

## GENDER ROLE IN VEGETABLE PRODUCTION IN RURAL FARMING SYSTEM OF KANCHANPUR, NEPAL

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### ABSTRACT

Agriculture is the primary occupation for the majority of Nepalese populace for their livelihood; the case is especially true for rural areas of Nepal. While both male and female engage in diverse agricultural activities, gender-specific roles in agricultural decision-making are significant. A survey study was conducted in three wards of Kanchanpur district (Majhgau-14, Bhuda-02, and Baghpata-19) to examine the gender-specific labor input in vegetable production activities. Eighty households were chosen by random sampling and a scheduled interview was carried out. Most of the activities such as fence construction, transplanting, fertilizer use, harvesting, cleaning, and grading were found typically female's responsibility. However, males were found dominantly involved in land preparation. Also, males were found to have relatively more access to, and control over farm resources and played dominant role in decision making than women. The findings of this study revealed that there are gender-specific domains in rural farming system. Therefore, there is a need to develop gender friendly technology and policy while formulating specific project planning and development efforts.

**Keywords:** Access, Decision, Farming system, Gender, Vegetable, Women

### INTRODUCTION

Gender refers to the socially assigned roles and behaviors of men and women. It is social meaning of biological sex differences. Gender roles are the responsibilities that women and men perform. These responsibilities are determined by the socio-economic and cultural environment and not by the biological factors (Mollel and Mtenga, 2000). The different roles played by men and women in the society are because of the gender disparity. And this causes bias in the distribution of resources, work, wealth, decision-making, as well as the enjoyment of entitlements and rights within the family and in public life (Welch et al., 2000).

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Women are involved in many aspect of rural life: household chores, livestock activities, farm work and caring for family members. They mainly contribute for the household consumption and food preparation. Therefore the role of women in advancing agricultural development and food security is considered vital (FAO, 2011). About 43% of workers engaged in agricultural activities around the globe are women (Akter et al., 2017). In Asian and African countries, about half of all agricultural workers are women (Agarwal, 2015). However, regardless of their greater contribution, they possess constraints in the multiple activities they pursue – less land ownership, access to credit, extension and other services, and ability to hire labor (Doss et al., 2008). The gender gap measured on the basis of agricultural produce per unit of cultivated land ranges from 4 to 25 percent, depending on the country and the crop (World Bank and ONE, 2014). This gap exists because women frequently have unequal access to key agricultural inputs such as land, labor, knowledge, fertilizer, and improved seeds (Sheahan and Barrett, 2014; Kassie et al., 2015). The authors revealed that women farmers generally face greater difficulty in obtaining fertilizers and water, particularly in African and Asian countries. Women generally do not have access to land and pursue farming on land owned by their husband or other male family members. Also, if women do have access to land, they seldom have the rights to lease or sell it (Agarwal, 2015). Because of these constraints and women's sub-ordinate position in the society, the contribution of women in the field often go unrecognized.

In Nepal the female headed household comprise of only 25.7% (CBS, 2018). And participation of women in economic activities is 55.2% versus 71.6% of men indicating a poor status of Nepalese women (CBS, 2009). Women are mostly involved in non-productive activities such as household chores and other farm activities which do not account value for their work. In an ideal Nepalese household, man generates income and his wife involves in domestic activities. Usually, men are responsible to earn either through farming or through non-farm activities, while women are responsible for child bearing/rearing, household chores and tending animals (Bhattarai, 2002). Inclined male out migration in the search of better job opportunities have resulted in increased work burden over women's. Now, women have to perform the work of house and that of farm. Women perform almost all the task except ploughing and transporting of the final produce, which are exclusively performed by men (Venkateswaran, 1995; Aggarwal et al., 2013). However, the contribution of gender in vegetable production is found reversed. Role of women in homestead vegetable cultivation activities is found dominant in comparison to men (Sultana, 1993; Rana et al., 2018).

Rana et al. (2018) stated that labor work for vegetable activities is solely the responsibility of women in Sindhuli district of Nepal. The homestead vegetables are majorly used for home consumption and are not considered as a cash oriented job. Sultana (1993) reported that every family member contribute for homestead vegetable production, but the most of labor input like land preparation, transplanting,

watering and harvesting was done by women. However, men preferably helped for fertilizer and pesticide application. Similarly, Akanda (1994) in his study found that rural women had high participation in vegetable cultivation. This research survey was carried with an aim to understand the real situation of women in the vegetable cultivation in the rural community of Kanchanpur district of Nepal.

### METHODOLOGY

A survey study was conducted in three villages of Kanchanpur district (Majhgau-14, Bhuda-02 and Baghphata- 19) to examine gender participation in vegetable production activities. Eighty households were chosen by random sampling technique and a scheduled interview was carried out during September-October, 2017. All the data were assembled in IBM SPSS 20. Different descriptive and inferential statistics were used for the analysis.

### RESULTS

#### **Socio-demographic characteristics**

Age, ethnicity, gender, education and occupation of the respondents were measured and categorized. The frequency distributions of the socio-demographic characteristics of the respondents are presented in Table (1). 42.5% of the respondents were male and 57.5% were female. 76.2% respondent belong to ethnic group, *Janjati* and 23.8% belong to *Brahmin/ Chhetri*. The mean age of respondent was  $41.27 \pm 11.741$ . Among the total respondent most of the respondent i.e. up to 43.8% were illiterate, 20.0% respondent have pursued their study up to primary level and 36.30% respondent have pursued their study up to secondary level. More number of females were found to be illiterate (33.75%) compared to men (13.75%). Most of the respondents (90.0%) were engaged in agriculture as their primary occupation whereas 10.0% were engaged in service. Greater numbers of females i.e. 58.75% were involved in agriculture than compared to men (32.5%).

#### **Gender involvement in training related to agriculture**

Most of the female farmers of Bhuda (13.75%) received week long training on Integrated Pest Management. However, most of the male farmers of Majhgau area received month long (13.75%) and weeklong training (12.5%) on off season vegetable cultivation and Integrated Pest Management. Table (2) shows the involvement of male and female in training in the surveyed area. A significant difference was found in the participation of male and female member in the training activities (chi square value = 10.544\*).

#### **Land Ownership**

In the rural Nepal land is the determining factor of the position and prestige of individuals in the society. According to our study the invaluable asset (land) mostly belonged to the male member and the females owned little or no land. Figure (1)

shows that 88.8% of male have the ownership of land while only a very marginal amount (11.2%) of land are owned by the female.

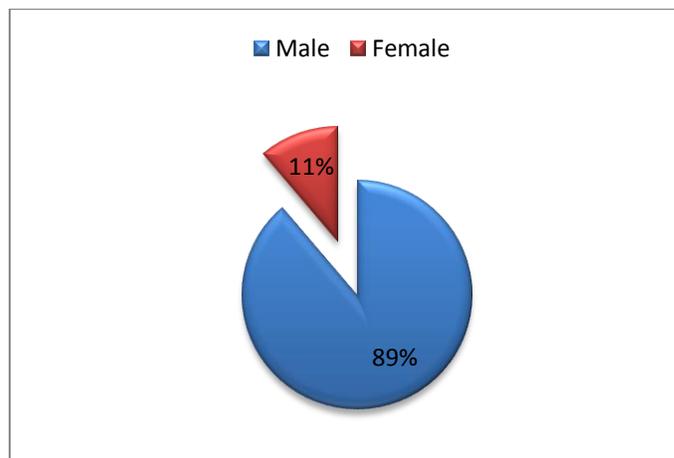


Figure 1. Ownership of Land

### **Gender based division of labor involved in vegetable production**

Table (3) reveals the division of labor in different activities of vegetable production. Females were found to involve more in transplanting (83.8%) and cleaning and harvesting (83.8%) activities, which are considered to be less skilled.

### **DISCUSSION**

Most of the women in rural part of Nepal are found to be illiterate. Bhandari et al. (2015) also found that most of the female members in rural area are illiterate and are involved in agricultural activities. Mostly the women's belonging to ethnicity *Janjati* are found to be illiterate than the *Bramin/Chhetri*. The *Janjati* community is one of the disadvantaged community of Nepal which is generally found to live in poverty condition (Patel, 2012). They generally have less access to resources and capital and perform the ritualized culture of subsistence farming. Subedi (2008) also reported that *Janjatis* have comparatively low access of knowledge and information as compared to *Bramin* and *Chhetri*.

Most of the respondents of *Janjati* community were found to involve in agriculture than other job. Farmers of Majhgau area, who resides by the Shuklaphata Wildlife Reserve, were involved in business of home stay and provide tourist a homely environment. This occupation has strengthened their income which consequently helped them to buy useful assets for off season vegetable farming. Farmers of Bhuda were actively involved in commercial seasonal vegetable farming. In Bagphata area, some farmers were found to take land on lease and practice seasonal vegetable farming.

The training received by the farmers was found to be the stimulating agent for pursuing the commercial vegetable farming. With the skill gained from the training they have now carried out, off season vegetable cultivation and are practicing integrated pest management techniques. Greater number of male farmers was involved in commercial vegetable farming in Majhgau area; consequently, they have greater access to agricultural services and trainings. However, female farmers of Bhuda were actively involved in farming since the male performed other jobs. Therefore, female farmers have greater access to the resources and training. However, in Bagphata area less number of male and female have received training. The farmers who didn't received the training were found to be involved in subsistence farming. Male member of the household make the decision about the person (either male or female member of family) participating in the training. If the males are themselves primarily involved in job other than agriculture, then trainings are received by females. However, if male farmers are themselves dominantly involved in agriculture, then they participate in the training.

UN (2015) found that though most of the men are performing job but they are informally involved in agricultural activities. And they become the principle decision makers of the overall activities including agriculture. Similarly, Zewdu et al. (2016) revealed that in most cases, men are the heads of households and are therefore the principal decision- makers in the household however some consultation with women may take place.

The patriarchal system continues to be the accelerating factor for domination of male to the women, in the rural part of Nepal. This attitude gives men relatively a greater power and position in a house as well as in the society. Kes and Swaminathan (2006) also reported that at a general level, women's work is primarily confined in the domestic sphere, while men are viewed as working outside the domestic sphere as the main breadwinners. This refers to that the work of majority of women's tends to be economically invisible. Joshi (2018) states that women's labor in household and voluntary work is culturally and economically devalued and unrecognized. Males dominate women due to their greater contribution in economy of family. Consequently, they have greater ownership of valuable assets like land. In our study, greater frequencies of males were found to have ownership of land as compared to female. Similar results were found by Zewdu et al. (2016).

Fence construction for vegetable farming is considered very important to prevent it from the attack of livestock. In Bhuda and Bagphata area, the livestock left open in the road were found to cause the damage. However, in Majhgau area, the wild animals from Sukhlaphata Wildlife Reserve cause serious damage of crop. And often fencing does not prove to be efficient preventive measure. Though fence construction is considered a skillful work requiring greater physical strength, but females were found to have greater role in fence construction. It is because greater number of females was found to involve in vegetable cultivation. The findings of our study were

in consistent with that of Abebe and Mulu (2017). However, in Majhgau area where greater number of males was involved in vegetable farming, they dominantly performed the fence construction activity.

Land preparation for vegetable cultivation is exclusively carried out by males (FAO, 2011). Similarly, Zewdu et al.,(2016) reported that males were found to be more involved in ploughing and harvesting of horticultural crop. We also found that males play greater role in ploughing and land preparation. However, less number of males were involved during harvesting of vegetable. The farmers having large area under vegetable cultivation performed the tillage by hiring the male labor who plough the land using tractor. Similarly, land is also prepared by ox driven tillage which is operated exclusively by man, because of the superstitious belief that female must not drive such equipment. However, for farmers with small land area, land preparation is done by females using tools like spade, shovel and *kuto*. Practice of hiring female labor for land preparation was found null.

Females played greater role in management of vegetable nursery. Also, females were found to play a dominant role in transplanting. Least number of males were found to be involved in transplanting. It is considered as a less skilled work and female oriented work. Similarly, cleaning and harvesting is also considered as a female oriented work. Olowa and Olowa (2015) also found that women are more involved in weeding, watering, transplanting, harvesting and marketing. UN (2015) reported that men are most likely to be employed as skilled agriculture workers, while women mostly work in elementary occupations, such as unskilled laborers in agriculture. Also, Khachaturyan and Peterson (2018) reported that women majorly perform weed control and harvesting.

More number of females were found to be involved in fertilizer application. Similarly, greater females were found to be involved in marketing of vegetable produce. Similar results were found by (Olowa and Olowa, 2015; Abebe and Mulu, 2017). Females and males were found to sell the produce to the *Sabji Mandi*, the main vegetable hub of Mahendranagar and sometimes sell them to the nearby retailer shops.

## CONCLUSION

This study analyzed gender participation in different vegetable production activities in Kanchanpur district of Nepal. From the study, it can be concluded that that most of the females of rural area are illiterate and predominantly involved in agriculture. Females labor input in vegetable farming was higher in the overall activity than men. Specially, in fence construction, fertilizer use, transplanting, harvesting and cleaning of vegetables, women were exclusively found to be involved. However, males have greater involvement in land preparation. Despite of greater role of females in vegetable cultivation, their contribution is supportive in nature while male have a dominative role because of greater decision making power and land ownership.

Providing training to the rural women is found to be a good way to strengthen women's access to the resources and decision making in agriculture. Projects and programs that addresses the complementary roles of male and female farmers, secured land tenure, greater access to extension services and training and increment in decision making power are recommended to improve women's role in agriculture.

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**ANNEX**

Table 1. Frequency distribution of socio-economic characteristics of the respondents

Social Category	Villages			Total
	Majhgau (n=34)	Bhuda (n=22)	Bagphata (n=24)	
<b>Gender</b>				
Male	19 (55.9%)	3 (8.8%)	12 (35.3%)	34 (42.5%)
Female	15 (32.6%)	19 (41.3%)	12 (26.1%)	46(57.5%)
<b>Ethnicity</b>				
<i>Bramin /Chhetri</i>	4 (21.1%)	0 (0%)	15 (78.9%)	19 (23.8%)
<i>Janjati</i>	30 (49.2%)	22(36.1%)	9(14.8%)	61 (76.2%)
<b>Age</b>				
		20-70		Mean = 41.27±11.741
<b>Education</b>				
Illiterate	9 (26.5%)	14 (63.6%)	12 (50.0%)	35 (43.8%)
Primary	8 (23.5%)	8 (36.4%)	0 (0%)	16 (20.0%)
Secondary	17 (50.0%)	0 (0%)	12 (50.0%)	29 (36.30%)
<b>Primary Occupation</b>				
Agriculture	29 (85.3%)	22 (100.0%)	21 (87.5%)	72 (90.0%)
Service	5 (14.7%)	0 (0%)	3(12.5%)	8 (10.0%)
<b>Secondary Occupation</b>				
Agriculture	3 (8.8%)	0 (0%)	3 (12.5%)	6 (7.5%)
Enterprise	2 (5.9%)	0 (0%)	0 (0%)	2 (2.5%)
No job	29 (85.3%)	22 (100.0%)	21 (87.5%)	72 (90%)

Source: Field Survey, 2017

Table 2. Gender involvement in training activities

	Gender		Residence		
			Majhgau	Bhuda	Bagphata
Training Related to Agriculture	Male	Not at all	0(0%)	0(0%)	6(6.25%)
		Training of week long	9(12.5%)	3(3.75%)	3(3.75%)
		Training of month long	10(13.75%)	0(0%)	3(3.75%)
	Female	Not at all	2(3.75%)	3(3.75%)	6(6.25%)
		Training of week long	6(6.25%)	12(13.75%)	0(0%)
		Training of month long	7(10%)	4(6.25%)	6(6.25%)

Source: Field Survey, 2017

Table 3. Gender involvement in vegetable production

Labor	Male (in percentage %)	Female (in percentage %)	Both (Male + Female) (in percentage %)
Farm activities			
Fence construction	43.7	37.5	18.8
Land preparation	55	33.8	11.2
Nursery Management	21.3	56.2	22.5
Transplanting	0	83.8	16.2
Fertilizer use	31.3	66.2	2.5
Vegetable harvesting	7.6	70	22.4
Cleaning/ harvesting	0	83.8	16.2
Selling	30	46.2	6.2
No selling = 14 (17.5%)			

Source: Field Survey, 2017