



Original Research Article

Adoption Behaviour of Livestock Farmers in Paschim Medinipore District of West Bengal, India

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ABSTRACT

The present study was aimed at finding out the level of adoption of respondents with the independent variables. The Barua village of Paschim Midnapore district was selected purposively for the present study. The sample size comprised of 139 livestock farmers in the Institute Village Linkage Project (IVLP) area at Barua. In the present study livestock owners' adoption behavior about selected animal husbandry practices were the dependent variables whereas the selected independent variables were - socio-economic, socio-psychological and communication variables. The adoption of Vitamin-mineral mixture of the livestock owners was not significantly correlated with any independent variable. Adoption of feeding green fodder was positively and significantly correlated with the occupation, education of the respondent, family educational score, family educational status, house, material possession, economic status at 1% level. Adoption of deworming of pig was negatively and significantly correlated with the urban contact and attitude of the respondent at 1% level. Adoption of RD vaccination was positively and significantly correlated with only one Socio-psychological variable (urban contact) at 1% level. Adoption of Urea-molasses was found to be positively and highly significantly correlated with all the communication variables. No communication variables were found to be significantly correlated with adoption of deworming of goat. Adoption of DP vaccination was positively and significantly correlated with the personal cosmopolite and personal localite at 1% level and with the communication source at 5% level.

Keywords

Adoption,
Livestock,
Behaviour

Introduction

Implementation of any improved scientific technology in practical field depends on the adoption behaviour of an individual who wants to implement. Wilkening (1953) described the adoption as a process composed of learning, deciding and acting over a period of time. The adoption of a specific practice is not the result of a single

decision to act but series of actions and meaningful decisions. There are various factors, which can influence in any stage of adoption process. Institution Village Linkage Programme (IVLP) in coastal agro-eco system of Paschim Medinipore was launched by West Bengal University of Animal and Fishery Sciences (W. B. U. A.

F. S.) with the financial assistance of National Agricultural Technology Project of Indian Council of Agricultural Research, Government of India a few years back at Barua village under Midnapur Sadar Block. The present study was aimed at finding out the level of adoption of respondents involved in project only in relation to livestock production system as an impact of IVLP of the said study area.

Materials and Methods

Paschim Medinipur district was selected purposively as the Technology Assessment and Refinement Institution Village Linkage Programme (TAR-IVLP) project was implemented at Barua village which is located at 5 no. Siromoni Gram panchayat under Midnapur Sadar Block. A total of 139 of respondents were taken for this study. Coefficient of correlation between the dependant variable-adoption of selected animal husbandry practices (Feeding of concentrate, Vitamin-mineral mixture, Urea-molasses, feeding of green fodder, Cultivation of green fodder, deworming cattle, deworming pig, deworming goat, vaccination of Ranikhet disease, vaccination of duck plague.) and 24 independent variables (socio-economic, socio-psychological and communication variables) were computed. All the selected animal husbandry practices taken for this study also have been analyzed separately to find out their correlation with the independent variables

Results and Discussion

Socio-economic variables

Table 1 indicated that adoption of the feeding of concentrate by the livestock farmers was significant with the family education score of the respondent at the 1

percent level. Family type and land were also negatively and significantly correlated with the adoption of feeding concentrate at the 5 percent level. But adoption of feeding concentrate was positively and significantly correlated with the material possession of the respondent. The adoption of Concentrate Feeding of the farmers was not significantly correlated with occupation, Age, family size and economic status. Ghosh (2004) also stated adoption of feeding concentrate by the dairy farmers was negatively and significantly correlated with family type in both the cases of member Co-operative Society and non-member Co-operative Society.

The adoption of Vitamin-mineral mixture of the livestock owners was not significantly correlated with any independent variable. Adoption of Urea-molasses was positively and highly significantly correlated with the family education status of the respondent, material possession, economic status of the livestock owners. Education of the respondent was also positively and highly significantly correlated with the adoption of Urea-molasses at 5 percent level. Sarkar (2005) found significant relation between educations of the respondent with the adoption index at 5% level of significance in case of Pearson's correlation. Sohi and Kherde (1980) also found in their study that education level of the farmers was significantly associated with the adoption of improved practices.

Joshi (1978) revealed a positive and significant association between adoption of dairy innovations and family education. Besides Sohal and Tyagi (1978) indicated that family education has no significant relationship with the adoption of dairy innovations.

Adoption of feeding of green fodder was positively and significantly correlated with

the occupation, education of the respondent, family educational score, family educational status, house, material possession, economic status at 1 percent level. These results were in congruence with the results of Trivedi (1963). Trivedi (1963) observed that socio-economic status and adoption of technology were significantly related. Land and farm power were also positively and significantly correlated with adoption of feeding green fodder at 5% level.

Adoption of cultivation of green fodder was positively and significantly correlated with the occupation, education of the respondent, family educational status, house at 1 percent level and with the material possession and economic status at 1 percent level.

Table 1 revealed that only house, material possession and economic status were positively and significantly correlated with the adoption of deworming of cattle. Ghosh (2004) stated that adoption of deworming by the dairy farmers was positively and significantly correlated with economic status at 5 percent level and material possession at 1 percent level. It is evident from the table that adoption of deworming of cattle was not significantly correlated with occupation, education, family type, family size, number of family members. Ghosh (2004) also stated adoption of deworming by the dairy farmers was not significantly correlated with occupation, caste and family size

Adoption of deworming of goat was negatively and significantly correlated with the education of the respondent, family education score, family educational status and house at 1% level and with the age at 5 percent level.

Balasubramanian (1980) observed that age was negatively associated with adoption of dairy innovations. While Subadhra (1979)

stated that the adoption of improved dairy husbandry practices was not significantly related to the age of the members of milk co-operatives. Malik and Sohal (1984) observed that age was not a significant factor in the adoption of dairy innovations. Srivastava and promila (1985) also revealed that age was not a significant factor in the adoption of dairy innovations. Again Yadav and Jain (1984) indicated that the older respondents were greater adopters.

Adoption of deworming of pig was negatively and significantly correlated with the occupation, education of the respondent, family educational status, house, material possession and economic status at 1 percent level and with the number of family members at 5 percent level. Sarkar (1981) reported that adoption levels of dairy farmers were highly and significantly associated with their family educational status.

Family type of the respondent was negatively and significantly correlated with the adoption of RD vaccination but adoption of RD vaccination was positively and significantly correlated with the type of house of the respondents. Adoption of DP vaccination was negatively and significantly correlated with the family size, farm power, material possession and economic status. Milind et al. (2007) observed that family size, annual income, had positive and significant association with the knowledge of the farmers regarding adoption of poultry management practices.

Above results were also in congruence with the results of Rogers and Stanfield (1966), Tyagi (1975), Mikkilineni (1976).

Socio-psychological variables

Table 1 depicted that adoptions of feeding of

concentrate was positively and significantly correlated with the urban contact and innovation proneness at 5 percent and 1 percent level respectively. But risk orientation was negatively and significantly correlated with the adoption of feeding of concentrate at 1 percent level.

The adoption of Vitamin-mineral mixture of the livestock owners was positively and significantly correlated with only one Socio-psychological variable (innovation proneness). Adoption of Urea-molasses was positively and significantly correlated with the economic motivation and innovation proneness at 5 percent and 1 percent level respectively. Adoption of feeding of green fodder was positively and significantly correlated with urban contact and attitude. Adoption of cultivation of green fodder was positively and significantly correlated with innovation proneness at 1% level and with risk orientation at 5% level. Sarkar (1981) suggested that adoption level of dairy farmers was highly and significantly associated with their risk preference. Table.1 indicated that adoption of deworming of cattle was positively and significantly correlated with the urban contact and attitude of the respondent at the 1 percent level. This is in line with the finding of Ghosh (2004) where he found attitude is significantly correlated at both 1 and 5 percent level with adoption of deworming in both the cases of member Co-operative Society and non-member Co-operative Society. Adoption of deworming of goat was negatively and significantly correlated with the urban contact and economic motivation at 5 percent level.

Adoption of deworming of pig was negatively and significantly correlated with the urban contact and attitude of the respondent at 1 percent level. Tripathi *et al.*

(1995) reported that adoption of technology was highly associated with attitude towards dairy farming. Adoption of RD vaccination was positively and significantly correlated with only one Socio-psychological variable (urban contact) at 1 percent level. Raju (1992) found that the extension agency contact of the respondents was found to have significant influence on the adoption of the recommended practices. None other than innovation proneness was negatively and significantly correlated with adoption on DP vaccination at 1 percent level. Economic motivation had no significant relationship with the adoption of RD vaccination and DP vaccination. Dana *et al.* (1996) reported that economic motivation was significantly and positively correlated with the adoption of poultry production technologies.

No adoption parameter was found to have any significant relationship with the independent socio-psychological variable-social participation. But Sudeepkumar (1992) found that social participation had significant positive relationship with the adoption of dairy practices. Thangavel (1994) observed that social participation was found to have positive and significant relationship with adoption of buffalo husbandry practices in dry and wet areas.

Communication variables

Table 1 manifested that was negatively and significantly correlated with personal cosmopolite, personal localite and communication source of livestock farmers. The adoption of Vitamin-mineral mixture of the livestock owners was negatively and significantly correlated with the personal cosmopolite and personal localite at 1 percent level and communication source at 5 percent level.

Table.1 Simple Correlations involving adoption parameters vs. independent variables

	AD_FC	ad vit min	ad ur mol	AD_FGF	ad cul gf	ad dew cattle	DEW_GOAT	DEW_PIG	AD_RD	AD_DP
AGE	0.15	0.031	0.025	0.112	-0.01	0.116	-0.172*	-0.086	0.028	-0.056
OCCU	-0.033	-0.032	0.147	0.244**	0.187*	0.097	-0.146	-0.226**	0.009	-0.145
EDU	0.038	0.035	0.172*	0.23**	0.178*	0.046	-0.25**	-0.347**	0.011	-0.15
F_TYPE	-0.19*	-0.094	-0.042	-0.032	-0.038	-0.096	0.044	0.074	-0.255**	-0.157
F_SIZE	-0.113	-0.113	-0.032	0.062	-0.032	-0.157	0.042	-0.137	-0.073	-0.182*
NUMBER	-0.128	-0.138	-0.113	0.038	-0.05	-0.072	-0.033	-0.205*	-0.048	-0.154
Fedu score	-0.227**	-0.158	0.133	0.256**	0.116	-0.054	-0.24**	-0.45**	0.077	0.029
FEDU_STA	-0.149	-0.099	0.285**	0.237**	0.19*	-0.018	-0.284**	-0.406**	0.119	0.082
LAND	-0.168*	0.009	0.157	0.188*	0.162	-0.087	0.042	-0.142	-0.002	-0.004
HOUSE	0.121	-0.088	0.141	0.268**	0.175*	0.215*	-0.337**	-0.334**	0.197*	-0.078
F_POWER	0.095	0.165	0.119	0.168*	0.123	0.114	0.079	-0.152	-0.094	-0.202*
M_POSS	0.18*	0.11	0.268**	0.389**	0.258**	0.191*	-0.152	-0.279**	0.143	-0.18*
ECO_STAT	0.119	0.076	0.234**	0.352**	0.243**	0.178*	-0.145	-0.312**	0.096	-0.174*
U_CONT	0.173*	0.051	0.094	0.199*	0.14	0.231**	-0.2*	-0.248**	0.271**	-0.045
ECO_MOTI	0.131	0.12	0.17*	0.082	-0.012	0.078	-0.194*	-0.11	0.031	-0.059
inno prone	0.282**	0.212*	0.346**	0.132	0.25**	0.134	0.02	-0.073	-0.035	-0.344**
ATTITUDE	0.004	-0.095	0.082	0.172*	0.114	0.303**	-0.115	-0.31**	0.019	0.075
RISK_ORI	-0.239**	-0.155	0.107	0.141	0.178*	-0.043	-0.07	-0.113	-0.016	0.055
S_PARTI	0.031	0.062	0.125	0.147	0.026	0.05	0.014	-0.085	0.075	-0.013
MASS_MED	-0.145	-0.048	0.517**	0.378**	0.626**	0.058	-0.119	-0.17*	-0.07	0.038
P_COS	-0.35**	-0.264**	0.271**	0.276**	0.276**	-0.055	-0.106	-0.255**	0.175*	0.293**
P_LOC	-0.465**	-0.266**	0.335**	0.171*	0.307**	-0.232**	-0.072	-0.096	0.093	0.219**
COM_SOUR	-0.349**	-0.211*	0.427**	0.319**	0.464**	-0.074	-0.114	-0.201*	0.071	0.203*
com skill	-0.006	0.03	0.471	0.374**	0.444**	0.06	-0.136	-0.178*	0.015	0.009

Note: * P<0.05 ** P<0.01

Adoption of Urea-molasses and adoption of cultivation of green fodder were found to be positively and highly significantly correlated with all the communication variables. Halakatti *et al.* (2007) found that personal localiteness and personal cosmopoliteness have positive and significant relationship with adoption of dairy farming technologies by rural women under SGSY scheme. Sarkar (1981) also reported that adoption level of dairy farmers was positively and significantly associated with localiteness and cosmopoliteness.

All the Communication variables-mass media exposure, personal cosmopolite, personal localite, communication sources and communication skill except personal localite (positively and significantly correlated at 5 percent level) were positively and significantly correlated with adoption of feeding of green fodder at 1 percent level. Similarly Chug (1986) indicated that mass media exposures of the dairy farmers were significantly influencing the extent of adoption of technology.

Joshi (1978) also stated that the exposure to mass media and adoption of dairy innovations possessed a positive and significant association between them. On the contrary Sayeedi (1983) stated that exposure to mass media was not found influencing on the level of adoption of the dairy husbandry practices. Table 1 explained that adoption of deworming of cattle was negatively and significantly correlated with personal localite at 1 percent level.

No communication variables were found to be significantly correlated with adoption of deworming of goat. Adoption of deworming of pig was negatively and significantly correlated with the personal cosmopolite at 1 percent level and with the mass media, communication source and communication skill at 5 percent level. Adoption of RD vaccination was positively and significantly correlated with the personal cosmopolite at 5 percent level. Adoption of DP vaccination was positively and significantly correlated with the personal cosmopolite and personal localite at 1 percent level and with the communication source at 5 percent level. Milind *et al.* (2007) observed that cosmopolite ness had positive and significant association with the knowledge of the farmers regarding adoption of poultry management practices. These results were also in congruence with the results of Daipuria *et al.* (2001) and Sharma and Singh (2001).

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