

## Problems of Coir Industry in West Bengal : An Analysis

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**Abstract :** West Bengal is one of the important coconut producing states in India. But maximum of the coconut husk is either discarded or used as fuel due to lack of awareness among the people. Only about 20% of the husk used for coir extraction. Though there are number of coir units in West Bengal but a few of them have registered their units under the Coir Board. Several initiatives have been taken by the Governments and the Coir Board to promote this industry. Still coir industry is facing a lot of problems in India as well in West Bengal. The present study tries to examine the problems of coir industry in West Bengal. The registered coir units have been considered to analyse the problems of coir industry in West Bengal.

**Key-words :** Coir, coconut husk, coir board.

### 1. Introduction

The Coir Industry is one of the most important traditional small scale industries for its contribution to Indian economy and employment generation. Coir is the word coming from Malayalam word Kayar or Kayaru which mean Cord to be twisted. Coir is the fibre extracted from coconut husk. The coconut producing regions are mainly located in the tropics, particularly in South and South-East Asia and in East Africa; such as, Indonesia, Philippines, India, Sri Lanka, Ghana etc. In most of the Countries coconut husk is either used as fuel or discarded as useless materials and in few countries, coir fibre is used to produce different products like, coir yarn, coir mats, carpets, as geo-textiles materials, etc.

This Industry is the largest traditional cottage industry mainly in the coastal region where other alternative avenues of gainful employment are few. This industry is crucially important as a source of employment and income for a million people. Again, this industry plays a vital role in the economic development of the country as a source of foreign exchange and it has earned foreign exchange of Rs. 1476.04 crore during the year 2013-14.

India though holds in the third position in the world for the production of coconuts but is first in production of coir. India shared about 47% of the total coir production of the world during the year 2012. Kerala, Tamil Nadu, Karnataka and Andhra Pradesh are the main coir producing states in India. Besides these states, Goa, Orissa, Andaman Nicobar Island, West Bengal, Gujrat, Maharashtra, Assam, Tripura, Pondicherry etc. also produce small quantities of coir. Kerala is the first largest coir producer whereas Tamil Nadu is holding second position in coir production among the Indian states. Kerala is considered as the home of coir industry.

## 2. Literature Review

Several studies have been conducted by the academicians and researchers on different aspects in the field of coir products and coir industry. The Coir Board has also published some reports.

Pylee (1975) made a study to examine the problems that has been faced by the coir industry during the year 1974. The study highlighted the main reason as that shortage of coir fibre which is the basic requirement for the industry. The study also focused the need for modernization of this industry through mechanization to up lift the export trends and to reduce the rising cost of production. The study recommended that for modernizing the sector, preference should be given to public sector and workers, cooperatives to be set up and to operate the husk beating machine. The study also emphasized on research and development for improvement of new products and advertisement to promote export and domestic sales.

Shamanarayan (1977) explained the marketing strategies, especially export trade of Coir Board for the development of the coir industry in India. He analysed the role of agencies in the export and problems faced by them, restrictions in foreign trade and its impact on the industry. Prakash (1977) examined the dual price system fixed for export and open for domestic markets and the problems connected with mechanization.

Thomas and Raghavan (1990) in their working paper framed a policy for revitalization of coir industry in Kerala. Their study analysed the overall problems of this industry and its prospects from different aspects. They made some valuable suggestions to overcome such problems and revitalization of this industry.

Fernandez (2003) examined the problems and prospects of coir industry in the context of trade and market. His study concluded that the survival of this industry depends on its adaptability to the fast changing customer preferences and widening choices. It also suggested that whether for domestic or export purposes, this sector have to keep diversity to maintain the quality of products and services high and ensure cost effectiveness.

Sivanesan (2013) analysed the socio-economic conditions, working conditions and problems of workers of coir industries in Kanyakumari District. Vignesh and Sekaran (2014) examined the problems of coir industry in Coimbatore District.

The primary raw material of coir industry is coconut husks. But the shortage of husks and fibre due to fall in production of nuts create a lot of problems to this industry. In West Bengal, only 20% of the total production of nuts, considered for extraction of fibre. The major problem of this industry is the collection of coconut husks from producers and consumers of coconuts in the state. Inadequate modern technologies and machineries makes it difficult for this state to extract husks for processing. Increases in production of natural fibres like jute, sisal, ladies finger are the problems in coir industry. Entry of Chinese plastic fibre in Indian market makes the coir industry more competitive.

## 3. Objectives of the Study

The objectives of the study are:

- i. To give an overview of the coir industry in West Bengal
- ii. To examine the problems and prospects of the coir industry in West Bengal.

#### 4. Databases and Research Methodology

Data have been collected from the books, journals, magazines, research articles, bulletins, working papers, newsletters, bulletins, regulation of the Coir Board, MSME Annual Reports, reports of the Coir Board and different websites. The primary data have been collected through a structured questionnaire. A pilot survey has been conducted to frame the questionnaire considering the different views of Officials/Executives of Coir Board in Kolkata and management of coir units. Communication has been made with the officials, executives, management of units of all the 56 registered coir units operating in West Bengal (as per Coir Board Kolkata, 2013-14.) through telephone, e-mail and personal interaction for filling up the questionnaire during the period from March 2013- July 2014.

Out of 56 registered Units, 34 (i.e., 60.71%) units have responded. Internal consistency of questionnaire is tested by using Cronbach's alpha (.627). Data have been analysed by using statistical package. Six hypotheses have been formulated and tested results are shown in analysis section.

#### 5. Coir Industry in West Bengal

West Bengal got fifth position in respect of coconut production in India with 367.50 nuts during 2011-2012. Coconuts are cultivated in almost all the districts of the State, but most of the coir units are located only in 8 districts viz. South 24 Parganas, North 24 Parganas, East Midnapore, West Midnapore, Kolkata, Howrah, Hooghly, Burdwan and Murshidabad. The coir units of the State are very small in size and maximum of them are concentrated in the village areas where there is lack of alternative job opportunity. It is completely an unorganized sector in the state. The workers are mostly from SC/ST, backward classes. This industry has to compete with Jute fibre (as West Bengal is well known for Jute Industry) and other artificial fibres. The State Government in collaboration with Indian Coir Board has taken different initiatives to set up training-cum-servicing centres in South 24-Parganas and Howrah districts where coconut husk are easily available.

The coir industry in West Bengal is mainly concentrated in South 24 Parganas, East-Midnapore, Howrah districts for easy availability of coconut husk and low cost workers. There are 56 registered Coir Units (as per Coir Board, Kolkata) and about 370 (as per MSME, West Bengal) unregistered coir units in West Bengal providing employment to more than 3,000 people in the state. Initially private sectors had started to work in this field in a very much unorganized way and the entire control of this industry was under private sectors. The West Bengal Government has taken different initiatives in collaboration with Indian Coir Board. Uluberia in Howrah district and Dhanchiberia in South 24 Parganas districts have undertaken initiatives to promote coir industries in the State. To modernize this industry, the State Government is running two training centres; one is situated at Uluberia in Howrah district and the other at Dhanchiberia in the cluster region in the district of South 24 Parganas. There are model villages in the state under the 'Model Coir Village Scheme', for implementing welfare programmes like common work-sheds, Common Facility Centre, drinking

water facilities, sanitary latrine for workers. These model villages are situated at Hirapur Gram Panchayat and Bagnan in Howrah district.

## 6. Analysis of Problems and Findings

The development of Coir Industry in West Bengal is hampered by varied problems. Scarcity of raw materials, unskilled workers, migration of workers, unavailability of adequate finance, lack of proper marketing facilities, absence of modern technology are the common problems for all the coir units of the State. In this context, the study has been attempted to analyse the various problems faced by the registered coir industry in West Bengal. Such problems have been analysed under five (05) broad areas. These areas are Employee related, Raw Material, Marketing, Financial and Products & Technology. Each area contains relevant questions. All together 71 questions have been constructed under these five broad areas to analyse the problems of the coir industry in West Bengal.

### 6.1 Employee related problems

Coir industry is one of the important traditional employment generating small scale industries. It is also a labour intensive industry. Production and the marketing are the main part of this industry. Production section requires a number of workers for retting of husk, fibre extraction from husk, spinning yarn and weaving. The extraction of fibre and spinning can be done manually (retting system) as well as by using machines (de-fibring system). Due to small size and lack of finance in the units of West Bengal, both the works are done manually. Due to this reasons the units of the State require a lot of permanent skilled workers. Yet, most of the units of the State do not get full time permanent workers. Workers are migrating from this industry to other sectors for various reasons. The survey has found several significant problems relating to employments which have been discussed below:

- 64.7% surveyed units believe that unskilled worker is a major concern to the coir units of the state.
- Only 44.1% of the surveyed units are able to arrange training programmes for their employees and 97.1% of which have agreed that production capacity of the workers increases after proper training.
- All the units are very much worried about the migration of workers. The reasons for migration are NREGA Programme or 100 Days Works of Central Government, lack of continuous work in the units throughout the year, less pressure but higher income in alternative jobs.
- Strike is another problem to this industry in the state. Few of the units have closed their units due to strike.

### Chi-Square Test

A Chi-Square test has been done to examine the impact of the training programme conducted by the units on its production capacity.

### Hypothesis-1

$H_0$  : The training programme has no impact on increasing production capacity of the units.

$H_1$  : The training programme has an impact on increasing production capacity of the units. Table 1 and Table 2 show below the results of Chi-square test and cross tabulation of training programme.

**Table-1 : Cross Tabulation of training programme for the employees and production capacity of the units**

| Unit arranges training programme for their employees |            | Production capacity are increased or not |         |        |
|--|------------|--|---------|--------|
|  |            | Agree                                    | Neutral | Total  |
| Agree  | Total      | 15                                       | 0       | 15     |
|  | % of Total | 44.1%                                    | .0%     | 44.1%  |
| Neutral  | Total      | 0  | 1       | 1      |
|  | % of Total | .0%                                      | 2.9%    | 2.9%   |
| Disagree   | Total      | 18                                       | 0       | 18     |
|  | % of Total | 52.9%                                    | .0%     | 52.9%  |
| Total  | Total      | 33                                       | 1       | 34     |
|  | % of Total | 97.1%                                    | 2.9%    | 100.0% |

(Source : Compiled by Researchers)

**Table-2 : Chi-Square Tests**

|                              | Value  | df | Asymp. Sig. (2-sided) |
|------------------------------|--------|----|-----------------------|
| Pearson Chi-Square           | 34.000 | 2  | .000                  |
| Likelihood Ratio             | 9.023  | 2  | .011                  |
| Linear-by-Linear Association | .008   | 1  | .928                  |
| No of Valid Cases            | 34     |    |                       |

(Source : Compiled by Researchers)

**Interpretation :** The Pearson Chi-Square or P value of the test at 5% level of significance is .000 which is less than 0.05. So, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be concluded that the training programme has an impact in increasing production capacity of the units.

From the above cross tabulation table-1, it is also found that 44.1% of the units provide training to their employees whereas 97.1% of the total surveyed units believe that the production capacities have increased from their trained employees.

### 6.2 Raw material related problems

Coir fibre is the prime raw material for this industry and the fibre is extracted from coconut husk. In West Bengal, only 20% of the total coconut productions are available for extraction of fibre and rest of the coconut husk are considered as waste. Local dealers are the main source of raw material to the coir units of the State and few of the coir units purchase raw material from other states. The coir units of the State face numerous problems; like

- 70.6% of the surveyed units have agreed that the quality of raw material available in West Bengal is very poor. Whereas 20.6% respondents have opined that the quality of raw material in West Bengal is very good and 8.8% have remained silent.
- Even the price of raw material is much higher in West Bengal (91.2%) and supply of raw material is very irregular.
- Sometimes productions are hampered due to unavailability of required raw material according to demand (82.4%) and 70.6% of the units reported that they need to buy raw material from other states for continuous production in the units.
- The collection cost of raw material is also rising day by day. Indirectly it increases the cost of coir products.
- 91.2% respondents have agreed that there is a lack of good machineries for collecting coconut husk from the source, like coconut producer, households, and coconut sellers.

#### Chi-Square Test

A Chi-Square test has been done to verify the degree of necessity to buy raw material from other states to maintain the continuous supply of coir and coir based production in the units.

#### Hypothesis-2

$H_0$  : Non-availability of raw material in West Bengal does not lead to purchase of raw material from other states.

$H_1$  : Non-availability of raw material in West Bengal leads to purchase of raw material from other states.

Table 3 and table 4 show below the results of Chi-square test and cross tabulation of need to buy raw materials from other states.

**Table-3 : Cross tabulation of raw materials are not available according to demand in West Bengal and Need to buy Raw Materials from other states**

| Raw materials are not available according to demand in West Bengal |            | Need to buy Raw Materials from other states for continuous production |         |          |        |
|--|------------|---|---------|----------|--------|
|  |            | Agree   | Neutral | Disagree | Total  |
| Agree  | Total      | 22  | 3       | 3        | 28     |
|  | % of Total | 64.7%   | 8.8%    | 8.8%     | 82.4%  |
| Neutral  | Total      | 1   | 0       | 1        | 2      |
|  | % of Total | 2.9%  | .0%     | 2.9%     | 5.9%   |
| Disagree   | Total      | 1   | 0       | 3        | 4      |
|  | % of Total | 2.9%  | .0%     | 8.8%     | 11.8%  |
| Total  | Total      | 24  | 3       | 7        | 34     |
|  | % of Total | 70.6%   | 8.8%    | 20.6%    | 100.0% |

(Source : Compiled by Researchers)

Table-4 : Chi-Square Tests

|                              | Value  | df | Asymp. Sig. (2-sided) |
|------------------------------|--------|----|-----------------------|
| Pearson Chi-Square           | 10.112 | 4  | .039                  |
| Likelihood Ratio             | 8.726  | 4  | .068                  |
| Linear-by-Linear Association | 7.889  | 1  | .005                  |
| N of Valid Cases             | 34     |    |                       |

(Source: Compiled by Researchers)

**Interpretation :** The Pearson Chi-Square or P value of the test at 5% level of significance is .039 which is less than 0.05. So null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be said that the coir units of West Bengal need to buy raw materials from other states for continuous production due to non-availability of raw material in West Bengal.

The cross tabulation table-3 also shows that 82.4% of the respondents have agreed that the raw material is not available according to demand in West Bengal and 70.6% of the respondents have also agreed that they need to buy raw materials from other states to continue their production in the units. 8.8% respondents agreed that there is no need to buy raw material from other states.

### 6.3 Marketing problems

Marketing is another important aspect to any industry especially to small sector industry like coir. The coir and coir based products have great demand in both domestic as well as in foreign markets. India is a major exporter of coir and coir based products. The domestic markets of coir and coir products are also expanding day by day. Both the markets are dominated by the coir units of Southern India. The coir units of West Bengal are not in a position to get up-to-date information about the market i.e. about the competition, taste-liking-disliking of the consumers and modern design & fashion. Even they are unable to upgrade their products keeping in mind the market requirements. They produce low quality of coir products at higher cost. In this section, marketing related problems of coir based products have been identified and analysed.

- 67.6% of the respondents sell their products in three ways i.e. directly, through private agency and Self Help Groups (SHGs). There is no Cooperative system of marketing of coir products in the state.
- All the respondents agreed that other natural fibres like sisal, jute and entry of artificial fibre have made the market tough for coir and coir products.
- The study has also found that there is huge competition among the coir units in West Bengal as well as in the other states of India (94.1%).
- All the respondents believe that entry of China products is another challenge to this industry.

- 97.1% respondents have agreed that the demand for coir products in West Bengal is increasing but 64.7% of the surveyed units have agreed that this demand cannot be fulfilled by the existing coir units of the state.
- 97.1% of the respondents have responded that they do not get assistance from Government in marketing of their coir products in domestic markets as well as in exporting the coir and coir products.
- The study has also identified that the coir units of the state are forced to sell their products to the middlemen or agents at their price (73.5%).
- Though there is a good scope of exporting coir and coir based products opined by 82.4% respondents but 61.8% respondents agreed that West Bengal is not in good position in exporting of coir and coir based products.

#### Chi-Square Test

A Chi-Square test has been done to examine whether West Bengal is in a good position in exporting coir and coir based products as there is a huge scope.

#### Hypothesis-3

$H_0$  : West Bengal is not in a good position in exporting coir and coir products.

$H_1$  : West Bengal is in a good position in exporting coir and coir products.

Cross tabulation for export of coir and coir based products and Chi-Square test are shown in table 5 and table 6 below.

**Table-5 : Cross tabulation of Huge scope for export of coir and coir based products and West Bengal is in good position in export of coir products**

| Huge scope for export of coir and coir based products |            | West Bengal is in good position in export of coir products |         |          |        |
|---|------------|--|---------|----------|--------|
|   |            | Agree  | Neutral | Disagree | Total  |
| Agree   | Total      | 6  | 5       | 17       | 28     |
|   | % of Total | 17.6%  | 14.7%   | 50.0%    | 82.4%  |
| Neutral   | Total      | 0  | 2       | 3        | 5      |
|   | % of Total | .0%  | 5.9%    | 8.8%     | 14.7%  |
| Disagree  | Total      | 0  | 0       | 1        | 1      |
|   | % of Total | .0%  | .0%     | 2.9%     | 2.9%   |
| Total   | Total      | 6  | 7       | 21       | 34     |
|   | % of Total | 17.6%  | 20.6%   | 61.8%    | 100.0% |

(Source : Compiled by Researchers)

Table-6 : Chi-Square Tests

|                              | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------|----|-----------------------|
| Pearson Chi-Square           | 2.752 | 4  | .600                  |
| Likelihood Ratio             | 3.770 | 4  | .438                  |
| Linear-by-Linear Association | .783  | 1  | .376                  |
| N of Valid Cases             | 34    |    |                       |

(Source : Compiled by Researchers)

Interpretation : The Pearson Chi-Square or P value of the test at 5% level of significance is .600 which is more than 0.05. So, the null hypothesis is accepted and alternative hypothesis is rejected. Therefore, the study has found that West Bengal is not in a good position in export though there is huge scope of exporting coir and coir based products. The reason behind this might be poor quality of products and promotional scheme.

From the cross tabulation table-5, it is also found that 82.4% of the respondents have agreed that there is a huge scope of exporting of coir and coir based products but 61.8% of the respondents have disagreed to the fact that West Bengal is in good position in exporting coir products. Only 17.6% respondents have agreed that West Bengal is in good position in exporting coir and coir based products.

#### 6.4 Financial Problems

One of the major problems of the coir units of West Bengal is lack of finance, the smaller the unit, the larger the problem of capital fund. They need more money as working capital as well as long term capital to run the units efficiently. Units need to borrow money but due to various legal processes and paper works they are not willing to borrow from Bank. Most of them are not aware about the different financial schemes of the Government and the Coir Board. This analyses such financial related problems of the coir units in West Bengal.

- The coir units of West Bengal are facing shortage of working capital. Only 23.5% respondents said that they have sufficient working capital to run the day-to-day work.
- 97.1% of the respondents units are very much willing to take loan from Bank. But due to legal hazards and paper works of taking loans from Banks 73.5% of the respondents borrow loans from other financial institutions at higher rate of interest.
- The study has found that only 8.8% units spent money for application of modern technology in their units in production process and the rest cannot spend money because of financial constraints.
- All most all the units are very much eager to get financial assistance from the Government and the Coir Board but they do not get such assistance.
- 94.1% of the surveyed units have agreed that the collection cost of coconut husk increases the production cost of coir based products.

### 6.5 Production and technological problems

Modern and upgraded technologies and machineries are very much required to produce qualitative coir products to compete with the coir industry of other states. But the coir units of West Bengal are not well equipped with the modern technology. Most of them manufacture coir products by using old machineries and conventional methods. Even they cannot adopt the modern technology and machinery due to various problems. Coir Industry in the state has become a value added traditional industry which produce a few coir based products like; coir yarn, rope, mattresses etc. The study is meant to find out such problems.

- It is also found that the demand for coir products in West Bengal is increasing day-by-day but the units cannot fulfill that demand with their traditional products only.
- 73.5% of respondents have agreed that it is not possible for them to carry out research and development activities with their products according to the new demand of the customers.
- The study has found that 79.4% of the respondents do not use modern machineries in the units for the production.
- 50% of the surveyed units do not mix-up any artificial fibre with the coir fibre but 41.2% do the same.

### 7. Conclusion

Coir products have great demand in the domestic markets as well as in foreign markets. But coir industry has some practical problems for which this industry could not develop to its full potential. The foremost problems are unavailability of skilled workers and their migration. Unavailability and poor quality of raw material are the other vital problems of this industry. Lack of awareness of existing market facilities is the drawback of the industry in comparison to coir units in other states. Technology adaptation and upgradation is very much required to sustain this industry in future. Moreover the Government and the Coir Board have tried to boost up this industry in the State.

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