



Impact of Self Help Groups on Socio-economic Status of Dairy Farmers in Kamrup District of Assam

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ABSTRACT

A study was conducted to assess the impact of Self Help Group activities on the socio-economic status of dairy farmers in Kamrup district of Assam. From twenty randomly selected dairy Self Help Groups, 100 members were selected randomly and 100 non-members from the adjacent villages were selected randomly to collect data. The SHG members were young, literate, had higher gross annual income (>Rs.60160), having more extension contact than the non-members. The members received loan from financial institutions while the non-members were not received any loan. Likewise, the SHG members were undergoing training on dairy farming while the non-members did not undergo any training till the time of investigation. The milk productivity of cows of SHG members were more in comparison to non-members. Respondents, both members and non-members, had less media exposure. The empowerment of SHG members through group activities like meetings, trainings, contacts with change agents, and informal discussion with fellow members contributed in improving members' socio-economic condition.

1. Introduction

In India, Self Help Groups (SHGs) and Micro Finance Institute model started in the 1990s. SHGs, which are instrumental in empowering rural poor, are adopting dairy farming is one of the important activities and significantly contributing in empowering the group members socially and economically. In Assam, the idea of SHG flourished in the nineties at a time when formation of non-government organization has become a trend with the objective of improving the socio-economic conditions of both the urban and the rural poor (Das *et al.*, 2001). In the state of Assam, many rural and agricultural development schemes sponsored by government are mandated with formation and capacity building of dairy-based SHGs. The Dairy Development Department of the state has taken up

Massive programme of “Strengthening Infrastructural for Quality and Clean Milk Production”. Central government sponsored scheme “*Rastriya KrishiVikashYojana*” in the state has also incorporated dairy sector as major component under the State Animal Husbandry and Veterinary Department. Formation and capacity building of dairy-based SHGs is one of the major components of these programmes. All these programmes along with their agenda must have given some inputs and incentives to the milk stakeholders including the SHGs in the state. These groups are acting as a tool social engineering in a highly diverse and multicultural rural society of the State. Various studies suggest that SHG initiatives have been successful in enhancing incomes, generating positive externalities such as increased self-esteem, more participation in decision making process and over all empowerment of its members (Hashemi *et al.*, 1996, Zaman, 2001, Krishnaraj and Kay, 2002, Puhazendi *et al.*,

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2002, Simanowitz and Walker, 2002 and Swain, R.B., 2006). Hence, the present investigation is undertaken to assess the impact of these SHGs on socio-economic status of the dairy farmers.

2. Materials and Methods

The study was conducted in purposively selected Kamrup district of Assam. From the district, twenty dairy-based SHGs were selected randomly and from each selected group, 5 members *i.e.* 100 members were selected randomly to collect data. Correspondingly, 100 non-members from the adjacent villages with similar socio-economic background were selected randomly to collect data on dairy farming. For the present study, socio-economic characteristics, *viz.* age of the farmers, gender, educational attainment, experience in dairy farming, occupation, community relation, number of training undergone, loan received, total operational land holding, herd size, annual gross income, annual milk production, milk sale, milk consumption, media exposure and extension contact of the farmer were selected. Data were collected with an interview schedule. The collected data were scored, compiled, tabulated and subjected to various appropriate statistical tools including frequencies, percentage, mean, cumulative square root frequency, Standard Deviation (SD) and Z-test tests to draw meaningful results and logical conclusion.

3. Results and Discussion

3.1 Age

Age influences the mobility, energy level and decision making ability of the person. Keeping this in mind, the age of the respondents were categorized and presented in the Table 1. Age of the SHG members varied from 24 to 52 years whereas for non-members, the range was 28 to 56 years. A perusal of the Table 1 indicates that the majority of the members (48.00 per cent) were in young age category (below 35 years) while 70.00 per cent of the non-members were middle aged (35-50 years).

The average age of the non-members (40.95 years) was higher than that of members (36.59 years). The age of the members and non-members significantly and negatively differed at 0.01 level of probability. This indicates that SHG movement was able to attract relatively younger people. The above findings are in line with the findings of various researchers, *viz.* CMD (2010), Feroze (2009), Sajesh (2006) and Das (2004) who also reported that majority of the members were in young age group.

3.2 Gender

Gender of the respondents is depicted in the Table 2. It is seen that majority (60.00 per cent) of members and 77.00 per cent of non-members were male, respectively. Though 90.00 per cent of the groups in the country were of female groups, the dairy SHGs in the districts were dominated by the male counterparts. As dairy farming is labour intensive and time consuming, women might not be enthusiastic for the enterprise.

3.3 Education

Education is an act or process of acquiring general knowledge, developing the powers of reasoning and judgment and preparing oneself for mature life. Education status of an individual farmer plays a vital role in realizing higher performance through better understanding of the mechanism involved in the formation and functioning of SHGs and practicing scientific dairy farming. Therefore, education of the respondents was investigated and presented in the Table 3. The table indicates that majority of the members (31.00 per cent) and non-members (30.00 per cent) were having education up to primary level, followed by 25.00 per cent of members and 18.00 per cent of non-members were having middle level of schooling, respectively. It is seen that the percentage of illiterate was more in non-members (21.00 per cent) than that of members (13.00 per cent). The findings of the study are in conformity with the findings of Rao (2009) and Das *et al.*, (2001) who also reported that in Assam, only 8.70 per cent and 8.92 per cent of members were illiterate, respectively.

Table 1. Age of the respondents

Respondents	Category(in Years)			Mean Value	SD	Members vs. Non-members (Z-stat)
	Young(<35)	Middle(35-50)	Old(>50)			
Members (n=100)	48	46	6	36.59	5.87	-12.37**
Non-members (n=100)	17	70	13	40.95	6.55	

** Significant at 1 per cent of significance

Table 2. Gender of the respondents

Gender	Member (n=100)	Non-member (n=100)
Male	60	77
Female	40	23

Table 3. Education status of the respondents

Education Level	Member (n=100)	Non-member (n=100)
Illiterate	13	21
Functional literate	9	18
Primary	31	30
Middle	25	18
Secondary	15	8
Higher secondary	5	5
Graduate and above	2	0

3.4 Occupation

Occupation status indicates the type of income generating activities undertaken by the respondents and decides the extent of involvement of a farmer in farm operations. The occupation status of the respondents was presented in the Table 4. The table reveals that majority of the members (61.00 per cent) were engaged in dairy farming while 45.00 per cent of the non-members were found to be dairy farmers cum agricultural labourers. Dairy farming+business was found to be main occupation for 10.00 per cent and 13.00 per cent of the members and non-members, respectively. Dairy was found to be a dominant occupation for the respondents as dairy-based SHGs were selected purposively for the study to evaluate the socio-economic condition of dairy farmers in the study area.

Table 4. Occupation of the Respondents

Respondents	Occupation		
	Dairy Farming	Dairy Farming + Agricultural Labourer	Dairy Farming + Business
Members (n=100)	61	29	10
Non-members (n=100)	42	45	13

3.5 Year of Experience in dairy farming

Farming experience is valuable in building a successful livelihood and fosters the ability to assume greater responsibilities. It also influences on the knowledge and adoption behavior including rejection of an innovation. So, it is vital to investigate the farming experience of the respondents in dairy farming. It is revealed from the Table 5 that majority of the members (46.00 per cent) were in medium experience category (10-14 years) and 51.00 per cent of the non-members short experience (below 10 years) categories. The experience in the dairy farming for the members ranged between 4 to 21 years while that for the non-members varied from 4 to 19 years. It was further observed that 44.00 per cent of the members were having short experience in dairy farming while 36.00 per cent of non-members had medium level of experience. Long experience (above 14 years) was found only in 10.00 per cent of the members and 13.00 per cent of non-members, respectively.

Table 5. Experience in dairy farming of the respondents

Respondents	Categories(in years)			Mean Value	SD	Members vs. Non-members (Z-stat)
	Short (<10)	Medium (10 to 14)	Long (> 14)			
Members (n=100)	44	46	10	10.21	4.17	0.71
Non-members (n=100)	51	36	13	9.9	3.54	

Table 6. Loan received by the respondents

Respondents	Categories	
	Received	Not Received
Members(n=100)	81	19
Non-members(n=100)	21	79

4. Loan Received

The idea behind the formation of a SHG is to provide financial services to those who remain out of reach of institutional financial services. Table 6 depicts the loan received by the respondents. A perusal of the table reveals that a great majority of the members (81.00 per cent) received loan while 79.00 per cent of the non-members had not received any loan. The study also revealed that members had taken loan after 8 to 10 months of joining the group. From the study, it is clear that the SHG programme is successful in providing the platform to the members to reach the financial institutions which otherwise out of reach of the poor.

4.1 Training Received

Training is an organized activity aimed at imparting knowledge and skill to change attitudes and behaviours to enhance the performance of trainees. Training is activity leading to skilled behaviour. A close look at the Table 7 reveals that majority of the members (43.00 per cent) received only one training on dairy farming while 57.00 per cent of the non-members did not undergo any training till the time of investigation. It is further observed that 32.00 per cent of the members and 12.00 per cent of non-members had undergone two trainings on dairy farming, respectively. The number of training received by the members varied from 0 to 3 numbers while that for the non-members ranged from 0 to 2 numbers. The average number of training for member was 1.26 while that for the non-member was 0.55.

The number of training received by members and non-members differed significantly and positively at 1.00 per cent significance level. The above findings are similar with CMD (2010) which found that very few numbers underwent training while Purushotham (2006) reported that respondents were not receiving any serious training. Das (2004) also reported that the most of the members (88.52 per cent) had attended training on one to three aspects.

4.2 Operational Land Holdings

Land is an important and crucial scarce factor of production. Operational land holding indicates the economic well-being of rural household. The operational land holding of the respondents is depicted in the Table 8. The table reveals that most of the respondents, 84.00 per cent of members and 85.00 per cent of non-members, were having marginal land holding *i.e.* below 1 ha. The mean marginal operational land holding for members was worked out to be 0.12 ha while that for non-members was 0.10 ha. Only 16.00 per cent of the members and 15.00 per cent of the non-members were having small operational land holding *i.e.* 1-2 ha. The mean operational land holding for the members was found to be 0.26 ha while that for the non-members was 0.24 ha. The small land holding of the members reflects that the SHG programme targeted the marginal farmers of the society. The above findings of the present study are in agreement with the findings of various researchers, *viz.*, Rao (2009), Feroze (2009), Prakash (2009), and Sajesh (2006) who also reported that majority of the members were having marginal land holding.

Table 7. Number of training on dairy farming received by the respondents

Respondents	Categories				Mean Value	SD	Members vs. Non-members (Z-stat)
	No (0)	Low (1)	Medium (2)	High (> 2)			
Members(n=100)	20	43	32	5	1.26	0.64	6.13**
Non-members(n=100)	57	31	12	0	0.55	0.31	

** Significant at 1 per cent of significance

Table 8. Total operational land holding of the respondents

Respondents	Categories(in Hectare)				Mean Value	SD	Members vs. Non-members (Z-stat)
	Marginal (Below 1)	Mean	Small (1-2)	Mean			
Members(n=100)	84	0.12	16	1.07	0.26	0.12	0.19
Non-members(n=100)	85	0.10	15	1.05	0.24	0.11	

4.3 Herd size

Herd size in a farm indicates the variety of activities undergoing in a household. The herd size of the respondents is presented in the Table 9. A cursory look at the table reveals that majority of the members (40.00 per cent) were having medium herd size (4-6) while most of the non-members (51.00 per cent) had small herd size (below 4). Large herd size (above 6) was found in 26.00 per cent of members and 15.00 per cent of non-members, respectively. From the study, it is recorded that SHGs members were having total 230 lactating animals, out of which 108 were local cows and 121 were crossbred cows. It means that on an average SHG members had 1.21 crossbred animals and 1.08 local cows. The total number of lactating animals for non-members was found to be 142. The number of crossbred animal per non-member was 0.62 and that for local cow was 0.8. It is further found that the mean herd size of the members differed significantly and positively at 1 per cent level of probability than that of non-members. The average herd size of the members (5.72) was higher as compared to that of non-members (4.18). The members were keeping more number of lactating animals than non-members as members' main occupation was dairy farming and they received external and internal loans to take up income generating activities *i.e.* dairy farming. The above-mentioned findings have some similarity with the observations made by Das (2004) who reported that SHG members were having medium herd size.

4.4 Gross Annual Income

Income is a crucial variable, which influences the farmers' investment in farming activities. The income obtained from various sources, *viz.*, crop, dairy and others as reported by the respondents were considered in order to calculate the gross annual income per family. The gross annual income for the members varied from Rs.18,000 to Rs.1,23,000 while that for the non-members ranged between Rs.15,000 to 95,000.

Table 10 indicates that high gross annual income (above Rs.60160) was recorded for most of the members (45.00 per cent) while only 13.00 per cent of the non-members were having high annual gross income. The mean gross annual income between members and non-members differed significantly and positively at 1 per cent level of significance. Average gross annual income of non-members (Rs.40,642) was found to be much lower than that of members (Rs.61,153). It might be due to the fact that farms of members were producing more milk and getting more annual returns as compared to that of non-members.

4.5 Annual Milk Production

Milk production is the single most important objective of a dairy farm and viability of the farm depends on the amount of milk produced in the farm. It is one of the important factors that directly influence the sustainability of the farms. The volume of milk production in the farms indirectly reflects the quality of animals at the farmer's possession. The data presented in the Table 11 shows that majority of the members' farms (42.00 per cent) were in medium milk production category (1461-2106 litre/year) whereas 84.00 per cent of the non-members' farms were in low milk production category (below 1461 litre/year). It is seen that 26.00 per cent and 6.00 per cent of members and non-members' farm were in high milk production category (above 2106 litre/year), respectively. Milk production for members' farms ranged between 338 litre/year to 4253 litre/year while the same for the non-members' farm varied from 315 litre/year to 3825 litres/year. The average milk production in the farms of the members was calculated at 1898 litres/year and that for the non-members was 1184 litres/year which significantly differed at 0.01 level of probability. The reasons for higher milk production in members' farm were the more number of crossbred animals and more productivity of the animals than the non-members' farms. The findings are similar with the findings of Feroze (2009) and Prakash (2009) who recorded that the members' dairy farms producing more milk than that of the non-members' dairy farms.

Table 9. Herd Size in the farms of the respondents

Respondents	Categories(in ACU)			Mean Value	SD	Members vs. Non-members (Z-stat)
	Small (<4)	Medium (4-6)	Large (> 6)			
Members(n=100)	34	40	26	5.72	1.75	3.15**
Non-members(n=100)	51	34	15	4.18	1.24	

** Significant at 1 per cent level of probability

Table 10. Gross annual income of the respondents

Respondents	Categories(in Rs./household)			Mean Value	SD	Members vs. Non-members (Z-stat)
	Low (<23952)	Medium (23952-60160)	High (>60160)			
Members(n=100)	12	43	45	61153	16392	765.79**
Non-members(n=100)	48	39	13	40642	10480	

** Significant at 1 per cent of significance

Table 11. Annual milk production in the farms of the respondents

Respondents	Categories(in litres/year)			Mean Value	SD	Members vs. Non-members (Z-stat)
	Low (<1461)	Medium (1461- 2106)	High (> 2106)			
Members(n=100)	32	42	26	1898	651.10	182.13**
Non-members(n=100)	84	10	6	1184	486.22	

** Significant at 1 per cent level of probability

4.6 Milk Sale

The household income from dairy depends on the amount of milk sold to the market and on the other hand marketed surplus of milk depends on the household milk production and consumption pattern of milk. Per household milk sold as a percentage of total milk production is presented in the Table 12. A cursory look of the table reveals that non-members sold 89.51 per cent of milk produced whereas 88.73 per cent of milk produced in the farms was sold by members. The above mentioned finding is almost similar with finding of Feroze (2009) who observed that per household marketed surplus of milk was higher for the non-members than the members.

Table 12. Milk sale by the respondents (in percentage)

Respondents	Mean Value	SD	Mean Difference	Members vs. Non-members (Z-stat)
Members (n=100)	88.73	4.31	-0.78	1.24
Non-members (n=100)	89.51	5.16		

4.7 Milk Consumption

The data presented in the Table 13 shows that milk consumption by the members was slightly higher (11.27 percentage) than that of the non-members (10.49 per cent). It is due to the fact that members' house hold retained more milk for consumption in their home and marketed less amount of milk than non-members.

4.8 Media Exposure

Exposure to various media helps a farmer to acquire latest information on dairy farming, market information and policies of government. Exposure to media indicates the degree of progressiveness of the farmers. Today media is playing a pivotal role in dissemination of technologies. Information on latest farming practices are spread through various media like magazines, newspaper, radio, television, internet, telephone *etc.* So, it's become imperative to investigate about the level of media exposure. The details regarding the classification of farmers with respect to media exposure and corresponding frequency distribution is presented in the Table 14. A perusal of the table reveals that 78.00 per cent of members had less media exposure (below 4) while the corresponding figure for the non-members was 84.00 per cent. Only 7.00 per cent of the members and 4.00 per cent of the non-members had high (above 6) media exposure. It is further observed that medium media exposure was found to be in 15.00 per cent of the members and 12.00 percent of the non-members, respectively. The above mentioned findings are in contrast with the findings of Prakash (2009), Ganguly (2005) and Das (2004) who reported that majority of the members had medium level of media exposure.

Table 13. Milk consumption by the respondents' family (in percentage)

Respondents	Mean Value	SD	Mean Difference	Members vs. Non-members(Z-stat)
Members (n=100)	11.27	4.13	0.78	1.29
Non-members (n=100)	10.49	3.86		

Table 14. Media exposure of the respondents

Respondents	Categories			Mean Value	SD	Members vs. Non-members (Z-stat)
	Less (<4)	Medium (4-6)	High (> 6)			
Members(n=100)	78	15	7	3.96	1.28	1.05
Non-members(n=100)	84	12	4	3.76	1.25	

Table 15. Extension contact of the respondents

Respondents	Categories			Mean Value	SD	Members vs. Non-members (Z-stat)
	Low (<4)	Medium (4-5)	High (> 5)			
Members(n=100)	32	52	16	4.46	1.37	3.41**
Non-members(n=100)	66	24	10	2.95	0.90	

** Significant at 1 per cent of significance

4.9 Extension Contact

Prompt and effective transfer of technologies takes place through the regular extension contact of the farmers with various change agents. Change agent's frequent contact motivates the farmers to adopt new and improved farming practices and also ensures participation of the farmers in extension activities. The details of categorization of the respondents are furnished in the Table 15. It is found from the table that majority of the members (52.00 per cent) were found to have medium level of extension contact (4-5) whereas that for the non-members was 24.00 per cent. Low extension contact (below 4) was found to be in majority of the non-members (66.00 per cent) while 32.00 per cent of the members had low level of extension contact. The average extension contact of the members was 4.46 and that for the non-members was 2.95. The mean extension contact of the members differed significantly and positively than that of the non-members at 0.01 level of probability. This might be due to fact that SHG members were in regular contact with the various extension personnel like dairy development workers, VOs, VFAs etc. Change agents from promoting agencies, banks made frequent visit to provide information on income generating activities. Similar findings are reported by Ganguly (2005) and Das (2004), that majority of the members had medium level of extension contact.

Conclusion

From the study, it can be concluded that the SHG activities positively contributed in improving members' socio-economic condition and the working as a tool for socio-economic development through dairy farming. Steps should be initiated for strengthening the SHGs and formation Dairy SHG federation in the district to empower the members economically and socially.

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