Assessment of training needs of livestock owners as perceived by field veterinarians in Jammu District of Jammu and Kashmir, India

ABSTRACT

Training is an essential element for appropriate human resource development, which enhances decision making ability of an individual. In livestock sector to improve quality of livestock and to increase both quality and quantity of livestock products. In India there is a pressing need for efficient human resource development and this may be achieved through training of the livestock farmers on scientific animal husbandry practices. The present study was conducted in Jammu district of Jammu and Kashmir state to assess the training needs of livestock owners as perceived by field veterinarians. Ex-post-facto research design and, multistage random sampling plan was followed for the selection of ultimate respondents. Sixty veterinarians working in Jammu district were randomly selected and were given suitably developed questionnaire to document their opinions regarding training-needs of livestock owners. The questions were in six broad groups (breeding, feeding, housing & management, health care, preparation and preservation of livestock products and marketing and finance) and were for evaluation of perceived training-needs in their respective sections. Respondents were asked to rate them in three point continuum i.e. most needed, needed, and least needed with their respective scores of 3, 2 and 1, based on importance of perceived training needs of livestock owners felt by field veterinarians. The summation of scores achieved by the respondents constituted the level of perceived training-needs in each sub-area. Findings of the study revealed that, veterinarians in India see: estrous cycle and time of breeding”, “balanced ration feeding and its economical composition”, “care and management of newborn/pregnant/productive/sick animals”, “zoonotic diseases and their transmission”, “preparation and preservation of milk and milk products” and “banking & insurance” as areas that training is most needed.

Keywords: Training needs; livestock owners; Jammu district; field veterinarians.

1. Introduction

India is blessed with a huge number of livestock, which not only supplements the income of farmers but also buffer the risk of crop failure due to draught. As agriculture in India is mostly dependent on monsoons and failure of crop due to drought looms large; animal husbandry plays a prime role in socio-economic development of rural households by buffering the risk of crop failure. It has a significant positive impact on equity in terms of income, employment and poverty reduction in rural
areas as distribution of livestock is more egalitarian as compared to land [1]. India like any other
developing country is having sufficient natural and particularly human resource, but the problem is the
under-developed human resource which hampers the productivity in different sectors of the economy,
particularly the livestock sector, which primarily depends on the human resource. So, training has
been considered as an essential element for appropriate human resource development, which
enhances decision making ability of an individual. Training is a process by which desired, knowledge,
skill and ideas are inculcated, fostered and or reinforced in an organism [2]. In livestock sector too,
there is a pressing need for efficient human resource development and this may be achieved through
training of the livestock farmers on scientific animal husbandry practices. Productive performance of
Indian livestock is lesser than that of the world average, which to an appreciable extent is attributed to
its underdeveloped human resource. In this industrialization era, demand for various livestock based
products has increased significantly due to increase in per capita income, urbanization, preferences
and increased awareness about nutrition. Animal husbandry sector is likely to emerge as an engine
for agricultural growth in the coming decades [3]. So, training is one of the options to increase both
quality as well as quantity of the livestock products. Farmers` training is a non-formal process of
education which teaches groups of farmers some specific topics at a particular place [4]. There are
various training needs that exist in livestock sector at different levels and these differ from one state to
another, depending on place, time and other set of conditions. A need is the gap between “what is
and what ought to be” and training need refers to the gap between “what is” and “what should be” in
terms of the trainee’s knowledge, skills, attitude and the behaviour in a given situation and time [5]. In
the present study, the focus has been on the importance of livestock extension services towards
improving production by concentrating on the training needs of the farmers for profitable animal
husbandry in...of India.

2. Materials and methods

The study was conducted in Jammu district of Jammu and Kashmir state to assess the training needs
of livestock owners perceived by field veterinarians. Ex-post-facto research design and, multistage
random sampling plan was followed for the selection of ultimate respondents. Jammu district
comprises of twenty blocks and out of these only 4 blocks were selected by simple random method.
The blocks selected were Marh, Bishna, Akhnoor and R. S. Pura. From each selected blocks 15
veterinarians working in Jammu district were selected randomly making a sample size of 60, and
each field veterinarians were given suitably developed questionnaire to document their opinion
regarding training needs of livestock owners. The questionnaire was divided into six broad areas
namely breeding, feeding, housing & management, health care, preparation and preservation of
livestock products and marketing and finance for evaluation of perceived training needs in their
respective sections. Responses were obtained in the areas of breeding, feeding, housing &
management and health care. Each area of perceived training needs of livestock owners contained 7
statements in breeding, 7 in feeding, 7 in housing & management, 6 in health care, 3 in preparation
and preservation of livestock products and 4 in marketing and finance, and the respondents were
asked to rate them in three point continuum i.e. most needed, needed, and least needed with their
respective scores of 3, 2 and 1, based on importance of perceived training needs of livestock owners
felt by field veterinarians. The summation of scores achieved by the respondents constituted the level
of perceived training needs within each sub-area. The perceived training needs were then ranked
based upon their total score and total weighted mean score. Data were coded, classified, tabulated
and analyzed using the software; Statistical Product and Service Solutions – SPSS version 16.0, an
IBM product [6]. The presentation of data was done to give pertinent, valid and reliable answers to the specific objectives. Frequencies, scores obtained, frequencies, score obtained, total scores, total weighted mean scores and ranks were worked out for meaningful interpretation.

3. RESULTS

3.1 Training needs of livestock owners in sub areas of breeding perceived by field veterinarians

Table 1 revealed that 86.66% oof the veterinarians perceived estrous cycle and time of breeding as most needed sub-area in breeding with a total score of 171 at 1\textsuperscript{st} place, followed by selection of animals for breeding with a total score of 168 at 2\textsuperscript{nd}, identification of infertility problems with a total score of 165 at 3\textsuperscript{rd}, information of artificial insemination with a total score of 164 at 4\textsuperscript{th}, detection of oestrous in animals with a total score of 156 at 5\textsuperscript{th}, information regarding parturition problems with a total score of 155 at 6\textsuperscript{th} and information regarding pregnancy diagnosis with a total score of 144 at 7\textsuperscript{th}.

Table 1: Average scores of Training needs of livestock owners in sub areas of breeding perceived by field veterinarians (N=60)

<table>
<thead>
<tr>
<th>Breeding</th>
<th>MN (3)</th>
<th>N (2)</th>
<th>LN (1)</th>
<th>TS</th>
<th>TWMS</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection of animals for breeding</td>
<td>48</td>
<td>12</td>
<td>0</td>
<td>168</td>
<td>2.80</td>
<td>2</td>
</tr>
<tr>
<td>Detection of oestrous in animals</td>
<td>41</td>
<td>14</td>
<td>5</td>
<td>156</td>
<td>2.60</td>
<td>5</td>
</tr>
<tr>
<td>Estrous cycle and time of breeding</td>
<td>52</td>
<td>7</td>
<td>1</td>
<td>171</td>
<td>2.85</td>
<td>1</td>
</tr>
<tr>
<td>Information of artificial insemination</td>
<td>44</td>
<td>16</td>
<td>0</td>
<td>164</td>
<td>2.73</td>
<td>4</td>
</tr>
<tr>
<td>Information regarding pregnancy diagnosis</td>
<td>26</td>
<td>32</td>
<td>2</td>
<td>144</td>
<td>2.40</td>
<td>7</td>
</tr>
<tr>
<td>Identification of infertility problems</td>
<td>46</td>
<td>13</td>
<td>1</td>
<td>165</td>
<td>2.75</td>
<td>3</td>
</tr>
<tr>
<td>Information regarding parturition problems</td>
<td>36</td>
<td>23</td>
<td>1</td>
<td>155</td>
<td>2.58</td>
<td>6</td>
</tr>
</tbody>
</table>
3.2 Training needs of livestock owners in sub areas of Feeding perceived by field veterinarians

Table 2 showed that 86.66% of the veterinarians felt balanced ration feeding and its economical composition as the most needed sub-area in feeding practices with a total score of 172 at 1st place, followed by importance of colostrums feeding at 2nd place with a total score of 171, nutritional management of breeding problems at 3rd place with a total score of 170, mineral mixture supplementation at 4th place with a total score of 167, urea treatment of straw at 5th place with a total score of 158, fodder verities & their cultivation at 6th place with a total score of 139, preservation of fodder (silage/ hay making & its storage) at 7th place with a total score of 130.

Table 2: Average scores of Training needs of livestock owners in sub areas of Feeding perceived by field veterinarians (N=60)

<table>
<thead>
<tr>
<th>Feeding</th>
<th>MN (3)</th>
<th>N (2)</th>
<th>LN (1)</th>
<th>TS</th>
<th>TWMS</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balanced ration feeding and its economical composition</td>
<td>52</td>
<td>8</td>
<td>0</td>
<td>172</td>
<td>2.86</td>
<td>1</td>
</tr>
<tr>
<td>Nutritional management of breeding problems</td>
<td>50</td>
<td>10</td>
<td>0</td>
<td>170</td>
<td>2.83</td>
<td>3</td>
</tr>
<tr>
<td>Importance of colostrums feeding</td>
<td>51</td>
<td>9</td>
<td>0</td>
<td>171</td>
<td>2.85</td>
<td>2</td>
</tr>
<tr>
<td>Mineral mixture supplementation</td>
<td>48</td>
<td>11</td>
<td>1</td>
<td>167</td>
<td>2.78</td>
<td>4</td>
</tr>
<tr>
<td>Fodder verities &amp; their cultivation</td>
<td>22</td>
<td>35</td>
<td>3</td>
<td>139</td>
<td>2.31</td>
<td>6</td>
</tr>
<tr>
<td>Urea treatment of straw</td>
<td>39</td>
<td>20</td>
<td>1</td>
<td>158</td>
<td>2.63</td>
<td>5</td>
</tr>
<tr>
<td>Preservation of fodder (silage/hay making &amp; its storage)</td>
<td>20</td>
<td>30</td>
<td>10</td>
<td>130</td>
<td>2.16</td>
<td>7</td>
</tr>
</tbody>
</table>

3.3 Training needs of livestock owners in sub areas of Housing & Management perceived by field veterinarians

On perusal of Table 3, it was found that the majority of the veterinarians felt care and management of new born/pregnant/productive/sick animals as the most needed sub-area in housing and management with a total score of 175, followed by construction of low cost housing at 2nd place with a total score of 170, sanitation and drainage in animal shed at 3rd place with a total score of 169, clean milk production & milking methods at 4th place with a total score of 165, culling of non
productive and sick animals (isolation) at 5th place with a total score of 155, record keeping at 6th place with a total score of 135, weaning at 7th place with a total score of 131.

Table 3: Average scores of Training needs of livestock owners in sub areas of Housing & Management perceived by field veterinarians (N=60)

<table>
<thead>
<tr>
<th>Housing &amp; Management</th>
<th>MN (3)</th>
<th>N (2)</th>
<th>LN (1)</th>
<th>TS</th>
<th>TWMS</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care and management of new born/pregnant/productive/sick animals</td>
<td>55 (91.66)</td>
<td>5 (8.33)</td>
<td>0 (0.00)</td>
<td>175</td>
<td>2.91</td>
<td>1</td>
</tr>
<tr>
<td>Culling of non productive and sick animals (isolation)</td>
<td>38 (63.33)</td>
<td>19 (31.66)</td>
<td>3 (5.00)</td>
<td>155</td>
<td>2.58</td>
<td>5</td>
</tr>
<tr>
<td>Weaning</td>
<td>14 (23.33)</td>
<td>43 (71.66)</td>
<td>3 (5.00)</td>
<td>131</td>
<td>2.18</td>
<td>7</td>
</tr>
<tr>
<td>Record keeping</td>
<td>17 (28.33)</td>
<td>42 (70.00)</td>
<td>1 (1.66)</td>
<td>135</td>
<td>2.25</td>
<td>6</td>
</tr>
<tr>
<td>Construction of low cost housing</td>
<td>50 (83.33)</td>
<td>10 (16.66)</td>
<td>0 (0.00)</td>
<td>170</td>
<td>2.83</td>
<td>2</td>
</tr>
<tr>
<td>Clean milk production &amp; milking methods</td>
<td>45 (75.00)</td>
<td>15 (25.00)</td>
<td>0 (0.00)</td>
<td>165</td>
<td>2.75</td>
<td>4</td>
</tr>
<tr>
<td>Sanitation and drainage in animal shed</td>
<td>49 (81.66)</td>
<td>11 (18.33)</td>
<td>0 (0.00)</td>
<td>169</td>
<td>2.81</td>
<td>3</td>
</tr>
</tbody>
</table>

MN= most needed, N= needed, LN=least needed, TS= total score, TWMS=total weighted mean score.

3.4 Training needs of livestock owners in sub areas of Health care perceived by field veterinarians

On the other hand, Table 4 showed that 98.33% of the veterinarians felt zoonotic diseases and their transmission as the most needed sub-area in health-care practices with a total score of 179 at 1st place, followed by vaccination at 2nd place with a total score of 177, deworming at 3rd place with a total score of 174, ecto-parasite control 4th place with a total score of 173, common diseases and its preventive measures at 5th place with a total score of 160, first aid treatment for simple ailments at 6th place with a total score of 125.

Table 4: Average scores of Training needs of livestock owners in sub areas of Health care perceived by field veterinarians (N=60)

<table>
<thead>
<tr>
<th>Health care</th>
<th>MN (3)</th>
<th>N (2)</th>
<th>LN (1)</th>
<th>TS</th>
<th>TWMS</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deworming</td>
<td>54 (90.00)</td>
<td>6 (10.00)</td>
<td>0 (0.00)</td>
<td>174</td>
<td>2.9</td>
<td>3</td>
</tr>
</tbody>
</table>
### Table 5: Average scores of Training needs of livestock owners in sub areas of preparation and preservation of livestock products perceived by field veterinarians (N=60)

<table>
<thead>
<tr>
<th>Preparation and preservation of livestock products</th>
<th>MN (3)</th>
<th>N (2)</th>
<th>LN (1)</th>
<th>TS</th>
<th>TWMS</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk and milk products</td>
<td>5 (8.33)</td>
<td>45 (75.00)</td>
<td>10 (16.66)</td>
<td>115</td>
<td>1.91</td>
<td>1</td>
</tr>
<tr>
<td>Meat and meat products</td>
<td>3 (5.00)</td>
<td>39 (65.00)</td>
<td>18 (30.00)</td>
<td>105</td>
<td>1.75</td>
<td>2</td>
</tr>
</tbody>
</table>

MN= most needed, N= needed, LN=least needed, TS= total score, TWMS=total weighted mean score.

#### 3.5 Training needs of livestock owners in sub areas of preparation and preservation of livestock products perceived by field veterinarians

Table 5 revealed that 83.33% of the veterinarians perceived preparation and preservation of milk and milk products as the most needed sub-area in preparation and preservation of livestock products with a total score of 115 at 1st place and followed by preparation and preservation of meat and meat products at 2nd with a total score of 105.

#### 3.6 Training needs of livestock owners in sub areas of marketing and finance perceived by field veterinarians

The results of Table 6 show that 96.67% veterinarians perceived banking & insurance as the most needed area at 1st place in marketing and finance with a total score of 157, followed by purchase of livestock & its product at 2nd with a total score of 149 and the sale of livestock & inputs with a total score of 128 at 3rd.

**Table 6: Average scores of Training needs of livestock owners in sub areas of marketing and finance perceived by field veterinarians (N=60)**
4. Discussion

The findings of the result revealed that majority of the veterinarians perceived ‘estrous cycle and time of breeding’ as most important training need in breeding area and acquired 1st rank, followed by ‘selection of animals for breeding’ on 2nd rank, ‘identification of infertility problems’ on 3rd rank, ‘information of artificial insemination’ on 4th rank, ‘detection of oestrous in animals on 5th rank’, ‘information regarding parturition problems on 6th rank’ and ‘information regarding pregnancy diagnosis on 7th rank. This may be due to the fact that adequate knowledge about estrous cycle and time of insemination is immensely critical for carrying successful breeding of animals, which may suggest why most of the respondents felt a need of training in these sub areas of breeding. Moreover, ‘knowledge about high yielding breeds’ was also needed by most of the livestock owners. This may be attributed to the fact that most of the respondents had indigenous animals which are low producers and help in improving the genetic make-up of indigenous cattle through selective breeding. The results are in line with the findings of Durggarani and Subhadra [7] who described that majority of the respondents felt training needs in selection of breed, heat detection and time of insemination. In the area of feeding, majority of the veterinarians felt ‘balanced ration feeding and its economical composition’ as the most needed training area and acquired 1st rank, followed by ‘importance of colostrums feeding’ on 2nd rank, ‘nutritional management of breeding problems’ on 3rd rank, ‘mineral mixture supplementation’ on 4th rank, ‘urea treatment of straw’ on 5th rank, ‘fodder varieties and their cultivation’ on 6th rank and ‘preservation of fodder (silage/hay making and its storage)’ on 7th rank. In the study area, animals were provided with nutritiously low quality fodder which affects the health of animal and thus decreases production and training about formulation of balanced ration is must to improve the production and repeat breeding problem arises due to be nutritional deficiency. Results further revealed that in the area of housing and management, the majority of the veterinarians felt ‘care and management of new born/pregnant/productive/sick animals’ as the most needed training area and placed it at rank 1, followed by ‘construction of low cost housing’, ‘sanitation and drainage in animal shed’, ‘clean milk production and milking methods’, ‘culling of non productive and sick animals (isolation) place’, ‘record keeping’ and ‘weaning’ on rank 2, 3, 4, 5, and 6, respectively. It was observed from the results that in the area of health-care, most of the veterinarians felt ‘zoonotic diseases and their transmission’ as the most needed training area on 1st place, followed by ‘vaccination’, ‘deworming’, ‘ecto-parasite control’, ‘common diseases and its preventive measures’
and ‘first aid treatment for simple ailments’ on 2nd, 3rd, 4th and 5th place. As the education status of the
most of farmers was poor and they were not aware about the pathogenesis and transmission of
zoonotic diseases which may adversely affect the productivity and economic losses. The findings
were supported by an observation of Jondhale et al. [8] who reported that training in zoonotic
diseases was most needed. In the area of preparation and preservation of livestock products, majority
of the veterinarians perceived preparation and ‘preservation of milk and milk products’ as needed
while ‘preparation and preservation of meat and meat products’ was felt as least needed. It was also
observed in the field of marketing and finance that most of the veterinarians perceived ‘banking and
insurance’ as the most needed area on 1st place, followed by ‘purchase of livestock and its product’
on 2nd place while the ‘sale of livestock and inputs’ was placed on 3rd place. Similar results were put
forth by Balaraju et al [9] in their study regarding training need assessment of livestock owners in
devangere district of Karnataka, who reported that, within major areas of small ruminant farming,
farmers and veterinarians perceived higher level of training needs in health care followed by feeding
and marketing and finance. The study further revealed that majority of the field veterinarians’
perceived higher extent of training needs for the farmers than farmer themselves.

5. Conclusion

It is evident from the study that there is an imperative need for the training in various sectors of
livestock rearing, providing which shall boost the productivity in the said sector and in turn alleviate
the income of livestock farmers. From the findings of study it can be concluded that veterinarians felt
“estrous cycle and time of breeding”, “balanced ration feeding and its economical composition”, “care
and management of new born/pregnant/productive/sick animals”, “zoonotic diseases and their
transmission”, “preparation and preservation of milk and milk products” and “banking & insurance” as
most needed areas in training. So, training should be provided to the livestock farmers through
various agencies by conducting various training programmes especially within the premises of the
village.

References

   Background paper for the FAO project memorandum “pro-poor livestock policy initiative”, FAO,
   Rome.


