Measuring Scale of Economic Motivation of Dairy Farmers

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ABSTRACT

The present study was conducted in the Udaipur and Banswara district of Rajasthan state during 2001-2003 with the four tribes groups namely Meena, Bhil, Garasia and Damor. Findings showed that majority of Meena (53.33%), Bhil (94%), Garasia (71.11%) and Damor tribes (84.45%) exhibited low level of economic motivation. Surprisingly none of Bhil, Garasia and Damor tribes were found in high level of economic motivation. It could also be observed that economic motivation of Meena tribes was marginally higher than other three categories of tribes. A marked difference could also be observed between all the four tribal communities in the study area.

Key words: *Economic motivation; Tribal communities;*

Animal husbandry and dairying sector contributes about 22 per cent of the value of the output of total agricultural and allied sector (2004). In India, food consumption basket is being diversified gradually in favour of non-food grain items like milk, meat and egg. Rapid advances in feed improvement and genetic and reproductive technologies offer scope for overcoming many of the technical problems posed by increased livestock production. Productivity is the key to growth. We have no option but to raise the productivity of our livestock through scientific breeding, feeding and management. Economic motivation refers to the occupational success in terms of profit maximization and relative value on economic ends placed by dairy farmers. The investigation was under taken with the objective to construct the economic motivation scale towards improved dairy farming practices among tribal dairy farmers.

METHODOLOGY

The present paper presents data gathered in a random cluster sample of the tribal belts of southern Rajasthan state of India. 200 respondents, 50 each from four tribal communities namely Meena, Bhil, Garasia and Damor were selected for the study.

The details of the steps followed in the construction of *Likert (1932)* type scale to measure the economic motivation among tribes dairy farmers towards improved dairy farming practices have been discussed as below:-

a) Collection of economic motivation statements: The first step in the scale construction was to collect and select a set of statements covering the entire universe of content. Twenty statements that reflect various aspects of Improved Dairy Farming Practices (IDFPs) were collected for construction of the scale. The collection of these raw items was done after a careful scanning of relevant literature and in consultation with the personnel involved in dairy farming, Dairy Development Officers and Scientists engaged in Animal Husbandry / Dairying.

b) Editing the statements: The collected statements were edited as per the 14 criterion enunciated by *Edwards (1969)* and consequently a total of 5 statements were eliminated. A list of remaining 15 statements which satisfied the criterion were provided to the judges to examine the relevancy of each of these statements for inclusion in the final scale. Thus, after scrutiny of the judges, a total of 15 statements were retained for further analysis with arrangement on a three-point continuum.

c) Responses to raw items: The proforma containing these 15 statements on three continuum were mailed by post and also handed over personally to the subject matter specialists including scientists, professors, veterinary officers and experts in the field. The judges were requested to examine each statement and indicate their degree of agreement or disagreement with each statement on three - point continuum, viz., agree, undecided and disagree. Complete responses were received from 30 out of 40 judges.

d) Statement Analysis and Scoring: The scoring pattern adopted for positive statements was 3, 2 and 1 for agree, undecided and disagree, respectively. However, for negative statements, the scoring pattern was reversed. The total score was then calculated for each of the 30 judges by summing up the scores of individual items.

e) Calculation of 't' values : As depict in Table 1 based on the total scores, the respondents were arranged in descending order. The top 25 percent of the respondents with their total score were considered as the high groups and the bottom 25 percent as the low groups, so that these two groups provided criterion groups to evaluate the individual item. With the help of these two criterion groups, 't' values were computed for all the 15 statements using the under mentioned formula (*Edwards, 1969*) :

$$t = \frac{X_H - X_L}{\sqrt{\dfrac{(X_H - X_H)^2 + (X_L - X_L)^2}{n(n-1)}}}$$

Where,

t   =   the extent to witch a given statement differentiates between the high and low groups,

X_H =   the mean score on a given statement for the high group,

X_L =   the mean score on the same statement for the low group,

$(X_H - X_H)^2$ =   the variance of the distribution of responses of the high group to the statement,

$(X_L - X_L)^2$ =   The variance of the distribution of responses of the low group to the statement and

n (n -1)   =   number of subjects in low or high group;

f) Final selection of statement : The statements with 't' value equal to or greater than 1.75 were selected initially with the logic that the average responses of the high and low group to all these selected statements differ significantly. As indicated in Table. 2, based on this criterion, 8 statements were filtered out leaving 4 positive and 4 negative statements finally selected for inclusion in the economic motivation scale. These 8 statements were scored on the usual pattern and the theoretical score extremes were 8 and 24.

Reliability of the Scale : The reliability of the economic motivation scale so constructed for the study was pre-tested by using the split half technique. It was administered to 30 respondents in the non-sampling area in the Udaipur and Banswara district of Rajasthan. The coefficient of correlation between odd and even scores was 0.851, which was found to be significant at 1 per cent level. Thereby testify a high internal consistency of the scale. Hence, the scale is said to be reliable.

Validity of the Scale : The validity of economic motivation scale was established through content validity, which means the representativeness or sampling adequacy of the content of a measuring instrument. *Neyman (1967)* indicated two major standards for ensuring content validity (I) A representative collection of the items and (II) Sensible method of test construction. This satisfies both these criteria as the possible statements that could be made about economic motivation was gathered from literature and consultation with expert who have knowledge about this psychological object and the scale was constructed in accordance with the steps enunciated in the summated rating techniques. There for, it was assumed that the scores obtained by administering this scale measured other than economic motivation towards IDFPs among tribes' dairy farmers. Moreover, calculation of 't' values assured high discriminatory values of the statements. Therefore, the scale was taken as a valid measure of the economic motivation.

Scoring techniques of the scale: The final economic motivation scale was administered to farmers who constituted the sample for this study. Each item in a scale was provided 3 response categories. These were agree, undecided and disagree with weightage of 3, 2, and 1, respectively for the positive statement and 1,2, and 3 for the negative statement. The total score of a respondent on a scale was obtained by adding the scores of all the individual items in that scale.

Results : The data in Table 3 indicated that majority of Meena (53.33%), Bhil (94.00%), Garasia (71.11%) and Damor tribes (84.45%) exhibited low level of economic motivation. Surprisingly none of Bhil, Garasia and Damor tribes were found in high level of economic motivation. It could also be observed that economic motivation of Meena tribes was marginally higher than other three categories of tribes. A marked difference could also be observed between all the four tribes in the study area. The distribution of respondents in same table pooled data showed that the majority of dairy farmers (74.50%) had low level (up to 14) of economic motivation; only 6.50 percent of tribes community dairy farmers had high level of economic motivation. A marked difference could also be observed between all the four tribes in the study area.

Table No. 1- 't' value of economic motivation items related to improved dairy farming practices.

S.No.	Statements	't' value
1.	Traditional methods of dairy farming have to be changed to reduce the level of poverty.	3.16*
2.	Most successful farmer is one who makes most profit.	1.25
3.	A dairy farmer has not been given his right place in the society	2.76*
4.	A farmers should grow crops and produce milk to increase monetary profits in comparing to grow food crops and produce milk for house consumption	1.18
5.	Modern dairy methods give good income.	1.57
6.	A dairy farmer wants to add good breed of cattle / buffaloes to his herd for getting more milk and profit.	2.47*
7.	Dairy farming as a business is like gambling	2.13*
8.	Dairy farmers do not need any help from experts to run a dairy farm economically.	1.85
9.	A dairy farmer should work for higher yield and more profit.	0.46
10.	A small farmers can get more profit from his land through dairy farming than crop production	2.75*
11.	Adoption of A.I. in dairying is a sin of success	1.98*
12.	Dairy farming pays the farmer more than his investment	3.34*
13.	A farmer must earn his living but the most important thing in life can not be defined in economic terms.	0.25
14.	A dairy farmer should sell milk to milk cooperative for earning more money.	1.47
15.	To be a member of milk co-operative society provides a feeling or brotherhood among dairy farmers	2.75*

*Selected practices

Table 2. Final statements of the scale

S. No.	Statements	
1.	Traditional methods of dairy farming have to be changed to raise the level of poverty.	**
2.	A dairy farmer has not been given his right place in the society	*
3.	A dairy farmer wants to add good breed of cattle / buffaloes to his herd for getting more milk and profit.	**
4.	Dairy farming as a business is like gambling	*
5.	A small farmer can get more profit from his land through dairy farming than crop production	**
6.	Adoption of A.I. in dairying is a sin of success	*
7.	Dairy farming pays the farmer more than his investment	**
8.	To be a member of milk co-operative society, provides a feeling of brotherhood among dairy farmers	*

** Positive Statements
*Negative Statements

Table 3. Distribution of the respondents according to economic motivation

Category	Tribes communities				
Score	Meena N=60	Bhil N=50	Garasia N=45	Damor N=45	Pooled N=200
Low (upto 14)	32 (53.33)	47 (94.00)	32 (71.11)	38 (84.45)	149 (74.50)
Medium (14-17)	15 (25.00)	3 (6.00)	13 (28.89)	7 (15.55)	38 (19.00)
High (Above 17)	13 (21.67)	0 (0.00)	0 (0.00)	0 (0.00)	13 (6.50)

Figures in parenthesis indicated percentage

The final scale:

Instructions : Dairy farmers have different economic motivation about improved dairy farming practices. You may have your own motivation about it. The following statements show the economic motivation of tribes' dairy farmers towards improved dairy farming practices. Please indicate whether you Agree, Undecided and disagree with these statements.

CONCLUSION

The effectiveness of economic motivation mainly depends upon the practicing farmers, which in turn was reflected by their ability towards it. Hence a scale to measure the economic motivation of tribes' dairy farmers towards improved dairy farming practices has been presented in this paper. Future researchers in conducting impact study can use this economic motivation scale constructed in the present study and evaluation studies on improved dairy farming practices. Future researchers in conducting impact and evaluation studies on improved dairy farming practices can use this economic motivation scale constructed in the present study. One of the challenges in the attempt to improve the ability of the third world to feed itself is the endeavour to persuade the individual animal agriculturalist to adopt modern techniques of improving output. The slow but steady progress of countries such as India in this direction disguises considerable individual variation within the country. The progress of same belts is quite rapid, while many others make no progress at all particularly in tribal belts of India. If the critical variables that make some farmers more open to new ideas could be identified more progress across the board might be engineered to measure the economic motivation

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