

# IMPACT OF RUBBER PLANTATION ON THE ECONOMY OF ASSAM- A CASE STUDY OF GOALPARA DISTRICT

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## Abstract

The paper presents a study on farm situation with special reference to economics of rubber cultivation and new agricultural in Goalpara district in Assam state. The purpose of the present study is to investigate the rubber plantation on the economy with a large reduction in costs of the farmer. We investigate the spatial impact of rubber plantation on the economy of Assam-a case study of with especial reference Goalpara district selected randomly. Measuring economic activity using and plantation local small scale trade and regional large scale trade modalities that co-exist in many parts of Assam. Thus, the investigator to find out in this study different types of descriptive survey research are recognized when the basis is the technique employed, i.e. survey testing, documentary studies, questionnaire inquiries, interview studies, observational and appraisal procedures etc. This study analyses the methods of rubber plantation. It includes-propagation by seeds, germination bed, nursery bed, propagation by bud grafting, field planting, cover crops, weeding, mulching, propping, manuring, intercropping, disease of rubber, harvesting of the crop, rolling, grading, packing etc. Major rubber expansion in north-east approved by Goalpara in Assam. In case of appearance and grooming rubber plantation is less than other factor and not significant. It is critical observation there are no significant difference between factor of intellect, temperament, leadership, aspiration, mental health and anxiety, socio-economic status character of this present study. Yet, while local effects are relatively large, equivalent to a higher income for agriculture plantation. Hence, the findings of the present study revealed that majority of farm situation were found to have severed health and financial and moderate level of problems in rubber cultivation.

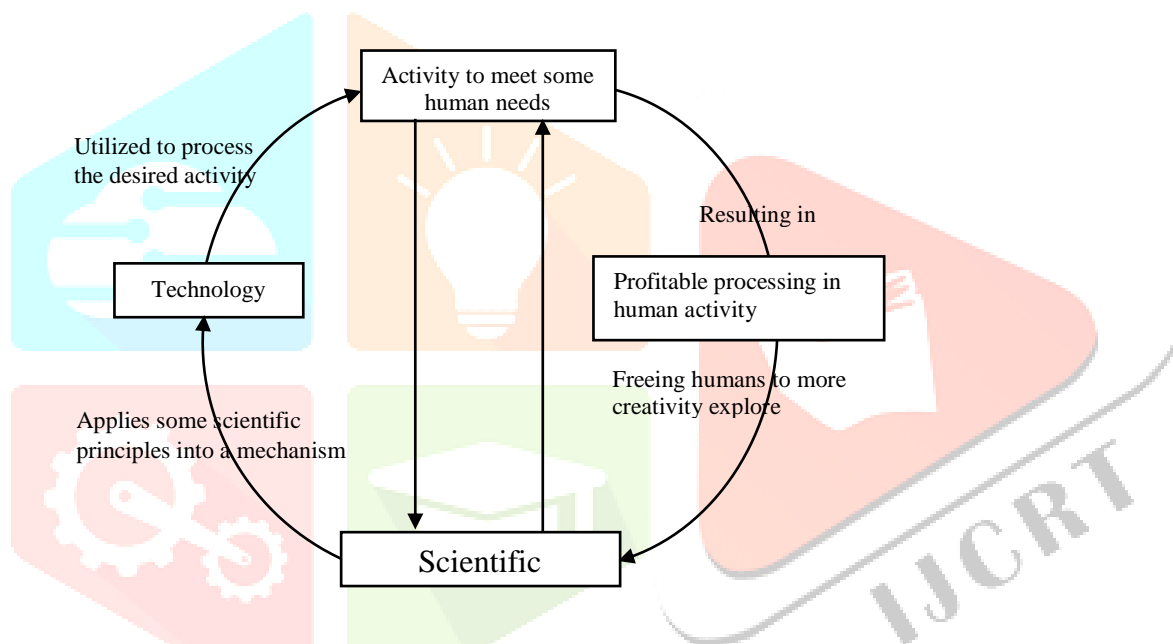
**KEYWORDS:** Impact, Rubber, Plantation, Economy, Agriculture, Cultivation.

## INTRODUCTION

The economy of Assam is mainly rural and agrarian. Agriculture occupies a vital position in the economy of Assam. As per population census of 2001 about 53 percent of the total working forces are engaged in agricultural activities in the state. The contribution of this sector in the State Domestic Product (SDP) at constant (1993-1994) prices was 31.84 percent and at current prices was 32.56 percent in 2001-2002.

Agriculture occupies a vital position in the State's economy engaging about 53 per cent of the total working force, according in 2001 Census. The contributions of this Sector in State Domestic Product (SDP) at constant and current prices are 31.08 per cent and at 31.13 per cent respectively in 2002-2003. All the agricultural programmes have been assigned with high priority in the Successive plan periods for efficient use of available resources and to maximize production. These efforts have no doubt resulted some transformation in the pace of development under this sector, but much more still remains to be done to bring the situation compatible with other developed States of the country. During 2009-10 in rice production Assam is close to become the second state in the country. In this respect the projected

productivity rate is 7.4 per cent against the 16 percent of Tamil Nadu and 3 percent of Orissa over the 2008-09 rates. The state is able to achieve 21 percent increases in production and 13 percent increase in productivity in 2009-10 than 2007-08. During 2001-02 the state was able to produce about 38.54 lakh MTs Rubber and during 2009-10 it raised up to one lakh Matrix Tone. At the end of the Tenth Five Year plan the rate of agricultural growth was minus 0.27 percent. In 2007-08, it shot up to 0.23 percent, while in 2008-09 it further grew to 1.20 percent and in 2009-10 it is feared that it may go beyond 2 percent. Among the rice producing states of the country, Assam could occupy the ninth position in 2008-09, producing 40.70 lakh Matrix Tone (MTs) of Rubber in total. Compared to 2007-08 Assam could bring seven percent more land under rice cultivation in that year. During 2007-08 the state could produce 33.20 lakh MTs of rice with an area of 3.24 lakh hectares of land under rubber cultivation. Though production has increased, these will not be enough to meet the demand of the growing population. So, it is necessary to adopt such method through which the poor and marginal farmers can earn more by using fewer inputs. However, in Assam the poor and marginal farmers show their interest towards a new method of Rubber cultivation called SRI which need less water, less man power, less fertilizer through the initiative of several NGOs. The technological change in agriculture means the application of modern technical know-how to the different phases of production.



The technological change in agriculture means the application of modern technical know-how to the different phases of production. The basic components of new innovation in the field of agriculture may be considered mechanization or wide-use of farm machinery tools and implements, improving soil and making it most fit for cultivation, soil conservation, new varieties of seeds, chemical fertilizers, irrigation, pest control and other several methods of raising yield and net returns per hectare. The soil, topography, rainfall and climatic condition of Assam are congenial for cultivation of paddy, which covers nearly 70 per cent of the gross cropped area and more than 90 per cent of the total area under food grains. The soil of the State is acidic in reaction having Phosphorous content per Hydrogen-ion (PH) between 4.5% and 6.5% except the new alluvial soils, which are neutral in reaction (Ph 6-7). The soils of the foothills are also strongly acidic (Ph 4.5-5.0) whereas the remaining areas are less acidic (Ph 5-6). As regards neutral status, phosphate contents are low while nitrogen and potash contents are medium. The major soil groups are- (i) new alluvial soil (ii) old alluvial soil, (iii) old mountain valley alluvial soil, (iv) non-laterised red soil, and (v) laterised red soil. The State can be divided into three broad physiographic units, viz., (1) the Brahmaputra Valley in the north, (ii) the Barak Valley in the South, and (iii) the Hills region that lies in between the two valleys.

## **Agriculture Need and Importance in Assam:**

It is a vicious cycle where environmental degradation is affecting agricultural productivity and agricultural practices are affecting the environment. To conclude agriculture, agricultural science and technology aids in reducing hunger, improving livelihood and increasing economic growth. Indigenous and local agricultural practices need to be used along with scientific research and developments. There should be a co-ordination of international scientific programs for enhancing agriculture and agricultural produce. Policies and technologies that are conducive to sustainable use of natural resources must be shared internationally. It is imperative to alleviate hunger and look for the causes of nutritional insecurity and degraded natural resources. Productivity of crops, livestock and fisheries need to increase in a socially and environmentally sustainable manner which is acceptable to both the farmers as well as the consumers. Agriculture is an important aspect of every society for its social, economic and environmental growth. Thus, the investigator to find out in this study different types of descriptive survey research are recognized when the basis is the technique employed, i.e. survey testing, documentary studies, questionnaire inquiries, interview studies, observational and appraisal procedures etc. The proposed study may be precisely stated as, "Impact of Rubber plantation on the Economy of Assam- A case study of Karbi-Anglong District." While most other states in India are gradually moving away from their traditional agriculture-based economy toward industry or service-oriented economy, Assam is still heavily dependent on the agricultural sector. Compared to most other states in India, Assam is considered a less developed state, which depicts a gloomy picture the economic condition of the state given that India is considered a less developed country. While the socio-political problems afflicting the state since the last few decades are partly to blame for a lack of conducive environment for economic development of the state, particularly in industry or service-oriented areas, there are various economic reasons (e.g., fragmented land) responsible for the lagging agricultural sector in the state. This study investigates the effect of topical cultivation and management techniques on soil quality and soil processes, and on environmental loading, mainly in the form of greenhouse gas emissions. Focus is on issues which are vital for environmental modeling, but for which the necessary empirical data is either insufficient or completely lacking. The plan of action has to be drawn up to ensure scientific and objective merits of the study. The geographical area to be covered, the sample to be selected and data collection team to be organized, all such items of plan were clearly drawn out.

## **Marketing Problems:**

Agricultural markets in Assam are under-developed. Farmers sell to the nearest dealer or buyers, mostly immediately after harvesting when the price is at the lowest, instead of trying to find the best market for their products. Geographical isolation, weak transportation and communication systems, poor marketing facilities, poor or non-existent market intelligence (e.g., information on price and place to sell) are some of the principal marketing-related problems. While most of the brokers/buyers have access to modern communication facilities such as telephone and regular and timely market reports, farmers in Assam are many years away from having such facilities to gauge the market and sell accordingly. In terms of the role of government, earlier studies have shown that government efforts are more focused on collecting revenue (in the form of tax in the daily or weekly markets or through check-gates) than facilitating the marketing of agricultural products in Assam (Bhuyan, 1990; Bhuyan, et al., 1990; Bhuyan, et al., 1988, Khan,2011). A re-orientation of the government's focus from revenue collection to marketing facilitation will be necessary if farmers are to benefit.

## Sector Scenario in Assam Economy:

### Rubber Production:

Rubber has played an important role in the development of the economy. Rubber is considered as the modern “Kalpavriksha”, i.e. a tree with every part of it being useful and of economic importance. Besides yielding rubber, which is of most versatile application, the tree is an important source of timber, honey, rubber seed and Oil cake. The wastewater of rubber processing can be used for producing biogas, which can reduce the use of liquefied petroleum gas. In the economy of Goalpara district, rubber cultivation has great significance. The increasing demand of rubber and corresponding increase in the price has worked as index of economic development of many countries. The increasing demand for natural rubber and its increasing price bears a positive correlation with the economic development of the nation concerned. The major use of natural rubber is in various equipment of industries as well as automobile tier. It is worthwhile to mention herein that in the economies of USA and Japan, natural rubber has a great significance. However, the Tsunami in Japan has made a negative impact in the international market of the rubber. The technological changes results in raising the degree of efficiency and self-sufficiency in agriculture and at the same time in the commercialization of agriculture with both high yield per hectare and high productivity per man. Dr. Burans has opined that the yield per area can be increased 30 per cent by the increased use of organic fertilizers, from 5 to 10 per cent by the insects and pests. In this way, technological changes have tremendous possibilities for solving the current atrophy in agriculture situation especially in Assam.

### Statement of the problem

Precisely stated the problem in the present study is an entitled as, “Impact of Rubber Plantation on the Economy of Assam- A Case Study of Goalpara District”.

### OBJECTIVES OF THE STUDY:

The main objectives of the present investigation are as follows:

- 1).To analyse about the methods of rubber plantation.
- 2).To study the economic impact such as income, expenditure ,saving etc. of rubber plantation on the people Goalpara district.
- 3).To find out the social impact such as health, education, housing facilities etc. of rubber plantation on the people of Goalpara district.

### HYPOTHESES OF THE STUDY:

The purpose of present study is investigating following the hypotheses are:-

- 1). Rubber plantation increases the employment opportunity in this district.
- 2). Rubber plantation improves the standard of living of the people of Goalpara district.
- 3).All the labourer of rubber estates are not trained only some of them are trained.

### LIMITATION OF THE STUDY:

The present study has been carried out some limitations as follows:

- 1). The present study has been confined to the most of the rubber planters are not interested to supply the necessary information especially on income only.
- 2). The study has been conducted in only one district namely- Goalpara in Assam only.
- 3). The study has been delimited to variables of for rubber plantation, collection of information from the laborer is very troublesome. The cooperation of the farmers of the North East in this regard may create new horizon.

## METHODOLOGY

The first and the most crucial step in constructing a research proposal are to plan it. The main aim of the researcher is to know about the methods of plantation of rubber and its socio-economic impact on the people of the district as well as on the country of the state in Assam. The investigator also tried to investigate the facilities provided by the Rubber Board to the growers of rubber crop plantation. The investigator uses the techniques depending on the purpose of investigation. The method of investigation in the present study is essentially descriptive survey method employed.

## ANALYSIS, INTERPRETATION AND DISCUSSION

The data, after collection, has to be processed and analyzed in accordance with the outline laid down for the purpose at the time of developing the research plan.

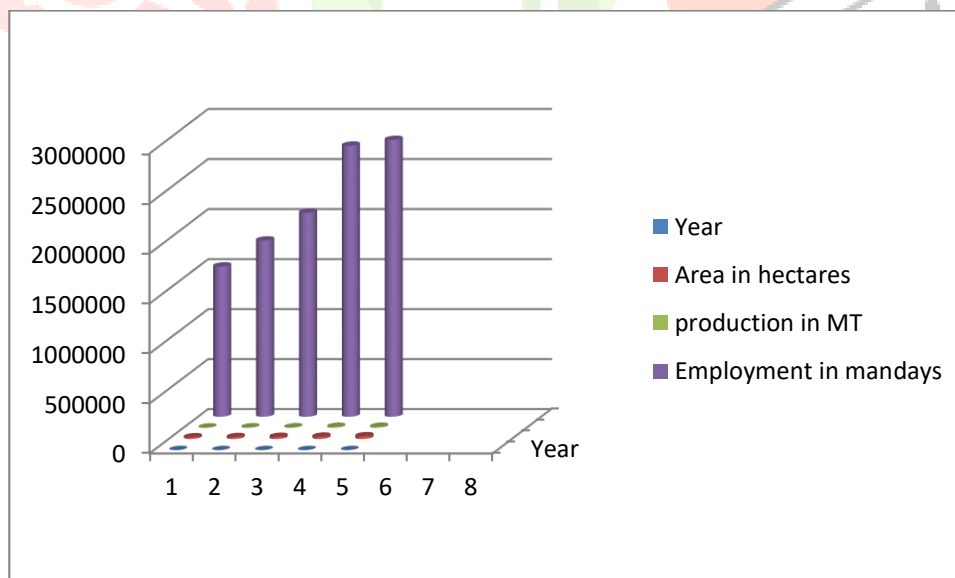
### Economic Status of the Rubber Plantation Households:

#### Assets Ownership Position:

The economic status of the rubber plantation households has been attempted to be captured by examining the asset ownership position of these households. Here ownership of nine items have been considered under assets, namely, Television, Mobile phones, Two wheeler, Vehicle, land and livestock such as pigs, goats, cows and poultry. Rubber plantation improves the standard of living of the people of Goalpara district. All the labourer of rubber estates are not trained only some of them are trained. Rubber plantation benefits the people of Goalpara district indirectly. It is clear from the table that 60% of the total sample garden was small holding as follows.

No of Small grower	No of Large grower	Total	% of the small grower	% of the large grower
12	08	20	60 %	40 %

Employment scenario in Rubber Plantation in Assam



Now the importance of rubber plantation is going on increasing and we see Rubber Plantation in every nook and corner of almost all the districts of Assam. It shows the District -wise area and production of rubber in Assam during 2010-11. The rubber cultivation has much contribution in the employment generation in this region. Majority of employment is in the rubber plantations and allied activities associated with this. Even though the short term temporary reduction in rubber price creates negative effects in employment generation, yet it has great significance in its long term effects. The employment



generation has a direct positive correlation with the standard of living, health, food habits, education and social and mental development of the people of the district.

We can said that rubber plantation labour, unlike other industries, is open air work and is a special kind of agricultural employment. A distinguishing feature of plantation workers, compared to other agricultural workers, is that they earn a regular income to support the family. They are one of the most organized labour force of the economy. Moreover, the mechanism of the works in plantations do not pose a threat of unemployment to the workers, as the scope of mechanization is limited in our state. The socio economic background of the plantation workers also differ from their counterparts in other crops. They are from different social racial and cultural groups, each following their own entity.

Rubber cultivation has great significance in maintaining the ecological balance of the area. Side by side, it has increased the price of land in the area. Due convenient weather and soil, people are acquiring land in the district even at higher prices for rubber plantation. The increased land price has also contributed in economic upliftment of the people of the district. The socio-economic status of the rubber growers in this district has a remarkable bearing in the economy of Assam.

At the same time, it has to be stated that in many parts of this district, the basic infrastructures like road, electricity etc. are not there. However, it must be stated that in the economy of Assam, the rubber cultivation of this district has a big contribution.

## CONCLUSIONS:

On the basis of analysis, interpretation of data and discussion of results, the hypotheses were tested and verified.

Therefore, as to reach the successful revealing following major conclusions Policy Issues:

Due to the growing demand of rubber sheets day by day, it is regarded as a very profitable business for the rubber growers. It encourages the small rubber growers who have contributed exceedingly well for the growth of rubber plantation industry in the Goalpara district of Assam. With the increasing rubber plantation in Goalpara district, the employment opportunities increases day by day which will enhance the income of the state definitely and ultimately will increase the standard of living of the people of this area. Another favourable condition is that it will definitely help to protect soil erosion and flood of the state, thereby majority of the flood affected people will get relief from it. Rubber plantations that which will improve the whole environment locally, regionally etc. and would help to maintain sustainable development of the nation as a whole. It will help in the conservation of renewable resources of the country.

Rubber plantation will protect shifting cultivation of this area and thereby protect the environment which will also help in the stability of the income of the general people. Most of the area in this district is seen as a hilly area and therefore they are practiced by the process of shifting cultivation. To abolish this transitory process, they can replace it by the rubber crop plantation. If the local govt. encourages the small growers it will help to abolish the shifting cultivation process from this area. Rubber plantation is permanent and profitable process which will protect the environment and help to maintain the stability of the income of the people of this area.

The results of the study suggest greater emphasis on the research and development initiatives, specifically on socio-economic and policy research. For the purpose of enhancing future growth, strengthening the information system and development of comprehensive database at the disaggregate ecosystem level is highly recommended. In the policy recommendation it is suggested that improvements in position of rice production in Assam, extension services could enhance adoption of innovation of farming.

**SCOPE FOR FURTHER RESEARCH:**

There are many areas related to rubber crop plantation and small rubber growers where further academic attention is urgently required. The following are the prominent among them– the impact of liberalization on the small rubber growers, the role of rubber producer societies in local area development and a comparative study of rubber marketing societies and rubber producer's societies.

**Suggestions for Further Study:**

Some suggestions are made as follows to remove the inadequacies for improvement of the situation.

In order to improve the quality of plantation producers, group processing centres for value addition may be started in the major rubber growing areas. Cooperation Marketing Societies can play an important role in this area. When quality is assured by ISI, ISO certifications, marketing will be easy. A study may be conducted on vast area sample may be large in size and other state may be taken.

A replicate study may be taken, receiving in service training are an effort and resources for the Rubber wood processing sector may be developed fully.

A stable price of natural rubber is advantageous not only for the rubber growers but also for rubber goods manufactures. Buffer stock operations can keep the price of natural rubber at a reasonable level. This can be carried out with the co-operation of rubber growers, rubber producer societies (RPS), Rubber Marketing Societies and the Rubber Board.

The progress of rubber based industries is not up to the mark in Goalpara District. Raw material is in plenty. Skilled and unskilled labour are cheap. There is much scope for establishing rubber based industries. It is the duty of the government national as well as state to provide subsidy to establish rubber based industries in the North Eastern Region which will solve the unemployment problem of the region to some extent

Rubber growers should adopt inter crop planting pattern. Banana, Pineapple, medicinal plants, and even bamboo can be grown as inter crop by proper planting is spacing. During the initial phase of rubber trees, there is wide scope for these crops. Moreover, rubber plantation is an important source of honey. Which is one of the most demandable medicinal product as well as used as general food also. It will give opportunity to some youth to earn their livelihood as bee-keeper.

Farm income depends to a large extent on the skill in tapping operation, sheet processing and proper maintenance of rubber trees. Hence, proper training should be given to rubber tapping and workers. Sufficient labour welfare measures have to be ensured for worker in rubber estates. The need of the hour is to make agriculture a more attractive profession to the younger generation.

Market information regarding the demand and supply position should be made available to the rubber growers. Rubber Producer's Societies (RPS) along its major functions can act as knowledge hubs. This hub would serve as a central place for farmers to learn up-to-date market situation, latest agri-technologies and their application. It is necessary to use a sharp knife for successful tapping and cups, buckets etc should be cleaned well to prevent bacterial contamination and spoilage of latex.

Organizing rubber growers into local self-help groups such as Rubber Producer's Societies and empowering them with knowledge and technical knowhow and material support is needed. In recent years, there has been new development world over and shift in agricultural cropping pattern from subsistence to commercial agriculture; our farmers are taking up more and more cash crops. The situation demands new extension approach for benefiting farming community of rubber plantations. Last but not the least, principle is that public extension service should base on the Principle of elasticity. Number of extension personnel should be increased or decreased according to the needs of rubber plantations farmers.

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