

MOTIVATIONAL FACTORS TOWARDS THE AGRICULTURE OF NATURAL RUBBER WITH SPECIAL REFERENCE TO KANYAKUMARI DISTRICT

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Abstract: Agriculture in India, the prominent sector of the economy is the source of livelihood of almost two thirds of the workforce in the country. The contribution of agriculture and allied activities to India's economic growth in recent years has been no less significant than that of industry and services. The importance of agriculture to the country is best summed up by this statement: "If agriculture survives, India survives". It is the most important sector in terms of providing employment and reducing poverty. This article examined the determinants of motivational factors towards the agriculture of rubber with special reference to Kanyakumari district, the southern district of Tamil Nadu. A focused Interview Schedule has been prepared and was administered among 250 sample respondents who directly involved in rubber cultivation.

Key Words: Agriculture, Motivation, Marketability, Rubber cultivation.

1. INTRODUCTION:

Agriculture plays a vital role in the Indian economy. Over 70 percent of rural households depend on agriculture. Agriculture is an important sector of the Indian economy as it contributes about 17% to the total GDP and provides employment to over 60% of the population. Agriculture, as everyone knows is the breadwinning sector of the Indian economy. This sector provides employment for more than half of the workforce of the country. It is a widely known fact that India is the largest producer of spices, pulses, rice, wheat, and other spice products. India has now become the second-largest producer of vegetables and fruits in the world. This is a very good indication for the agricultural sector in the Indian economy. India continues to remain among the top three producers of wheat, paddy, groundnut, natural products, sugarcane, rapeseeds, pulses, vegetables, tobacco leaves, jute, cotton, tea, etc. As for as India is concerned, it is quite true that agriculture is confined mostly to rural areas. Agriculture provides not only good for domestic consumption but also a large quantity for our exports. Agriculture prices are quickly responsive to demand and supply conditions. Since agricultural output constitutes around 40 percent of the national product the general price level is mostly determined by the behavior of agricultural prices. It is one of the profitable cash crops in the country. Rubber plantation industry in India enjoys the distinction of having the highest rate of growth in comparison to that in other rubber growing countries of the world.

2. LITERATURE REVIEW:

Mr. Giridhara Gowda K & Dr. Sureshramana Mayya (2016), their article titled "Problems and Prospects of Rubber Plantation Industries in Dakshina Kannada District: A Case Study with Reference Harvesting Cost", The main objective of the study is to understand the importance, prospects of rubber and its various uses and to study the potentials for rubber-based industries in Dakshina Kannada, and to suggest the measures to overcome various problems in the plantation and processing of Natural rubber and to Works out the cost of cultivation and revenue in the rubber plantation industry of Dakshina Kannada.

M.A.K. Sriyalatha (2018), in his article titled "Factors Affecting Natural Rubber Production: Case Study of Small Rubber Farmers In Kalutara District, Sri Lanka The study revealed that variables such as input cost, credit facility, fertilizer subsidiary, land size, experience, hours spent on rubber activities, inter-cropping and number of family members age, are positively related to output while education level is inversely related. However, fertilizer subsidiary, size of the land, farmer's experience and the number of labour hours spent on production have a significant impact on rubber production. Education level has a significant negative impact on rubber production. The efficiency analysis showed that farmers in the small rubber industry are belong to stage II of the production function and that factors were efficiently allocated.

3. OBJECTIVE OF THE STUDY:

3.1 General objective:

The overall objective of the study is to determine the motivational factors towards the agriculture of Natural Rubber by the sample respondents in the study area.

3.2 Specific objective:

- To analyse the major reasons to involve the agriculture of Natural rubber
- To know the motivating factor which inspire the farmers to cultivate the Natural rubber
- To analyse the major conditions which motivate the farmers to cultivate the Natural rubber.

1.3 Scope of the study:

The study covers the area of Kanyakumari District. The sample respondents have been taken from all over the district. Only the farmers who involved in Rubber cultivation have been interviewed for the purpose of the study. Both primary and secondary data have been collected and used for study.

1.4 Statement of the problem:

The only rubber growing district in Tamil Nadu is Kanyakumari District. In Kanyakumari District 19233 Hectares of rubber plantation are available which produce 24020 tons of rubber annually. In Kanyakumari District, (Tamil Nadu) the largest producer is Arasu (Govt) Rubber Corporation. It provides direct employment for around 2000 people and indirect employment to around 2000 people. Other than Arasu (Govt) Rubber Corporation in Kanyakumari District, there are 65 nos. of large growers and 570 nos. of small growers. The total area of 19233 ha covered under rubber cultivation in Kanyakumari District. The majority of the population in Kanyakumari District is depending on rubber related occupation. This article highlights the motivational factors which helps to promote the agriculture of natural rubber cultivation by the sample respondents.

4. METHODOLOGY OF THE STUDY :

The study consists of both primary and secondary data. The secondary data have been collected from the records, magazines, journals, periodicals and the like. The primary data have been collected from the respondents by way of Interview Technique. A specialized Interview Schedule has been prepared and was administered among 250 sample respondents who directly involved in rubber cultivation. The researcher used convenience sampling for the purpose of collecting primary data.

4.1 Tools for Analysis

a. Garrett Ranking:

With help of Garrett Mean Score the major reasons which motivate the agriculture of Natural rubber is analysed

The formula used to transmute ranking into score is,

$$\text{Percent position} = \frac{100(R_{ij} - .5 / N_j)}{N_j} \quad \text{Where,}$$

R_{ij} = Rank given to j th for to j th individual and

N_j = Number of factors ranked by j th individual

b. 't'-Test :

't'-Test is applied to know the major motivating factor which induces the farmers to cultivate rubber in the study area .

c. Correlation:

In the correlation technique is used to study the relationship between interrelated variables for the chosen variables. To know the motivating factor which inspire the farmers to cultivate the Natural rubber this correlation technique is used.

$$r = \frac{\sum xy}{\sqrt{x^2 \times y^2}}$$

Further, to know the structural difference for the progress and performance of agriculture credit in the district, correlation significance analysis is used by the following formula.

$$t = \frac{r}{\sqrt{1-r^2}} \sqrt{n-2}$$

5. ANALYSIS AND DISCUSSION:

The main objective of the study is to determine the motivational factor towards the agriculture of Natural Rubber by the sample respondents. The study covers the area of Kanya Kumari District. The sample respondents have been taken from all over the district. Only the farmers who involved in Rubber cultivation have been interviewed for the purpose of the study.

Personal Profile of the respondents:

TABLE No. 1.1

PERSONAL PROFILE OF THE SAMPLE RESPONDENTS

Variables	Frequency	Percent	Cumulative Percent
Age			
20 – 30	2	1	1
31 – 40	39	16	17
41 – 50	134	53	70
51 – 60	75	30	100
Total	250	100	
Sex			
Male	234	93.6	93.6
Female	16	6.4	100
Total	250	100	
Number of children			
1	79	31.6	31.6
2	113	45.2	76.8
3	58	23.2	100
Total	250	100	
Qualification			
Up to 9 th std	2	0.8	0.8
9 th to 12 th	73	29.2	30.0
Degree	105	42	72.0
P.G	52	20.8	92.8
Diploma	18	7.2	100
Total	250	100	
Type of family			
Joint family	36	14.4	14.4
Nuclear	214	85.6	100
Total	250	100	
Experience in cultivation			
0 – 10	25	10	10
11 – 20	177	70.8	80.8
21 – 30	48	19.2	100
Total	250	100	
Experience in Marketing			
0 - 10	125	50	50
11 - 20	109	43.6	93.6
21 – 30	10	4	97.6
31 – 40	6	2.4	100

Source: Primary Survey.

As per the survey, it is noted that 94 percentage of the sample respondents were males and the remaining 6 percent were women, 16 percent of them belong to the age group of 31 to 40, 53 percent 41 to 50 and 30 percent from 51 to 60. Among them 42 percent were graduates, 21 percent post graduates, 42 percent have school education, and the remaining 7 percent were Diploma holders. Out of the 250 respondents, 45 percent have 2 children, 32 percent one child and the remaining 23 percent have 3 children, 71 percent have the experience of 11 to 20 years, 19 percent 21 to 30 years and the remaining 10 percent have below 10 years of experience. They too have better experiences in marketing rubber too as many of them (50%) have the experience of more than 10 years.

Motivational factors towards the Agriculture of Natural Rubber by the sample respondents:

The motivation or purpose behind starting a venture depends upon the financial background, infrastructure and the like factors available to an individual. In Kanya kumari District, though there are ample facilities available for the development of agriculture, some may take it voluntarily while others by force due to various reasons. The major reasons include Unemployment problem, to get Additional income, to be self- employed, to improve the standard of living, to provide employment, Profit motive, Encouragement from others, Easy marketability, Traditional business, previous experience, Favorable climate, Family support, Availability of land, and the inheritance of Family property. The survey results are summarized below with help of Garrett Mean Score.

TABLE No1.2 FACTORS MOTIVATED TOWARDS AGRICULTURE

Variables	Total Garrett Score	Mean Garrett Score	Rank
Additional income	13629	54.52	I
Unemployment	13596	54.38	II
Self-Employment	13507	54.03	III
To improve the standard of living	13230	52.92	IV
Provide employment	13213	52.85	V
Profit motive	13203	52.81	VI
Encouragement from others	12931	51.72	VII
Easy marketability	12924	51.70	VIII
Traditional business	12052	48.21	IX
Previous experience	11888	47.55	X
Favorable climate	11853	47.41	XI
Family support	11345	45.38	XII
Family property	11022	44.09	XIII
Availability of land	10357	41.43	XIV
Average	12482	49.93	

Source: Primary Survey.

As per Garrett's scores, the variables are arranged in order. They are Additional income(54.52) Unemployment, Self-employment (54.38), To improve the standard of living(54.03), Provide employment(52.92), Profit motive(52.81), Encouragement from others (51.72), Easy marketability(51.70), Traditional business, (48.21) Previous experience(47.55) Favorable climate(47.41), Family support(45.38), family property (44.09)and availability of land(41.43) The average score of this connection is 49.93. Eight variables are above the average level. They are considered more important than the other six variables which have the scores below the average level.

TABLE No. 1.3 Result of 't' Test for Factors Motivated Towards Agriculture

	Std. Deviation	Std. Error Mean	t	Sig. (2-tailed)	95% Confidence Interval of the Difference	
					Lower	Upper
Self-Employment	7.55347	2.01875	8.846	.000	13.4959	22.2184
Previous Experience	7.25213	1.93821	9.213	.000	13.6699	22.0444
Encouragement friends relatives	7.63451	2.04041	8.752	.000	13.4491	22.2652
Improve the standard of living	6.32282	1.68984	10.57	.000	14.2065	21.5078
Provide employment	6.85966	1.83332	9.740	.000	13.8965	21.8178
Traditional business	4.68807	1.25294	14.25	.000	15.1503	20.5640

Unemployment	7.23089	1.93254	9.240	.000	13.6822	22.0321
Family property	7.59410	2.02961	8.798	.000	13.4724	22.2418
Profit motive	5.82907	1.55788	11.46	.000	14.4915	21.2227
Favorable climate	7.56365	2.02147	8.834	.000	13.4900	22.2243
Additional income	7.11290	1.90100	9.394	.000	13.7503	21.9640
Easy marketability	9.50997	2.54165	7.026	.000	12.3662	23.3480
Availability of land	11.09995	2.96659	6.019	.000	11.4482	24.2661
Family support	10.55285	2.82037	6.331	.000	11.7641	23.9502

Source: Primary Survey.

Among the chosen variables, the variables availability of land and the Family support are the two major motivating factor which induces the farmers to cultivate rubber in the district as it is revealed by the various tests of t-test, Std. Deviation, Std. Error Mean, and 95% Confidence Interval of the Difference.

TABLE No. 1.4 CORRELATION FOR FACTORS MOTIVATED TOWARDS AGRICULTURE

		Self-employment	Previous experience	Encouragement from others	improve the standard of living	Provided employment	Traditional business	Unemployment	Family property	Profit motive	Favourable climate	Additional income	Easy marketability	Availability of land	Family
Self-employment	r	1													
Significance															
Previous experience	r	-.139	1												
Significance		.635													
Encouragement from others	r	.245	.139	1											
Significance		.398	.637												
Improve the standard of living	r	.318	-.405	-.200	1										
Significance		.267	.151	.494											
Provide employment	r	.522	-.245	-.376	.264	1									
Significance		.055	.399	.185	.362										
Traditional business	r	-.437	-.152	.161	-.551*	-.577*	1								
Significance		.118	.603	.583	.041	.031									
Unemployment	r	.594*	-.190	-.122	.711**	.584*	-.763**	1							
Significance		.025	.516	.679	.004	.028	.001								
Family property	r	-.576*	.086	-.394	-.202	-.451	.252	-.384	1						
Significance		.031	.770	.163	.488	.106	.384	.175							
Profit motive	r	.448	-.255	-.206	.227	.386	.027	.390	-.473	1					
Significance		.108	.378	.479	.435	.173	.926	.168	.087						
Favourable climate	r	-.531	.108	.171	-.271	-.224	.205	-.542*	.245	-.595*	1				
Significance		.051	.714	.558	.349	.441	.481	.045	.399	.025					
Additional income	r	.683**	-.431	.335	.453	.506	-.460	.625*	-.569*	.135	-.389	1			

Significance		.007	.124	.241	.104	.065	.098	.017	.034	.646	.169				
Easy marketability	r	-.388	-.229	.087	-.209	-.376	.657*	-.311	.028	.320	-.010	-.205	1		
Significance		.170	.431	.769	.474	.185	.011	.279	.923	.264	.973	.482			
Availability of land	r	-.674**	.221	-.421	-.203	-.373	.230	-.437	.566*	-.469	.284	-.638*	-.115	1	
Significance		.008	.447	.133	.486	.189	.429	.118	.035	.091	.326	.014	.695		
Family support	r	-.395	.178	-.204	-.508	-.222	.217	-.590*	.333	-.334	.179	-.462	-.168	.328	1
Significance		.162	.544	.485	.064	.445	.456	.026	.245	.243	.540	.096	.566	.253	

Source: Primary Survey.

Self-employment has significant relationship with Unemployment, Family property, Additional income, and Availability of land, Improvement in the standard of living with Traditional business, and Unemployment, Providing employment to others with Traditional business, Unemployment, and Easy marketability, Unemployment with Favorable climate, Additional income, and Family support, Family property with Additional income and Availability of land, Profit motive with Favorable climate, and Additional income with the Availability of land. Hence, unemployment, Self-employment, and Improvement in the standard of living are the major criteria which motivate the rubber cultivation.

6. FINDINGS OF THE STUDY:

As per Garrett scores the variables are arranged in order. They are Additional income, Unemployment, Self-employment, To improve the standard of living, Provide employment, Profit motive, Encouragement from others, Easy marketability, Traditional business, Previous experience, Favourable climate, Family support, family property and availability of land. The variables availability of land and the Family support are the two major motivators which induce the farmers to cultivate rubber in the district as it is revealed by the various tests of 't' test, Std. Deviation, Std. Error Mean, and 95% Confidence Interval of the Difference. As per correlation analysis, unemployment, Self-employment, and Improvement in the standard of living are the major criteria which motivate the rubber cultivation.

7. RECOMMENDATIONS:

Export Potentiality: Owing to the expansion of the rubber goods manufacturing industry in the country, the domestic consumption of natural rubber increased steadily. Though the country consumed almost the entire quantity of indigenously produced rubber, there has been a chance for export when production outstripped consumption and the natural rubber become surplus. The present study shows that the awareness and aspirations of export are very low among the rubber cultivators. As India, especially Tamil Nadu in which Kanyakumari District has been blessed with the opportunity of producing more natural rubber, the export potentialities can be explored for the betterment of the nation.

Sustainability of Rubber Cultivation: With the globalization of the Indian economy and removal of quantitative restrictions on import of natural rubber, the Indian rubber industry has now undergone radical changes from being a highly insulated and internally regulated sector to becoming intrinsic part of a highly competitive world economy. To sustain rubber cultivation in a globalized market economy, it has become necessary to have radical changes in the policy measures. The first and foremost measure to be taken is to restore the confidence of rubber growers in the sustainability of rubber cultivation. Unless the cultivators are not directly motivated to get the assurance of turnover, the final end will not be possible.

9. CONCLUSION:

In Kanyakumari District, rubber is cultivated widely in forest areas. The trend on sales is picking up than the production. Mostly male members involved in cultivation who have rich experiences and reasonable education and land holdings. Many of them not have come out of the traditional methods of cultivation practices and for sales too they have depend on intermediaries and have no attempt of exporting their products of their own. They do prefer agriculture due to unemployment, Self-employment, and to improve their standard of living and have utilized 30 percent from their own funds and 70 percent from borrowed funds for the purpose of cultivation. More formalities and political influences made the situation worse of getting assistance from the banks in time. Often they find it difficult to repay the loan amount due to Fund Diversion, wrong Investment and Personal problems. The constraints like monsoon, Infrastructure, Finance and Diseases are the bottlenecks in the cultivation of rubber in the district. Further, Processing Constraint, Marketing Constraint, Cost Constraint and Price Constraints are the major constraints of marketing rubber in the district. The

economic and social impact is good among the cultivators due to rubber cultivation. It is concluded from the study that experience is the key factor in the determination of income from rubber and also the land holding, Types of Sales, Fund Utilization, and Mode of Sales are the influencing factors in improving the earning capacity of the farmers in the district. Though there are ample opportunities available in the district for rubber cultivation, the farmers at times disappointed with the monsoon condition which is unavoidable and also the varying nature of price fluctuations which is controllable. If the government take some precautionary measures and concrete steps to stabilize the rubber price both in the domestic and international markets, certainly the rubber cultivation can be more flourished

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