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Causes for Technological Adoption Gaps among *Buffalo* Keepers of Etawah

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Abstract

The human population in India is around one billion and represents over 16.7% of the world population. About 26.1% in India remains below poverty line. India ranks first in the world in terms of milk production with a total of 102 million tons for 2007-08 with per capita milk availability at 246 gms per day. Our country has 185 million cattle, 98 million buffaloes (17 th livestock Census, 2005) population, which represents 16 and 57% of the world's cattle and buffaloes population respectively. The rural economy in India is traditionally based on agriculture and animal husbandry and rural people have been engaged in activities related to that sector for income generation of the family. With this background study was conducted in Uttar Pradesh during 2007. Data were collected through semi-structural interview schedule from 80 respondents in Etawah district. Where study reveals technological adoption gaps among buffalo keeper as use of bran, feed additives and use of artificial insemination were almost negligible thus 100% farmers were having full gap. And under feeding management, in case of green fodder, dry fodder, concentrate mixture, grain, and water management practices were available but in imbalanced form and thus, accepted as 100% partial gap by the farmers. Under breeding and production management practices, the sanitation of buffalo sheds and natural service of animal like operations were properly used by farmers resulting they possessed (100%) no gap, means they were quite aware of these two recommended practices by experts. The main reason for technological adoption gaps were due to low level of education and also their unawareness, poor economic condition and failure of extension communication systems.

Key words : Adoption gaps, Buffalo, Milk, Management, Production technologies.

Buffaloes contribute more than half of the total milk (72 million tones) produced in the country although buffalo population is 1/3rd of total cattle population (1). Over 80% animals being kept in herds of 2 to 8 animals in the country. More than 40% of Indian farming households, about two thirds of which own less than 1 ha of land, are engaged in milk production as this is a livestock enterprise in which they can engage with relative ease to improve their livelihoods. Regular milk sales allow them to move from subsistence to earning a market-based income (2). The per capita availability of milk in India(246g per day) is lower than the world average (285g per day). Buffalo milk now accounts for approximately 57% of total milk production in India (3). The government is hoping to increase milk production in India to 180 million tones by 2021-22 through the National Dairy Plan drawn up by the National dairy Development Board (NDDB) (4). Uttar Pradesh is leading state in milk production. And here still exists a wide gap between the potential yield achieved at experimental farms and what the farmers are getting in their fields. Presently farmers have already adopted a part of improved package for given commodity. And only 30 per cent technologies are reaching up to ultimate users, and rest is of no use (5). There is need to identify gaps in adoption so that it could be basis for technical planning of demonstration and training programs. Keeping the above fact in the view this study was conducting to find out the existing technological adoption gaps and factors associated with it under following objectives : To analyze the technological adoption gaps associated with the buffalo management in district Etawah, and to identify the causes for technological adoption gaps in relation to buffalo management in district Etawah.

Methods

The study was conducted in Uttar Pradesh dur-

Table 1. Technological adoption gaps associated with the buffalo management.

Practices	No Gap		Partial Gap		Full Gap	
	No. of farmers	% of farmers	No. of farmers	% of farmers	No. of farmers	% of farmers
Feeding Management						
Green fodder	0	0	80	100	0	0
Dry fodder	0	0	80	100	0	0
Grazing	0	0	62	77.5	18	22.5
Concentrate mixture	0	0	80	100	0	0
Grains	0	0	80	100	0	0
Cakes	9	11.25	71	88.75	0	0
Brans	0	0	0	0	80	100
Mineral mixture	9	11.25	4	5.0	67	83.75
Salt	0	0	13	16.25	67	38.75
Feed additives	0	0	0	0	80	100
Water	0	0	80	100	0	0
Breeding Management						
Artificial Insemination	0	0	0	0	80	100
Natural Service	80	100	0	0	0	0
Production Management						
Clean milk production	0	0	80	100	0	0
Sanitation of sheds	80	100	0	0	0	0
Health Management						
Vaccination						
Haemorrhagic Septiceamai	0	0	80	100	0	0
Foot and Mouth Disease	0	0	80	100	0	0
Black Quarter	0	0	80	100	0	0
Deworming						
Ecto parasite	0	0	16	20	64	80
Endo parasite	0	0	16	20	64	80

ing 2007. Out of 70 districts of the state (Census 2001) Etawah was selected purposely on the basis of major livestock and milk producing district. Three-stage random sampling was adopted for selection of blocks, villages and respondents. At first stage two blocks from Yamuna-Sanger region were selected randomly. At the second stage, from each selected block, three villages were selected randomly. Thus six villages were selected. Thus, in all 80 farmers were selected randomly for the study. The information was collected from the buffalo keepers through semi-structural interview schedule. Ambiguous responses were not entertained. Then data were analyzed through percentage statistical tool. The technological gap in the present study was conceptualized as the difference between recommended buffalo management technologies and the technologies actually adopted by the buffalo keepers. If there was 50% and above variation in adoption of recommended practices considered as full gap, 20 to 50% variation as partial gap and 10 to 20% variation was considerable and considered as no gap in technology adoption by the respondents. In the study of technological adoption gaps, four important buffalo management practices namely feeding, breeding, production and health management aspects were considered. The gap has been expressed

in per cent and presented in findings and discussion.

Results and Discussion

Twenty two items representing the technological adoption gaps associated with the buffalo rearing practices in district Etawah. And these are in three categories, no gap, partial gap and full gap of technology adoption.

Table 1 Indicates that in buffalo management practices, use of brans, feed additives and use of artificial insemination were almost negligible at the farm level because 100% farmers were having full gap. And under feeding management, green fodder, dry fodder, concentrate mixture, grain, and water management practices were available but in imbalanced form and thus, accepted as 100% partial gap by the farmers. Under breeding and production management practices, the sanitation of buffalo sheds and natural service of animal like operations were properly used by farmers resulting they possessed (100%) no gap, means they were quite aware of these two recommended practices at farm. Use of cakes and grazing operations exhibited partial gaps as more than 77.0 to 88.0% of farmers, and they did not adopt the scientific recommendations as such. Rest variables are being expressed in the table.

Causes for Technological Adoption Gaps in Buffalo Management Practices

Study reveals the two basic categories of causes in the study area responsible for technological adoption gaps, first personal problems of buffalo keepers like weak economic status, unawareness, illiteracy, confidence and their traditional mind to think, which adversely affects milk production and results no adoption of new technologies. Simultaneously the second category deals with the failure of extension communication system, lack of awareness activities, common service centers, village knowledge centers, organization of training programs for the buffalo keepers, unavailability veterinary, domestic milk markets, incentives from the government etc. were the basic causes to hinder the production of buffalo in the region beyond the extrement potentiality of this profession to enhance the income of small and marginal farmers in district Etawah. Study conducted by Misra and Ramakrishna (6) in Andhra Pradesh and Karnataka also revealed quite similar causes for technological adoption gaps.

Conclusion

Technological adoption gaps were found in feeding management, production management, breeding management, and health management of buffalo rearing in district Etawah. It indicates that there is need to update knowledge of dairy farmers, regarding breeding , feeding, protection and management. This can be imparted through training programmes on various need based aspects related to dairy farming at farm level. All queries of buffalo keepers should be short out at farm itself and government would require special attention to regain their self confidence in this profession by providing different incentives to buffalo keepers during natural calamities and opening of veterinary centers with strengthening the fair milk marketing system at the domestic level.

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