

## ADOPTION GAP IN IMPROVED TECHNOLOGY OF ANIMAL HUSBANDRY

Pyar Mohammad Khan<sup>1</sup> & Jitendra Chauhan<sup>2</sup>

### ABSTRACT

*Animal husbandry is the main subsidiary occupation of Rajasthan state as well as rural India. However the milk production is far from satisfactory. This investigation was therefore undertaken to find out the adoption gap in improved technology of animal husbandry among various categories of farmers, to determine constraints faced by the farmers in animal management and to ascertain the relationship of certain characteristics of farmers on the adoption of new technology of animal husbandry. The investigation was undertaken in district Bhilwara. Out of total 11 panchayat samities two panchayat samities were selected randomly and from each panchayat samiti two villages were randomly selected. Following random procedure in all 150 farmers were selected for the study. The study revealed that the extent of gap in adoption of improved animal husbandry practices was quite high among all the respondents. The major constraints in the adoption of new practices of animal husbandry were lack of knowledge of improved A.H. practices, Lack of financial & material resources, Poor irrigation facility to grow green fodder, High cost of commercial concentrates and dry fodder and Non-availability of veterinary health care services respectively. Except age, all the independent variables were found to be significantly and negatively correlated with the gap in adoption among all the categories of farmers.*

**Keywords :** Adoption gap, Improved Technology of Animal Husbandry, Independent Variables.

### INTRODUCTION

It has been said that Rajasthan may be considered as Denmark of India. The livestock population is nearly 11 per cent of the country's total population. The agro-climatic conditions make this state fit for livestock industry. Even though the Rajasthan state is rich in total animal strength yet the progress of animal husbandry does not seem to be satisfactory. Adoption of innovations varies from farmers to farmers and also from among different categories of farmers' viz. big, small and marginal farmers. Several factors have been considered to be correlated for such poor productivity viz. deterioration of the breed gradually, poor fertility, poor breeding, feeding and management practices, poor knowledge about improved animal husbandry practices and many other characteristics of the farmers rearing the cattle. Despite several technologies development and technology transfer efforts being made, hardly 30 percent of the available improved animal husbandry practices are being put in to practice at the farmers level. It is, therefore, of paramount importance to develop a suitable extension education strategy for the rapid dissemination of improved animal husbandry technologies among various categories farmers rearing cattle throughout the country. With this point in view the present investigation was undertaken with the following specific objectives :

1. To determine the gap in adoption of improved animal husbandry practices among various categories of farmers.
2. To find out the constraints faced by the farmers in the adoption of improved technology of animal husbandry
3. To analyze the relationship between certain characteristics of cattle keepers and their level of gap in adoption of improved animal husbandry technology.

### METHODOLOGY

The investigation was undertaken in district Bhilwara, Rajasthan. Following multistage sampling procedure total no. Of 150 farmers engaged in animal husbandry were selected for the study, comprising 50 farmers from each category viz. big, small and marginal from ten villages of two Panchyat Samities out of total 11 Panchyat Samities in the district. The data were collected by personal interview with the help of schedule especially constructed for the purpose. For analysis and interpretation, the appropriate statistical measurements were used.

Technological gap index developed by the 'All India Coordinated Research Programme in Extension Education', I.A.R.I., New Delhi (Bangarva et. al. 1993)

1. Asso. Prof. (Ext. Edu.) KVK, Bhilwara (Raj.)
2. Reader (Ag. Extension) RBS College, Bichpuri, Agra (U.P.)

was used to measure the technological gap. The formula used was :

$$\text{Technological Gap Index} = \frac{R - A \times 100}{R}$$

Where R = Recommended Practices

A = Practice actually adopted by the farmers

The technological gap index was treated in this study as dependent variable. In all 14 independent variables were included in this study in order to analyze their relationship with the dependent variable technological gap index. These independent variables were Age, Income, Extension participation, Knowledge of new animal husbandry practices, Caste, Education, Farm Power, Social participation, Social Economic Status, Level of aspiration, Risk preference, Economic motivation, Cosmo politeness and Attitude towards new farm practices. Zero-order correlation coefficient was used to determine the relationship between dependent and independent variables.

## RESULTS AND DISCUSSION

**Extent of gap in adoption of improved animal husbandry practices**—The frequencies distribution of the respondents on the basis of their technological gap index is presented in table 1.

**Table 1. Distribution of respondents according to their technological gap index about improved animal husbandry practices. (N=150)**

Categories	Marginal Farmers (N=50)		Small Farmers (N = 50)		Large Farmers (N=50)		Total N = 150	
	No.	%	No.	%	No.	%	No.	%
High	36	72	34	68	28	56	98	65.33
Medium	12	24	09	18	14	28	35	23.33
Low	02	04	07	14	08	16	17	11.33

It is evident from table 1 that the adoption gap was found higher in case of marginal farmers than small and large farmers. Further, the adoption gap was higher in small farmers than that of large farmers.

**Practice wise extent of gap in the adoption of improved animal husbandry practices**—The results of the study with regards to the practice wise extent of gap in the adoption of improved animal husbandry practices have been presented in table 2.

The results regarding adoption gap of big, small and marginal farmers presented in table 2 indicates that all most all the categories of farmers had high adoption gap in the improved animal husbandry practices. It is also evident from the findings of this study that the

adoption gap was found to be higher in case of marginal farmers than small farmers and at the same time the adoption gap of small farmers was higher than big farmers in all the selected six improved animal husbandry practices.

**Table 2. Adoption gaps of big, small and marginal farmers about improved animal husbandry practices**

S. No.	Improved practices	Marginal Farmers (N = 50) Adoption Gap MPS	Small Farmers (N = 50) Adoption Gap MPS	Large Farmers (N = 50) Adoption Gap MPS
1.	Breeding	88.60	82.70	73.10
2.	Feeding	79.70	70.20	62.50
3.	Housing	64.40	61.30	57.80
4.	Health Management	85.60	78.40	65.00
5.	Clean Milk Production	74.30	68.50	61.20
6.	Insurance of Animals	95.10	94.50	91.00

**Constraints faced by farmers in the adoption of new practices of animal husbandry**—The farmers were asked to express constrains faced by them in the adoption of new practices of animal husbandry. The results with this regard of pooled sample of farmers are presented in Table 3.

**Table 3. Constraints faced by the farmers in adoption of new practices of animal husbandry (N=150)**

S. No.	Constraints	Frequency	Percentage
1	Lack of financial & material resources	140	93.33
2	Risk of uncertainty in animal management	70	46.66
3	Difficulties in getting loans from bank	63	42
4	Lack of knowledge of improved A.H. Practices	145	96.66
5	Lack of technical guidance from the experts	74	49.33
6	Non-availability of veterinary health care services	125	83.33
7	Non-availability of quality fodder & concentrate	68	45.33
8	Lack of marketing facilities	79	52.66
9	Low prices for milk	65	43.33
10	Low prices of by selling of animals	67	44.66
11	High cost of commercial concentrates and dry fodder	133	88.66
12	Spoilage of milk during transportation	80	53.33
13	Lack of knowledge regarding value addition of animal produces	83	55.33
14	Poor irrigation facility to grow green fodder	138	92
15	Poor facilities of artificial insemination	87	58

Perusal of Table 3 indicated that the major constraints as perceived by pooled sample of big, small and marginal farmers in the adoption of new farm practices of animal husbandry were lack of knowledge of improved A.H. practices (96.66 per cent.), Lack of financial & material resources (93.33 per cent.), Poor irrigation facility to grow green fodder (92 per cent.), High cost of commercial concentrates and dry fodder

(88.66 per cent.) and Non-availability of veterinary health care services (83.33 per cent.)

**Correlates of Gap in Adoption**—In all there were 14 independent variables in the study. The relationship of these 14 independent variables with the dependent variable gap in adoption of farmers was found by computing correlation coefficient (r). The results have been presented with this regard in table 4.

**Table 4. Correlates of gap in adoption of improved Animal Husbandry Practices**

S. No.	Characteristics	Correlation coefficient ('r')		
		Large farmers	Small farmers	Marginal farmers
1.	Age	-0.314NS	0.18NS	0.15NS
2.	Income	-0.35**	-0.80**	-0.61**
3.	Extension participation	-0.81**	-0.73**	-0.52**
4.	Knowledge of improved practices of A.H.	-0.80**	-0.74**	-0.67**
5.	Caste	-0.40**	-0.42**	-0.30**
6.	Education	-0.47**	-0.65**	-0.37**
7.	Farm Power	-0.24*	-0.40*	-0.36*
8.	Social participation	-0.54**	-0.70**	-0.57**
9.	Socio-economic status	-0.84**	-0.85**	-0.81**
10.	Level of aspiration	-0.65**	-0.65**	-0.65**
11.	Risk preference	-0.89**	-0.81**	-0.84**
12.	Economic motivation	-0.59**	-0.76**	-0.52**
13.	Cosmopolitaness	-0.53**	-0.43**	-0.51**
14.	Attitude towards new farm practices	-0.77**	-0.67**	-0.76**

\*\* Significant at 1% level.

\* Significant at 5% level.

NS-Non-Significant

The result of zero order correlation coefficient presented in table 3 indicated that out of the 14 personal, socio-economic and psychological independent variables, 13 variables were found to be significantly and negatively related with the gap in adoption of improved animal husbandry practices except age in all the three categories of farmers. This indicated that with the increase in the independent variables the gap in adoption

of improved animal husbandry practices decreased correspondingly. However, age had nothing to do with the gap in adoption amongst all the categories of farmers' viz. large, small and marginal farmers.

## CONCLUSION

The findings of the study concluded that overall extent of gap in adoption of improved animal husbandry practices was quite high among all the categories of farmers. Practice wise gap in adoption of improved animal husbandry practices was also found high among all the categories of farmers. Difference was also observed in the gap in adoption from practice to practice. Adoption gap was found higher among marginal farmers then small farmers and at the same time the adoption gap was found to be higher among small farmers than large farmers. The major constraints as perceived by pooled sample of big, small and marginal farmers in the adoption of new farm practices of animal husbandry were lack of knowledge of improved A.H. practices, Lack of financial & material resources, Poor irrigation facility to grow green fodder, High cost of commercial concentrates and dry fodder and Non-availability of veterinary health care services. Out of 14 selected independent variables, except age, all the 13 independent variables were found to be significantly and negatively correlated with the gap in adoption among all the categories of farmers. This, for example, indicated that with the increase in the knowledge about new animal husbandry practices of the farmers there was corresponding decrease in the gap in adoption. The findings of this investigation in tern will help the extension mechanism to follow a viable strategy for technology transfer from research to the ultimate users.

## REFERENCES

1. Gill S.S. and Singh P.(1977). "Professional Knowledge Dairy Farmers of Ludhiyana District". Indian J. of Extn. Edu. 13(3 & 4), 77-79.
2. Sharma, K.C. and Khandelwal,(2002). Suman. "Role of Farm women in Animal Management ". Raj. J. of Ext. Edu.,10, 126-129.
3. Verma, D.P. and Tyagi, K.C.(1993). "Adoption Behaviour of Dairy Farmers". Indian Dairyman,45 (6), 233-236.
4. Mudgal, V.D. (2001). "Sustainable Livestock Production and Food Security in India". Indian Dairyman,53 (2), 27-31.
5. Sankhala, G. and Ram chand (1998). " Assessment of Training Needs of Tribal Dairy Farmers". Journal of Dairying, Foods & Home Science.17 (2), 99-105, 1998.

