Socio- Personal, Economic and Psychological Status of Buffalo Owners in Murrah Breeding Tract of Haryana

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A B S T R A C T

Present study was conducted with objective to explore the socio- personal, economic and psychological characteristics and information seeking behaviour of buffalo owners in Hisar and Jind district i.e. part of Murrah breeding tract of Haryana. Data was collected by interviewing 240 buffalo owners personally. Study revealed that majority of respondents were found in age group of 37-57 years, came from nuclear and small size family, medium family education status, small herd size, high risk orientation and medium economic motivation. Majority had less than 2 ha of land, agriculture as main occupation and belonged to low annual gross income category by earning $\leq$ Rs. 400000 per annum. They were utilizing informal sources for getting information related to animal husbandry at low level, medium level of formal and mass media sources.

Introduction

India's livestock sector is one of the largest in the world with a holding of 11.6 per cent of world livestock population (512.06 million) comprising of buffaloes (57.83%) (Livestock census, 2012). Contribution of agriculture in GDP of country is 17.4 per cent (India Economic survey, 2015-16), in which animal husbandry and dairy constitute 33 per cent. India is the largest producer of milk i.e. 165.4 million tonnes (NDDB, 2017), with 49 per cent share of buffalo (DAHDF, 2016-17). Livestock population has been decreased by 3.33 per cent while, the population of buffalo has increased by 3.19 per cent (Livestock census, 2012). Livestock contributed 16% to the income of small farm households as against an average of 14% for all rural households (Livestock census, 2012). Livestock provides livelihood to two-third of the rural community. It also provides

employment to about 8.8% of the population in India. For further improve the contribution of this sector in livelihood security there is need that farmers should have access to technology, training, resources and veterinary extension services rendered by public sector or private. So, there is indispensable need of the service providers to know about the socio-economic status of the livestock farmers to provide aforesaid services need based and efficiently. Keeping in view, the present study was designed with the objective of studying the socio-personal, economic and psychological profile of the buffalo owners.

Materials and Methods

The present study was carried out following ex-post facto and exploratory research design in Murrah breeding tract of Haryana comprising seven districts. Amongst these, 2 districts; Hisar and Jind were selected purposively for the study because of familiarity of the researcher with the local language, customs and culture that helped in building up rapport with the respondents. From each of the selected districts, 120 buffalo owners were selected randomly, thus 240 respondents were selected and data were collected by personal interview and observation and results were expressed in frequency and per cent.

Results and Discussion

Socio-personal profile of the buffalo owners

This includes the age, caste, type of house, family type, family size, family education status, family main occupation, herd size and herd structure.

Age

Table 1 reveals that nearly forty six percent

of respondents were in middle age group (37-57 years), followed by young (32.9%) and 20.8 per cent fell under 57-76 years of age group. The mean age was 44 years. Earlier studies conducted by Pavan *et al.,* (2016) in Karnatka and Sabapara *et al.,* (2016) in southern Gujarat on dairy animal keepers also find that more number of respondents fell under middle age category.

Caste

Table further shows that overall majority of respondents (75.8%) belonged to General category, followed by Schedule caste (12.9%) and rest 11.3 per cent belonged to other backward class category. This indicates that buffalo rearing occupation is not restricted to any one caste or category in Haryana.

Type of house

Majority of respondents (91.7%) were having *Pucca* house followed by mixed (7.1%), *Kuchha* (1.3%) and no one was having hut in studied area. It indicate that buffalo farmers in Haryana are quite progressive and had *Pucca* house for their living.

Family structure

Family structure included family size and family type.

Family type

Majority (73.7%) of respondents came from nuclear family system and rest 26.3 per cent belonged to joint family (Table 4.2). Sarita *et al.,* (2016) also report that majority (73.3%) of dairy farmers in Hisar district of Haryana has nuclear family system.

Family size

Table indicates that majority of respondents

(73.3%) had small size family i.e. up to seven (7) members followed by respondents (22.1%) having medium size family comprising 8-11 members. Only few per cent of respondents (4.6%) also had large size family with more than 12 members. Jyoti (2015) and Pavan *et al.,* (2016) while studying on dairy farmers in Uttar Pradesh and Karnataka, find that majority of respondents have medium size family with 4-6 members. However, Devaki *et al.,* (2015), Balaraju (2016) and Rekha *et al.,* (2017) report that majority of dairy farmers in Tamilnadu, Karnataka and Haryana state have small family size.

Family education status

Table 1 points out that majority of respondents (61.7%) fell under medium followed by high (34.2%) and low (4.2%) family education status categories with mean schooling of 4.83 ± 1.29 years. Results are in consonance with Balaraju (2016) who also find that more number of respondents (43%) belonged to medium family education status. However Rekha *et al.,* (2017) reveal that majority of women dairy farmers (57.78%) in Rewari district of Haryana belonged to low family education status. The differences may be due to the gender as in present study cent per cent respondents were male.

Family land holding

The mean size of land holding was 1.88 ha per family. More number of respondents (29.6%) belonged to large farmers category followed by small (28.7%) and marginal (27.1%). Rest 14.6 per cent respondents were landless. Rachna *et al.,* (2017) while studying on dairy farmers reveals that family land holding varies between 1 to 6 acres in Haryana. The results of study indicate that buffalo owning farmers of Haryana had large size of land holding as majority owned more

than one hectare of land and this is quite high as national average land holding size is 0.12 ha (World bank, 2015).

Family occupation

Agriculture was found to be main occupation revealed by majority of respondents (60.0%) followed by animal husbandry (16.2%), government service (11.2%), self-employed (5.8%) and equal per cent of respondents were engaged in private service and labour (3.3% each). It clearly revealed that agriculture is still main livelihood source in studied area. The reason being that more than half of the country's population depend on agriculture for employment and state of Haryana is no exception to it. Livestock sector act as a source for supplying additional family income, milk, meat, manure, fuel and drought power. The present study are in line with many studies conducted recently by Prakash *et al.,* (2014), Adesh *et al.,* (2014), Rekha (2015) and Balaraju (2016) wherein majority of respondents have agriculture as their main occupation in various state of India including Haryana.

Herd size

Table 1 indicates that majority of sampled household (71.7%) had small size of livestock holding comprising of ≤ 5.0 cattle equivalent score followed by medium (18.8%) and large livestock holding (9.5%) with respective cattle equivalents score of 5.1-10.0 and ≥10 animal heads. An average size of livestock holding was 4.9 as per cattle equivalent score. Earlier authors Sabapara *et al.,* (2016), Rekha *et al.,* (2017) also reported small herd size being maintained by majority of dairy farmers in southern Gujarat and Haryana respectively.

Herd composition

Perusal of the Table 1 reveals that majority of

respondents (64.2%) were rearing exclusively buffalo followed by combination of buffalo + cattle (34.5%) and buffalo + small ruminant (1.3%). People of Haryana generally rear the good quality animals for milk because it is one of the major dietary components of routine life and studied area also being the breeding tract of Murrah breed. This may be one of the reasons that majority were rearing buffalo only. The distribution was common in both the selected locales under study.

Information seeking behaviour

Information seeking behaviour was measured by dividing the sources of information in three categories i.e. formal, informal and mass media. For each source, data were collected on three point continuum scale i.e. Always, Sometime and Never to understand their extent of use of various sources.

Informal sources

Table 2 reveals that majority of respondents (58.8%) were seeking less information from informal sources with score between as 5.00-7.33. About thirty four per cent respondents fell under medium level of use and rest only 7.4 per cent were utilizing at high level.

Formal sources

Majority of respondents (67.9%) were utilizing formal sources of information at medium level as per the scores achieved by them, followed by high (20%) and low categories (12.1%).

Mass media sources

Majority of respondents (82.9%) fell under medium category revealing that mass media sources were being utilizing by the respondents for receiving, sharing and utilizing the information related to buffalo

husbandry practices. Results of the present study are in line with Mukesh *et al.,* (2015) who reported more than sixty seven percent of the respondents in Jharkhand had medium to high level of exposure to mass media. Devaki *et al.,* (2015) and Sabapara *et al.,* (2016) also reported that majority of respondents in Thiruvallur district of Tamilnadu and southern Gujarat had medium level of utilization of mass media sources.

Socio-economic profile of the buffalo owners

This includes the gross family annual income and income generation through dairy. Gross family annual income referred as total income of the family earned through various sources *viz.,* agriculture, animal husbandry, labour, business service etc. in a year. Income generation through dairy was operationalized as income earned from the milch buffalo rearing per annum through sale of milk, milk products, dung and buffaloes and was calculated by subtracting annual expenditure on dairying from annual gross income in dairying during data collection period i.e. 2017.

Gross family annual income

A perusal of the Table 3 reveals that majority of respondents (67.1%) belonged to low gross annual income category i.e. Rs. ≤ 400000 followed by 27.1 per cent respondents belonged to medium category (Rs. 400001 – 810164). Nearly 6 per cent respondents fell under high annual gross income category. Earlier studies as conducted by Prakash *et al.,* (2014) and Adesh *et al.,* (2014) reported average annual income of the majority of the farmers are Rs. 30097 – Rs. 232220 and Rs. 80,000 – 1, 30,000 in Karnataka, Maharashtra and Uttar Pradesh respectively. Wherein in our study the average annual income was about three and half lakh.

Table.1 Distribution of respondents according to their socio-personal characteristics (N=240)

Characteristics	Frequency	Per cent
Age (Years)		
Young (18-37)	79	32.9
Middle (37-57	111	46.3
Old (57-76)	50	20.8
Mean ± S.D.	44.66 ± 13.39	
Caste		
Schedule Caste	31	12.9
Other Backward Caste	27	11.3
General	182	75.8
Type of house		
Hut	-	-
kuccha	3	1.2
Mixed	17	7.1
Pucca	220	91.7
Family structure (family type and family size)		
Family type		
Nuclear	177	73.7
Joint	63	26.3
Family size		
Small (≤ 7)	176	73.3
Medium (8 - 11)	53	22.1
Large (≥12)	11	4.6
Mean ± S.D.	6.2 ± 2.7	
Family education status (Score)		
Low (0-2.67)	10	4.2
Medium (2.67-5.34)	148	61.6
High (5.34-8)	82	34.2
Mean ± S.D.	4.83 ± 1.29	
Family land holding (ha)		
Landless	35	14.6
Marginal (<1)	65	27.1
Small (1-2)	69	28.7
Large (>2)	71	29.6
Mean ± S.D.	1.88 ± 2.36	
Family occupation		
Agriculture	144	60.0
Animal Husbandry	39	16.2
Government service	27	11.2
Labourer	8	3.4
Private service	8	3.4
Self-employed	14	5.8
Herd size (Cattle Equivalent Score)		
Small (≤5.0)	172	71.7
Medium (5.1-10.0)	45	18.8
Large (≥10.0)	23	9.5
Mean ± S.D.	4.9 ± 4.7	
Herd composition		
Buffalo only	154	64.2
Buffalo+ Cattle	83	34.5
Buffalo+ Small ruminant	3	1.3
Buffalo+ Cattle + Small ruminant	-	-

Table.2 Distribution of respondents according to their information seeking behaviour (N=240)

Characteristics	Frequency	Per cent
Informal sources (Scores)		
Low (5.00- 7.33)	141	58.8
Medium (7.34 - 9.67)	81	33.8
High (9.67-12)	18	7.4
Formal sources (Scores)		
Low (12.00- 13.66)	29	12.1
Medium (13.67 - 15.33)	163	67.9
High (15.34-17.00)	48	20
Mass media sources (Scores)		
Low (6.00- 9.33)	36	15
Medium (9.34 - 12.67)	199	82.9
High (12.67-16.00)	5	2.1

Table.3 Distribution of respondents according to their socio-economic characteristics (N=240)

Characteristics	Frequency	Per cent
Gross family annual income (in ₹)		
Low (≤ 400000)	161	67.1
Medium (400001 – 810164)	65	27.1
High (≥ 810165)	14	5.8
Mean ± S.D.	359682 ± 306530	
Income generation from dairying in a year (in ₹)		
Low (≤ 164339)	185	77.1
Medium (164340 - 327170)	42	17.5
High (≥ 327171)	13	5.4
Mean ± S.D.	122544 ± 96251	

Table.4 Distribution of respondents according to their socio-psychological characteristics (N=240)

Characteristics	Frequency	Per cent
Risk orientation (Scores)		
Low (8-13.33)	53	22.1
Medium (13.33-18.66)	69	28.7
High (18.66-24)	118	49.2
Economic motivation (Scores)		
Low (15-18)	22	9.2
Medium (18-21)	144	60.0
High (21-24)	74	30.8

Income generation in a year through milch buffaloes

A perusal of the Table 3 reveals that majority of respondents (77.1%) belonged to low income category i.e. Rs. ≤ 164339 followed by 17.5 per cent respondents belonged to medium category (Rs. 164340 - 327170). About 5 per cent respondents fell under high income category. Earlier studies as conducted by Yogendra singh (2013) reported that 63.13 per cent of the beneficiaries of integrated murrah development scheme belong to medium average annual income (Rs. 9347 – 55643) and Rekha *et al.,* (2015) reported that 60 per cent respondents under low income category (Rs. 15000-31683) from dairy in Haryana state.

Socio-psychological profile of the buffalo owners

This includes the risk orientation and economic motivation of the respondents towards animal husbandry.

Risk orientation

Table 4 reveals that 49.2 per cent of respondents fell under high risk orientation category followed by medium (28.7%) and

low (22.1%). It could be justified in the sense that more number of respondents came from small and large farmers categories and they might be ready to take high risk in adoption of scientific practices of dairy for high production.

Economic motivation

Majority of the respondents (60 %) were inclined for economic gains from buffalo farming followed by high (30.8%) and low (9.2%) level. Results of our study are in consonance with Sarita *et al.,* (2016) who also find that majority of dairy farmers belonged to medium economic motivation category in Haryana. However Ravi (2009) and Mali *et al.,* (2014) reported high economic motivation in majority of dairy farmers of Bareilly district of Uttar Pradesh and Belgaum district of Karnataka state respectively.

In view of the above findings, it may be concluded that buffalo farmers of this region were educated, risk oriented, economically motivated and had sufficient land for fodder production. Agriculture was the main occupation of the majority of the buffalo owners and income from buffalo rearing is contributing a significant share in the total income of the farmers in the studied area.

Acknowledgement

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