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Socio-economic status and limitations faced by buffalo owners in Nagpur tahsil of Nagpur district

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Abstract
The present investigation entitled ''Socio-economic status and Limitations faced by Buffalo owners in Nagpur Tahsil of Nagpur District'' was undertaken in order to feeding and management practices they have adopted. The 200 farmers of 10 villages were selected to study in Nagpur tahsil of Nagpur district. In this study it was revealed that maximum farmers belonged to 31-50 years age group (55.00%), Followed by up to 30-year age group (28.00%), then the farmer from 51 and above year age group (17.00%). The 32 farmers belonged to the landless category, 78 of the farmers belonged to the marginal land holding category, while 20 farmers were medium land holders and 11 respondents belonged to the large farmer category. The major limitations expressed by the farmers were high cost of mineral mixture, high value of concentrates, non- availability of agro-industrial by products, lack of scientific knowledge, shortage of green fodder, lack of storage facility, lack of loan facility and lack of interest.

Keywords: Socio-economic status, limitations, feeding practices, management practices, buffalo owners

Introduction
Livestock plays a significant role in maintaining a strong agriculture economy in India. Livestock provides employment opportunities to a large number of landless and marginal farmers. Also, they provide us milk, meat, manure, draft and transport purpose. Buffaloes are the backbone of rural economy in many developing countries of the Asian region including India. Buffaloes occupy a prominent place in the social economic and cultural life of Indian rural communities and are useful as a triple purpose animal for milk meat and draft power. Dairying with buffaloes in India is a closely interwoven integral part of agriculture. Currently India has highest buffalo population in the world 109.85 million during 2019 (Anonymous 2019) [1-2]. Buffalo is more productive than cattle due to better feed conversion efficiency and more resistant to disease hence buffaloes are now more preferred by the farmers over the cattle. In India the buffalo's population are increasing and outnumber the cattle population simply because of their easy adaptability in harsh environment and producing milk of higher fat content. The milk production of India during 2020-2021 was 209.96 million tonnes of which buffalo contributes more than 50 per cent. In spite of all this the per capita availability of milk in India is 427 gm/day (Anonymous – 2019) [1-2]. Livestock sector play a very crucial role in shaping the economy of rural peoples. It is continuous income generating source for rural house hold.

Materials and Methods
Over all 200 buffalo owners were chosen randomly that is 20 buffalo owners from each village. The data of present study was collected from the selected buffalo farmers with the help of presented interview schedule (Questionnaire). Based on the objectives of study, a detailed questionnaire was prepared which was used to collect data from the buffalo owners.

Results and Discussion
The results of investigation are reported and discussed in this chapter under following heads.

Table 1: Classification of buffalo owners according to size of land holding

Sr. No.	Name of village	Landless	Marginal	Small	Medium	Large	Total
		(Landless)	(Up to1ha)	(1 to 2ha)	(2 to 10ha)	(above 10ha)	
1	Bhokara	0	7	9	2	2	20
2	Bailwada	3	6	7	3	1	20
3	Chimnazari	2	9	5	3	1	
4	Chikana (Dhamana)	1	8	8	2	1	20
5	Hingana	3	9	6	2	0	20
6	Matkazari	3	7	8	2	0	20
7	Nara	4	5	6	2	3	20
8	Salai mendha	6	8	3	1	2	20
9	Sawarmendha	6	11	1	1	1	20
10	Wadad	4	8	6	2	0	20
	Total	32	78	59	20	11	200
	Total Per Cent	16.00	39.00	29.5	10.00	0.50	100

It was observed from table 1 that, 16 per cent buffalo owners were landless, 39 per cent buffalo owners had marginal farm size, 29.50 per cent buffalo owners had small farm size, 10.00 per cent buffalo owners had medium farm size and 11.50 per cent buffalo owners had large farm size.

Table 2: Distribution of buffalo owners according to age

Sr. No.	Particulars	Landless (N= 32)	Marginal (N= 78)	Small (N=59)	Medium (N= 20)	Large (N=11)	Total (N= 200)
	Age						
i.	Young (Up to 30 years)	11 (34.37)	26 (33.33)	13 (22.03)	4 (20.00)	2 (18.18)	56 (28.00)
ii.	Middle (31 to 50 years)	16 (50.00)	38 (48.71)	35 (59.32)	13 (65.00)	8 (72.72)	110 (55.00)
iii.	Old (51 years and above)	5 (15.62)	14 (17.94)	11 (18.64)	3 (15.00)	1 (9.09)	34 (17.00)
Total		32 (100)	78 (100)	59 (100)	20 (100)	11 (100)	200 (100)

It was observed from table 2 that, the highest proportion of dairy farmers i.e. 55.00 per cent belonged to middle age category of 31 to 50 years, whereas, 28.00 per cent dairy farmers were in young age group up to 30 years. The dairy farmers above age 51 years were 17.00 per cent. It was revealed from the results that, majority of dairy farmers belonged to middle age group ranging between 31 to 50 years. Moreover, the proportion of young farmers was relatively higher than that of old dairy farmers. The present results resembled with Bashir and Vinod (2013) [3] in Kottayam district of Kerala.

Table 3: Classification of buffalo owners according to Education

	Education						
i.	(No education) Illiterate	3 (9.37)	5 (6.41)	3 (5.08)	3 (15.00)	1 (9.09)	15 (7.50)
ii.	Primary (up to 4th std.)	8 (25.00)	6 (7.69)	5 (8.470	1 (5.00)	1 (9.09)	21 (10.50)
iii.	Secondary (5th to 10th)	12 (37.50)	32 (41.02)	26 (44.06)	8 (40.00)	5 (45.45)	83 (41.50)
iv.	Higher secondary (11th to 12th)	4 (12.50)	21 (26.92)	17 (28.81)	5 (25.00)	2 (18.18)	49 (24.50)
v.	Graduation (Degree holder)	5 (15.62)	14 (17.94)	8 (13.55)	3 (15.00)	2 (18.18)	32 (16.00)
Total		32 (100)	78 (100)	59 (100)	20 (100)	11 (100)	200 (100)

It was observed from table 3 that, only 7.50 per cent respondent were illiterate, 10.50 per cent had primary education and 41.50 per cent had secondary education and 24.50 per cent respondent had higher secondary education and remaining 16.00 per cent were graduates from respective discipline. It indicated that, majority of the farmer had secondary education. In fact, agriculture and allied fields are more technical and complicated. Similar results were reported by Chauhan and Kansal (2014) while studying in Punjab.

Table 4: Distribution of buffalo owners according to Annual income and Herd size

A.	Annual income						
i.	BPL (Up to Rs. 50000/-)	14 (43.75)	36 (46.15)	28 (47.45)	9 (45.00)	5 (45.45)	92 (46.00)
ii.	Creamy layer (Rs. 50001/- to 60000/-)	10 (31.25)	28 (35.89)	18 (30.50)	6 (30.00)	3 (27.27)	65 (32.50)
iii.	Middle (Rs. 60001/- to 100000/-)	5 (15.62)	10 (12.82)	8 (13.55)	3 (15.00)	2 (18.18)	28 (14.00)
iv.	High (Above 100001)	3 (9.37)	4 (5.12)	5 (8.47)	2 (10.00)	1 (9.09)	15 (7.50)
Total		32	78	59	20	11	200
		(100)	(100)	(100)	(100)	(100)	(100)
B.	**Herd size**						
i.	Small size (Up to 4 buffaloes)	17 (53.12)	38 (41.71)	33 (55.93)	12 (60.00)	7 (63.63)	107 (53.50)
ii.	Medium	10	28	15	5	3	61
	size (5 to 8 buffaloes)	(31.25)	(35.89)	(19.23)	(25.00)	(27.27)	(32.00)
ii.	Big size (9 and above buffaloes)	5 (15.62)	12 (15.38)	11 (18.64)	3 (15.00)	1 (9.09)	32 (16.00)
Total		32 (100)	78 (100)	59 (100)	20 (100)	11 (100)	200 (100)

It was observed from table 4 that, about 46.00 per cent buffalo owners which comes under BPL. The remaining 7.50 per cent buffalo owners had high annual income. The result indicated that, about 92.50 per cent farmers were having low income. The findings are in similar manner with Dhaka *et al.,* (2011) [5] conducted study in Bundi dist. of Rajasthan.

It indicated that, 53.50 per cent buffalo owners had small herd size, 32.00 per cent buffalo owners had medium herd size and 16.00 per cent of buffalo owners had big herd size. The findings were in accordance with Manohar (2012) [9-11] conducted a study in Jaipur district of Rajasthan.

Table 5: Limitations faced by buffalo owners in adopting scientific management practices

Sr. No.	Particulars	Landless (N = 32)	Marginal (N = 78)	Small (N = 59)	Medium (N = 20)	Large (N = 11)	Total (N = 200)
1.	**Financial limitations**						
a.	High value of concentrates	30 (93.75)	71 (91.00)	51 (86.44)	17 (85.00)	3 (27.27)	172 (86.00)
b.	High cost of green fodder	29 (90.62)	69 (88.46)	49 (83.05)	3 (15.00)	1 (9.0)	161 (80.50)
c.	Lack of loan facility	32 (100)	42 (53.84)	36 (61.01)	11 (55.00)	9 (81.81)	130 (65.00)
d.	High cost of mineral mixture	32 (100)	77 (98.71)	59 (100)	19 (95.00)	11 (100)	198 (99.00)
2.	**Technological limitations**						
a.	Lack of Scientific knowledge	30 (97.00)	68 (87.00)	45 (76.00)	16 (80.00)	1 (9.0)	160 (80.00)
b.	Lack of Technical Knowledge	28 (87.00)	35 (44.00)	26 (44.00)	7 (35.00)	0 (0)	96 (48.00)
3.	**Other limitations**						
a.	Lack of fodder Storage facility	30 (93.75)	42 (53.84)	35 (59.32)	17 (85.00)	0 (0.0)	124 (62.00)
b.	Shortage of green fodder	32 (100)	53 (67.94)	34 (57.62)	4 (20.00)	0 (0)	123 (61.50)
c.	Non - availability of Agro-based industries by products	32 (100)	78 (100)	59 (100)	20 (100)	11 (100)	200 (100)
d.	Lack of irrigation Facility	28 (87.00)	50 (64.00)	34 (57.00)	7 (35.00)	2 (18.18)	121 (61)

Financial limitations

High value of concentrates

It was observed from table 5 that, the limitations related to feeding of Buffalo owners were high cost of concentrates faced by landless, marginal, small, medium and large group of buffalo owners was 93.75%, 91.00%, 86.44%, 85.00%, 27.27% respectively. At an overall 86.00 per cent buffalo owners observed high value of concentrates in feeding animals. Mande *et al.* (2008) [8] in their study revealed that, the limitations faced by dairy farmers were high cost of concentrate (85%) in Latur Dist. of Maharashtra.

High cost of green fodder

It was observed from table 5 that, the limitations of Buffalo owners were high cost of green fodder faced by landless, small, marginal, medium, large group of buffalo owners was 90.62%, 88.46%, 83.05%, 15.00% and 09.00% respectively. The overall 80.50 per cent buffalo owners faced problem of high cost of green fodder. Kavathalkar *et al.* (2007) [6] revealed that, overall 79.25 per cent buffalo owners faced problem of high cost of green fodder. This result was in accordance of present study.

Lack of loan facility

It was revealed from table 5 that, the major constraint faced by the buffalo owners was lack of communication. Majority of buffalo owners of landless (100%), followed by marginal group (53.84%), small (61.01%), medium (55.00%) and large (81.81%) group faced problem of lack of loan facility. The overall 65 per cent buffalo owners observed problem of lack of loan facility. Mande *et al.* (2008) [8] revealed that, the first major limitation, followed by inadequate and untimely loan availability from the bank (65.00%).

High cost of mineral mixture

It was observed from table 5 that, the limitations of buffalo owners were high cost of feeding mineral mixture or mineral bricks to their animals faced by landless, marginal, small, medium and large group buffalo owners was 100%, 98.71%, 100%, 95.00% and 100% respectively. The overall 99 percent buffalo owners faced problem of high cost of mineral mixture. Mhatre *et al.* (2020) [12] has conducted study in Kolhapur district of Maharashtra to identify the constraints faced by the dairy farmers in which stated that high market rates of concentrated feed and mineral mixture is one of the limitations which are faced by majority of farmers.

Technological limitations

Lack of scientific knowledge

It was revealed from table 5 that, the limitations faced by Buffalo owners were lack of scientific knowledge faced by majority of cattle owners in landless (97.00%), Marginal (87.00%), medium (80.00%), small (76.00%) and large (9.0%) group. The overall 80.00 per cent of Buffalo owners were observed lack of scientific knowledge. Kavathalkar *et al.* (2007) [6] observed that, overall 81.48 per cent of Buffalo owners involved lack of scientific knowledge. These results similarly matched with present study.

Lack of technical guidance

It was revealed from table 5 that, the limitations faced by majority of buffalo owners in landless group (87.00%) followed by small (44.00%), marginal (44.00%), medium (35.00%) and large (0%). The overall 48.00 per cent of Buffalo owners were observed lack of technical guidance. This result were similarly matched with Kavathalkar *et al.* (2007) [6] revealed that, overall limitations faced by 48.14% buffalo owners had lack of technical guidance.

Other Limitations

Lack of fodder storage facility

The limitations involved under other group were lack of storage facility in majority of buffalo owners of landless (93.75%), medium (85.00%), small (59.32%), marginal (53.84%) and large (0.0%) group were faced problem of lack of storage facility. The overall 62.00 per cent buffalo owners observed problem of lack of fodder storage facility. Kumar *et al.* (2014) [7] in his study revealed that 67% of farmers faced the limitations while storing of feed. The present investigation readily are in accordance with the result.

Shortage of green fodder

It was observed from table 5 that, the limitation buffalo owners were shortage of green fodder faced by majority of buffalo owners in landless group (100%), followed by marginal (67.94%), small (57.62%), medium (20.00%) and large (0%) group. The overall limitations faced by 61.50 per cent buffalo owners were shortage of green fodder. The finding resembles with Kavathalkar *et al.* (2007) [6] indicated that, majority of farmers (60%) reported nonavailability of fodder round the year.

Non availability of Agro-based industries by products

The majority in the limitations is faced by 100 per cent of the buffalo owners where due to unavailability of Agro industries the by products such as rice bran, wheat bran, sugarcane bagasse etc. and many more are unavailable for farmers. Such by products can be used for feeding of buffalo as well as cow.

Lack of Irrigation Facility

It was resulted that, the limitations such as discontinues water supply and lack of water bodies, faced by buffalo owners in landless (87.00%) and marginal (64%), small (34%), medium (35%) and large (18.18%) group. The overall limitations observed by 61.00 per cent of buffalo owners were lack of irrigation facility. The finding resembles with Pata *et al.* (2018) [13] studied limitations faced by buffalo owners in Junagadh and Porbandar districts of Gujrat and resulted that economic aspects, unavailability of poor irrigation facilities for cultivation of crops.

Conclusion

The socio-economic study indicated that, majority of farmers were having limited land holdings, small herd size and low income. Whereas, most of the farmers were middle aged and less educated. The financial limitations involved high cost of concentrates, green fodder, mineral mixture and lack of loan facility with hold farmers to adopt some scientific practices.

Future Scope

Full potential productivity of buffalo can be got through improved breeding and management practices, good quality and quantity of feeding material. The provision of ample green fodder, improvised dry roughages may increase socio-economic level of the farmers.

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