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PERFORMANCE OF WOMEN IN DAIRY SECTOR OF AGRICULTURE: A CASE STUDY IN NORTHERN DISTRICTS OF BANGLADESH

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ABSTRACT

Bangladesh is an agro-based over-populated country. Development of socio-economic condition of Bangladesh fully depends upon the development of the village. Women in rural Bangladesh are major but largely unrecognized contributors to agricultural especially dairy sector and economic productivity.

This paper undertaken to study the phenomenon of women in Agriculture: an examination in the Northern Districts of Bangladesh. It is a study of women participation & contribution to agricultural activity, total agriculture production & access of ownership in agriculture of women.

Secondary data depend on primary data. Data has been collected from 5 different districts & 11 different area of farmers group through organized questionnaires. All Information has been collected through Focus Group Discussion.

Women are well represented as farmers and increasingly represented as livestock health workers in northern part of Bangladesh. This paper sheds light on the context of women in rural North West Bangladesh, identifying household and community gender norms and arising barriers to women's participation. This paper sheds light on some key results achieved for women, with respect to social and economic empowerment.

In closing, this paper captures key lessons learnt & suggests some policy to minimize women barrier & to improve participation in agriculture & livestock sector.

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BACKGROUND

The female contribution to the overall economy, particularly in agriculture is high throughout Asia. Bangladesh, Bhutan, Cambodia, China, India, Myanmar, Nepal, Pakistan and Vietnam have particularly high percentages of women employed in the agricultural sector, with estimates ranging between 60 and 98 percent (FAO, 2003). Among the neighboring countries, only 59 per cent of Bangladeshi women, as compared to over 74 per cent of Indian, 64 per cent Pakistani and 85 per cent Nepali women, are employed in agriculture. Indeed, in most Asian countries the number of women employed in agriculture as a percentage of the economically active population is higher than that of men. However, women's contribution to agriculture, which is considered as unpaid family labor, is grossly underestimated. In fact, if unpaid work were included, the figures for female employment in agriculture would be even higher (FAO, 2003).

FAO has noted that while the overall proportion of the economically active population (EAP) working in agriculture declined during the 1990s, the percentage of economically active women working in agriculture at the global level remained nearly 50 percent through 2000, with an even higher percentage in developing countries (61 percent) and in LDCs (79 percent). Furthermore, although FAO projections to 2010 indicate a continued reduction in the overall female participation in agriculture globally, the percentage of economically active women working in agriculture in LDCs is projected to remain above 70 percent. The chart below compares FAO estimates of the proportions of the female economically active population working in agriculture, first at the global level, and then for developing countries, low income food deficit countries (LIFDCs) and the Least Developed Countries (LDCs).

Cattle are an inseparable part of the rural farming system, with Bangladesh ranked third for cattle production in Asia and 12th in the world. Milk production remains predominantly in the hands of small-scale mixed farms and landless households owning an average of two to three local cows. These cows and households contribute over 90 per cent of the milk produced in the country. Livestock are an important asset for these households; a recent CARE assessment showed that half of landless households own cattle (CARE Bangladesh 2007).

Patterns of female seclusion are the norm in Bangladesh’s patriarchal society. In Bangladesh, women’s property ownership is rare: less than 10 per cent of all women have their names on marital property. Domestic violence is common with 50 per cent of women reporting physical violence in their homes. Women are subject to practices of dowry payment, with high correlations between inflated dowry demands and domestic violence. Women are considered to

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be of lower status in the household relative to men and more senior women, and this is reflected in intra-family food distribution. Women are often the last to eat the already limited quantities of food available, even when pregnant.

The development of the dairy sector in Bangladesh presents particular challenges and opportunities for women. Traditionally dairy farmers, rural Bangladeshi women are facing many barriers to participate in dairy sectors. Their participation, however, necessitates diversion from cultural norms, including moving around and beyond the village for business' sake.

The research aims to cross-examine the progress of women in the dairy sector and to directly gather qualitative information from the farmers on their socio-economic characteristics. As the research aims to explore the asset ownership pattern and asset disparities to men and women; thus, the definition should be clear before in-depth analysis.

METHODOLOGY

Secondary data has been collected from reports and reading of past studies. All the reports and study results has been collected from the internet. Primary data has been collected by using questionnaires. The questionnaire was divided into multiple sections, covering different aspect of subjects relevant to study objectives. The following topics were covered:

Data collection & Data entry: Data collection process has been carries out over a period of 20 days, from 05 October 2012 to 25 October 2012. Data was collected from 11 different farmer groups of 5 different districts. After collecting all the response data was entered into excel sheet for further data analysis. Sampling has been done with a combination of probability & non-probability sampling method.

Firstly 5 districts have been selected based on the 'Convenience & Purposive method'. Purposively 5 districts selected where women are mostly engaged in agriculture. Then we use 'Cluster method' to identify different community where females are engaged in agriculture sector at different level. This has been done to get information at different level like agriculture sector, livestock sector & other source of entrepreneurship. Then 'Quota and Simple random sampling method' is used for identifying the group of respondents. Quota method has been used to get female group & minimum number of male in group.

Focus Group Discussion Checklist for Dairy Producer Groups

The following eleven groups were interviewed. Following are their characteristics. From seven of the groups only women were interviewed. Of the remaining four groups, three had two men and one had one man [Table 1].

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Table 1: Distribution of the respondents of FGDs according to gender

Group Name	Gender of participants	
	No of Men	No of women
Hossain Nagar, Hindupara, Rangpur.	**0**	**20**
Lalitpur milk Producing group, Rangpur.	**2**	**16**
Ashar Alo, Rangpur.	**1**	**16**
Jalalpur, Mitapukur, Rangpur.	**2**	**12**
Shoili, ullapara, Sirajganj.	**2**	**21**
Sarkar Para ,Taragonj, Rangpur.	**0**	**15**
Varat Badelgachi ,Naogan.	**0**	**18**
Dhantala Sariakandi , Bogra.	**0**	**16**
Purba Kutipara, Bogra.	**0**	**20**
Durjoy Nepaltoli Gaptoli, Bogra.	**0**	**30**
Uttar Singergari, Kishorganj, Nilphamary.	**0**	**17**

DAIRY AND MANAGEMENT OF DAIRY RELATED INCOME

Changes in workload

Who is mainly carrying out the dairy activities? Feeding, watering, milking selling milk, health care? Why these groups are allocated these tasks?

All eleven groups said that women mainly carry out dairy activities (feeding, watering, milking, selling milk, healthcare etc.) because Women stay at home all day and can manage these activities while at home (seven groups).

How has the workload of men, women, boys and girls changed with the dairy cows? What other gender relations have changed and why? (For increases, discuss by how much, for decreases, discuss by how much /many hours per day).

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Changes in work load with introduction of dairy cows were predominantly an increase for both women and men. For women, the time worked increased between 15 and 60 minutes each day (1 hour; 20 – 25 min; 15 min; 20 min; 30 min) according to eleven groups, and for men it increased for about 30min according to nine groups. Only one group said that boys and girls continued to help with work without specifying whether their workload had increased or not. Men are helping more because they appreciate the benefits of adopting new dairy technologies.

Marketing of milk

Who mainly markets the morning milk, who mainly markets the evening milk? Why?

Morning milk is mainly marketed by women according to ten groups. Women sell milk from home and to collectors. According to three groups, available family members also sell milk whereas two groups said that men delivered milk to the market when collectors failed to collect milk. Evening milk is also sold by women to collectors from home according to seven groups. Men deliver milk that has not been collected to the market (one group) and any available family member may sell milk (one group).

How are the payments made for each? What payment methods do men and women prefer?

There is no difference in payment modes for morning and evening milk. Men and women from each group were happy with the different modes of payment. They had probably negotiated for these payments modes. Seven groups were paid for milk sold weekly, three groups daily and one group monthly. The group that stated that they received money monthly also reported preferring to prefer being paid weekly.

How are decisions made about how much milk to sell and how much to keep for household consumption? Who makes the decisions? What determines the amount of milk to be sold in the morning and evening?

According to seven groups women mainly decide on how milk will be sold and how much will be kept. 90 to 92% of the women in two groups stated that women decided after consulting husbands. The quantity of milk produced usually determines how much milk will be kept or sold according to six groups.

What are the constraints to marketing milk by men and women?

All eleven groups said that men had no constraints and seven groups stated that women had no constraints. This lack of constraints by men and women was attributed to the establishment of collection centers, and hence, access to market because the project has linked them with

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processors. Three groups said that women were constrained and associated it with the lack of access to local markets by women because men do not allow them to leave their homes.

Income management

Who mainly manages the income from the sale of morning and evening milk? What determines who manages the income? Under what circumstances do women manage income from milk?

Seven groups stated that milk income was managed by women; five that milk income was managed by men and three that it was managed jointly. No explanation was given. According to six groups, the main determinant of who manages the income is the person who receives it and because women most often receive the income, they manage it. Two groups said that the amount of money being paid also determines who manages it and when it is little, women will manage it, but when it is much, men manage it. Another two groups also stated that the expenditure requirement also determines who manages it with men receiving money for use for large expenditure like construction, school fees and asset purchase e.g. plots

How do households commonly manage the milk income? Is it put in savings, account, mainly spend immediately, and kept within the home? Is this different for income from morning and evening milk? If saved, where?

Ten groups stated that milk income is saved in group savings accounts, seven groups that it is used to purchase livestock, livestock feeds and other farm inputs. Sometimes all income was spent and other times some or all of it was saved depending on family need.

Do households have savings accounts (proportion of group members, men and women with accounts registered in the names of men, women and joint). In whose names are the accounts? What rights do men have over money in women's accounts, in joint accounts? What rights do women have over money in men's accounts, joint accounts?

The situation of account ownership was really complex. Women do not normally have bank accounts. The eight groups with savings accounts narrated the following variations in account ownership 3/20 women, in their names; 12/14 have a group savings account but none as individuals; 4/21 members' husbands have individual bank accounts but wives do not know anything about these accounts; men can use women's savings; 10/36 have savings accounts in husband's names; women have saving accounts in their names in banks e.g. Grameen, TMSS and with NGOs; 2/35 women with own bank accounts in their names. Two groups said that they saved money at home because they had no bank account. In response to the question on rights of women and men to joint accounts, all groups stated that there are no joint accounts.

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Expenditure patterns

What are priority expenditure items by men and women for money made from dairy?

For women, five groups stated that education for children was priority expenditure; four groups identified purchase of livestock, specifically cows and poultry; another four purchased dairy feeds and other farm inputs like medicine; and another four purchased household consumables such as clothes and dishes. For men, three groups stated that they leased land; two groups that they purchased dairy feeds and farm inputs such as medicine; two groups that they spent it on children's education and another two that they bought livestock jointly on women. One group stated that men spent money on leisure items such as smoking, tea and betel-leaf from milk income.

What kind of assets have women bought from dairy income? What kind of assets have men bought from dairy income?

Women, according to four groups purchased livestock, poultry and cattle jointly with their husbands; according to two groups each, women also contributed money to purchase and lease land with their husbands; purchase cattle and poultry alone; and buy dishes. Men, on the other hand spent income according to four groups on livestock – poultry and cattle and dairy inputs and according to three groups they bought land.

RESULTS

The results is described on the Dairy and Dairy income Management. The result section includes the findings from the Dairy Management and Changes in Dairy Workload, Marketing of Milk, and Dairy Income Management and Expenditure Patterns.

A. Dairy Management and Changes In Dairy Workload

In Bangladesh like in many other countries, women spend much of the day performing tasks to maintain the household and women are also responsible for dairying at household. This is also found from the focus group discussions. Women are mainly carrying out the dairy activities, e.g. Feeding, watering, milking selling milk, health care etc. Men assist the women by grass cutting, chopping straw and bathing the cattle. Women are allocated these tasks as this is in-house activities and the outside activities are done mainly by the male. There is an opposite scenario too, in few cases men are watering, feeding and milking the cow. All the participants said that after involving with the project, dairy workload has been increased, due to being more aware and adopting improved practices in cattle management. Participants reported that from 15 minutes to 45 minutes time increased per day that depends on the cattle size. Although husbands are sharing

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some workloads at household after working with the project, but its not up to the ratio of increased load.

B. Marketing of Milk

In all focus group discussion, it is found that collectors collect milk door-to-door and giving weekly or monthly payment. Few of them were selling milk at local market before the project interventions and men from the household were doing it. However, presently most of them are selling to the milk collectors who are collecting door-to-door milk. The collectors are giving weekly or monthly payments and the group members and collectors decide the payment process jointly. Considering the quantity of milk produced per day, they jointly decide on quantity to sell it or to keep for household consumption. A mainly woman first decides it and then consult with husband if they think important to be discussed.

C. Dairy Income Management and Expenditure Patterns

Multiple responses have found in the dairy income management pattern. Most of cases found where they use the milk sales income for dairy management. E.g. purchasing cattle feed, medicine, treatment and AI services etc. Most of the women found who are saving the money in the group account and organizing group deworming and vaccination campaign with the money. They also reported that sometimes they are investing the money for better education of their children. A few of them giving money to their husband while making any assets and sometimes they are purchasing cattle with the money. *Most women reported that they have control over milk sales income and they can manage it independently*. Although in a few cases, they are giving the savings money to their husbands but they think this is their joint family, so women will get the ultimate benefit if husband makes any assets with the money. However, some cases also found where women wanted to buy a cattle but husband preferred to invest it in land.

Table 2: key findings of FGDs

Area	Key findings
Asset ownership pattern and dairy income management:	• Women can buy or own cattle, poultry and gold more easily than owning land or other big assets. As women have easy access to savings and credit, thus they can buy some small assets. • At the same time, it's also found that women are not much aware on building their asset ownership and project has scope to aware them on the relationship between asset ownership and position. • Most of the women have control over milk sales income and they can

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	manage it independently.
Normative attitude and women barriers	• Most of the participants responded that they inherits the lowest quality land and gets the lowest share and often offered to receive money in change of the lowest share which is of very poor amount comparing the land. Around 5% Women inherited land with minimum share. Around 30% said that they will get a minimum share of land and in change of this land; they may have to receive money from brothers. • As women do not have own earning source, they cannot buy individual assets. • In a few cases, women faces pressured to bring money from parents while making any assets by their husbands. • Women along with the value chain are facing different barriers in participating different forum that limits their mobility and women service providers sometimes faces constrains in service delivery due to normative attitude in rural context. Sometimes farmers also do not have faith on women service providers, as women are not familiar in these professions.
The most commonly experienced barriers to female participation in the dairy sector are that:	• Women are not given permission to attend training courses outside of their communities, particularly if they have children who require care. • Women are discouraged by husbands from practicing particular innovative cow rearing activities due to suspicion about their validity. • Women are disinclined to assume roles as livestock health workers due to dishonor around 'women's work' and mobility. • Men believe that women should not earn money; rather they should concentrate on household work. • Women livestock health workers are not given permission to attend emergency calls at night. • Women cannot make decisions about the use of savings and making investments without permission from their husband or guardian. • Husbands do not respect women's decision making authority in the household.

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DISCUSSIONS

Allocation of time for both economic and domestic activities for women gradually decreased since end of eighties implying that women have now more leisure time than before. On the other hand, less involvement of male members with increased production than in the past indicates increased labor productivity in agriculture in recent years. Adoption of more mechanized cultivation in future and moving to remunerative non-farm jobs by male farmers indicate labor crisis for agricultural operations in the rural areas will aggravate which will demand participation of more women in agriculture. In the face of male labor crisis, increased women involvement in crop production activities is mostly related to managerial activities now.

Most of the technologies developed for agriculture are related to preharvest crop production activities in which male farmers are mostly involved. Women friendly preharvest as well as post-harvest technologies for crop production and processing technologies need to be developed for effective participation of women in agriculture. This needs attention from both the researchers and planners. Women participation in agriculture has increased in recent years; however, their participation in crop production activities has drastically reduced in recent years.

On the other hand, participation of women in livestock and poultry production activities as well as in homestead gardening has gradually increased to a considerable extent. As women in Bangladesh find more comfortable engaging in agricultural activities within the boundary of household rather than in the field for crop production activities, home-based agricultural activities like livestock and poultry production as well as homestead gardening should be encouraged through providing more credit and training facilities to women.

In reality in most situations the questions of woman's contribution in agricultural & food production cannot be answered with any degree of accuracy. Women do not usually produce food separately from men. Most food is produced with labour contribution of both men & women in a collaborative process. Quantifying the share of food produced by women involves making arbitrary assumptions about gender roles in the production process, which are not likely to hold universally. For example, if men typically provide the labour to clear the field & women plant & weed the crops, both men & women are involved in harvesting. So it is impossible to separate output by gender. Women play a fundamental role in all the stages of food cycle in all regions, but this role differ by regions. Taking account of heterogeneity of their contribution is essential if policies & interventions are to be effective.

Address discrimination in land ownership and tenure by taking immediate steps to guarantee equal rights to land, property and inheritance for men and women, independent of their civil

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status; and implement policies and programmes to facilitate women's access to and control over land, water and other natural resources.

Overhaul extension services to make them gender-sensitive, for example by increasing the number of female extension agents, creating accessible demonstration plots within villages, establishing pro-female farmer field schools and farmer-to-farmer exchanges, and setting up gender-sensitive learning and evaluation mechanisms to improve extension service delivery. Given their many responsibilities, women may not have time to access extension services so these need to be tailored to women's routines and needs.

Engage women in policy-making and planning processes at all levels, for example by establishing quotas and targets for women in decision-making roles, legislating to remove barriers, and encouraging the establishment of effective collective structures that are gender-sensitive.

Integrate gender dimensions in nutrition and agricultural policies and research by uncovering the social, economic and political barriers to women's participation in agricultural production and marketing and seeking to minimise them.

Ensure that disaster risk reduction at all levels addresses the different vulnerabilities and risks faced by women and men (especially in the most marginalised and vulnerable communities). Community-level structures and mechanisms for disaster risk reduction, such as disaster preparedness programmes, crop diversification, and agrobiodiversity preservation, should be adequately resourced and offer equal opportunities for women, men and children to contribute to decision making, planning and implementation of disaster preparedness, mitigation measures and disaster response.

Increase investments in gender-sensitive public services and infrastructure such as clean and renewable energy and childcare centres, which can significantly optimise women's time and resources spent in care and reproductive activities, and allow them to engage in other productive and leisure activities.

Invest in rural infrastructure beyond agriculture, including health, education, and water and sanitation services, to reduce burdens on women's time, and increase their health and well-being to enable improved livelihoods

Increase investment in women smallholders and ensure funding is gender-sensitive and reaches women smallholders. Governments should use sex-disaggregated data to track funding and improve food security planning and policymaking, as well as to track progress against gender specific indicators. Nonetheless, policies that specifically target women are not enough on their

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own. Existing policies that intentionally and unintentionally reinforce gender discrimination must be addressed. For example, some government-sanctioned cooperatives require household heads to be members; this often leaves out women. To address embedded gender barriers such as these, governments should implement planning processes that identify the specific constraints women smallholders face to accessing information, knowledge, markets, technologies, and natural and productive resources such as time constraints caused by unpaid care work.

CONCLUSIONS

If women can create a positive image as a farmer, worker or entrepreneurs, can gather knowledge of law and self-confidence to claim rights, have access of land & can use information and skills to improve productivity and income, labor or time will be equitably divided, Increased involvement in decision making at household level, equitable control over productive assets and use of income , and Increased food and nutrition security , they can achieve the success in agriculture sector in our country & can take part in contribution to produce more food for overall population.

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