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LIVESTOCK PRODUCT STUDIES THROUGH MARKET CHAIN DEVELOPMENT MAINTAINING QUALITY IN BANGLADESH

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ABSTRACT

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The results of the studies conducted on livestock product studies through market chain development maintaining quality in Bangladesh showed that most of the professionals are interested for being market agent instead of primary production. About 31% respondent highest scored for market agent followed by transport and storage 30%, while lowest mean score was recorded as 24% for dairy owner & processor. About 49% respondent told that their achievement was within the range of 20-40%. Skill development scored highest as facing serious problems. Need analysis for milk consumption and value chain segment must be done by ministry of fisheries and livestock and their respective consultancy which will reduce the crises of milk marketing. Quality control labs should be established nationally and regionally by DLS. Similarly under the supervision and direct assistance skill development (treatment, instrumentation, processing) should be strengthened by Department of Livestock Services (DLS) specially in digital modular methods for less literate farmers.

Key words: *livestock product, market chain, milk quality*

INTRODUCTION

Bangladesh is a low-income rural economy with the livestock sector accounting for around 2.5 percent of GDP and share about 13.13 percent out of 23 percent of Agricultural GDP in Bangladesh (Ali 2000; BBS 2008; BBS-BER 2011). In the early 1980s, the government began to deregulate, decontrol and liberalize the economy, and particularly with the adoption of the Fifth Five-Year Plan (1997-2002) were serious steps towards the development of a market economy taken (MOA 2005). To date, however, the public sector enterprises continue to account for a substantial share of national production, investment, employment generation, and government expenditure.

In Bangladesh, cattle is generally raised by marginal and poor farmers rather than by big commercial farmers with the exception of few government farms, and in recent years, some mini and small-scale private dairy farms, those have been developed throughout the country during the last decade. At present, there are about 55,000 registered mini, small and medium scale private dairy farms and more than 2.3 millions of improved crossbred dairy cattle in the country which reported new type and unknown diseases and problems dis-favouring establishment of sustainable modern dairy farms (Hossain 1996; Hossain 1998). These crossbreeds are the results of 50 years of government artificial insemination (AI) program carried out in the country and in recent years, there has been a dramatic increase in the number of private dairy farms as well as in the number of crossbred animals of better yielding capacity throughout the country. Number of cattle per livestock household is 3.5 (Saadullah 1989) and that of 0.94 for all households. However, the figures for horse, pig, geese, pigeon and dogs are not available in FAO Yearbook. Most animals are raised by small-scale farmers who own 1-2 heads of cattle, 2-3 heads of goat / sheep and a few poultry birds. Management system is a combination of both tethering and scavenging with or little inputs for breeding, feeding & health care. This type of subsistence farming covers nearly 85% of the livestock farming environment, while the rest are commercial production. Most of the livestock species are still reared under traditional production system except the considerable development of commercial poultry based on imported germplasm, feed and medicines. Of the large ruminant species about 64.0% of the cattle and 90.0% of the buffaloes are reared under low input, 24% and 10.0%, respectively of the two species under medium input and the rest 12.0% of the cattle is reared under high input system, but other than the coastal regions (Hossain and Lin, 2001) where the situation was found to be more less prominent though have higher potential in the sector for traditional farming. Of the total goat and 84.80% of the total sheep are reared under low input system and the rest are reared under medium input system.

The Poverty Reduction Strategy Paper (PRSP) of the Government of Bangladesh given high priority for accelerating agricultural growth in order to increase rural incomes, reduce poverty and to improve food security. The major Government document, PRSP has recognized the livestock and poultry sub-sector as a promising and dynamic sector with enormous potentials for rapid poverty reduction, and has placed high importance on production, processing and marketing of livestock products as it is primarily a family-based small scale and dispersed production system not capable of ensuring stable supplies to the major center's of demand. The Government has committed to play the facilitating role of inducing the private sector to invest more, especially by designing clear policy framework under which the semi-government agencies, NGOs and private sector in particular could operate business activities without difficulty. The PRSP under policy matrix-4 for agricultural growth towards poverty reduction has identified the following 4 (four) strategic goals as per policy matrix-4 for

Livestock Sub Sector; (1) Increasing productivity of livestock sector; (2) Promoting poultry sector development; (3) Promoting milk and meat production and (4) Strengthening of livestock research and extension (GOBUN 2005). One of the key challenges of sustainable livestock production lies in the improvement of genetic potentiality of individual animals in the population. Lack of suitable cattle breed and poor animal breeding efficiency in the country might be attributed to the insufficient institutional facility for animal breeding as well as lack of proper breeding vision and techniques. In Bangladesh starting from 1975, intensive AI operation is being carried out throughout the country for genetic improvement of available cattle in the country. At present, the estimated breed able female cattle are about 7 millions. To provide necessary AI service to these huge female cattle of the country the only central cattle breeding station is striving for producing bulls and semen beyond its capacity to operate. As a result, semen of same breeding bull being used in AI operation indiscriminately in the same operating areas years together, which, eventually, creating serious genetic problems (inbreeding depression) in the base population leaving less responsive to further genetic development. If this situation prevails, in near future we would be in far more behind to our minimum requirement for milk and milk products due to decreasing production potentials of available dairy cattle. In the context the main objectives of the present studies were to identify the status of the industry and its problems and potentials in the focus of skill development and contributions preferably to be prioritized by the respective Ministries and Directorates.

MATERIALS AND METHODS

The present study was conducted to livestock product studies through market chain development maintaining quality in Bangladesh. For this reason seven districts of Bangladesh were selected.

The major Methods and materials involved were: Technical Survey with one Questionnaire Guideline, Group discussion on Training Manuals and Materials and one Market visit with check list.

Study Sites and variables:

Districts covered: Dhaka, Narayoganj, Manikganj, Sirajganj, Chittagong, Comilla, Barguna.

Product type : Milk, milk products, meat, of Cow and buffalo

Respondent groups were: Dairy owner and processor, Market agents, Transport and Storage, Instrumentation professionals

Questionnaire Guidelines

A. Personal information: Name, District, Gender, Age, Qualification, Experience in years, Training days.

Type of Products: Cow milk, Cow milk products, Cow meat, Buffalo milk, Buffalo milk products, Buffalo meat
Percent dependent on the activity for livelihood.

B. Research questions

1. Productivity status of the farms/firms as per total target output?
2. Component of market now facing serious problem:
3. Component (s) are comparatively more profitable in Bangladesh?
4. Component (s) you prefer to start work in Bangladesh.
5. Component (s) need immediate attention by the DLS.
6. Component (s) need immediate attention by the MOFL.

RESULTS AND DISCUSSION

The results obtained from the studies are presented and interpreted here. The results after analysis are illustrated both in tabular and in figure graphs.

Percent dependent on the activity for livelihood

The data collected and analyzed on the percent of dependence on the respective activities for livelihood are given in the Table 1 and Fig. 1. The results show that: Mean response of percent dependent on the activity for livelihood. About 36% respondent score as highest for market agent followed by dairy owner & processor (34.4%), while the lowest mean score was recorded as 29.6% for transport & storage. Highest score (54%) dependence on the livelihood was found to be the dairy industry within the range of 40-60%. Similar results reports were also previously given (MOA 2005; BBS 2008; BBS-BER 2011), but those were mostly generalized. The present findings clear the picture dependence on the activity of livelihood in the country which were very integrated with other components of agriculture and the farmers were of general agriculture farmer professionals.

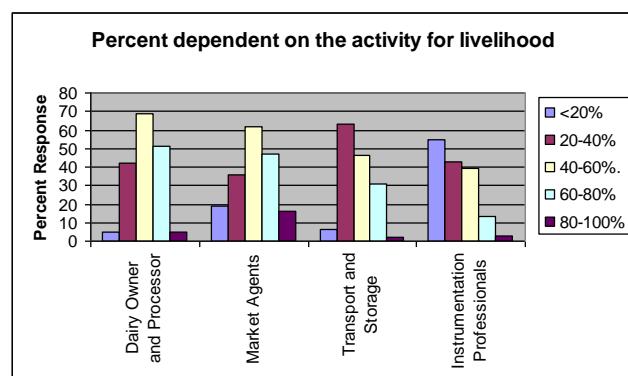


Fig. 1. Percent dependence on the activity for livelihood

Table 1. Percent dependent on the activity for livelihood

Professional groups	% Dependence					Mean
	<20%	20-40%	40-60%	60-80%	80-100%	
Dairy owner and processor	5	42	69	51	5	34.4
Market agents	19	36	62	47	16	36.0
Transport and storage	6	63	46	31	2	29.6
Instrumentation professionals	55	43	39	13	3	30.6
Mean	21.2	46.0	54.0	35.5	6.5	32.6

Productivity status of the farms as per total target output

The productivity status of the farms over total target outputs as found in the studies are given in the Table 2 and Fig. 2. The results obtained on the productivity index showed that: About 31% respondent highest scored for market agent followed by transport and storage 30%, while lowest mean score was recorded as 24% for dairy owners and processors. About 49% respondent told that their achievement was within the range of 20-40%. Such reports are available from Govt. Offices, But the productivity status was not calculated (BBS 2008; BBS-BER 2011).

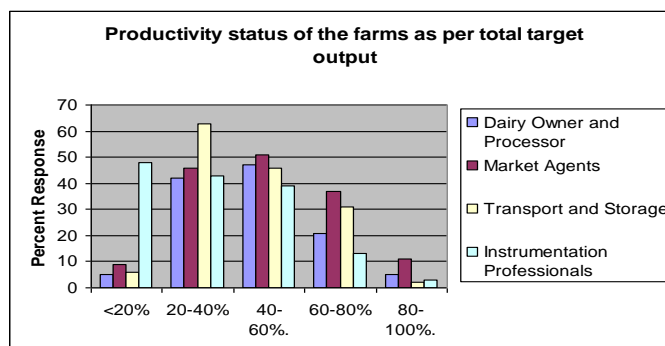


Fig. 2. Productivity status of the farms as per total target output

Table 2. Productivity status of the farms as per total target output

Professional groups	% Production status					Mean
	<20%	20-40%	40-60%	60-80%	80-100%	
Dairy owner and processor	5	42	47	21	5	24
Market agents	9	46	51	37	11	31.0
Transport and storage	6	63	46	31	2	30.0
Instrumentation professionals	48	43	39	13	3	29.2
Mean	17	49.0	46.0	25.5	5.2	28.4

Market component facing serious problem

The data collected on the issues of market component currently facing intensive constraints are given in the Table 3. The results in Graphical forms are illustrated in the Fig. 3. The results obtained on market component facing serious problem showed that the skill development (73%) scored highest as facing serious problem followed by transportation (70%); while lowest mean (30%) score was recorded as for need analysis; which was not their function, as they told. About 62% respondent scored that they are facing serious problem of milk marketing.

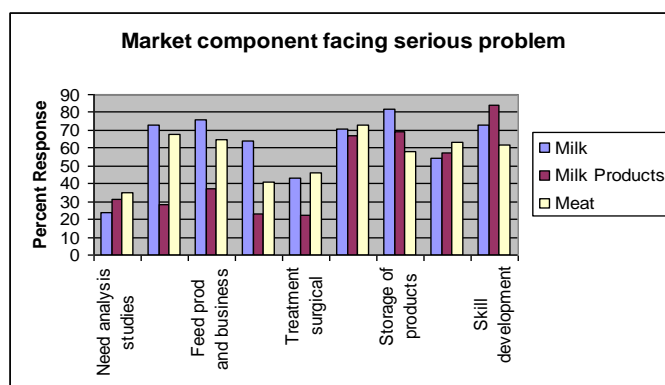


Fig. 3. Market components facing serious problems

Table 3. Market component facing serious problem

Market component	Milk	Milk products	Meat	Mean
Need analysis studies	24	31	35	30.0
Breed development and availability	73	28	68	56.3
Feed production and business	76	37	65	59.3
Treatment medicine scope	64	23	41	42.6
Treatment surgical scope	43	22	46	37.0
Transportation	71	67	73	70.3
Storage of products	82	69	58	69.6
Quality control lab	54	57	63	58.0
Skill development	73	84	62	73.0
Mean	62.2	46.4	56.7	55.1

Market chain segment more profitable in Bangladesh

The results obtained on market chain profitable segment in Bangladesh from the present research are given in the Fig. 4 here. According to the results as given in the Table 3 showed that mean response for market chain segment more profitable in Bangladesh: Skill development (73%) scored highest segment followed by transportation (70%), while the lowest mean score was recorded as 30% for need analysis. About 62% respondent score as highest that they are interested for doing business with milk.

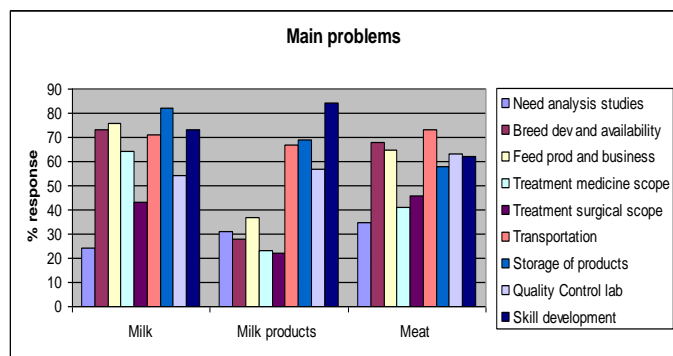


Fig. 4. Main problems of the dairy and milk markets

CONCLUSION

The results indicated that most of the professionals are interested for being market agent instead of primary production; still then they could not rely on the business fully. Dairy owner and processor could not achieve in the targeted output due to lack of integrated processing system with the market price. Skill development scored highest as facing serious problems. Due to lack of need analysis market and government polices failed in contributing to the system positively. Results indicated that milk processing (lack of documentation as regards imports, border cross marketing and poor instrumentation for quality control) is irregular and have administrative complexity (powder milk and milk powder). Market chain segment preferred to start was recommended to be skill development still now meat market seemed more acceptable than the complex milk chain market. Milk marketing system in Bangladesh is not uniform. In case of component deserving immediate attention by the DLS, Meat response scored highest deserving immediate attention by the DLS. Professional skill development is more needed which can only be done by DLS. Skill development training for meat processor in the contest of current use was also important specially for short term preservation in non-chemical way. As per component deserving prime attention by the MOFL, skill development scored highest. Milk processing response scored highest as component deserving prime attention by MOFL. MOFL should provide skill development policies for milk processing or value addition activity through formulation of value chain principles under specific regulation. Thus it was recommended that market agent should be attached to primary production farms but all after Modular based training and skill development. Milk and meat processing should be strongly in-built in the value chain market system.

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