RESEARCH NOTE

Assessing Knowledge of Tribal Farmers Regarding Scientific Animal Husbandry Practices

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ABSTRACT

The present study was conducted purposively in Mandla and Seoni district of Madhya Pradesh as these two districts have a sizeable proportion of tribal population. The final sample was comprised of 10 villages and 150 tribal livestock owners as respondents (n=150). The data shows that overall herd composition the study also shows that majority of the respondents reared poultry (40%), followed by cattle (26%), goats (25%), pig (5%) and buffalo (4%), respectively. Date also indicates that majority of the respondents (84.67%) gave first preference to relatives, followed by neighbour (62.67%), gram sevaks (34.67%), veterinary doctors (15.33%), radio (11.33%), newspaper (8.00%) and television (6.00%), respectively. Data pertaining to Knowledge level reveals that majority (64.37%) of the respondents had low level of knowledge followed by medium level of knowledge 35.63 per cent. None of the respondent had high level of knowledge regarding management, breeding, feeding and health care practices of animal husbandry. The relationship analysis reveals that age of the tribals farmers had negative and significant correlation (r= -0.141) with knowledge level about animal husbandry practices at 5 per cent level of significance while education of farmers had positive and significant (0.184) relationship with knowledge level.The independent variables namely, herd size (0 .324) and information source utilization (0.173) by the tribals were found to have positive and significant correlation at 1 per cent level of significance.

Key words: *Tribal; Livestock; Management; Breeding; Feeding; Health care practices;*

Central India especially Madhya Pradesh (M.P.), has a large ratio of tribal population such as Gond, Baiga, Korku, Bharia, Bhilala and Saharia. About 8 per cent of the Indian population belongs to a category listed as "Scheduled Tribes" enumerated in the schedule to article 342 of the constitution of India. The crop enterprise alone could not help them to increase their income and employment because of poor productivity, low availability of per capita arable land and also lack of other income generating avenues. Hence, there is heavy dependence of tribal households on animal husbandry practices (*Meganathan et al., 2010*). It is also believed that tribal livestock owners are unskilled and have primordial knowledge in animal husbandry practices (*Avinashilingam et al., 2010*). They have not been enriched by the knowledge generating from the research institutions or extension centers. Thus, the tribal livestock owners are not able to exploit the potential of their livestock and sometimes suffer from the loss of their livestock, leading to poverty. Knowledge as a body of understood information possessed by an individual or by a culture (*English and English, 1958*) is one of the important components of the adoption behaviour. Knowledge about various animal husbandry practices are the pre-requisite for acceptance and adoption of scientific practices. Considering the above facts, the present study was undertaken with the following objectives:

i. To study the socio-economic profile and the existing status of animal husbandry practices followed by tribal livestock owners.
ii. To determine the relationship between antecedent characteristics of farmers and knowledge regarding animal husbandry practices.

METHODOLOGY

The present study was conducted purposively in Mandla and Seoni district of Madhya Pradesh as these

two districts have a sizeable proportion of tribal population. Five villages were selected randomly from each district (i.e. Mandla and Seoni) for the present study. Initially, an exhaustive list of tribal households was prepared from the selected villages. Then, from each district a total sample of 75 tribal livestock owners were selected on the basis of Random Proportionate Sampling (RPS) method. Thus, the final sample was comprised of 10 villages and 150 tribal livestock owners as respondents (n=150). The following variables namely Age, education, family size, family type, tribe, land holding, occupation, herd size, information source-utilization and annual gross income were included in the study.

RESULTS AND DISCUSSION

Socio-economic profile of the tribal livestock owners: The tribal livestock owners according to their age were categorized into three groups, i.e., young, middle and old. The data presented in Table 1 reveals that majority of the tribal livestock owners (72.00%) belonged to middle age group, while 14.66 per cent of the respondents were from old age group and 13.33 per cent hailed from the middle age group. The present study indicates that majority of the tribal livestock owners were middle aged (in between 32-53 years of age). Thus, while planning programmes in animal husbandry the aim should be to include the middle age group of interested person as they are more enthusiastic and more malleable to change. It can be observed that majority of the tribal livestock owners (35.33%) were illiterate, followed by 30 per cent and 24 per cent were educated upto primary and middle school category, respectively. Only 10.67 per cent respondents were educated upto high school level and none of the respondent were educated graduate and above level. Similar finding is reported by *Bashir et al. (2011)*. Thus, in order to popularize the animal husbandry practices among tribal people it is very necessary to make more extension activities to motivate the respondents to adopt new scientific/ recommended practices.

Further majority of the respondents (69.33%) belonged to medium family size category followed by 24 per cent tribal livestock owners had small family size and only 6.67 per cent fell in the category of large family size and 87.33 per cent farmers belonged to joint family, whereas, only 12.67 per cent belonged to nuclear family. Regarding category of tribe 92 per cent respondents belonged to Gond tribe, whereas, only 6.67 per cent and 1.33 per cent belonged to Baiga and Bhil tribe, respectively. A perusal of Table 2 points out that 22 per cent of the tribal livestock owners was landless. The majority of the respondents (64.67%) possessed 1-2 hectare of land and belonged to small farmers' category, while, 13.33 per cent of the respondents had less than 1 hectare of land and fell in the marginal farmers' category. The average land holding of tribal livestock owners is less than 2 hectare due to fragmentation of land and population explosion. None

Table 1. SE profile of the tribal livestock owners

Variable	Category	No.	%
Age	Young (< 32 years)	20	13.33
	Middle (32-53 years)	108	72.00
	Old (> 53 years)	22	14.67
Education	Illiterate	53	35.33
	Primary school	45	30.00
	Middle school	36	24.00
	High school	16	10.67
	Graduate and above	0	0.00
Family size	Small (< 4 members)	36	24.00
	Medium (4-8 members)	104	69.33
	Large (> 8 members)	10	06.67
Land holding	Landless (No land)	33	22.00
	Marginal (< 1 ha.)	20	13.33
	Small (1-2 ha.)	97	64.67
	Medium (2.1-4 ha.)	0	0.00
	Large (> 4 ha.)	0	0.00
Family type	Nuclear	19	12.67
	Joint	131	87.33
Tribe	Gond	138	92.00
	Baiga	10	06.67
	Bhil	2	01.33
Occupation	Labour	134	89.33
	Agriculture	13	08.67
	Animal husbandry	2	01.33
	Business	1	00.67
	Service	0	00.00
Annual income	Low (< Rs. 8600)	21	14.00
	Medium (Rs.8600-23373)	113	75.33
	High (> Rs. 23373)	16	10.67
Information source utilization	Relatives	127	84.67
	Neighbour	94	62.67
	Gram sevak	52	34.67
	Veterinary doctor	23	15.33
	Radio	17	11.33
	Newspaper	12	08.00
	Doordarshan	09	06.00

of the respondent belonged to medium and large farmers' category and majority of the tribal livestock owners (89.33%) were labourer. Agriculture provided occupational livelihood to 8.67 per cent of the respondents, whereas, 1.33 per cent respondents earned through animal husbandry. The main occupation of tribal livestock owners was labour, however almost all the tribal households kept livestock as subsidiary occupation, which corresponded to the finding of *Rao (2013)*.

Furthermore regarding herd size of animals kept by tribals indicate that 65.89 per cent of the respondents had herd size of 1-3 cattle followed by 14.67 per cent and 10 per cent had herd size of 4-7 cattle and more than 7 cattle, respectively. Only 14.67 per cent respondents had 1-3 buffalos. The study further shows that the tribal livestock owners had 1-3 goats (51.33%), 1-3 pigs (9.33%) and 1-3 poultry (38%). Surprisingly, none of the respondent was involved in sheep rearing. Regarding overall herd composition the study also shows that majority of the respondents reared poultry (40%), followed by cattle (26%), goats (25%), pig (5%) and buffalo (4%), respectively. The study shows that all the respondents kept some livestock and majority of them had a small herd size which is in consonance, annual income, majority of the respondents (75.33%) were between Rs. 8600-23373 followed by 14 per cent had an income of less than Rs. 8600, while a mere 10.67 per cent had an income of more than Rs. 23373. The rank given by tribal livestock owners to the different sources of information utilized is also presented in Table 02. The Table indicates that majority of the respondents (84.67%) gave first preference to relatives, followed by neighbour (62.67%), gram sevaks (34.67%), veterinary doctors (15.33%), radio (11.33%), newspaper (8.00%) and television (6.00%), respectively. The overall information source utilization of respondents was poor, which is in contrary to the findings of *Meganathan et al. (2010)*. Relevant information on animal husbandry practices, if properly delivered will help the livestock owners to prevent the diseases affecting livestock as well as to decide on taking them for treatment based on their importance.

Table 2. Distribution of respondents according to overall knowledge level in animal husbandry practices

Variable	Category	No.	%
Overall knowledge level	Low (< 33.33)	96	64.37
	Medium (33.33-66.66)	54	35.63
	High (>66.66)	00	00.0

Knowledge level of tribal livestock owners in animal husbandry practices: The data presented in Table 2 reveals that majority (64.37%) of the respondents had low level of knowledge followed by medium level of knowledge 35.63 per cent. None of the respondent had high level of knowledge regarding management, breeding, feeding and health care practices of animal husbandry.

Knowledge is a pre-requisite to the proper utilization of innovation by the livestock owners, and is ultimately linked with the increased socio-economic status of the livestock owners. The study shows that tribal livestock owners possessed low level of knowledge in terms of livestock management, feeding, breeding and health care practices. These findings are in consonance with the findings of *Khandi et al. (2010)* and *Shekhawat et al. (2013)*. Several studies show that the information system of poor livestock owners has not been enriched by the knowledge emanating from research institutions or extension centre. Because of this 'not so efficient dissemination of knowledge' the farmers are not able to exploit the potential of their livestock and sometimes suffer from the loss of their livestock, leading to poverty. Dissemination of knowledge through appropriate delivery methods can play a part in addressing these needs.

Table 3. Correlation between personal attributes and knowledge level about animal husbandry practices

Independent Variables	'r' value
Age (X1)	-0.141*
Education (X2)	0.184*
Family size(X3)	0.056
Family type(X4)	0.045
Tribe (X5)	0.012
Land Holding (X6)	0.151
Occupation (X7)	-0.042
Herd size (X8)	0 .324**
Information source-utilization(X9)	0.173**
Annual gross income(X10)	0.189*

*P<0.05 ; **P<0.01

Correlation between Antecedent characterstic and knowledge level about animal husbandry practices of tribal farmers : The relationship analysis given in Table 3 reveals that age of the tribals farmers had

negative and significant correlation (r= -0.141) with knowledge level about animal husbandry practices at 5 per cent level of significance while education of farmers had positive and significant (0.184) relationship with knowledge level. The findings were in accirrdance with the findings of *Khandi et.al. (2010)*. The independent variables namely, herd size (0 .324) and information source utilization (0.173) by the tribals were found to have positive and significant correlation at 1 per cent level of significance. It is well established fact that frequency of information source utilization was positively related with knowledge of farmers. With respect to annual gross income of the farmers was found to have positive and significant correlation with knowledge level at 5 per cent level of significance.

CONCLUSION

Knowledge about various Animal Husbandry (A.H.) practices is the pre-requisite for acceptance and adoption of modern technology. Tribal livestock owners can adopt new technology if they have knowledge about it. So, exposure to and use of appropriate information by poor livestock owners will help them to improve knowledge enabling them to obtain more output from their livestock. Thus, a realistic planning for education and training need to be done to enhance the knowledge level of tribal people pertaining to animal husbandry practices.

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