

## Social and Economical Parameters Influencing Awareness of Animal Welfare among Dairy Farmers of Kathua District of J &K State

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### ABSTRACT

*Agriculture sector is the backbone of rural socio-economic status in India and livestock sector alone contributes nearly 25.6% to the total value of output in Agriculture. Farmers doing both agriculture and livestock farming can easily sustain their earnings as livestock farming never fails if it is done with good managerial skills. Management in dairy farm is linked health and welfare of animals. Animal welfare expectations vary enormously and are strongly influenced by the socio-economic conditions of the livestock owners in the country. As we all are aware that safe and quality milk is being produced from healthy animals using management practices that are sustainable from an animal welfare, social, economic and environmental perspective. The study was conducted on 120 dairy farmers in Kathua district of Jammu and Kashmir. The study revealed that majority of the respondents were from middle age group (51%) and having education only up to high school. No respondent was found having education beyond the level of high school. Majority of the farmers (53.3%) were having land holding of less than one acre and no respondent was having land holding more than ten acres. Majority of the farmers were having low herd size of 2-5 animals and agriculture was their main occupation (50%) followed by animal husbandry (29%) as subsidiary occupation. The annual income of the dairy farmers from the animal husbandry was low (73%) but their gross family income was medium (63%). The awareness of dairy farmers about animal welfare measures was good and they (69%) believed that they themselves were responsible for the animal welfare.*

**Keywords:** Socio-economic, Animal welfare, Dairy farmers.

### INTRODUCTION

Animal husbandry has been an integral part of human civilization since time immemorial. The existence of the civilization of man- a social animal, started probably during the old

stone age. Human started domestication of animals on the basis of behaviour and utility of the species. Since ancient times Indian farmers regarded livestock possession as the symbol of prosperity.

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Livestock rearing is one of the most important economic activities in the rural areas of the country contributing significantly to the national economy. It provides handsome profit to the farmers having livestock farming as main occupation and supplementary income to families that dependent on agriculture. It also acts as linchpin for the landless families, who generate income through livestock rearing activities. Profit in livestock farming can only be generated by knowledge and managerial skills of the livestock owners. Catering the physical and psychological needs of the dairy animals is utmost important to maintain animal health and to generate optimal returns from the venture. Knowledge of animal welfare practices and measures is important to maintain healthy dairy stock. Socio economic status of the livestock owners plays an important role towards it. Animal welfare practices and measures are affected by many factors and socio-economic status of livestock farmers is one of these factors (Arora et al., 2006).

Animal welfare is directly related to the health, production and productivity of animals. Animal welfare expectations vary enormously and are strongly influenced by the socio-economic growth of the livestock owners (Hansson et al., 2018).

India is a livestock rich country and livestock sector alone contributes nearly 25.6% of value of output at current prices of total value of output in Agriculture, Fishing & Forestry sector. The overall contribution of livestock sector in total GDP is nearly 4.11% during 2012-13 (19<sup>th</sup> livestock censuses, GOI, 2012). Total bovine population in Jammu and Kashmir state is 35.91 lacks (34.45 lacks rural livestock population and 1.46 lacks urban livestock population). Majority of the livestock population (95%) is reared by rural community of the state and hence their education level, gender, income and other parameters decide their overall knowledge about the dairy farming and animal welfare. Knowledge of animal suffer maltreatment, overloading and ill feeding should be known to the farmers (Swarup, 2007). Animals very often are

transported on foot for a distance of 200-300 miles and in the course of journey they are poorly fed and incessantly beaten (Rahman et al., 2005). Animals are forced to live in close confinement with minimal floor space where they cannot even turn around, lie down or move more than a step forward or backward. Calves are kept hungry while the cow milk is sold in the market for human consumption.

## MATERIALS AND METHODS

The study was conducted in four randomly selected blocks of Kathua district of Jammu & Kashmir (Kathua, Hiranagar, Billawar, Barnoti). Three villages were selected randomly from each of the four selected blocks making a total of 12 villages. Thereafter, 10 respondents having one or more dairy animal were selected randomly from each village. Thus, making a total sample size of 120 respondents. Data was collected personally using a structured interview schedule which was appropriately pretested and evaluated.

## RESULTS AND DISCUSSION

### Age

All the respondents were categorized into three groups. Young (up to 30 yrs), middle (30 to 50 yrs in age) and old age group (respondents above the age of 50 years). Table no.1 reveals that middle age group of the dairy farmers was more (51%) oriented towards the animal welfare and management. Nearly, thirty-two percent of the respondents were from old age group and only seventeen percent respondents were from the young age group. The middle age group was more engaged in the animal husbandry and agricultural practices because middle aged respondents were either illiterate or studied only up to the level of primary school and were devoting much of their time in agriculture and animal husbandry practices for their livelihood. Similar results have been reported by Weary and Robbins (2019), who recorded that middle age group of the respondents were more oriented towards the animal welfare and they have more knowledge about the different animal welfare practices

than that of other age groups. They were treating these occupations as their major source of livelihood due to which they had more knowledge and awareness about the good animal husbandry practices and their

adoption level was also very high. Similar findings have been reported by Ventura et al. (2016), where they found that the age of the respondents was positively and significantly associated with overall adoption.

**Table 1: Distribution of the respondents according to the age**

Sl.No	Trait/ Category of trait	Billawar (n=30)		Kathua (n=30)		Hiranagar (n=30)		Barnoti (n=30)		Total (n=120)	
		No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)
<b>1</b>	<b>AGE</b>										
1.1	Young(upto30)	5	17	4	13	6	20	6	20	21	17
1.2	Middle(30to50)	18	60	14	47	15	50	14	47	61	51
1.3	Old(>50)	7	23	12	40	9	30	10	33	38	32

### Education

Respondents were categorized into five groups (illiterate, up to primary school, middle school, high school and above high school). Table no. 2 indicates that forty-seven percent of the respondents were found illiterate, thirty-two percent of respondents had studied up to the level of primary school, fifteen percent studied up-to middle school, six percent of the farmers were found in the category of high school and no respondent was found who had studied above high school. By comparing the results between educational level of the dairy farmers and their awareness about animal husbandry practices it is clear that, education of the dairy farmers of Kathua district was not affecting the animal welfare practices being followed by

them, probably because they were getting traditional knowledge from their elders. Education of the dairy farmers was only responsible for the feeding welfare practices as less educated farmers had less awareness about feeding management. Similar study was reported by Miele et al. (2010), who observed that education of respondents was not found to have any significant relationship with animal welfare and overall adoption of practices, but it had positive and significant correlation with adoption of feeding practices. But studies reported by Devitt et al. (2015), recorded different observations. He reported that good animal welfare and adoption practices had direct relationship with the educational level of the dairy farmers.

**Table 2: Distribution of the respondents according to education level**

Sl.No	Trait/ Category of trait	Billawar (n=30)		Kathua (n=30)		Hiranagar (n=30)		Barnoti (n=30)		Total (n=120)	
		No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)
<b>1</b>	<b>Education</b>										
1.1	Illiterate	12	40	13	43	16	53	15	50	56	47
1.2	Primary school	7	23	10	33	11	37	10	33	38	32
1.3	Middle school	5	17	7	24	3	10	3	10	18	15
1.4	High school	6	20	0	0	0	0	2	7	8	6
1.5	Above high school	0	0	0	0	0	0	0	0	0	0

**Land holding**

Based on the land holding the respondents were categorized into five groups: (landless, possessing less than 1acre of land, 1-5 acres, 6-10 acres and more than 10 acres of land). Table no. 3 reveals that ten percent of the respondents were land less. 53.3% were having land holding of less than one acre, 29.2% of dairy farmers were in the category of 1-5 acres and only 7.5% were found having land holding in between 6-10 acres. No respondent was found having land holding of more than ten acres. This study revealed that majority of the respondents were having land

holding of less than one acre but their awareness level was good. The findings reported by Mochizuki et al. (2014), were different from the findings being observed they were more aware about the animal husbandry practices and their awareness did not depend on their land holding. It was also observed that the feeding management practices being followed by the dairy farmers had direct correlation with the land holding because farmers having more land holding were also engaged in agriculture and they were producing fodder in their own fields.

**Table 3: Distribution of the respondents according to land holding**

Sl.No	Trait/ Category of trait	Billawar (n=30)		Kathua (n=30)		Hiranagar (n=30)		Barnoti (n=30)		Total (n=120)	
		No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)
1.1	Landless	2	7	3	10	3	10	4	13	12	10
1.2	Less than 1acre	15	50	17	57	17	57	15	50	64	53.3
1.3	1-5 acres	11	37	7	23	8	27	9	30	35	29.2
1.4	6-10 acres	2	6	3	10	2	6	2	7	9	7.5
1.5	> 10 acres	0	0	0	0	0	0	0	0	0	0

**Herd size**

Depending upon the number of animals kept by the respondents, the herd size was categorized into three group (1<sup>st</sup> group included 2-5 animals, 6-10 animals in 2<sup>nd</sup> group and more than 10 in 3<sup>rd</sup> group). Table no. 4 shows that majority of the respondents (48%) were having 2-5 animals, forty percent of the respondents had 6-10 animals and only twelve percent of respondents were found to have more than ten dairy animals. As majority of the dairy farmers had only 2-5 animals but it was observed that herd size was not affecting

the awareness of dairy farmers about animal welfare and management practices. Similar, findings were reported by Anneberg et al. (2012), and Te Velde et al. (2002), who reported that the herd size have no relationship with calf rearing; animal breeding, health care, management practices but the findings reported by Manteuffel et al. (2009), were not in agreement with the findings of these findings because they have observed significant relationship between herd size and awareness.

**Table 4: Distribution of the respondents according to the herd size**

Sl.No	Trait/ Category of trait	Billawar (n=30)		Kathua (n=30)		Hiranagar (n=30)		Barnoti (n=30)		Total (n=120)	
		No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)
1	<b>Herd size</b>										
1.1	2-5 animals	8	27	19	63	13	43	18	60	58	48
1.2	6-10 animals	15	50	8	27	14	47	11	37	48	40
1.3	More than 10 animals	7	23	3	10	3	10	1	3	14	12

### Occupation

Occupation of the respondents was divided into two parts (main occupation and subsidiary occupation).

#### Main occupation

Main occupation of the respondents was categorized into five groups (agriculture, animal husbandry, business, labour and government services). Agriculture was the main occupation of the respondents. On an average fifty percent of the respondents depended on agriculture for their livelihood, 15% had adopted business, 14% were engaged in animal husbandry activities, 14% were doing labour jobs and remaining 7% were in government services. Similarly, table 6 reveals that majority of the respondents (42%) had adopted animal husbandry as their subsidiary occupation, twenty-nine percent of the respondents were engaged in agricultural activities, fourteen percent were doing business as subsidiary occupation, three percent did labour jobs and twelve percent were involved in other services. No respondent

was found to have government service as their subsidiary occupation. It was found that agriculture was the main source of income for the dairy farmers of Kathua district and secondly they depend on animal husbandry for their daily wages. Similar, findings have been reported by Alary et al. (2008), that the first source of the income of the respondents was agricultural wages and the second was milk output. Bhat and Mattoo (1984), reported that the main family occupation of Gujjars of Jammu and Kashmir was animal rearing but in Kathua majority of the respondents were permanent residents of the district and only ten percent were landless like Gujjars. So, on an average it was concluded that majority of the respondents were having agriculture as their main occupation and animal husbandry as their subsidiary occupation. It was also found that the farmers having agriculture and animal husbandry as their main occupations were more aware about the animal welfare practices.

**Table 5: Distribution of the respondents according to their main occupation**

Sl.No	Trait/ Category of trait	Billawar (n=30)		Kathua (n=30)		Hiranagar (n=30)		Barnoti (n=30)		Total (n=120)	
		No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)
1	<b>Main occupation</b>										
1.1	Agriculture	14	47	15	50	15	50	16	53	60	50
1.2	Animal husbandry	3	10	3	10	6	20	5	17	17	14
1.3	Business	5	17	5	17	3	10	5	17	18	15
1.4	Labour	4	13	6	20	6	20	1	3	17	14
1.5	Government services	4	13	1	3	0	0	3	10	8	7

#### Subsidiary occupation

Subsidiary occupation of the respondents was categorized into six groups (agriculture, animal husbandry, business, labour, government services and other services). Table no. 6 indicates that animal husbandry was the subsidiary occupation of the respondents. Nearly 42% of the respondents were taking animal husbandry as subsidiary occupation,

29% were engaged in agriculture as subsidiary, business 14%, labour 3% and 12 % were in other type of services. So it clearly indicates that the majority of the farmers were having agriculture as their main occupation and animal husbandry as subsidiary occupation. Selection of occupation depends on their positive attitude towards the venture as illustrated by Mellor (2015).

**Table 6: Distribution of the respondents according to their subsidiary occupation**

Sl.No	Trait/ Category of trait	Billawar (n=30)		Kathua (n=30)		Hiranagar (n=30)		Barnoti (n=30)		Total (n=120)	
		No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)
1	Subsidiary occupation										
1.1	Agriculture	6	20	9	30	9	30	11	37	35	29
1.2	Animal husbandry	16	53	11	36	8	27	15	50	50	42
1.3	Business	5	17	5	17	4	13	3	10	17	14
1.4	Labour	0	0	2	7	1	3	1	3	4	3
1.5	Government services	0	0	0	0	0	0	0	0	0	0
1.6	Other services	3	10	3	10	8	27	0	0	14	12

### Annual income from animal husbandry (in ₹.)s

The respondents were divided into three categories on the basis of annual income from animal husbandry. Low (less than ₹ 42,000), Medium (₹ 42,000- ₹ 62,000) and High (more than ₹ 62,000). Table no. 7 shows that the majority of the respondents (73%) were from the low income category, 19% were in medium income category and only 8% were earning more than ₹ 62,000 from animal

husbandry activity (High income category). Farmers were earning less income from the animal husbandry per year because animal husbandry was treated as the subsidiary occupation by most of the dairy farmers and they were putting less time and money in animal husbandry practices. Christensen et al. (2019), reported that their interest and knowledge about animal welfare were also depend on their earnings from the animal husbandry.

**Table 7: Distribution of the respondents according to Annual income from Animal Husbandry**

Sl.No	Trait/ Category of trait	Billawar (n=30)		Kathua (n=30)		Hiranagar (n=30)		Barnoti (n=30)		Total (n=120)	
		No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)
1	Annual income from Animal husbandry in ₹ /yr										
1.1	Low (< ₹ 42,000)	20	67	25	83	21	70	22	74	88	73
1.2	Medium (₹ 42,000- ₹ 62,000)	6	20	3	10	7	23	7	23	23	19
1.3	High (> ₹ 62,000)	4	13	2	7	2	7	1	3	9	8

### Annual gross family income of the respondents (in ₹.)

Respondents were divided into three groups on the basis of their gross family income. Low (less than 1 lakh), Medium (1-2 lakh) and High (more than 2 lakh). Majority of the respondents (63%) were from medium income group, having gross family income of more

than 1 to 2 lakh. Nearly 30% were found to have gross income less than one lakh and remaining 7% were earning more than 2 lakh per annum. Agriculture has contributed more in the gross family income of the dairy farmers than the other occupations because dairy farmers of Kathua district have agriculture as their major source of livelihood.

Table 8: Distribution of the respondents according to their Gross family income

Sl.No	Trait/ Category of trait	Billawar (n=30)		Kathua (n=30)		Hiranagar (n=30)		Barnoti (n=30)		Total (n=120)	
1	Gross family Income in Rs/yr	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)	No.	Percent (%)
1.1	Low (< ₹ 1 lakh)	7	23	14	47	5	17	10	33	36	30
1.2	Medium (₹ 1-2 lakh)	20	67	14	47	22	73	20	67	76	63
1.3	High (> ₹ 2 lakh)	3	10	2	6	3	10	0	0	8	7

### CONCLUSION

Majority of the respondents in the Kathua district were from middle age group, illiterate with a land holding of less than one acre and herd size of 2-5 animals. They were engaged in agriculture as their major source of livelihood. However, annual income from animal husbandry was low. They were having low socio economic status and they were also facing many constraints that were restricting their way towards animal welfare as like: Lack of knowledge about sanitation and hygienic conditions was the major constraint perceived by 80 percent of the respondents. Lack of financial support to farmers was the second (78%) major constraint. With the help of training programmes and extension services, the awareness and knowledge about animal welfare practices can be improved.

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