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# Importance of Agro Based Industries for Economic Development in Assam

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**Abstract:** *Agro based industries are most essential for agricultural and economic development in Assam. Agro-based industries facilitate for optimization of resource use, output management, enhance farmer income, widening of market, addition to national income through value addition and employment creation. These industries eliminate wastage of agricultural produce to a greater extent and ensure steady and better price to farming community as well as availability of the commodities in processed form to consumer throughout the year. Perusable goods can store for long time and export to other places through food processing industries. Major agro based industries are rice mill, gur making, oil mill, spice grinding, small flour mill, pickle making, chips making, banana fibre extraction unit etc. under the category of food products and allied industries in Assam. Though these industries are playing most important role for agricultural and economic development, it is yet to be develop and manage properly in Assam. The present study attempts to explore the scenario of agro based industries, importance of agro based industries, challenges and strategies for agro based industries in Assam.*

**Keywords:** *Scenario of agro based industries, importance of agro based industries, challenges and strategies for agro based industries.*

## I. INTRODUCTION

Economic development of a country is measured from the development of manufacture industries. Industries help to rapid economic growth, employment, foreign exchange, agricultural development, national security, etc. in developing countries like India where huge numbers of manpower and varieties of resources are abundant. The industrial developmental index is not satisfactory which is 0.046907 and rank is 18 of Assam among the states of India during 2011-12. The contribution of industrial sector to the state economy is 29.80 percent in 2014-15. The industry sector has grew at an annual average of 5.85 percent during the period 2001-2015 in Assam. Total number of factories are 3303 and are engaged 167835 persons in Assam during 2014-15. Assam has 20 Industrial Estates, 8 Mini Industrial Estates, 17 Industrial Areas and 12 Growth Centres where 722 numbers of Industrial units are functioning. One Export Promotion Industrial Park (EPIP) is established with world class infrastructure, where 47 numbers of industrial units are producing various export quality products at Amingaon in Kamrup district. In addition, Industrial Infrastructure Development (IID) Centre are 11 numbers in different districts and 3 numbers of Industrial Growth Centre, one Food Park at Chaygaon in Kamrup District and one North East Mega Food Park at Nalbari District have been established. These industries can be classify as mineral based and agro based industries.

## II. METHODOLOGY

Present study is based on secondary sources of information. The secondary information are collected from various Government publications, official documents, relevant literature, newspaper, journals, internet etc.

## III. OBJECTIVES

- A. To study the scenario of agro based industries.
- B. To identify the importance of agro based industries.
- C. To understand the challenges of agro based industries
- D. To find out the strategy for agro based industries.

## IV. STUDY AREA

Assam is situated in the North East region of India bounded by seven states namely Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and West Bengal and two countries like Bangladesh and Bhutan. The geographical area is 78,438 sq. km of which 98.4 percent area is rural in Assam. It occupies 2.4 percent geographical area of India. The population of Assam stands at 312.05 lakh which is 2.6 percent population of the country in 2011.

**A. Scenario of Agro Based Industries**

Agriculture is the main source of livelihood of people of Assam which has employed more than 50% workforce and support livelihood for 75 percent population in Assam. The contribution of agriculture and allied activities is 20.28 percent in 2014-15 in the GSDP of Assam. As a result agro based industries play crucial role for agricultural and economic development in Assam. Agro-based industries facilitate for optimization of resource use, output management, enhance farmer income, widening of market, value addition to national income and employment creation. Agro based industries broadly includes - Grain Mill Products Industry (Rice, Oil and Flour Mill), Sugar Industry, Food Processing Industry, Jute industry, Bee industry, Tea Industry and Textile Industry in Assam. Most of the agro based industries are engaged in manufacturing or processing of food products. Raw materials of agro based industries are paddy, wheat, tea, ginger, chilly, orange, maize, banana, passion fruits, mustard, turmeric, sugarcane and such other crops grow intensively and is abundant in the entire region. Important agro-based industries are rice mill, paddy dehusking, gur making, chow making, oil mill, spice grinding, small flour mill, pickle making, chips making, banana fibre extraction unit etc. under food products and allied industries in Assam.

Table 1: Index of Industrial Production in Assam during 2004-05 to 2014-1 Base: 2004-05 = 100

| Industry Division                       | Weight | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | Share in % in 2014-15 |
|---|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------------------|
| Manufacture of food products & beverage | 61.20  | 100.00  | 102.23  | 105.27  | 106.13  | 110.68  | 114.18  | 115.47  | 117.47  | 136.70  | 146.37  | 143.76  | 3.95                  |
| Total manufacturing Industries          | 436.92 | 100.00  | 114.13  | 119.53  | 129.14  | 141.95  | 146.74  | 148.17  | 159.67  | 170.48  | 178.13  | 178.37  | 4.82                  |

Source: Director of Economic and Statistic, Assam

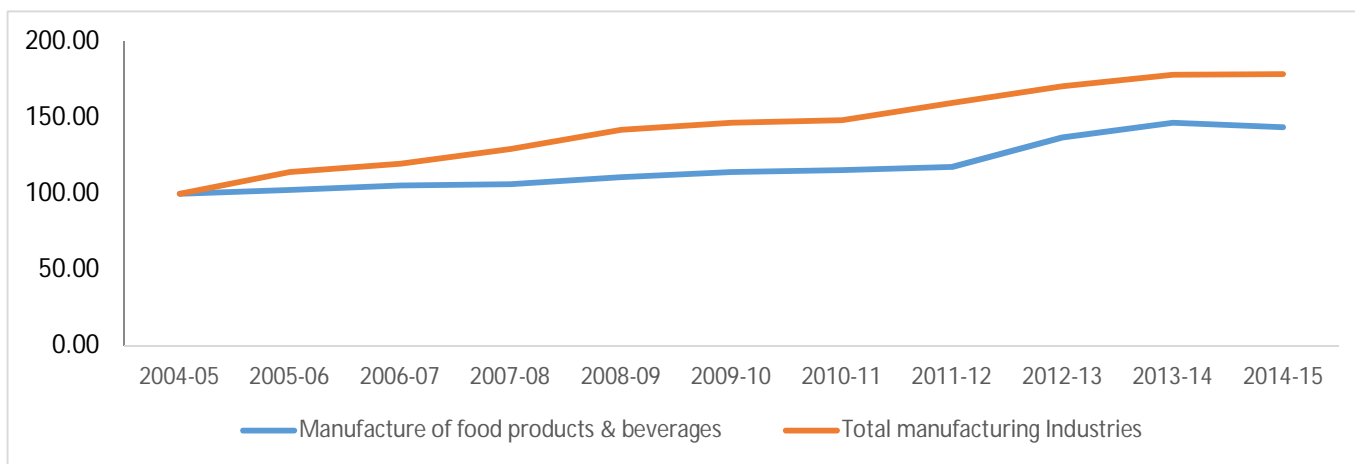


Fig 1: Trend of Index of Industrial Production in Assam during 2004-05 to 2014-15

Table 1 shows index of industrial production for manufacture of food products and beverages are an increasing trend during the period from 2004-05 to 2014-15. It was 100 during 2004-05 and has increased to a highest level at 146.37 in 2013-14 which has decreased to 143.76 during 2014-15. Total manufacturing industries index of industrial production is an increasing trend during the period from 2004-05 to 2014-15. It was 100 in 2004-05 and has increased to a highest level 178.37 in 2014-15. The share of manufacture of food products and beverages are 3.95 against the total manufacturing industries 4.82 percent of the state SGDP in 2014-15.

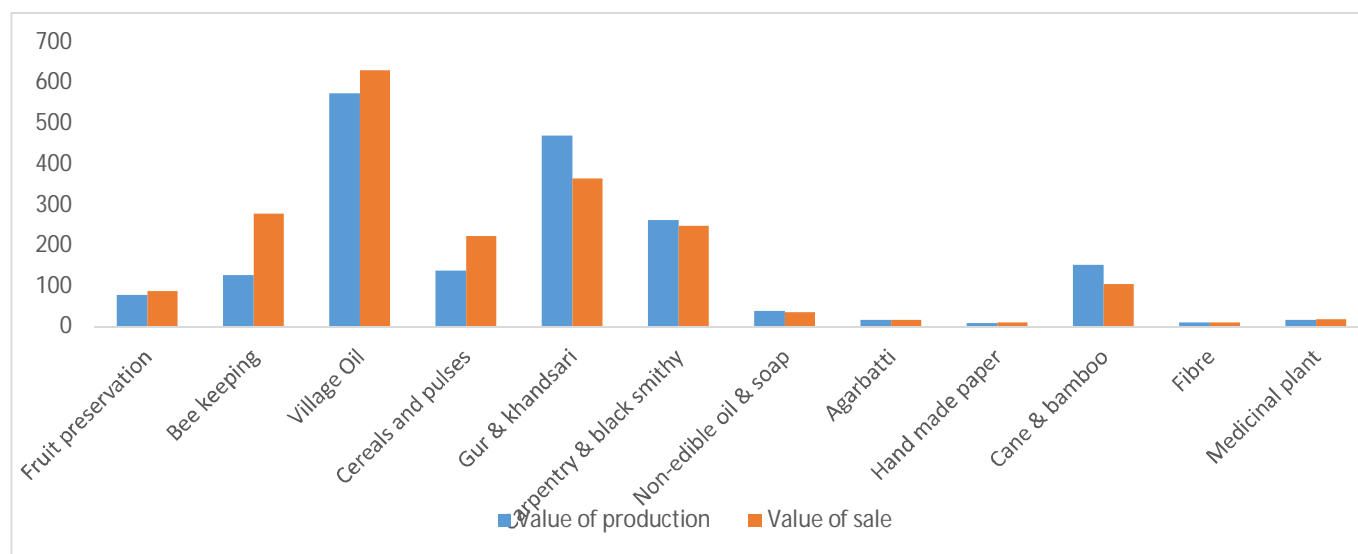
Table 2: Agro industries production and employment under Khadi and village industries board in Assam during 2014-15

| Sl. No. | Type of Industry                 | No. of centres working | Total Employment | Value of production | Value of sale |
|---------|----------------------------------|------------------------|------------------|---------------------|---------------|
|         |                                  |                        | (in nos.)        | (in lakh)           | (in lakh)     |
| 1       | Fruit preservation industry      | 37                     | 212              | 78                  | 86.6          |
| 2       | Bee keeping industry             | 300                    | 22482            | 126                 | 278           |
| 3       | Village oil industry             | 521                    | 3154             | 573                 | 630.9         |
| 4       | Processing of Cereals and Pulses | 300                    | 1460             | 138                 | 222.6         |
| 5       | Gur&khandsari                    | 1280                   | 5280             | 470                 | 364           |
| 6       | Khadi (cotton & silk)            | 31                     | 13290            | 57.15               | -             |
| 7       | Carpentry & Black smithy         | 685                    | 5370             | 262.1               | 247.15        |
| 8       | Non-edible oil & soap industry   | 20                     | 72               | 38                  | 34.5          |
| 9       | Cottage match industry           | 0                      | 0                | 0                   | 0             |
| 10      | Agar batti industry              | 10                     | 38               | 15.8                | 16.2          |
| 11      | Handmade paper industry          | 3                      | 47               | 9                   | 10.2          |
| 12      | Cane & bamboo industry           | 500                    | 4988             | 152                 | 105           |
| 13      | Fibre industry                   | 25                     | 113              | 10                  | 10.21         |
| 14      | Medicinal plant industry         | 6                      | 318              | 16.1                | 17.3          |
| 15      | Dyeing & printing unit           | 1                      | 4                | 0                   | 0             |
| TOTAL   |                                  | 3719                   | 56828            | 1945.15             | 2022.66       |

Source: Statistical Hand Book, Assam 2015

Table 2 shows total number of agro industries under Khadi and Village Industries Board are 3719 in Assam during 2014-15. Gur and khandsaries industry is 1280 which is highest among the agro based industries followed by carpentry and black smithy industry (i.e. 685 nos.), village oil industry (i.e. 521 nos.), cane and bamboo industry (i.e. 500 nos.) etc. Agro based industries has employed 56828 persons of which bee keeping industry is the highest employer with 22482 persons followed by cotton and silk industry with 13290 persons in 2014-15.

Fig 2: Agro based industries value of production and sale in Assam during 2014-15



Total value of production for agro based industry under Khadi and Village Industries Board is 1945.15 lakh during 2014-15 in Assam. Village oil industry has highest contribution in total value of production among agro based industries which is 573 lakh

followed by gur and khandsari 470 lakh, carpentry and black smithy 262.1 lakh, processing of cereals and pulses 138 lakh, etc. In agro based industries total value of sale is 2022.66 lakh in 2014-15 which comprises village oil industry 630.9 lakh, bee keeping industry 278 lakh, carpentry and black smithy 247.15 lakh, processing of cereals and pulses 222.6 lakh, etc. in Assam. The value of sale is highest for the bee keeping industry followed by cereals and pulses industry and village oil industry, on the other hand the value of sale is lower for the industry gur and khandsari, carpentry, cane and bamboo industry in 2014-15. Tea and jute industry plays a very special role in the State economy. Assam alone produces more than 50 percent of country's total tea production. The tea industry provides employment to more than 6.86 lakh persons in average daily in the State, which is around 50 percent of the total average daily number of labour employed in the country (Economic Survey, Assam, 2015-16). Assam is one of the important states of India in respect of Jute production and the production is 797000 tonnes in Assam during 2014-15.

#### *B. Importance Of Agro Based Industries*

Agro based industries has urgent need for agricultural, industrial and economic development in Assam. Agro-based industries are easy to establish and provide income in rural areas with less investment. Agro based industries are labour intensive and will create more employment opportunities to solve the unemployment problems in the region. These industries eliminate wastage of agricultural produce to a greater extent and ensure steady and better price to farming community. Relatively bulky, perishable and typically inedible raw materials are convert into more useful, shelf-stable and delicious foods or beverages by food processing industries which facilitate to export to domestic as well as global market. These industries facilities to preserve perishable agricultural products for long time.

#### *C. Challenges of Agro Based Industries*

The overall performance of industrial sector is not encouraging in Assam. During the period from 2012 to 2015, the industrial sector has grown at an average growth of 1.86 percent. This period started with a negative growth of 2.20 percent during 2012-13 followed by high growth of 6.03 percent during 2013-14 in industrial sector. Annual average growth rate of industry sector shown growth rate of 4.31 per cent during the 11<sup>th</sup> five year plan period. The lower growth of industrial sector as well as agro based industry in the state are the result of following factors.

- 1) *Lake of knowledge:* Lack of adequate knowledge about the agro based industry is the biggest barrier for the expansion of agro based industries in the state. Lack of information and awareness about opportunities and limitations are major obstacle for growth of rural agro based industries. People have no adequate knowledge about the benefits of agro based industries and technological effectiveness.
- 2) *Inefficient Manpower:* Manpower plays an important role in industrial growth. The inefficiency of manpower affected in the growth of agro based industries. The main causes of inefficient of labours are illiteracy, awareness and lack of training facilities. The productivity of rural unskilled labour is very low and the quality of product is also low.
- 3) *Industrial Accident:* Industrial accident is a major challenge for industrial development in Assam. These accidents are occurred due to inefficient skill labour and old type of machineries. The number of fatal accidents are 2 and non-fatal accidents are 39 in manufacture of food and beverage out of the total 13 fatal and 58 non-fatal accident of industries during 2014 in Assam.
- 4) *Infrastructural Development:* Infrastructural development is one of the biggest indicator for the expansion of industries which is not satisfactory in Assam. The infrastructural developmental index is 0.163818 and rank is 20 of Assam among the states of India. The energy, market, transportation and communication sector has not well developed in Assam. The chronically flood badly impact on road networks every year.
- 5) *Lack of Credit Facility:* Lack of credit facility is a major challenge for industrial growth in Assam. The financial conditions of people are not satisfactory in Assam and the commercial banks are not interested in providing finance to this sector. People are not financially sound to establish a new industry in Assam.
- 6) *Old and Obsolete Machineries:* The small scale industries are facing the problem in production due to old and outdated machineries. They are unable to compete with the products of large scale industries. These products are unable to meet the demand of modern people and the production cost of these old machineries are more compare to modern machineries.
- 7) *Lack of Efficient Marketing Facilities:* Agro based industries are facing the problem of efficient marketing. There are lack of organised marketing facilities for these industries. They have to depend on the middlemen and private traders for selling their products. These middle man are getting more benefits than the producers.
- 8) *Lack of Transportation Facility:* Non-availability of proper transportation is a major challenge for industrial development in Assam. This affects the movement of raw materials and produces from the place of production to market and other parts of the

country. Lack of proper transportation facilities increase the cost of production which is contributing to low economic return. Industrial produces in one area cannot transport to other part of the region for marketing due to lack of poor transportation facilities.

- 9) *Lack of Energy*: Electricity is most important as a source of energy for industrial development. The production of electricity is not sufficient which hamper in the industrial growth in Assam. Frequently load shading is a major problem of industrial development in Assam.
- 10) *Terrorism*: Terrorism is important factor that hamper for industrial growth. Terrorist activities disappoint the investors in the region. Some anti-social and terrorist groups are demanding donation from the investors and kidnapping investor time to time.

#### D. Strategies for agro Based Industries

Agro based industries has ample scope of expansion in Assam. Assam has abundant raw materials and manpower that will helpful for the industrial development. It unique geographical and climatic condition has endowed this land with a wide range of raw materials for the food processing industry. The climate of Assam is very suitable for the processing of edible items. But the growth of these units are not evenly distributed in the entire state. Adaptation of following opportunities will bring expansion of industries in Assam.

- 1) *Co-operative method*: Agro-based industries can be set up on co-operative basis ensuring participation of people in the development process. The cooperative methods is most important to meet the problem of capital, labour, raw materials, etc. These cooperation will between government and public participation or among the people. The NGO, society, SHG etc. will establish new industry in cooperative method.
- 2) *Credit facility*: Capital is prerequisite for the industrial development. The poor economic condition of people badly affected in the industrial expansion in Assam. Government should provide loans to a very low rate of interest for formation of credit to the entrepreneur. Under the circumstances subsidies and incentives on capital investment have promoted the agro industries.
- 3) *Agro based industrial awareness*: Industrial awareness is a program to promote agro based industry which will provide information of profit, funding to entrepreneur, raw materials, agribusiness and education. This will provide information of new adaptation, technologies, planning, training, education campaigns and management of industry. The awareness can reach to every households through hosting workshops and conferences, awareness campaign, websites, videos, displays, publications, advertisement etc. in Assam. The development of this sector will result in change of attitude of people of this region which will help in industrial development in the region.
- 4) *Efficient Market system*: Efficient market system occupies an integral position for overall development of agro based industry. Marketing comprises all activities like supply of raw materials to industry and movement of industrial products from the industry to the domestic and international market. The regulated market will helps to getting optimum price to the farmer, through effective marketing policy, proper infrastructural development, free grading facilities for agricultural commodities and issuing pledge loan during distress sale. Though it is playing most important role for agricultural development, it is yet it is to be developed and manage properly.
- 5) *E-marketing*: E-marketing will promote the non-farm produces from various government websites like INDG, INDIA MART and others. It gives a platform to showcase the products which enables the buyer to directly contact the community for bulk business. Moreover e-marketing is a marketing which decrease the middleman and consumers can get the product in rational price and producers get better price. So promotion of e-marketing will provide a opportunities for industrial development.
- 6) *Infrastructural Development*: Infrastructural development is prime for creation of environment for industrialization and attract investor in this sector. To achieve the goal government should give urgent priority on the establishment of infrastructural facilities in the form of Export Processing Industrial Park (EPIP), Industrial Infrastructure Development Centre (IIDC), Growth Centres, Food Processing Industrial Park, Industrial Estates, Industrial Areas, and Commercial Estates etc.
- 7) *Transportation and communication linkage*: Proper transportation and communication linkage will help to transport raw materials to the industry and industrial products to the consumers. Better road connectivity will reduce the cost of transportation as well as the transportation time for perishable goods. The communication linkage will provide information of goods to the consumers and traders. The information includes price of goods, place of availability, quality of goods etc.

#### V. CONCLUSION

Agro based industries plays a vital role in fostering the tempo of rural economic development. Agro-industries provide a means of converting raw agricultural materials into value added products while generating income and employment and contributing to

overall economic development in both developed and developing countries. Agro-based industries facilitate for optimization of resource use, output management, enhance farmer income, widening of market, value addition to national income and employment generation. Agro based industries broadly include - Grain Mill Products Industry (Rice, Oil and Flour Mill), Sugar Industry, Food Processing Industry, Jute industry, Bee industry, Tea Industry and Textile Industry in Assam. The index of industrial production for the manufacture of food products and beverages are in an increasing trend and reached to 143.76 in 2014-15. Total value of production for agro based industry is 1945.15 lakh in 2014-15 in Assam. These industries eliminate wastage of agricultural produce to a greater extent and ensure steady and better price to farming community. The industrial sector grew at an average growth of 1.86 percent during 2012 to 2015. The lower growth of industrial sector in the state are the result of lack of knowledge, manpower, industrial accident, infrastructural development, credit facility, etc. The opportunities are vast in the region but we still need a holistic approach for overall development of the agro based industries. Assam has abundant raw materials and manpower that will helpful for the industrial development.

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