

Original Research Article

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Information Needs of Buffalo Farmers in Haryana

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ABSTRACT

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The present study was carried out in Haryana, farmers with at least one adult female buffalo were selected randomly to arrive at a total sample size of 120 farmers. An ex-post facto research design was used in the present study. The responses for information needs of the buffalo farmers were retrieved on three point scale *viz.* most needed, needed and not needed. More than half (56.70%) of the respondents fell in the medium information needs category while 22.50 per cent had low information need whereas 20.80 per cent were in high information needs category. The most important perceived information needs of the farmers included feeding, breeding, healthcare, market, farm credit and management. Information needs regarding feeding was ranked first as revealed by mean score (2.97) followed by breeding (2.82), healthcare (2.81), market (2.70), farm credit (2.49) and management (2.09) and were ranked second, third, fourth, fifth and sixth, respectively.

Introduction

Wijngaert (1999) conceptualized that needs for information consists of the process of perceiving a difference between an ideal state of knowledge and the actual state of knowledge. In the present study, perceived information needs refer to scientific buffalo husbandry practices on which respondents sought information.

The present human society is living in an information age and as a consequence, man

has become more and more information conscious. More and more people deliberately seek information and it has become an integral part of human activity especially in the area of education, research and development, animal husbandry practices (e.g. castrations, dehorning, and marketing of animals).

The information must be relevant and meaningful to farmers, in addition to being packaged and delivered in a way preferred by them (Diekmann *et al.*, 2009). Context-

specific information could have higher impacts on the adoption of technologies and increase farm productivity for marginal and small agricultural landholders (Sammadar, 2006). An analysis of the NSSO 2003 survey showed that small and marginal farmers accessed less information and from fewer sources than medium and large scale farmers in India (Adhiguru *et al.*, 2009).

Animal health information is of potential importance not only to the farm business but potentially also to animal welfare and public health. It is against this background that the field of buffalo husbandry is not an exception, in the need for timely delivery of complete and relevant information. This is because buffalo farmers have varying needs that range from information on the disease status of animals which is very crucial and can contribute to a large number of herd die off when ignored or pose as a threat to the well-being of humans.

Buffalo farmers also need information on good animal husbandry practices, new emerging technologies, market-related information, and information on livestock policies. The assessment of the information needs and seeking behavior of buffalo farmers is essential for assisting them to access and use information resources required for high production levels and equally to assist the relevant authorities in charge of disseminating information to come up with better implementation strategies.

Materials and Methods

The present study was carried out purposively in Haryana because the state is the native tract of best buffalo breed of the world i.e. "Murrah" buffalo. Haryana possesses a significant number of buffalo population and it is on the increasing trend. In the total livestock population of the state, buffalo

contributes 69.00 per cent. The state is second highest in per capita milk availability i.e., 930 g/day (BAHS, 2017).

Haryana state is divided into two agro-climatic zones i.e. eastern and western zones which comprise 15 and 6 districts, respectively. Two districts from zone I and one district from zone II was selected randomly. As there are 15 districts in the zone I so to give proportional representation to both the zones, two districts were selected from zone I. Two blocks from each randomly selected district were selected randomly. Thus, a total of six blocks were studied. From each selected block, two villages were selected randomly. Thus, four villages from each district to a total of twelve villages constituted the study area. From each selected village, a sampling frame comprising the list of buffalo farmers having at least one adult female buffalo was prepared with the help of the veterinary officer. From the listed farmers, ten buffalo farmers were selected randomly. Hence, ten farmers from each village were selected randomly to arrive at a total sample size of 120 farmers. The variables under study were selected on the basis of an extensive review of literature related to the topic of research and consultation with experts. An ex-post facto research design was used in the present study.

Results and Discussion

Perceived information needs of the buffalo farmers were classified under sub-headings *viz.*, management, breeding, healthcare, feeding, farm credit and market. Data on perceived information needs on various areas of improved buffalo husbandry practices were collected on three-point continuum with maximum score of three and minimum score of one where one stood for not needed and three for most needed information. The findings are presented as follows:

As evident from Table 1, on the basis of total score of information needs it was found that more than half (56.70 %) of the respondents fell in medium information needs category, while 22.50 and 20.80 percents were categorized as respondents having low and high information needs. The results were in line with the finding of Meena *et al.*, (2014) who found that most of the respondents had medium level of perceived information needs.

On the basis of mean and percentage of total information needs score, areas of information needs were ranked. It was found that feeding was the area with highest information needs mean score 2.97 and ranked first, followed by breeding (2.82), healthcare (2.81), market (2.70), farm credit (2.49) and general management (2.09) which were ranked second, third, fourth, fifth and sixth, respectively. The results were in accordance with the finding of Kanthi (2013), Balaraju *et al.*, (2014), Raina (2017) and Singh *et al.*, (2018) who observed that feeding, breeding, healthcare, general management, market and farm credit were the major areas on which respondents needed information (Table 1–3).

Information needs on management

Results in Table 9 revealed that a sizeable population of the respondents (40.00%) belonged to low perceived information needs on general management followed by 38.30 and 21.70 percent respondents who had high and medium perceived information needs, respectively. The results were in concurrence with the findings of Devaki and Senthilkumar (2013), who conducted a study in Tamilnadu and found that in perceived information needs of the farm women, general management was ranked sixth with minimum mean percentage of 59.93.

Information needs on breeding

The perceived information needs of the buffalo farmers on various aspects of breeding are shown in Table 4. Results revealed that majority of the respondents needed information on importance of AI and methods of breeding for improving the genetic potential of the buffalo, as clear from their mean scores of 2.93 and 2.91 respectively.

Table.1 Distribution of respondents according to their perceived information needs

Information needs	Frequency (n = 120)	
Low	27 (22.50)	Mean total score = 101.69 SD = 3.817
Medium	68 (56.70)	
High	25 (20.80)	

Table.2 Ranking of major areas of information needs of buffalo farmers

Major areas	Mean score	Rank
Breeding	2.82	II
Market	2.70	IV
Feeding	2.97	I
Healthcare	2.81	III
General management	2.09	VI
Farm credit	2.49	V

Table.3 Distribution of respondents according to their information needs on management

Management	Most needed	Needed	Not needed	Mean score
Scientific method of buffalo rearing and its practice	0 (0.00)	84 (70.00)	36 (30.00)	1.70
Breeds of buffalo and its importance	0 (0.00)	87 (72.50)	33 (27.50)	1.73
Care of dam before, during and after parturition	0 (0.00)	68 (56.67)	52 (43.33)	1.57
Care and management of new born calf	54 (45.00)	56 (46.67)	10 (8.33)	2.37
Importance of colostrum	46 (38.33)	67 (55.83)	7 (5.84)	2.33
Care and management of milch buffalo	46 (38.33)	60 (50.00)	14 (11.67)	2.27
Method of disposal of male buffalo	47 (39.16)	25 (20.84)	48 (40.00)	1.99
Housing system and cleaning practice	50 (41.67)	22 (18.33)	48 (40.00)	1.99
Buffalo insurance	58 (48.33)	52 (43.33)	10 (8.34)	2.40
Clean milk production	64 (53.34)	56 (46.66)	0 (0.00)	2.53

Figures in parenthesis indicate percentage

Table.4 Distribution of respondents according to their information needs on breeding

Breeding	Most needed	Needed	Not needed	Mean score
Selection and importance of male and female buffalo for breeding	108 (90.00)	12 (10.00)	0 (0.00)	2.90
Methods of breeding for improving the genetic potential of the buffalo	111 (92.50)	7 (5.84)	2 (1.66)	2.91
Importance of AI	112 (93.33)	8 (6.67)	0 (0.00)	2.93
Importance of high genetic merit bull	61 (50.83)	58 (48.34)	1 (0.83)	2.50
Heat detection	106 (88.33)	14 (11.67)	0 (0.00)	2.88

Figures in parenthesis indicate percentage

Table.5 Distribution of respondents according to their information needs on healthcare

Healthcare	Most needed	Needed	Not needed	Mean score
Information about vaccine preventable diseases like HS, FMD, BQ and Brucella	112 (93.33)	8 (6.67)	0 (0.00)	2.93
Information about preventive vaccines available for buffaloes	63 (52.50)	57 (47.50)	0 (0.00)	2.53
Information on diseases of zoonotic importance	115 (95.83)	5 (1)	0 (0.00)	2.96
Prevention and destruction of internal and external parasites and its importance	117 (97.50)	3 (2.50)	0 (0.00)	2.98
Information about diseases of buffaloes and home remedies for them	62 (51.67)	58 (48.33)	0 (0.00)	2.52
Proper disposal of the carcass	115 (95.83)	5 (1)	0 (0.00)	2.96

Figures in parenthesis indicate percentage

Table.6 Distribution of respondents according to their information needs on feeding

Feeding	Most needed	Needed	Not needed	Mean Score
Feeding of pregnant buffalo and its importance	116 (96.67)	4 (3.33)	0 (0.00)	2.97
Importance of mineral mixture	117 (97.50)	3 (2.50)	0 (0.00)	2.98
Importance of concentrate feeding	117 (97.50)	3 (2.50)	0 (0.00)	2.98
Preparation of silage	120 (100.00)	0 (0.00)	0 (0.00)	3.00
Feeding of young calves	115 (95.83)	5 (1)	0 (0.00)	2.96
Feeding of heifer	116 (96.67)	4 (3.33)	0 (0.00)	2.97
Fodder production for lean period	119 (99.16)	1 (0.84)	0 (0.00)	2.99
Balance feeding	117 (97.50)	3 (2.50)	0 (0.00)	2.98

Figures in parenthesis indicate percentage

Table.7 Distribution of respondents according to their information needs on market

Market	Most needed	Needed	Not needed	Mean score
Selling of milk on better remunerative prices	118 (98.33)	2 (1.67)	0 (0.00)	2.98
Importance of value edition	58 (48.33)	32 (26.67)	0 (0.00)	2.48
Purchasing of animal from reliable source	66 (55.00)	54 (45.00)	0 (0.00)	2.55
Animal purchase with suitable record and certificates	110 (91.67)	10 (8.33)	0 (0.00)	2.92
Information on government schemes	72 (60.00)	48 (40.00)	0 (0.00)	2.60

Figures in parenthesis indicate percentage

Table.8 Distribution of respondents according to their information needs on farm credit

Farm credit	Most needed	Needed	Not needed	Mean score
Source of credit availability	78 (65.00)	42 (35.00)	0 (0.00)	2.65
Interest and repayment	70 (58.33)	50 (41.67)	0 (0.00)	2.58
Rules and procedure	65 (54.16)	54 (45.00)	1 (0.84)	2.53
Mode of disbursement	72 (60.00)	48 (40.00)	0 (0.00)	2.60
Loan related information	16 (13.33)	100 (83.34)	4 (3.33)	2.10

Figures in parenthesis indicate percentage

Table.9 Distribution of respondents according to their area of perceived information needs

Category	Management n = 120	Breeding n = 120	Healthcare n = 120	Feeding n = 120	Market n = 120	Farm credit n = 120
Low	48 (40.00)	9 (7.50)	0 (0.00)	0 (0.00)	0 (0.00)	46 (38.30)
Medium	26 (21.70)	0 (0.00)	74 (61.70)	6 (5.00)	58 (48.30)	15 (12.50)
High	46 (38.30)	111 (92.50)	46 (38.30)	114 (95.00)	62 (51.70)	59 (49.20)

Figures in parenthesis indicate percentage

Data in Table 9 revealed that majority (92.50%) of the respondents belonged to high level of perceived information needs on breeding, while the remaining 7.50 per cent had low information needs. The results were in accordance with the observation of Singh *et al.*, (2016) who conducted study in Punjab and reported that 64.70 per cent of the farmers sought information on animal breeding. The same results were reported by Devaki and Senthilkumar (2013) who conducted a study in Tamilnadu and found that with regard to perceived information needs of the farm women, breeding was ranked second with a mean percentage of 81.33.

Information needs on healthcare

Data pertaining to perceived information needs of the buffalo farmers on various aspects of healthcare is presented in Table 5 and it is apparent from the table that majority of the respondents needed information on prevention and elimination of internal and external parasites followed by information on zoonotic diseases and proper disposal of the carcass, as evident from the mean scores of 2.98, 2.96 and 2.96 respectively.

Data in table 9 revealed that most (61.70%) of the respondents had medium level of perceived information needs on healthcare and remaining 38.30 per cent had high information needs. The results were in concurrence with the findings of Rezvanfar *et al.*, (2007), who conducted study in Iran and concluded that farm women needed more information on healthcare and Phand *et al.*, (2009) stated that information on health management aspect was one of the priorities of the farmers.

Information needs on feeding

The perceived information needs of the buffalo farmers on various aspects of feeding

are indicated in table 6. Data revealed that majority of the respondents needed information on preparation of silage and fodder production for lean period, as apparent from the mean scores of 3.00 and 2.99, respectively.

Data in table 9 showed that majority (95.00 %) of the respondents had high perceived information needs on feeding while remaining 5.00 per cent had medium perceived information needs on feeding.

The results were in line with the finding of Singh *et al.*, (2018), who conducted a study to examine the information needs of farmers using mKisan services in Uttar Pradesh with respect to different dairy husbandry practices and revealed that farmers had higher information needs about feeding practices which was seen from weighted mean score of 2.20.

Information needs on market

As shown in Table 7, the perceived information needs of the buffalo farmers on various aspects of market envisages that majority of the respondents needed information on selling of milk on better remunerative prices and animal purchase with suitable record and certificates, which are evident from their mean scores 2.98 and 2.92, respectively.

Table 9 clearly shows that more than half (51.70%) of the respondents belonged to high level of perceived information needs on market related information followed by 48.30 per cent who belonged to medium category. The results were in line with the observation of Singh *et al.*, (2016) who conducted study in Punjab and reported that majority of the farmers (70.58%) needed information on different subsidy schemes of the government.

Information needs on farm credit

The perceived information needs of the buffalo farmers on various aspects of farm credit are shown in Table 8. It is apparent that majority of the respondents needed information on source of credit availability and mode of disbursement as evident from their mean scores of 2.65 and 2.60 respectively.

Data in Table 9 reveals that almost half (49.20%) of the respondents belonged to high level of perceived information needs on farm credit related information followed by 12.50 per cent belonged to medium category and 38.30 per cent belonged to low information needs. Similar results were reported by Babu (2008) who found that 51.94 per cent of the respondents needed information on credit organization. However, the results were not in agreement with the finding of Devaki and Senthilkumar (2013) who conducted a study in Tamilnadu and found that in perceived information needs of the farm women, farm credit was ranked first.

In conclusion to fulfill the information needs of the farmers' additional number of multipronged information channels needs to be created. Organizing more number of informal group meetings, use of print media and television programmes, use of interactive two way platforms for providing context specific and need based information about improved buffalo husbandry practices by different players who are working for buffalo development in the state, can be effective. As seen from present study farmers needed more information on market and farm credit that can be fulfilled by concerned stakeholder *viz.*, banks, farmers' cooperatives and SDAH personnel by organizing special meetings, dedicated stalls in farmers' fairs, use of print media and television programmes.

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