

Female Agricultural Workers in Assam: A Case Study of Darrang District

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I. SECTION

INTRODUCTION

Women in rural India are involved in various stages of agricultural operations starting from sowing of seeds to hand weeding, harvesting and post harvest activities. Over time, as technological change in agriculture has brought about a substantial change in labour-land use pattern, the nature of work of rural women has also undergone a change. Women spend a substantial part of their time not only in various activities directly related to agriculture but also in the management of livestock, poultry, etc. (Sisodia, 1985; Agarwal, 1988). However, the true picture of female work and their contribution to family expenditure is usually not clearly presented. Many economically productive activities performed by women go unrecorded as such or are subsumed within 'domestic work'.

OBJECTIVE OF STUDY

The main objective of this study is to find out the contribution of women agricultural workers to family income in the farm households of Assam.

METHODOLOGY

The definition of worker given by NSSO is used in the study. According the definition, persons who, during the reference period are engaged in any economic activity or who, despite their attachment to economic activity, have temporarily abstained from work for reasons of illness, injury or other physical disability, bad weather, festivals, social or religious functions or other contingencies constitute workers. Unpaid helpers who assist in the operation of an economic activity in the household farm or non farm activities are also considered as workers. An economic activity is one that contributes to the output marketed by a rural household. It is assumed here that time is a productive economic resource. To access the contribution of the female workers, detailed information about each person's role in different activities and time spent was collected. Method used in recording of time spent in economic and non economic work depended upon the nature of activity. For daily activities such as childcare, care of animals, work in the kitchen, etc., the daily time spent by each member in each activity was recorded. In crop production, labour time utilized was recorded seasonally as well as crop wise and operation wise. The Interviews Using Recall Approach has been used in the collection of primary data for the study. Women themselves often consider a wide range of

productive activities performed inside or outside the house as 'housework'. Wherever required, in matters such as land owned, expenditure incurred in cultivation and allied activities, price received from sale of produce etc. male help was taken. Information was collected about women participation in a wide range of activities generally performed by workers in rural areas (which include i. *cultivation* i.e., land preparation, sowing, irrigation, fertilizer and manure application, weeding, harvesting, threshing, storing, and grading, ii. *dairying* i.e., milking, bringing fodder, feeding, watering, and cleaning iii. *poultry* i.e., feeding, watering, taking care, cleaning, collecting eggs) and on the basis of time devoted to each activity during a working day, women's share was calculated in total work. The reference period for the study is the agricultural year 2007-08.

The data for the study has been collected from 140 households of Darrang district of Assam by taking sample villages. The sample villages have been selected in a manner so that it represents the agricultural situation in the state. The sample villages have also been selected so that it includes villages having both indigenous and immigrant population, coming from different social strata.

The sample unit consisted of all females engaged in agriculture.

Stratified sampling was followed in the collection of data. The sample was divided into two strata. The first strata consisted of females engaged in agricultural operations in their own fields and the second strata are females engaged in agricultural operations, not in their own field but working as agricultural labourers.

The sample for the study has been taken from both the strata. Primary data for the study was collected with a structured questionnaire and through personal interview with the respondents. Secondary data was collected from various Central and State Government publications and Census of India Report.

The paper is divided into V sections. Section II gives an outline of the studies already completed on woman's increasing role in agriculture. Section III gives a socio-economic profile of the sample. Section IV gives a disintegrated picture of the total household income derived from agricultural and non-agricultural sources. Section V summarizes the findings and the policy implications of the study.

II. SECTION

REVIEW OF LITERATURE

A study by Anuva Saikia (2000) of three villages near Jorhat in the Brahmaputra valley, records that women are engaged in

sowing, transplanting, irrigation, hand weeding, harvesting and post-harvest activities. While they perform 80 per cent of transplanting

And harvesting, they do not participate at all in spraying insecticides and other pesticides, using tractors and power tillers, or purchasing inputs. For other tasks, women provide 10-30 per cent of the total labour. She notes that this specificity cuts across all farm sizes.

C P Chandra Sekhar and Jayati Ghosh, in "Feminisation of India's Agricultural Workforce" states that the increased involvement of women in agriculture may be due to out migration of males from low paid agriculture to high paid industry.

The same authors in "Indian Economic Refoms Process and the Implications of South-East Asian Crisis" in 1999, has stated that in India, feminisation in agriculture has been induced by casualisation of work, unprofitable crop production and distress migration. Migration has been noticed to other rural areas, to slums and to highly labour-exploitative sectors of the economy such as construction.

Swarna S Vepa in "Feminisation of Agriculture and Marginalisation of their Economic Stake", Economic and Political Weekly, 2005, proves that increase in women's work in agriculture is due to outmigration of male partners. Women's work remains invisible in family enterprises. Women in rural areas are engaged in other activities (viz., livestock, fisheries and forestry) besides farming. She has calculated that women on an average spend 23.6 hours a week on economic activities, but receive payment for 60 per cent of their work.

Maithreyi Krishnaraj in "Food Security: How and for Whom?", reports that despite efforts made over the years to improve coverage of women's work in rural areas by proper inclusion of unpaid productive work, there has been only marginal improvement. The definition of cultivators in the census relies on ownership of land so that even though women actually cultivate they are seen as family labour. Hence this fact is not reflected in the proportion of men and women cultivators, which make some people, dispute that there is feminisation of agriculture in India.

Maithreyi Krishnaraj and Aruna Kanchi in "Women Farmers of India" focuses on the increasing role women are playing in the agricultural and allied sectors in India. They feel that women continue to get discriminated in this sector as seen through the lopsided manner in which their role is viewed both in public perception as well as policy makers.

Delima Hasri Azahari in "Indonesian Rural Women-The Role in Agricultural Development" stress on the point that position of rural women is influenced by religious, social and political system, and economic status associated with the size of landholding they occupy. The study tries to answer the question as to why women are neglected in rural development. Women are not given equivalent access to land, credit or extension services. According to the study, some of the reasons for South East Asians women's exclusion from aspects of development are Western ideology, colonialism, male opposition and difficulties faced by female researchers. The study also tries to find out the importance of including women in the development process.

Rupinder Kaur (2004) states that the present definitions of work do not capture the large part of the work done by women in

developing countries. In economies where self-employment and unpaid family labour are common, western concepts of employment lose their relevance. The criterion of wage earner does not apply. In agrarian economies, mostly the work women do in agriculture, household industry and the processing of agricultural products, is unpaid and therefore unrecognized. Work is seasonal. People engage themselves in multiple economic activities. In this situation, identification of a person as a worker or non-worker becomes difficult. The problem is more serious in case of women. Also women play roles, which are either preparatory or supportive to the production process and much of this, remain unrecorded.

Bina Agarwal (2000) in 'Gender and Command over Property: an economic analysis of South Asia', focuses on the links between gender inequities and command over property. It stresses on the fact that since land is the most important form of property in rural South Asia, any significant improvement in women's economic and social status is linked to their having independent land rights. But in spite of progressive legislations, few South Asian women own land. Social, administrative and ideological factors are found to be responsible for the gap between women's legal rights and their actual ownership of land. Agrawal specifies the necessity of collective action by women for overcoming these obstacles and the need for a specific policy focus on these issues.

Tuteja ((2000) finds that female agricultural workers contribute significantly in household income on all farm sizes and their earnings are crucial for the small and landless households. The proportionate contribution of females declined with increasing farm size. As regards decision-making, status of female agricultural workers is found to be poor. Female workers belonging to big farm households had a better say compared to others in this respect.

III. SECTION

SOCIO-ECONOMIC PROFILE

Table 1 gives a socio economic profile of the sample households. As can be seen from the table, the proportion of illiterate population is high at 37.14 per cent. The sample also had a graduate as an agricultural worker. One important point to note here is that more than 40 per cent (41.32 per cent) of the sample was more educated than their husbands.

Table 1 Socio-Economic Background of Women Agricultural Workers

Average age	38
Average household size	5.9
Proportion who are illiterate	37.14
Proportion who have completed middle school	42.15
Proportion who have completed high school	13.57
Proportion who are more educated than husbands	41.32
Proportion who belong to landless households	39.29
Proportion who belong to marginal households	32.14
Proportion who belong to small households	24.28
Proportion who belong to big households	4.28
Proportion who belong to SC households	21.43
Proportion who belong to minority households	21.43

Source: Survey

IV. SECTION

This section gives a disintegrated picture of the household income from both agricultural and non-agricultural sources.

INCOME FROM CULTIVATION

Cultivation is the major source of income for rural households. Income earned by a cultivator from raising crops on land used for agricultural purposes is termed as income from cultivation. This is arrived at by deducting cash expenditure from gross value of output. Cash expenditure includes costs on human and animal labour, cost of hired machinery (e.g tractor), irrigation charges, and expenses on seeds, fertilizers and pesticides. This concept of family income is taken from studies of family income by Parthasarathy and Ramarao (1974) and Bhaiti and Singh (1987). The estimates of family income from cultivation, along with the contribution of female workers in different farm sizes, are shown in Table 2.

An average household of the sample earns Rs 83,696 per annum from cultivation during 2007-08. The differences in income from samples in different farm sizes are shown in the table. The share of female workers in family income is calculated as a proportion to their share in total labour used by the family in cultivation. As can be seen from the table, the share of income contributed by women is significant on all farm sizes. And the proportional contribution of female workers is negatively related to farm size, i.e., the proportional share of female workers declines with increasing farm size (due to higher income level, higher education level).

INCOME FROM DAIRY

Almost all households engaged in agriculture possess dairy animals to supplement their income. It is not only a profitable enterprise but also possible for the households to be engaged in it due to the seasonal nature of their dependence on cultivation. Dairy enterprise (milk, milk products, eggs, meat, etc.) are not only a source of income but is also used to supplement their own consumption. All females irrespective of the size of farm are engaged in this economic activity, though the extent of involvement varies. Table 2 shows the income from dairy of the farm households. Dairy income has been derived by deducting

costs like expenses on green fodder, dry fodder and veterinary expenses from gross income of dairy.

The average household earns around Rs 12,856 per annum from dairy enterprise. The share of female workers has been estimated, similarly as in the case of cultivation, according to their share in labour use. The contribution of female workers was more than 45 per cent in case of landless households, and high in case of other farm categories also. However, the level of involvement was found to decline with the increase in farm size and income. But, in a few cases, where children are able to work, women were exempted from some of the work.

INCOME FROM WAGE EMPLOYMENT

In addition to the above-mentioned activities (i.e., cultivation and dairy enterprise), agricultural households are also seen to be engaged in wage employment to supplement their income. This is true in case of both males and females, though it is more in case of females, especially in the landless and marginal households.

Table 2 shows that the average income from wage employment on sample households is Rs 2340.75 per annum. The workers from big and small households were found to be employed in small business and a few (5 per cent of the sample) had a permanent salaried income. But, the workers from landless and marginal farms were mostly engaged in big farms as agricultural workers. The share of female workers from wage employment in the landless and marginal households was high, contributing more than 50 per cent to total household income. However the contribution of females from small and big farm households was less compared to income from cultivation or dairy enterprise due to social customs, which does not allow a female to work as a labourer except in extreme situations

INCOME FROM AGRICULTURE

Table 2 also shows an estimate of the aggregate income from agriculture on the sample households. It has been arrived at by aggregating income from cultivation, dairy enterprise and wage employment (in agriculture and subsidiary activities). The share of female workers in family has been found to be significant at all farm sizes.

Table 2 Distribution of Agricultural Income and Contribution of Female Workers

Farm Size Category	Per Household Income (Rs) from Agriculture	Female Worker's Share In Income (Rs)	Percentage Share of Female Workers' in Income
	{Cultivation + Dairy + Wage}		
Landless (0-3 bigha)	23,729 + 4,115 + 4,630	19,018 + 1,892 + 2,358	71.65
Marginal (4-7 bigha)	50,873 + 7,608 + 1,886	21,037 + 2,548 + 1,033	40.78
Small (8-15 bigha)	63,517 + 13,835 + 2,614	17,405 + 3,057 + 144	25.77
Big (>bigha)	1,96,666 + 25,866 + 233	21,900 + 3,833 + 12	11.55

Source: Survey

NON AGRICULTURAL INCOME

Non agricultural income comprises of income derived from services in secondary and tertiary sectors, business income and any other income accruing to the family outside agriculture. An average farmer earned Rs 22,286.75 per annum in the reference period from non-agricultural activities. However, the share of

women from non-agricultural income is low. This is mainly because of the prevalence of patriarchal society where women are usually confined to work at home (which is unpaid) and the males go out for work. This is more common in rural households, where the males are engaged in small business outside the home leaving the works at home to the females.

Table 3 Contribution of Female Workers in Non Agricultural Income to Family Income

Farm Size Category	Per Household Income(Rs)	Female Worker's Share In Income (Rs)	Percentage Share of Female Workers' in Income
Landless (0-3 bigha)	17,449	592	3.4
Marginal (4-7 bigha)	15,182	578	3.81
Small (8-15 bigha)	25,566	2,361	9.24
Big (>bigha)	30,950	0	0

Source: Survey

TOTAL FARM HOUSEHOLD INCOME

Total farm household income here refers to income from both agricultural and non agricultural sources. Per household income from all sources stand at Rs 1,21,179 during the reference period 2007-0. There are variations across different farm sizes. Table 7

shows the details of total household income and the contribution of female workers to total income. This contribution is found to be significant in all farm sizes, though the proportionate contribution of female workers to total income is seen to diminish as the farm size increases.

Table 4 Contribution of Female Workers to Total Household Income

Farm Size Category	Per Household Income(Rs) [Agriculture+Non agriculture]	Female Worker's Share In Income (Rs)	Percentage Share of Female Workers' in Income
Landless (0-3 bigha)	49,923	23,860	47.79
Marginal (4-7 bigha)	75,549	21,184	28.04
Small (8-15 bigha)	1,05,532	22,967	21.76
Big (>bigha)	2,53,715	25,745	10.14

Source: Survey

V. SECTION

CONCLUSIONS AND POLICY IMPLICATIONS

Female workers contribute significantly to household income and their earnings are crucial especially for landless and marginal farm households. The proportionate contribution of females is, however, found to decline with increasing farm size. This is because the participation rate of women in agriculture is mostly governed by the economic condition of their family. Women

from poor families accept any economic work to assist their family even under very inferior working conditions. They are mainly supplementary earners and their stay in labour force is of temporary nature, which declines with the improvement in the economic conditions of the family.

Moreover, a large percentage of women are also found to be engaged in agriculture because agriculture is an occupation which provides work opportunities to women, irrespective of their age, level of education, or any formal training (women

between the age group 15 to 60 years; illiterate women to graduates, were found to be engaged in agriculture).

Based on the selected indicators, the status of the female agricultural workers is found to be poor. Ownership of land is almost non-existent for female workers. They also do not have the right over their own earnings. Women agricultural workers get lower wages compared to the male workers for equivalent work. One way of bringing about an improvement in the status of the female workers is to raise the wages of the women workers to improve their economic condition. To achieve this, minimum wage legislation alone is not sufficient; steps should be taken to enforce it.

Female agricultural workers contribute significantly to family income but they should also be integrated into the mainstream through better education, health and other support facilities. Their status is low mostly due to their limited access to economic resources (land in this case). The strategies adopted by the Government to increase women welfare should be made more focused to bring forth appropriate results.

According to the Assam Human Development Report (2003), the present policy on agriculture in Assam needs revision. Measures for consideration include appointment of women extension officers and workers, instituting special training camps for women agriculturists, extending agricultural credit to women and giving pattas on government allotted land to women. Another important step is to pass state laws on women's right to a share of parental property, particularly landed property.

Since women contribute a large percentage to total family income, especially in households owning less land, women should be taken as active partners in the development process. Capacity building and skill formation should therefore be made an integral part of any development programme to make it more meaningful. Since domestic and subsistence labour is unpaid, therefore women must be included in development which generates income, yet suits their needs.

Assam has a strong tradition of women's involvement in agriculture since ancient times. Gender development is a necessary condition both for economic growth and human development. A new paradigm with women at the core will ensure better participation of men and women and help the society and the economy to grow. Women have the potential to contribute to agricultural productivity equivalent to men. According to an Indian study, development, which provides education and training to women, can enhance the productivity of all farm inputs (Cloud, 1985). Planners should not ignore productivity of domestic activity. Improvement in productivity of domestic chores makes it possible for women to spend their time on other income generating activities. If development process emphasizes on the increased income generation through higher agricultural and domestic productivity, benefits would accrue to the community. Nutrition levels in a family will also improve with the increase in women's wages. As has been proved by Nelson (1979), women use their wages on household affairs and necessities, education, health, children clothing, etc., whereas men spend it on drinking or purchase of things like radios.

REFERENCES

- [1] Agarwal, Bina (1994): "A Field of One's Own: Gender and Land Rights in South Asia", Cambridge University Press, New Delhi.
- [2] Agarwal, Bina (2000): "Gender and Command over Property: an Economic Analysis of South Asia", Kali for Women, B 1/8 Haus Khas, New Delhi.
- [3] Agarwal, Ritu (2007): "Women Farmers in China's Commercial Agrarian Economy", *Economic and Political Weekly*, October 20, 2007.
- [4] Azahari, Delima Hasri (2008): "Indonesian Rural Women-The Role in Agricultural Development", *Analisis Kebijakan Pertanian*, Vol 6, No 1, Maret 2008: 1-10.
- [5] Choudhary, P (1993): "High Participation, Low Evaluation: Women and Work in Rural Haryana", *Economic and Political Weekly*, pp. A-135-148.
- [6] Chandrasekhar, C P and Ghosh, Jayati (1999): "Indian Economic Reform Process and the Implications of South-East Asian Crisis", *Employment and Training Department, International Labour Office, Geneva*.
- [7] Christy, R. John and M Thirunavukkarasu (2002): "Socio Economic Dimensions of Female Participation in Livestock Rearing: A Case Study in Tamil Nadu", *Indian Journal of Agricultural Economics*, January-March 2002.
- [8] Cloud, Kathleen (1985): "Role of Women in Household Production" on 'Small Scale Enterprise and Women: Gender Roles in Development Projects' ed. C. Overholt, M.B. Anderson, K Cloud and J.E. Austin, West Hartford: Kumarian Press, Inc.
- [9] Kaur, Rupinder (2004): "Proceedings of the National Seminar on Gender Statistics and Data Gaps", Goa 5-7th February, 2004, Central Statistical Organisation.
- [10] Krishnaraj, Maithreyi, (2005): "Food Security: How and For Whom", *Economic and Political Weekly*, June 18.
- [11] Krishnaraj, Maithreyi and Aruna Kanchi (2008): "Women Farmers of India" National Book Trust.
- [12] Kishor, Sunita and Gupta, Kamla (2004): "Women's Empowerment in India and Its States: Evidence from NFHS", *Economic and Political Weekly*, February 14.
- [13] Meenakshi and Ranveer Singh (1995): "Role of Women in Different Systems of Hill Farming: A Study of Himachal Pradesh", *Agricultural Economics Research Centre, Shimla*.
- [14] Nelson, Nici (1979): "Why has Development Neglected Women? A Review of the South Asian Literature" ed. T S Epstein and F P F Sensarathnes, New York Pergamon Press.
- [15] Parthasarathy, G and G. D. Ramarao (1974): "Employment and Unemployment of Landless and Marginal Farmers", *Seminar Series, Indian Society of Agricultural Economics, IIM*.
- [16] Radhakrishna, R (2005): "Food and Nutrition Security for the Poor in India", *Economic and Political Weekly*, April 30.
- [17] Rao, Nitya (2005): "Gender Equality, Land Rights and Household Food Security", *Economic and Political Weekly*, June 18.
- [18] Rustagi, Preet (2003): "Gender Biases and Discrimination Against Women: What do Different Indicators Say", *CWDS and UNIFEM, New Delhi*.
- [19] Saikia, Anuva (2000): "Employment Patterns of Rural Women and Their Involvement in Decision-Making: A study in Jorhat District of Assam", in 'Women in Agriculture and Rural Development', *Proceedings of the Worksho, Indian Society of Agricultural Economics, New Delhi, Nov. 9-10*.
- [20] Tuteja, Usha (1997): "Female Employment in Agriculture in Haryana", *Agricultural Economics Research Centre, University of Delhi, Delhi*.
- [21] Tuteja, Usha (2000): "Contribution of Female Agricultural Workers in Haryana", *Indian Journal of Agricultural Economics*, April-June, 2000, Vol. 55, No 2.
- [22] Unni, J (1999): "Women Workers in Agriculture: Some Recent Trends", in T S Papola and A Sharma (eds.), 'Gender and Employment in India, *Vikas Publishing House, New Delhi, pp. 99-121*.
- [23] Vepa, S Swarna (2005): "Feminisation of Agriculture and Marginalisation of their Economic Stake", *Economic and Political Weekly*, June 18.
- [24] World Bank (2001): "World Development Report, 2000-01: Attacking Poverty", *Oxford University Press, New York*.