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DAIRY FARMERS' ATTITUDE TOWARDS USE OF CATTLE HEALTH CARD OF CARE-SDVC PROJECT

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A B S T R A C T

This study was carried out to determine dairy farmers' attitude towards use of Cattle Health Card (CHC) and to identify the relationships between the selected characteristics of the farmers with their attitude towards use of CHC under SDVC project of CARE. The problems faced by the dairy farmers' in using CHC and their probable solutions are also identified. This study was carried out in two unions of Parbatipur upazila under Dinajpur district. Thirty two percent of the farmers were randomly selected as a sample of the study from a population of 300 to make a sample size of 96 dairy farmers. Data were collected using an interview schedule during 1st August to 20th September 2012. The findings revealed that the highest proportion (37.5 percent) of the dairy farmers had 'moderately favorable' while 32.3 percent and 30.2 percent had 'highly favorable' and 'slightly favorable' attitude towards the use of CHC, respectively. The educational qualification, annual family income and knowledge on dairy farming had significant relationships with their attitude towards use of CHC. 'Lack of knowledge about CHC' and 'lack of consciousness' were the top two problems and 'increasing communication between CHC users and service providers' was the most important solution as suggested by the dairy farmers.

Keywords: Dairy, Attitude, Cattle, Extension.

INTRODUCTION

Bangladesh is a densely populated and agro-based developing country. Around 152.51 million people lives in its 1,47,570 square kilometer of land (BBS, 2012). Most of the rural people are dependent for their livelihood mainly on cropping and livestock farming. Livestock sub-sector is playing a crucial role in the traditional subsistence farming, contributing about 6.5 percent of the GDP, 13 percent of the total foreign exchange earnings and providing employment to 20 percent of the population. The total cattle population of Bangladesh is 22.87 million of which 3.79 million is dairy cows yielding 1.64 million metric ton milk per year which is only 14 percent of the total requirement. The majority of the rural households in Bangladesh have an average of 2-3 dairy cows. Sometimes these cattle are used as dual purpose i.e. milk and draft power (Rokonuzzaman *et al*., 2009). About 92 percent of the dairy cattle is descriptive indigenous and only eight percent is reported to be crossbred (BBS, 2006). The average milk yields 1.5liters/cow/day for indigenous and 2.5 liters/cow/day for cross-breeds. Dairying is one of the important parts of a mixed farming system in Bangladesh (Saadullah, 2001). The livestock sub-sector plays a vital role for the economic development of agro-based Bangladesh. The contribution of livestock to national Gross Domestic Product (GDP) is 2.79 percent and which is 17.15 percent of total Agricultural share (DLS, 2011). About 44 percent of the animal protein comes from livestock sources. Moreover, 4.31 percent of foreign exchange comes from the export of leather and leather goods. The Department of Livestock Services (DLS) is one of the larger Government organizations in Bangladesh and provides challenging livestock services to livestock farmers throughout of the country. Cooperative for Assistance and Relief Everywhere (CARE) founded in 1945 is one of the largest and oldest humanitarian aid organizations focused on fighting global poverty. In 2011, CARE reported working in 84 countries, supporting 1015 poverty-fighting projects and reaching over 122 million peoples (CARE, 2011). It

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started its operations in Bangladesh (former East Pakistan) in 1949. CARE Bangladesh amplifies voices of the poor and marginalized in ways which influence public opinion, development practice, and policy at all levels - drawing on grassroots experience and relationships with civil society, government, and the private sector. CARE Bangladesh targets four of the poorest groups in Bangladesh in order to achieve sustainable impacts on their lives: socially, economically and politically marginalized women; rural poor who rank lowest in social, political and economic well being; marginalized urban populations; and communities at risk from natural disasters and environmental change (CARE, 2011). Strengthening Dairy Value Chain (SDVC) is a project to develop dairy sub-sector in Bangladesh through strengthening the value chain. The project is in operation in nine districts of North and Northwest of Bangladesh. To strengthen the overall health services one of the most important activity of SDVC project is to 'establish animal registry system or health card'. Cattle Health Cards (CHC) is like a booklet containing 6 pages (excluding cover pages) to keep the information on cow's identity, vaccination, de-worming, Artificial Insemination (AI) and general treatment. Besides, it works as a resource materials to increase the knowledge of dairy farmers on different farming issues. Other specific objectives to introduce CHC are: to make the producers skilled, effective and economic on cow rearing so that they can get their service timely and economic manner; to make the producers aware regarding their rights so that always thinks about cost benefit; to make the service institutionalization surrounding so that in future unethical and unfair practice may minimize and to make the farm profitable and sustainable. Attitude of an individual on certain aspect serves as a driving force for constant efforts on certain perceived actions. Unless the farmers of Bangladesh have sufficient knowledge and favorable attitude towards modern innovative techniques on farm management like Cattle Health Card would be practically impossible to achieve desirable development in the field of livestock. However, very few researches have so far been conducted in Bangladesh in the social and psychological aspects of animal production. It is, therefore, necessary to undertake a research study to ascertain 'Dairy Farmers' Attitude towards the Use of Cattle Health Card (CHC) under CARE-SDVC project'. Therefore, the following specific objectives had considered to give proper direction to the study: To determine the attitudes of dairy farmers' towards the use of Cattle Health Card.

- To determine the relationships between the selected characteristics of the farmers and their attitude towards use of Cattle Health Card. The characteristics are: age, educational qualification, family size, farm size, annual family income, aspiration, fatalism, knowledge on dairy farming.
- To identify the problems faced by the farmers in using CHC for dairy farming and their probable solutions.

METHODOLOGY

The study was conducted in two unions namely Monmothpur and Polashbari out of 10 unions of Parbatipur upazila under Dinajpur district.

Multi-stage random sampling procedure was followed in the study. A total of 96 dairy farmers (32 percent) under SDVC project of CARE were selected randomly from a population of 300 farmers constituted the sample of the study. The data were collected during the period from 1st August to 20th September 2012 using pre-tested structured interview schedule. Descriptive statistics including range, frequency, percentage, mean and standard deviation were used to describe the data. Coefficients of correlation were computed to identify the relationships between selected characteristics of the dairy farmers and their attitude towards use of cattle Health Card (CHC). Eight selected characteristics of the farmers were considered as independent variables are: age, educational qualification, family size, farm size, annual family income, aspiration, fatalism and knowledge on dairy farming. The attitude of the dairy farmers towards the use of Cattle Health Card (CHC) was the dependent variable of the study. Attitude of the dairy farmers towards use of Cattle Health Card (CHC) was measured by a 5 point likert-type scale having 11 statements (4 positive and 7 negative). Dairy farmers response level on 11 statements were ascertained as 'strongly agree,' ' agree,' 'no opinion,' 'disagree' and 'strongly disagree' with scores of 4, 3, 2, 1 and 0, respectively for the positive & negative statements. Thus, the possible score could range from 0 to 44, where 0 indicated highly unfavorable attitude and 44 indicated highly favorable attitude towards the use of CHC.

RESULTS AND DISCUSSION

The age of the respondents ranged from 27 to 52 years. The average age of the respondents was 38.80 years with a standard deviation of 6.08 years. Data depicted in

Table 1 Indicated that more than fifty percent (55.2 percent) of respondents were in the middle aged category followed by 38.5 percent old and only 6.3 percent under young categories. Thus, an overwhelming portion (93.7 percent) of the respondents belonged to middle and old age groups. The observed score of educational qualification ranged from 0.5 to 10. The mean and standard deviation were 5.54 and 3.15 respectively. The highest proportion (54.1 percent) of farmers had secondary education compared to 31.3 percent having primary education and 14.6 percent respondents can sign only. The family size of the respondents ranged from 2 to 8 with an average and standard deviation of 5.05 and 1.70 respectively. Majority of the respondents (57.3 percent) had medium family size compared to 19.8 percent had small and 22.9 percent had large family size. Thus, More than three-fourth (77.1 percent) of the farmers had small to medium family size. Existence of large family size in the study area may be due to the less consciousness about family planning measures and tendency to attach with joint families. Farm size varied from 0.12 to 0.98 hectares. The mean value of farm size was 0.41 hectares with a standard deviation of 0.16. More than fifty percent of the respondents (58.3 percent) had medium sized farms followed by 36.5 percent had large sized and 5.2 percent had small sized farm respectively. Hence, approximately half of the farmers i.e., the highest proportion of the farmers had medium sized farm. Annual family income of the respondents ranged from 50 thousand taka to 140 thousand taka with the mean of 89.10 and standard deviation 21.09. Slightly more than three-fifths (60.4 percent) of the farmers had high annual family income, while 31.3 percent had medium and 8.3 percent had low annual family income. The aspiration scores of the respondents ranged from 12-25 against the possible range of 0-32 with a mean and standard deviation of 17.81 and 3.39 respectively. Around three-fifths (61.5 percent) of the respondents had medium aspiration, more than one-fourths (36.5 percent) of the respondents had high aspiration and 2.1 percent of the respondents had low aspiration respectively. Findings showed that majority of the farmers possessed their aspiration which was the effect of low education status of the same. The fatalism score of the respondents varied from 10 to 25 against the possible range of 0 to 32. The mean score was 15.50 and standard deviation 3.77. Slightly more than three-fourths (77.1 percent) of the respondents were medium to high fatalistic and near about one-fourths (22.9 percent) of the respondents were low fatalistic. The knowledge scores of the respondents ranged from 8 to 19 against the possible range of 0 to 20. The mean and standard deviation was 13.59 and 2.52 respectively. More than three-fifths (66.7 percent) of the farmers had good knowledge while 22.9 percent had excellent knowledge followed by 10.4 percent had poor knowledge on dairy farming.

Table 1. Characteristics profile of the respondents (N = 96).

Characteristics (measurement unit)	Possible score	Observed score	Respondents Category	No.	%	Mean	SD
Age (year)	Unknown	27-52	Young (25-30)	6	6.3	38.80	6.08
			Middle (31-40)	53	55.2		
			Old (Above 40)	37	38.5		
Educational qualification (year of schooling)	Unknown	0.5-10	Can sign only (0.5)	14	14.6	5.54	3.15
			Primary level (1-5)	30	31.3		
			Secondary level (6-10)	52	54.1		
Family size (Total Number)	Unknown	2-8	Small (<4)	19	19.8	5.05	1.70
			Medium (5-6)	55	57.3		
			Large(>6)	22	22.9		

Farm size (hectare)	Unknown	0.12-0.98	Small (0.12-0.32)	5	5.2	0.41	0.16
			Medium (0.33-0.48)	56	58.3		
			Large(0.48-0.98)	35	36.5		
Annual family income ('000' Taka)	Unknown	50-140	Low (0-78)	8	8.3	89.1	21.09
			Medium (79-100)	30	31.3		
			High (>100)	58	60.4		
Aspiration (score)	0-32	12-25	Low (up to 16)	2	2.1	17.81	3.39
			Medium (17-20)	59	65.5		
			High (>20)	35	36.5		
Fatalism (score)	0-32	10-25	Low (up to 14)	22	22.9	15.50	3.77
			Medium (15-18)	35	36.5		
			High (>18)	39	40.6		
Knowledge on dairy farming (score)	0-20	8-19	Poor knowledge (<10)	10	10.4	13.59	2.52
			Good knowledge (11-15)	64	66.7		
			Excellent knowledge (>15)	22	22.9		

Attitude towards the use of CHC: The dairy farmers' attitude towards the use of CHC was quantified by computing scores for their attitude statements. These scores of the farmers' could range from 0 to 44 where 0 indicating unfavorable attitude and 44 indicating highly favorable attitude. Computed attitude scores of the farmers' ranged from 22 to 39 and the average was 31.32 with a standard deviation of 4.48. On the basis of computed scores, the farmers' were classified into the following three categories as shown in figure 1.

Relationships between the Selected Characteristics of the Dairy Farmers and their Attitude towards the use of CHC: The purpose of this section is to explore the relationships between the independent variables and their attitude towards the use of CHC under SDVC project of CARE. The relationships were measured by using the Pearson's Product Moment Correlation Co-Efficient (r). The summary results of the correlation analysis between independent and dependent variables are presented in Table 2.

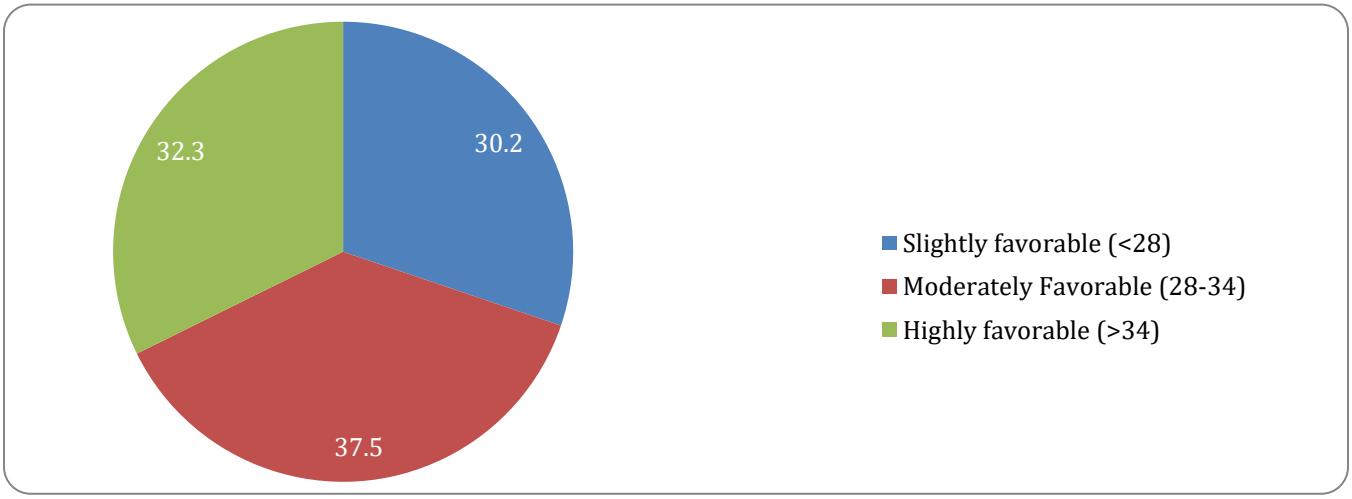

Figure 1. Pie graph showing the dairy farmers attitude towards the use of CHC.

Table 2. Correlation results of the dairy farmers' attitude towards the use of CHC and independent variables (N=96).

Dependent variable	Independent variables	Co-efficient of correlation (r)	Tabulated Value of 'r'	
			0.05 level	0.01 level
Attitude towards the use of CHC	Age	-0.090	±.0.021	± 0.052
	Educational qualification	0.551**		
	Family size	0.083		
	Farm size	0.125		
	Annual family income	0.289**		
	Aspiration	0.151		
	Fatalism	-0.037		
	Knowledge on dairy farming	0.257*		

*=Significant at 0.05 level; **= Significant at 0.01 level

Table 2 reveals that among the selected eight characteristics, educational qualification, annual family income, knowledge on dairy farming have significant positive relationships with attitude towards the use of CHC. However age, family size, farm size, aspiration and fatalism of the respondents had no significant relationship with their attitude towards the use of CHC.

Problems Faced by the Farmers in Using CHC: There was an open question in interview schedule to know the problems faced by the farmers' in using CHC for dairy farming. These problems along with their ranked order are presented in Table 3.

Table 3. Distribution of the problems faced by the farmers' in using CHC and rank order.

Problems	No. of citation	Rank order
Lack of knowledge about CHC	85	1st
Lack of consciousness on CHC	75	2nd
Replacement of card is difficult	52	3rd
Lack of proper preservation of CHC	45	4th
Service providers do not write in CHC properly and duly	41	5th

It is evident from Table 3 that majority of the respondents had 'lack of knowledge about CHC' and was ranked first. Since majority (84.4 percent) of the farmers had primary to secondary level of education, it was difficult for them to understand all aspects of CHC. 'Lack of consciousness's' was ranked second. Though it is a new concept for dairy farming and lack of training on the use of CHC, farmers' consciousness is less on this aspect. 'Replacement of card is difficult' ranked third because there was a large communication gap between service providers and CHC users i.e dairy farmers. As most of the farmers are less conscious, so they did not understand the importance of its preservation. Farmers placed 'lack of proper preservation of CHC' as the fourth problem in the ranked order. 'Service providers do not write in CHC properly' appeared to be the number fifth problem. The reason is that when the user come to service providers in group at the same time in recommended date it became difficult for service providers to fill up all the required information to the card properly and duly.

Probable Solutions of the Problems as Suggested by the Farmers: Probable solutions suggested by the respondent farmers regarding their problems in using CHC are given in Table 4.

Table 4. Probable solutions of the problems in using CHC as suggested by the farmers.

Solutions	No. of citation	Rank order
Providing more training facilities	75	1st
Communication between CHC users and service providers should be increased	65	2nd
CHC should be preserved properly	52	3rd
Number of service providers should be increased	20	4th

Providing more training facilities' was ranked the first suggested by the dairy farmers. More training exposure would increase farmers' level of knowledge and interest towards CHC and therefore, might help them to use the CHC efficiently and might also motivate them to use intensively the CHC. The second ranked probable

solution as mentioned by the farmers was 'communication between CHC users and service providers should be increased'. By proper communication, farmers can easily solve the problems regarding dairy farming by effective utilization of their CHC. 'Cattle Health Card should be preserved properly' was the third ranked solution as mentioned by the farmers. Proper preservation will increase its long term effectiveness. 'Number of service providers should be increased' is the fourth ranked probable solution which might be helpful for the farmers to get effective and on time services.

CONCLUSION AND RECOMMENDATION

Cattle Health Card (CHC) is used for keeping records of the cow's identity, vaccination, de-worming, artificial insemination and general treatments. Most of the respondent farmers have moderate to high favorable attitude towards the use of the CHC. But there are some problems regarding using CHC by the dairy farmers which need to be addressed for proper management of the CHC. This might be helpful for overall improvement of the cattle of the CHC using farmers as the records being kept in the CHC which could be used for the future management of their dairies. The card will also be helpful for the overall development of the dairy sector of the country if it is widely available and accordingly use by the dairy farmers.

- The personnel who are involved in field level under SDVC project like service provider should have more technical background and skill for effectively train the Cattle Health Card (CHC) users.
- Precaution should be taken in the selection of members for any new project or programme. Only those members should be chosen who are willing and useful, considering their age, academic qualification, and annual family income and so on.
- Initiative may be made in order to increase the knowledge level of the farmers' who use CHC under SDVC project; this may be done through providing effective training to farmers by different government and non-government organizations.
- Farmer's level trial might be conducted to assess practical field. Result of such performances may help in forming favorable attitude towards the use of CHC under SDVC project of CARE. The multi-locational regional field trial can easily be conducted through regional stations of CARE.
- The target group of CARE was mostly the marginal farmer. Basically they were in low income group and as it is very difficult for them to manage agricultural input. So, inputs should be made available to them locally by CARE as well as other government and non-government organizations.
- The study was conducted only in two unions of Parbatipur upazila under Dinajpur district. Findings may be verified by similar study in other parts of the country.
- The study examined the relationship of eight selected characteristics of the farmers who use CHC under SDVC project and attitude towards the use of CHC under SDVC project. Therefore, it is recommended that further study may be undertaken involving other independent variables in this regard.
- The present study was done only on the CHC under SDVC project of CARE. Further studies could be conducted with other component of the same project.

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