



## Research Article

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## A Study on the Prospects and Sustainability of Agro-Based Industries in North East India

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**Abstract:** The North Eastern part of India which comprises of eight states- Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim is well endowed with natural resources like oil, agricultural resources, mineral resources and have great potential for hydroelectric power generation. With a large variety of agricultural products such as rice, maize, sugarcane, jute, cotton, rubber, tea, coffee, coconut, walnut and a vast range of fruits and vegetables, North East India is an emerging market for agricultural products and has the potential to be a powerhouse of Indian economy.

Agricultural sector has been the backbone of North East India with more than half of its population engaged in agriculture and allied activities. As such promoting and supporting households engaged in agro based industrial products could provide alternative livelihood opportunities for rural people and enhance the rural development. This study will focus on the prospect and growth opportunities of agro-based industries in North East India. It will also focus on whether agro based industries have the potential to provide an alternative means of sustained livelihood of the rural people of North East India and contribute in rural development.

**Keywords:** Agro-Based Industries, Livelihood, Sustainability, Rural Development.

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## INTRODUCTION

The North Eastern part of India comprising of Assam, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland, Tripura plus Sikkim is connected to East India via a narrow corridor between Nepal and Bangladesh. With approximately 40 million people as its population (as per 2011 census), it represents 3.1% of the total Indian population (1,210 million as per 2011 census). The region shares more than 4500 km of international border (about 90% of the border area) with China in the North, Myanmar in the East, Bangladesh in the southwest and Bhutan to the North West. The area is well endowed with natural and mineral resources and has great potential for hydroelectric power generation.

With a large variety of agricultural products such as rice, maize, sugarcane, jute, rubber, tea, coffee, coconut, cotton, walnut and a vast range of fruits and vegetables, North East India is an emerging market for economy. Agricultural products and have the potential to be a powerhouse of Indian economy.

Agricultural sector has been the backbone of North East India with more than half of its population engaged in agriculture and allied activities. As such promoting and supporting households engaged in agro based industrial

products could provide alternative livelihood opportunities for rural people and enhance the rural development. This study will mainly focus on the potential of agro based industries in providing livelihood to the rural households.

## Objectives of the Study

The study was made with the following objectives in mind:

- To find out the prospect of agro- based industries in different states of North East India.
- To study the potential of agro based industries in providing employment and entrepreneurship development of the rural people of North East India.

## Importance of the Study

- This study will help in finding the areas for economic growth of North East India.
- It will also help in exploring the opportunities for employment from agro based industries.

## Limitations of the Study

The limitation of time has been a constraint for the study:

- The article is based only upon the sources the researcher has reached for. There is enough scope for further studies on this topic.

- This article is based on secondary data. As such limitations of secondary data may affect the discussion.

## RESEARCH METHODOLOGY

The article is descriptive in nature. The sources of data collected are of secondary in nature. The sources include books, journals, newspapers, magazines, websites etc.

## REVIEW OF LITERATURE

Gandhi et al. (1999) studied the link between agro based industries and development of small farmers. It was found that the agro based industries are gaining significant priorities in economic development of India. This sector plays a vital role in reducing poverty and promoting development. The agro based industries contribute a large share of overall employment in industry as well as value addition and income generation. Such industries continue to play an important role in providing income and employment for the rural people of India specially the landless farmers.

Mishra et al. (2002) in his book, "Agro industries and economic development found that setting up of agro based industries has a direct or indirect effect on agriculture. It has a two way effect - agriculture serves as a raw material for agro based industries which are directly supplied from the agricultural sector and the industries which are linked with agriculture for its growth and development such as the industries for fertilizers, pesticides and other agricultural implements indirectly develop a scope for its own growth and expansion.

Laxmikantreddy (2014) in their study elaborates that agriculture has been a way of life for the rural people of India and continues to contribute as the largest provider of livelihood in the Indian economy. In the last few decades agricultural sector's self sufficiency and self reliance were being set as goals and these were the main areas that were focused in the agricultural policy. India has now become a country of self reliance on the production of food grains. Agro based industries' contribution in the development of India is widely recognised and it is acknowledged that agro based industries are capable of providing larger income and more employment with a comparatively low investment.

Khosla et al. (2013) emphasised that agro based industries are an important link between agriculture and industries. It is capable of solving various problems linked with Indian agriculture. However, promoting agro based industries in an imprecise manner will not serve in solving the agricultural problems. As the agro based industries requires comparatively low investment and are labour intensive, efficiency and consistency in its growth can

be a bright prospect and a good sign for their growth and development of the Indian economy at large. However, the risk factor cannot be ignored as there are enough evidences for its failure to accomplish its goals. The researcher, on the basis of evidences, concludes that there is a good scope for agro based industries in India.

Dhiman & Rani (2011) discussed that the agro based industries is regarded as the sunrise sector of the Indian economy and it has the potential to contribute in the growth and development of the economy with significantly contributing to a sustainable livelihood, employment creation and income generation. The researchers studied some estimates and found that in developed countries approximately 14 percent of the work force are engaged in agro processing sector directly or indirectly. However, in India, only 3 percent of the work force are engaged in agro processing sector. This reveals the under developed state of this sector and the vast untapped potential of this sector that are yet not explored for employment generation.

Paramasivan & Pasupathi (2016) in their article, "Performance of agro based industries in India," found that the impact of agro based industries was significant on the income levels of all categories of the rural population of India. The researchers found that the increase in income was more significant in the households employed in agro industrial units. The farmer category was also benefited indirectly through higher rates of wages and employment security in the farm sector. Thus agro based industries served both the employees engaged in the sector as well as the farmers.

### Present State of Agriculture and Agro based Industries in India

As per the Annual reports published by the Government of India, following points summarises the present state of agriculture and agro based industries in India:

- The proportion of Indian population who depend directly or indirectly on agriculture for livelihood and employment opportunities the more than any other sectors of Indian economy.
- The share of agriculture and allied activities in the total GVA (gross value added) of the country has been continuously declining as there is higher growth performance of non-agricultural sectors which is a natural outcome of development process.
- GVA at constant (2011-12) prices for 2019-20 from "Agriculture, Forestry and Fishing" sector is estimated to grow by 2.8 percent.
- Agricultural mechanization helps the Indian farmers in transforming from subsistence farming to commercial farming. The overall firm mechanization in India is about 40 percent which is lower compared to China (59.5 percent) and Brazil (75 percent).

- The regional distribution of agricultural credit in India shows a highly skewed pattern. It is seen that agricultural credit is low in North Eastern, Hilly and Eastern States. The share of North Eastern States has been less than one percent in total agricultural credit disbursement.
- Livestock income has become an important secondary source of income for lakhs of rural families and has assumed an important role in achieving the goal of doubling farmers' income. Livestock sector has been growing at a CAGR of 7.9 per cent during last five years.
- During the last 6 years ending 2017-18, Food Processing Industries sector has been growing at an Average Annual Growth Rate (AAGR) of around 5.06 per cent. The sector constituted as much as 8.83 per cent and 10.66 per cent of GVA in Manufacturing and Agriculture sector respectively in 2017-18 at 2011-12 prices.
- With the implementation of the National Food Security Act from July 2013, the food subsidy bill has increased from ` 113171.2 crore in 2014-15 to ` 171127.5 crore in 2018-19. While the interests of the vulnerable sections of the population need to be safeguarded, for sustainability of food security operations, the issue of burgeoning food subsidy bill needs to be addressed.

### **Prospect and Growth of Agro Based Industries in North East India**

North East India is known for its abundance in flora and fauna. These states offer a great opportunity to explore the untapped natural resources. The potential and growth opportunities in different states of North East India is briefly discussed below:

#### **Assam**

Assam is home to a variety of medicinal herbs and plants. About 300 types of medicinal herbs and plants are found in abundance in the state with the Brahmaputra valley alone having 150 varieties of herbs and plants having commercial value. Livestock is the integral part of the mixed-farming system that characterizes agriculture in Assam. For many poor households, livestock is a daily source of earning and is an insurance against adversity.

Livestock production in the State includes milk, meat, fish and eggs. With a considerable number of national parks and wild life sanctuaries, there is a potential of wild life tourism in Assam. The agro climatic conditions in Assam are favourable for a large variety of fruits, vegetables and species. With upgraded technology, Assam can easily cause a great growth in the field of horticulture and agro based industries.

Bamboo which is the fastest growing plant holds the potential to replace wood on many grounds. As such bamboo based industries can prove profitable for the state

#### **Manipur**

The food processing industry can flourish in Manipur as the agro climatic conditions of Manipur are most suitable for food processing industries. Production of bamboo and establishing bamboo shoot production units can grow well in Manipur. There can be an increase in demand for bamboo furniture in Meghalaya.

The potential industries in the agriculture sector are integrated rice parboiling, hulling/dehusking/milling, bran stabilizing and captive power generation (based on rice husk biomass gasified dual fuel) unit, Non-flavoured potato chip projects.

The potential industries in the horticulture plantation sectors are Multi-fruit juice project, Orange Squash & Jam/Marmalade, Pineapple/Mixed Fruits Jam and Jelly, Tomato sauce, Ginger oleoresin Extraction as the major crops grown the state include the orange, pineapple, tomato, ginger and etc.

#### **Arunachal Pradesh**

Horticulture has a vast potential in Arunachal Pradesh as the climate is most favourable for development of a variety of fruits and vegetables. The food processing industry, if given a push, can be another potential industry for the state. Besides, bamboo industry, and units for tea, coffee, aromatic grass and medicinal herbs can also be set up in the state.

#### **Meghalaya**

The economy of Meghalaya is basically agrarian. Agriculture, the net cropped area is only about 9.87 % of the total geographical area of the State. Meghalaya accounts for about 150 species of orchids. As such there is a great potential for export business of orchids in Meghalaya. The horticulture industry which includes food processing, mushroom cultivation and processing is another agro based industry which have the potential to grow in Meghalaya. The state also has a high potential for development of dairy and allied industries for processing of animal hides and skins and for setting up leather industry.

#### **Mizoram**

The climatic conditions for fruits are quite suitable in Mizoram. Mizoram accounts for approximately 13% of the total production of fruits in North East India. Also ethnic handicraft and handloom of Mizoram have a large market in India and abroad. Bamboo crafts and the ready to wear ethnic clothing are being marketed by the Government agencies.

Production of fruits, vegetables, spices, cotton, coffee, tea, bird's eye chilli, and rose has immense potential in Mizoram.

With abundant natural resources and government support, the food processing industry along

with allied services such as cold chain management are potential areas for investment in Mizoram.

### **Nagaland**

Horticulture is one of the promising sectors for employment generation, value addition and reducing poverty in Nagaland. The natural resources and government support offers scope for profitable investment in bamboo industry and food processing industry of the state. Moreover, Nagaland has a rich wealth of flora and fauna and as such floriculture industry can be another potential area for investment. Honey processing is also needed to be mentioned as another potential area for investment as Nagaland has a rich biodiversity and there is a traditional practice of bee keeping with numerous honeys bee species.

### **Sikkim**

The handloom and handicraft industry has a great potential to generate income and employment creation in the state.

The demand for large cardamom in the export market has been increasing steadily. Thus, there is huge export potential for large cardamom from Sikkim.

### **Tripura**

The agro-climatic conditions in Tripura are favourable for growing various fruits and horticultural crops. Tripura's pineapples and oranges are known for their unique flavour and organic nature. Setting up of food processing industry and meat processing industry are potential areas for investment in Tripura.

### **Sustainable Livelihood Opportunities from Agro Based Industries**

The agro-climatic condition of North East India favour the growth of a variety of fruits and vegetables/ spices including orange, banana, pineapple, arecanut, coconut, guava, mango, jackfruit, citrus fruits, ginger, turmeric, chillies, potatoes, etc. Vegetable cultivation is also a major agricultural activity in the area. Horticulture in North East is also very rich. It has tremendous potentiality to grow further.

### **Opportunities for Entrepreneurs**

Food Processing and Agro based products are huge sector to invest and entrepreneurs can venture in following fields:

- Corn Flakes
- Caramel Food Colorant
- Curry Powder
- Pulp and Paper from Bamboo
- Rice Mill (Parboiled Rice)
- Wheat Flour
- Garlic Oil and Powder, etc.

North East India also has a large number of medicinal plants and herbs which are still untapped. Medical Plant constitutes an important therapeutic aid

in alleviating ailments. The West is now acknowledging its importance and studies are being conducted on the curative properties and almost magical properties of herbal medicine. There is a vast variety of medicinal herbs and plants in the hills and forests of North East India.

About 300 types of medicinal herbs and plants are known to exist in abundance in Assam. Hence, this sector presents huge resources waiting to be tapped and opportunities exist in plantation and cultivation of medicinal herbs & plants, herbal cosmetics, medicinal plant extract etc. Assam in particular and North-East India in general has great potentiality for the herbs based industries.

### **Opportunities for Entrepreneurs**

Herbal and Ayurvedic products are huge sector to invest and entrepreneurs can venture in following fields:

- Medicinal Herbs Plantation
- Plantation of Medicinal Plant and Herbs
- Ayurvedic Medicines (Chyawanprash, Cough Syrup Herbal, Ayurvedic Hair Oil,
- Jawahar Mohra & Mukta Shukti Tablets)
- Herbal Extracts
- Aloe Vera Gel & Powder
- Herbal cosmetics, etc.

The bamboo industry is another growing industry which is capable of becoming a major employer in the North East India. Bamboos are used for the incense stick industry, sericulture and handicrafts. All these industries are labour intensive which will create more employment opportunities for the people of North East India. Nearly 12 lakhs people are directly or indirectly engaged in the bamboo industry in North East India. The demand for incense sticks can be understood by the fact that over 2 billion sticks are burnt in a day. Thus, it can be seen that the bamboo industry is capable of providing a sustained livelihood opportunities for the people of North East specially the rural people and landless farmers.

## **CONCLUSION**

North East India has an abundance of natural resources which are yet not explored. Setting up agro based industries will be a great boon for the people of North East India, specially the rural people and landless farmers. Since, such industries are primarily labour intensive industries, they will be able to open up new entrepreneurship development as well as employment. Besides, providing employment opportunities, agro based industries will contribute to the socio economic development of the region. However, the main constraint in this regard will be the connectivity of the rural areas with the urban markets and centres. As such, it is recommended to have proper infrastructure

facilities for agro based industries to flourish in North East India.

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