

AN ANALYTICAL STUDY ON NATURAL RUBBER CULTIVATION IN TRIPURA –IT’S FUTURE PROSPECT

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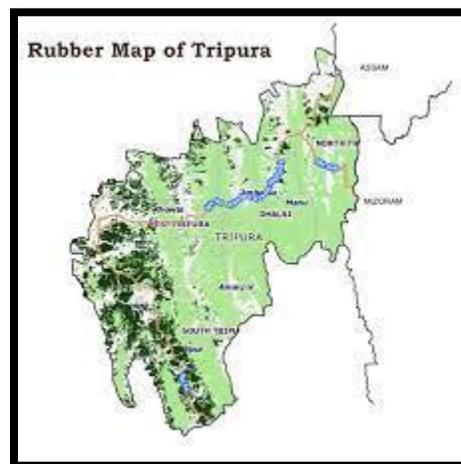
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ABSTRACT:-

The study examines the total area under Rubber Plantations and Mature Area in Hectares for the past decade (2008-2018). The present study also includes the planted area for the last decade (2008-2018). Most of the mature area is however under tapping or in the yielding stage. Annual production in (Mt) has been thoroughly studied and analyzed for the past decade. The state of Tripura stands second in the country in terms of both Area and Production of Natural Rubber. Some measures are taken by Rubber Research to increase and improve Area under plantation of Natural Rubber and also policies are improvised to increase Rubber Production followed by marketing strategies to increase growers share, for a better future prospect.

KEY WORD :-*Natural Rubber, Total area, Rubber Plantations, Immature Area, Mature Area, Hectars, Tapping, Annual Production, Research, Policies, Marketing Strategies, Growers Share, Future Prospects.*



INTRODUCTION :-

Natural Rubber Cultivation in Tripura dates back to 1963 with the introduction of this plantation crop as soil conservation measure by Tripura Forest Department .



RRIM 600 clone is the major variety of this crop, covering an average mature area of 280 (Agerage primary factors which has devastating effects on plant health and population are tempests, cyclones; Insurgency effecting normaley for past two decades (80's and 90'') annual wintering. However the state is blessed with less attack of crop-pests.

Natural Rubber has brought out a paradigm shift in socio-economic panorama in Tripura. This socially accepted and commercially viable crop has re-inforced the economic value of plantation activity with its social significance. Rehabilitation projects have been introduced for transformation of shifting cultivation (jhum) to wage employed Natural Rubber cultivation the major features for attracting Rubber cultivation in Tripura are as follows--

- 1) No matching income from same land pattern
- 2) 25-30 years of income after gestation period (6-7)yrs
- 3) Natural Rubber yield on every alternative day.
- 4) Effective Marketing strategies of Natural Rubber as compared to other plantation crops.

Total Area under Rubber in Tripura is estimated to be around 85,038 Ha in the year 2018, out of which 65,893 is in the yielding stage. Annual production of Natural Rubber has been estimated to be 74139 Mt. Most of the mature area is under tapping. Thus, the state stands second in the country in terms of Area and production of Natural Rubber.

Aims and Objectives:

- To Assess and increase Area of plantation and bring entire Jhumia community under wage-employed Rubber cultivation.
- To increase production of Natural Rubber through reformed Marketing policies.

Material and Methodology:-

DATA COLLECTION:

Secondary Data were collected from Regional Office Rubber Board; Rubber Plantation Department Regional Rubber Research on the basis of Personal interview through pre-tested schedule.

Analytical Formula :-

- a) **Price Spread-** It is the difference between the price paid by the consumer and the price received by the producer.

b) Producer's share in Consumers' Rupee =
$$\frac{\text{Producer's Price}}{\text{Consumers' Price}} \times 100$$



c) **Marketing Efficiency** – It is assessed using shepherd’s formula as –

$$\text{Marketing Efficiency} = \frac{\text{Consumer Price per unit of Rubber}}{\text{Marketing cost per unit of Rubber}}$$

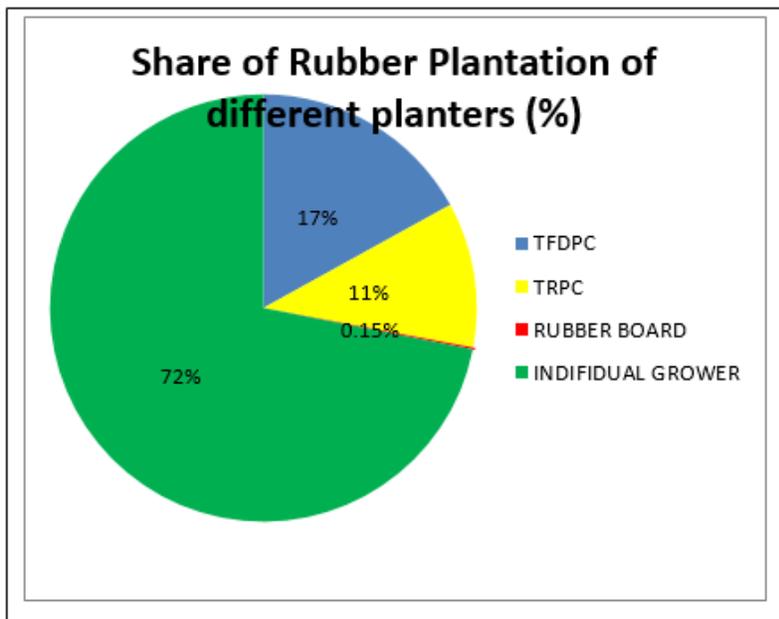
$$\text{ME} = \frac{V}{I} - I$$

Where ME= Marketing Efficiency,
V = Consumer Price per Unit of Rubber,
I = Marketing Cost per Unit of Rubber.

Result and Discussion-

DATA ANALYSIS:-

Figure-1





ANALYSIS-1

The major planters of natural rubber in Tripura can has been classified into four major categories as follows –

- 1) Tripura Forest development plantation Corporation (TFDPC).
- 2) Tripura Rehabilitation Plantation Corporation (TRPC)
- 3) Rubber Board (BPU-RPS)network
- 4) Individual planters or growers. The Rubber Board has played significant role in the development of rubber plantation in Tripura. The present shares of Rubber plantation different planters are shown in the above figure-1

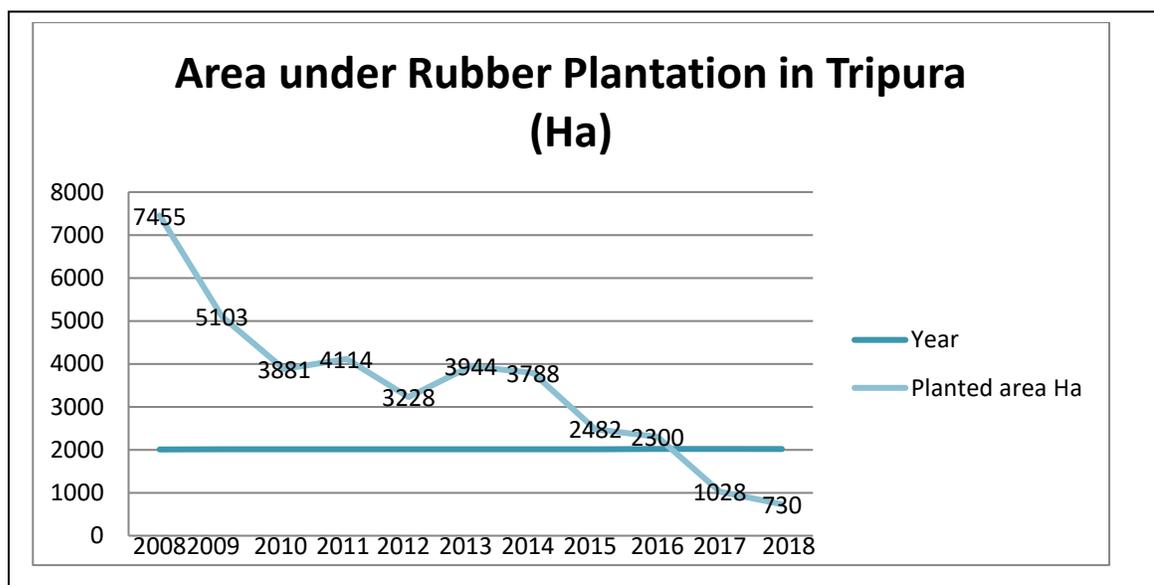
TABLE: AREA AND PRODUCTION

Year	Planted area	Cumulative Total area	Mature area	Immature area	Production
	Ha	Ha	Ha	Ha	Mt
2008	7455	54439	28145	26294	33774
2009	5103	59542	29507	30035	35408
2010	3881	63423	30872	32551	37046
2011	4114	67537	31747	35790	38096
2012	3228	70765	33114	37651	39737
2013	3944	74709	34630	40079	42491
2014	3788	78498	36862	41635	46815
2015	2482	80980	41620	39359	52025
2016	2300	83280	46986	36294	56380
2017	1028	84308	54441	29861	65330
2018	730	85038	65893	19145	74139



Source ---- Rubber Board Graph-

Figure-2



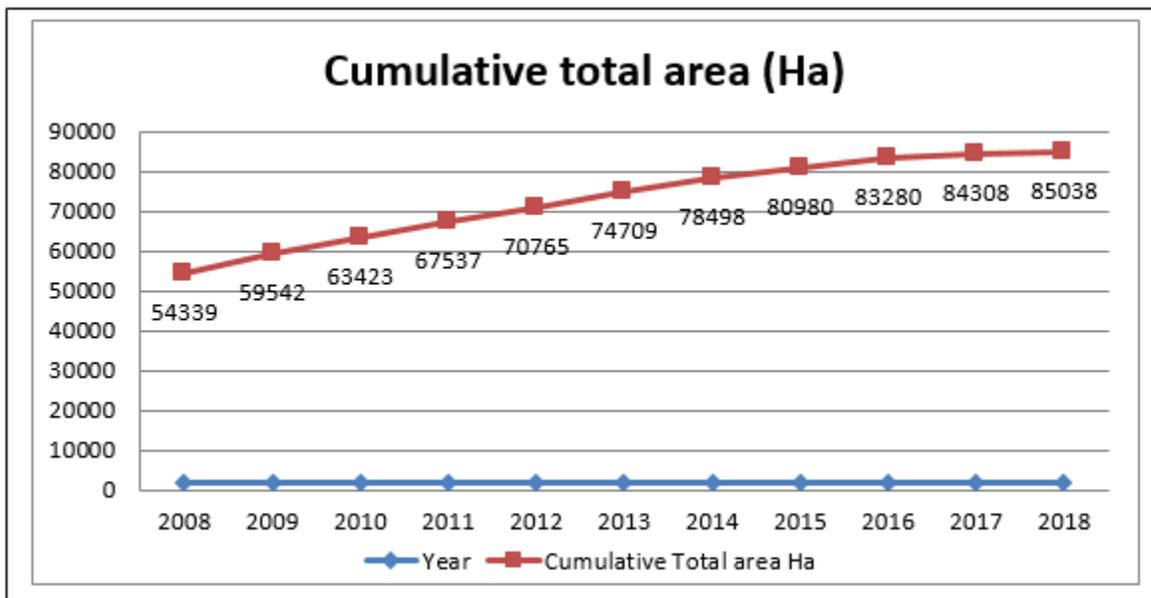
ANALYSIS :-2

(High-yielding clones have been developed for commercial plantation of Natural Rubber. These clones yield more than 2.000 kg of dry rubber per hectare per year, when grow under ideal conditions.

The Rubber Plantation in Tripura was first introduced by the state forest department in 1963 as soil conservation as part of afforestation programme. However. Those trees maturing in the early 1970s. Gave a new opportunity for the state to explore Rubber Plantation. The National Bureau of Soil Survey and land Use planning have identified 450000hectares of land in the North-eastern region as suitable for rubber plantation. The survey suggests that around 100000 hectares of land in Tripura can be utilized for rubber plantations (Bahuguna. Dr. V.K. Action plan for Expansion of Rubber in Tripura 2005). The present status of area planted and year wise development of natural rubber plantation and the trend of growth of tappable area are evident from the) data provided by Rubber Board depicted in the above Table. A plot of plantation area in Hectaus Vs year for the past decade has been shown above.



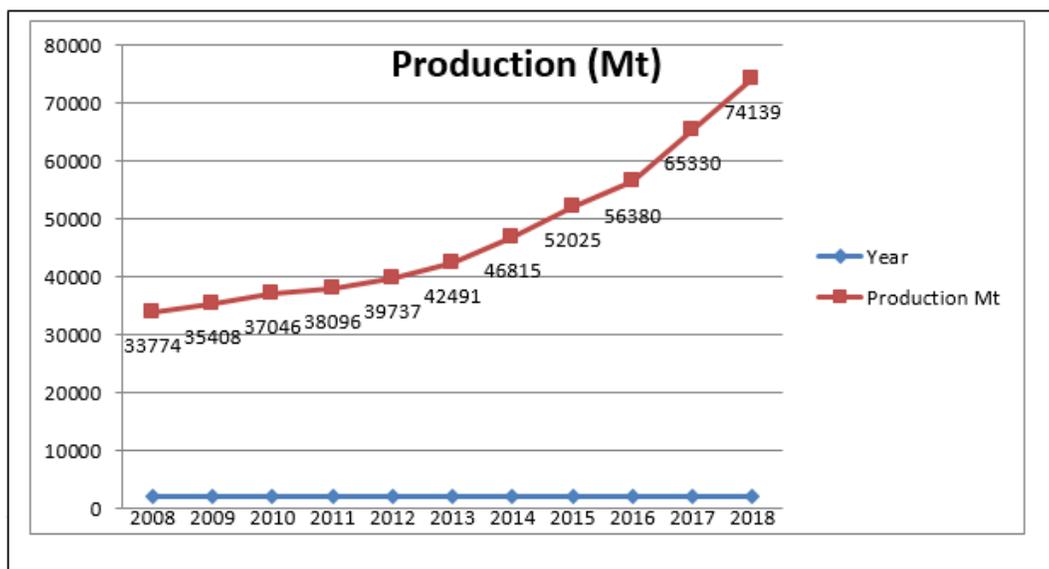
Figure-3



ANALYSIS-3

(A plot of Tappable Area in Hectares Vs year for the past decade shows the increasing trend which clearly depicts the rising opportunity in Natural Rubber cultivation in the state.)

Figure-4

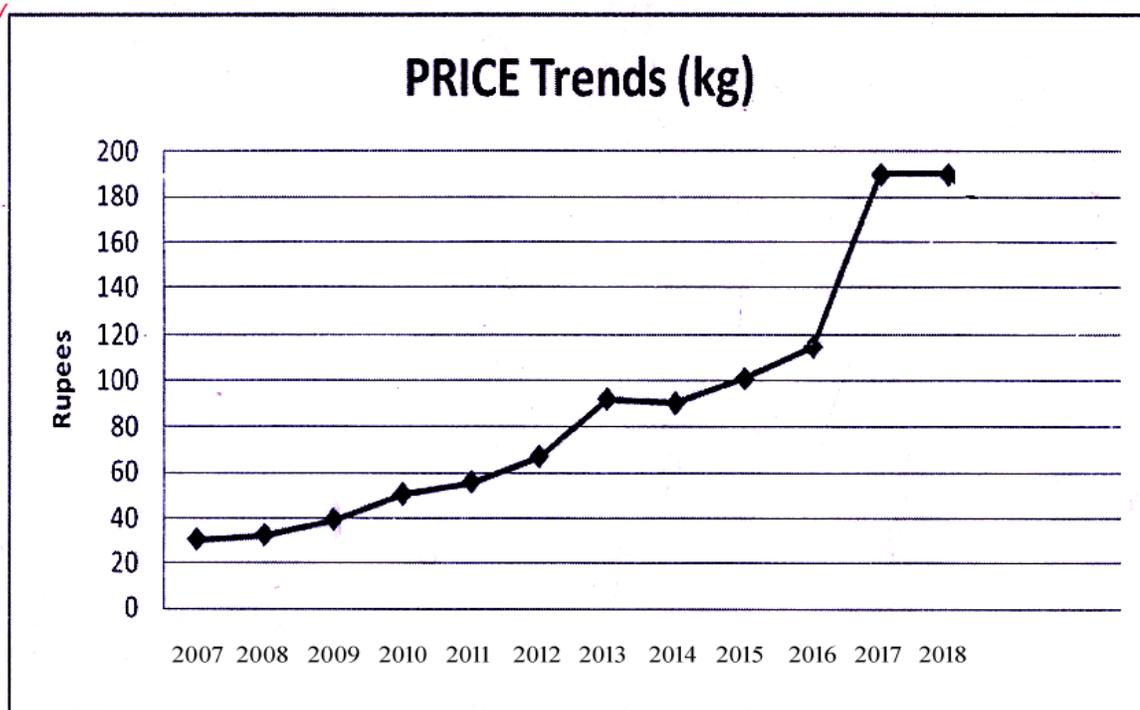




ANALYSIS-4

(A plot of production in MT Vs year for the past decade shows the increasing trend in production which clearly depicts the rising opportunity in Natural Rubber cultivation in the state.)

Figure-5



ANALYSIS-5

Initially the tree *Hevea brasiliensis* was planted in Tripura for the purpose of soil conservation. But the suitable agro climatic condition along with the increasing demand of natural rubber the rubber plantation is gradually getting the shape of commercial activity.

The factors contributing to the rise in price of natural rubber are as follows-.....

Rising demand of Natural Rubber cultivation; steep rise in the price of synthetic rubber, reduced production of NR and supply of NR some previously dominant countries such as Malaysia, Thailand Indonesia. These factors are responsible for further increase in production of natural rubber and also provided an opportunity to spread rubber plantation to new areas. The price trend of the natural rubber also attracted the investor for more Investment in this sector as is evident from the above graphical representation.



The above factors contributed a lot in the growth of rubber plantation in this non-traditional area like Tripura. The plantation of rubber attains popularity throughout the state and last 10 years plantation and production data depicts the growth trend all over the state.

CONCLUSION:-

Average Productivity remains around **1200-1250 kg/Ha/Year** during last couple of years. This is due to constant up-skilling and sporadic productivity enhancing programmes are scaled up on one hand while on other hand old plantations gradually grow senile to suppress production.

Productivity enhancing measures like manuring, salt-water conservation, rain guarding are not common in practice. Silt-pit making in about 300 Ha, Manuring in about 481 Ha is available with the active participation of Rubber Board, Regional Office, Tripura, and its promoted trading company, Manimalayar Rubbers pvt L.td.

Thus, there is necessity of New planting and Re-planting through involvement of state Government schemes. Although absence of Rubber wood Treatment plant and remunerative price on Rubber –wood felling can't promote re-planting in an appropriate manner. As per the data availing from the recent report there are only 33.20 Ha re-planting . Lands allotted under the Forest Right Act, 2006 was not readily available for Rubber Plantation over a period of about 10-12 years.

Rubber plantation Department is the largest department of the state, which collect database on various aspects of Rubber plantation in the state. It is involved in planting material generation, plantation development; harvesting, processing value addition and marketing.

The department also imparts training Programmers. It also provides financial support as plantation development subsidies, stipend of utilities for training, labour welfare, processing and smoking infrastructure development. The department works through the network of six Regional Offices, and eleven Field Station.

Nevertheless, Regional Rubber Research also conduct studies and location specific trails to recommend suitable measures for plantation development, ancillary income etc.

Some of the measures taken by Rubber Research to increase and improve Area under plantation of Nature Rubber and hence its production for a better future prospects.

These are as follows -----

- 1) To prepare soil fertility map for rubber growing regions of North-East India and to develop an on-line fertilizer recommend action (Rub S I S), Collection of geo-referenced composite soil samples per every 40 Ha of rubber holdings was initiated.
- 2) Spatial mapping of existing rubber plantation in Tripura, with the help of satellite-based remote sensing and GIS techniques.



- 3) Integration of socio-economic and ecological factors for developing rubber based agro-forestry systems in a homestead approach.
- 4) Development of cropping system by intercropping in immature rubber plantations e.g Banana; pineapple; Ginger etc.
- 5) Formulation and updation of planting material recommendations.
- 6) Genetic improvement in breeding and high yielding clone selection.
- 7) Developing Latex harvesting techniques.
- 8) To formulate location specific agro-management practices nutrition management and planting techniques to meet the challenges of climatic change, pests, soil degradation, other environmental concerns.
- 9) Making Rubber Cultivation profitable by minimizing input costs and maximizing productivity.
- 10) Ecotological and Socio-economic impset studies

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