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Assessment of level of knowledge and relationship with socio-economic variables among cattle owners of Jodhpur district in Rajasthan

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Abstract

The present study was conducted on 80 cattle owners to assess the level of knowledge and to identify the relationship between the socio-economic variables and level of knowledge regarding scientific cattle management practices. The results of the study revealed that majority of the cattle owners (74.68%) were observed to be in moderate level of knowledge followed by high (14.37%) and low (10.93%) regarding overall scientific cattle management practices. The study regarding relationship between socio-economic variables and level of knowledge among the cattle owners revealed that education, socio-economic status, income from cattle rearing and mass media exposure had positive and significant relationship ($p < 0.01$ or $p < 0.05$), while land holding, cattle holding, gross annual income and extension contact had positive but non significant relationship and age had negative and non significant association with overall knowledge level of the respondents.

Keywords: Cattle owner, socio-economic variables, scientific cattle management practices, level of knowledge

1. Introduction

Indian economy is mainly based on agriculture, animal husbandry and related activities and more than 75 percent of the population in rural areas depending on it for their livelihood. India has enormous potential of livestock with a total population of 536.8 million, including cattle, buffaloes, sheep and goats. Cattle make up 36.04 percent of this number, buffaloes 20.47 percent, sheep 13.83 percent and goats make up 27.74 percent (Anonymous, 2020) [2]. The state of Rajasthan is really important for these animals. It is second in the country for buffaloes and sixth for cattle with a total of 136.93 lakhs and 139.37 lakhs, respectively. Out of the 139.37 lakhs of cattle 116.14 lakhs are indigenous and 23.23 lakhs are cross bred. The state of Rajasthan stands at second rank in the country with annual milk production 22.42 million tones and per capita availability is 834 gm (Anonymous, 2017-18) [1]. However the Indian economy and the livestock industry including cattle are not as productive as they could be. This is because many cattle owners do not use scientific practices to manage their animals (Kumar *et al.*, 2011) [6]. The livestock industry, including cattle needs to be improved so that cattle owners can make it more profitable one. In this context, it becomes important to assess the knowledge level of cattle owners regarding scientific cattle management practices (Gour *et al.*, 2015) [5], so that the existing knowledge assessed and required knowledge could be ascertained. This means that cattle owners need to start using methods, such as proper

health care, feeding, breeding and management. To do this we need to understand what cattle owners already know about these scientific practices so that we can teach them what they need to learn. That is why this study was done, to look at what cattle owners, in the Jodhpur district of Rajasthan know about scientific cattle management and how this knowledge is related to their economic situation.

2. Materials and Methods

The study was conducted in purposively selected Jodhpur tehsil of Jodhpur district of Rajasthan. This was chosen as the Pashu Vigyan Kendra of Rajasthan University of Veterinary and Animal Sciences, Bikaner works there to help livestock and their owners. Four villages. Keru, Beru, Narwa and Daizer. were randomly selected from Jodhpur tehsil. From each villages, 20 families with cattle were randomly chosen. So total 80 respondents who mainly have cattle for their livelihood were selected and interviewed to assess the level of knowledge and how it relates to socio-economic variables. The level of knowledge of cattle owners was measured using a three-point scale i.e. correct, partially correct and incorrect and scores of 2, 1 and 0 were given for each respectively. The knowledge scores for areas like health care, feeding, breeding and management were added up. This was done to find out the level of knowledge, in each area. The areas were then prioritized based on the knowledge score obtained.

3. Results and Discussion

3.1 Level of Knowledge regarding scientific cattle management practices: The data presented in Table 1 indicated that majority of the respondents (53.75%) had moderate followed by high (25%) and low (21.25%) overall knowledge regarding scientific cattle management practices. Findings also revealed that majority of the cattle owners i.e. 56.75, 51.25, 60 and 52.5 per cent were observed to be in moderate level of knowledge regarding health care, feeding, breeding and management practices, respectively. This might be because many of them were in regular contact with the Pashu Vigyan Kendra of the districts and the nearby

veterinary hospital, Krishi Vigyan Kendra etc for their queries and doubts, they acquired the knowledge on various aspects of cattle management from the training programmes organized by them. Solanki *et al.* (2011) ^[12] reported in their study that 56 per cent cattle owners belonged to moderate knowledge category regarding cattle feeding practices and Sabapara *et al.* (2013) ^[9] found that majority (73.5%) of dairy farmers had medium knowledge about improved healthcare practices. Shekhawat *et al.* (2013) ^[11] reported that majority (70%) of the animal owners possessed medium level of knowledge followed by low (17.34%) and high (12.66%).

Table 1: Distribution of the respondents according to their level of knowledge regarding scientific cattle management practices N=80

S. No.	Scientific cattle management practices	Knowledge level	% Respondents
1.	Health care	Low (< 0.53)	11 (13.75)
		Moderate (0.53-0.75)	47 (56.75)
		High (> 0.75)	22 (27.5)
2.	Feeding	Low (< 0.36)	14 (17.5)
		Moderate (0.36-0.71)	41 (51.25)
		High (> 0.71)	25 (31.25)
3.	Breeding	Low (< 0.6)	26 (32.5)
		Moderate (0.6 – 0.86)	48 (60)
		High (> 0.86)	6 (7.5)
4.	Management	Low (< 0.34)	19 (23.75)
		Moderate (0.34 – 0.6)	42 (52.5)
		High (> 0.6)	19 (23.75)
5.	Over all	Low (< 0.48)	17 (21.25)
		Moderate (0.48 – 0.76)	43 (53.75)
		High (> 0.76)	20 (25)

Data in parentheses indicate per cent respondents

3.2 Relationship between socio-economic variables and level of knowledge

It was observed from the Table 2 that socio-economic variables i.e. education, socio- economic status, income from cattle rearing and mass media exposure had positive and significant relationship either at 0.01 or 0.05 level of probability, while land holding, cattle holding, gross annual income and extension contact had positive but non significant relationship and age had negative and non significant association with overall knowledge level of the respondents. This prove that as the literacy level, socio-economic status, income from cattle rearing and mass media exposure rises, overall knowledge level of the respondents regarding scientific cattle management practices increases

and influenced them to acquire more information. As the age of the respondent increases, they are more dependent on the traditional practices and reluctant to adopt the improved technologies regarding scientific cattle management practices. Sharma *et al.* (2023) ^[10] reported that diverse socio-economic background and educational levels among farmers influencing their farming decisions. They also reported that education, training participation, social participation and scientific orientation as pivotal predictors of knowledge level in dairy management. The findings of the study are in conformity with the findings of Biswas *et al.* (2015) ^[3], Mishra *et al.* (2017) ^[7], Panchbhai *et al.* (2017) ^[8] and Dabhi *et al.* (2019) ^[4].

Table 2: Distribution of cattle owners according to correlation between independent variables and knowledge regarding scientific cattle management practices N=80

S. No.	Variables	Health	Feeding	Breeding	Management
1.	Age	-0.175	-0.157	-0.146	-0.136
2.	Education	0.407**	0.337**	0.243*	0.306**
3.	Land holding	0.095	0.035	0.173	0.097
4.	Socio-economic status	0.318**	0.273*	0.283*	0.274*
5.	Cattle holding	0.132	0.193	0.251*	0.175
6.	Income from cattle rearing	0.276*	0.262*	0.174	0.307**
7.	Gross annual income	0.107	0.007	0.072	0.125
8.	Extension contact	0.010	0.255*	0.097	0.200
9.	Mass media exposure	0.170	0.262*	0.242*	0.223*

*. Correlation is significant at the 0.05 level

**. Correlation is significant at the 0.01 level

4. Conclusion

The findings of the study concluded that majority of the respondents had moderate level of knowledge followed by high and low regarding overall scientific cattle management practices. A plausible conclusion would be that the cattle owners of Jodhpur district would require more information on various aspects especially on breeding followed by management, feeding and health care. More emphasis should be given to impart trainings accordingly, so that they improve their knowledge, skill and attitude for scientific cattle management to make the cattle farming more profitable and viable one. Findings further concluded that level of knowledge among the cattle owners had positive relationship with most of the socio-economic variables i.e. education, land holding, socio-economic status, cattle holding, income from cattle rearing, gross annual income, extension contact and mass media exposure. It might be because as the education and socio-economic status increases, which in turns created interest among them to acquire the latest technologies regarding scientific cattle management.

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