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Variables Contributing to the Level of Adoption of Improved Dairy Husbandry Practices by Dairy Women.

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Dairy industry in India has emerged today as a dynamic tool of socio- economic upliftment of rural people. There is a growing realization that promotion of dairying not only contributes towards national health building but also creates substantial employment opportunities. Women contribute far more to dairying than has generally been recognized or acknowledged. It is commonly believed that women have a physical limitation to positively interact with technology and hence are excluded from educational and training programmes.

Efficient returns from improved dairy technologies presuppose that desirable use of dairy innovations will depend upon relevant acquired knowledge which is an important force of accelerated adoption. A number of socio-personal, economic and communicational variables affect adoption behaviour of dairy women but very few studies have been conducted to ascertain the variables responsible for affecting the adoption behaviour either directly or indirectly.

In this context a study was conducted to identify the variables which significantly contributed towards level of adoption of dairy women so that the knowledge could be used in dairy promotion work with the following specific objectives:-

1. To assess the level of adoption of improved dairy husbandry practices by rural women.

2. To know the association between selected variables and the level of adoption of dairy women.

METHODOLOGY:

The study was conducted in Muraul and Mushahari blocks of Muzaffarpur district. From each block, two villages were selected purposively. Thus, the total number 9f villages selected was four.

Respondents were selected through proportionate stratified random sampling technique on the basis of the size of land holding. Ten percent respondents were drawn each from landless, marginal, small and medium category of dairy women. Thus a total of 100 dairy women practicing dairying were selected.

Dependent variable

Adoption level was calculated with the help of the following formula developed by

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Chattopadhya (1963):

$$AQ = \frac{Ei/Pi * 100}{N}$$

Where:

N = Number of practices for which the individual has potentiality. In this investigation five components were considered.

Ej= Extent of adoption of the jth practice in a particular year. Extent of adoption is the degree to which a farmer has actually adopted a practice.

Pj= Potentiality of the jth practice from Ej is calculated in that year. Potentiality is conceived as the maximum degree to which farmers can extend their adoption.

Independent variables

The following eleven variables were selected for study and were grouped into three categories.

Socio-personal variables:

Xl Age, X2 Caste, X3 Education, X4 Social participation, X5 Knowledge

Economic variables:

X6 Land holding, X7 Family income, X8 Herd size, X9 Economic motivation

Communicational variables:

XI0 Information sources X 11 Extension contact

FINDINGS AND DISCUSSION:

The adoption level of farm women in various components of dairy husbandry viz. feeding, management, breeding, disease control and marketing has been presented in table 1. The data in the table reveals that maximum adoption was in case of marketing practices (59.0%) followed by management (58.13%), breeding (57.16%), feeding (53.92%) and minimum of disease control practices (41.50%). The table also reveals minimum and maximum adoption scores obtained by the respondents on each of the five aspects and the corresponding mean values. The mean score obtained by the respondents on feeding, management, breeding, disease control and marketing are 7.55, 4.65, 3.43,2.49 and 3.54 respectively out of a total score of 14.0,8.0,6.0,6.0, and 6.0 respectively.

Table 1. Adoption of various components of improved dairy husbandry technologies by dairy women

Sl. No.	Components of dairy husbandry practices	Minimum Score	Maximum Score	Mean Value	Percentage	Rank
Y1	Feeding	4.0	12.0	7.55	53.92	IV
Y2	Management	3.0	7.0	4.65	58.13	II
Y3	Breeding	1.0	5.0	3.43	57.16	III
Y4	Disease Control	1.0	4.0	2.49	41.50	V
Y5	Marketing	2.0	6.0	3.54	59.00	I

Table 2. Distribution of respondents among different categories with respect to overall adoption level

Adoption level (Score)	Frequency (N = 100)
Low (0-14)	5(5.0)
Medium (14.1-26.0)	69(69.0)
High (26.1 - 40.0)	26(26.0)
Total	100 (100.0)

Figures in parentheses indicate percentage

Overall adoption level of the respondents with respect to dairy husbandry practices has been presented in table 2. The respondents were categorized into low, medium and high level of adoption. The data presented in table 2 reveals that majority of the farm women (69%) had medium level of overall adoption while only 5 percent of the respondents had low level of overall adoption with regard to improved dairy husbandry practices.

The perusal of table 3 shows that age of the respondents ($p<0.01$) was negatively and significantly correlated whereas the variables education, knowledge, family income, herd size, economic motivation and information sources were positively and significantly ($p<0.01$) correlated with overall adoption of dairy innovations by dairy women.

A summary of table showing the significant variables, ranked on the basis of standard partial regression values for overall adoption of improved dairy husbandry practices by dairy women is presented in table 4.

Age contributed negatively and significantly to the prediction of overall adoption of improved dairy husbandry practices by dairy women.

Young dairy women are more exposed to modern trends and new ideas with less bondage for tradition than middle and old aged dairy women who are brought up in old ideas. Such dairy women are also receptive of new ideas. This situation might have compelled young dairy women to learn more of the new dairy technologies and might be the reason for the variable age to be negatively and significantly correlated with adoption of dairy husbandry practices.

Table 3. Correlation coefficient of independent variables with adoption of dairy husbandry practices.

Sl No.	Variables	Coefficient of correlation (r)
1.	Age (X1)	-0.808**
2.	Caste(X2)	0.172 NS
3.	Education(X3)	0.353**
4.	Social Participation (X4)	0.080NS
5.	Knowledge (X5)	0.815**
6.	Land holding (X6)	0.190NS

7. Family income (X7) 0.512**
8. Herd size (X8) 0.778**
9. Economic motivation (X9) 0.727**
10. Information sources (XI0) 0.703**
11. Extension contact(X 11) 0.088 NS

** - Significant at 1 % level of probability; NS - Non - significant; Y - Overall adoption behaviour of women in dairy husbandry

Table 4. Relative contribution of independent variables towards overall adoption of dairy husbandry practices (Dependent variables) by dairy women

Independent variables	Regression coefficient	Standard regression coefficient	T-value	R_2	Remarks (Rank order)
Age (XI)	-0.1004	-0.24632	-2.853 *		III
Caste (X2)	-0.0363	-0.00444	-0.093NS		XI
Education (X3)	-0.1458	-0.02824	-0.483NS		VIII
Social Participation (X4)	-0.0911	-0.00743	-0.165NS		X
Knowledge (X5)	0.1598	0.26856	3.032**		II
Land holding (X6)	-0.2095	-0.05575	-1.084NS		VII
Family income (X7)	-0.5534	0.11639	1.836*		V
Herd size (X8)	1.5690	0.46057	6.244**	0.838	I
Economic motivation(X9)	0.1786	0.06155	0.836NS		VI
Information sources(XI0)	0.8716	0.14245	2.181**		IV
Extension contact(X 11)	-0.0617	-0.01609	-0.340NS		IX

** - Significant at 0.05 probability level ** - Significant at 0.01 probability level NS - Non significant*

Knowledge about improved dairy husbandry practices was positively and significantly correlated with adoption of improved dairy husbandry practices by dairy women. Knowledge was found to be an important component in influencing the adoption level of dairy women. Dairy women who possess more knowledge of dairy husbandry practices adopt more sophisticated dairy technologies.

Family income contributed positively and significantly towards overall adoption of improved dairy husbandry practices. Family income of dairy women was found to be an

important variable in influencing the level of adoption of dairy women.

The idea of higher production and more economic gain and income generation might have compelled the dairy women to think in terms of entrepreneurship development and to adopt more of the dairy husbandry practices.

Herd size contributed positively and significantly to the prediction of overall adoption of improved dairy husbandry practices by dairy women. Herd size was found to be an important variable in influencing the level of adoption of dairy women. Large size of herd animals might fetch dairy women with more economic return per animal as compared to small size of herd animal. This might be the reason for the dairy women who possess large herd size to adopt more of the improved technologies.

Information sources contributed positively and significantly towards overall adoption of improved dairy husbandry practices by dairy women. Information sources were found to be an important variable in influencing the level of adoption of dairy women. Information sources are closely associated with innovativeness of dairy women.

The studies carried out by Pal and Kherde (1988) and Sheoran and Kumar (1988) support the findings of this investigation. Pal and Kherde (1988) reported that the variables like herd size and information sources established positive and significant correlation with overall adoption of dairy innovations. Sheoran and Kumar (1988) reported that farm size had positive and significant correlation with overall adoption.

CONCLUSION:

Adoption of improved dairy husbandry practices was maximum in area of marketing and minimum in case of disease control practices. Dairy women had medium level of adoption of dairy husbandry practices.

It is also concluded that herd size is by and large the deciding factor in determining overall adoption behaviour of dairy women.