



Farmers' opinion to reduce the constraints in scientific dairy farming practices—a case study

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Received: 18 August 2011; Accepted: 18 February 2012

ABSTRACT

The study was conducted in operational area of Krishi Vigyan Kendra, Banka of Bihar. In this study, farmers' opinions were assessed for alternative solutions to the constraints perceived by them in adoption of scientific dairy farming practices. From the study, it was observed that non-functional AI centre, timely availability and non-availability of vaccine and veterinary medicine in government hospitals, repeat breeding, preferences to cash or food crops rather than fodder crop, unawareness about recommended feeding practices, non-availability of HYV of fodder seeds, poor availability and high cost of compound feed, mineral mixture, lack of veterinary doctors and lack of knowledge about scientific management and health care of dairy animals practices were perceived as the important constraints in adopting improved dairy farming practices by majority of respondent. Other constraints were—none of the villages were attached to dairy cooperative societies either private or government. Considering these constraints it was suggested that appropriate strategy should be formulated by authority of Krishi Vigyan Kendra, Banka with the help of district/ block veterinary department, District development department of state governments or with other agencies engaged in dairy development in the area for transfer of technology relevant to scientific dairy farming practices, in the area. It was observed that long experiences of farmer's in dairy farming contribute valuable suggestions which may remove bottleneck constraints in improved dairy farming practices in the study area. Therefore, government or other dairy developmental agencies should take initiative for ensuring participation of farmer's at various levels before launching any dairy development programmes to sort out the problems effectively in dairy development in an area.

Key words: Breeding, Constraints, Farmers' opinion, Feeding, Health care, Management, Scientific dairy farming

India has become the largest milk producing country in the world with 109 million tonnes milk production, and it is growing at around 5% per annum (<http://www.nddb.org/statistics/milkproduction.html>). At the same time, it is distressing to note that the pace of development is not uniform in different parts of country. There is serious regional imbalances with respect to production as well as per capita availability and consumption of milk. Even in Bihar, the pace of dairy development in different districts is not uniform. Banka, a district of Bihar, which lies in south alluvial plane, Zone-III, was poor in dairy sector despite of several dairy developments related activities. There were several constraints in improved dairy farming practices (Table 1). Besides that, lack of recognition of farmers priorities, their

problems and most importantly their views about solutions of problems related to dairy development were not considered seriously by policy makers, government and non-government agencies engaged in dairy development activities of Banka district. Therefore, identifying farmers' problems, knowing their views about solution related to dairy development problems and assisting them to meet these solutions will certainly strengthen the farmers in dairy sector in Banka.

Sah *et al.* (2002), while analyzing the linkages in agricultural and dairy extension have rightly emphasized the need of appropriate linkage mechanism between the sub-systems, Knowledge, transfer and utilization. They also endorsed for consideration of socio-economic issue, human resource and environment protection as an important contents of extension activities in agriculture and its allied enterprises. Under such context, providing right opportunity to farmers for their opinion on various viable and alternative solutions to the problems perceived improved dairy farming practices may be right approach for strengthening human resource base in dairy farming vis-à-vis in facilitating two-way linkages between sub-systems. Keeping in view of these facts, a study

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was conducted in villages namely Jhirwa, Belatkar, Rampur, Meharpur, Jitarpur and Kakwara of Banka district with the objective to identify constraints relevant to dairy farming and to assess the farmers' opinion about the possible solutions of the constraints experienced by them.

METHODOLOGY

The study was conducted in purposively selected villages namely Jhirwa, Belatkar, Rampur, Meharpur, Jitarpur and Kakwara in operational area of KVK, Banka. Simple random technique was applied to select 20 dairy farmers from each village constituting 120 dairy farmers as total respondents. Data were collected by conducting personal interview of respondent with the help of structured interview schedule developed for the purpose. The constraints faced by dairy farmers were identified (Table 1). Farmers' responses against open ended questions were recorded to assess their opinion regarding viable and alternative solutions of the constraints faced by Jhirwa, Belatkar, Rampur, Meharpur, Jitarpur and Kakwara in the study area of Banka district in adoption of improved dairy farming practices. The collected data were compiled, tabulated and suitable statistical tools were applied for interpretation of finding.

RESULTS AND DISCUSSION

Breeding: Non- functioning of artificial insemination (AI) centre of Banka block of animal husbandry department was the major bottleneck in AI programme (Kumar *et al.* 2000b, Sah *et al.* 2002, Kumar *et al.* 2009) which leads to negligible performance of AI programme in the study area. Under such distressing situation, functioning of AI centre at animal husbandry department was the most desirable solution of the constraints on breeding practices as evident from Table 2. Hence, 88.33% farmers opined that AI centre of Banka must be equipped with veterinary doctors, technical personnel with infrastructural facility required for AI centre and inputs like frozen semen and other equipments and medicine. At the same time, they had also reported that poor conception rate and repeat breeding in dairy animals aggravate the development of dairy in the study area. The present finding that repeat breeding is the major constraint was also reported by Meena (2000). Our result further supported by Kumar *et al.* (2011 a, b) in different district of Bihar, who had also reported that repeat breeding was utmost constraints under breeding practices. Hence, 71.66% farmers opined that proper treatment of poor conception rate and repeat breeding should

Table 1. Constraints in adoption of improved dairy farming practices as perceived by respondents (N=120)

S. no.	Constraints	Frequency	Percentage	Rank	Mean (%)
A.	<i>Breeding</i>				70.28
1.	Non-functioning of AI centre, ill equipped AI centre	106	88.33	1 st	
2.	Poor conception rate and treatment of repeaters is not rewarding	86	71.66	2 nd	
3.	Inadequate knowledge and poor appreciation for AI services	84	70.00	3 rd	
4.	Lack of good breedable bulls for natural service	79	65.83	4 th	
5.	Low genetic potential of local animals	76	63.33	5 th	
6.	Scarcity of resources to maintain crossbreed/ superior breed of milch animals	75	62.50	6 th	
B.	<i>Feeding</i>				72.6
1.	Preference to grow cash crops instead of fodder crops	101	84.16	1 st	
2.	Inadequate knowledge about scientific feeding of dairy animals	98	81.66	2 nd	
3.	High cost of ingredients of concentrate mixture	95	79.16	3 rd	
4.	Under feeding due to limited financial resources	94	78.33	4 th	
5.	Inadequate resources for cultivation of fodder crops round the year	85	70.83	5 th	
6.	Poor availability of high yielding variety seeds of fodder	76	63.33	6 th	
7.	Poor availability, high cost of compound feed and mineral mixture	75	62.50	7 th	
8.	Lack of grazing land facilities	72	60.83	8 th	
C.	<i>Management and Health care</i>				76.42
1.	Veterinary hospitals are ill equipped, lacking facilities for treatment, vaccine, medicine etc.	106	88.33	1 st	
2.	Lack of proper knowledge about clean milk production	103	85.83	2 nd	
3.	Lack of awareness of deworming about importance	95	79.16	3 rd	
4.	Lack of awareness and knowledge about importance of vaccination	87	74.16	4 th	
5.	Poor housing to dairy animals	85	70.83	5 th	
6.	High cost/ charge levied by veterinary staff for performing medical assistance	85	70.83	6 th	
7.	Lack of knowledge about right time of drying up pregnant animal	79	65.83	7 th	
D.	<i>Others</i>				76.6
1.	Lack of knowledge in making value added dairy products	107	89.16	1 st	
2.	Non-availability of dairy cooperative societies	101	84.16	2 nd	
3.	Lack of loan facilities and high rate of interest	81	67.5	3 rd	
4.	Low price of milk	79	65.58	4 th	

Table 2. Farmers' opinion about the potential solutions related to identified constraint

Opinion	Frequency	Percentage	Rank	Mean (%)
Smooth functioning of well equipped AI centre	106	88.33	1 st	71.66
Proper treatment of poor conception rate and repeat breeding particularly in crossbred	86	71.66	2 nd	
Proper knowledge about advantages of AI through training	84	70.0	3 rd	
Distribution/availability of good breedable bulls at free/subsidized rate by animal husbandry, dairy development department or other agencies	79	65.83	4 th	
Proper training on care and management of cross-breed and superior breeds of milch animals by KVK or animal husbandry department	75	62.5	5 th	

Table 3. Farmers' opinion for solution of feeding constraints

S. no.	Opinion	Frequency	Percentage	Rank	Mean (%)
	Encourages the farmers for cultivation of green fodder with their importance in health of milch animals	101	84.16	1 st	72.03
	Provision of training programmes regarding scientific feeding practices	98	81.66	2 nd	
	Availability of irrigation facility either by govt. or community effort	95	79.16	3 rd	
	Availability of HYV fodder seeds at subsidized rate	76	63.33	4 th	
	Availability of concentrate mixture at subsidized rate	75	62.50	5 th	
	Proper training and skill on preparation of low cost balance ration from their own local village resources by KVK or animal husbandry and dairy development office, Banka	74	61.34	6 th	

be ensured in the villages by veterinary doctors/veterinary assistant. Similarly, 70% farmers supported for proper training related to breeding aspects of milch animals with advantages of AI, inputs and training related to advantages of crossbreeding and their maintenance in the study area should be given. Farmers (65.83%) also emphasized for availability and distribution of good breedable bulls for natural service, either free or at subsidized rate by the government animal husbandry or dairy development department or other agencies involved in dairy development in the area. Farmers (62.5%) also suggested for conduction of training programmes relevant to care and management of crossbred or superior breed of milch animals by KVK, Banka, animal husbandry or dairy development department or other agencies involve in dairy development.

Feeding: In case of feeding the major constraint were farmers' preferences to grow cash crops instead of fodder crops (Table 3), besides poor knowledge about scientific feeding of dairy animals (81.66%), high cost of ingredients of concentrates mixture (79.16%), poor availability of high yielding variety seeds of fodder (63.33%). All these also slowed down the growth of dairy development in Banka. Similar findings were also reported by Kumar *et al.* (2009) and Kumar *et al.* (2011b), who had also reported poor knowledge about feeding of dairy animals as a major constraint in dairy development. A large number of farmers (84.16%) were having the desire to encourage the farmers for cultivation of green fodder with their importance in maintaining health of milch animals.

Farmers (81.66%) also viewed the dairy development agencies particularly veterinary and animal husbandry office, dairy development department, Banka must conduct the short and long term training programmes regarding improved feeding practices in the study area. Moreover, farmers (63.33%) also suggested that government and other development agencies must ensure availability of HYV seeds of fodder and concentrate mixture at subsidized rate. Farmers (61.34%) also advocated for proper training and skill on preparation of low cost balance ration from their own village resources by KVK or any development agencies working for dairy development in Banka district.

Management and health care: Among the management and health care, major constraints were unavailability of vaccine, medicine at each block veterinary office of Banka district. Similar observations were also reported by Kumar *et al.* (2009) and Kumar *et al.* (2011). This opinion was cited by 88.33% farmers (Table 4).

The study revealed that most of the block of veterinary hospital run without veterinary doctor. In Banka block, only one veterinary doctor was posted who had to cover entire villages of block, coming under his jurisdiction which reflects poor scenario of basic requirement of animal health care in the operational area of KVK, Banka. Farmers (85.83%) also opined that government must ensure the availability of veterinary doctor in each block of Banka district with their supporting staff along with necessary medicine and vaccine required for treatment of milch animals so that morbidity and mortality of milch animals could be minimized in the

Table 4. Farmers' opinion for solution of management problems and health care

Opinion	Frequency	Percentage	Rank	Mean (%)
Timely availability of vaccine, medicine at Animal husbandry office, Banka	106	88.33	1 st	
Timely availability of veterinary doctors/ livestock assistant in the area for better health care and treatment of milch animals with availability of free medicine and service	103	85.83	2 nd	
Awareness among farmers about importance of vaccination/deworming camps-cum-training organized jointly by KVK and AHD, Banka	95	79.16	3 rd	78.00
Training about advantage of scientific housing of dairy animals	85	70.83	4 th	
Provision of training related to techniques of clean milk production and appreciation to milk producer by govt. or other agencies involved in dairy development	79	65.83	5 th	

Table 5. Farmers' opinion for solution of other problems

Opinion	Frequency	Percentage	Rank	Mean (%)
Formation of dairy cooperative societies in villages	101	84.16	1 st	
Provision of training and technical skills for making value added dairy products	98	81.86	2 nd	81.73
Provision of loan from Nationalized Bank for purchasing and construction of animal house at subsidized rate or lower rate of interest	95	79.16	3 rd	

Banka. Besides that, KVK, Banka should conduct animal health camps in the villages of Banka with the support of veterinary doctor and his team to control or reduce the health problems of milch animals. It is also pointed out by farmers (65.83%) that KVK, veterinary office, dairy development or other agencies in Banka involved in dairy development in Banka district should encourage the farmers about the importance and techniques of clean milk production by conducting awareness-cum-training in such context by KVK or other dairy development department/agencies engaged in dairy development in Banka. Besides that, dairy development department, state dairy federation should encourage the milk producer/ farmers for clean milk production by providing comparatively better price for it than the unclean milk.

Others: The majority of milk producer (84.16%) had reported that there were no dairy cooperative societies established in the Banka (Table 1), which was also supported by Kumar *et al.* (2009) and Kumar *et al.* (2011a). Due to that they are not getting proper market for selling of surplus milk which was also one of the major hurdles in dairy development in Banka. Formation of village/ panchayat level dairy cooperative societies was among the priorities of solution opined by 84.16% respondent as evident from Table 5.

Therefore, government and non- government agencies must take initiative for formation of village/ panchayat level dairy cooperative societies so that they get market for their milk at reasonable price. Farmers (81.66%) also viewed that scientist (dairy) of KVK or dairy development department should conduct short- or long-term skill based training for making value added dairy product so that they could get more price of their milk. Farmers (79.16%) also opined that there should be provision of loan from nationalized bank for purchasing milch animals and also for construction of animal

house at subsidized rate or lower rate of interest without delay to encourage the dairy business in Banka.

During the study, it was observed that farmers of Banka had good knowledge with innovative ideas for solving the several problems related to dairy with their limited resources. Farmers expected immediate intervention by government or other dairy developmental agencies regarding functioning of ill equipped AI centre with proper facilities and technical staff. Simultaneously, farmers also expressed desire to motivate the farmers of Banka about improved dairy farming practices by scientist of KVK, Banka along with veterinary and animal husbandry and dairy development of Banka through conducting schedule training programmes, vaccination/ deworming/ animal health camps/ demonstration of suitable high yielding varieties of feed and fodder, value addition of milk etc. in the study area. They also opined that government and other development agencies must take initiative for formation of village level cooperative societies for getting market for their surplus milk with reasonable price and also comparatively better price for clean milk production. They also advocated for provision of loan from nationalized bank for purchasing milch animals and also construction of animal house at subsidized rate or lower rate of interest without delay for encourages the dairy business in the study area of Banka district. Appreciation of the views expressed by the milk producer/ farmers would be utilized for planning and execution of any dairy development programmes in the Banka district in order to improve the dairy sector.

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