

Market-led Extension Approach for Livelihood Security of Dairy Farmers through Dairying in Bihar

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ABSTRACT

The agricultural production of the country has increased dramatically in the last sixty years but could not translate into better remuneration to the farmers. Poor efficiency in the marketing channels and inadequate marketing infrastructure are believed to be the cause of not only high and fluctuating consumer prices, but also little of the consumer rupee reaching the farmer. Therefore extension functionaries need to play a major role to build the capacity of the farmers to meet the emerging challenges and make the farmers to realize better prices to their farm produce. This transformation of Extension is termed as Market – led extension, and so far it is not much discussed issue in the extension scenario. Hence the extension focus should extend from mere production to market led extension on end-to-end basis. In this regard, the present study were taken with 240 respondents through well-structured interview schedule. More than four fifth (82.92%) of the respondents had medium to high level of livelihood security, whereas, the overall average livelihood security index value was 0.61.

Key words: Market – led extension; Livelihood security; Livelihood security index;

Indian agriculture has grown tremendously since independence. The gradual transformation of Indian agriculture from “begging bowl” to “self-sufficiency” in food grain production is the testimonial of India’s agricultural success. This success also proved wrong the theories of Malthus and economists who said that India would suffer on account of poverty and technological backwardness. The glorious agricultural data also verify this fact, which signify that, the food grain production that was 82 MT in 1960-61 has touched 264 MT by 2013-14, during the same period the rice production increased from 34 MT to 100 MT and the wheat production which was 11 MT is now over 90 MT. At national level the average productivity of rice which was 1013 kg per ha. is now above 2500 kg per ha. Similarly, the productivity of wheat also has gone up from 850 kg/ha to over 3000 kg/ha in the corresponding period. Thereafter, Indian agriculture witnessed an all round development as a result of which horticulture production is now over 280 MT, milk production about 140 MT, fisheries 9.5 MT and eggs are about 73 billion

(Anonymous, 2013). These achievements have placed India among the leading producer of these food items. The credit for this path breaking success can’t be bestowed on agricultural scientists only, but it was a team effort where the intelligence of scientists who evolved the technology, extended at the field level by the extension professionals, implemented through the hard work of farmers and finally coordinated by the conducive policy of the policy makers. Extension agencies played very crucial role in bridging the road for production related technologies from research institutes to the farmer’s fields. The production has increased dramatically but could not translate into better remuneration to the farmers. The share of farmers in the consumer rupee in Ahmedabad was 41.1 to 69.3 percent for vegetables and 25.5 to 53.2 percent for fruits. In Chennai KFWVM, the farmers’ share was 40.4 to 61.4 percent for vegetables and, 40.7 to 67.6 percent for fruits (Gandhi, n.a.). Poor efficiency in the marketing channels and inadequate marketing infrastructure are believed to be the cause of not only

high and fluctuating consumer prices, but also little of the consumer rupee reaching the farmer (*Kaul 1997, Singh and Vasisht 1985*). The producers and the consumers often get a poor deal and the middlemen control the market, but do not add much value. There is also massive wastage, deterioration in quality as well as frequent mismatch between demand and supply both spatially and over time (*Subbanarasiah 1991, Swarup et.al. 1985*). Add to this, the Indian farmers have to face challenges of global force that are affecting or are likely to affect Indian agriculture. This assumes greater significance in the light of the new international trading regime under WTA and the export opportunities being opened up. Therefore extension functionaries need to play a major role to build the capacity of the farmers to meet the emerging challenges and make the farmers to realize better prices to their farm produce. This transformation of Extension is termed as Market – led extension, and so far it is a peripheral issue in the extension scenario. Hence the extension focus should extend from mere production to market led extension on end-to-end basis.

Market – led extension : With globalization of the market, farmers need to transform themselves from mere producer – sellers in the domestic market to producer cum seller in a wider market sense to best realize the returns on their investments, risks and efforts. The emerging marketdriven model of organizing extension systems is a 180- degree change in direction from the traditional linear model of linking research to extension to farmers (*Kumar et al 2012*). Extension education needed to be focused on marketing aspect, particularly on to produce more quantitative and qualitative products for export-oriented standard from existing available resources to create the new avenue of income generation (*Singh, B. P. et al 2004*).

Farmers are the ultimate loser in the marketing scenario. Farmers are not getting proper remuneration of their produce due to their poor marketing skill, low position in the marketing chain, lack of knowledge about the market, unreliable marketing intelligence and so on (*Singh et. al. 2012*). This crisis raise the concern for livelihood security of dairy farmers. By keeping this view in the mind the present study were conducted with the objective to assess the livelihood security through dairying among the dairy farmers of Bihar.

METHODOLOGY

The present study were conducted in Bihar with 240 respondents, which were selected randomly from three districts of three agro climatic zones of the state, followed by three blocks from each district and then, two villages from each blocks randomly and finally forty respondents from each village were selected randomly. Respondents were selected from those who should be involved in selling minimum five litre of milk per day throughout the year to various marketing channels.

Livelihood security:

- It is operationalized as the adequate access to income and other resources to meet basic needs including food and nutrition, health facilities, clean environment, habitat facilities, educational opportunities, community participation and social integration.
- Livelihood Security Index were developed for assessing the status of livelihood security of the farmers.

Development of livelihood security index

Selection of dimensions: The livelihood security has multidimensional aspects. It includes economic security, food and nutritional security, health security, marketing security, production security etc. Therefore, it was important to select dimensions, which were representative indicators of all these sectors of human-life. The availability of authenticated literature and through discussion with experts in relevant field played an important role in the identification of these dimensions. Broadly, these dimensions were grouped into ten categories: (i) food and nutritional security, (ii) economic security, (iii) health security, (iv) marketing security, (v) production security, (vi) infrastructure security, (vii) social security. The identified dimensions of LSI were operationalized as given below:

Food and nutritional security: It was operationalized as the extent of food availability, accessibility, affordability and quality at household level. Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

Economic security: It was operationally defined as the availability and access to financial sources and accumulation of the financial capital. It was measured

in terms of savings, insurance, indebtedness, employment status, livestock composition and total annual income of the household. For which sub-indices will be computed and their scores summed up to arrive at the LSI.

Health security: It was operationalized as the extent of availability, accessibility, affordability and quality of health facilities at village level. It refers to the health status and capacity of respondents to afford health facilities as per the requirement.

Marketing security: It was operationalized as the extent of awareness and involvement in the marketing decision of the dairy farmers. It refers that up to what extent the farmers were involve in the selling aspects of milk and milk products.

Production security: It was operationally defined as the availability and access to the resources for dairy production optimization i.e. the extent to which dairy production of farm is sufficient for farmer's sustained living.

Infrastructure security: It was operationally defined as the availability and access to basic infrastructure and producer goods needed to support livelihoods at both individual and society level. Infrastructure consists of physical environment that help the people to meet their basic needs and to be more productive. Producer goods are the tools and equipments that dairy farmers use to function more productively.

Social security: It was operationally defined as the social status of the respondent at home and outside in terms of respondent's family education status, farming experience, training received, social participation and trust & solidarity among the members of the society which forms an effective social safety networks for improving their livelihoods.

Determination of scale values: It has been decided to give specific weights (Scale Values) to each dimension of the IRLSI based on their perceived significance. The Normalized Rank Order Method suggested by *Guilford (1954)* was used for determining the scale values. The method has got a unique advantage that it can be used with any number of variables and does not require a large number of judges. As per the method, seven different dimensions of LSI were ranked by the group of judges according to their perceived significance in determining the status of livelihood security of small and marginal farmers. Ranking was

obtained from judges who involved experts in the field of Social Science, Extension Education, Rural Development, and Market-led Extension. The performa containing dimensions of LSI was sent by post, through e-mail and also handed over personally to the total 40 judges for ranking (1 to 7) dimensions according to their relevance in the livelihood security of small and marginal farmers. Out of 40 judges 35 judges had returned the same set of indicators after duly recording their judgements in a stipulated span of 2 months. Out of 35 responses, 5 responses were found unsuitable for item analysis and eliminated after careful examination of responses. The remaining 30 responses were considered for the item analysis. The rankings given by all 30 judges were summarized and presented in Table 1. In the next step, the proportions were worked out for the ranks assigned by all the judges. The formula is, " $p = (R_i - 0.5) 100/n$ " Where R_i stands for the rank value of the dimension i in the reverse order as 7 to 1 and n indicates the number of dimensions ranked by the judges. Here we needed the middle area of the dimensions ranked. The p is the centile value which indicated the area of the dimensions in the normal distribution. The p values were worked out for all the ranks shown in Table 1. Thus, the p values for the ranks ranged from the lowest 7.14 to 92.86. The next step is to find out the C values for all the ranks. The correct rank order (1 to 7) is given in the column under r_i in Table 1. The second column R_i in Table 3.3 is the reverse rank order (7 to 1). The C values were determined for each rank from the Table-M (*Guilford 1954*). These values can be traced by putting the finger on the column extreme left of the Table-M, on the number which indicates the number of stimuli used in the experiment. In the case of this experiment the numbers of stimuli (Dimensions) were 10, and also the number of stimuli to be ranked. While moving the finger from this number 10 towards right, stop at the number which indicates the rank number (r_i , 7). Above the rank number you can find the respective C value 4 for the rank 7 under the letter C . The C values are from 1 to 9 only. The same procedure may be adapted in finding out the C values for all the ranks (r_i) from the Table 1. The next step is to find out the $\sum f_{ji} C$ value for all the dimensions. This value for every dimension was obtained by multiplying the frequencies found in the columns of the respective dimension by the C values of the rank (r_i),

and summing up the products for each dimension and entering the same in the row against $\sum f_{ji} C$. The mean of the total frequencies, that is for the whole data of the matrix was $(1230/210= 5.86)$ 5.86, and the mean of the C values was $(41/7= 5.86)$ also 5.86. Then the $\sum f_{ji} C$ values for each dimension was divided by the total number of judges 30, which resulted in obtaining the $M_c = R_j$ value for each dimension. This was the mean value (M_c) and also the response value (R_j) for each dimension. The mean values were shown in the row against $M_c = R_j$. The treatment of data can be stopped at this stage and the M_c values can be accepted and treated as the Scale Values. The total value was 41 which was also the total sum of the C values, and the mean of the M_c or R_j or R_c values was 5.86. The standard deviation and standard error of the M_c values was 0.89 and 0.16, respectively. The obtained Scale Values (R_c) were shown in Table 1 against row M_c or R_j or R_c .

Selection of indicators: Indicators under each dimension of IRLSI were selected through expert consultation and literature scan. Special care was taken to include all relevant items. The procedure involved could ensure the efficiency of the instrument to measure the household livelihood security by ascertaining content validity. The following steps were followed for selecting relevant indicators under each dimension of LSI.

Collection and editing of indicators: By referring the available literature on relevant subject, a total 60 indicators were collected covering the almost entire universe of content. The researchers, farmers and extension experts were also consulted for selecting indicators. The indicators were edited as per 14 informal criteria suggested by *Edwards (1957)* as outcome 10 indicators were eliminated. Finally, 50 indicators were retained after editing and considered for judge's rating.

Response to indicators: The performa containing 50 indicators on three point continuums i.e. Most Relevant, Relevant and Not Relevant was sent by post, through email and also handed over personally to the total 40 judges. These judges were experts in the field of Extension Education, Social Science, Rural Development and Integrated Farming Systems, etc. The judges were requested to indicate their response by tick mark in suitable continuum in front of each

indicator. Also the judges were requested to make necessary modifications and additions or deletions, if they desired so. Out of 40 judges 35 judges had returned the same set of indicators after duly recording their judgements in a stipulated span of one month. Out of 35 responses, 5 responses were found unsuitable for item analysis and eliminated after careful examination of responses. The remaining 30 responses were considered for the item analysis.

Relevancy test: Item analysis is an important step while constructing valid and reliable index. It is possible that all the indicators collected may not be relevant equally in measuring the status of livelihood security of farmers. Hence, these indicators were subjected to scrutiny and their subsequent screening for inclusion in the final index. The judges were asked to indicate degree of relevancy on each indicator with three point continuums 'Most Relevant, Relevant and Not Relevant' with scoring 3, 2, and 1, respectively. The Relevancy Weightage (RW) and Mean Relevancy Score (MRS) were worked out for all the selected indicators individually by using the following formula;

$$RW = \frac{MRR \times 3 + RR \times 2 + NRR \times 1}{\text{Maximum Possible Score}}$$

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$$MRS = \frac{MRR \times 3 + RR \times 2 + NRR \times 1}{\text{Number of judges}}$$

MRR= More relevant response

RR= Relevant response

NRR=Not relevant response

By using these two criteria the indicators having Relevancy Weightage (RW) > 0.70 and Mean Relevancy Score (MRS) > 2.25 were considered for including in the Livelihood Security Index (LSI). By this procedure, final indicators of respective dimensions of LSI were selected, modified and rewritten as per the comments of judges. The various set of items/statements was prepared under each indicator for final data collection from the respondents.

Computation of the composite index: Each dimension of IRLSI consists of number of indicators and hence, their range of total scores was different. Therefore, the total score of each dimension was converted into unit score by using simple range and variance as given below,

$$U_{ij} = \frac{Y_{ij} - \text{Min } Y_{ij}}{\text{Max } Y_{j} - \text{Min } Y_{j}}$$

Where,

U_{ij} = Unit score of the i th respondents on j th dimension

Y_{ij} = Value of the i th respondent on the j th dimension

Max Y_j = Maximum score on the j th dimension

Min Y_j = Minimum score on the j th dimension

Thus, the score of each dimension range from 0 to 1 i.e. when Y_{ij} is minimum, the score is 0 and when Y_{ij} is maximum the score is 1. Then, the unit scores of each respondent was multiplied by respective scale value of the each dimension and summed up. Thus, the score obtained was divided by the sum of scale values in order to get the LSI for each respondent.

$$LSI_i = \frac{\sum U_{ij} * S_j}{\text{Sum of scale values}}$$

Where,

LSI_i = Livelihood Security Index of i th respondent

U_{ij} = Unit score of the i th respondent on j th component

S_j = Scale value of the j th component

The status of respondent's livelihood security was calculated based on the total index score of all the indicators. The classification of respondents into the categories of very low, low, medium, high and very high livelihood security status was based on the range of total livelihood security index scores by cumulative square root of frequency method.

Standardization of the index: The validity was ascertained for standardization of the index. It is the property that ensures the obtained test scores as valid, if and only if it measure what it is supposed to measure. An index is said to be valid if it stands for one's reasoning. The validity was measured by content validity. The content validity of the index was tested by experts' judgement. The content validity is the representative or sampling adequacy of the content, the substance, the matter and the topics of a measuring instrument. This method was used in the present index to determine the content validity of the index. The content of the index was thoroughly covered through literature scan and expert opinions. The indicators had at least 80 per cent judges' agreement were retained. This indicated validity of the index content. As the scale values, relevancy weightages and mean relevancy scores of all the dimensions and indicators had discriminating values, it seemed reasonable to accept the index as valid measure of the desired dimension.

RESULTS AND DISCUSSION

Livelihood security of dairy farmers : Livelihood of dairy farmers can be secured on a sustainable basis only if they are able to assess all the facilities for personnel and professional level at the right time and at the right moment. The different dimensions of livelihood were given the results below.

Food and nutritional security : The results presented in Table 1 revealed that near to half (47.09%) of the dairy farmers have high level of food and nutritional security followed by medium (31.67%) and low level constitute about 21.24 per cent of the respondents. It was satisfying to note that near about 50.00 per cent of the respondents had high level of food security. Hence, the dairying could be the great option to provide food security to the small and marginal farmers in the future. As dairy farming provides the alternative means for earning, due to that more than half of the farmers have medium to high level of food and nutritional security. It can also be concluded from the result that low milk sellers have more food and nutritional security than high milk sellers. The reason for such type of results were mainly due to more consumption of milk by the low milk sellers as compared to the high milk sellers and also high milk sellers have other means to fulfil their food and nutritional security.

Economic security index: The data in Table 2 showed that the nearly half (47.50%) of the respondents had high level of economic security followed by medium level (30.00%) and low level (22.50%) of economic security. It was also pleasing to note that almost half of the respondents had high level of economic security. This might be due to income generated through dairying throughout the year made them economically secure. As dairying required the regular labour for the day to day activities of animals, it reduced the migration also up to some extent. The economic security were almost equal for all the type of milk sellers, but medium milk sellers have little advantage over the low and high milk sellers. This might be due to the more expenditure by the high milk sellers to maintain their status and low milk sellers have to spend on other commodity of day to day activities.

Marketing security : It can be visualized from the Table 3 that exactly half (50.00%) of the respondents have low level of marketing security, whereas, medium and

Table 1. Distribution of respondents according to food and nutritional security index under different milk seller (N=240)

Food & nutritional security index	Low milk seller	Medium milk seller	High milk seller	Overall
Low (upto 0.76)	9 (3.75)	31 (12.92)	11 (4.57)	51 (21.24)
Medium (0.77 – 0.81)	26 (10.83)	30 (12.50)	20 (8.34)	76 (31.67)
High (> 0.81)	70 (29.17)	27 (11.25)	16 (6.67)	113 (47.09)

Table 2. Distribution of respondents according to economic security index under different milk seller (N=240)

Economic security index	Low milk seller	Medium milk seller	High milk seller	Overall
Low (upto 0.64)	19 (7.92)	23 (9.58)	12 (5.00)	54 (22.50)
Medium (0.65 – 0.70)	32 (13.34)	15 (6.24)	25 (10.42)	72 (30.00)
High (> 0.75)	24 (10.00)	56 (23.34)	34 (14.16)	114 (47.50)

Table 3. Distribution of respondents according to marketing security index under different milk seller (N=240)

Marketing Security Index	Low milk Seller	Medium milk Seller	High milk Seller	Overall
Low (upto 0.59)	40 (16.67)	27 (11.25)	53 (22.08)	120 (50.00)
Medium (0.59 – 0.71)	19 (7.92)	14 (5.84)	27 (11.24)	60 (25.00)
High (> 0.71)	14 (5.84)	25 (10.42)	21 (8.74)	60 (25.00)

Table 4. Distribution of respondents according to health security index under different milk seller (N=240)

Health security index	Low milk seller	Medium milk seller	High milk seller	Overall
Low (upto 0.66)	16 (6.67)	9 (3.75)	39 (16.25)	64 (26.67)
Medium (0.67 – 0.71)	28 (11.67)	21 (8.75)	34 (14.16)	83 (34.58)
High (> 0.71)	29 (12.08)	34 (14.17)	30 (12.50)	93 (38.75)

Table 5. Distribution of respondents according to social security index under different milk seller (N=240)

Social security index	Low milk seller	Medium milk seller	High milk seller	Overall
Low (upto 0.76)	8 (3.33)	2 (0.84)	14 (5.83)	24 (10.00)
Medium (0.77 – 0.84)	18 (7.50)	13 (5.42)	29 (12.08)	60 (25.00)
High (> 0.84)	47 (19.58)	49 (20.42)	60 (25.00)	156 (65.00)

Table 6. Distribution of respondents according to infrastructure security index under different milk seller (N=240)

Infrastructure Security Index	Low milk Seller	Medium milk Seller	High milk Seller	Overall
Low (upto 0.63)	23 (9.57)	15 (6.25)	33 (13.75)	71 (29.57)
Medium (0.64 – 0.68)	31 (12.92)	24 (10.00)	42 (17.50)	97 (40.42)
High (> 0.68)	19 (7.92)	25 (10.42)	28 (11.67)	72 (30.01)

Table 7. Distribution of respondents according to production security index under different milk seller (N=240)

Production security index	Low milk seller	Medium milk seller	High milk seller	Overall
Low (upto 0.77)	41 (17.08)	45 (18.75)	59 (24.58)	145 (60.41)
Medium (0.78 – 0.82)	22 (9.17)	17 (7.09)	34 (14.17)	73 (30.43)
High (> 0.82)	10 (4.16)	2 (0.84)	10 (4.16)	22 (9.16)

Table 8. Distribution of respondents according to rural livelihood security index under different milk seller (N=240)

Rural Livelihood Security Index	Low milk seller	Medium milk seller	High milk seller	Overall
Low (up to 0.69)	14 (5.84)	16 (6.67)	11 (4.57)	41 (17.08)
Medium (0.70 – 0.73)	38 (15.84)	17 (7.08)	42 (17.50)	97 (40.42)
High (> 0.73)	22 (9.16)	43 (17.92)	37 (15.42)	102 (42.50)

high level of marketing security constitute 25.00 per cent and 25.00 percent respectively. Due to the low marketing network and marketing information and marketing behaviour of the farmers, such results were observed. It can also be evident from the table that, high milk sellers have more marketing security than the low and medium milk sellers. The reason were obvious as they were cosmopolite and progressive in nature and have more links with the marketing agencies.

Health security index : The perusal of Table 4, clearly showed that the more than one-third (38.75%) of the respondents had high level of health security followed by medium level of health security (34.58%). It was also disappointing to note that around one fourth (26.67%) of the respondents had low level of health security. This might be due to lack of health facilities in the study area. The majority of respondents were food and nutrition secured, hence their health status was good but they had poor availability and accessibility to the health services in their locality. About more than one-third (38.75%) of the respondents had high level of health security. This might be due to better health status of the respondents' family due food and nutritional security through dairy and agriculture. It can also be observed from the Table that high milk sellers have more health security than the low and medium milk seller. This might be due to their accessibility to the nearby town for good medical facility and moreover they have more money for disposal on this aspect.

Social security index : The results presented in Table 5, reported that more than two third (65.00%) of respondents had high level of social security followed by medium level of social security (25.00%) and only one tenth (10.00%) of the respondents have low level of social security. It was also satisfying to note that the majority (65.00%) of respondents had high level of social security. This might be due to the culture of rural community to help and trust each other. It can also be observed from the table that almost all the milk sellers have equal social security level, but high milk sellers have more social security due to their high social status, cosmopoliteness, innovativeness and progressive nature.

Infrastructure security index: The overall development of the farmer's communities can be achieved through better infrastructure facilities at household and village levels. Table 6, clearly revealed that about two fifth (40.42%) of respondents had medium level of

infrastructure security followed by high level (30.01%) and low level (29.57%) of infrastructure security. The majority (70.43%) of respondents had medium to high level of infrastructure security. This might be due the poor infrastructure facilities like road, electricity, credit, market and cooperatives at village level. But the respondents had better infrastructure facilities at household level like pucca house, water and sanitation facilities, house wares and agricultural implements because of better income from dairying made them able to afford it. The better infrastructure facilities at household and village level, increase production efficiency of small and marginal farmers. Hence, infrastructure security have important role in sustainable rural livelihood security of farmers. It can also be analysed from the result that high milk sellers have more infrastructure security at the household level than the low and medium milk sellers due to their more income from agriculture and dairy.

Production security index : Production security of farmers are more important for sustaining their livelihood. The production security of dairy farmers could be achieved through increasing animal productivity and market accessibility. The results shown in Table 7, clearly indicated that the almost three fifth (60.41%) of the respondents had low level of production security followed by medium level (30.43%) and low level (9.16%) of production security. It was disappointing to note that the around 90.84 per cent of the respondents had low level and medium level of production security. This might be due to low animal productivity, low technology utilisation and lack of efficient marketing.

Rural livelihood security: It can be viewed from the Table 8, that more than four fifth (82.92%) of the respondents had medium to high level of rural livelihood security followed by low (17.08%) level of rural livelihood security. It might be due to the high food and nutritional security, economic security, social security and health security. The majority of respondents in high milk seller system had high level of rural livelihood security. This might be due to integration of dairying enterprises provides optimum utilisation of available resources through recycling and more income and employment throughout the year. It can be concluded from these findings that promotion of dairy farming in the study areas needs special attention in order to sustain the livelihood of the dairy farmers.

Table 9. Distribution of respondents according to mean livelihood security index under different milk seller (N=240)

LSI Components	Low milk seller	Medium milk seller	High milk seller	Overall
Food & nutritional Security	0.80	0.81	0.82	0.81
Marketing Security	0.67	0.74	0.78	0.73
Economic Security	0.73	0.84	0.81	0.79
Health Security	0.64	0.70	0.68	0.67
Production security	0.58	0.67	0.69	0.64
Social Security	0.52	0.63	0.76	0.64
Infrastructural Security	0.34	0.43	0.51	0.43
Mean RLSI	0.54	0.62	0.67	0.61

Mean of rural livelihood security index: The perusal of Table 9, showed that the overall average rural livelihood security index value was 0.61. The average rural livelihood security index value was high (0.67) for high milk sellers followed by medium (0.62) and low (0.54) milk sellers. This might be due to complementary enterprise integration ensures income, food and nutritional securities of the dairy farmers. On the satisfactory note, it can be concluded that all the milk sellers have average rural livelihood security index value more than 0.5, which signifies that on an average all the dairy farmers have secured their livelihood on a sustainable basis. But, informational, technological and infrastructural factors limit the development of the dairy farmers on a long term basis. So, there were the need to improve the infrastructure of the rural areas, so that information can be assessed promptly and the technology can be utilized efficiently and at the right time.

CONCLUSION

Indian agriculture came to very long distance in agricultural production, so the dairy also. But, on the share of farmers in the consumer price front, still it has to go a mile. Due to the lack of marketing information and intelligence, the farmers have to sell their produce in the haphazard manner, without proper understanding of the market behaviour. In, this regard there were the need of extension mechanism, which can consider the production as a system starting from the pre-production to marketing of the produce. Market led extension is such type of the system which consider the production in a system mode and committed to provide the right remuneration to the farmers for their produce. If, such type of system were followed by the dairy farmers, their livelihood can be secured on a sustainable basis and their standard of living can also be enhanced.

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