RURAL ECONOMIC ACTIVITIES AND LIVELIHOOD: A CASE OF MILK PRODUCERS’

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ABSTRACT
Milk production is one of the major economic activities in rural India. About 20.5 million people depend upon livestock for their livelihood. Agriculture and its allied activities are dominating the rural economy, and now it is characterized with transformational issues. The economic activity helps to secure the necessities of life of an individual. So the present study attempts to analyze milk production by the farmers in rural economy. The India is the highest owner of buffaloes and second highest cattle owner in the world. The economy milk producer’s is not constant and sufficient. Because of many reasons, they may be no fixed price for milk, inefficient dairy sector, price hike on concentrates, lack of advanced veterinary services etc., in the rural areas. This study shows that many milk producers are not technologically updated because of low economic background and unawareness of loan facilities, but they are said that they are economically satisfied with milk production. The research methodology includes both primary and secondary data, which was collected through field survey and the other relevant secondary sources, and Hypothesis, are framed between economic variables and milk production in India. To testing Hypothesis correlation coefficient technique is used.

KEYWORDS: Milk producers, rural economy, livelihood and Milk production.

I. INTRODUCTION
Milk producer is a person may be men or women, who are producing milk by farming cows, buffalos, sheep, goats, camels etc. But in India, we mainly concentrate on cows and buffaloes milk because of high milk yielding nature of these animals. In India both rural and urban milk producers are contributing to milk production but rural milk producers are contributing more. Individual portion contributing is very small but their number is big, so it will indicates that their earnings also very low per head. They are small holder of milch animals as compare to urban and updated business minded milk producers. Anyway India is the largest milk producer in the world, for this both dairy milk producers and non-dairy milk producers are contributed. But the dairy sector not getting a good name in world scenario i.e. in a global market, because of bad maintenance of raw milk, poor on-farm efficiency and low productivity (Raghavendra Verma report). Whatever issues on milk production, India is fully satisfied in milk production by fulfilling the demand for milk from 1.35 billion population. Indian agriculture is an economic symbiosis of crop and cattle population. Millions of rural smallholder milk producers dominate India’s dairy industry, contributing 62 percent of the total milk produced in the country. Rapidly growing markets for livestock products in general, and dairy products in particular (owing to the rise in per capita incomes) are opening new avenues for enhancing rural incomes. (Satish Belhekar, Soumyakant Dash 2016)
It is provided to the socio-economic development, empowering women, political, employment and income generation, rural women poverty reduction, improvement of children education, and sustainable livelihood to millions of household in rural country and State. (Prasad M, Dr. B. S. Chandrashekar, 2017) Now, milk production is a profit-oriented business. It varies by holding milch animals such as cows and buffalos. There are many landless milk producers equally contributing to milk production. These milk producers may incur more cost than landed milk producers. Both the milk producers marketing strategy differs. One can choose dairy cooperatives for marketing of milk and another one can choose other options like direct selling through door-to-door delivery service, through making packet milk which has a brand name etc. Though also the milk produced by them are not getting fixed and fair price. The dairy cooperatives are fixing prices on the basis of fat percentage. But, they are not considering the cost of milk production, so it is not fair. The price of concentrates for milch animals is very high and fluctuating; less support price from government etc. problems are facing by milk producers. So the purpose of the research is to know the socio-economic status of the rural milk producers on these circumstances.

II. OBJECTIVES OF THE STUDY

- To examine the role of milk production in economic development.
- To evaluate the economic empowerment of milk producers.

III. METHODOLOGY OF THE STUDY

The methodology of the study includes both primary and secondary data. The primary data is collected through the questionnaire which consists of twenty-one questions, which helps to know the socio-economic background of milk producers in Hiriyur taluk, Chitradurga district of Karnataka state. And the secondary data is collected from different sources like articles, journals, research papers, and internet sources also. Especially Hypothesis testing is used for this study. The research methodology field survey and the other relevant secondary sources, and Hypothesis are framed between economic variables and milk production in India. To testing Hypothesis correlation coefficient technique is used.

IV. HYPOTHESIS FOR THE STUDY

Null hypothesis

- There is no significant correlation between milk production and GDP.
- There is no significant correlation between milk production and GNP

V. NEED FOR THE STUDY

The maintenance of foreign breed cows and high milk yielding Murrah buffalos which are from Haryana state is very difficult. By farming these milch animals the milk producers have to take due care about environmental changes. The environmental temperature in Karnataka state differs from district to district and on that time milk producer role is very important, if he fails to manage then he has to face bad circumstances. Due to lack of milk production knowledge the milk producers are facing more problems. So this study conducted to know whether the milk producers of Hiriyur taluk are satisfied with these milch animals and are getting the good return or not. And also to know milk production is economical to them or not. Many studies were conducted on the topic entitled socio-economic status of milk producers, but in Hiriyur taluk, research is yet not done on this topic. So this research may help the interested people to know about milk producers’ status in Hiriyur taluk.

VI. SCOPE AND LIMITATIONS OF THE STUDY

The study mainly concentrates on socio-economic conditions of rural milk producers especially in Hiriyur taluk. The field survey done through questionnaire which is filled by selected 30 respondents of Hiriyur which includes both dairy and non-dairy milk producers. The limitations of the study are, we mainly concentrate on buffaloes and cattle milk production and we can’t get information of Indian origin cow’s milk producers in our study i.e. in Hiriyur taluk.

VII. PROBLEMATIZATION

Milk production in olden days is not a business oriented activity in India, but today it reverse. Every milk producer has the intention of earning something from this activity. The India is the highest owner of buffaloes and second highest cattle’s owner in the world. The economy milk producer’s is not constant and sufficient. Because of many reasons, they may be no fixed price for milk, inefficient dairy sector, price hike on concentrates, lack of advanced veterinary services etc., in the rural areas. Many milk producers are not technologically updated because of low economic background and unawareness of loan facilities, because in India both rural and urban area many milk producers are concentrating to hold more foreign breed cows instead of Indian origin cows, because of low milk yielding capacity of Indian origin cows. Here we need to observe that why they are interested in this activity, only because of low price on milk and not providing fair price to quality milk (A2) of Indian origin cows. Whatever issues and problems on type of milk production are only responsible of government as well as public of India because of lack of preference to Indian origin cows.
VI. DATA ANALYSIS AND INTERPRETATION

Table-1 GDP, GNP, and Milk production in India

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP</th>
<th>MP in India</th>
<th>GNP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>2.34</td>
<td>80.6</td>
<td>2.32</td>
</tr>
<tr>
<td>2001-02</td>
<td>2.47</td>
<td>84.4</td>
<td>2.45</td>
</tr>
<tr>
<td>2002-03</td>
<td>2.57</td>
<td>86.2</td>
<td>2.55</td>
</tr>
<tr>
<td>2003-04</td>
<td>2.78</td>
<td>88.1</td>
<td>2.76</td>
</tr>
<tr>
<td>2004-05</td>
<td>2.97</td>
<td>92.5</td>
<td>2.94</td>
</tr>
<tr>
<td>2005-06</td>
<td>3.25</td>
<td>97.1</td>
<td>3.23</td>
</tr>
<tr>
<td>2006-07</td>
<td>3.56</td>
<td>102.6</td>
<td>3.53</td>
</tr>
<tr>
<td>2007-08</td>
<td>3.90</td>
<td>107.9</td>
<td>3.88</td>
</tr>
<tr>
<td>2008-09</td>
<td>4.16</td>
<td>112.2</td>
<td>4.13</td>
</tr>
<tr>
<td>2009-10</td>
<td>4.51</td>
<td>116.4</td>
<td>4.48</td>
</tr>
<tr>
<td>2010-11</td>
<td>4.91</td>
<td>121.8</td>
<td>4.86</td>
</tr>
<tr>
<td>2011-12</td>
<td>5.24</td>
<td>127.9</td>
<td>5.20</td>
</tr>
<tr>
<td>2012-13</td>
<td>5.48</td>
<td>132.4</td>
<td>5.45</td>
</tr>
<tr>
<td>2013-14</td>
<td>5.74</td>
<td>137.7</td>
<td>5.67</td>
</tr>
</tbody>
</table>

\[ R \text{ value} = 0.998900697 \quad \text{and} \quad 0.998860257 \]

Source: Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, GoI

Figure-1

**Relationship Model:** Any economic activity which has the motive of profit-making called as the business. It has different dimensions with entrepreneurship, self-employment, professions, and occupations etc. The study observes that there is a significant correlation between milk production and gross national product and gross domestic product. Figure 1 show the role of milk production as a major economic activity which deals with variables of economic development. Very high positive correlation between economic variables and milk production in India. So it indicates that if the milk production in India increases the economic variables also react positively. Hence it is clear that the null hypothesis is rejected.
Table 2: Determinants of Milk production

<table>
<thead>
<tr>
<th>S.No</th>
<th>Factors</th>
<th>Yes %</th>
<th>No %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Land</td>
<td>83.33</td>
<td>16.67</td>
</tr>
<tr>
<td>2</td>
<td>Knowledge</td>
<td>83.33</td>
<td>16.67</td>
</tr>
<tr>
<td>3</td>
<td>Land for Milk Providence</td>
<td>50.00</td>
<td>50.00</td>
</tr>
<tr>
<td>4</td>
<td>Labors</td>
<td>30.00</td>
<td>70.00</td>
</tr>
<tr>
<td>5</td>
<td>Fodder</td>
<td>93.33</td>
<td>06.67</td>
</tr>
<tr>
<td>6</td>
<td>Protein</td>
<td>60.00</td>
<td>40.00</td>
</tr>
<tr>
<td>7</td>
<td>Water</td>
<td>80.00</td>
<td>20.00</td>
</tr>
<tr>
<td>8</td>
<td>Milking machines</td>
<td>13.33</td>
<td>86.67</td>
</tr>
<tr>
<td>9</td>
<td>Chaff cutter</td>
<td>30.00</td>
<td>70.00</td>
</tr>
<tr>
<td>10</td>
<td>Loan</td>
<td>36.33</td>
<td>63.67</td>
</tr>
<tr>
<td>11</td>
<td>Record keeping</td>
<td>33.33</td>
<td>66.67</td>
</tr>
<tr>
<td>12</td>
<td>Economical empowerment</td>
<td>70.00</td>
<td>30.00</td>
</tr>
<tr>
<td>13</td>
<td>Milking 2 time</td>
<td>96.63</td>
<td>03.33</td>
</tr>
<tr>
<td>14</td>
<td>Direct selling</td>
<td>40.00</td>
<td>60.00</td>
</tr>
<tr>
<td>15</td>
<td>Dairy co operative</td>
<td>60.00</td>
<td>40.00</td>
</tr>
<tr>
<td>16</td>
<td>Veterinary service satisfactory and good</td>
<td>76.66</td>
<td>33.34</td>
</tr>
</tbody>
</table>

Source: Field survey

- **Land owned by formers:** The above table shows that 83.33% milk producers have land and using for the purpose of milk production. And remaining 16.67% milk producers are not having land. The study observes that in milk production more landed milk producers are working. When milk producers have land then cost of expenditure of farming may less as compare to landless milk producers. Out of this 50%, milk producers are using their whole land for milk production purpose.

- **Knowledge:** The above table shows that 83.33% milk producers i.e. respondents have enough knowledge about milk production and the remaining 16.67% not have enough knowledge about milk production. Thereby they are able to face the chains of problems in the milk production process.

- **Labor:** The survey reveals that only 30% milk producers are having labors and the remaining 70% milk producers are not having labors for milk production purpose because milk producers are the smaller holder of milk animals.

- **Fodder, Protein, and Water:** the above table shows that 93.33% milk producers are purchasing fodder from outside and the remaining 6.67% are not purchasing fodder, the above table shows that 60% responded milk producers are using bypass protein products and remaining 40% responded milk producers are not using bypass protein products. the study reveals that 80% responded of milk producers are having enough water facility for maintenance of milk animals and the remaining 20% responded milk producers are not having enough water facility for maintenance of milk animals.

- **Milking machines:** the above table shows that 13.33% responded milk producers are using milking machines and the remaining 86.67% responded milk producers are not using milking machines, because they are not having many milch animals. Otherwise, milk producers are able to have enough labors to do milking activity.

- **Loan:** The above table shows that 36.67% responded milk producers are taken the loan for milk production purpose and the remaining 63.33% responded milk producers are not taken the loan for milk production purpose. The milk producers are not taken loan either they have sufficient capital to start milk production or they have not aware about loan facility for milk production.

- **Economical empowerment:** The field survey reveals that 70% responded milk producers are economically satisfied with milk production, and the remaining 30% are not economically satisfied with milk production. As per the above table, more milk producers are economically satisfied with milk production so only they are in this field. In starting time any business has to face some loss then only it will get a grip in that field to get succeed in that business.
VII. MAJOR FINDINGS OF THE STUDY

- **Correlation analysis:** By using the correlation coefficient technique the null hypothesis is rejected and it is proved that there is relationship between the economic variables and milk production in India.

- **Determinants of milk production:** The study observes that the major determinants which are significantly influenced on milk production, such are knowledge, labor, marketing, basic infrastructure, financing for milk producer, and technological factors.

- **Income security and economic empowerment:** The study investigates the income security and economic empowerment through milk production. It states that 56.67% milk producers are earning profit between ₹1000-5000.

- **Record keeping Analysis:** The above table shows that 66.67% milk producers are not maintained the records, so that the milk producers are not able to identify the cost of expenditure for each activity.

- **Marketing of Milk:** the above table shows that 60% milk producers are selling milk to dairy cooperatives, and the remaining 40% are selling directly to consumers. When they plan to directly sell to consumers they have to face competition from both direct seller and branded milk packet.

VIII. SUGGESTION

The major observation in present study is the maintenance of records by milk producers very minimal. So it is advisable to maintain the records and accurate information about their economic activity and its related matters, thereby it is possible to predict cost and benefit of milk production.

IX. CONCLUSION

Milk production is one of the agriculture allied sector in India as well as Karnataka. It provides platform for socio-economic development, economic empowerment, employment and income generation, rural poverty eradication, improvement of children education, and sustainable livelihood to millions of household in rural economy. The Economic empowerment through self employment is one of the challenging tasks in the present scenario. Most of the population in India both in rural and semi-urban economy are employed in order to meet the financial demands. A major proportion of them are engaged their economic activities in agriculture and allied activities like milk production, animal husbandry, dairy farming, fisheries development, cattle and buffaloes rearing, and other allied activities. Income from agricultural activities has been as irregular as the monsoon is uneven. Hence, the present study finally recommends that the rural economy and their actors are forced to think of additional revenues generating economic activities.

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