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INFLUENCE OF CERTAIN SELECTED CHARACTERISTICS OF FARMERS ON ADOPTION OF BUFFALO HUSBANDRY PRACTICES IN DRY AND WET LAND AREAS

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Bufallo, one of the most important domestic animals, not only provides milk and meat but also serve as a draft animal. India possesses 78.5 million buffaloes which account to 53 per cent of the world buffalo population (FAO, 1993). In India, buffalo forms one-third of the total cattle population and they contribute more than 50 per cent of the total milk production (Acharya, 1992). Though our country has good animal wealth and is the home land of best milch buffaloes, milk production is not self sufficient.

Considering the importance of buffalo rearing, it is proper to find out by way of research evidences, what and how much the buffalo owners know and respond to buffalo husbandry practices. The care and management of buffaloes differ in relation to various agroclimatic conditions and the resource availability to the farmers. Apart from the above factors, the adoption of buffalo husbandry practices may vary with knowledge and certain characteristics of farmers. The present study was designed and conducted:

i) to ascertain the level of adoption of certain selected buffalo husbandry practices by dry and wet land farmers and

ii) to study the correlates of certain selected characteristics of farmers and their adoption of buffalo husbandry practices in dry and wet land areas.

Materials and methods

This study was conducted in Periyar District of Tamilnadu. Among 20 blocks in Periyar District, Uthukuli and Kodumudi blocks were selected as dry and wet blocks based on the lead bank report. A total of four villages were randomly selected, two from each of the blocks representing dry and wet land areas. A list containing all the names of buffalo farmers in the selected villages was first prepared. Samples of 50 respondents were selected from each of the dry and wet areas by applying proportionate random sampling technique. Hence a sample of 100 respondents were selected in proportion to the total number of buffalo farmers in the study areas.

To ascertain farmers level of adoption, an interview schedule was developed. Eleven buffalo husbandry practices namely artificial insemination, service at proper time of heat, pregnancy diagnosis at 60-90 days after breeding, service within 60-90 days after calving, green fodder feeding, concentrate feeding, colostrum feeding, navel cord ligation, wallowing, deworming and vaccination were considered for their adoption in terms of full adoption, partial adoption and non-adoption. The scores assigned were 2, 1 and 0 respectively. The sum of scores on all the eleven practices was considered as the adoption score of an individual respondent. The variables - age, occupation, extension agency contact and social participation - were measured with the help of the scale developed by Sudeepkumar (1992). For measuring education, herd size,

experience in dairying, land holding, income, mass media exposure and knowledge a teacher made test was used to elicit the information.

Results and discussion

The level of adoption of buffalo husbandry practices have been presented in Table 1. It is apparent from the data in table that nearly one-half of the dry land farmers were low adoptors while nearly one-half of wet land farmers were medium adopters.

Table 1 Distribution of respondents according to their level of adoption of buffalo husbandry practices

	Number of respondents		Percentage	
	Dry Area (n = 50)	Wet Area (n = 50)	Dry Area	Wet Area
Low	24	14	48	28
Medium	11	22	22	44
High	15	14	30	28
Total	50	50	100	100

Dry Area	Wet Area
Mean : 11.04	Mean : 14.40
SE : 0.53	SE : 0.47

Table 2 revealed that on an average the level of adoption of wet land farmers was significantly higher than that of dry land farmers.

The correlation analysis of certain selected characteristics of farmers with their level of adoption of buffalo husbandry practices have been presented in Table 3. It is apparent from the data in Table 3 that education, income, extension agency contact, mass media exposure, social participation and knowledge had positive and significant relationship with the level of adoption of buffalo husbandry practices in both dry and wet areas. In wet area age and experience in dairying exerted negative and significant influence over the adoption of buffalo husbandry practices which suggested that farmers of younger age with less experience in dairying were adopted more buffalo husbandry practices.

It could therefore be inferred that higher the education higher the income, more extension agency contact, more exposure to mass media, more social participation and greater the knowledge on buffalo husbandry practices, higher would be the adoption of buffalo husbandry practices.

Farmers with higher education would have the capacity to understand, comprehend and gain greater knowledge on the recommended practices easily. This would have helped for adoption.

Higher income level of farmers might have facilitated the farmers to adopt the practices to a greater extent.

Frequent contact with extension agency, higher exposure to mass media and more involvement in social organisations would have enabled the farmers to know more details about the practices to the convincing level, which inturn would have resulted in positive and significant association of these three variables with their adoption.

The table further shows that knowledge was positively and significantly associated with adoption. It is a fact that knowledge is a prerequisite for any innovation. If increase in knowledge, conviction would have been promoted which inturn might have let to the adoption of buffalo husbandry practices.

Herdsize had no significant association with adoption in both the areas. In general, farmers who have more scientific orientation will adopt the innovation to a greater extent irrespective of

the herdsize. This would have been the reason for not having significancy between these herdsize and adoption.

Landholding had no significant association with the adoption of buffalo husbandry practices in both the areas. The reason may be due to the fact that as the landholding increases, the farmers give more emphasis to the crop enterprise than dairying. Hence there may be no significant association obtained.

Majority of the dry and wet land farmers had dairy and agriculture as their primary occupation respectively. Though primary occupation of dryland farmers was dairying, it was practised only at subsistence level. Hence no correlation may be found between occupation and adoption.

Table 2 Mean score and 't' value of adoption level of buffalo husbandry practices

Sl. No.	Variable	Mean score of farmers		Difference between means	't' value
		Dry Area (n=50)	Wet Area (n=50)		
1	Adoption level	11.04	14.40	3.36	6.24*

* Significant at 1 per cent level

Table 3 The correlation co-efficient analysis of the socio economic factor with adoption of buffalo husbandry practices

Sl. No.	Socio-economic Factors	'r' value	
		Dry Area	Wet Aea
1	X_1 Age	-0.1245^{NS}	-0.3418^{x}
2	X_2 Education	0.3546^{x}	0.2918^{x}
3	X_3 Herd size	0.2327^{NS}	0.0459^{NS}
4	X_4 Experience in dairying	-0.0865^{NS}	-0.2827^{x}
5	X_5 Land holding	0.2252^{NS}	-0.0192^{NS}
6	X_6 Occupation	-0.0889^{NS}	0.1000^{NS}
7	X_7 Income	0.3725^{xx}	0.3603^{x}
8	X_8 Extension Agency Contract	0.5050^{xx}	0.5238^{xx}
9	X_9 Mass Media Exposure	0.4779^{xx}	0.5910^{xx}
10	X_{10} Social Participation	0.3867^{xx}	0.4757^{xx}
11	X_{11} Knowledge	0.7284^{xx}	0.7086^{xx}

NS - Non-significant

* Significant at 5 per cent level of probability ** Significant at 1 per cent level of probability

Majority of the dryland farmers were old and more experienced. Generally the old farmers are highly resistant towards any change. Since dairying was practised primarily by the dryland farmers, the farmers given more emphasis to the result rather than the innovation. Hence age and experience in dairying had no significant association with the adoption of buffalo husbandry practices.

The findings of the study are in conformity with the contentions of Balasubramanian (1980), Kologi and Anand (1985), Alviar (1988), Mahipal and Kherde (1992), Sudeepkumar (1992) and Verma and Tyagi (1993). The higher rate of adoption in wet land area than dry land area might be due to better infrastructural facilities and proper encouragement by the scientists. It can, therefore be concluded that adoption of buffalo husbandry practices by dry and wet land farmers can be improved by manipulating knowledge variable, using the closely associated variables like extension agency contact, mass media exposure and social participation.

Summary

The study was conducted in Periyar District of Tamilnadu by drawing sample from both dry and wet land areas. Eleven buffalo husbandry practices were considered for the level of adoption and eleven selected characteristics of farmers were considered for their influence over adoption. It can be concluded that respondents of dry area had low level of adoption and they are significantly lower than that of wet land farmers in the adoption of buffalo husbandry practices. The farmers traits such as education, income,. extension agency contact, mass media exposure, social participation and knowledge positively and significantly correlated with the adoption of buffalo husbandry practices in dry and wet land areas.

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