Ind. Res. J. of Ext. Edu.-Vol. 2, No. 2, July-2002

A STUDY ON KNOWLEDGE AND ADOPTION OF IMPROVED CATTLE REARING PRACTICES BY THE FARMERS IN CHHATTISGARH

R.K. Tiwari[1], J.P. Bisen[2] & P.N. Sharma[3]

Dairying is an age-old practice by majority of farmers in India. Number of high and low milk producing cattle is found in different part of country. Various surveys indicate that the average milk intake is 20 ml\day in eastern India against 400 ml\day in northern India. The trend in the per capita availability of milk in India shows that it was only 128.98 g/day during 1950-51, which increased to 187.85 g/day in 1994-95. But this enhancement is not encouraging and still there is a wide scope to increase the dairy production in order to feed the ever growing population as per the recommendation of health physician (220 g/day). Indian dairying is characterized with unfortunate gap between researches and adoption. In Chhattisgarh state also there is large chunk of cattle population but most of them are unproductive or less yielding. Adoption of recommended cattle rearing is not as simple as it appears from its face value. The farmers generally do not want to take the risk; hence, time lag of adoption of an innovation in association with the speed and rate of adoption is always an interesting and important field of investigation so long as innovations are forthcoming. With a view to overcome the problem of poor availability of milk the present investigation was designed to study the knowledge and adoption of improved cattle rearing practices by the farmers of Chhattisgarh with following objectives :

1. To study the socio economic profile of rural cattle rearers.
2. To determine the knowledge and adoption gap between existing and recommended cattle rearing practices.

METHODOLOGY

The study was conducted in Dharsiwa block of Raipur district of Chhattisgarh state. The block was selected purposively as it has the maximum number of cattle than the other blocks. The whole block was divided into three stratum according to the distance from the block headquarter. Ten percent RAEO's circles were selected randomly from each stratum. A list of farmers who have five or more milch animals was prepared and 10 per cent farmers were selected randomly and considered as respondents. Thus total respondents were 106. Data were collected by personal interview method by using a structured interview schedule, which was pre-tested and designed according to the local dialect.

RESULTS AND DISCUSSION

(A) Socio economic profile of cattle rearers– The socio economic characteristics of cattle rearers in the study area reflect that about 64.16 percent respondents belonged to 26 to 50 years age group (table 1). This age group of farmers had high attitude towards learning new ideas, but majority of them (70%) are either illiterate or having education status up to primary level. This indicated that the dairy farmers needed more intensive efforts in educating the about modern cattle rearing practices. Almost all the categories of farmers were residing in the study area but other backward caste farmers were in majority (74%). There were almost equal proportions of joint and nuclear families residing in the study area. The family size was 6-10 members who represent about

1, 2 & 3. Department of Agricultural Extension, IGAU, Raipur (C.G.),

Table 1. Distribution of respondents according to their socio-economic characteristics

(n=106)

S.No.	Characteristics	Frequency	Percentage
1.	*Age (in year)*		
	Below 25	6	5.66
	26 to 50	68	64.16
	Above 50	32	30.18
2.	*Education*		
	Illiterate	16	15.10
	Primary	58	54.71
	High School	26	24.52
	Above high school	6	5.67
3.	*Caste*		
	Scheduled Castes	21	19.81
	Scheduled tribes	2	1.89
	Other Backward castes	78	73.58
	General	5	4.72
4.	*Type of family*		
	Nuclear	55	51.89
	Joint	51	48.11
5.	*Family size*		
	Up to 5 members	21	19.81
	6 to 10 members	55	51.89
	11 to 15 members	19	17.92
	Above 15 members	11	10.38
6.	*Land holding (acre)*		
	Nil	3	2.83
	Up to 2.5	15	14.15
	2.6 to 5.0	26	24.53
	5.1 to 10	26	24.53
	More than 10	36	33.96
7.	*Social participation*		
	Nil	84	79.24
	Low	14	13.20
	Medium	4	3.78
	High	4	3.78
8.	*Annual income (Rs.)*		
	Up to 12,500	5	4.72
	12,501 to 25,000	5	4.72
	25,001 to 50,000	30	28.20
	50,001 to 75,000	13	12.26
	75,001 to 1,00,000	22	20.75
	Above 1,00,000	31	29.25
9.	*Animal shed*		
	Open	14	13.20
	Earthen (Kachcha)	80	75.48
	Concrete (Pucka)	12	11.32

52 percent of the respondents Among the selected respondents only 3 percent did not hold any land, they were absolutely either agricultural labours or dairy man. A major group of farmers (34%) owned more then 10 of land whereas 14 percent respondent has up to 2.5-acre land. Rest of the respondents had 2.6 to 10 acres of land. Most of the selected respondents (92 %) did not involve in any social organisation like panchayat, yuva mandal etc., whereas only 8 percent respondents were involve in different organisation from where recent informations regarding different welfare activity of government and other organisation are being carried out towards the rural mass. A large group of respondents (76%) had earthern animal shed whereas concrete shed was available with 11 percent farmers. About 13 percent respondents had no shed to their cattle and the cattle were kept in open space during heavy rainfall period, chilling winter as well as during hot summers. Majority of the respondents had earned some income. About 93 per cent respondents earned 25,000 to more than 1 lakh rupees annually, out of which about 50 percent respondents had earned more than Rs. 75,000 annually. This indicated that the respondents' income was quite high from dairy and agriculture enterprises. They were capable of investing some amount in adoption of improved cattle rearing practices, but intensive extension efforts are still needed to educate them, as most of them were illiterate. Nakade (1971) while working at Jabalpur also indicated that the socio economic factors like age, education, size of land holding and social participation had significant effect on the increase of dairy milk production.

(B) Knowledge and adoption gap between exiting and recommended cattle rearing practices–Extent of knowledge of the dairying was tested by knowledge index, which was divided in low, medium and high category (Table2). About 90 percent of the respondents had medium knowledge of improved animal husbandry practices and about 8 percent respondents were having high knowledge of dairying. But the adoption had reverse pattern. The adoption of improved animal husbandry practices was tested by constructing an adoption index. None of the respondents belonged to high adoption index, whereas, 15 percent of the respondents belonged to low adoption index category. Majority (85%) of the respondents belonged to medium category of adoption index.

Table 2. Distribution of respondents according to their extent of knowledge and adoption about improved animal husbandry practices

S.No.	Category	Frequency	Percentage
A.	*Extent of knowledge*		
	Low (Up to 33KI)	3	2.83
	Medium (34 to 66KI)	95	89.62
	High (Above 66KI)	8	7.55
B.	*Extent of adoption*		
	Low (Up to 33AI)	16	15.10
	Medium (34 to 66AI)	90	84.90
	High (Above 66AI)	00	00.00

The knowledge gap regarding selected animal husbandry practices of respondent revealed that the maximum gap (63%) existed in the disease control practices (Table -3). Sharma (1967) observed that two-third of the respondents in Haryana did not know the contagious nature of livestock disease. Only literate people know something about contagious disease. The gap of the knowledge of feeding, breeding and management practices was 50, 47and 32 percent, respectively. The total average gap of knowledge regarding all the above four animal husbandry practices was calculated to be 47 percent. Gill and Singh (1977) also estimated the professional knowledge of the dairy farmers in Ludhiana (Punjab). They found that knowledge of dairy farmers in breeding, feeding, housing and animal health was low. Their knowledge in the management and marketing of milk were at medium level only. The adoption gap of each selected animal husbandry practices revealed that maximum adoption gap (75%) existed in the improved breeding followed by management (54%). The overall adoption gap of 58 percent was recorded in different improved animal husbandry practices. Education plays significantly positive rule in adoption of improved animal husbandry practices. Increase in the size of holding, income, number of animals and knowledge of improved animals husbandry practices also increased the adoption of improved animal husbandry practices. These factors had significant and positive correlation with adoption of improved animal husbandry practices. Therefore efforts should be made to improve the above factors to get better adoption pattern of improved animal husbandry practices. Tyagi (1975) reported that adoption of breeding, feeding, disease control and management practices were influenced by the heard size, knowledge, family education, firm size and sale of milk.

Table 3. Knowledge and adoption gap about improved animal husbandry practices

S.No.	Practices	MOS	OMS	Extent of Knowledge/ Adoption (%)	Gap (%)	Rank
A.	*Knowledge*					
	Improve feeding	16	8.06	52.92	47.08	III
	Improved feeding	12	6.35	50.35	49.65	II
	Improved disease control	15	5.63	57.55	62.45	I
	Management practices	32	21.61	67.75	32.25	IV
	Overall knowledge	*75*	*39.25*	*52.33*	*47.66*	
B.	*Adoption*					
	Improved feeding	12	6.97	58.10	41.90	III
	Improved breeding	6	1.49	24.84	75.16	I
	Improved disease control	19	6.06	67.40	32.60	IV
	Management practices	48	22.00	05.83	54.17	II
	Overall adoption	*75*	*31.48*	*41.97*	*58.03*	

OMS= Obtainable Mean Score MOS= Mean Obtained Score

CONCLUSION

The study was conducted in Dharsiwa block of Raipur district of Chhattisgarh state with a view to understand the knowledge and adoption of improved cattle rearing practices by the farmers. It can be concluded from this study that there exited a wide gap between the milk production of improved and local breeds. The maximum knowledge gap was found in the disease control

measures, while the maximum adoption gap was recorded in the improved breeding practices. It could be suggested that the knowledge of dairy farmers should be increased by proper education and should be motivated for increasing the adoption level of improved animal husbandry practices.

REFERENCES

1. Gill, S. S. and Singh, P. (1977). Professional knowledge of dairy farmers of
2. Ludhiyana District. *Ind. Jr. Extn. Edn.* 13 (3): 77-79.
3. Nakade, M. G. (1971). A study of the impact of K.V. scheme Jabalpur on
4. Cattle owners around Jabalpur. M. Sc. Thesis (unpublished), JNKVV, Jabalpur.
5. Sharma, S. N. (1967). A study of job preference of animal husbandry extension officers in Punjab. M. Sc. Thesis (unpublished), HAU, Hissar.
6. Tyagi, K. C. (1975). Factors influencing the adoption of dairy innovation by
7. Farmers of ICDP, Karnal. Paper presented at summer institute, NDRI, Karnal on modernization of dairy farming.

❖ ❖ ❖