SHORT COMMUNICATION

Perception of scientists and traders in deciding the price of a buffalo in Haryana

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Abstract The data were collected from 50 traders and 50 scientists on a five point continuum for 18 Murrah Breed characteristics which determine the price of buffaloes. Milk yield was considered as most important parameters which determined the price of a buffalo by the two categories of respondents. Difference of opinion was observed with regard to the importance of rest of the characteristics by the respondents of the study. Spearman's Rank order correlation was applied to see if there was any association in the opinion of two categories of respondents. The rho- value was 0.84 which was significant at 0.01 percent level of significance which indicated that there was similarity in the opinion of both the categories of respondents.

Key words: Buffalo, price, perception of scientists, buffalo trading, traders

Haryana is privileged to be the home-track of buffaloes, which must have been the basis of the common saying "Deshaan mein desh Harian jith doodh dahi ka khana" (Haryana – the exclusive state where milk and curd are staple food). Over generations, the state took pride in owning and breeding pure Murrah animals characterized by jet black color, short neck and face, tightly curled horns and deep belly with spacious milk machine – the udder. Recognition of its qualities of looks and production potential created interest among the farmers not only in other states of the country, but also in the entire world. This proved to be a boon, but quietly turned out to become bane too for the buffalo breeders of Haryana. As per the data of the Statistical Abstract of Haryana, from 1997 to 2003 the cattle population decreased by nearly 36%, while buffalo population recorded over 25% increase. Over last 20 years the population of buffaloes in Haryana recorded an increase of nearly 80% from 3.37 million in 1982 to 4.37 million in 1992 and 6.03 million in 2003 though slight decrease was observed in 2007 (Statistical Abstract of Haryana, 2010).

Buffalo trading is done on a big scale in some pockets of Haryana like Rohtak, Kalanur, Julana, Jind etc. The price of buffaloes has increased over the period and during 2005 the best animals were sold for over one lakh rupees each and some elite buffaloes fetched as much as Rs. 1.5 lakh. Traders negotiate the price of a buffalo with farmers and it is fixed on the basis of some parameters. In this study it was endeavored to find out the important parameters which determine the price of a buffalo. In order to find out the scientific basis for pricing a buffalo, perception of 50 scientists was also elicited on this aspect.

The study was conducted in Haryana as it happens to be the home state of Murrah buffalo, Fifty traders_ belonging to Rohtak, Kalanur, Julana and Jind blocks constituted the study sample. Large scale trading of buffaloes is done at Rohtak and Jind which are famous for buffalo markets while Kalanaur and Julana blocks have big markets for sale-purchase of buffaloes. In addition, 50 randomly selected scientists of Central Institute for Research on Buffaloes, Hisar, National Dairy Research Institute, Karnal and Lala Lajpat Rai University of Veterinary and Animal Science, Hisar were also included in the sample for the study.

A list of Murrah Buffalo characteristics was prepared on the basis of review of literature, discussion with animal scientists, farmers, veterinarians and traders. Thus, 18 characteristics were identified which determined the price of a buffalo. These parameters were administered to both the categories of respondents. The responses were elicited on a 5 point continuum from "most important" to 'least important". Thus the mean score of scientists and traders on 18 parameters was calculated and rank of each parameter of both the categories of respondents was determined. The data were subjected to Spearman rank order correlation to assess the degree of agreement among the scientists and traders on the characteristics which matter in determining the price of Murrah buffaloes.

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Table1: Average number of buffaloes brokered per month during breeding season

No. of buffaloes	Frequency of traders	Percentage
Upto 15 buffaloes	9	18
20 – 50 buffaloes	31	62
50 – 100 buffaloes	6	12
More than 100	4	8
Total	50	100

Lot of buffalo trading is done from four centers of Haryana - Rohtak, Kalanur, Julana and Jind. In order to see the pattern of trading information was collected about sale of buffaloes per month from these centers and findings are presented in Table 1. Out of 50 traders surveyed randomly, it was found that 62% brokered 20-50 buffaloes while 18% brokered up to 15 buffaloes. The study also indicated that 12 and 8 percent brokered 50-100 and more than 100 buffaloes respectively during the breeding season. Thus the findings revealed that lot of buffaloes are being sold by the traders to different states of the country. The study is in line with the contentions of Singh & Singh (2006) who reported that there was large scale exodus of animals from Haryana to different parts of the country. They also reported that on an average approximately 1,200 buffaloes were exported every month from Rohtak district alone. Economic and planning Department of Haryana mentioned in its report that about one lakh 'Murrah' buffaloes were exported every year to other states and abroad during 2001 to 2009.

Table 2: Important months for sale of buffaloes

Months	Frequency	Percentage
July	8	16
August	10	20
September	12	24
October	13	26
November	7	14

Table 3: Preference of traders regarding sale of buffaloes in different lactations

Lactation No.	Frequency	Percentage
First	8	16
Second	15	30
Third	20	40
Fourth	3	6
Fifth	4	8

The information was elicited from the traders regarding the months when maximum sale- purchase takes place and the results pertaining to this information are given in Table 2. It is obvious from the table that 70 % sale of buffaloes took place in during August, September and October. In July and November 16 and 14 percent buffaloes were sold respectively from Haryana. The findings got the support of Mondal and Pandey (1993 and 1996).

Table 4: Perception of scientists and traders on the characteristics of buffaloes which determine their price

Character	Scientists Mean Score	Rank	Traders Mean Score	Rank
Milk Yield	4.86	I	4.98	I
Parity (no. of lactation)	4.08	III	4.44	IV
Stage of lactation	3.68	VIII	4.28	VI
Shape and size of udder	4.18	II	4.38	V
Attachment of udder	3.88	V	4.18	VII
Length of teats	3.48	X	3.44	XI
Shape of teats	3.34	XII	2.94	XIII
Placement of teats	3.4	XI	3.54	IX
Prominence of milk vein	3.6	IX	3.1	XII
Height / Body size	3.86	VI	3.68	VIII
Color of animal	3.76	VII	4.5	III
Horn Pattern	3.88	IV	4.62	II
Shape of face / fore head	3.2	XIII	2.28	XVII
White markings on fore head	3.02	XVI	3.48	X
Tail Switch	3.06	XV	2.48	XV
Skin thickness	2.96	XVII	2.42	XVI
Sex of calf	2.92	XVIII	2.8	XIV
Temperament	3.14	XIV	2.18	XVIII

Singh & Singh (2006) also reported that maximum number of buffaloes were sold during July, August and September.

Parity is also one of the important parameters for determining the price of a buffalo. This information was collected from the traders and is given in Table 3. It is apparent from the table that maximum number of buffaloes were sold in their second and third lactations (70%) followed by first lactation (16%). Very few buffaloes were sold in the rest of the lactations (14%). The study got support partly from Singh & Singh (2006) who mentioned that there was a definite pattern of the type of animals being exported to different parts of the country. They also reported that the animals going to Maharashtra including Mumbai and Pune were the true to breed animals in their first or second lactations and these fetch the maximum price. Murrah buffaloes going to central India and places like Jabalpur, Bhopal, Raipur, Indore, Varanasi, Kanpur, besides the state of Rajasthan were the second grade animals with comparatively lower emphasis on breed characters and that too during their 3rd or 4th lactations.

Data were collected from traders and scientists regarding the different parameters which determine the price of buffaloes and the results are presented in Table 4.

It is apparent from the Table no.4, that milk yield (4.86), shape and size of udder (4.18) and Parity (no. of lactation) (4.02) were considered as most important parameters by the scientists and skin thickness (2.96) and sex of calf (2.92) were perceived as least important. Similarly milk yield (5.00), horn pattern (4.62) and color of animal (4.5) were found most important parameters and shape of face / fore head (2.28) and Temperament (2.18) were felt as least important parameters by the traders.

Perception of scientists' and traders' about 10 most important parameters of buffaloes which determine their price was analyzed. The analysis indicated that the first 8 parameters out of 10 were same even though each parameter holds different ranks. It was found that scientists considered 2 parameters i.e. prominence of milk vein (3.6) and length of teats (3.48) which were not considered as important by the traders. On the contrary, traders but not the scientists considered placement of teats (3.54) and white markings on fore head (3.48) as important parameters to fix the price of Murrah buffaloes.

The findings also revealed that there is fairly high agreement among both the categories of respondents on the characteristics of the Murrah Buffaloes as indicated by the significant rho value (0.84).

The findings of this study were in line with the contentions of Mondal and Pandey (1993 and 1996) who reported that buffaloes yielding 12 litres of milk in their first lactation fetched the maximum price. The buffalo price peaked during the summer months due to limited availability of freshly calved buffaloes, which further leads to scarcity of milk.

Conclusions

Thus it can be concluded that both scientists and traders considered milk yield, shape and size of udder, parity (no. of lactation), horn pattern and color of animal as most important parameters in deciding the price of a buffalo. The study also revealed that most of the buffaloes were sold during August, September and October months and that too in their second or third lactation. There was high degree of agreement among the perceptions of scientists and traders on the characteristics of Murrah buffaloes which were considered important in determining the price of a buffalo.

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