KNOWLEDGE OF SHEEP FARMERS ABOUT IMPROVED SHEEP PRODUCTION TECHNOLOGIES

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ABSTRACT

The study was conducted in arid western plain zone of Rajasthan. A sample of 240 sheep farmers constituting of small, medium and large flock were interviewed with the help of structured questionnaire. Results indicated that more than half of the respondents possessed medium level of knowledge. They had higher knowledge about improved feeding followed by management and breeds and breeding technologies. There also existed a significant difference with regard to knowledge levels of small, medium and large sheep farmers.

Key words: Knowledge, Sheep, Sheep farmer, Technology, Breeding, Feeding, Management.

INTRODUCTION

In India, about 64 per cent of the population is engaged in agriculture and rearing livestock, subsidiary to agriculture. The livestock plays an important role, specifically in the rural economy. It provides a stable and well-distributed income throughout the year.

Sheep husbandry is an important part of the people of arid, semi-arid and hilly region of the country. The resource poor people in the lower strata of society rear the sheep. It is the most important species of livestock for utilization of available sparse vegetation and owing to their multifaceted utility (wool, meat, skin, milk and manure) constitute an important part of rural economy.

The total population of sheep in India was 61.5 million that was 6.0 per cent of the world’s sheep (1024.0 million). India ranks fourth in sheep production in the world. Sheep producing 0.2300 million tones of mutton and wool production of country was 45.0 million kg with an average of 0.9 kg wool per sheep against the world average of 2.4 kg, which is very low (Anonymous 2007).

Although the economic contribution of sheep seems to be quite substantial in the agricultural economy as well as in the national economy, the sheep farmers are yet ignorant about scientific management practices. If their breeding, feeding and management aspects are effectively supervised, the country can become one of the leading wool production nations of the world, therefore, improvement in existing sheep population is essential. Considering the vitality of above stated facts, the present study was carried out with specific objective as:

To determine the extent of knowledge of improved sheep production technologies by the sheep farmers.

MATERIAL AND METHODS

The study was conducted in Arid Western Plain zone (I-a) of Rajasthan, India. It includes Barmer and Jodhpur districts. This zone covers all the tehsils (eight) of Barmer district and five tehsils of Jodhpur district. Out of these, two tehsils from each district and four villages from each selected tehsils were selected randomly. Hence, sixteen villages in all were taken up for the study.

A comprehensive list of all the sheep farmers engaged in sheep farming for last 5-10 years of the selected villages was prepared with the help of concerned persons. Then all the sheep farmers from selected villages were pooled separately district wise. On the basis of the number of sheep possessed by the sheep farmers they were categorized into three groups of small, medium and large sheep farmers.
having the flock size of 1-50, 51-100 and more than 100, respectively. From these identified categories, 120 sheep farmers were selected proportionately on the basis of random sampling from each district, thus making a total sample of 240 sheep farmers.

To measure the existing knowledge levels of the respondents, a knowledge test developed by the investigator was used for this study. 56 major aspects of improved sheep production technologies were included in the knowledge test, one score was assigned to each correct response, while zero was given to wrong one. Therefore, maximum obtainable score for the test was 77. To find out the significance of difference among small, medium and large sheep farmers with regard to their knowledge, the analysis of variance (F-test) was applied.

**RESULTS AND DISCUSSION**

1.0 Knowledge level of different categories of sheep farmers about the improved sheep production technologies

To get an overview of the knowledge possessed by the sheep farmers they were grouped into low, medium and high knowledge categories on the basis of calculated mean and standard deviation of the knowledge scores.

A perusal of data of Table-1 revealed that more than half of the sheep farmers 61.25 per cent possessed medium level of knowledge whereas, 22.50, and 16.25 per cent respondents had high and low level of knowledge regarding improved sheep production technologies, respectively.

The findings are in agreement with those of Daniel (1999) and Sharma and Reddy (2000) who reported that majority of the sheep rearers possessed medium level of knowledge regarding improved sheep rearing practices.

2.0 Extent of knowledge about improved breeds and breeding technologies

A perusal of contents of Table 2 shows that calculated ‘F’ value (3.69) is greater than the tabulated value at 5 per cent level of significance hence it could be concluded that there was significant difference among the respondents of selected groups of small, medium and large sheep flock with respect to their knowledge regarding breeds and breeding. A comparative look at data indicated that the respondents with large size flock had higher mean per cent score of knowledge (49.25 MPS) as compared to sheep farmers of medium and small size flock whose mean percent score was 44.00 and 42.49, respectively. This was because of the reason that large sheep farmers knew about the estrus cycle, age of puberty, improved breeds, flushing and appropriate proportion of ewes and ram in the flock as compared to small and medium sheep farmers. They had very poor knowledge about the flushing, estrus cycle, age of puberty and appropriate proportion of ewes and rams in the flock. Only a few sheep farmers consulted the veterinarian when sheep did not come in heat and checked the breeding lambs for pedigree.

The findings are in conformity to the findings of Daniel (1999) who reported that the large sheep farmers had high knowledge about breeding aspect of sheep production.

3.0 Extent of knowledge about improved feeding technologies

The contents of Table 2 indicates that calculated ‘F’ value (2.93) is less than the tabulated value (2.99) at 5 per cent level of significance hence, it could be concluded that there was no significant variation between the sheep farmers of different flock size with respect to their knowledge regarding...
improved feeding technologies. The table further shows that small sheep farmers possessed less knowledge (53.12 MPS) as compared to medium and large sheep farmers who had 58.46 and 59.79 MPS, respectively.

An insight into in-depth knowledge of the respondents regarding feeding technologies highlighted that more than half of sheep farmers knew about the concentrate mixture and extra ration given to ewes during pregnancy, and breeding rams during breeding period but most of the respondents (83.33 per cent) were unaware about the recommended quantity of concentrates and mineral mixture. It was encouraging to note that all the respondents knew about colostrum feeding and its advantages and fed colostrum to newborn lamb within one hour of lambing. Most of the sheep farmers had knowledge of hay making but due to very less rainfall there was not surplus production of fodder for conservation.

The large sheep farmers grew bajra and cowpea as green fodder crops on their own land and had linkage with the personnel of livestock or animal husbandry and extension agency working in the village or surrounding area. They also participated in the training’s, demonstrations and other extension activities to gain the knowledge regarding improved technology for sheep production and fodder production.

The findings are contradictory with the findings of Daniel (1999) who reported that medium sheep farmers possessed higher (35.9 per cent) knowledge score as compared to large (35.3 per cent) and small (31.3 per cent) sheep farmers regarding improved sheep feeding practices.

### Table 2: Knowledge levels of different categories of sheep farmers regarding improved sheep production technologies (n =240)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Improved sheep production technologies</th>
<th>Small (n=94)MPS</th>
<th>Medium (n=82)MPS</th>
<th>Large (n=64)MPS</th>
<th>F cal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Breeds and breeding technologies</td>
<td>42.49</td>
<td>44.00</td>
<td>49.25</td>
<td>3.69*</td>
</tr>
<tr>
<td>2.</td>
<td>Feeding technologies</td>
<td>53.12</td>
<td>58.46</td>
<td>59.79</td>
<td>2.93</td>
</tr>
<tr>
<td>3.</td>
<td>Management technologies</td>
<td>49.40</td>
<td>53.13</td>
<td>58.52</td>
<td>5.24*</td>
</tr>
<tr>
<td>Overall knowledge levels of sheep farmers</td>
<td>46.52</td>
<td>51.36</td>
<td>55.69</td>
<td>5.32*</td>
<td></td>
</tr>
</tbody>
</table>

* Significant at 5 per cent level

MPS= Mean Per cent Score

### 4.0 Extent of knowledge about improved sheep management technologies

A perusal of contents of Table 2 highlights that there was significant difference between different categories of the respondents with respect to their knowledge regarding improved sheep management technologies.

On the basis of above data it could be inferred that large sheep farmers had higher MPS of knowledge (58.52) as compared to the medium and small sheep farmers whose, MPS were 53.13 and 49.40, respectively. This finding led to the conclusion that large sheep farmers knew better management technologies as compared to medium and small sheep farmers. This is because of large sheep farmers had regular contact with veterinary extension personnel, good socio-economic status, higher education, participation in trainings and demonstrations, sheep fairs and other sheep development activities which helped them to get acquainted with the housing, shearing and health care and hygiene technologies related to sheep farming. During the study it was observed that most of the respondents used open yard for housing and housed all the categories of sheep together. Majority of the sheep farmers sheared the wool twice in a year with hand shearer/clipper in cooperative shearing shed. Majority of the respondents vaccinated their animals against Enterotoxaemia (E.T.) and Sheep Pox and few of them vaccinated their animals against Foot and Mouth Disease (F.M.D.) and Pestesdes Petitis Ruminants (P.P.R.) due to lack of awareness.

However, the findings are in contradiction to the findings of Daniel (1999) who reported that medium category of sheep farmers possessed highest MPS (30.0) than large (27.9 MPS) and small (27.08...
MPS) sheep farmers regarding sheep management technologies.

5.0 Over all extent of knowledge of sheep farmers about improved sheep production technologies

From the contents of Table 2, it could be inferred that there was significant difference between different categories of sheep farmers with respect to their knowledge regarding overall improved sheep production technologies as calculated value of ‘F’ (5.32) is greater than tabulated value at 5 per cent level of significance.

On the basis of data in Table 2 it could be concluded that large sheep farmers possessed higher MPS (55.69) as compared to medium (51.36 MPS) and small sheep farmers (MPS 46.52) regarding improved sheep production technologies.

The data presented in Table 2 show that the respondents were having medium knowledge in breeds and breeding and management technologies whereas, they possessed high knowledge in feeding technologies.

It was also observed that majority of the large sheep farmers knew better about different types of housing, major diseases of sheep, breeds of sheep for wool production, required quantity of concentrate, method of fodder conservation, correct method of shearing, recommended proportion of ewes and rams and scientific method of disposing the dead animals as compared to the medium and small sheep farmers. This might be due to the reason that the large sheep farmers had keen interest in attending the sheep development activities like training programmes, demonstrations etc., regular contacts with veterinary staff, more exposure to mass media of communication, good socio-economic status, good educational level as compared to other farmers i.e. medium and small sheep farmers.

The findings are also some what similar to the findings of Daniel (1999), Mathur (2001) and Meena (2005) who reported that knowledge levels of large respondents of sheep, cattle and buffalo keepers, respectively possessed higher MPS of knowledge as compared to medium and small categories of respondents.

CONCLUSION

With the results, it could be concluded that more than half of the sheep farmers possessed medium knowledge whereas, rest of the respondents were more or less distributed in high and low knowledge groups. It could be observed from the findings that large sheep farmers had higher knowledge as compared to small and medium sheep farmers with respect to improved sheep production technologies. A significant difference could also be observed in small, medium and large sheep farmers with respect to improved breeds & breeding and management technologies of sheep production.

REFERENCES