

Archives of Agriculture and Environmental Science 5(2): 164-167 (2020)  
<https://doi.org/10.26832/24566632.2020.0502012>

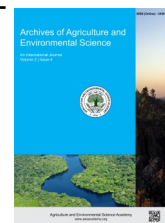


e-ISSN: 2456-6632

This content is available online at AESA

Archives of Agriculture and Environmental Science

Journal homepage: [journals.aesacademy.org/index.php/aaes](http://journals.aesacademy.org/index.php/aaes)



ORIGINAL RESEARCH ARTICLE



## Survey on gender role in rice production by farmers of Nuwakot district, Nepal

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### ARTICLE HISTORY

Received: 29 March 2020

Revised received: 11 May 2020

Accepted: 29 May 2020

### Keywords

Belkotgadi

Decision making

Field inspection

Pesticides

Random sampling

### ABSTRACT

Gender plays an important role in agriculture from managing work at the farm field to communicate with buyers. There is a significant division of labor among rice farmers in Nepal; thus, the study was conducted to identify the role of males and females in a farm field and also in decision making and other relevant activities. A random sampling survey was conducted where the respondents aged between 35-55 were highest and 85% of the respondents were males. The area was found to be dominated by the Brahmins. Female workers were found to be involved in highly unskilled work like transplanting, uprooting, weeding, and male workers were found to be involved in decision making, marketing, land preparation, pesticide application. Harvesting was done by females and then threshing by males. Equal involvement of males and females laborers was observed in the irrigation of rice crops. Women's less access to decision making was found to be due to lack of land ownership and lower level of education than those of males. Thus, the need for women empowerment is necessary for the area and also exposure of female labors to different skill-oriented training should be encouraged. The focus of NGOs/ INGOs should be headed to uplift the women's role in farming in Nepal.

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**Citation of this article:** Thapa, S., Jamkatel, D.P., Bharati, S. and Bam, S. (2020). Survey on gender role in rice production by farmers of Nuwakot district, Nepal. *Archives of Agriculture and Environmental Science*, 5(2): 164-167, <https://dx.doi.org/10.26832/24566632.2020.0502012>

### INTRODUCTION

Agriculture plays a strategic role in the process of economic development of the country. It is the main source of national income. Gender plays a crucial role in the field of agriculture in the present context. The World Bank estimates that as of 2018 agriculture comprise of around 9.5% of GDP for all developing countries. Women comprise 41% of the world's agricultural labor force. Women play a major role in rice production, post-harvesting processing, and marketing throughout the world (Boserup, 1970). With collectivization, women's labor input into agriculture increased in all regions, but it is still highest in southern China (33%) where rice is the dominant crop (Croll, 1979). A comparison of women's participation in northern and southern India also indicates that the rice system has traditionally used more female labor and within rice farming, the more intensive irrigated system uses more female labor (Rosenzweig and Schultz, 1982). The FAO (2011) estimates that women make up

45% of the agricultural workforce, rising to 60% in parts of Africa and Asia. Also, the FAO estimates that women comprise an average of 43% of the agricultural labor force in developing countries and even up to 70% in some countries (Ugwu, 2019). If they had equal access to productive resources, they could increase the yield by 20-30%. Nepalese economy is dominated by agriculture which contributes 31.7% of total GDP (MOF, 2016). Nepal being an agro-based country, 80% of Nepalese are engaged in agriculture. About 40% of national income comes from agriculture. Gender plays a significant role in the division of labor during rice production. Gender inequality is not a homogeneous phenomenon but a collection of unrelated and interlinked problems arises from cultural norms and values (Mulema *et al.*, 2019). Women undertaking agricultural labor received wages 26% lower than men (Sahavagi, 2016) although the provision of no discrimination about remuneration has been made by the Government of Nepal (NPC, 2015c). The participation of the female labor force in agriculture has increased from

36% in 1981, 45% in 1991, and has hiked up to more than 50% in 2016. Women make an essential contribution to agriculture and rural economies in all developing countries but are unpaid farmworkers in their own family (Patil and Babu, 2019). It is estimated that women provide 85-90% of time spent on household activities across a wide range of countries (Jain, 1996; Fontana and Natalia, 2008; Wrangham, 2009).

In the global context, men participate in field tasks (animal care, plowing, harvesting crops using farm machinery) while women are confined to homes. On one hand, technologies are not gendered friendly and on the other hand, women are not often viewed as farmers and rarely approached by agricultural extension service providers (UN Women, 2016) resulting in low adoption in rural areas. The agriculture sector being feminized but their contribution is still undervalued. Overall, gender equality often only exists in laws and policies and still is not adequately implemented on the ground for the benefit of women. For sustainable and socially inclusive development, women are the driving factors and also have a promoting role in agriculture (Oedl-Wieser, 2020). This paper focuses on gender roles in rice production and the division of labor in different activities related to rice production. Also, the focus has been made on the socio-economic characteristics of respondents and their role in decision making and access to land.

## MATERIALS AND METHODS

### Study area

Nuwakot district is a mid-hills lie in province no. 3 of Nepal in the ordinates 27°5" N to 85°26" to the Bagmati zone. Within the Nuwakot district, Belkot Gadi municipality was selected for the study, and ward no. 01 and 02 were selected randomly and the respondents were also selected randomly. Due to variability in climate from tropical to alpine, the Nuwakot district is also regarded as one of the potential areas for rice production. Thus, a household survey was conducted to collect information regarding gender involvement in different activities related to rice production.

### Research design, data collection, and analysis

A semi-structured questionnaire was prepared and respondents were selected by simple random sampling using the non-replacement technique. A total of 50 households were selected to collect the information from where the respondents were also selected randomly. Since August is the peak time for rice cultivation so interview schedule and survey was conducted during August 15-20 (2019) and September 23 (2019) at two steps and focus group discussion was conducted on the 24<sup>th</sup> of august to verify the data obtained and also to gather people's perception regarding women role in farming. The need for accessing gender roles in rice production has been done as explained by Res (1983) and Ohki (1983). Descriptive statistics were used for the data analysis. MS Excel and IBM SPSS 20 were used to interpret the results.

## RESULTS AND DISCUSSION

### Socio-economic characteristics

During the survey total of 60 households were surveyed in the Belkotgadi Municipality where each of 20 households was selected from three wards viz., ward no. 01, ward no. 02, ward no. 03. Brahmins (70%) were found to be dominant over Chhetri (10%) followed by Dalits (10%) and Janajati (10%). The majority of the respondents were males (85%) and females (15%). The average age of the respondents was found to be 42.7 ±1.304 (max. Respondents were between 35-55 years old). 20% of the respondents were illiterate and 80% were literate (primary: 30.33%, secondary: 26.67%, higher secondary: 16.67% and University degree: 3.34%). According to (CBS, 2015) only 59.8% are literate from the Nuwakot district which is quite contrasting to the present study. Farming was the major occupation in the study area which accounts for 83.33% followed by service holders 5.1%, businessman 5.1%, drivers 3.4%, and priest 1.7%. All of them were found to be involved in farming as their secondary job. Males are dominant in ownership of land with 80% and 20% of lands are owned by females in the study area. A similar case of male domination in land ownership and decision making has been observed in Afghanistan (Tavva and Martini, 2014). Patriarchal society suppresses the women able to be exposed out of the house and has to bear a load of household activities.

### Gender role in different activities related to rice production

Gender plays a significant role in the division of labor at different phases during rice production viz., from land preparation to harvesting. Males were found to be dominant in preparation of land (86.67%), seedbed (88.33%), and sowing of seeds (95%). A similar type of findings was reported by Zewdu et al. (2016). However, females were dominant during the uprooting and transplanting phase (93.33%). 6.67% of the males and 93.33% of females were involved in the weeding. Hand weeding was found to be done by the majority of respondents in the survey area. Women are found to be involved in tedious work like transplanting and weeding. A similar type of observation was reported by (Joshi and Kalauni, 2019). Also, (Khachaturyan and Peterson, 2018) reported that weeding is chiefly done by women in the farm field. Irrigation in the rice field was found to be done by 43.33% of females and 56.67% of males. The application of fertilizer and pesticides in the field was to be done by 90% of males and 10% of females. Pesticides are harmful to health so farm families do not allow most of the females to spray in the field and are to be done by males (Sapkota et al., 2020; Thapa et al., 2015). A similar type of observation was made by (Mollel and Mtenga, 2000) in cash crops and by (Kalauni et al., 2020) in cereal crops. Still, discrimination to women is in existence in agriculture in the form of wages and their involvement in unskilled work (Ghosh and Ghosh, 2014).

A field visit is one of the important tasks. This suggests the visitor about the different growth stages and its correlation with water and fertilizers. 63.33% of males and 36.67% of females were found to be involved in field inspection. It also suggests the

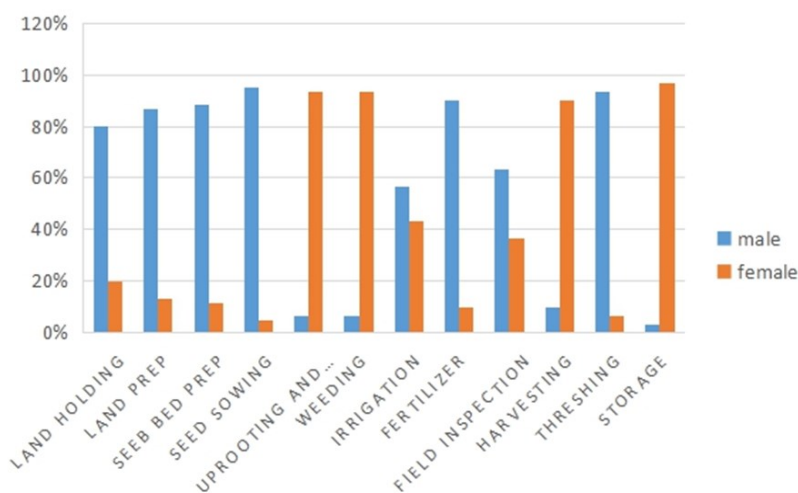


Figure 1. Division of labor in a rice farm.

farmers about the time for harvesting and threshing of rice. Harvesting is done dominantly by females (90%) and threshing by males (93.33%). before storing the crop grading is to be done which is done by 95% of males and 5% of females. Storage of rice which is one of the important and laborious works done by 96.67% of females (Figure 1). All the above results of the division of labor are similar to the observation of (Zewdu et al., 2016).

#### Training related to rice production

Most of the people in the study area are unaware of the training related to rice production but have attended the training on vegetable production. Among all of the respondents, only 16.67% of males and 3.33% of females have participated in the training related to rice production. The remaining of the respondents has participated in training related to potato and vegetable production. Training plays an important role as most of the seed producers in the study area have received a week-long training of seed production as provided by the government of Nepal. The involvement of males in training was found to be higher than that of females and a similar result was observed by (Joshi and Kalauni, 2019) in vegetable farming in Kanchanpur.

#### Conclusion

Agriculture plays an important role in the Nepalese economy as almost 80% of the population is involved in agriculture. Gender plays an important role in agriculture. The division of labor in the farm is found to be mostly dependent upon gender. Males are superior to females on every aspect from decision making in the household to working in the farm field. Females have limited access to resources and are involved in less skilled and tedious work. In the rice field, females are highly employed for seed-sowing, uprooting of seedlings, transplanting, and weeding whereas males are involved in decision making, field inspection, application of fertilizers, and pesticides. Harvesting is found to be chiefly done by females and threshing by males. The gender gap is the most observed problem in Nepalese agriculture and

also the same case was reported in rice production. The less involvement of women in decision making and land ownership reflects the dominance of males in society. Males are also leading in off-house work than that of females like marketing, field inspection, and training. Thus women's participation should be increased and effective plans should be formulated for disclosing the gender gap so observed in rice production in the study area. Equal participation of males and females should be encouraged. Females should be equally involved in the decision-making process so it increases gender participation in agriculture.

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