Livestock Farmers' knowledge about Rearing Practices in Ganderbal District of Jammu & Kashmir

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ABSTRACT

The present study was conducted in eight randomly selected villages of Ganderbal district in Kashmir valley. Data was collected through structured interview schedule. A total sample size was constituted with 240 livestock farmers to study the relationship between knowledge of livestock farmers towards different farming practices and various socio-economic characteristics. The study revealed that majority of livestock farmers were at medium age and belonged to homogenous religion and caste group. The average income of livestock farmers from animal husbandry was Rs. 8657 per annum which contributed 7.58 per cent to their total family income. The study also revealed that a positive and significant correlation existed between effective herd size, farming experience, income from the livestock source and overall knowledge level of the farmers regarding animal husbandry practices. Form the overall study it was found that majority of livestock farmers were possessing low level of knowledge about scientific livestock practices.

Keywords: *Socio-personal; Livestock farming practices; Knowledge level.*

Livestock is an essential part of the socio-economic structure of rural India as a source of livelihood and provider of draught power, manure and energy. Over the last three decades livestock production grew faster than crop sector as a whole and made significant contribution to agricultural growth, which is considered to be an important factor in poverty reduction in most developing countries (*Birthal et al, 2006*). India has largest livestock number in the World. India has also the distinction of having largest number of cattle and buffalo in the World. The contribution of livestock and livestock products to national economy is continuously increasing. In Jammu and Kashmir (J & K) livestock plays a crucial role at both the national and household level and has been identified as critical to the overall economic and social development. In J&K total livestock population is 9.9 million which share near about 2.05 per cent of countries total livestock population (*Anonymous, 2003*). The economic contribution of livestock sector of Kashmir valley was 775.91 crores rupees during the year 2003-04. Out of these Rs. 690 crore from milk, Rs. 38.8 crore from eggs, Rs. 17.1 crore from poultry meat and Rs. 30 crore from farm yard manure (Anonymous, 2008). So live stock plays a vital role for up-liftment of livestock farmers in Kashmir valley. Thus, the present study attempted to explore the socio-economic profile and knowledge level of livestock farmers in the Ganderbal district in Kashmir valley.

METHODOLOGY

The present study was conducted in Ganderbal district of Kashmir valley of J&K state. The sample was pooled from the eight randomly selected villages. The number of respondent, per village was 30 that too selected from the farmers who were having at least one cross bred dairy animal. In this way a total of 240 livestock farmers were selected and interviewed through face to face contact interview method. The data were collected by using a pre-designed interview schedule developed for the purpose in consultation with other experts. Following the tabulation and necessary sorting, statistical analysis viz. frequency, percentile, Pearson's correlation and ANOVA (one way) were used to draw the inferences.

RESULTS AND DISCUSSION

Socio-personal characteristics of livestock farmers: Characteristics of livestock farmers are presented in Table 1 which revealed that out of nine characteristics, caste, religion and respondents' education were not noticeable.

Table 1. Socio-personal characteristics of livestock farmers(N = 240)

S. No	Variable	Frequency	Mean	SD
1	*Age*		48.53	± 10.85
	Young (<35 years)	31 (13.00)		
	Middle (35-50 years)	114 (47.5)		
	Old (>50 years)	95 (31.67)		
2	*Gender*			
	Male	37 (15.42)	-	-
	Female	203 (84.58)		
3	*Marital Status*			
	Married	219 (91.25)	-	-
	Unmarried	7 (2.92)		
	Widow	12 (5.00)		
	Divorcee	2 (0.83)		
4	*Caste*			
	General	240 (100.00)	-	-
5	*Religion*			
	Islam	240 (100.00)	-	-
6	*Family type*			
	Nuclear	138 (57.50)	-	-
	Joint	102 (42.50)		
7	*Family size*		8.05	± 3.85
	Small (<5)	79 (32.92)		
	Medium (6 to 8)	83 (34.58)		
	Large (>8)	78 (32.50)		
8	*Education*			
	Illiterate	86 (35.83)	-	-
	Can Read & write only	48 (20.00)		
	Primary	17 (7.08)		
	Middle School	24 (10.00)		
	High School	35 (14.58)		
	Graduate	30 (12.50)		
9	*Family Educational Status*			
	Low (up to 1.9)	69 (28.75)	2.59	± 1.16
	Medium (2-3)	99 (41.25)		
	High (more than 3)	72 (30.00)		

(Figures in parenthesis indicate percentage)

Cent percent of the respondents belonged to general caste having faith in Islam. This may be due to the fact that in the valley particularly rural area was most homogeneous and dominated by Muslim.

The table showed that majority of the livestock farmers were illiterate (35.83%) followed by those who could read and write (20.00%). However, it was interesting to notice that the number of livestock farmers who passed middle school, high school or graduate were more than those who could reach up to primary school level. The fact revealed that the livestock farmers started schooling, tried to reach at least middle school before he/she has been drop out. *Kaur (1991), Gautam and Meenakshi (1992)* and *Chauhan et al., (1994)* reported prevalence of illiteracy among the female farmers. The study showed that majority of the livestock farmers (47.5%) were from the middle age group, where as (39.5%) belonged to old age and 13% to young age group. The mean age of livestock farmers was 48.53 with S.D. of ± 10.85. *Kaur (1991), Shreeshailaja and Vaarabhadraiah (1993), Shoremi and Wodi (1997)* in their respective studies also found that majority of livestock farmers belonged to middle age group. Number of female respondents (84.58%) exceeded male (15.42%) number due to the fact that during interview, houses were enquired about the person mostly involved in animal husbandry activities before collecting data, indicating women were more involved than its counter parts in these activities. Maximum (91%) livestock farmers were married, few percentages were unmarried (3%), widow (5%) and divorcee (2%). The over all study showed that maximum (57.5%) had nuclear type of family. The present findings were in accordance with the findings of *Sharma (1992), Akand (1999)*. Regarding family size of the respondents, majority of the framers were having medium size of the family ranging from 6 to 8 numbers followed by almost equal per cent (33) of the family having small and large family size. The average family size was found 8.05. Similar was the trend in case of family educational status where majority of the farmers (41.25%) were having medium level of family education. *Omprakash (1988)* and *Malik (1997)* reported more than 60 per cent of farm women had medium family education.

Occupation: Economic status of the farmers was estimated in terms of several parameters namely occupation, herd size, material possession, income from

all sources and income from livestock activity in particular and presented in the Table 2 which revealed higher per cent (30%) of livestock farmers were engaged in business followed by cultivator (25.42 %). The possible reason for the above fact might be due to the semi-urbanization of area that caused the people to engage in tourist activity.

Herd Size: The Table 2 also showed that majority of the respondents (75.83) had medium size of cross bred cows that varies from 2 to 5 nos. But in respect of other species of animal like sheep and goat, most of the farmers were having no animals which might be due to the fact that during the sampling, the respondents were selected based on the possession of cross bred cows

Table 2. Economic status of livestock farmers (N = 240)

S. No	Parameter	Category	Frequency	Mean	SD	Range
1	*Occupation*	Agricultural labour	50 (20.83)	-	-	-
		Business	72 (30.00)			
		Independent profession	14 (5.83)			
		Cultivation	61 (25.42)			
		Service	43 (17.92)			
2	*Herd size*					
	Cattle	1 no.	45 (18.75)	2.84	± 1.62	1-12
		2 – 5 nos.	182 (75.83)			
		More than 5 nos.	13 (5.42)			
	Sheep	No sheep	131 (54.58)	3.14	± 5.43	0-42
		1 – 6	70 (29.17)			
		More than 6 nos.	39 (16.25)			
	Goat	No goat	162 (67.50)	1.03	± 2.07	0-13
		1- 3 nos.	54 (22.50)			
		More than 3 nos.	24 (10.00)			
	Poultry	No poultry	98 (40.83)	4.68	± 5.25	0-36
		1-10 nos.	120 (50.00)			
		More than 10 nos.	22 (9.17)			
	Horse/	Yes	22 (9.17)	-	-	-
	Mule/	No	218 (90.83)			
	Donkey					
3	*Material*					
	Possession					
	House Type	Mixed house	73 (30.42)	-	-	-
		Pacca House	167 (69.58)			
	Farm power	No draught animal	128 (53.33)	1.02	± 1.21	0-6
		1-2 draught animal	106 (44.17)			
		3-4 dragut animal	2 (0.83)			
		5-6 draught animal	4 (1.67)			
	Land holding	Landless	27 (11.25)	Collected		
		Upto 2 hac	175 (72.92)	as such		
		Above 2 hac	38 (15.83)			
4	*Total Family*	25000 – 70000	85 (35.41)	114154.16	± 72208.53	25000 - 450000
	income (Rs.)	70000 to 125000	76 (31.67)			
		More than 125000	79 (32.92)			
5	*Income from*	Less than 10000	81 (33.75)	8657.08	± 5385.65	1000 - 30000
	animal	10000 to 30000	93 (38.75)			
	hus. (Rs.)	More than 30000	66 (27.50)			

(Figures in parenthesis indicate percentage)

only. The mean herd size of cattle, sheep, goat and poultry were found 2.84± 1.62, 3.14 ± 5.43, 1.03± 2.07 and 4.68± 5.25, respectively.

Material possession: Though the study area was entirely rural based, majority of the farmers (69.58 %) were residing in concrete house. It is common practice in the valley of Kashmir to construct concrete house rather than any other type of thatched house as do exist in other parts of the country. The farmers incurred such expense at any cost to get rid of the extreme weather condition. Regarding farm power, most of the farmers (53.33) did not even prefer to rear a pair of draught animal because of extreme scarcity of feeds and fodder during lean period, also due to small land holding of the farmers. Similarly more than 70 % of the farmers had only up to 2 hectare of land followed by farmers having more than that of size.

Family income: The average family income of the livestock farmers was Rs. 1,14,154 per annum. 38.75 per cent earned between Rs. 10000 –30000 followed by 33.75 per cent farmers who could earn between Rs. 5500 to less than Rs.10000 and 27.5 per cent used to earn more than Rs. 30000 per annum. The study also found that the average income of livestock farmers from animal husbandry was Rs. 8657 per annum that contributed 7.58 per cent of total family income of the livestock farmers. *Grewal and Rangi (1980)* reported that the net return from dairying worked out Rs. 388.00 per animal per year.

Social participation and information source utilization: Social participation in terms of farmers association with various social organizations was estimated and accordingly frequency distribution analysed. The Table 3(a) indicated that about 70 per cent of the farmers were not linked with any institution. Only 17.92 per cent farmers were office bearer. It was also revealed that about 12 per cent farmers were associated with one or more organizations. *Shreeshailaja and Veerabhadraiah (1993)* reported that the majority of dairy farm women had low social participation.

Information source of the farmers was estimated in two different aspects namely institutional sources and non-institutional sources and presented in Table 3(b). A perusal of the table showed that majority (46 per cent) of livestock farmers used low level of institutional information source. Whereas about 31 per cent of livestock farmers used high level of institutional information source.

In contrast to the above fact, linkage between farmers and non-institutional members revealed that majority of the farmers (35.83%) were having linkage at medium level followed by higher linkage category (32.50%). The fact revealed that farmers do prefer discussing their problems with local experts or their relatives (categorized under non-institutional sources) rather than institutional personnel may be due to easy and friendly communication process. *Jamal (1989)* found that majority of respondents utilize non institutionalized interpersonal sources within the village only and very limited number of respondents utilized institutional information sources.

Table 3 (a). Social participation of livestock farmers N=240)

S. No.	Category	N	%age
1	Non-member of any organization	167	69.58
2	Member of one organization	26	10.83
3	Member of more than one organization	3	01.25
4	Office holder	43	17.92
5	Wider public leader	01	0.42

Table 3 (b). Information source utilization pattern of livestock farmers (N=240)

S. No	Category	N	%age
1.	Institutional Source		
	Low level (< 4)	111	46.25
	Medium level (4 to 5)	55	22.92
	High level (>5)	74	30.83
2.	Non-institutional Source		
	Low level (< 4)	76	31.67
	Medium level (4 to 5)	86	35.83
	High level (>5)	78	32.50

Knowledge level of the livestock farmers on selected animal husbandry practices: Farmers without having adequate knowledge on scientific practices are practicing many malpractices and to believe in superstition which leads to failure of the venture. Table 4 shows that the awareness level of farmers varied from 6.25 per cent to as high as 84.1 per cent. Different scientific animal husbandry practices on which more than 50 per cent farmers were having knowledge are feeding of colostrums, disposal of manure, cleaning of shed, vaccination, artificial insemination, de-worming and castration in descending order. Farmers were having least knowledge in balanced feeding of the animal.

However, distribution of farmers according to their knowledge level revealed from the Table – 4(b) that

majority of the livestock framers (39.17 per cent) were having low level of knowledge followed by high level of knowledge (32.92 per cent) and 27.92 per cent livestock farmers were having medium knowledge about livestock farming.

Table 4 (a): Distribution of livestock farmers according to their Knowledge level on selected animal husbandry practices (N=240)

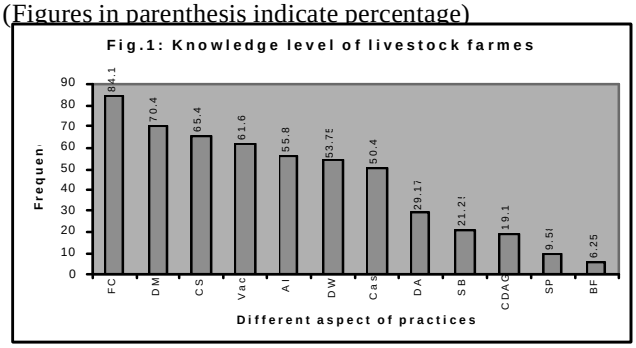
S. No.	Aspects	No. of Respondents	
		having knowledge	having no knowledge
1	Caring different age group of animal	46 (19.17)	194 (80.83)
2	Balanced feeding	15 (6.25)	225 (93.75)
3	Silage preparation	23 (9.58)	217 (90.42)
4	Feeding of colostrums	202 (84.17)	38 (15.83)
5	Cleaning of shed	157 (65.42)	83 (34.58)
6	Selective breeding	51 (21.25)	189 (78.75)
7	Artificial Insemination	134 (55.83)	106 (44.17)
8	Vaccination	148 (61.67)	92 (38.33)
9	De-worming	129 (53.75)	111 (46.25)
10	Castration	121 (50.42)	119 (49.58)
11	Disposal of animal	70 (29.17)	170 (70.83)
12	Disposal of manure	169 (70.42)	71 (29.58)

(Figures in parenthesis indicate percentage)

Table 4 (b). Different categories of farmers based on their knowledge level (N=240)

S. No	Category	N	%
1	Low (1-32)	94	39.17
2	Medium (33 - 50)	67	27.92
3	High (>50)	79	32.92

(Figures in parenthesis indicate percentage)



FC : Feeding of colostrums
DM : Disposal of manure
CS : Cleaning of shed
AI : Artificial Insemination
CDAG: Caring different age
SB : Selective breeding group of animal
BF : Balanced feeding
Vac : Vaccination
DW : De-worming
Cas : Castration
DA : Disposal of animal
SP : Silage preparation

Relationship between Knowledge levels of the farmers with socio-economic characters: Ten variables were put for relational analysis with total knowledge score of the farmers, the result of which is depicted in the Table 5. Various statistical techniques were used for different variables based on characteristics of the independent variable. The Table 5 revealed that positive significant correlation exists between effective herd size, farming experience and income from the livestock source of the livestock farmers and overall knowledge level of the farmers regarding animal husbandry practices. *Akand (1999)* observed similar finding.

Table 5. Relationship between Knowledge levels of the farmers with socio-economic characters (N=240)

S.No	Characters	Test done	Sigficance	r - Value
1	Age	Correlation	NS	0.066
2	Family Educational Status	Correlation	NS	-0.016
3	Effective herd size	Correlation	S	0.254**
4	Social participation	Correlation	NS	-0.138
5	Farming experience	Correlation	S	0.172**
6	Income from livestock	Correlation	S	0.193 **
7	Gross family income	Correlation	NS	-0.080
			Category	M V
8	Respondents Education	ANOVA	Graduate	4.03 a
			High School	5.03 ab
			Illiterate	5.34 ab
			Primary	5.65 b
			Can read & write	5.69 b
			Middle	5.83 b
9	Occupation	ANOVA	Independent Profession	4.07 a
			Service	4.83 ab
			Business	5.15 ab
			Agricultural labour	5.56 b
			Cultivation	5.75 b
10	Marital status	ANOVA	Divorce	5.00a
			Unmarried	5.14a
			Married	5.21a
			Widow	6.58a

** Significance at 1 per cent level of probability

MV= Mean Value

The table also showed that negative and insignificant relationship exists between family educational status, social participation and gross family income with the knowledge level of the farmers. This was in contrast to the findings of *Akand (1999)*. In contrast, an insignificant positive correlation was observed between age of the livestock farmers with the knowledge level of the farmers.

The ANOVA results in respect of respondents' education showed that knowledge level among the farmers having different educational background differ significantly among them. Knowledge level of the farmers who could reach up to Graduate level differs significantly from rest of other category. However, among the other group of farmers, whether he/she is illiterate or have passed high school standard; there is no significant difference among their knowledge level in terms of animal husbandry practices.

Similarly, Table 5 revealed a significant difference among the farmers belonging to different occupational groups. Non-significant difference was observed among groups having their occupation as Independent profession, Service, and businessman. Similar results were observed among farmers working as agricultural labour, business and service holders. But a significant difference was observed between independent profession, agricultural labour and cultivators.

CONCLUSION

The study highlighted that livestock plays a significant role in rural people's life of Kashmir Valley. Form the study it was found that majority of livestock farmers were possessing low level of knowledge about scientific livestock practices. Thus, proper policies and strategies are necessary for better development of livestock production.

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