purchase related activities. On the other hand women group reported that decision for purchase of ginger seed/rhizome is solely taken by women while regarding disposal of harvested

ginger they take sole decisions most of the time, sometimes consult men. The details are given in table 2. Sharma (1984) reported that women from hilly regions of India take positive role in decision making in farm households.

III. Access and control

a) Access and control over production resources

Men groups claimed that both men and women have equal access and control over land, labour in production, farm implements and seed/rhizome. While on the other hand women strongly argued that women were the one who have more access and control over production resources rather equally (table 3).

Response from men group also highlights that women has less access and control over production resources while on the other hand women group also reported that men has less access and control. A study in Nepal found that women have limited ownership or control of rights as the country leads Patriarchal Society (FAO, 2010). While in another study, similar result was found that women do not have access to land compared to men engaged in ginger production and that is due to financial and mode of land acquisition in the area (Yusuf, 2016). Bach and Adersen (2008) found that, women in Africa have owned only 1 per cent of land and also had limited access to financial and technical resources.

Table 2. Decision making pattern related to ginger cultivation, Post-harvest, procurement and marketing activities as responded by men and women group

S. No.	Areas of decision making	FGD categories	Participation in decision making		
			Women solely	Men solely	Jointly
a	<i>Cultivation</i>				
1	Site selection	Men	-	****	*****
		Women	*****	****	*
2	Variety selection	Men	-	****	*****
		Women	*****	***	*
3	Planting space and time	Men	-	****	*****
		Women	*****	***	**
4	Inter culture Operation	Men	*	***	*****
		Women	****	*	*****
5	Harvest related activities	Men	-	***	*****
		Women	**	*	*****
b	<i>Utilization of cultivation inputs</i>				
1	Source, amount and Time of application of cultivation input	Men	-	****	*****
		Women	*****	**	**
2	Labour	Men	-	*****	****
		Women	*****	***	*
c	<i>Procurement and marketing activities</i>				
1	Procurement of inputs	Men	*	*****	***
		Women	*****	*	*
2	Disposal of harvested ginger	Men	-	****	*****
		Women	*****	*	****

Table 3. Gender differences in access and control over production resources and farm benefits as responded by men and women group

S. No.	Items	FGD Categories	Access and Control		
			Women	Men	Jointly
a.	<i>Production Resources</i>				
1.	Land	Men	-	****	*****
		Women	*****	*	***
2.	Labour in Production	Men	-	****	*****
		Women	*****	**	**
3.	Farm implements	Men	-	****	*****
		Women	*****	**	***
4.	Seeds/Rhizome	Men	-	***	*****
		Women	*****	**	***
b.	<i>Farm Benefits</i>				
1.	Ginger rhizome (seed/ spice)	Men	-	***	*****
		Women	*****	**	*
2.	Farm Income	Men	*****	-	*
		Women	***	*****	*

a) Access and control over farm benefits

For all the production resources, men's group reported that in most cases access and control over the resources is enjoined jointly by both genders and in certain instances by men only. Access and control over resources are never enjoyed solely by women. However, women's group had totally contradictory response. They reported that access and control over resources is mostly enjoyed by women solely, sometimes jointly and in rare instances by men solely. Regarding the harvested rhizome, men reported that access and control is vested jointly to both genders, sometimes to men only. But as per response from women's group women were the ones who has more access and control over the harvest. As for farm income both men and women groups reported that the other gender had more access and control but overall response seems to be favourably inclined towards women. Interestingly farm income is hardly shared jointly. Rahman (2009) reported that women from Meghalaya, Mizoram and Nagaland play a significant role in retail selling of ginger. Moreover, in other northern states like Punjab, Himachal, Haryana and Maharashtra have only 26.47 per cent of women having control over farm resources (Sah *et al.*, 2007). Table 3 shows the details, as reported by men and women group.

Time allocation:

The daily activities chart as given in figure 1 indicates that a prominent difference in the time allocation to different activities by men and women farmers. About one third of the day of women is engaged in domestic reproductive

activities like preparing food, caring for children, caring for the sick, caring for the aged, cleaning, household maintenance and others while men spend only 2 hrs on domestic work. The time spent doing productive work like formal employment, self employment and informal employment is more for men at 9 hrs per day while women get to spend a relatively less time of 7.5 hrs on productive activities yielding income. The workload of the domestic and productive work leaves very less time for leisure and socialising with community for women while men seem to get ample time for leisure and socialising as reported by women and men group, it is found that women in the study area contribute more time as much as 8 hrs to domestic work compare to men contributing only 2 hrs to domestic work. While women in community role (Voluntary social/care work, Cultural activities, Maintenance [roads, water points, *etc.*] Security-related work) was found to be negligible compared to men contributing 1 hr per day and also women were found to have less leisure time. It may be due to the fact that women were more involved in domestic work and does not find enough time for community work. Women were reported to have worked around an average 15.5 hrs a day including productive and domestic work; while men were found to have worked only 9 hrs in total per day. Rangeland women work more hours on an average of 17 hours compared to rangeland men who worked about 8 hours a day (FAO, 2010). Majority of the respondents in the group also responded that they were satisfied with their time allocation.

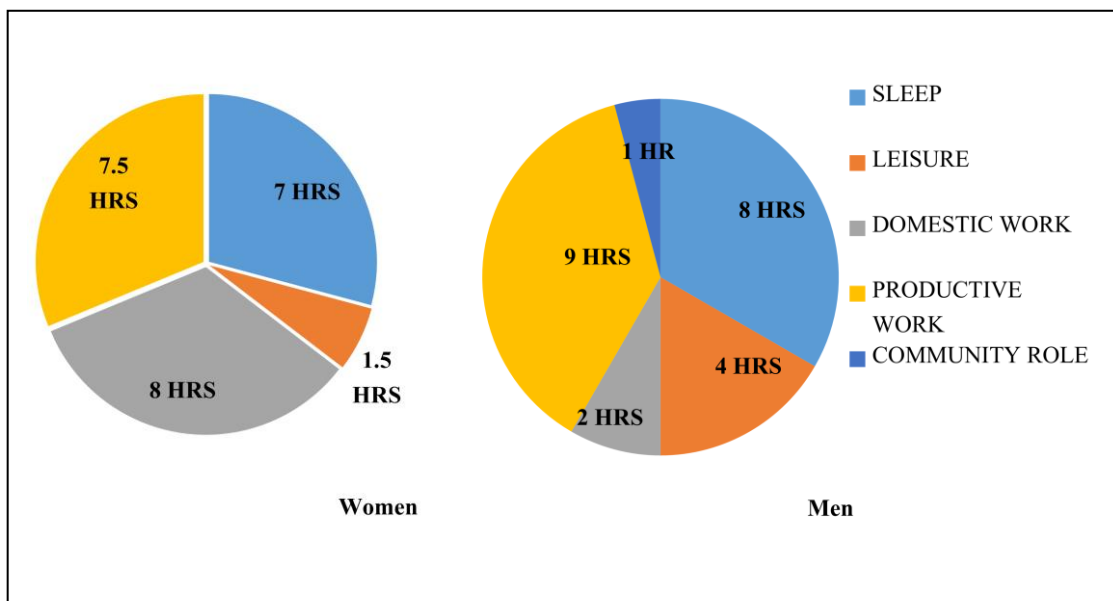


Figure1. Daily activity chart of women and men ginger farmers

Conclusion

The study was carried out in a selected village with limited respondents and thus generalisation may be restricted to certain extent. However we cannot ignore the finding that both women and men do actively participate and also contribute in decision making in various ginger cultivation activities. There may be variations in the extent of participation from one activity to another as well as in responses received from the two gender groups but this can be safely generalised for the ginger growers of this region that all participate actively irrespective of gender. Thus for any planning and implementation of extension activities of these farmers a thorough consideration of issues like gender balance and gender equity in training attendance, distribution of inputs and dissemination of information is required. If extension is biased towards any gender, the effectiveness of the effort is sure to reduce. It may also be recommended that a thorough study of the gender roles and responsibilities in production may be necessary for gender mainstreaming of extension programmes for maximum reach, efficiency and effectiveness.

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