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# Marketing Pattern of Rubber Plantation in Tripura, India

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**A B S T R A C T**

The present study was carried out to study the marketing pattern of Rubber plantation in Tripura State. In the first stage two districts namely South Tripura and Gomati were selected purposively due to having highest area under rubber plantation crop, while in the second stage one block from each district was selected randomly and further from each block three villages were randomly selected; from each village 10 respondents were selected on the based on stratified random sampling methods. The marketing channels were identified based on the middleman from the point of production to the point of ultimate consumer (traders). Study reveals that the marketing efficiency in Channel I (Producer-processor-wholesaler- trader) of South Tripura district was better than that of Gomati district whereas Channel II (Producer-agent-retailer-trader) of Gomati district was more efficient than that of South Tripura district. The price spread of both the channels of Gomati district was more than the respective channels of South Tripura district.

## Introduction

Natural rubber plays an important role in area as well as production where more than 80.00 per cent of rubber production was contributed by smallholding farmers. As per International Rubber Study Group (Anon., 2015), worldwide production of natural rubber had considerably increased from 68.11 lakh tonnes in 2000 to 121.03 lakh tonnes in 2014 and worldwide increased consumption of 121.25 lakh tonnes in 2014 as compared to 71.08 lakh tonnes in 2000. India is the fourth largest producer (8.90 per cent) and third largest consumer (8.70 per cent) of natural rubber in the world. The production and consumption of natural rubber during 2008-2009 was 820 thousand tonnes and 905 thousand tonnes, respectively. Major contributions of traditional rubber cultivation were made by the southern states of India with Kerala having more than 90.00 per cent of the total rubber production followed by Tamil Nadu contributing 2.89 per cent of the total rubber produced in India. As per the government reports, cultivation of rubber in North eastern states would improve the socio economic condition of the smallholders and around 4,50,000 ha of land had been identified by the national bureau of soil survey suited for rubber cultivation. Tripura holds the central position in rubber production and has high prospective for cultivation in the region. The state had been blessed with great potential for rubber

cultivation as compared to other non-traditional rubber growing regions of the nation (Joseph *et al.,* 2009; Joseph *et al.,* 2010; Joseph *et al.,* 2012). Presently, Tripura is the largest rubber producer among the North eastern states and ranks second place in India after Kerala. As per Indian statistics (2013-2014) rubber productivity and production in Tripura was 1200 kg / ha / year and 37,277 mt, respectively and it had increased the annual income of the rubber growers by 112.00 per cent as per the study conducted by Joseph *et al.,* (2010). Marketing plays a significant role by bringing the producers and consumers together and satisfying the needs of the consumers. So, a survey was conducted to determine socio-economic characteristics of the rubber growers, different marketing channels and the marketing costs involved in marketing of rubber, price spread of rubber and the constraints faced by the rubber growers in Tripura. Hence, the research on "Comparative study on marketing pattern of Rubber in Tripura" was carried out to study the marketing channels and price spread of rubber.

## Materials and Methods

A multi-stage sampling procedure was adopted for the present study for the purpose of selection of representative from districts, blocks, villages and respondents. Based on pilot survey, South Tripura district and Gomati districts due to the high position in rubber cultivation area were selected. Rubber was cultivated in all the blocks of South Tripura and Gomati districts, however, the maximum area under rubber was in Satchand block of South Tripura district and Matabari block of Gomati district. Hence, these two blocks were selected for the survey. From the selected Satchand block of South Tripura district, three villages *viz.* Chotokhil, Brajendranagar and Srinagar and from Matabari block of Gomati district, three villages *viz.* Salgara, Laxmipur and Fulkumari were selected. Thirty rubber growing farmers were randomly selected from each block with ten farmers from each of the three villages to obtain detailed primary data regarding cultivation of rubber crop. In total, 60 rubber growers were selected for the study. Five intermediaries were randomly selected from each of the selected districts for studying the marketing aspects of rubber. Thus, a total sample number of ten intermediaries were selected.

The data required for the study were collected from the respondents through personal interview method using pre-tested schedule. The marketing channels of rubber were identified based on the data collected from intermediaries involved from the point of production (producer) to the point of ultimate consumption (trader). The costs involved in moving the rubber product from the point of production to the point of traders is known as the cost of performing marketing functions. It involves transportation cost, weighing cost, storage cost, loading and unloading cost, packaging cost, miscellaneous cost. The primary data for the present study was collected from the respondents by using pre-tested interview schedule. All the secondary data used in the study were collected from various secondary sources viz. office of the Regional Rubber Board in Agartala, Statistical handbook of Tripura, journals, research articles, etc.

Price spread is the difference between the price paid by the consumer and the price received by the producer. It may consist of marketing costs and margins. The price spread analysis was carried out as:

$$\text{Producer's share in Consumer's rupee} = \frac{\text{Producer's price}}{\text{Consumer's price}} \times 100$$

In order to assess the marketing efficiency in the sale of the rubber, the Shepherd's formula of the following form was used.

$$ME = \frac{V}{I} - 1$$

Whereas:

ME = Marketing Efficiency,
V = Consumer price per unit of rubber,
I = Marketing cost per unit of rubber.

## Results and Discussion

As per the information collected from different intermediaries involved in rubber marketing, the channels identified were:

Channel I: Producer - Processor - Wholesaler - Trader

Channel II: Producer - Agent - Retailer – Trader

Table 1 reveals that in South Tripura district, the marketing cost incurred by producer in marketing of rubber was ₹ 3.00 per kg. In total cost of marketing, storing charges accounted for 66.67 per cent followed by weighing charges (5.97 per cent). The cost incurred in rubber sheet marketing by the processor was ₹ 7.50 per kg. The loading and unloading charges with packaging charges both constituted ₹ 2.00 per kg (26. 67 per cent) followed by storing charges (17.33 per cent), transportation charges (16.00 per cent) and weighing charges (13.33 per cent). The cost incurred by the wholesaler was ₹ 9.50 per kg while transportation charges alone constituted ₹ 3.50 per kg (36.84 per cent) followed by loading and unloading charges (31.58 per cent), storing charges (21.05) and miscellaneous charges (10.53 per cent). The cost incurred in rubber sheet marketing by the agent was ₹ 9.70 per kg. The loading and unloading charges alone constituted ₹ 3.00 per kg (30.93 per cent) followed by both packaging and transportation charges (20.62 per cent), storing charges (15.46 per cent) and weighing charges (12.37 per cent). The cost incurred by the retailer was ₹ 11.5 per kg while loading and unloading charges alone constituted ₹ 4.50 per kg (39.13 per cent) followed by both storing and transportation charges (26.09 per cent) and miscellaneous charges (8.69 per cent), respectively.

While in Gomati district, marketing cost incurred by producer in marketing of rubber was ₹ 3.20 per kg. In total cost of marketing, weighing charges accounted for 37.50 per cent followed by both storing and miscellaneous charges (31.25 per cent). The cost incurred in rubber sheet marketing by the processor was ₹ 10.60 per kg. The loading and unloading charges alone constituted ₹ 3.00 per kg (28.30 per cent) followed by storing charges (23.58 per cent), weighing charges (18.88 per cent), transportation charges (16.98 per cent) and packaging charges (12.26 per cent). The cost incurred by the wholesaler was ₹ 10.50 per kg while loading and unloading charges alone constituted ₹ 4.00 per kg (38.09 per cent) followed by storing charges (31.58 per cent), transportation charges (23.82 per cent) and miscellaneous charges (9.52 per cent).

The cost incurred in rubber sheet marketing by the agent was ₹ 9.5 per kg. The loading and unloading charges alone constituted ₹ 3.00 per kg (31.58 per cent) followed by both weighing and transportation charges (21.05 per cent), packaging charges (15.79 per cent) and storing charges (10.53 per cent). The cost incurred by the retailer was ₹ 10.00 per kg while loading and unloading charges alone constituted ₹ 4.00 per kg (40.00 per cent) followed by transportation charges (30.00 per cent), storing charges (20.00 per cent) and miscellaneous charges (10.00 per cent), respectively.

Table 2 reveals that in South Tripura district, Channel I was more efficient than Channel II and the efficiency index for Channel I was the maximum with 5.06 followed by Channel II with 4.22.

In Gomati district, Channel II was more efficient than Channel I and the efficiency index for Channel II was the maximum with 4.50 followed by Channel I with 4.22. The marketing efficiency for Channel I of South Tripura district was more than that of Gomati district because of lower marketing cost whereas Channel II of Gomati district was more efficient than that of South Tripura district.

Therefore, Channel I of South Tripura district was the most efficient channel.

Data reveals that in the South Tripura district, producer's share in consumer's rupee was 83.08 per cent and 80.21 per cent in Channel I and Channel II, respectively. Correspondingly, net price received by the producer was higher in Channel II (₹ 98.31 per kg) than Channel I (₹ 97.67 per kg). The price spread was more in Channel II (₹ 25 per kg) than Channel I (₹ 20.5 per kg). In Gomati district, the producer's share in consumer's rupee was 79.81 per cent and 79.95 per cent in Channel I and Channel II, respectively. Correspondingly, net price received by the producer was higher in Channel I (₹ 97.97 per kg) than Channel II (₹ 97.7 per kg). The price spread was more in Channel I (₹ 25.6 per kg) than Channel II (₹ 25.37 per kg). The price spread of both the channels of Gomati district was more than the respective channels of South Tripura district.

**Table.1** Price spread of rubber plantation through different marketing channels

| Sl. No. | Particulars | South Tripura | | Gomati | |
|---|---|---|---|---|---|
| | | Channel-I (₹ ) | Channel-II (₹ ) | Channel-I (₹ ) | Channel-II (₹ ) |
| 1 | Gross price received by producer | 100.67 | 101.31 | 101.17 | 101.20 |
| 2 | Marketing cost of producer | 3.00 | 3.00 | 3.20 | 3.50 |
| 3 | Net price received by producer | 97.67 | 98.31 | 97.97 | 97.70 |
| 4 | Marketing cost of | | | | |
| | Processor | 7.50 | - | 10.60 | - |
| | Agent | - | 9.70 | - | 9.50 |
| 5 | Profit of | | | | |
| | Processor | 2.00 | - | 2.50 | - |
| | Agent | - | 1.80 | - | 2.80 |
| 6 | Wholesaler's purchase price | 110.17 | - | 114.27 | - |
| 7 | Marketing cost of wholesalers | 9.50 | - | 10.50 | - |
| 8 | Retailer's purchase price | - | 112.81 | - | 113.50 |
| 9 | Marketing cost of retailers | - | 11.50 | - | 10.00 |
| 10 | Consumers' purchase price | 121.17 | 126.31 | 126.77 | 126.57 |
| 11 | Profit of wholesalers | 1.50 | - | 2.00 | - |
| 12 | Profit of retailers | - | 2.00 | - | 3.17 |
| 13 | Price spread | 20.50 | 25.00 | 25.60 | 25.37 |
| 14 | Producer's share in consumer's rupee (per cent) | 83.08 | 80.21 | 79.81 | 79.95 |

**Table.2** Marketing efficiency of rubber plantation

| Particulars | South Tripura | | Gomati | |
|---|---|---|---|---|
| | Channel I | Channel II | Channel I | Channel II |
| Consumer Price (₹ /kg) | 121.17 | 126.31 | 126.77 | 126.57 |
| Total Marketing Cost (₹ /kg) | 20.00 | 24.20 | 24.30 | 23.00 |
| Marketing Efficiency | 5.06 | 4.22 | 4.22 | 4.50 |

The present study concluded that Channel I (Producer-processor-wholesaler-trader), the producer sold their produce directly to the processor and processor sold it to wholesaler and finally reached to the trader. In Channel II (Producer-agent-retailer-trader), the producer sold their produce to the retailer through agent and ultimately reached to the trader. Marketing cost incurred by the producer of both Channel I and Channel II of Gomati district was higher than Gomati District. It was observed that the producers of South Tripura district in both Channel I and Channel II incurred a higher amount on storage than Gomati district.

The marketing cost incurred by the processor of Gomati district was higher than South Tripura district due to loading and unloading charge and similarly the marketing cost incurred by the agent of South Tripura district was higher than Gomati district due to loading and unloading charge. It was also observed that a high amount of loading and unloading charges was paid by the processor of Gomati district than South Tripura district.

Among the total marketing cost incurred by the wholesaler in South Tripura district, transportation charges constituted the main item while in Gomati district the main item was loading and unloading charges. The marketing efficiency for Channel I of South Tripura district was more than that of Gomati district because of lower marketing cost whereas Channel II of Gomati district was more efficient than that of South Tripura district. Therefore, Channel I of South Tripura district was the most efficient channel. The price spread was more in Channel I (₹ 25.6 per kg) than Channel II (₹ 25.37 per kg). The price spread of both the channels of Gomati district was more than the respective channels of South Tripura district.

## Policy Implications

Based on the present finding the following policy recommendation will be implemented for the better prospects in the days to come

Rubber plantation has good commercial potential and the area under this crop was significantly increasing in the study area. Hence, Government should plan for establishing new processing units in the rubber growing areas for the growers.

As initial investment in rubber plantations was higher so seed money to the farmers who want to establish the plantations shall be provided with financial assistance.

Provisions need to be made for imparting training to rural youth on scientific method of rubber cultivation.

Information about the marketing should be disseminated properly among the rubber growers to improve marketing strategy.

To enhance the productivity of rubber plantations, farmers are to be advised to use limited quantity of chemical fertilizers as both State and Central governments are promoting organic cultivation in the country.

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