

*Original Research***Assessment of Perceived Training Needs of Pack Animal Owners in the Middle Himalayan Region of India**Tanusha<sup>1\*</sup> and Rupasi Tiwari<sup>2</sup><sup>1</sup>Department of Animal Husbandry, Uttarakhand, INDIA<sup>2</sup>ATIC, Division of Extension Education, ICAR-IVRI, Izzatnagar, Uttarakhand, INDIA\*Corresponding author: [drtanusha.vet@gmail.com](mailto:drtanusha.vet@gmail.com)

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**Abstract**

The study identified training needs of the pack animal owners in middle Himalayan region of India. The study was conducted purposively in Chamoli and Uttarkashi districts of Uttarakhand state. A total sample size of 80 respondents comprising 40 from each district was selected using snowball sampling technique. The training needs were broadly categorised into four categories viz., selection of pack animals, care and management of pack animals, training of the pack animals and knowledge about diseases of pack animals. The training regarding the knowledge about diseases of pack animals was perceived as 'most needed'. The indicators such as first aid, treatment of diseases, vaccination and occurrence of diseases were perceived as 'most needed'. The training about the selection of pack animals was perceived as 'needed' and that of training of pack animals was 'less needed'. The respondents opined for training on care and management of pack animals as 'not needed'.

**Key words:** Equines, Knowledge, Pack Animal Owners, Training Needs

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**Introduction**

Equines continue to be an important means of transport especially in the mountain areas, despite being affected by the incessant process of mechanization and rural development. According to an estimate, there are more than 500 villages in Uttarakhand which depend totally on pack animals for supply and transportation and their own movement from one place to another (Farooque *et al.*, 2018). Also, pack animals hold important position in the tourism of the state, especially to pilgrim places like *Kedarnath, Hemkund Sahib, Yamunotri, etc.* Livestock policy and international development programs exist to make sure that owners can properly care for the animals that contribute to their livelihoods. However, currently animals included in these policies and programs are limited to produces from livestock and poultry. Despite

the massive contribution working equines make, they're not considered “critical” livestock (Brooke Report, 2015). Thus, no development programmes exclusively meant for equines are being run in the state or country. Despite the importance of equines in the agriculture and transport, there is often little attention devoted to learning about their general management and veterinary needs at many levels (Thiemann, 2010). Local governments should encourage training programmes complying with welfare standards and the protection of working animals for owners (Swann, 2006). But there is lack of consultation of and participation by farmers and needs and aspirations of farmers are rarely considered (Bembridge, 1991). Also, the training needs of the pack animal owners have never been assessed before, which could improve the condition of these animals and also make it a lucrative profession for people living in the hills. Thus, the study was conducted to know the perceived training requirements of the pack animal owners in hills of Uttarakhand and give a picture to the government to make some plans for the pack animal owners.

### Material and Methods

The study followed ex post facto research design. The study was conducted purposively in Uttarakhand state because of its high dependency on pack animals both for tourism and transportation. A list of top five districts containing the highest population of pack animals viz., horses, mules, ponies and donkeys, was made and two districts, Chamoli and Uttarkashi were purposively selected from the list as they had the maximum number of pack animals. From the selected districts, respondents were selected using the snowball technique. A snowball sample was used, because the members of a population such as homeless individuals, migrant workers, or undocumented immigrants were difficult to locate. A total of 80 respondents comprising 40 from each district were selected.

The perceived training needs were divided into following categories: selection of pack animals, care of the pack animals, training of pack animals and knowledge about diseases of pack animals. The category for selection of pack animals included criteria of size, breed, age and weight. The indicator care of pack animals included daily care, health care, feeding management, housing and care of newborn. Training of the pack animal was subdivided into training with saddle, training with cart, and training with different implements. Knowledge about the diseases was further categorised into kind of diseases, occurrence, first aid, treatment and vaccination. Data was collected through the pretested semi- structured interview schedule. The schedule was developed for the various indicators and the perception by the owners was noted as ‘most needed’ (3), ‘needed’ (2), ‘less needed’ (1) and ‘not needed’ (0) (numerals in parenthesis indicate the score given).

### Results and Discussion

The respondents in the study area had pack animal rearing as their major occupation, with a pack size of 2-4 and experience of 9.8 years on an average for equine rearing. Majority of the respondents (75.00%) have not attended any training regarding pack animals. Only 22.50 per cent respondents in Chamoli and 27.50

per cent in Uttarkashi attended some training (Table 1). Non-awareness about the training camps, constraint of time and training camps being held at far off places were the major reasons given by them. All the training camps were organised by the government and the respondents were trained about management of the pack animals. The duration of training was mostly one week. Cent per cent of the trained respondents admitted to be benefitted by attending the training camps.

**Table 1:** Distribution of pack animal owners according to training attended by them

Training ever Attended	Chamoli (n <sub>1</sub> =40)	Uttarkashi (n <sub>2</sub> =40)	Total (n=80)
Yes	9 (22.50)	11 (27.50)	20 (25.00)
No	31 (77.50)	29 (72.50)	60 (75.00)
<b>Organisation</b>			
Government	9 (100.00)	11 (100.00)	20 (100.00)
<b>Topic</b>			
Management	9 (100.00)	11 (100.00)	20 (100.00)
<b>Duration (in weeks)</b>			
One	7 (77.78)	11 (100.00)	18 (90.00)
Upto three	2 (22.22)	0 (0)	2 (10.00)
<b>Benefitted</b>			
Yes	9 (100.00)	11 (100.00)	20 (100.00)
No	0 (0)	0 (0)	0 (0)

Figures in parenthesis indicate percentage.

### Perceived Training Needs

It refers to the perception of respondents about the needs of training regarding pack animal rearing. Perceived training needs of the respondents were assessed under the descriptions viz., selection of pack animals, care of the pack animals, training of pack animals and knowledge about diseases of pack animals. The perceived training needs are shown in Table 2.

### Training Needs Assessment on Selection of the Pack Animals

As size, breed, age and weight of the animal are the basic criteria of selection of pack animals, training needs were assessed in these areas. Of all these, perceived training need for size and breed were higher than age and weight. As shown in Table 2, majority of the owners opined that training regarding the size of the animal and breed of the pack animal were 'needed' by 61.25% respondents. The need for training regarding the estimation of age of the animal was 'needed' (51.25%) but training for the estimation of weight of the animal was 'less needed' (56.25%) by the pack animal owners. Age was an important criterion, because the respondents use to buy pack animals of at least 2 years of age.

**Table 2:** Distribution of pack animal owners according to their perceived training needs

Criteria	Chamoli (n <sub>1</sub> =40)				Uttarkashi (n <sub>2</sub> =40)				Total (n=80)			
	MN	N	LN	NN	MN	N	LN	NN	MN	N	LN	NN
<b>Selection of pack animals</b>												
Size	1 (2.50)	20 (50)	19 (47.50)	0 (0)	0 (0)	29 (72.50)	11 (27.50)	0 (0)	1 (1.25)	49 (61.25)	30 (37.50)	0 (0)
Breed	1 (2.50)	21 (52.50)	18 (45.00)	0 (0)	0 (0)	28 (70.00)	12 (30.00)	0 (0)	1 (1.25)	49 (61.25)	30 (37.50)	0 (0)
Age	1 (2.50)	23 (57.50)	16 (40.00)	0 (0)	0 (0)	18 (45.00)	22 (55.00)	0 (0)	1 (1.25)	41 (51.25)	38 (47.50)	0 (0)
Weight	0 (0)	16 (40)	24 (60.00)	0 (0)	0 (0)	15 (37.50)	21 (52.50)	4 (10)	0 (0)	31 (38.75)	45 (56.25)	4 (5)
<b>Total</b>	<b>3 (1.80)</b>	<b>80 (50.00)</b>	<b>77 (48.13)</b>	<b>0 (0)</b>	<b>0 (0)</b>	<b>90 (6.25)</b>	<b>66 (41.25)</b>	<b>4 (2.50)</b>	<b>3 (0.90)</b>	<b>170 (53.13)</b>	<b>143 (44.68)</b>	<b>4 (1.25)</b>
<b>Care of pack animals</b>												
Daily care	1 (2.50)	31 (77.5)	8 (20.00)	0 (0)	0 (0)	15 (37.50)	25 (62.50)	0 (0)	1 (1.25)	46 (57.50)	33 (41.25)	0 (0)
Health care	4 (10.00)	29 (72.50)	7 (17.50)	0 (0)	6 (15.00)	25 (62.50)	9 (22.50)	0 (0)	10 (12.50)	54 (67.50)	16 (20.00)	0 (0)
Feeding management	7 (17.50)	28 (70.00)	5 (12.50)	0 (0)	10 (25.00)	19 (47.50)	11 (27.50)	0 (0)	17 (21.25)	47 (58.75)	16 (20.00)	0 (0)
Housing	6 (15.00)	26 (65.00)	8 (20.00)	0 (0)	20 (50.00)	20 (50.00)	0 (0)	0 (0)	26 (32.50)	46 (57.50)	8 (10.00)	0 (0)
Care of newborn	4 (10.00)	18 (45.00)	8 (20.00)	10 (25.00)	2 (5.00)	3 (7.50)	15 (37.50)	20 (50.00)	6 (7.50)	21 (26.25)	23 (28.75)	30 (37.50)
<b>Total</b>	<b>22 (11.00)</b>	<b>132 (66.00)</b>	<b>36 (18.00)</b>	<b>10 (5)</b>	<b>38 (19)</b>	<b>82 (41)</b>	<b>60 (30)</b>	<b>20 (10)</b>	<b>60 (15)</b>	<b>214 (53.5)</b>	<b>96 (48.00)</b>	<b>30 (15.00)</b>
<b>Training of pack animals</b>												
Training with saddle	6 (15.00)	26 (65.00)	8 (20.00)	0 (0)	21 (52.50)	19 (47.50)	0 (0)	0 (0)	27 (33.75)	45 (56.25)	8 (10.00)	0 (0)
Training with cart	0 (0)	0 (0)	23 (57.50)	17 (42.50)	0 (0)	8 (20.00)	21 (52.50)	11 (27.50)	0 (0)	8 (10.00)	44 (55.00)	28 (35.00)
Training with different implements	1 (2.50)	15 (37.50)	24 (60.00)	0 (0)	0 (0)	12 (30.00)	22 (55.00)	6 (15.00)	1 (1.25)	27 (33.75)	46 (57.50)	6 (7.50)
<b>Total</b>	<b>7 (5.83)</b>	<b>41 (34.16)</b>	<b>55 (45.80)</b>	<b>17 (14.16)</b>	<b>21 (17.50)</b>	<b>39 (32.50)</b>	<b>43 (35.80)</b>	<b>17 (14.16)</b>	<b>28 (11.67)</b>	<b>80 (33.30)</b>	<b>98 (40.83)</b>	<b>34 (14.16)</b>
<b>Knowledge about diseases</b>												
Kind of diseases	22(55)	18 (45.00)	0(0)	0(0)	21 (52.50)	19 (47.50)	0(0)	0(0)	43 (53.75)	37 (46.25)	0(0)	0(0)
Occurrence	23 (57.50)	17 (42.50)	0 (0)	0 (0)	20 (50.00)	20 (50.00)	0 (0)	0 (0)	43 (53.75)	37 (46.25)	0 (0)	0 (0)
First aid	25 (62.50)	15 (37.50)	0 (0)	0 (0)	28 (70.00)	12 (30.00)	0 (0)	0 (0)	53 (66.25)	27 (33.75)	0 (0)	0 (0)
Treatment	25 (62.50)	15 (37.50)	0 (0)	0 (0)	25 (62.50)	13 (32.50)	2 (5.00)	0 (0)	50 (62.50)	28 (35.00)	2 (2.50)	0 (0)
Vaccination	14 (35.00)	20 (50.00)	6 (15.00)	0 (0)	22 (55.00)	18 (45.00)	0 (0)	0 (0)	36 (45.00)	38 (47.50)	6 (7.50)	0 (0)
<b>Total</b>	<b>109 (54.50)</b>	<b>85 (42.50)</b>	<b>6 (3.00)</b>	<b>0 (0)</b>	<b>116 (58.00)</b>	<b>82 (41.00)</b>	<b>2 (1.00)</b>	<b>0 (0)</b>	<b>204 (51.00)</b>	<b>167 (41.75)</b>	<b>8 (2.00)</b>	<b>0 (0)</b>
<b>Grand total</b>	<b>141 (20.73)</b>	<b>338 (49.7)</b>	<b>174(25.58)</b>	<b>27(3.97)</b>	<b>175(25.73)</b>	<b>293 (43.08)</b>	<b>171 (25.15)</b>	<b>41 (6.02)</b>	<b>295 (21.70)</b>	<b>631 (46.40)</b>	<b>345 (25.36)</b>	<b>68 (5.00)</b>

Figures in parenthesis indicate percentage; MN: most needed, N: needed, LN: less needed and NN: not needed

Table 3 depicts that the mean perception score for training for the selection of pack animals by respondents in Chamoli and Uttarkashi districts was 6.15 and 6.18, respectively with the pooled value of 6.16, which

shows a 'medium' level of training need. Overall, majority of the respondents (83.75%) had medium level (5-8) of perception of training score for the selection of pack animals followed by respondents (15.00%) had low score (0-4) and only 1.25 per cent had high score (9-12). Independent sample 't' test analysis reveals that there was no significant difference between two districts.

### Care of the Pack Animals

Training was perceived to be 'needed' on most of the aspects of care of pack animals *viz.*, daily care of the pack animals (57.50%), health care (67.50%), feeding management (58.75%) and housing management (57.50%). Equine rearers are often interested in learning more about feeding and management (Bolwell *et al.*, 2013). Housing was identified as one of the major problems for the livestock species (Turkson and Naandam, 2003) which was likely from difficulties in obtaining inputs for shelter. Training about the care of the newborn was perceived as 'not needed' (37.50%) by the respondents. One of the possible reasons may be that they are not involved in breeding of the pack animals and buy foals of more than two years of age. This differs from the findings which stated that breeding and care of foals were also popular among respondents (Bolwell *et al.*, 2013). The care and management of animal was opined as most needed by the respondents (50.67%) (Patil *et al.*, 2009). The mean perception score for training (Table 3) about the care of the pack animal was 8.77 *i.e.*, 'needed' by the pack animal owners in the study area. Overall, overwhelming respondents (77.50%) had medium (6-10) level of score followed by 15.00 per cent with high (11-15) and 7.50 per cent with low (0-5) score.

### Training of the Pack Animals

As evident from the Table 2, the training for practicing the animal with saddle was perceived as 'needed' (56.25%) and for training the animal with cart was perceived as 'less needed' by majority (55.00%) of the pack animal owners. This was due to the reason that the pack animals are not used to pull carts, the study areas being the hilly regions. The training of the pack animals with different implements was perceived as 'less needed' (57.50%) and 'needed' (33.75%) by the animal owners.

Table 3 reveals that the average score for the training of the animal was 6.44 (needed). Majority of respondents (78.75%) in the study area had medium level (5-8) score. In Chamoli, 75.00 per cent owners had medium score and in Uttarkashi, 82.50 per cent had medium score. Independent sample 't' test analysis reveals that there was high significant difference between the pack animal owners in two districts with respect to perception of training needs for training of pack animals. The difference might be due to the fact that people in Uttarakashi district were more involved in tourism and therefore, the training of their pack animals was more required by them.

**Table 3:** Distribution of pack animal owners according to score for perceived training needs

Selection of Pack Animals (Score)	Chamoli (n <sub>1</sub> =40)	Uttarkashi (n <sub>2</sub> =40)	Total (n=80)
Low (0-4)	10 (25.00)	2 (5.00)	12 (15.00)
Medium (5-8)	29 (72.50)	38 (95.00)	67 (83.75)
High (9-12)	1 (2.50)	0 (0)	1 (1.25)
Mean ± S.D.	6.15 ± 1.733	6.18 ± 1.010	6.16 ± 1.409
t test value	0.079		
<b>Care of Pack Animal</b>			
Low (0-5)	5 (12.50)	1 (2.50)	6 (7.50)
Medium (6-10)	29 (72.50)	33 (82.50)	62 (77.50)
High (11-15)	6 (15.00)	6 (15.00)	12 (15.00)
Mean ± S.D.	9.15 ± 2.547	8.40 ± 1.905	8.77 ± 2.267
t test value	1.491		
<b>Training of Pack Animal</b>			
Low (0-4)	9 (22.50)	1 (2.50)	10 (12.50)
Medium (5-8)	30 (75.00)	33 (82.50)	63 (78.75)
High (9-12)	1 (2.50)	6 (15.00)	7 (8.75)
Mean ± S.D.	5.85 ± 1.424	7.03 ± 1.493	6.44 ± 1.565
t test value	3.601**		
<b>Knowledge about Disease</b>			
Low (0-5)	0 (0)	0 (0)	0 (0)
Medium (6-10)	14 (35.00)	4 (10.00)	18 (22.50)
High (11-15)	26 (65.00)	36 (90.00)	62 (77.50)
Mean ± S.D.	12.58 ± 2.229	12.85 ± 1.210	12.71 ± 1.787
t test value	0.686		

Figures in parenthesis indicate percentage. (\*\*p<0.01)

### Knowledge About the Diseases

Table 2 also envisages the training need for the knowledge about diseases of pack animals. The training needs were perceived as ‘most needed’ for knowledge of kind of diseases (53.75%), occurrence of disease (53.75%) and first aid (66.25%). Also, treatment was perceived as ‘most needed’ (62.50%) and training for the vaccination of the pack animals was perceived as ‘needed’ (47.50%) by the pack animal owners. None of the respondents opined that the training for knowledge of disease was not needed. Similar findings of diseases as a major constraint to livestock production in the tropics have been reported (Hanssen and Autreve, 1989; Turkson, 1992; Winrock International, 1992). The training need about diseases was perceived most important due to inevitable economic losses and unavailability of immediate veterinary services in remote areas at time of emergency. This was in concordance to few workers (Meena, 1994; Okwoche *et al.*, 2015; Patil *et al.*, 2009).

It has also been reported that farmers have inadequate knowledge about technical aspects of diseases such as etiology, symptoms, diagnosis, prevention and control measures (Sajeev and Singh, 2010). When farmers do not acquire technical knowledge and skills, the productivity cannot be improved and there will be no increase in downstream income, generation of rural employment, reduction in food prices, establishment of agro-based industries and economic growth. The average score for the perceived training need regarding

the knowledge of diseases was 12.71. It means that the training need regarding the knowledge of the diseases was 'most needed' by the pack animal owners. The high need for the training regarding the knowledge of diseases might be due to the reasons that the veterinary hospitals were situated at a distance from the house of the owners and therefore the immediate veterinary services could not be availed. Also, the working area of these animals consists of difficult paths which might hurt the animal. Another aspect is that the economic condition of the pack animal owners was not very good and the occurrences of the diseases lead to certain high economic losses. Majority of the pack animal owners (65.00%) in Chamoli had high (11-15) followed by medium score (35.00%). In Uttarkashi, majority of the respondents had high (90.00%) and medium (10.00%) score for perception of training need. Majority of the overall respondents had high level (77.50%) of perceived training needs for knowledge about diseases. Independent sample 't' test analysis reveals that there was no significant difference between the pack animal owners in two districts with respect to perception of training needs for knowledge about diseases of pack animals.

### Conclusion

Training need assessment is an essential pre-requisite to support equine based livelihood. The present study described the priority areas for training in pack animal rearing in hills. It was found out that training about the knowledge on common diseases, early reporting and first aid seem to be of paramount importance. This is because of the migration of majority of pack animal owners for a significant period every year. Accessibility to veterinary services, therefore, remains an inherent constraint. Training for the care of pack animals should be given, so that they rear the animal in a better and scientific way which will improve the health of the animals and in turn will be economically beneficial to owners. The scientifically trained pack animals will be more hardy and useful for working in hills. Training for selection of the animal should be given to save the pack animal owners from exploitation by the traders and make the owners proficient in distinguishing a fine animal from a moderate one. The poor economic condition of the respondents made them not capable of buying a best performing pack animal. As a result, they have to maintain the pack animal they possessed by adopting recommended practices. Some countries have carried out a number of investigations into the development of research-based extension programme for equine industry (Bolwell *et al.*, 2013). Such steps could be taken in the study area as well. Therefore, Government should take efforts in this direction and impart appropriate training programmes to pack animal owners for rearing and management of pack animals from time to time.

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