

# Baseline Survey Report

Cluster Development Technical Agency

**Assam Agribusiness and Rural Transformation Project (APART),  
Government of Assam**



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# 1. Introduction

## 1.1. Introduction

Assam Agribusiness and Rural Transformation Project (APART) is funded by the World Bank and aims at adding value and improving the status of selected agriculture value chains focusing on small holder farmers and agro-entrepreneurs in targeted districts of Assam.

One of the components in the project is that of the Cluster Development Technical Agency, awarded to Grant Thornton India LLP wherein the scope of work includes developing 17 clusters in 16 Districts of Assam. The proposed 16 districts are Kamrup, Nagaon, Sonitpur, Darrang, Goalpara, Dhubri, Kokrajhar, Jorhat, Golaghat, Sibsagar, Karbi Anglong, Morigaon, Cachar, Lakhimpur, Nalbari and Barpeta. The Cluster Development Technical Agency (CDTA) is expected to contribute towards meeting the overall project objectives of establishing cluster-based Industry Associations (IAs) for sustainable growth of agro-based MSMEs in select clusters by providing services like infrastructure creation, marketing, finance, skill development, technology interventions, business development services and facilitating external linkages and networks to support IAs to enhance competitiveness of their MSME units.

The project aims on the focus commodity value chains of cereals (rice and maize), pulses (lentil, pea and black gram), spices and condiments (ginger, turmeric and mustard), fruits (banana) and vegetables.

## 1.2. Objective of the Assignment

The critical objectives of the assignment viewed as follows:

- Developing and establishing 17 cluster-based IAs with targeted vision and committed leadership for sustainable growth of agro MSMEs in these clusters, for providing various services to agro MSMEs in the area of infrastructure creation (such as common facilities), marketing, finance and skill upgrading.
- Supporting the IAs in the development and implementation of Agro Industrial Development Plans (AIDPs) that address the cluster-level obstacles to enterprise growth over the project period and enhancing access to agro MSMEs to needed technical and other BDS including entrepreneurship development training programs.
- Facilitating external linkages and networks that will support the IAs to overcome the obstacles that affect their competitiveness and implement AIDPs.

## 1.3. Objective of the Baseline Survey Report

The Baseline survey is considered as the foundation of any study and intervention programs and the same acts as a guideline for monitoring and evaluating progress, effectiveness and impact of any project. The survey enables to provide the basis for assessment of the project implementation and help plan for the envisaged output and results of the project.

**The baseline survey aims to undertake and/or map the following:**

- Validate/update the existing data on agro-based enterprises in the Districts of Assam
- Understand the type/concentration of enterprises in the Districts of Assam

- Analyse the existing nature of Machinery and Equipment deployed, capacity utilisation of installed machinery/equipment, existing level of technology in the enterprises in the districts
- Category wise contribution of these enterprises to revenue and employment in the State of Assam
- Identify the prevalent value chain in the Districts
- Understand the existing procurement channels for raw materials, packaging materials etc.
- Analyse the existing nature of employment in the enterprises and understand the employment status, map skilled and unskilled labourers engaged in the enterprises
- Understand the existing market channels used by the enterprises and explore scope for identifying new market for the products manufactured
- Analyse the status of registration of the enterprises – UAN, EM part I, EM part II, FSSAI etc.
- Access/understanding of various schemes, subsidies & capacity building and support options available for the enterprises
- Analyse the existing ecosystem for MSMEs in terms of BDS utilized and access the need for such services in order to strengthen the cluster ecosystem.
- Analyse the requirement of Common Facilities Centre as envisaged by enterprise stakeholders

#### **1.3.1. Sample Size to validate/update the existing agro-based enterprises in the districts**

During the preliminary consultations with the ARIAS society, a list of 2535 enterprises was provided by the ARIAS Society for reference, the data had been collected by ARIAS Society through a primary survey.

A separate list comprising 2298 enterprises in all sixteen districts was provided by the DICC in the respective districts. The preliminary survey conducted by ARIAS society was also based on this list. Hence, the lists provided by ARIAS Society and DICC were overlapping in nature. However, during this survey by ARIAS society, a few unregistered enterprises were also additionally identified.

Taking these lists into consideration the baseline survey was started in the districts. The physical verification of the units as per the lists provided were done and in the process many unregistered and closed units were also identified. Few enterprises were later approached based on the information gathered during consultation with the entrepreneurs.

#### **1.3.2. Understand the type/concentration of enterprises in the districts**

Each district in the state of Assam has unique flora and fauna and is rich in agricultural and horticulture commodities. The baseline survey targeted the enterprises which were exploiting agro based commodities such as rice, fruits and vegetables, turmeric, ginger, wheat, maize etc. as raw material inputs to manufacture products. Enterprises related to dairy, piggery and fishery processing were also targeted. The survey aimed to identify the enterprises using these commodities as raw materials and the concentration of such units in the districts. It also aimed

at mapping similar enterprises to study the perspective of natural clusters, if any. Thus, the survey would help us understand the nature of enterprises operating in each district.

**1.3.3. Machinery availability, machinery capacity, level of technology used by enterprises in the districts**

The enterprises in the districts as per the lists provided by the ARIAS Society and the DICC's revealed that most of the enterprises were micro and small in nature. Taking the same into consideration, the baseline survey focused on understanding the machinery involved in the manufacturing process, level of technology used and identifying the need for upgradation of machinery and use of advanced technology by the enterprises.

**1.3.4. Identify the prevalent value chains concentration in the districts**

Based on the list of units provided by the ARIAS Society and the DICC's, few prominent value chains - based on industries in each of the 16 project districts were listed down which were the following: animal feed, bakery, beverages, confectionery, fish products, food processing, sugarcane based, milk & allied, mushroom, mustard oil, pulses, rice mill & rice based products, soyabean, spices, wheat, pig, fish & milk.

This baseline survey enabled us to validate the information and study the actual scenario of enterprises and prominent value chains in the districts.

**1.3.5. Understand the procurement channels of raw materials, packaging materials etc:**

During our preliminary discussions with entrepreneurs in the districts, issues related to the procurement and availability of raw material, consumables and packaging material were found to be a concern for the entrepreneurs. Therefore, while conducting the baseline survey, focus was on analysing the challenges related to the same, identify the scope for availability, procurement channels related to raw materials and packaging materials in the districts. This was done with the intention of understanding the costs, demand and supply chain of the raw material and packaging material during different seasons (Assam having heavy rainfall during the monsoons affecting the connectivity through rail and road.; floods and landslides during monsoon months affecting the overall operations and businesses).

**1.3.6. Understand and map skilled and unskilled workers, involvement of women in the entrepreneurial sector**

Through the baseline survey, it was also strived to understand the extent of employment in the enterprises, assess the mix of workers involved in the enterprises and map the relative deployment skilled and unskilled labour. This study attempted to understand the status of skilled and unskilled labour engaged in the enterprises, the use of training infrastructure and support utilised by the enterprises relating to manpower and analyse gaps therein. This gap analysis enabled to understand the need for training to develop more skilled manpower.

This study also helped map the men - women engagement ratio in the MSME sector. Most women were seen to be involved in the food processing sub-sector such as in bakery and

confectionery, pickles, jam, jelly, squash, and in textiles sector (eri & muga). Clarity regarding the involvement of men and women depending on the sector also could be analysed from the survey.

**1.3.7. Understand the market for the products manufactured:**

The enterprises registered under the DICCC and surveyed by the ARIAS Society were engaged in manufacturing of various value added products. The baseline survey helped us understand and derive the ratio of enterprises involved in the manufacture of value added products in the project districts and also identify the market where these products were sold. This survey enabled us to understand the market for the products manufactured in these districts which would include vendors, wholesalers and retailers. We also attempted to understand whether these products are sold in the local markets, within the District, within the state, North East Region or within the country. If the products were sold within the state, North East Region or in other parts of the country, we tried to understand the channels through which marketing is carried out, payment terms related to the same and the demand for these products at each level (state, NER or country level).

The survey also helped us to analyse marketing infrastructure availability in the districts and the use of the same for the sale of products. As there are no organised markets in the state, this study would also bring the status and need for marketing infrastructure in the State.

**1.3.8. Registration status of enterprises (e.g., under DICCC, MSME Department; FSSAI etc.), Assess/understanding of various schemes, subsidies available for the enterprises:**

Through the baseline survey, attempt was made to scrutinise the registration status of each enterprise. The registration of enterprises could be under the DICCC or the MSME Department. Both the Departments are providing support by way of incentives, loans, subsidies on machinery procurement, statutory support such as reservation, relaxations on interest for loans taken from banks etc. This survey helped in identifying entrepreneurs who have taken the benefits of the aforementioned schemes and subsidies and at the same time identify entrepreneurs who can be linked to concerned Departments to avail of similar support.

The Food Safety Standards Authority of India certifies enterprises involved in making edible and consumable products and is a mandatory certification. This study also helped to identify enterprises who were unaware of the same and are yet engaged in manufacturing and selling of consumable goods. Compliance gaps were identified.

**1.3.9. Understand whether entrepreneurs avail any business development services; requirement for further services:**

The study also helped understand the knowledge and infrastructure base of entrepreneurs regarding business development services such as technology and management related training programmes provided by various institutions – MSME DI, NSIC, IIE, IIFPT etc.; preparation of Detailed project reports by Chartered Accountants to take bank loans; machinery suppliers for upgradation of machinery installed or availing consultation for repair or procurement of new machinery etc.

**1.3.10. Requirement in terms of common facility centre:**

While conducting the baseline survey, we also tried to analyse the gap in availability of machinery, challenges related to procurement of upgraded machinery and the need of Entrepreneurs were also briefed of the scope to grow and expand their production in their sector. Entrepreneurs were also briefed about the benefits of evolution of a strong Industry Association and benefits of a Common Facility Centre so that entrepreneur can analyse their specific need and pursue the same accordingly.

# 2. Approach & Methodology

## 2.1. Approach for the baseline Survey

The approach adopted for the survey was both empirical and exploratory in nature. The nature of the survey was empirical in the sense that the idea was to capture the essence and extent of agro based enterprises in the identified districts of Assam. For this, quantitative data on the enterprises was collected through PRA tools administered through a primary survey with the intention of drawing conclusions from “verifiable” evidence. The tool used for this purpose was a questionnaire specifically designed for the purpose. Exploratory research approach was adopted to an extent where qualitative data collection was done in areas where administering the questionnaire posed to be difficult and in situations where the understanding of the enterprises with regard to technical terms like turnover, technology status was limited or respondents were hesitant to disclose. Therefore, both qualitative and quantitative approaches for data collection was used.

### 2.1.1. Categories of MSME and Large enterprises:

According to the Ministry of Micro, Small & Medium enterprises, the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two Classes:

- a. **Manufacturing Enterprises:** The enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the industries (Development and regulation) Act, 1951) or employing plant and machinery in the process of value addition to the final product having a distinct name or character or use. The Manufacturing Enterprise are **defined in terms of investment in Plant & Machinery.**

As per the Ministry of MSME, the categorization of the manufacturing enterprises is done on the following basis:

- Micro Enterprises: enterprises with an investment of less than INR 25 Lakhs in plant and machinery/equipment are considered micro enterprises
- Small Enterprises: enterprises with an investment between INR 25 Lakhs to INR 5 Crores in plant and machinery/equipment are considered small enterprises
- Medium Enterprises: Enterprises with an investment between INR 5 Crores to INR 10 Crores in plant and machinery/equipment are considered medium enterprises
- The Large Enterprises are the enterprises which has an investment above INR 10 Crores in plant and machinery/equipment.

### 2.1.2. Tools used for the approach:

#### Participatory Rural Appraisal (PRA):

Participatory Rural Appraisal (PRA) is considered as one of the most popular and effective approaches to gather information in rural areas. PRA is a methodology of learning rural life and their environment from the rural people. It requires researcher's / field workers to act as facilitators to help local people conduct their own analysis, plan and take action accordingly. It is based on the principle that local people are creative and capable and can do their own investigations, analysis, and planning.

**The PRA tools used while conducting the baseline survey are:**

- i. Focus Group Discussions**
- ii. Pocket Meetings**
- iii. Questionnaire**
- iv. Enterprise mapping**

**Focus Group Discussions:**

Focus Group Discussions (FGDs) are important to gain a better understanding of successful innovative behaviour in various clusters. Firms rarely innovate in isolation but in networks of production. Most innovative activities involve multiple actors and stem from combining competencies and knowledge of various actors. Such FGDs act as means to evolve consensus on constraints and opportunities.

In this context, Focus Group Discussions were carried out in the project districts to primarily sensitise and create awareness among the local entrepreneurs and farmers on the objectives of the APART project and the role of the Cluster Development Technical Agency, Grant Thornton India LLP to realise those objectives.

Mobilization of the entrepreneurs was done through discussions with prominent entrepreneurs in the blocks and DICC extension officers. The FGDs were held at locations wherein the concentration of enterprises was low and reaching out or identifying the unregistered units was difficult. The FGDs helped us to have detailed discussions with entrepreneurs from different value chains in one platform.

Through the FGDs the challenges related to the locality, registration status of the enterprises, procurement of raw materials and channels related to the same could be identified and solutions were proposed by the participants themselves.

During the Focus Group Discussions organised by the CDTA, stakeholders from various fields, such as Government, Chartered Accounts, NSIC, MSME-DI, KVK, Lead Banks also participated to understand the various challenges and the opportunities in terms of better market linkages, technical needs, financial support, schemes and subsidies offered by the State and Central Government. These discussions created awareness, clarified the participants on the queries which remain unanswered on various platforms.

**Pocket Meetings:**

Various pocket meetings were held by us in locations where the concentration of enterprises were high. These meetings mostly involved entrepreneurs from one value chain in one locality. Minimum 1 pocket meeting was held at each block level with a target to reach out to the maximum entrepreneurs. These discussions enabled to understand the trend in these localities, engagement in entrepreneurial sector and challenges prevailing in one particular locality.

These pockets meetings also enabled us to identify and select industry leaders and representatives for Executive Body while forming the Industry Associations in the districts.

**Designing of the Questionnaire:**

Based on the firm's previous experiences of working in cluster development in various states of India, discussions with the officials from various Government Departments – Agriculture, Horticulture, Regional Rainfed Lowland Rice Research Station (RRLRRS), Banks, and preliminary interviews with entrepreneurs from different value chains, machinery suppliers, packaging material suppliers, top industry leaders, observations were drawn and a questionnaire was designed to map the details of the agro based enterprises in the districts. The same was reviewed by the ARIAS Society and Industries & Commerce Department and approved to be used for interviewing the entrepreneurs.

### **Enterprise Mapping:**

After analysing the gaps based on the preliminary interviews, an enterprise mapping format was developed in order to capture the details about the enterprises. This format was used to interview the entrepreneurs who are well versed with the business scenario of Assam and could provide insights, entrepreneurs who could guide in identifying the challenges and analyse the same to plan for interventions. The enterprise mapping format focused on gathering as much information it could, queries related to the investments, commencement of the business, type of products manufactured/ processing involved, understand the stages of manufacturing or processing, understand the engagement with any Industry Association or the need for an Industry Association, the services sought by the entrepreneurs in terms of procurement /support institutions/organisations/other firms; we also tried to understand the components of annual cost structure of the enterprises: percentage of total cost spent on procurement of raw materials, processing –including labour and power, other overheads including marketing of the products, interest on working capital, profit margins.

The enterprise mapping also enabled us to understand the level of technology used by the entrepreneurs, the need for upgradation of the machinery and assistance sought for the same, the marketing function in the districts, identify the mode of selling their products in the market, the basis of competition, costs, product differentiation, other marketing channels, sale through participation in trade fairs, exhibitions, Government channels such as NERAMAC.

The procurement of raw materials, through suppliers, if any were also identified, we also tried to analyse the preferred sources of procurement; factors affecting the availability and price of the raw materials, procurement process, whether procured jointly or individually.

The labour and managerial skill upgrading and Human Resources development- needs related to orientation programmes, skill development programmes.

Questions related to finance and capital were also discussed which included assistance or support availed from financial institutions in terms of loans, instrument typically availed of, gap like underfinancing and restoring of informal finance. We also tried to understand, in the absence of any help from the banks, are there any other instruments through which financial assistance can be gathered.

#### **2.1.3. Methodology:**

##### **Primary research:**

The primary data was collected through the use of surveys, focus group discussions, enterprise mapping and one to one interviews. Many focus group discussions, buyer seller meets, business development meets, technology meets were held to gather information based on the questionnaire and enterprise mapping format. The primary research helped in closely discussing the prospects, challenges related to the enterprises.

##### **Secondary research:**

Review of the secondary information is important in order to develop the study tools and devise a plan for the study, Grant Thornton India LLP has reviewed the list of registered enterprises of around 2500 provided by the ARIAS society operating in the 16 districts of the State.

Based on the aforementioned research tools, the team deployed in the 16 districts visited the enterprises and with the use of the questionnaire and the enterprise mapping format interviewed the entrepreneurs. A few industry leaders were identified in the process who had established themselves in their fields and had gained expertise in terms of procurement of raw materials and have been able to market their products through proper market channels. They have also been able to guide and share their know how with new entrepreneurs.

Various meetings, focus group discussions, buyer seller meets, technology meets, business development meets were held in the districts to gather primary information related to the technology know how and the need for upgradation, training programmes related to procurement of new machinery, business

development services such as linkages with the banks which will provide loans for expansion of business and new product development etc. The buyer seller meets enabled to get buyers for the products manufactured by these enterprises. These meetings helped in market linkages, financial institutions linkages, raw material procurement linkages.

## 1. Development of study tools and execution:

- 1.1. **Sample size:** The baseline survey is aimed at identifying agro based enterprises in the 16 project districts of Assam and as such the survey is a population survey. The population being the enterprises related to the identified value chains dealing in raw materials for the same or supporting the identified value chains directly or indirectly. The lists of enterprises obtained from ARIAS Society and Department of Industries and Commerce were collated and verified for duplicate entries and common list of enterprises was derived. Taking this as a reference point, almost 95% all existing enterprises in the project districts were visited and survey was also conducted to map the enterprises. For the purpose of the study the definition of enterprise as per the Ministry of MSME, Government of India which defines an enterprise as engaged in the manufacture or production, processing or preservation of goods with some investment in plant and machinery has been referred. Approximately 95% of the existing enterprises were mapped which summed to approximately 4600 enterprises including registered and unregistered enterprises related to agricultural sector in the project districts.
- 1.2. **Questionnaire design:** A structured questionnaire schedule was developed for consultation with the entrepreneurs. Size of enterprise, technology, investment, Employment (social mapping), turn over, capacity utilisation, registration, UAN, Need gap analysis for BDS, CFC, Value chain mapping, market study, new product scope/ innovative technology. The questionnaire focused on identifying the parameters such as registration of the enterprises, source for procurement of raw materials and analyse gaps in availability for enterprises, packaging materials, capturing existing central and state government schemes/subsidies and examine the awareness level of the enterprises about the schemes, registration with the MSME, DICC, training programmes undertaken by the entrepreneurs. Few questions were also designed to understand the need for training programmes, FSSAI registration (wherever applicable) loans on working capital etc. The same was shared as part of the inception report and approved by OPIU.
- 1.3. **Planning and execution of Focus Group Discussions / Pocket meetings:** The planning of the focus group discussions and pocket meetings were done in consultation with the industry leaders and the extension officers of the DICC in the respective blocks of each of the 16 project districts.  
  
Enterprises for the focus group discussions were mobilised with assistance from the industry leaders / DICC and were planned in areas where concentration of enterprises were low and pocket meetings were planned wherein the concentration of the enterprises were high.
- 1.4. **Data collection and investigation:** A detailed field plan was prepared and finalized after consultation with the project team members. Each district is deployed with one cluster team leader (CTL) and two cluster facilitator coordinators to carry out visits to enterprises and interview the entrepreneur based on the questionnaire developed. At least two focus group discussions (FGDs) and pocket meetings covering all the blocks in the districts were conducted by the respective district teams.
- 1.5. **Data processing and analysis:** Data collected during the interviews of the entrepreneurs were entered in excel sheets and analysed.

The study attempts to examine the constraints and prospects of agriculture in the districts of Assam at micro level. Hence, the study uses primary data.

The Primary Data is based on Socio-Economic profile of the agricultural entrepreneurs their annual business turnover, level of technology used and investment therein, suggestions for business development services and common facility requirement were collected through questionnaire schedules from the entrepreneurs. Keeping in view the nature of the study, for obtaining proper and perfect data from the sample entrepreneurs, it was decided to collect information through personal interview using the questionnaire schedules. The separate interview schedules were prepared for the field survey. For preparing the questionnaire, schedules the available literature and research reports were referred based on their suggestions the questionnaire schedules were revised and finally used for data collection.

#### **A) Data Processing and Analysis**

Collected data is raw, hence must be prepared in order to achieve the desired results of the survey. Data processing and analysis is a process and covers a few steps to get reliable data. The data collected can be prepared and analyzed with help of excel and charts.



- 1) Questionnaire –The Questionnaire Schedule is considered an appropriate tool to get the requisite information. For the purpose of data collection, a well-designed questionnaire schedule was used. A questionnaire schedule is a set of questions which are asked from the respondents in a face to face situation. A questionnaire schedule was developed in the light of the objectives of the study. The questions in questionnaire schedule were mostly structured.

The questionnaire includes questions on different aspects of the business standings which provides a brief insight in the following:

- Categories of Enterprises into Large, Medium, Small and Micro
- Whether they are registered with government authorities or not?
- The units are situated in Industrial Area or not?
- Which value chain they fall in?
- Type of technology used and investment therein
- Whether any government scheme has been availed of?
- Requirement of Common Facility Centre and such other questions?

The sample size for the survey was 4605 units. For selection of the stake holders each block of all the districts has been covered. To make the survey results more meaningful, different Value Chains in the district have been identified in the primary data.

- 2) Editing – Editing of data is a process of examining the collected data to detect errors and/or omissions and to correct the same.
- 3) Classification – Classification of data which happens to be arranging of data, group or classes on the basis of common characteristics like Identifying value chain and products produced.
- 4) Data Adjusting – Necessary adjustments to have a better symmetry in the data.
- 5) Data Cleaning – Deleting fields which are not required and/or not have an impact on the results of the survey and to have better data consistency.

- 6) Graphical Representation – Graphs helps to understand the data easily. Most common graphs used in this analysis are Bar and Pie Charts.

**Tools Used – Pivot Table**

A Pivot Table is an excel tool for summarizing a list into a simple format. It helps to summarize, analyze, explore and present the data in a meaningful way. A pivot table was used as an interactive data summarization tool to automatically condense large datasets into a separate, concise tables. Data inconsistency was then identified and rectified.

**Graphical Representation**

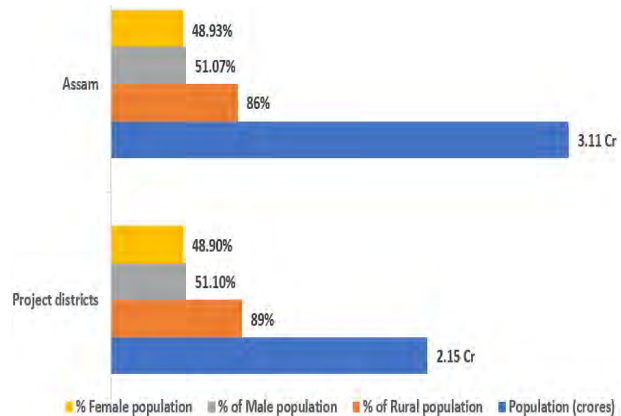
For better understanding of the data collected, different graphs were used to demonstrate the information in the graphical form. Comparative analysis among different categories, value chains, districts and blocks has been showcased using the following graphs –

1. Column Chart
2. Pie Chart
3. Bar Graph
4. Combination Graph

**2.2. Social Mapping**

The state of Assam constitutes nearly 90% of the rural population who are largely dependent on agriculture for their livelihoods. The agriculture sector employs almost 50% of the state’s workforce and provides support to 75% of the total population, however, the true potential in the sector is not reached as the agriculture in the state is based on conventional practises where it is characterised by certain key constraints in its structural transformation.

In this context to facilitate the development of organised micro, small and medium enterprises would require handholding, business facilitation services and facilitation of access to financing along with regulatory changes for the enterprises to flourish. Some identified challenges include; underdeveloped agribusiness value chains, limited availability of crop-insurance etc.



**2.2.1. Demographic profile of the project districts**

Assam accounts for nearly 2.5% of the country’s population as per 2011 census. The population composition by gender is similar in the project districts to that of the state levels. The percentage of urban population to that of the total population in the project districts is lower than that of the state i.e., 11.1% and 14% respectively and the concentration in rural population in the project districts is higher than that of the state i.e., 88.9% and 86% respectively. However, the average household size, percentage of male and female population to the total population and the population density is almost similar.

The total population of the project districts is 2.15 crores (as per census 2011) which is 68.9% of the state population. Nagaon has the highest population concentration with 9.05% of the state’s population and

Nalbari has the lowest concentration with 2.47% of the 16 project districts. Table 1 gives the detail of the demographic details of the project districts.

#	District	Population	% to state population	Density (persons /sq.km.)	Household size	% of urban population	% of rural population
1.	Barpeta	16,93,622	5.43	632	4.9	8.7	91.3
2.	Cachar	17,36,617	5.57	459	5	18.17	81.83
3.	Darrang	9,28,500	2.98	491	5.2	5.98	94.02
4.	Dhubri	19,49,258	6.25	1,171	4.9	10.45	89.55
5.	Goalpara	10,08,183	3.23	553	4.5	13.69	86.31
6.	Golaghat	10,66,888	3.42	302	5.1	9.16	90.84
7.	Jorhat	10,92,256	3.50	383	5,1	20.19	79.81
8.	Kamrup	15,17,542	4.86	436	5	9.38	90.62
9.	Karbi Anglong	9,56,313	3.06	93	4.9	11.81	88.19
10.	Kokrajhar	8,87,142	2.84	280	4.9	6.19	93.81
11.	Lakhimpur	10,42,137	3.34	457	4.7	8.76	91.24
12.	Morigaon	9,57,423	3.07	618	4.9	7.66	92.34
13.	Nagaon	28,23,768	9.05	711	4.7	13.09	86.91
14.	Nalbari	7,71,639	2.47	763	4.7	10.72	89.28
15.	Sibsagar	11,51,050	3.69	431	4.7	9.56	90.44
16.	Sonitpur	19,24,110	6.17	365	4.7	9.04	90.96
	Project districts	<b>2,15,06,448</b>	<b>68.91</b>	-	<b>4.9</b>	<b>11.11</b>	<b>88.89</b>

Source: Compiled from Primary Census Abstract, 2011

### 2.1.2 Social profile of the project districts

The assessment of the social profile for the project districts includes review of sex ratio, literacy rate, schedule caste (SC) and schedule tribe (ST) population. Table 2 gives the social profile for the project districts.

**Table 1: Social profile**

SN	District	Sex ratio	Literacy rate (% to total)	SC population (%)	ST population (%)
1	Barpeta	953	52.97	5.63	1.61
2	Cachar	959	67.61	15.25	1.01
3	Darrang	954	52.45	4.34	0.91

4	Dhubri	953	47.32	3.61	0.32
5	Goalpara	964	55.90	4.47	22.97
6	Golaghat	964	67.65	5.84	10.48
7	Jorhat	962	72.78	8.12	12.81
8	Kamrup	949	65.59	7.11	12
9	Karbi Anglong	951	58.27	4.7	56.33
10	Kokrajhar	959	55.16	3.33	31.41
11	Lakhimpur	968	65.59	7.85	23.93
12	Morigaon	967	56.39	12.31	14.29
13	Nagaon	962	60.58	9.43	4.08
14	Nalbari	949	68.91	7.8	3.03
15	Sibsagar	954	70.68	3.68	4.26
16	Sonitpur	956	57.61	5.67	12.07
<b>Project districts</b>		<b>958</b>	<b>60.40</b>	<b>7.1</b>	<b>10.92</b>

Source: Compiled from Primary Census Abstract, 2011

**Sex ratio:** Among the project districts Lakhimpur (968) has the highest sex ratio while Kamrup and Nalbari has the lowest sex ratio (949) each which is still higher than the national average at 940.

**Literacy rate:** The literacy rate in Jorhat is the highest (72.78%) and lowest in Dhubri (47.32%) among the project districts which is also lower than the state (61.46%) and the national (63.06%) average.

**SC population:** Cachar has the highest concentration of the SC population at 15.25% and Kokrajhar the lowest at 3.33% among the project districts. However, the country constitutes nearly 17% of the SC population.

**ST population:** STs constitute more than 50% of the total population in Karbi Anglong the highest among the project districts followed by Kokrajhar with more than 30%. Dhubri however has the lowest concentration level of STs with only 0.32%.

### 2.1.3. Economic Profile of the project districts

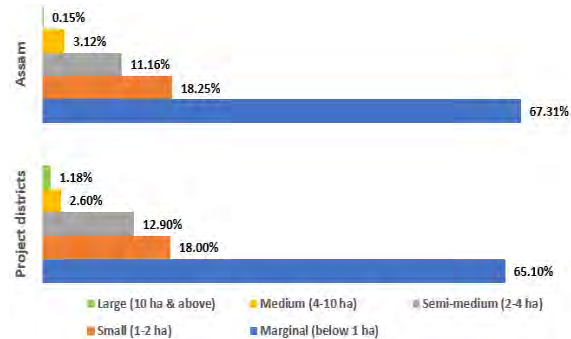
**Workforce participation rate:** The workforce participation rate at the state and the project districts level is similar. Among the project districts Barpeta (33.17%) has the lowest WPR and districts of Cachar, Darrang, Dhubri, Goalpara, Morigaon, Nagaon and Nalbari has WPRs lower than the state average. Gender level data shows that males constitute 72% of the working population of the project districts. Primary sector (cultivators and agriculture labourers) constitute more than 50% of the workforce in the project districts. Workers engaged in these sectors constitute 74% of total workers in Karbi Anglong.

**Poverty levels:** The poverty levels have been assessed based on the composition of people living below the poverty line as identified by the Planning Commission of India. The project districts have higher levels of poverty (38.8%) as compared to that of the State average (31.98%). The prevalence of BPL in rural areas (40.9%) of the project districts is almost two times the corresponding figure for the urban areas (22.7%). The high poverty ratio adds to the importance of successful implementation of the project to help eradicate rural poverty in the project districts by increasing income generation activities.

**Land holding size:** The land holding size of the project districts has been categorised on the basis of size i.e., marginal, small, semi-medium, medium and large as pre-defined by the agricultural census. Distribution of land holdings according to 2010-11 agricultural census shows that overall marginal farmers are dominant in the state holding a total area of 774 hectare with 66.2% male and only 1.17% female whereas farmers in the large category hold a total area of 28 hectare with only 0.07% male and negligible number of females.

Farming practises needs to be more efficient to produce higher yield for the economic growth of the workers involved, given the small land holding size spread across the project districts.

**Human Development Index:** The Human Development Report Index, 2014 ranks Assam 16 among the states of India with 0.557 HDI. Among the project districts Jorhat has the highest HDI of 0.655 surpassing the state index whereas Barpeta, Kamrup, Karbi Anglong, Sibsagar, has HDIs above the national average and Cachar has the lowest HDI with 0.463.



#### 2.1.4. Village grazing reserves

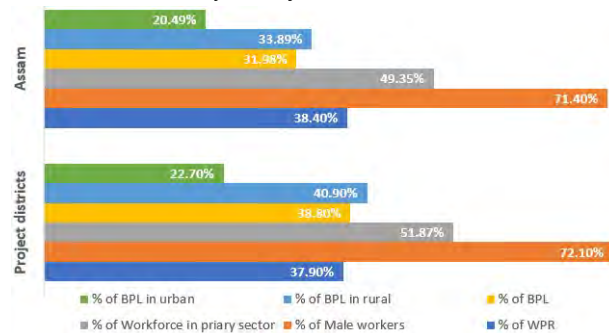
The grazing lands are important common property to pasture the cattle in the villages and are significant part of land holding under the GoA, however these are frequently converted to non-agriculture purposes due to non-availability of Government land for other development projects. The extent of grazing land available in the state is only 2.5% of the total and area. Among the project districts Karbi Anglong has no land area demarcated as grazing land and Dhubri has only 0.9% area under grazing. Few districts of Barpeta, Darrang and Cachar has 4-4.6% under grazing.

#### 2.1.5. Profile of the STs/IPs in the project districts

ST population constitutes 12.45% of the total population of Assam. Major tribes of Assam are Bodos, Misings, Dimasas, Karbis, Tiwas, Tai-phakes, Khamtis, Rabhas, Singphos, Khelmos, Kukis, Sonowal Kacharis and Deuris. The state has three Tribal Autonomous Councils formed under the sixth schedule of the Constitution. Among the project districts Karbi Anglong has the highest concentration of ST community with 56% of the total population of the district followed by Kokrajhar with 33%. Dhubri has the least concentration of ST population with 0.32%.

#### 2.1.6. Free, Prior, Informed Consultation (FPIC)

FPIC intends to fully identify the views of the indigenous community and ascertain their support for the project. The FPIC has twin objectives of (i) disseminating details about the proposed project, its adverse and favourable impact on the community; and (ii) integrating the indigenous households with



suitable sub-project interventions. Informed participation

involves organised and iterative consultation through which the views of the communities on matters that affect them directly such as proposed sub-project intervention requirements, eligibility criteria, the sharing of development benefits and opportunities and implementation issues shall be incorporated into the decision-making process for the project.

#### **2.1.7. Gender profile in the project districts**

The percentage of women population is lesser than the state (48.92%) in all the project districts except in Cachar and Kokrajhar. The gender ratio for the overall state is 954 (census 2011). The ratio of the women is maximum in Morigaon (974) and minimum in Darrang (923). The literacy level among women is the highest in Jorhat (67.72%), whereas Dhubri ranks the lowest with only 43.2% literacy rate among women. 50% of the project districts have women literacy rate lower than the state level of 56.4%.

The total working population of the state is 38.4% and the corresponding figure for women is 22.5%. The workforce participation rate among women is lower than the state level in Barpeta, Cachar, Darrang, Dhubri, Goalpara, Morigaon, Nagaon and Nalbari districts.

Women representatives comprise only 6.35% of the 126 member house, lower than the 11.1 percent in the last assembly. The percentage of women representation in PRIs is higher due to the compulsory reservation of 33%.

# 3. State Profile: Assam

Assam is situated in the North-East region of India bordering seven states viz. Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, and West Bengal. It is a state with heterogeneous population and socio-cultural and ethnic diversity. Notably, it is situated in the high rainfall zone which makes it naturally favourable to support production of food grains in abundance. Assam, known for its wild life, tea plantations, agri processing industries, is the largest economy in

Snapshot	
State capital	Dispur
Geographical area	78,438 sq. kms
Population (Census 2011)	31.20 mn
Gross state domestic product (GSDP)	USD 37.23 billion (2016-17) CAGR 11.78% (2010-11 to 2016-17)
Key Crops	Paddy, Pineapple, Banana, Litchi, Jackfruit, Cabbage, Cauliflower, Ginger, Turmeric, Tea,

the North East. Assam occupies 30% of the area of the North Eastern region (NER) and represents 68% of the population of the North East Region. The State has witnessed steady economic growth, as Gross State Domestic Product (GSDP) has grown at a rate of 7% over the last six years and contributed to more than 61% to the combined GSDP of the North Eastern region.

Assam covers an area of 78,438 km<sup>2</sup> (30,285 sq. mi). The state is bordered by Bhutan and Arunachal Pradesh to the North; Nagaland and Manipur to the East; Meghalaya, Tripura, Mizoram and Bangladesh to the South; and West Bengal to the West via the Siliguri Corridor, a 22 kilometers (14 mi) strip of land that connects the state to the rest of India. Myanmar lies about an hour away connected to the Easternmost part of Assam. Almost 27.4% of the land in the State is under forests. The major source of revenue from this sector is from timber (367 species), cane and bamboo (52 species), followed by stone-gravel-sand.

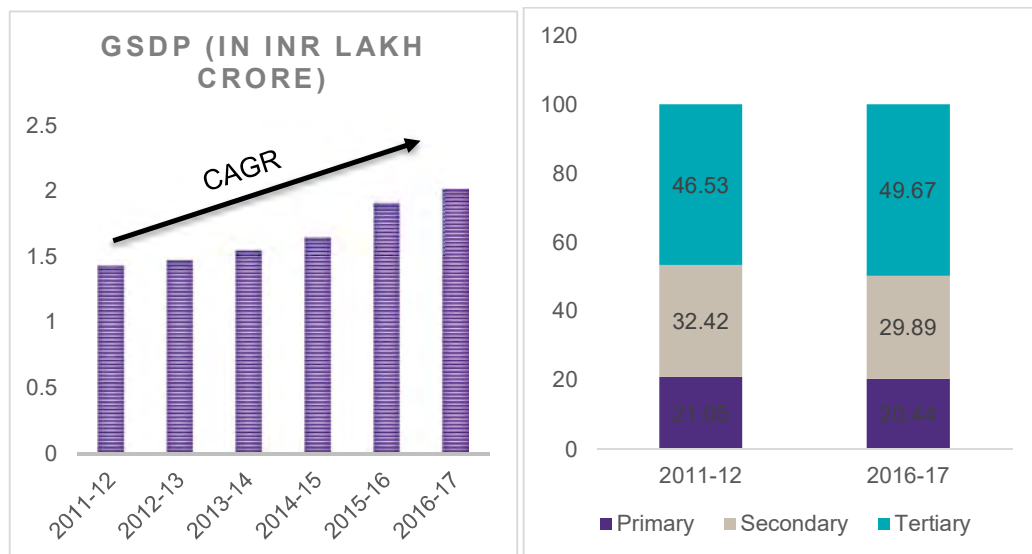
Many processed food products such as chips, semi-processed / frozen vegetables, juices, jams, spice preparations, etc. are produced using these crops as raw material. These food-processing industries are not necessarily large industrial units but are small & medium scale units (even household operations) with enormous scope for local employment.

Food Products, Coke & Refined Petroleum Products, Chemical and Chemical Products and other non-metallic minerals have been traditionally strong industries in Assam and top contributors to Gross Value Added (GVA), Output and Employment in the State. The circumstance presents high potential for increasing the GVA and Output per person engaged in the State.

**Assam is the link to South East Asia due to the following three key reasons: Culture, Commerce and Connectivity.**

With respect to economic profile, Assam with a Gross State Domestic Product (GSDP) of INR 1.91 Lakh Crores (US\$ 29.35 billion) in 2015-16, has a share of 61.3% in the combined GSDP of eight States of North East India. Assam's GSDP grew to INR 2.01 Lakh Crores (US\$ 30.89 billion) in 2016-17, witnessing a healthy economic growth of 7% (CAGR) between 2011-12 and 2016-17.

The charts below present Assam's economic growth trend and sectoral composition.



### 3.1. Economy

Agriculture is of basic importance to Assam, engaging about half of the total working population and generating roughly one-third of the state's gross product. Rice accounts for more than two-thirds of the sown area. Tea and jute, widely cultivated in the Brahmaputra valley are important foreign-exchange earners. Assam grows a large portion of the country's tea.

Livestock and dairy farming have shown moderate growth since the late 20<sup>th</sup> century, largely promoted by the government. Nevertheless, those activities remain but small contributors to the state's economy.

Development of the manufacturing sector has been inhibited by the state's isolation from the rest of India, by an underdeveloped transport system, by a small local market and inadequate regional demand and by the lack of adequate investment.

At current prices, the Gross State Domestic Product (GSDP) of Assam was INR 2.50 trillion (USD 37.23 billion) in 2016-17. Notably, the GSDP of the state grew at a CAGR (in INR) of 11.78 per cent from 2011-12 to 2016-17. The GSDP of the state grew at a CAGR (in INR) of 11.78 % from 2011-12 to 2016-17. All these figures are from the latest Economic Survey (2016-17) for the State of Assam.

A sectoral analysis reveals that during 2016-17(QE) the percentage contribution of Agriculture and allied sector to total GSDP of Assam at current price was 19.34%, industry sector 28.72% and services sector contributed 45.5%.<sup>1</sup>

According to the Department of Industrial Policy & Promotion (DIPP), cumulative FDI inflows in North-Eastern states during April 2000-June 2018 stood at US\$ 110 million consolidated in all sectors.

Sector/year	2011-12	2016-17(QE)
<b>Agriculture and its allied</b>	19.89%	19.34%
<b>Industry</b>	30.63%	28.72%
<b>Service</b>	43.97%	45.51%
<b>Taxes and Subsidies</b>	5.51%	6.44%

**Source:** Economic Survey of Assam 2017 -18

<sup>1</sup> <https://des.assam.gov.in/information-services/economic-survey-assam-2017-18> (retrieved on May 7<sup>th</sup>, 2019)

The Department of Industries and Commerce, Assam has established an Export Promotion Industrial Park at Amingaon in Kamrup (Rural) District at a total project cost INR Rs.1462.00 lakh. A total of 44 numbers of industrial units are functioning in the park as on 31.12. 2017

### 3.2. Agriculture and Allied Sector in Assam

Assam is an agrarian economy and agriculture is the major contributor to the state economy, 75% of the total population relies on agriculture and allied activities as its primary source of livelihood i.e. farmers, agricultural laborers.

Agriculture and allied sectors have four sub-sectors, i.e. crops (horticulture and field crops), livestock, forestry and logging, fishing and aquaculture:

- Nearly 74.9% of the contribution from agriculture and allied sectors comes from the horticulture and agriculture segment, followed by 5.4% from livestock and the remaining 11.6% from forestry logging, fishing and aquaculture sectors.

The table following highlights Annual Growth Rate of GSDP in the Agriculture Sector during 2016-17 (QE)

Sub Sectors	Current Prices	Constant Prices
<b>Crops (Agriculture and Horticulture )</b>	12.9%	3.87%
<b>Livestock</b>	34.36%	18.67%
<b>Forestry and Logging</b>	2.55%	1.81%
<b>Fishing</b>	6.35%	4.84%
<b>Agriculture Sector</b>	<b>11.69%</b>	<b>4.58%</b>

*Source: Economic Survey of Assam 2017 -18 (Latest as on date of submission)*

The contribution of the Agriculture Sector towards the State Economy has shown a growing trend in terms of GSDP at current prices, wherein the agriculture and horticulture segment contributes ~INR 276 Billion (2016-17 QE). As per estimates, annual growth rate in the agriculture and horticulture segment at current prices for 2016-17 is estimated at 12.9% against 10.2% in 2015-16. Crops like food grains and rice have shown slight improvements in terms of production as well as yield in the last few years. According to the estimates, the production of food grains and rice has increased to 53.55 lakh tonnes MT and 51.27 lakh tonnes in 2016-17, respectively.

#### 3.2.1. Agriculture Production Scenario

While most other states in India are gradually moving away from their traditional agriculture-based economy towards an industry or service-oriented economy, Assam is still heavily dependent on the agricultural sector. Development of the agriculture sector in Assam, therefore, contributes to inclusive development. Agriculture is considered as the major component and plays an imperative role in the state's economy. Agro-economic activities in Assam have paramount importance as a source of livelihood to its people. The State is home to 27.50 lakh farm families and 85.30% of them are small and marginal. Including population dependent on plantations, more than 80 per cent of the total population of Assam is dependent on agriculture.

It is apparent from the Agricultural Census, 2010-11 that there were 27.2 lakh operational holdings in Assam covering an operated area of 29.99 lakh hectares as against 27.5 lakh operational holdings covering an operated area of 30.49 lakh hectares in 2005-06 and 27.1 lakh operational holdings covering

an operated area of 31.1 lakh hectares in 2000-01. Thus, the agricultural operated area shows a decreasing in the State by 3.69 percent in 2010-11 over 2000-01.

Commodity	Rank	Production in Assam (MT)	Production in India (MT)	Share (%)
Rice	9	5127435	110150000	4.65
Pineapple	2	296524	1969000	15.05
Banana	11	913272	30275000	3.01
Ginger	2	161604	1076000	15.1
Pig	1	1585338 Pigs	10290000 pigs	15.04
Mustard	8	187522	6280000	2.98
Tea	1	675170	1321760	51.08
Potato	7	720968	48237000	1.5

Paddy, Coarse Cereals and Maize are major crops produced in Assam. The state is also a major producer of fruits (such as Banana, Citrus fruits light Lime and Lemon, Orange, Pineapple etc.); and vegetables (such as Potato, Cabbage, Cauliflower, Brinjal, Okra/ Lady Finger, Radish etc.). Major spices produced are Ginger, Chillies, Turmeric, Garlic, Coriander etc. Assam also has a large livestock population contributing towards the production of Milk, Eggs, Fish and Meat.

As per estimates, the total area under paddy cultivation during the year 2016-17 declined to 24.67 lakh hectares from 24.85 lakh hectares in 2015-16. The area for paddy cultivation in 2016-17 was estimated at 92.5% of the total area under food grain in the state as compared to 92.61% in 2015-16. However, the production of Rice in the State has slightly increased to 51.27 lakh tonnes in 2016-17 from 51.25 lakh tonnes in 2015-16.

Crop	Production (MT)	District with highest production
<b>Food Grain</b>		
Rice	5222645	Nagaon (CBV)
Maize	93179	Darrang (H) (40 per cent)
Wheat	28769	Dhubri (LBV)
Gram/Chana	1956	Dhubri (LBV)
Pigeon Peas/ Tur	5738	Karbi Anglong (H)
Rabi Pulses (Mug/ Masoor/ Peas)	103268	Barpeta (LBV)
<b>Oilseeds (rapeseed/ castor/ linseed/ mustard/ nizer/ sesame)</b>		
Oilseeds	205685	Kokrajhar (LBV), Lakhimpur (NBP)
<b>Plantation</b>		
Sugarcane	1099134	Karbi Anglong (H) (over 25 per cent)
Areca nut	73870	Nagaon (CBV)

### 3.2.2. Horticulture Production Scenario

Horticulture crops occupy about 15 percent of the gross cultivable area of the state, with an annual production of more than 76 lakh MT of various horticultural produces. Assam, encompassing one of India's 14 biodiversity hotspots, has uniquely diverse agro climatic conditions which provide ideal conditions for rich horticultural production — fruits, vegetables, flowers, spices, nut crops, tuber crops, medicinal and aromatic plants, mushrooms etc. Various initiatives by the government such as the Horticulture Mission for North East & Himalayan Region (HMNEH), Rastriya Krishi Vikas Yojana (RKVY), Micro- Irrigation under PMKSY and Mission Organic Value Chain Development for North Eastern region (MOVCD NER) have helped the horticulture sector boom. Resultantly, horticulture has moved from rural confinement to commercial venture attracting youth since it has proved to be economically-rewarding.

Horticultural	Production (MT)	District with highest production
<b>Orange</b>	210141	Kamrup, Karbi Anglong, Dima Hasao (H)
<b>Pineapple</b>	285165	Dima Hasao (H)
<b>Potato</b>	694002	Kokrajhar, Barpeta (LBV)
<b>Sweet potato</b>	29339	Nagaon (CBV)
<b>Tapioca</b>	29139	Kokrajhar (LBV)
<b>Black Pepper</b>	6025	Lakhimpur (NBP)
<b>Ginger</b>	141441	Dima Hasao, K Anglong
<b>Turmeric</b>	16184	Dima Hasao (H)
<b>Garlic</b>	60843	Dhubri
<b>Coriander</b>	29676	Barpeta
<b>Other Spices</b>	5560	Goalpara

The fruit production in the state has increased by 8.15Lakh MT from 2001 to 2017. The productivity has also increased by 2862 Kg/Ha. It has the maximum area in the country, under pine apple (14 thousand Ha), having main varieties as Kew, Queen and Mauritius. Despite this, it is second in production of Pineapple with a production of 296524 MT (2017-18)<sup>2</sup>. It also ranks third in Litchi production (40.50 thousand Ha)<sup>3</sup> with a production of 50242 MT (2017-18). Assam Lemon is a variety widely cultivated in the state and is used in various Assamese cuisines. Within the state Banana leads in fruit production with production of 913272 MT (2017-18), followed by Pineapple.

Vegetable production in Assam, contributes nearly 54.7% to the state horticulture production. The major vegetables produced are potato, Sweet Potato, Tapioca, Cucumber, Cauliflower, Cabbage, Tomato, Jack Fruit, Bitter Gourd, Brinjal, Okra Peas, Carrot, Radish etc. The vegetable production in Assam has increased by 26.92Lakh MT in last 16 years<sup>4</sup>. Potato and Cabbage are among the widely produced vegetables in Assam with the production of 720968 MT and 640125 MT (2017-18) respectively.

Assam is among the top producers of spices in the country. Spices production in Assam contributes around 5% to the state horticulture production. The total spices production is 3.57 MT (2016-17). Major spices grown in Assam are Ginger, Turmeric, Coriander, Garlic, Chillies etc. Among these, Ginger ranks first with a production of 16104 MT (2017-18), making Assam the second largest Ginger producer in the country contributing 14.71%<sup>5</sup> to the country's Ginger production. Ginger and Turmeric are also grown by organic methods in many districts like Kokrajhar, Golaghat and Chirang.

<sup>2</sup> <http://agriexchange.apeda.gov.in/Market%20Profile/one/PINEAPPLE.aspx>

<sup>3</sup> <http://agriexchange.apeda.gov.in/Market%20Profile/one/LITCHI.aspx>

<sup>4</sup> [https://dirhorti.assam.gov.in/sites/default/files/swf\\_utility\\_folder/departments/horticulture\\_medhassu\\_in\\_oid\\_5/portlet/level\\_1/files/PR-ESSENT%20SCENARIO%20HORTICULTURE%20IN%20ASSAM.pdf](https://dirhorti.assam.gov.in/sites/default/files/swf_utility_folder/departments/horticulture_medhassu_in_oid_5/portlet/level_1/files/PR-ESSENT%20SCENARIO%20HORTICULTURE%20IN%20ASSAM.pdf)

<sup>5</sup> [http://agriexchange.apeda.gov.in/India%20Production/India\\_Productions.aspx?cat=Spices&hscode=1097](http://agriexchange.apeda.gov.in/India%20Production/India_Productions.aspx?cat=Spices&hscode=1097)

Since farming of Flowers assures better return over other crops, cultivation of Marigold, Tuberosa, Anthurium, Gerbera, Rose, Orchids etc. are encouraged with schematic assistance under HMNEH, RKVY, CM Floriculture Mission etc.

In fruits and plantations, there has been a growth in production of 9.9% from year 2016 to 2017 whereas the growth in production from 2017 to 2018 is 5.2%. Among fruits and plantation crops Banana and Coconut has shown higher growth in the period 2017-18 on the other hand Areca nut has shown a slight decline in the same period.

### Horticulture Sector in Assam

Assam has a diverse and unique agro climate conditions, is traditionally very rich in horticultural production as the climatic conditions are very conducive for growing a wide variety and range of various horticultural crops like various types of fruit, vegetables, flowers, spices, nut crops, tuber crops, medicinal and aromatic plants and mushrooms etc. Assam is encompassed as one under 14 global bio-diversity hotspots and has enough options for farming as well as making investments in horticulture sector.

Horticulture sector has been significant in Assam majorly for 2 reasons:

- 1. Inherent capacity for employment generation**
- 2. Income generation is high at farmers level and no other sector and state like Assam has been in a better position in this regard.**

Horticultural crops occupies about 15 % of the gross cultivable area of the state with a total production of 7.04 Million tonnes<sup>6</sup>(2017-18). According to the Directorate of Horticulture and Food Processing Assam, the growth rate of Area, Production and Productivity of Horticulture sector has been assessed at 50.32%, 91% and 20.31% respectively. Major horticulture commodities which are being exported to other states and countries includes pineapple cubes, orange, ginger, dendrobium orchids etc.

In terms of processing infrastructure, there are 12 large units operating in APART districts like Pratap Snacks, Patanjali Ayurveda, Dharmapal Stayapal group etc. which are majorly into Agri business, bakery, spices and beverages, snacks, confectionary, dairy etc.

## 3.3. Value chain based cluster from baseline data:

As one of the key objective of this sub-component B1 Support establishment of cluster level Industry Associations (IAs) is to enhance competitiveness of agri-enterprises in specific geographic clusters. It is expected that this sub-component will impact approximately 2000 agro-enterprises across 17 geographical clusters by mobilizing them into industry associations. Critical mass of enterprises play an important role while defining a cluster. As part of the project in most of the cases one District has been considered as one cluster with different value chains, however in few cases two clusters in one Districts have been considered because of the size of the district and in few cases two districts have been clubbed to form a cluster to get critical mass of enterprises. As per Govt. of India norms for micro enterprises clusters critical mass of 50 enterprises of one value chain is considered as Micro Cluster. We are also following the same methodology for the project. Based on the analysis of the same following processing clusters have been identified in the Various Districts of Assam. In general scenario minimum of 2-3 value chains have been identified in one cluster and based on the pre-defined selection criteria we may select one or multiple value chains for setting up of common facility center. Kindly refer the table below for the with the prominent value chains emerged through the baseline survey.

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<sup>6</sup> <https://www.ibef.org/states/assam.aspx>

It is evident from the table below that Rice is one of the prominent value chains and rice processing enterprises are scattered across the districts. As per the findings of the base line survey we can have one enterprise cluster for rice value chain in each of the APART district. There is availability of critical mass of enterprises of multiple value chains in Districts like Lakhimpur, Morigaon, Kamrup (Metro and Rural) Nagaon, Sonitpur, Cachar, Golpara and Sivasasagar. Districts like Nalbari, Barpeta, Golaghat, Jorhat, Darrang, Dhubri, Karbi-Anglong and Kokrajhar have for concentration of rice processing enterprises in the Districts. This further validates that we can have one cluster at each of district, in few districts we have two clusters and in few cases we may club two districts to form a Cluster.

**Tentative list of clusters in Districts identified through Baseline Survey:**

District Names	Rice	Bakery and Confectionery	Dairy	Eri& Muga	Fish	Pulses and Gram	Fruits and Vegetables	Maize	Mushroom	Mustard	Piggery	Spices	Wheat	Grand Total
Barpeta	128	29	24		13		9	2		9		7	9	230
Cachar	48	31	47		33		8		2	4		37	1	211
Darrang	147	2	5				5	3		4	1	1	4	172
Dhubri	72	6	1			1				4			1	85
Goalpara	207	59	7				4			3		7	5	292
Golaghat	136	21			1		9		2	5		3	6	183
Jorhat	127	14	6			2	18		1	7		5	25	205
Kamrup	239	90	24	5	2		28	4	1	6	4	34	32	469
Karbi Anglong	98	7	4				8	2		1		3	2	125
Kokrajhar	65		4				1		14	3		1	10	98
Lakhimpur	119	7		93	24		1		72	47	32	3		398
Morigaon	141	11	105		27		80	33		44	3	7	1	452
Nagaon	453	45	9		2	1	74	32	1	23		72	18	730
Nalbari	117	25	14		12	2	13	1	16	11	1	1	1	214
Sibsagar	195	21		6	28		122			1		2	27	402
Sonitpur	351		25	4	7	8	20	4		10		8	62	499
<b>Grand Total</b>	<b>2643</b>	<b>368</b>	<b>275</b>	<b>108</b>	<b>149</b>	<b>14</b>	<b>400</b>	<b>81</b>	<b>109</b>	<b>182</b>	<b>41</b>	<b>191</b>	<b>204</b>	<b>4765</b>

In terms of agro industrial profile Assam had a total of 4765 (registered and unregistered) operational agro-enterprises employing more than fifty thousand workers. Nagaon has the highest concentration of agro enterprises followed by Sonitpur, Morigaon and Kamrup. The prominent value chains in the District are highlighted in the table below:

Enterprise Cluster Value Chain	Key Districts
Rice	Lakhimpur, Morigaon, Kamrup, Nalbari, Nagaon, Sonitpur, Barpeta, Golaghat, Jorhat, Darrang, Cachar, Sivasagar, Golpara, Karbi-Anglong, Kokrajhar
Bakery	Kamrup, Nagaon, Goalpara
Dairy	Morigaon, Cachar
Fruits and Vegetables	Morigaon, Nagaon, Sivasagar
Maize	Morigaon
Mustard	Lakhimpur, Morigaon, Kamrup
Wheat	Sonitpur
Mushroom	Lakhimpur
Spices	Nagaon
Eri and Muga	Lakhimpur

The agro based industry in Assam is operating at a traditional level but has high potential because of the raw material availability and an estimated level of 57%, 12% and 65% surplus production of fruits, vegetables and spices, respectively, is available.

#### **Analysis of Baseline Data: Assam**

In accordance with the terms of reference, Grant Thornton has conducted a primary survey (Baseline) for agro- enterprises operating in APART Districts and selected value chains. As part of the survey we have covered close to 95% of units operating in APART value chains. As per the baseline survey we have covered close to 5212 units out of which close to 447 units have closed their operations and 4765 agro based units operating out of APART Districts. Out of the total units, Nagaon district has maximum concentration of 679 units followed by Sonitpur, Morigaon and Kamrup Districts. Out of total units only 2707 (53%) units were having Udyog Aadhar Memorandum Number (UAM) number. Basically UAM is a mandatory requirement for MSMEs as per the Ministry of Micro Small Medium Enterprises (MoMSME), Government of India. MSMEs only with a valid UAM number shall be eligible for any benefit from Govt. of India. We can easily say more than 45% of agro based enterprises in Assam were not eligible for any incentive/benefit under Govt. of India Schemes. GT Team is assisting these units in securing UAM.

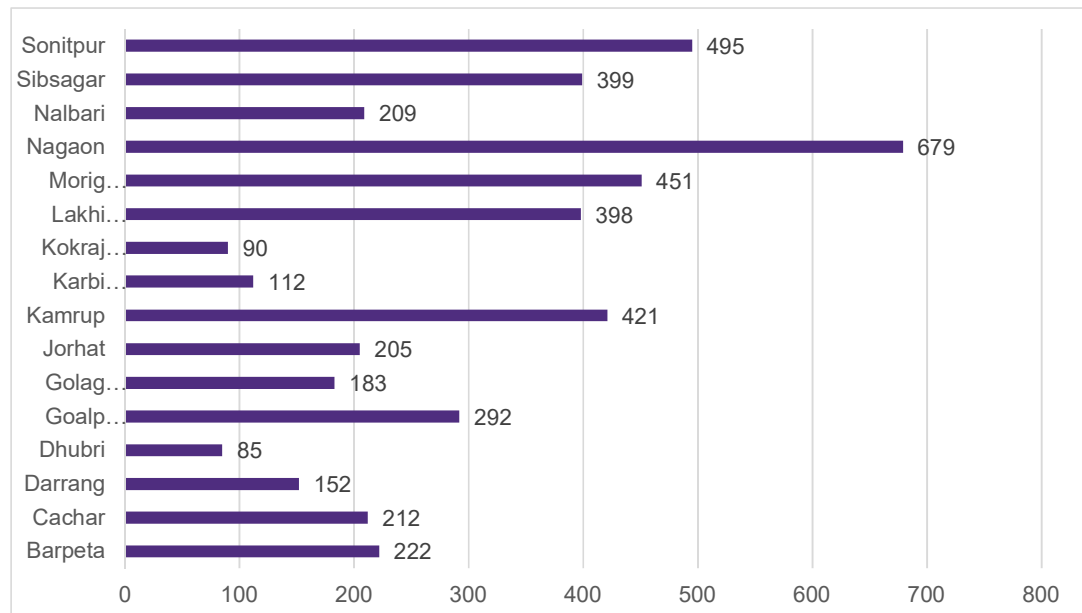


Figure 1: Districtwise Distribution of Units

The categorization of agro based units in Assam has been presented in the graph and the same is as per the definition of Ministry of Micro Small Medium Enterprises (MoMSME). It can be observed that out of the total 4605 units more than 4286 (93%) comes under micro category, 288 units (6.3%) are of small category, 18 units (1%) are medium category and a handful of and 13 units (0.3%) falls under Large category. The scenario is in line with the overall country's scenario where more than 90% of manufacturing units falls under micro category. As it can be seen in the graph following that 99% micro enterprises are operating out of designated industrial areas, these units are generally located in the residential areas, near to the production areas (agricultural land). In the case of small units only 88% of units are operating out of industrial areas and in case medium enterprises 44% are operating inside the industrial area. With increase in investment capacity the ratio of units operating inside the industrial area also increases.

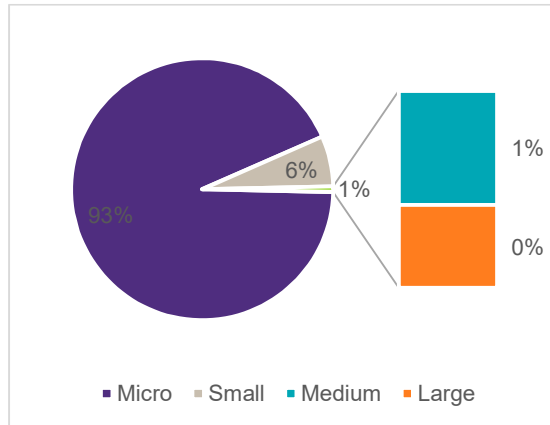


Figure 3: Category of units

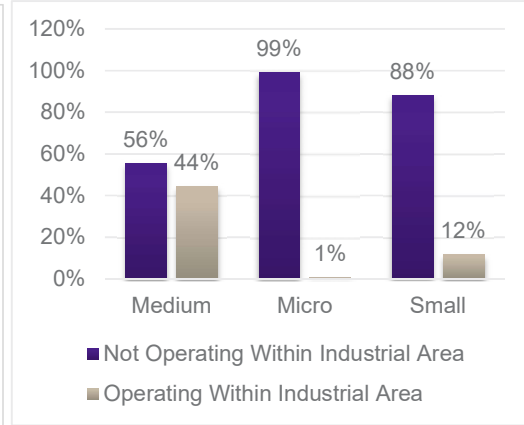


Figure 2: Units operating in Industrial Area

The following graph depicts the analysis of turnover, investment in plant and machinery and employment generation w.r.t to different category of units operating out of Assam based on the data collected as on date of baseline survey. As per analysis of the data it is noticed that Micro category units with 33% share towards investment in plant and machinery, contributes 21% to the total annual turnover of agro based enterprises and has contributes 67% in total employment generation from these enterprises. Small category of enterprises with 48% share in investment for plant and machinery has got highest contribution of 67% to the turnover of agro based enterprises with 30% contribution to the employment in the sector. With the lowest concentration among MSE units medium category units has got 20% investment for plant and machinery with 12% and 3% contribution towards turnover and employment of the sector.

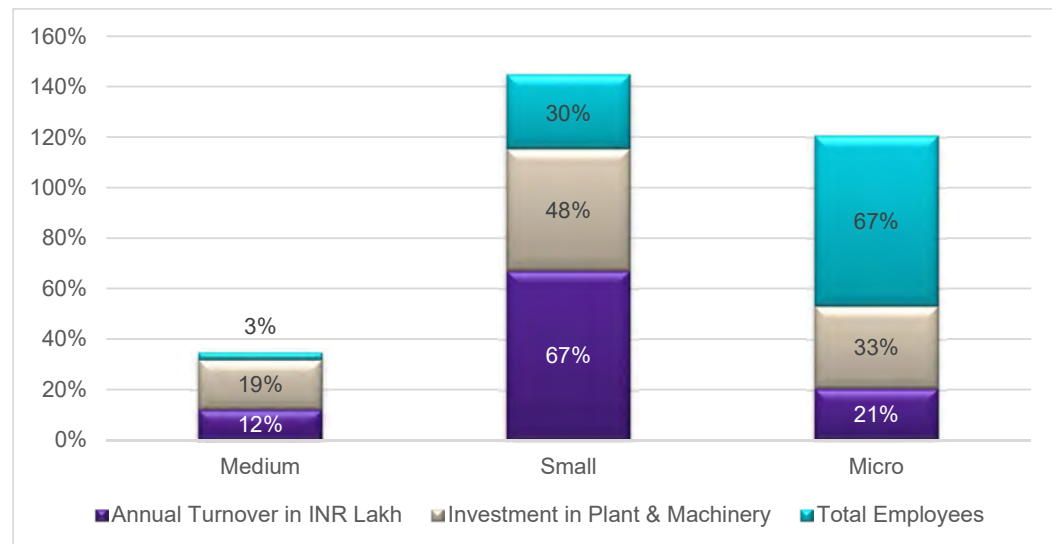


Figure 4: Annual Turnover, Investment and Employment; Category wise

The graph presented below shows the status of District wise employment share and annual turnover generated from the agro based enterprises of Assam. As per the analysis Jorhat district contributes highest 28% of the total annual turnover from agro based enterprises, followed by Kamrup and Sonitpur with 23% and 17% respectively. With regards to contribution towards employment generation Kamrup is ranked 1<sup>st</sup> with 19% share of total employment followed by Sonitpur and Nagaon with a share of 15% and 8% respectively.

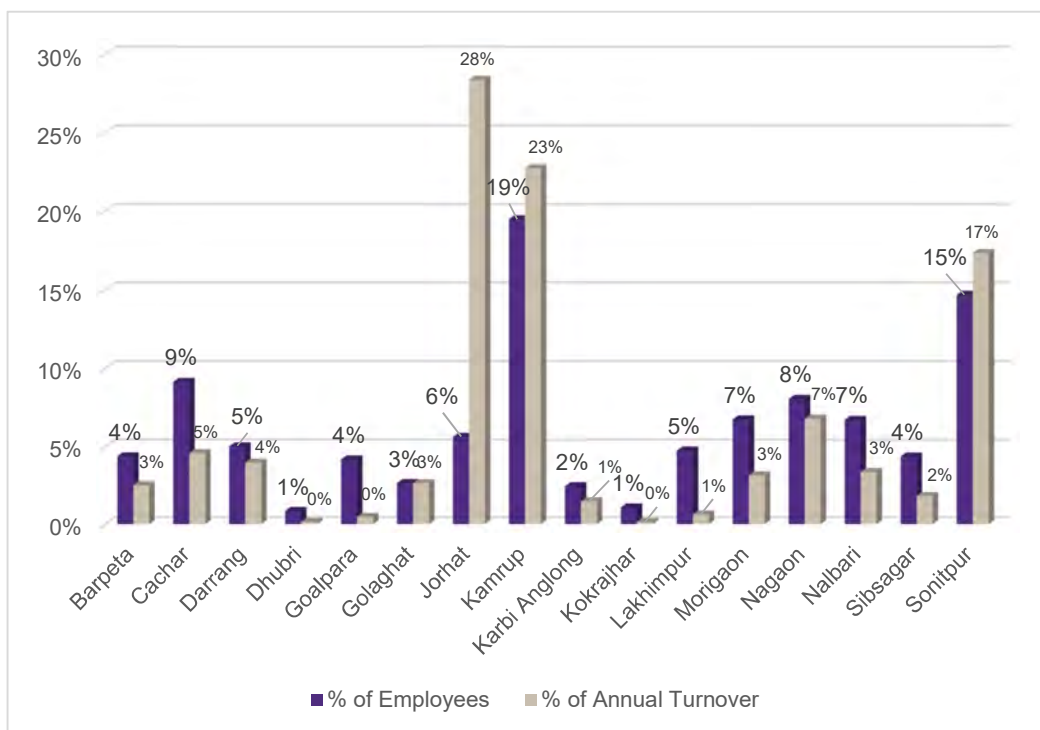


Figure 5: Employment and Turnover

The Asset to Turnover ratio of the agro based enterprises in Assam is also being analysed from the data collected through baseline survey. The asset turnover ratio measures the value of a company's sales or revenues relative to the value of its assets. The asset turnover ratio can be used as an indicator of the efficiency with which a company is using its assets to generate revenue. The higher the asset turnover ratio, the more efficient a company. Conversely, if a company has a low asset turnover ratio, it indicates it is not efficiently using its assets to generate sales. The graph below denotes category wise asset turnover ratio for the agro enterprises in Assam. It shows that small category of units operating in Assam are the most efficient in using assets for generation of turnover as they maintain highest asset to turnover ratio of 5.96 followed by micro and medium units with ratio of 2.70 and 2.68 respectively.

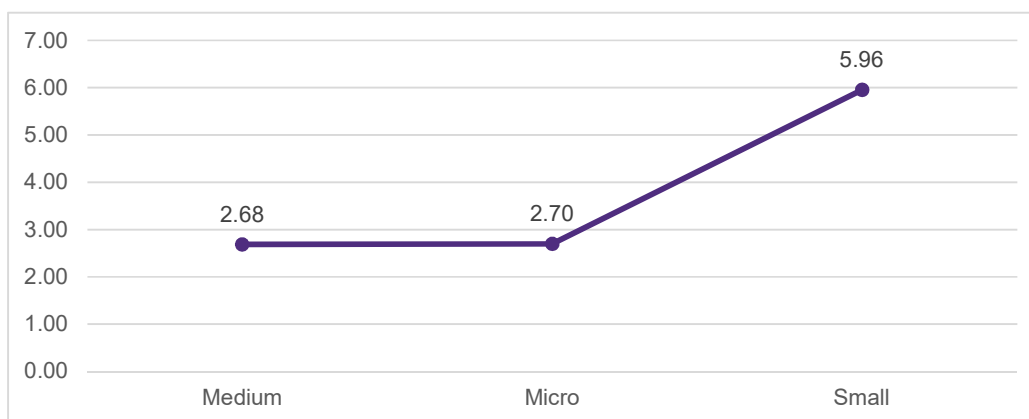


Figure 6: Asset Turnover Ratio

Through the baseline survey a total of 13 value chains have been identified in the 16 project districts of Assam with Rice being the most prominent value comprising of 56% of the total units surveyed. Paddy being the prominent crop in the state and staple of the Assamese population, processing of paddy to rice, par boiled rice and other value added products like puffed rice, flattened rice and rice flour is the most prominent industry in the agro processing sector in the state. Therefore, instances of multiple value chains particularly in the micro category has been found to be in existence. A separate analysis of the rice processing units along with the unit's operating in the multiple value chains was done and it has been observed that 93% of these units are in the rice value chain only and 7% of the units are operating multiple value chains along with rice. The district wise distribution of Rice Processing units reveal that Nagaon district has the highest number of Rice processing units with 434 followed by Sonitpur district with 347 units. The other preceding districts after Nagaon and Sonitpur in terms of number of Rice Processing units are Kamrup with 211 units and Goalpara with 205 units.

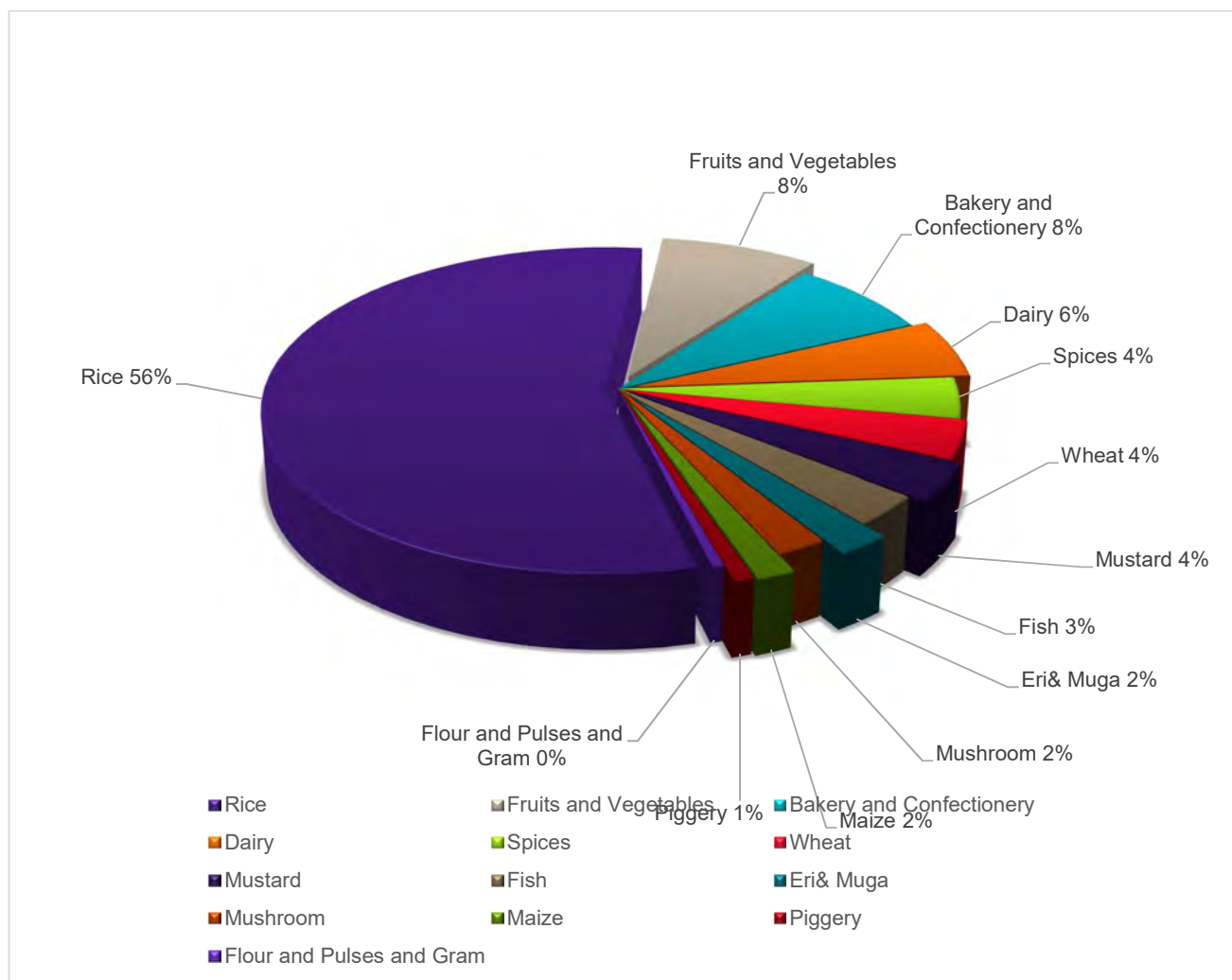


Figure 7: Percentage of units Value Chain wise

From the analysis of the baseline data five major value chains have emerged comprising of Rice (56%), Bakery and Confectionery (8%), Fruits and Vegetables Processing (8%), Dairy (6%), Spices (4%) and others (18%) which includes wheat, mustard, piggery, fishery, maize, mushroom, pulses and handloom (Eri and Muga). The concentration of these units however can be better understood from the district wise data that has been presented in the preceding chapters.

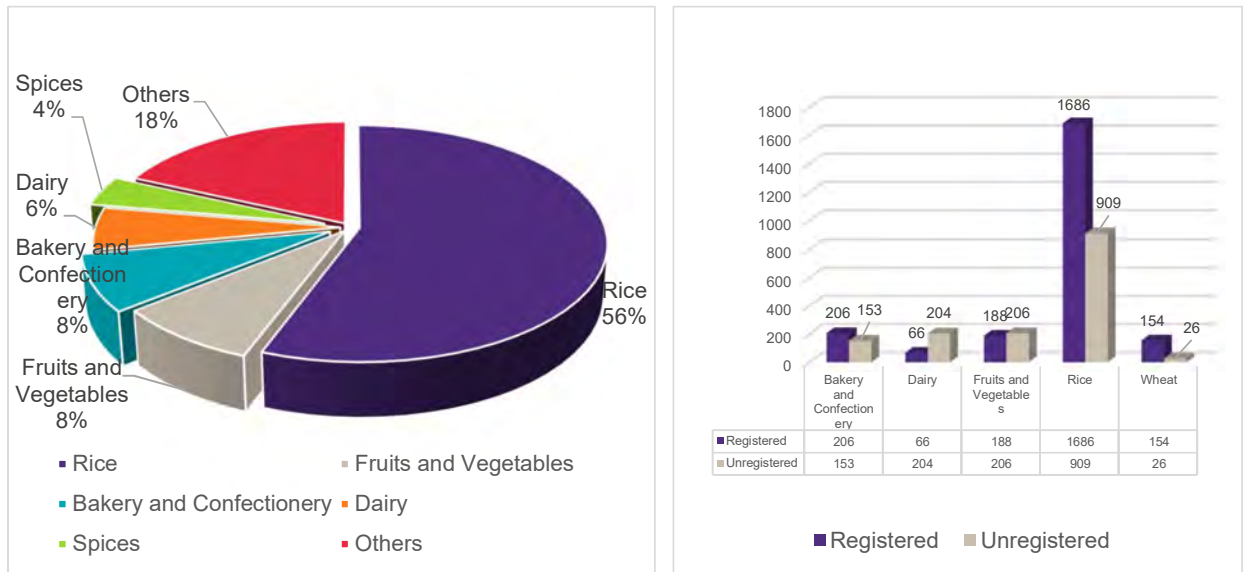


Figure 8: Top five Value Chains

As part of the analysis we have also captured the data related to the capacities of the units operating in Assam. The flowing graph depicts the category wise average capacity of the agro enterprises of operating out of Assam.

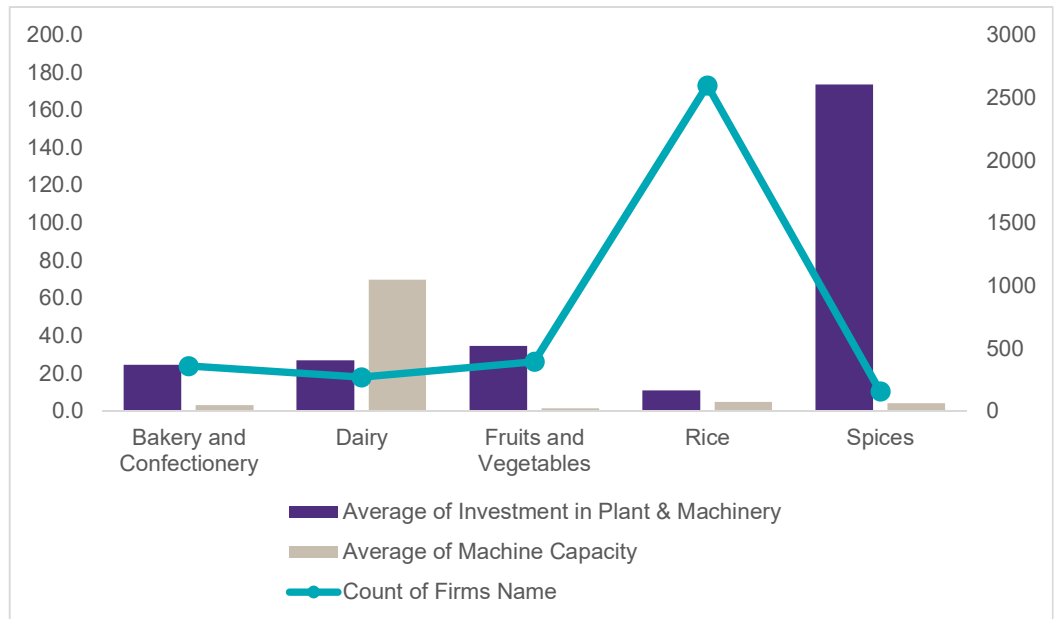
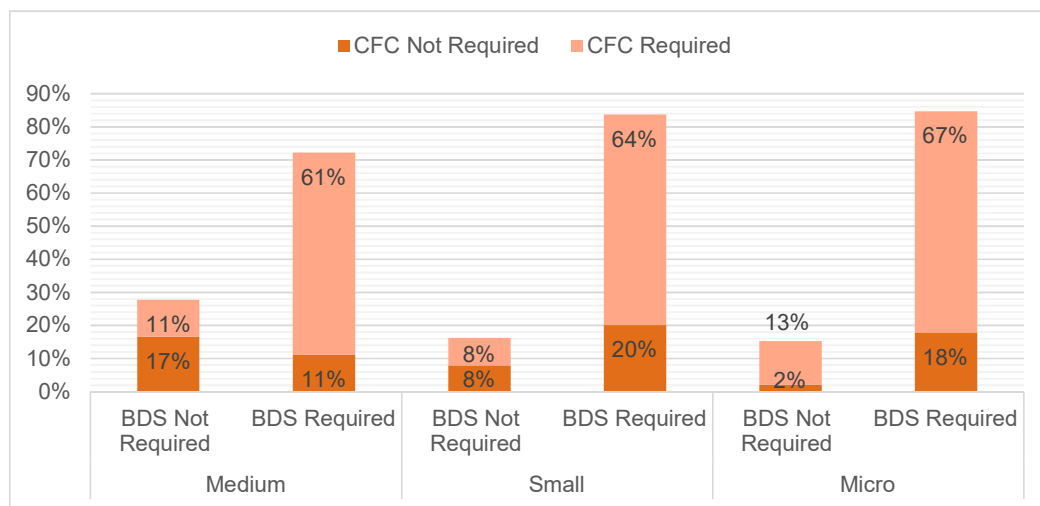


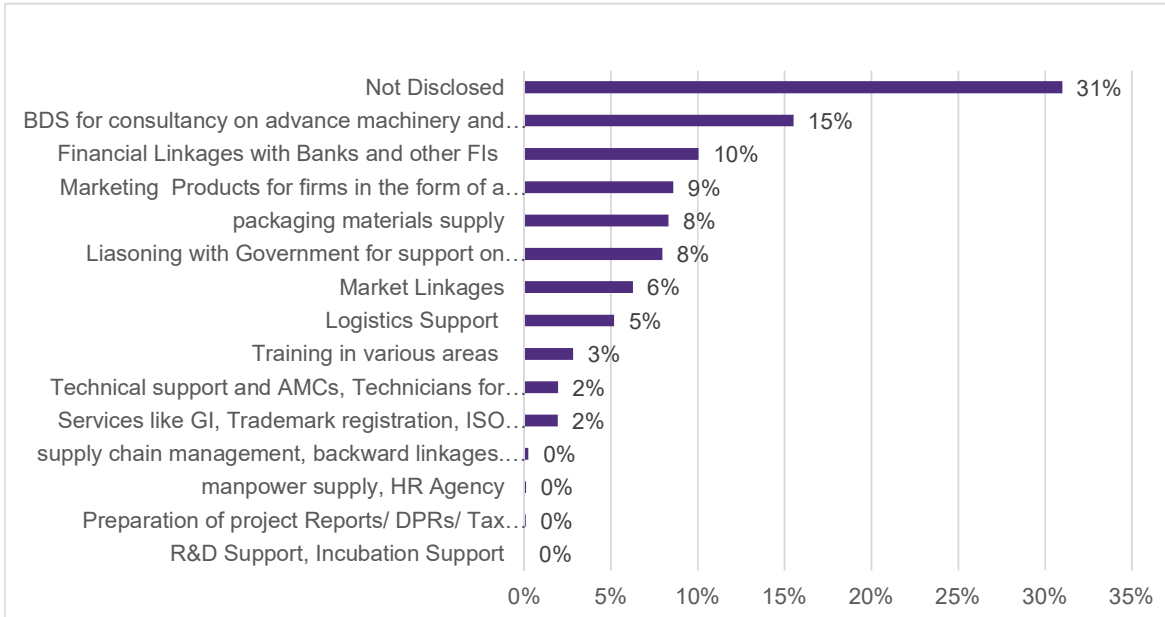
Figure 9: Capacity and Investment in Plant and Machinery

The core objectives of the project is to organise the enterprises into industry associations and facilitate Business development services (Financial, Technical, Market, Skill, Technology etc.) which is an important initiative for cluster development. For the technological gap the project will support the industry association for setting up of one common facility center (CFC) as part of the project. As these are essential services for the growth of MSEs and needs to be

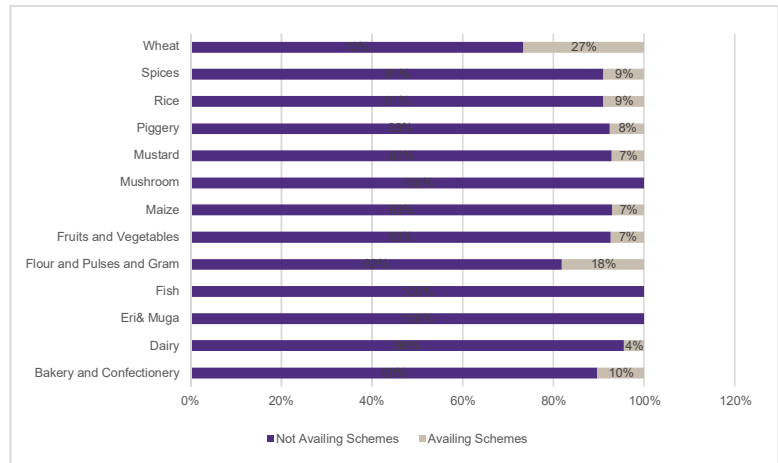
available within the cluster. As part of baseline survey data was also collected relating to the requirement of BDS and CFC by the agro enterprises operating in Assam. The following graph shows, 67% of micro enterprises have shown requirement for CFC which is 64% and 61% in case of small and medium enterprises. The analysis indicates that more than 60% of agro enterprises operating from Assam have shown their interest in requirement of CFC to be set up with advanced technology in the clusters.



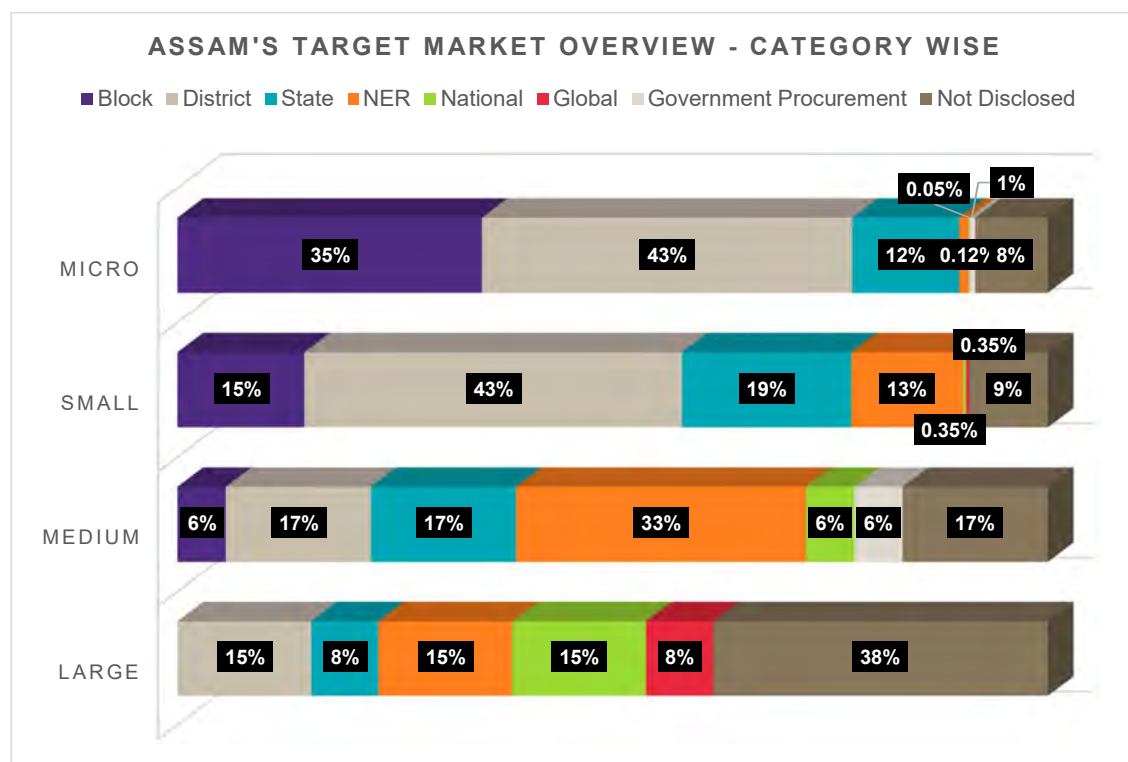
As mentioned above it is quite evident that Business Development Services (BDS) is one of the important parameters for the success of the project and it will contribute in the success of Industry Association/Cluster. The primary role of IA is to identify the kind of BDS services required by the cluster enterprises and facilitate the same. Through the baseline survey we have tried to identify the kind of BDS required by the enterprises in Assam. The following graph shows range of BDS required by the agro enterprises in Assam. Out of the total number of units operating out of Assam 16% of the enterprises have shown interest in consultancy services for advance machinery and sourcing assistance, 10% of enterprises required linkages with the Bank/FIs, 15% of enterprises requires linkages with the buyers/alternate market channels. The other requirements of the enterprises have been detailed out in the following graph.



There are various State/Central Government schemes available for industries and the central govt. has a separate budget for North Eastern States. The graph following depicts the number of enterprises that have availed benefits under any of the State/Central schemes. It can be observed that 7% of micro units have availed benefits under State/Central schemes. In case of small and medium the figure is 26% and 17% respectively. A value chain wise analysis of data relating to enterprises availing benefits under central/state schemes have been made. It can be seen that 27% units in the wheat VC have availed benefits under various schemes and 9% units in case of rice and spices.



With the traditional technology, micro and small units are largely selling their products in Districts only (78% of micro enterprises) only 12% of enterprises are selling their products at State level. On contrary the Medium category units have their market spread in other States of north east region and as well as other States.



## Support Institutions:

### Department of Industries and Commerce Government of Assam

The nodal agency for the enterprise sector in Assam is the Department of Industries and Commerce headed by The Commissioner of Industries, Government of Assam. The department through its various branch offices, District Industries and Commerce Centre, in the districts has helped in the promotion and development of Industries in the entire state. The primary function of the Department is promotion of enterprises through registration and licensing of new industrial undertakings, development of Industrial area, creation and maintenance of Industrial Estates, organizing Exhibition, Industries Fairs within and outside the state for the promotion of the industries of the state through various schemes like SVYEM, Sarothi, Biponi, Boneej, Mukhya Mantri Karmajyoti Achari, Prime Minister's Employment Generation Scheme. In addition to this the new industrial policy of Assam, "Assam Industrial and Investment Policy 2019" is also being implemented by the department. The department through its subordinate departments of AIDC, AIIDC, ASIDC is trying to build and manage a conducive environment for flourishing industrial ecosystem in the state. The latest feather in the cap is NEST- A Startup which is an incubation centre providing conducive environment for start-ups to help in assimilating the initial bottlenecks faced by new entrepreneurs. The district offices of the department also facilitate the registration of Udyog Adhar Numbers for Entrepreneurs through MSME DI which will now be taken up for the unregistered units identified during the baseline survey.

### Micro, Small and Medium Enterprise Development Institute (MSME-DI)

The Micro, Small and Medium Enterprise Development Institute of the Government of India with regional office at Guwahati has developed several MSME clusters in Assam and other

North Eastern states. In addition to this the department has various provisions for the promotion and development of individual enterprises through a wide spectrum of services to the MSMEs including entrepreneurship development training, technical and managerial consultancy services to MSMEs, export assistance and provision of facilities for testing and toll making. In addition to this the centre also has provision for promotion of enterprises through its Market Promotion Schemes wherein it provides financial assistance for participation in fairs and exhibitions. The institute facilitates and supervises the generation of Udyog Adhaar Number through the centre at Guwahati and other branch offices and also has provision of generating the same from the District Industries and Commerce Centres of the Department of Industries, Government of Assam.

## Department of Agriculture and Horticulture, Government of Assam

The Department of Agriculture, Government of Assam, the principal organisation for Agriculture development of Assam has been providing support and guidance to farmer by providing quality seeds, fertilizers, agricultural tools and equipment at subsidised rate. It is implementing various schemes like National Food Security Mission (NFSM), National Mission for Sustainable Agriculture (NMSA), National Mission on Agriculture Extension Technology (NMAET), National Mission on Oil Seeds & Oil Palm (NMOOP), Horticulture Mission for North East & Himalayan States (HMNEH), Mission Organic Value Chain Development in Assam (MOVCD), Pradhan Mantri Fasal Bima Yojna (PMFBY), Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), Rashtriya Krishi Vikas Yojana (RKVY), Credit Guarantee Fund Scheme (CGFS), Equity Grant Scheme (EGS) to name a few. By leveraging such schemes, the backward linkages of the enterprises can be strengthened through strengthening of farmers. In addition to this, the district offices of the department promote farmer institution or Farmer Producer Organisation (FPO) on cooperative mode and such potential cooperatives can be converted to Farmers Producer Company (FPC) under the aegis of the department. These FPOs and FPCs can be linked to the processing clusters for better movement of commodities within the cluster districts which can benefit both the producers (farmers) as well as the processors (enterprises).

## Department of Animal Husbandry, Govt. of Assam

Department of Animal Husbandry has developed piggery breeding farm in different parts of Assam. All together 19 pig breeding farms are operating in full or half capacity. The Department through these farms are providing quality piglets to the pig rearer within the vicinity of the farm. Some of the breeding farms will be within the cluster of the respective district. The main objective of the department is:

- To provide health coverage to livestock and birds against contagious and non-contagious diseases
- Undertake activities to increase production of livestock products like meat, milk and egg in the state

The department can support in providing backward linkages for pig growers in terms of supplying pig to pork processing unit. In a similar manner the **Department of Fishery, Dairy Development Board and Department of Sericulture and Handloom, Government of Assam** can provide support to the enterprises through strengthening of the backward linkages and through various training and demonstration activities for the producers in the district clusters.

## National Small Industries Corporation (NSIC)

With a mission “To promote and support Micro, Small & Medium Enterprises (MSMEs) Sector” by providing integrated support services encompassing Marketing, Technology, Finance and other services, the NSIC Zonal Office at Industrial Estate, Bamunimaidam, Guwahati is doing its bit to promote the Micro Small and Medium Enterprises in the North Eastern Region in general and the state of Assam in particular. Through its various schemes this organisation has been providing continuous support to the entrepreneurs of the region in varied areas starting from financial support to marketing linkages. Through its Bank Credit Facilitation Scheme, the organisation facilitates MSME in accessing credit support (fund based or non-fund based limits) from the banks. NSIC also provides technical support to MSMEs through 'NSIC Technical Services Centres' (NTSCs) and a number of TICs & LBIs spread across the country. The range of technical services provided through these centres include skill development in Hi-Tech as well as conventional trades, material and product testing at testing laboratories accredited by NABL / BIS, common facilities, energy audit, environment management etc. By means of its Raw Material Assistance Scheme, the organisation assists MSMEs by way of financing the purchase of Raw Material (Both indigenous & imported). This gives an opportunity to MSMEs to focus better on manufacturing quality products. In the marketing front, NSIC helps MSMEs by registering the enterprises under Single Point Registration scheme (SPRS) for participation in Government Purchases. Furthering its efforts to market the products of MSMEs, NSIC has set up a Specialized Marketing Intelligence Cell which provide appropriate information at one place and at the right time thus enabling MSMEs in enhancing their ability to gauge and be at par with the global demand. Potential beneficiaries would be MSMEs seeking business collaboration and co-production opportunities, joint ventures, exporters and importers, and those looking for technology transfer.

## Food Safety and Standards Authority of India (FSSAI)

Food Safety and Standards Authority of India (FSSAI) is an autonomous body established under the Ministry of Health & Family Welfare, Government of India, for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption. The Authority with its branch offices in all districts of Assam is involved in creating awareness on Food Safety Standards and the necessity of licensing under the ACT. In addition, the Authority also recommends that all licensed food businesses must have at least one trained and certified Food Safety Supervisor for every 25 food handlers in each premise particularly for the manufacturing sector and dairy, poultry and other meat products. This training certification is provided by Food Safety Training and Certification (FoSTaC) which is new initiative of FSSAI. FoSTaC offers nine different types of courses meant for different types of food businesses on different competency level. FSSAI guides every food business operator to have at least one trained and certified person in their business premises to ensure food safety.

## ICAR-NRRI-Regional Rainfed Lowland Rice Research Station (RRLRRS) Gerua, Assam

NRRI being the pivotal agency in rice research in the country, the Regional Rain-fed Lowland Rice Research Station (RRLRRS) was set up in association with ICAR at the behest of the State Government to assist the state's efforts on rice research in order provide suitable high yielding varieties and production technology, especially for flood prone lowlands of Assam. To conduct basic, strategic, applied and adaptive research on crop improvement, production and protection for increasing and stabilizing rice productivity in rainfed lowland ecosystem. With

its effort on developing varieties of crops to suit the climatic conditions of the state, the organisation has been able to evolve rice varieties for the Boro, Ahu and Sali season for Assam which in turn has helped in increasing the yield of paddy in the region. The organisation's resources can be tapped to provide good agricultural practices and choosing the right variety for greater yield which in turn will benefit the enterprises of the region.

### International Rice Research Institute (IRRI)

The International Rice Research Institute (IRRI) is an independent, non profit, research and educational institute, founded in 1960 by the Ford and Rockefeller foundations with support from the Philippine government which is considered one of the world's premier research organization dedicated to reducing poverty and hunger through rice science; improving the health and welfare of rice farmers and consumers; and protecting the rice-growing environment for future generations. More than half of the rice area in Asia is planted to IRRI-bred varieties or their progenies. The institute develops new and improved methods and technologies that enable farmers to manage their farms profitably and sustainably, and recommends rice varieties and agricultural practices suitable to particular farm conditions as well as consumer preferences. With its regional office at Guwahati and a sub office at Karbi Anglong, it is providing services to the Government of Assam in improving agricultural practices for farmers. Through its rice breeding programs, IRRI has generated an extensive portfolio of new rice cultivars with desirable characteristics suitable for the state of Assam. To bridge the gap between research and practice in rice production, the International Rice Research Institute (IRRI), in collaboration with the Government of Assam, Assam Agriculture University, and the Assam Agribusiness and Rural Transformation Project developed the Rice Knowledge Bank, Assam (RKB, Assam)—a digital extension service that provides practical knowledge solutions, specialized for small-scale farmers for the state of Assam. The Institute can be roped in for skills and knowledge dissemination for strengthening the backward linkages of the rice entrepreneurs in the state. The viability of rice-related products can be analysed by using the testing and analysis services, backed by expert know-how, rigorous methodologies, and advanced technology the institute provides.

### International Livestock Research Institute (ILRI)

The International Livestock Research Institute (ILRI) co-hosted by Kenya and Ethiopia, has 14 offices across Asia and Africa, works for better lives through livestock in developing countries. ILRI envisions a world where all people have access to enough food and livelihood options to fulfil their potential. ILRI's research is directed to improving food and nutrition security through increased production and access to animal-source foods; stimulating economic development and poverty reduction through enhanced livestock value chains and increased productivity; improving human health through improved access to animal-source foods and a reduction in the burden of zoonotic and food-borne diseases; and managing the adaptation of livestock systems to climate change and mitigating the impact of livestock on the environment. With its local office at Guwahati, ILRI has been imparting training and capacity building services to the dairy enterprises in Assam. A program by researchers from the International Livestock Research Institute (ILRI) that trained smallholder dairy producers in Guwahati in Assam, India led to an increase in milk production through improved methods and practices of dairy farming. The institute's services can help in increasing the productivity and quality of dairy enterprises in Assam.

## ICAR-NRC on Pig

National Research Centre on Pig was set up as result of the review of the midterm appraisal committee constituted by ICAR in 1990 to review work done by All India Coordinated Centres on Pig which recommended the establishment of one National Research Centre preferably in the North Eastern part of the country where 28% of country's pig population is distributed. Following the recommendation, ICAR approved the establishment of one NRC on pig at Rani, Guwahati, Assam towards the fag end of the IX five-year plan following which all existing AICRP centres were merged with the NRC. With a mission of conducting performance appraisal and genetic cataloguing of indigenous pigs, development of improved pig variety together with production, health, product processing and pig based integrated farming system technologies to facilitate the pig rearers of the country achieving household food, nutritional and economic security, the Centre has been providing continuous support to pig farmers and processors across the region.

A state of the art slaughter house fully equipped with all the modern equipment was set up as a R&D pig slaughter house and pork processing plant of National Research Centre in February 2011. It has the facilities for hygienic processing of pork and production of value added products. The unit also has a state-of-the-art effluent treatment plant which allows the treatment of the effluent water from the slaughter house mixed with blood and fat and the final treated water will have the BOD values below the recommended levels. Currently the unit is processing frankfurters, hotdogs, cocktails, ham, nuggets, patties, samosa, momos etc. from pork. The Institute is also keenly desirous of establishing close linkage with small scale entrepreneurs who are willing to take up the improvised technologies/products from the Institute and willing to market the fresh pork and processed pork products, one such enterprise being M/S Arohan Foods which has signed an MoU with the Centre. Apart from this, the unit is undertaking regular research activities on assessment of carcass and meat quality of indigenous pigs and their crosses in comparison to improved pig breeds so as to standardize the carcass grading procedure for indigenous pig breeds, refinement, standardization and popularization of technologies for value-added pork products etc.

## Fishery Development Board, Government of Assam

The National Fisheries Development Board (NFDB) was established in 2006 as an autonomous organization under the administrative control of the Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture and Farmers Welfare, Government of India to enhance fish production and productivity. In order to realize the full potential and to encourage fish farmers in the state of Assam, NFDB has initiated several schemes like "Matsya Jagaran–Ghare Ghare Pukhuri Ghare Ghare Maach", Seed Bank Programme, Majuli Development Programme, Selection of Matsya Mitra, Beneficiary Training, Assistance to Women SHGs For Production Of Value Added Fish Products. These schemes can be converged to provide support in the districts with potential for fishery development.

## FISHFED

FISHFED, Assam is a State level Cooperative Federation of Primary Fishery Cooperatives of Assam. It has a number of infrastructure including Fishery project comprising of 303 bighas of land near Morigaon. This site is basically low-lying area and quite suitable for different fish-based activities, aqua-tourism and post-harvest and market related activities including cold room infrastructure, modern fish retail outlets, development of modern intensive aquaculture projects, etc. The main objective of the federation is to help the fishermen community in their socio economic development through the primary fishery cooperative societies by increasing

the production of fishes through member societies as well as through its own project and marketing the production through various market and sales booths of FISHFED by eliminating the middlemen assuring better price to the fishermen and an assured market to the consumer. The organisation has also launched an online purchase platform ([www.fishfedassam.org](http://www.fishfedassam.org)) through which consumers in Guwahati can place their fish orders online.

## World Fish

WorldFish is an international, non profit research organization with headquarters in Penang, Malaysia, and offices in Asia, Africa, and the Pacific. WorldFish's mission is to harness the potential of fisheries and aquaculture to reduce poverty and hunger in developing countries. In the developing world, more than one billion poor people obtain most of their animal protein from fish and 250 million depend on fishing and aquaculture for their livelihoods. In Assam with its regional office, WorldFish is providing technical support to the Directorate of Fisheries in the implementation of one of the sub-components of APART project.

## Assam Apex Weavers & Artisans Co-operative Federation Ltd. (ARTFED)

ARTFED was formed on 27th July 1977 by reorganizing the Assam Apex Weavers Co-operative Society Ltd. with the aims and objects that the Apex Society shall organize Handloom Weaving and other Cottage Industries in the state on Co-operative basis. The area of operation of this Apex Co-operative Federation is in the entire state of Assam. The Federation has now 22 district and 867 number of primary level Co-operative and 141 others as its members. It has **three** nos. Handloom Production Unit located at **Bamunimaidam, Pachim Boragaon** and **Nalbari**. There are also more than 400 captive looms of ARTFED at Sualkuchi and other areas to fulfil the requirements of Mulberry and Non Mulberry Silk products. It has 53 showrooms out of which 48 showrooms are located inside the state and 5 showrooms are located outside the state. The showrooms at Kolkata, Jaipur, Kanpur, Indore, Delhi are owned by ARTFED as its Capital assets.

The federation can support the handloom enterprises in the state through its schemes relating to Skill upgradation training, Setting up of Yarn Bank Scheme through which it has already supported 27 Nos. Districts of Assam under Handloom and Textiles Deptt, Government of Assam.

## Central Potato Research Station, Shillong (Meghalaya)

The Central Potato Research Institute (CPRI) operates 7 regional research stations in different potato growing areas in India. These are located in different potato growing areas of the country: Kufri-Fagu (HP), Modipuram (UP), Jalandhar (Punjab), Gwalior (MP), Patna (Bihar), Shillong (Meghalaya), and Ootacamund (Tamil Nadu). The Central Potato Research Station located in Shillong, Meghalaya was established in the year 1959. The main programmes of the station are screening of germplasms and hybrids for resistance to late blight, bacterial wilt and potato tuber moth and development of production technology and varieties suitable for the North Easter Himalayan hills. The station also produces truthful quality seed tubers through aeroponics and tissue culture for local requirement.

## International Potato Centre (CIP)

The International Potato Center (CIP) was founded in 1971 as a research-for-development organization with a focus on potato, sweetpotato and andean roots and tubers. It delivers innovative science-based solutions to enhance access to affordable nutritious food, foster inclusive sustainable business and employment growth, and drive the climate resilience of root and tuber agri-food systems. Headquartered in Lima, Peru, CIP has a research presence in more than 20 countries in Africa, Asia and Latin America. The Centre is currently involved with the Government of Assam for the implementation one sub component of the APART Project. This institute can provide support to the existing enterprises in identification and promotion of processing varieties of Potato in the state.

## North Eastern Regional Agricultural Marketing Corporation Limited (NERAMAC)

North Eastern Regional Agricultural Marketing Corporation Limited (NERAMAC) was set up to support farmers/producers of North East getting remunerative prices for their produce and enhance the agricultural, procurement, processing and marketing infrastructure of the North-eastern Region of India. Presently it is under the administrative control of the Ministry of Development of North Eastern Region (DoNER), Government of India, New Delhi, with its registered office at 9 Rajbari path, Ganeshguri, Guwahati. Assam Karbi Anglong Ginger, Assam Tezpur Litchi, Meghalaya Khasi Mandarin, Sikkim Large Cardamom, Mizoram Bird Eye Chilly, Manipur Kachai Lemon, Tripura Queen Pineapple, Arunachal Orange and Nagaland Tree Tomato. Such initiatives can also be facilitated through NERAMAC in the project districts for specialized value chains.

## The Agricultural and Processed Food Products Export Development Authority (APEDA):

APEDA was established by the Government of India under the Agricultural and Processed Food Products Export Development Authority Act passed by the Parliament in December, 1985. APEDA in Assam is mandated with the responsibility of export promotion and development of the various agricultural products including fruits and vegetables and processed food. APEDA has facilitated export of fresh bean commonly known as hyacinth bean or lablab bean from Guwahati to London on a trial basis to boost exports from the North East region in the month of October, 2018. APEDA is working with various stakeholders to bridge the gaps for exports and to link produce of North East to the international market. Successful trial shipments of fresh pineapples and oranges were also done by APEDA from Assam. APEDA schemes can be availed for enterprises willing to export their products to bordering countries of the region.

## Indian Institute of Food and Processing Technology (IIFPT)

The Indian Institute of Food Processing Technology (IIFPT) is a pioneer Research and Educational Institution under the Ministry of Food Processing Industries, Government of India located in Srimantapur, Guwahati having modern laboratories equipped with hi-tech instruments engaged in value addition, by-product utilization through bio-processing process and product development. Their Testing laboratory is NABL accredited and FSSAI referral. It has business incubation center through which it provides hands on experiences of food processing, product development, packaging, technology and plant and machinery. Their facility can be used for piloting new products & testing, training of entrepreneurs and their staff leveraged for inputs on various horticulture crops suitable for processing and value addition.

They can design and conduct customized training modules suitable for entrepreneurs based on agriculture product.

## The Federation of Indian Chambers of Commerce and Industry (FICCI):

FICCI's office in Guwahati looks after FICCI activities in eight North Eastern states through a state council specifically for the state of Assam, "Assam State Council" and the "North East Advisory Council". FICCI's activities in the region focus on capacity building of local industry, policy analysis, policy advocacy and investment promotion. Agro food processing sector has been identified by FICCI as a focus sector for its activities. FICCI, North East also runs an Intellectual Property Rights Facilitation Centre. FICCI North East Chapter has carried out a number of initiatives to catalyse development in the agro food processing sector like "Honey Season" (A national Conference on Honey and apiculture organised in Guwahati), Awareness programs on opportunities in Agro Food Processing (in different parts of the region) and Workshops on Quality and standardisation in food processing industries.

- Through its member bodies and member companies, FICCI has established a very wide network spread across the state. This network can be utilised to organise stakeholder consultations and other programs as also to create awareness about Government initiatives.
- FICCI being a federation of Chambers of Commerce, new trade / business bodies that are formed in the state can get affiliated to FICCI.
- FICCI can also provide guidance in formation of business bodies, in setting up professional secretariats for the new chambers business bodies and can provide mentoring support.

## Federation of Industry & Commerce of North Eastern Region (FINER)

Federation of Industry & Commerce of North Eastern Region (FINER) was formed for the creation and sustenance of an environment conducive to the growth of Industry, Trade and Commerce in the North Eastern States of India. With its collaboration with Chambers of Commerce across various regions and Governments; Semi-Governments; Industrial and Commercial organizations and enterprises both at home and abroad, FINER has been able to make an impact in the industrial environment of the region. The organisation has a special **Agri Business Committee with members from various agri enterprises representing the forum**. FINER's sole aim is to industrially develop the region and bring about an economic resurgence. FINER is the most vibrant Apex Industrial body of the N.E. Region.

## North Eastern Development Finance Corporation Ltd (NEDFi)

The North Eastern Development Finance Corporation Ltd (NEDFi) is a Public Limited Company registered under the Companies Act 1956. The shareholders of the Corporation are IDBI, SBI, LIC, SIDBI, ICICI, IFCI, SUUTI, GIC and its subsidiaries. NEDFi provides financial assistance to micro, small, medium and large enterprises for setting up industrial, infrastructure and agri-allied projects in the North Eastern Region of India and also Microfinance through MFI/NGOs. It is the designated nodal agency for disbursement of Govt. of India incentives to the industries in the North-East India under North-East Industrial and Investment Promotion Policy 2007 (NEIIPP 2007). The Company has provided financial support to entrepreneurs across Assam since its inception through various schemes such as:

### MSE Finance

- North East Entrepreneur's Development Scheme [NEEDS]
- Women Enterprises Development Scheme (WEDS)
- Initiative for Development of Entrepreneurs in Agriculture (IDEA)
- Jute Enterprises Development Scheme (JEDS)
- Scheme for North East Handloom and Handicrafts (SNEHH)

#### **Project Finance**

- Rupee Term Loan Scheme
- Equipment Finance Scheme
- Corporate Finance Scheme
- WCTL for Contract Finance Scheme
- Working Capital Term Loan Scheme etc.
- **Micro Finance Scheme**

### National Bank for Agriculture and Rural Development (NABARD)

With a mission to promote sustainable and equitable agriculture and rural development through participative financial and non-financial interventions, innovations, technology and institutional development, NABARD North East Chapter has been doing commendable work in the development of rural enterprises and livelihood mission across the North East region of India and Assam in particular. Through various pro agri schemes, the organisation has been promoting the growth and development of agriculture and rural enterprises in the state and has extensive reach through its district offices. The organisation is open to new ideas in the field of rural development and may be helpful in aiding the agri business enterprises in the state through customized programmes to suit the needs of the clusters.

### Small Industries Bank of India (SIDBI)

Small Industries Development Bank of India (SIDBI) was set up as the Principal Financial Institution for Promotion, Financing and Development of the Micro, Small and Medium Enterprise (MSME) sector as well as for co-ordination of functions of institutions engaged in similar activities. Through their activities like SIDBI's Make in India Soft Loan Fund for Micro Small and Medium Enterprises (SMILE), Start-ups lifecycle along with SIDBI's interventions, Awareness campaign about MUDRA loan in North East Region, Skill Training through Industry Association like FINER, Laghu Bharti Udyog and ICC etc. it has been providing financial assistance to the Micro and Small Entrepreneurs of the state.

### Export Import Bank of India (EXIM)

Export Import Bank of India with its office at Guwahati, Assam is catering to the credit needs of needs of enterprises in Assam and its neighbouring states in the North Eastern Region through Term loan to Enterprises with export of at least 10% or turn over of 5 Cr, whichever is less, conducting due diligence services on behalf of client for export/import of goods from & to other countries to Assam/NER specifically. Exim Bank has been actively supporting capacity development programmes and knowledge building seminars in North East India. Exim Bank has partnered UNDP in formulating a programme aimed at promoting export potential of MSMEs in industrial clusters in North-East region. It has also collaborated with several Industry Association and Government of Assam for conducting awareness programmes for export documentation.

## YES Bank

Yes bank is one of the Fastest Growing Banks among the Private Bank. It is providing various types of loan to SME, Agri Sector in India. The bank has following instrument through which it is providing financial support to entrepreneurs:

- The Small Agri Enterprises Loan is primarily aimed at individuals involved in farming and business units engaged in trading and manufacturing, and commission agents.
- Turnover based lending approach
- Working Capital Loan: Minimum loan amount: INR 20 Lakhs, Maximum loan amount: INR 5 Crores.
- Smart Overdraft facility is aimed at providing working capital limit up to INR 1 Cr without balance sheet.
- The YES Suyog programme is aimed at providing a comprehensive solution for the financing requirements of SMEs engaged in manufacturing, trading and services.

## State Bank of India

The State Bank of India is an Indian multinational, public sector banking and financial services statutory body. It is a government corporation statutory body headquartered in Mumbai, Maharashtra. SBI is ranked as 236th in the Fortune Global 500 list of the world's biggest corporations of 2019. It is the largest bank in India with a 23% market share in assets, besides a share of one-fourth of the total loan and deposits market. The bank through its financial instruments like the Simplified Small Business Loan and Credit Guarantee Fund Trust, the bank is providing financial assistance to Micro, Small and Medium enterprises of the country.

**State Bank of India (Simplified Small Business Loan):** The SBI Simplified Small Business Loan is targeted at businesses who need to build up their current and fixed assets. This loan is available for businesses in wholesale or retail trade, manufacturing, services, and also for self-employed and professional individuals.

**Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE):** Availability of bank credit without the hassles of collaterals / third party guarantees. Ministry of Micro, Small & Medium Enterprises (MSME), Government of India launched Credit Guarantee Scheme (CGS) so as to strengthen credit delivery system and facilitate flow of credit to the MSE sector. To operationalise the scheme, Government of India and SIDBI set up the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE).

Currently the team is in discussion with the Zonal office of State Bank of India for designing of customized products to suits the requirements of the cluster stakeholders under the APART project in Assam.

## CANARA BANK

Canara Bank is one of the largest public sector banks owned by the Government of India. As per the announcement made by the Finance Minister Nirmala Sitharaman on 30/08/2019, Canara Bank will be anchor bank for Manipal based Syndicate Bank and this merger is expected to come to force from 01/04/2020, making it the fourth largest bank in the country.

The bank is providing financial support to the MSME sector in the country through its specialized products like Prime Minister Employment Generation Programme(PMEGP), Performance and Credit Rating Scheme, Credit Guarantee Trust Fund for Micro & Small Enterprises (CGTMSE), Interest Subsidy Eligibility Certificate (ISEC) etc.

Public sector Canara Bank on Monday distributed MSME loans to the tune of ₹403 crore under Mudra, Stand -up India and also some schemes of the bank at an MSME road show in

Chennai. The Grant Thornton team had a preliminary discussion with the bank officials for developing financial instruments targeted specifically at the sixteen APART districts and the members of the Industry Associations to be formed under the project.

### North East Small Finance Bank Limited

On September 16, 2015, Reserve Bank of India awarded the “In-principle approval” to set up Small Finance Bank (SFB) to 10 Financial Institutions, including RGVN (North East) Micro Finance Limited. The only institution from North-Eastern state of India to receive this recognition to establish Small Finance Bank. The main objective behind setting up small finance bank by RBI was to drive the objective of financial inclusion by making provision of savings and to provide credit to small business units, small and marginal farmers, micro and small industries and other unorganized sector entities, through high-end technology, low cost operations. The bank has shown interest in providing concession on interest rates against loan taken by members of Industry Association to be formed under the project.

# 4. District Profile: APART Districts

## 4.1 Karbi Anglong

### 4.1.1 Geographic Details of Karbi Anglong District

The Karbi Anglong District is situated in the central part of Assam, bounded by the state of Nagaland and Golaghat district in east, Hojai district in the west, Golaghat and Nagaon district in the north and Dima Hasao district and Nagaland in the south. The district with dense tropical forest covered hills and flat plains is situated between 25° 33' – 26° 35' North Latitude and 92° 10'- 93° 50' East Longitudes. Karbi Anglong is accorded recognition as an Autonomous district with its Headquarters at Diphu and administered by local Karbi Anglong Autonomus Council (KAAC) under Assam Govt. headed by Chief Executive Member. The district enjoys autonomy under the provision of Sixth Schedule of the Indian Constitution. It is the largest district of Assam.



Sub-Divisions	Town	Blocks	Executive Member	Villages
3	4	11	14	2928

### Roadways

The district is well connected with other districts through various routes. On the north it is covered by NH-36 and on the east by NH-39. The internal routes are covered by the P.W.D. Road distance from Guwahati to Diphu (via NH37 and 36) 259 KM

### Railways

The N.F. Railways passes through the district touching only a few points along the boundary. They are Borlangphar, Langsoliet, Nilalung, Diphu, Doldoloi, Dhansiri, Rongapahar, Khotkhoti and Bokajan. Railway distance from Guwahati to Diphu: 213 Km

### Airports

There is no airport in the district. The nearest airport is in Dimapur which is 61.2 km away from Diphu. The details are in the table below:

SL	Particulars	Total No.'s	Details
1	National Highway	3	NH-36, NH-39, NH-37
2	Railway Station	4	

3	International Airport	1	Lokpriya Gopinath Bordoloi International Airport
4	Domestic Airport	1	Dimapur

### 4.1.2 Demographic Details

The population of the district is predominantly tribal. The major tribal ethnic groups of this district are Karbis, Bodos, Kukis, Dimasas, Hmars, Garos, Rengma Nagas, Tiwas, Man (Tai Speaking). Besides, a large number of non-tribals also live together in this hill region.

#### Population

Parameters	Total	Rural	Urban
Population	9,56,313	8,43,347	1,12,966
SC Population	44,961	39,936	5,025
ST Population	5,38,738	4,91,856	46,882
Male	4,90,167	4,31,924	58,243
Female	4,66,146	4,11,423	54,723
Literate	5,57,214	4,70,110	87,104

Source: Census 2011

#### Literacy Rate

Total	Male	Female
58.27%	64.11%	52.12%

Parameters	Total
Literacy Urban percentage	77.10 %
Literacy Rural percentage	55.74 %
Density of Population	92 per Sq. Km (As per 2011 census)
Sex Ratio	956 females/1000 males (As per 2011 census)

Source: Census 2011

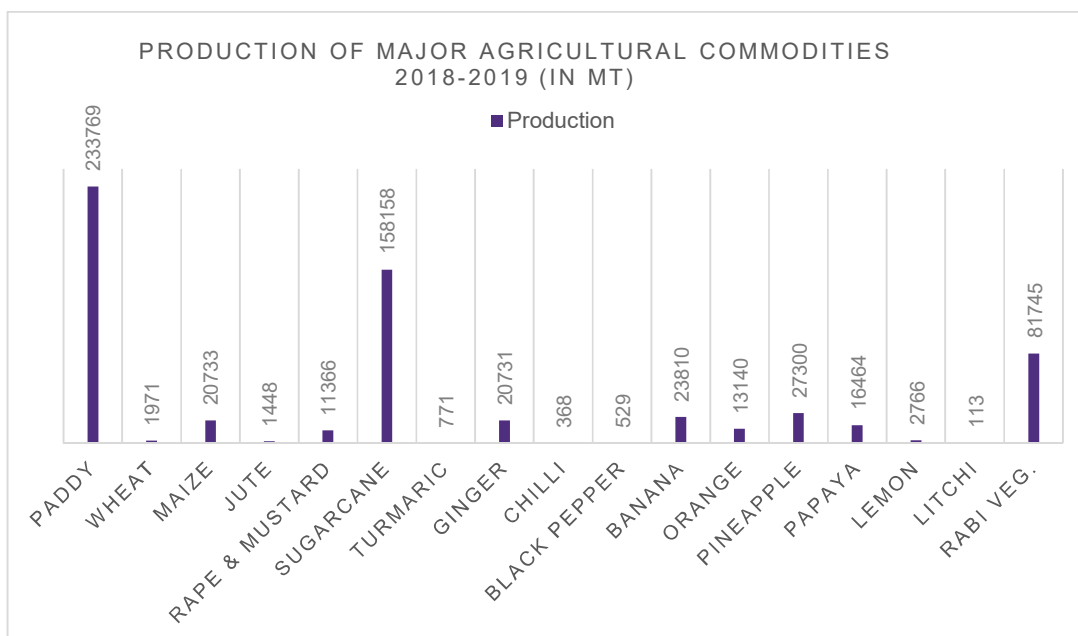
### 4.1.3 Agriculture Production Scenario/Trend

Karbi Anglong district is primarily dependent on agriculture and forest products. Main source of income is paddy with surplus production. Rice, wheat, jute, maize, sugarcane are major crops of the district. Howraghat Development block has few big rice mill and besides that there are lots of micro and small size rice mills in Rangkut, Langhin, Bukolia, Uttarborbill, Rangajan, Bokajan, Dongkamukam, Baithalangso, Toradubi, etc. Sugarcane industry is concentrated in Kheroni area. Fruits & vegetables unit are mostly in Diphu area.

Agriculture is the main livelihood of the tribal population of the districts. The traditional method of cultivation is the slash & burn one, commonly known as jhuming in hill areas. In the plain area we winter paddy, summer paddy cultivation is taken up. Beside paddy cultivation, Karbi Anglong has huge natural advantages for other form of cultivation like Pineapple, Mango, Banana, Maize, turmeric, Ginger, Tapioca, Sugarcane, broom, orange, mausambi, black pepper, papaya, arecanut and field crops like cotton, jute, mesta, wheat & improved varieties of oil seed, pulses & vegetables. The district also has presence of number of rice mills, food processing, spice processing and beverage units.

Though Karbi Anglong is a hill district in few Blocks namely Howraghat, Samelangso, Rangkhalang, Bokajan and a part of Lambajong bloc, Rice is the principal crop and staple food due to its congenial climati. Rice is cultivated mostly during winter (Sali) and summer (Boro) in the district. The major agriculture and allied enterprises are of Rice, spice, fruits & Vegetables, Banana, Pineapple, Orange, Areca Nut, Dairy, Piggery, Poultry, etc.

#### 4.1.4 Agriculture production data of Karbi Anglong



Source: Dist. Agricultural Officer, Karbi Anglong, Diphu

#### 4.1.5 Industrial Infrastructure Details

The district has two industrial estates and three Growth centre that were developed in order to support industrial growth of Karbi Anglong.

S L.	Name of Ind. Area	Land acquired (Sq. Mtr)	Land developed (In hectare)	Prevailing Rate Per Sqm (In Rs.)	No of Sheds	No of allotted Sheds	No of Sheds Occupied	No. of Units in Production
1	Bokajan Industrial Estate	80266	NA	NA	6	5	5	5
2	Hamren Industrial Estate	20066	NA	NA	4	0	0	0
<b>Total</b>		<b>100332</b>	<b>NA</b>	<b>NA</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>

Source: Statistical Hand Book, Assam 2012, Directorate of Economics & Statistics

S. No.	Name of Growth Centre	Land acquired (Sq. Mtr)	Land developed (In hectare)	Prevailing Rate Per Sqm (In Rs.)	No of Sheds	No of allotted Sheds	No of Sheds Occupied	No. of Units in Production
1	Bokulia Growth Centre	803	NA	NA	2	2	2	2
2	Manja Growth Centre	803	NA	NA	2	2	2	2
3	Sariyahjan Growth Centre	6689	NA	NA	4	1	1	1
<b>Total</b>		<b>8295</b>	<b>NA</b>	<b>NA</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>5</b>

Source: Statistical Hand Book, Assam 2012, Directorate of Economics & Statistics

#### **4.1.6 Key Agriculture Based Industries**

The Karbi Anglong district has a total of 112 Agro based, registered & Unregistered industrial units as found during the baseline survey. Out of these most of them are micro unit and very few are small size unit in category. Some of the key Agro based industries are listed below.

- M/s Karbi Anglong Agro products Private Limited. Bokajan
- M/s Assam Hill Small Industries Development Corporation Ltd.
- M/s Kamala Devi Rice Mill, Bukolia.
- M/s Rangpi Bakery, Diphu
- M/s Surobhi Dairy, Khatkhati, Bokajan
- M/s Timung Brothers Rice Mill, Howraghat

## Export Infra Availability

There is not Export infrastructure available in Karbi Anglong

### 4.1.7 Industrial Parks and Contribution to Agro Enterprises:

In Karbi Anglong agriculture is the main source of livelihood of people which has employed more than 70% workforce and support livelihood for 80 percent population in Karbi Anglong. The Industrial growth centre and Industrial estate plays very important role in developing the enterprises in Karbi Anglong, the district got 2 Industrial estates and 3 growth centres in very important places. All the seven industrial facility are providing enough facilities for the entrepreneurs to grow. Through PMEGP scheme many micro entrepreneurs got benefited and helping for economic growth of the district.

Agro based industries facilitates optimization of resource use, output management, enhance farmer income, expansion of market, contribution to national income and employment generation. Agro based industries broadly includes - Rice Products Industry (Rice and Flour Mill), Sugar Industry, Food Processing Industry, Jute industry, Fruits & vegetables processing industry, Tea Industry and Textile Industry in the district. 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, turmeric, chilly, orange, maize, banana, Mango, litchi, mustard, sugarcane and such other crops which grow intensively and is abundant in the entire region. Important agro-based industries are rice mill, gur (Jaggery) making, oil mill, spice grinding, small flour mill, pickle making, unit etc. under food products and allied industries.

### 4.1.8 Support Institutions

The twin hill district of Karbi Anglong is one of the 33 administrative districts of Assam with its headquarter at Diphu. The district has a huge potential for agro business development due to its natural as well as mineral resources. However, in terms of industrialization, Karbi Anglong is pretty backward with very less medium and large enterprises. Under the APART project, the Cluster Development Technical Agency (CDTA), Grant Thornton India LLP team in Karbi Anglong has found a number of support Institutions like DICCC, MSME-DI, NABARD, KVK, Agriculture Research Institution, ITI etc. for faster development of the MSME units. Through a detailed baseline survey, GT has found a total of 112 agro based units in the district, out of which 86 were found to be micro and small rice mill units. Rest of the units belonged to different sectors like bakery, fruits & vegetables, food processing, mustard, feed unit, dairy unit and spices.

#### **Assam Gramin Vikash Bank**

The Langpi Dehangi Rural Bank, now known as Assam Gramin Vikash Bank offers agricultural loan for the upliftment of rural population in terms of cultivation, plantation of horticulture crops, irrigation and land development. It also offers loans for various allied activities such as piggeries, poultry farms, dairy farm and fisheries. Additionally, it offers crop insurance for selected crops as well as a Kishan Credit Card. In addition to providing all the above loans & services, Assam Gramin Vikash Bank is the lead bank in Karbi Anglong offering loans under different types of subsidy schemes like PMEGP.

Assam Gramin Vikash Bank is working for MSE enterprises for growth by providing various types of loan according to their requirement. Now they are focusing on MUDRA loan for MSE

units. Asaam Gramin Vikash Bank in Karbi Anglong has been tremendously working for the development of MSE enterprises for their growth. It will be beneficial for the project if it works together as it is the lead banking system in Karbi Anglong. Most of the entrepreneurs have already has bank accounts with Assam Gramin Vikash Bank. The bank has been trying to give more financial help to MSE provided they fulfil the minimum eligibility which is required.

#### **Krishi Vigyan Kendra, Diphu**

Krishi Vigyan Kendra in the district of Karbi Anglong received its administrative approval from the ICAR in the year 1999 as a recommended KVK and started functioning from the year 2000. Later in the year 2004 the same was given the status of a full-fledged KVK to cater to the needs of the farming community for training and skill development in carrying out the farming activities in a befitting manner. The KVK is headed by a Programme Coordinator and he is assisted by a group of Extension scientists and other supporting staff as per ICAR requirement. The institution imparts learning through work experience and is concerned with technical literacy of the district's residents. It mainly focusses on the training of people who are either already employed or wish to be self-employed. Additionally, it is also responsible for operating the Kissan helpline for the area, which can be an extremely useful tool for farmers and rural youths. **KVK** is providing various training and research programme for the farmers through providing awareness and trainings on fertilizer, advance seeds and equipment for agriculture productivity.

#### **NABARD, Diphu**

The branch office of NABARD in Karbi Anglong is located in Diphu, which aims to promote sustainable and equitable agriculture and rural development through participative financial and non-financial interventions for agricultural production and livestock promotion. The office is under Mr. P Bulte, Assistant Director. The institute also nurtures innovations, technology and institutional development for securing prosperity. NABARD is already working with various local FPO and SHGs for sustainable agricultural growth.

NABARD Diphu has been already extending various sanitization and awareness programmes to increase animal livestock and agriculture productivity through mobilizing local youths with the help of FPOs and SHGs. The department may be involved in all the cluster activities for the development of existing enterprises.

NABARD has been extending various sensitization and awareness programmes to increase animal livestock and agriculture productivity through mobilizing local youths with the help of FPOs and SHGs.

#### **Industrial Training Institute (ITI)**

The Industrial Training Institute is located in Diphu. The major objectives of the ITI are:

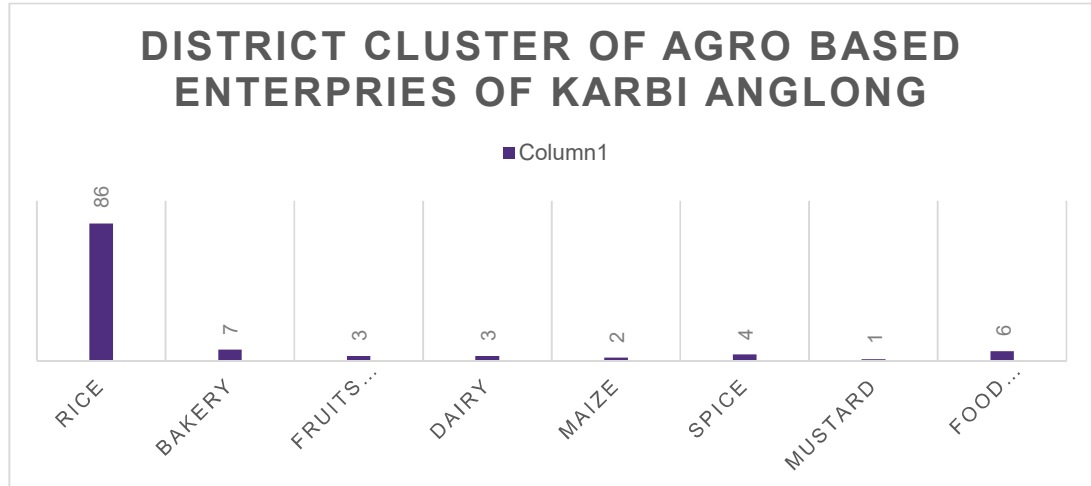
- To provide semi-skilled/skilled workers to industry by systematic training course
- To reduce unemployment among educated youths by equipping them with suitable skills for industrial employment & self-employment
- Provide customized need based training program for particular need identified by concern agency as facilitator.

#### **FSSAI, Karbi Anglong**

The FSSAI district office is at Diphu. The district designated officer is Shri Hideswar Kemprai, The FSSAI is providing food safety license to the entrepreneurs of food products manufactures of Karbi Anglong district. It has been rendering its services for the fruit & vegetable processing and food processing industry of Karbi Anglong.

#### 4.1.9 Analysis from Baseline Data

There are 125 units of agro based processing unit in the district. Most of the agro based processing unit is rice mill from micro size to small size unit, the brief details of agro based unit is as follows:

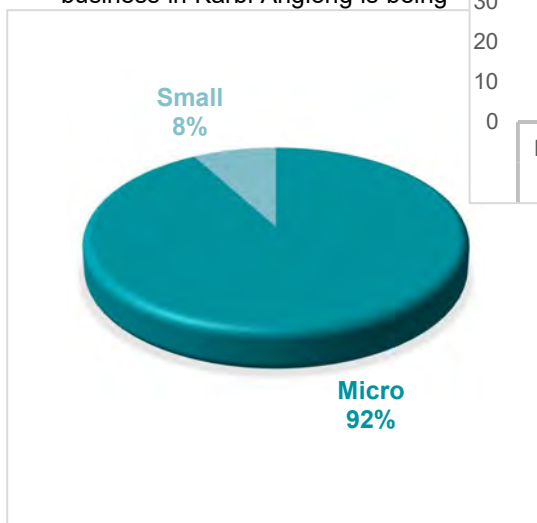


#### Baseline Units:

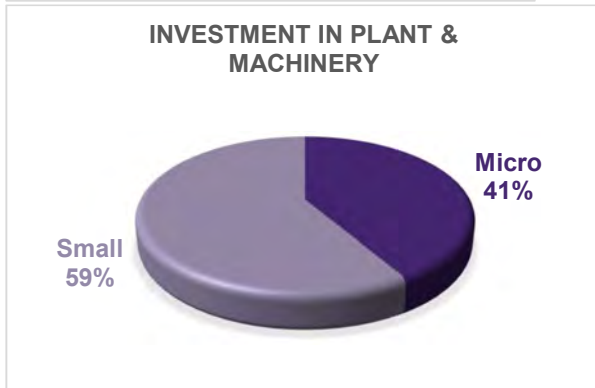
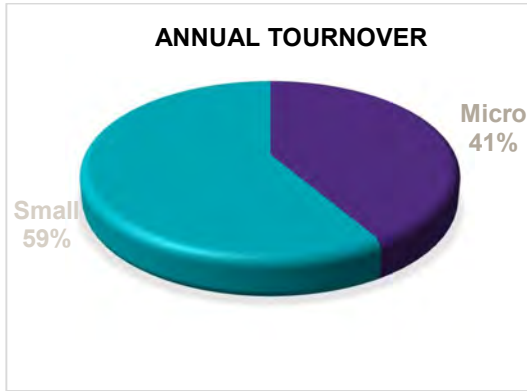
Throughout Karbi Anglong district 125 active agro based processing units were found during the survey comprising of different value chain like in rice (87 units), Bakery (7 units), Food Processing (8 units), Spice (4 units), Animal Feed (2 units), Mustard (1 unit), Dairy (3 units). 92% of the units are micro size and out of 92% 56 number of units are registered and 47 are unregistered and only 8% are small category, out of 8% only 7 units are registered units under DICC Diphu and 2 are unregistered, Among 103 micro units 56 registered units only 2 units are operating in Industrial Area and out of 9 small category units only 1 unit is operating in industrial area.

#### 1.2 Category:

An analysis of the category wise i.e. Micro and small units contribution in agro processing business in Karbi Anglong is being

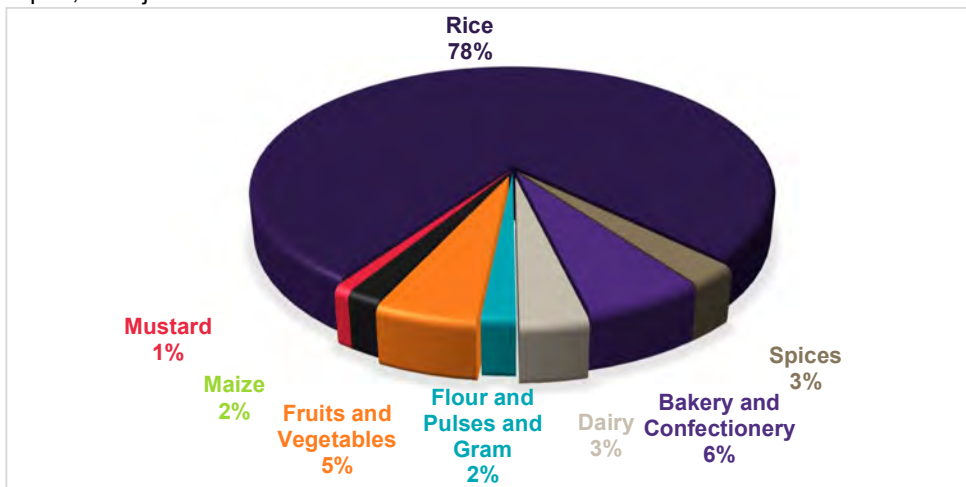


made. The annual turnover of Small category units surveyed is 2408 Lakhs, 59% with an investment of INR 503 Lakhs even though the number of units are only 9 and the turnover of micro units is 1705.43 lakhs, 41% with an investment of INR 356.59 lakhs, contributed by 103 comprising of all value chain. In terms of employment 324 number of employee are engaged in Small Category units whereas 297 employees are engaged by Micro level units.



**Baseline Value chain wise:**

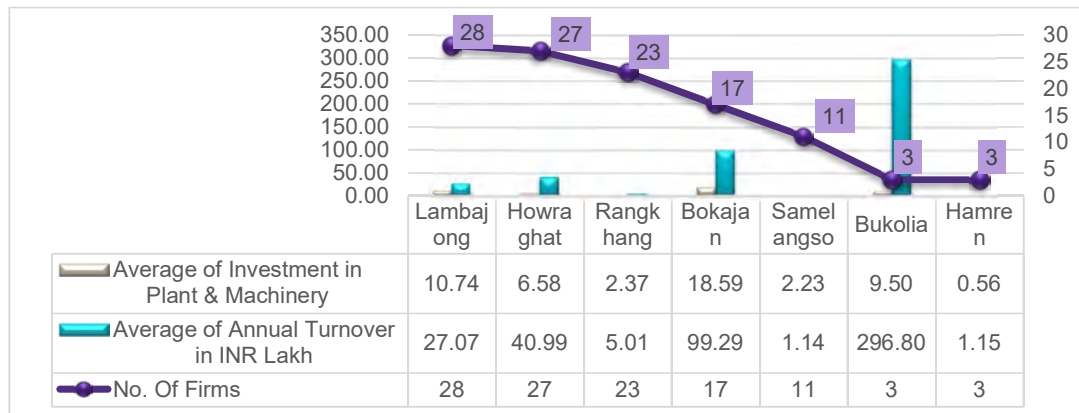
In Karbi Anglong few very important value chain having huge potentials for growth in terms of business as well as employment generation has been identified. 87 number of the units are in rice milling business in Micro and small size. Secondly 7 units are in bakery, which are concentrated in Diphu and Bokajan town. The number of units in Fruits and vegetables is 6 in Diphu, Bokajan and Hamren.



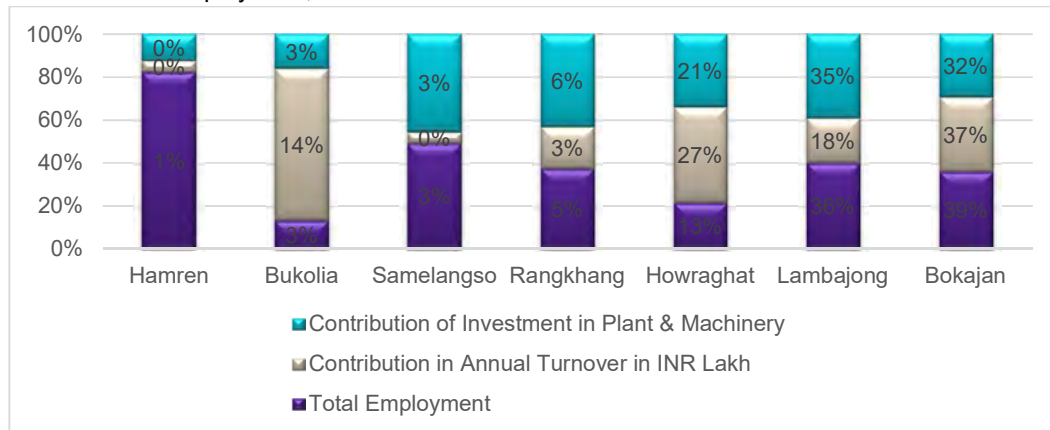
**Baseline of Agro Based Processing Units in Block Wise:**

Agro based processing units has also been analysed blockwise. It shows that there is concentration of rice Milling units in Howraghat, Samelangso, Rangkhang, Bokajan and partly Lambajong block due to the quantum of paddy production in the area. Bakulia, headquarter of Langsomepi Block has highest turnover of 14% INR 296.8 lakhs with investment of INR 9.5 lakhs from 3 active rice mill unit, Bokajan block has 17 units of different value chain with annual

turnover of 37% (INR 99.3 lakhs) with investment of INR 18.6 lakhs in average likewise Howraghat has annual turnover of 27% (INR 40.98) lakhs with investment of INR 6.57 lakhs from 27 active different value chain unit. Lambajong has highest number of units 28 of different value chain but most are micro category which has annual turnover 18% of INR 27.06 lakhs with investment of INR 10.74 lakhs. In terms of employment Bokajan has the highest number of employment (240 in 17 units), Lambajong with 222 in 28 units, Howraghat 81 in 27 units, Rangkhang 34 in 23 units, Samelangso 19 in 11 units, Langsomepi (Bakulia) 17 in 3 units, Hamren 8 in 3 units.

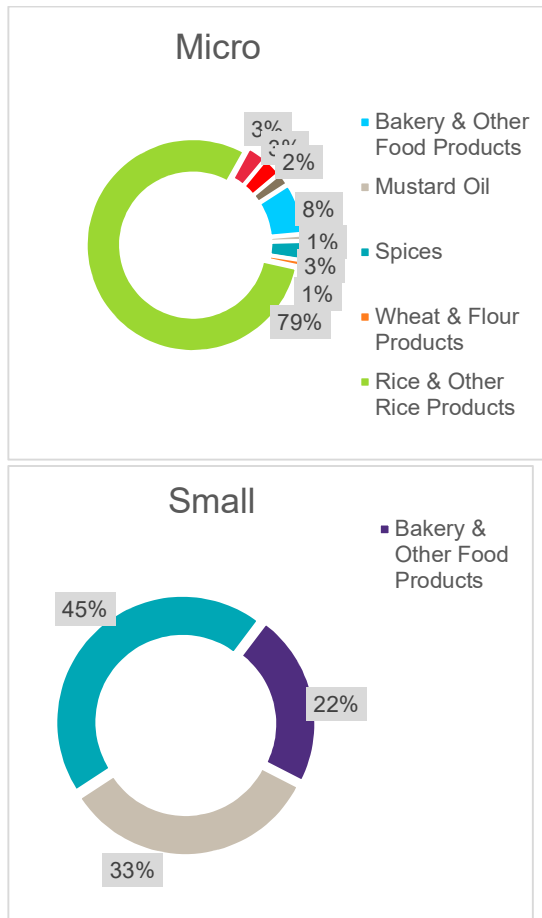


Distribution of employment, Investment and annual Turnover



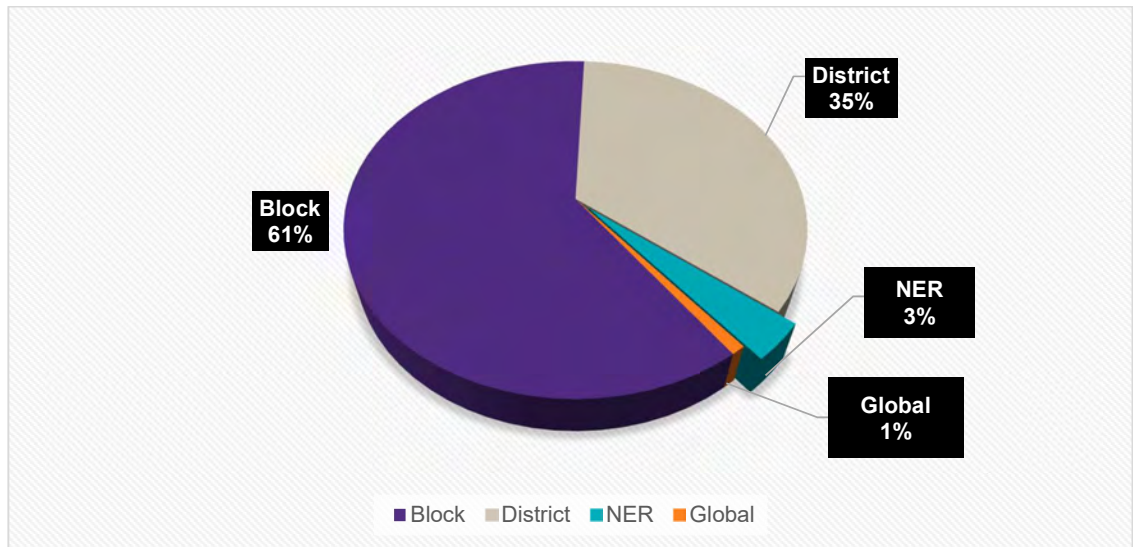
### Products of Karbi Anglong

Mainly 8 value chain products irrespective of Micro and small category units is found during the survey, It is noticed that in some of the value chain value addition is also been done. The products in the value chain that are noticed are **1.** Rice, in rice no value addition has done till now in the entire district, **2.** Bakery in bakery we found highest value addition for example Bread, Cakes, Biscuits, Veg & Non Veg pastry, Roll cakes etc. **3.** Fruits & Vegetables has value addition of Pickles, Juice, squash etc. **4.** Spice has Turmeric powder, dry chips, Ginger paste, dry ginger chips, dry ginger fingers, King chili paste, dry pods etc. **5.** Dairy has value addition like Dahi, Ice Cream, Panner, milk in pouch. **6.** Feed has only two units of poultry feed and cattle feed **7.** Mustard has only 1 unit in entire karbi anglong **8.** Food processing has value addition like making snacks chips, Fingers chips, noodles, ice con, Sewai, fry dal mut, mixer sana etc.



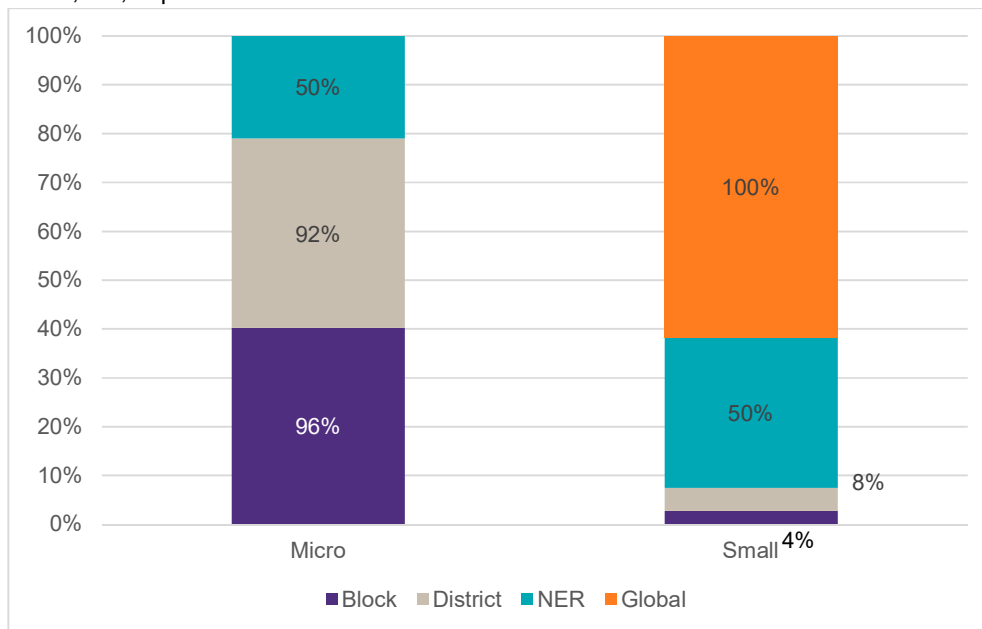
**Market share of Karbi Anglong products:**

It is noticed that most of the agro based units of karbi Anglong are micro in category and the rice milling units are mostly public milling in nature so the market share for those products is concentrated in local market which include personal consumption. Within the block it is 61% of market share of product of 68 units. District market share is 35% of 39 nos of units producing different value chain, in North east region market share is only 3% of 4 small category unit, NER market is Nagaland, Silchar, Karimganj, Guwahati, Nagaon, Azadpur Mandi, siliguri etc. In Global market the share is 1% of total production of Karbi Anglong which is being contributed by only one unit of small category which is Karbi Anglong Agro Processig industry, this unit is exporting its King chili products to U.S, Japan, U.K etc.



Total Market share of Karbi Anglong production of 112 units.

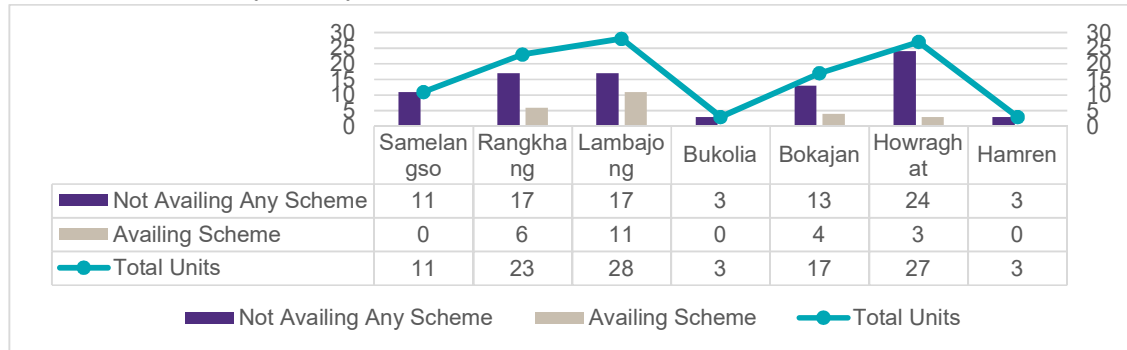
In Karbi Anglong out of 103 micro units, 65 unit's total production is sold in block level only, 36 unit's production is distributed in district, only 2 unit's production is supplied to north eastern regional market through traders. In small category out of 9 units, 3 unit's production is sold in block level market, 3 unit's production is marketed in district, 2 unit's production in North eastern Market and National market and only 1 unit of small category's production is supplied to UK, US, Japan etc.



**Schemes availed in districts:**

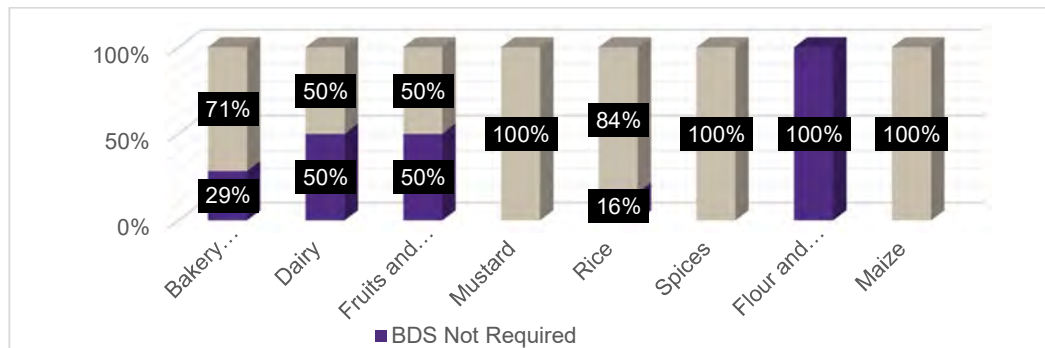
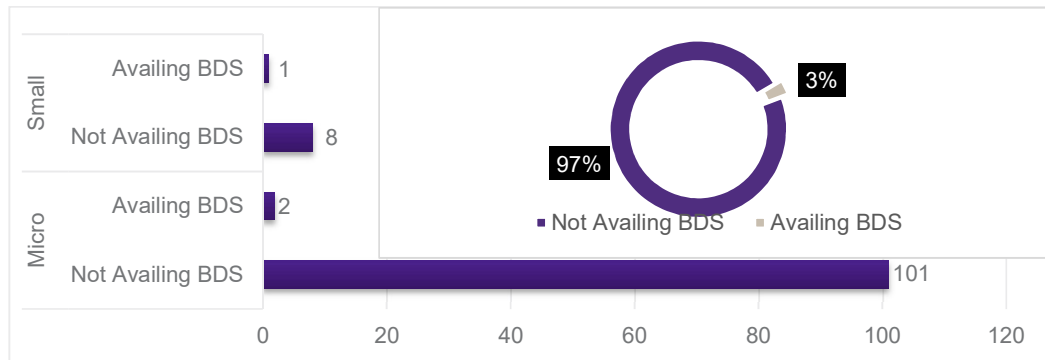
In Howraghat block we have found that out of 28 units 11 units have availed govt. scheme but 17 units couldn't have access to any schemes. Similarly in Ranghang block out of 23 units 6 units have got govt. schemes but 17 couldn't get that. The graph below shows the status of beneficiaries of Govt. Schemes. Of the agro based units in the district only 24 units have got

assistance under governments schemes while 88 numbers of units couldn't avail any benefits like PMEGP, Electricity subsidy etc.



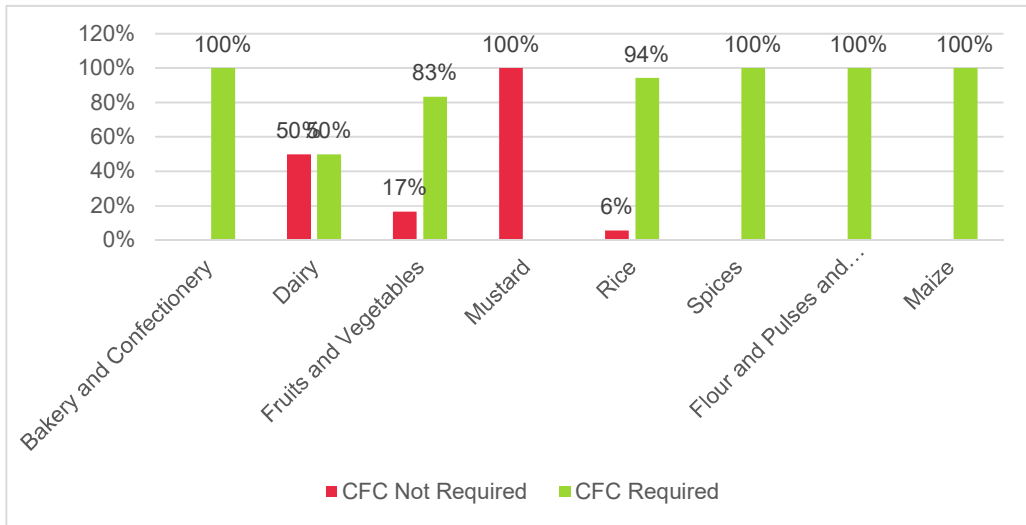
### BDS availed and required

From our baseline survey we found that in Karbi Anglong out of 112 units only 3 units have availed BDS service from their own source, M/s ARHAM in small category and M/s Surobhi dairy and M/s Diamond feed in Micro category. Similarly, out of 112 units 89 units need BDS service but 23 units doesn't need BDS.



### CFC Required

In terms of CFC requirement majority of the units in all value chains have expressed their requirement for CFC.





## 4.2 Nalbari

### 4.2.1 Geographic Details of Nalbari

The Nalbari district is situated between 26 degrees' and 26.51 degrees' north latitude and 91 degrees' and 91.47 degrees' east longitude. The entire area of the district is situated at the plains of the Brahmaputra Valley. The northern side of the district is bounded by the Indo-Bhutan international boundary and the southern side by the mighty Brahmaputra. The district is bounded by Darrang and Kamrup district on the east and by the Barpeta district in the west. Total geographical area of the district is 2257 sq. km. which is approximately 3% of the total area of the state.

Agro-climatically the district falls in the Lower Brahmaputra Valley Zone. Major crops produced in the district are Rice, Jute, Cabbage, Potato, Cauliflower, Banana, Tomato etc. The entire area of the district is situated in the plans of the Brahmaputra valley. The tributaries of the river Brahmaputra have enormous contribution towards the agrarian economy of the district. Nalbari only has 3 tea gardens which is very low when compared with other districts of the state.

The district has a sub-tropical climate with semi-dry hot summer and cold winter. The district receives an average annual rainfall of 1500 mm. The district is well connected by road network. The National Highway – 31 passes through the district. Nalbari railway station is located in the northern part of Nalbari town. The Nalbari district consists of 1 Sub-division, 2 towns, 7 number of development blocks, 65 Gaon panchayats and 471 revenue villages.



Sub-Divisions	Town	Blocks	Panchayats	Villages
1	2	7	65	471

The district is connected by all means of transport which include airways, railways, roadways with other districts of Assam & other parts of India. The Nalbari district has one national highways viz. NH-27 connecting the other districts of Assam and also with other states of India. There are 3 railway stations in Barpeta and nearby Airport is Guwahati.

SL	Particulars	Total No.'s	Details
1	National Highway	1	NH-27
2	Railway Station	1	Nalbari Station & Ghograpar
3	Airport	1	Lokpriya Gopinath Bordoloi International Airport

### 4.2.2 Demographic Details

The demographic details are as follows:

Description	Nalbari
Population	7.72 Lakhs
Male	3.96 Lakh
Female	3.76 Lakh
Population Growth	11.99%
Area Sq. Km	2257
Density/km <sup>2</sup>	733
Sex Ratio (Per 1000)	945
Child Sex Ratio (0-6 Age)	967
Average Literacy	78.63%
Male Literacy	84.36%
Female Literacy	72.57%

Source: Census 2011

### 4.2.3 Economic profile of the District

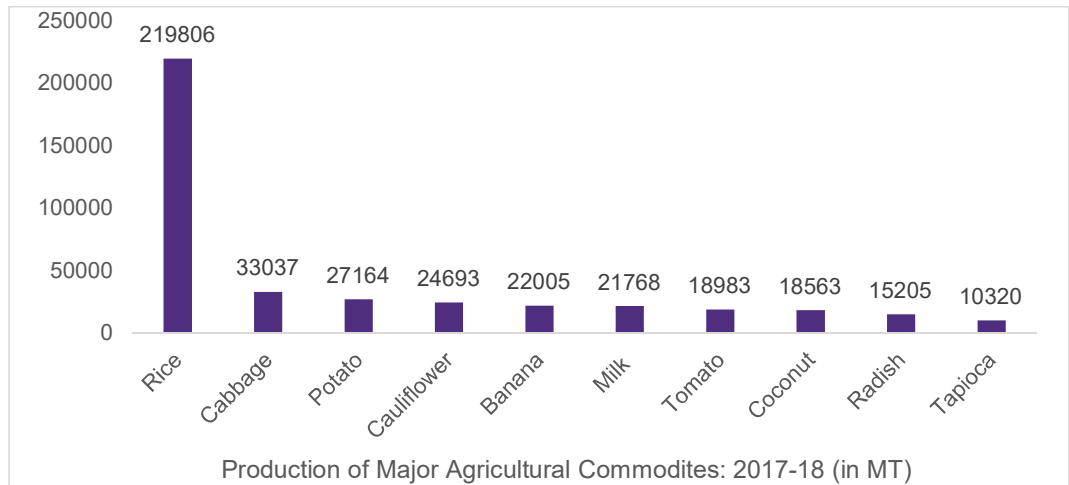
The District of Nalbari is one of the economically backward districts of Assam as it is characterised by low per capita income, poor socio-economic infrastructure, and heavy percentage of rural population below the poverty line and poor industrialisation. Agriculture occupies the most dominant position in the economy of Nalbari. Nearly 97 per cent of the district population lives in rural areas. According to the 2011 census report more than 71 per cent of the working force are engaged in agriculture and its allied activities.

### 4.2.4 Agriculture Production Scenario/Trend

Rice is the principal crop and the main staple food of the district. 3 crops of Rice namely autumn, winter, and summer are raised in the district.

The total production of rice is 219806 MT in Nalbari district. The district contributed 2.21% of the total milk production, 2.27% of the total egg production, 1.85% of the total meat production and 4.04% of the total fish production in the year 2017-18.

Major agriculture and allied enterprises are Rice, Cabbage, Potato, Cauliflower, Banana, Tomato, Coconut, Radish, Tapioca, Jackfruit. Nalbari also produces a good amount of Assam Lemon and Brinjal. The district has a very low number of tea gardens when compared with other districts of the state. A chart indicating the production of major commodities produced in the district in 2017-18 is shown below.



#### 4.2.5 Industrial Infrastructure Details industries in Nalbari

Name of Industrial Infrastructure	Open Space (Sq. M)		
	Total Open Space	Open Allotted	Space Available for Allotment
IID, Nalbari,	152341	0	152341
Industrial Estate, Nalbari	20000	13951	6049
MSDC, Mukalmuwa	6500	0	6500
Commercial Estate, Tihu	2600	0	2600

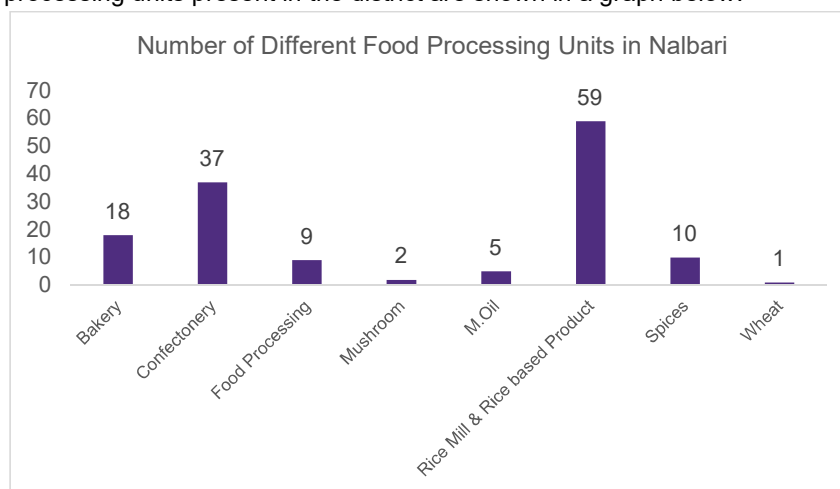
**North East Mega Food Park:** The Central Processing Centre (CPC) of the Mega Food Park was developed in an area of over 58 acres in the Tihu town of the district. The site is in close proximity to Tihu Railway Station and is only 70 kms away from Guwahati airport. The site is in the vicinity of East-West corridor, making it possible to market the products of the park across the country. The food park lies close to Guwahati city which is the major market of processed foods. The region being close to the city; skilled manpower is easily available.

The park has a well-developed infrastructure and consists of facilities like warehouse, cold chain, quality control & FPO lab, common facility building, effluent treatment plant and other facilities. Listed below are few processing units located in the park:

SL. NO.	NAME OF UNITS	PRODUCT MANUFACTURED
1	M/s Dukes Products India Ltd.	Biscuits, Chocolates, Candy
2	M/s Ravi Foods Pvt. Ltd.	Snacks, Chips etc.
3	M/s Assam Agrotech Pvt. Ltd.	Dehydrated Vegetables, Spices
4	M/s P.L. Industries	Snacks, Chips etc.
5	M/s Crioforma India Private Limited	

#### 4.2.6 Key Agriculture Based Industries

The Major field crops cultivated in Nalbari are Rice, Rapeseed & Mustard, Pea, Lentil, Black gram, Banana, Jackfruit, Assam Lemon, Papaya Litchi. There are a total of 223 agro based Micro and small units. The district has a significant number of Rice mills and confectionery units. The sector wise food processing units present in the district are shown in a graph below.



### **Export Infra Availability**

There is no Export Infra Available

## **4.2.7 Support Institutions**

### **Krishi Vigyan Kendra (KVK)**

It is located in Milanpur. The institute provides specialized need based trainings to the farming community on various aspects related to agriculture and allied sectors. The prime mandate of KVK is to impart vocational training to the practicing farmers, rural youth and field level extension functionaries, conducting on farm trial, front line demonstration and transferring latest technologies to the farming communities.

### **Industrial Training Institute (ITI)**

The industrial training institute is located in Haripur, Nalbari. The major objectives of the ITI are:

- To provide semi-skilled/skilled workers to industry by systematic training.
- To reduce unemployment among educated youths by equipping them with suitable skills for industrial employment & self-employment

### **College of Horticulture, Assam Agriculture University**

The main goal of this institution is to produce globally competitive human resources in farm sector and to carry out research in both conventional and frontier areas for production optimization as well as to disseminate the generated technologies for benefiting the food growers/ producers and traders involved in the sector while emphasizing on sustainability, equity and overall food security at household level. The university offers a 3-year bachelor's program and 2-year master's program in horticulture.

### **UCO Bank**

The bank offers a number of services and products which are tailored to support agro based industries. It offers Kisan Credit Cards (KCC) and many other programmes, which allow farmers to meet their short term credit requirements at affordable interest rates. Additionally, it offers loans to set up Cold Storage as well as Agro and Food Processing units.

### **Sankardev Jaivik Krishi Farm & Jyoti Farmers Club**

Jyoti Farmers Club at Changnoi and Sankardev Jaivik Krishi Farm on the bank of Pagladia are the epicenter of this pumpkin revolution. Within a short time, the farms have attracted many dignitaries and got media coverage and won many awards. Businessmen from the neighboring districts and states like Tripura, Nagaland are procuring pumpkin from these farms. Scientists of KVK Nalbari guided and helped in every aspect of pumpkin cultivation apart from support from state agriculture department and financial institutions.

### **NABARD**

Promote sustainable and equitable agriculture and rural development through participative financial and non-financial interventions, innovations, technology and institutional development for securing prosperity. Providing refinance support, building rural infrastructure, preparing district level credit plans to motivated entrepreneurs. In Nalbari Mr. Debojyoti Biswas working as a District Development Manager who initiated to form nine FPOs in different places of the district and supporting them to strengthen the operations.

**NABFINS**

NABfin is working in association with NABARD. The main objectives of the NABfin are to provide financial services in two broad areas of agriculture and microfinance. NABFINS provides credit and other facilities for promotion, expansion, commercialization and modernization of agriculture and allied activities. NABFINS shall engage in the business of providing micro finance services and other facilities to needy and disadvantageous sections of the society for securing their prosperity in both rural and urban areas in Nalbari is providing Micro Finance services to the enterprise

**Lotus Progressive Centre**

This is a NGO located at Morowa Nalbari. The NGO is providing services on formation of SHG, facilitating to two FPOs, Nabarun and NABA udiptta paddy cum fish situated in same place. The NGO are assisting on providing micro finance under the NABfin to Joint Liability Groups and SHGs. The NGO is also helping to provide seed to farmers and collect different types of paddy for marketing. They have good knowledge on varieties of native paddy also got GI on Boka Rice.

President - Shri Pradip Kumar Das

Secretary - Shri Tapan Baishya

**Directorate of Mushroom Research (DMR), Solan, Himachal Pradesh**

Most of the Mushroom cultivator and processor of Nalbari attended different training of DMR like technical training, which helped them to build their confidence for mushroom processing.

**RSETI, Nalbari**

Rural Self Employment Training Institute (RSETI) Nalbari established on 22 September 2014 by Mr Bharat Chandra Kalita who was the first Director. The organization provides various trainings to people to help them earn a living and also help them provide cheap loans through banks. Basically the institute is providing EDP training to selected first generation entrepreneur for future development. Time to time RSETI is also organising skill development training to youth and existing entrepreneur. The Institute is located at Sondha, near paikarkuchi chowk, Nalbari.

**Chartered Accountant/Tax consultant**

Chartered Accountant based at Nalbari town is providing financial, legal and compliance related issues like tax filing, preparation of Bankable proposal, GST registration and filing to the enterprises of Nalbari district. Some of the CAs are Mr. Hamen Sarma, Hajo road, Nalbari, Mr. Rajnith Jain (8402861973), Debiram Road, Nalbari, Mr. Bajaj Jain Station road, Nalbari

**Machinery Supplier**

Services for purchase of machinery and consumables and parts related to Rice/oil Mill is provided by M/s. Assam Machinery, Bar maszid chowk, Nalbari and M/s Raghav Machinery & Tools, N T Road, Nalbari.

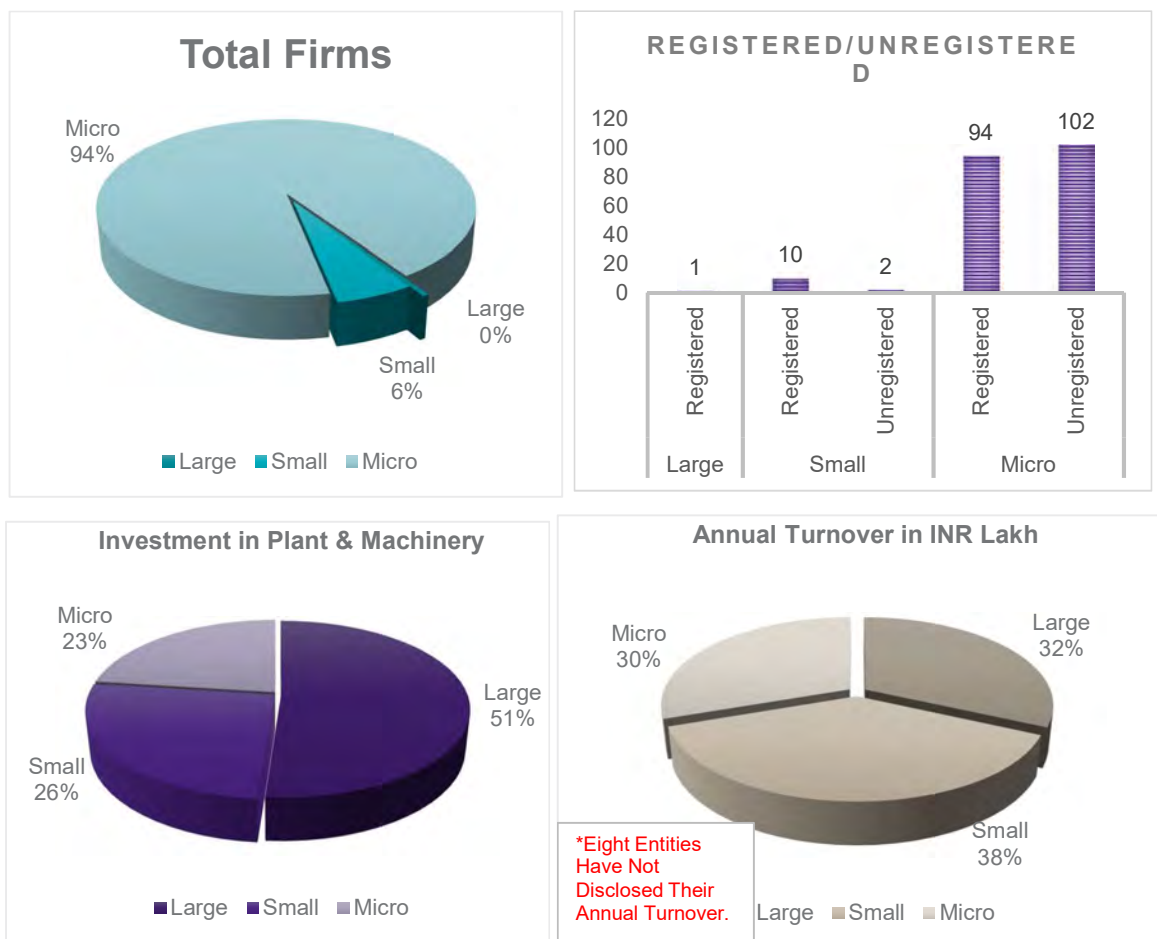
**Private Consultant**

Local consultant namely P.R. Das Consult & Associate, Khatabari, Nalbari, and Sarma Associate, Hajo Road Nalbari provide the technical services related to preparation of DPR, Financial Plan and linkage to the Bank

## 4.2.8 Analysis from Baseline Data

### Baseline Units:

in our baseline survey we found a total 215 agro based active units, out of 215 units 90%, i.e 205 unit is in micro category out of which 94 units are registered and 10 units are not registered. In small category 12 number of units which is 6% of total. Out of these 10 units are registered and 2 units are not registered. Similarly, only 1 large category unit is there in the district which is registered under DICC and other concerned agencies.

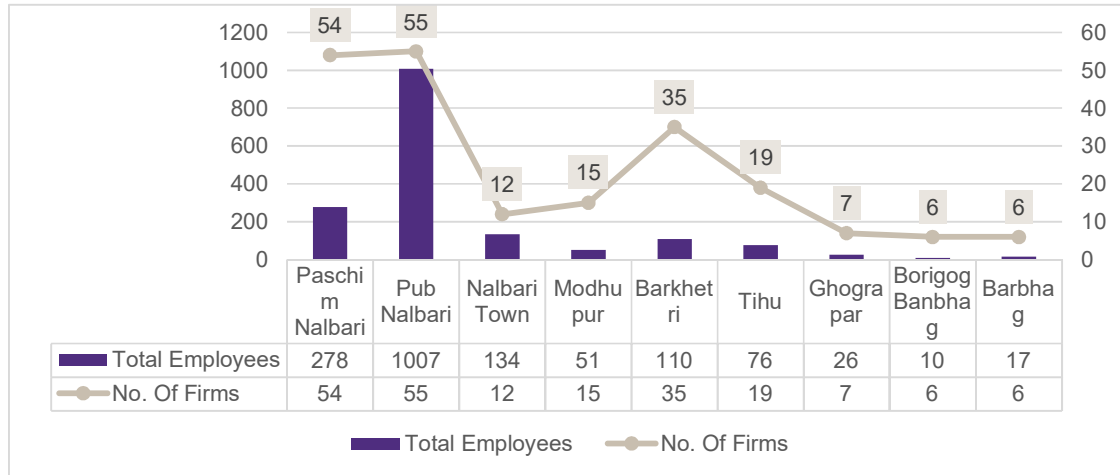


**Category:** From the graphs we can infer that the 51% of the total investment has been made by only one 1 large category unit which has 32% of total turnover of Nalbari district, similarly the Micro units investment is 23% by 205 units with a total turnover of 30% and in small category the investment is 26% by 12 unit whose turnover is 38% of total turnover of district

### Baseline Value chain wise:

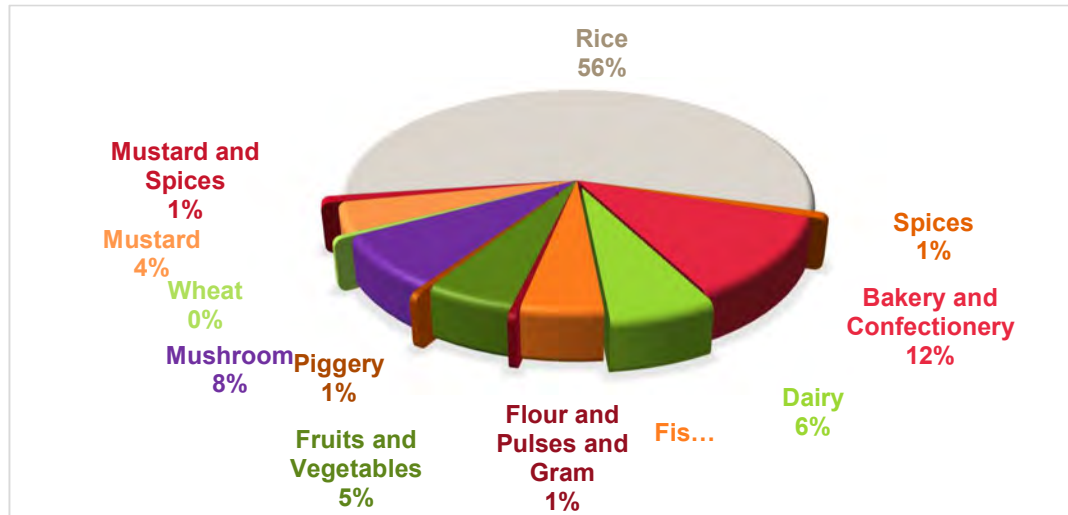
From the baseline analysis we have found in Nalbari 12 numbers of different value chain like rice which has 56% 118 units, Bakery and confectionary has 12% 25 units, Fish has 5% 10 units, Fruits & vegetables has 5% 11 units, Mushroom has 8% 16 units, Mustard has 4% 9 units, spice has 1%

2 units, Dairy has 6% 13 units, and Wheat has 1 units, Mustard and spices has 1% 2 units, Piggery has only 1 unit and Flour and pulse has 1% 1 unit.



**Baseline of Agro Based Processing Units in Block Wise:**

From the two graphs below we can classify the investment, turnover and employment in different blocks; for example Tihu Block has highest turnover of Rs. 238.69 lakhs with investment of Rs. 127.97 lakhs in average of 19 units, which has employment of 76 employees. Similarly, we have found that the Nalbari town has 2nd highest turnover of Rs. 191.25 lakh with investment of Rs. 22.18 lakhs in average of 12 units with employment of 134 employees. Pub nalbari has the highest employment of 1007 employees in 55 units with investment of Rs. 14.28 lakhs and its turnover is 34.54 lakhs.

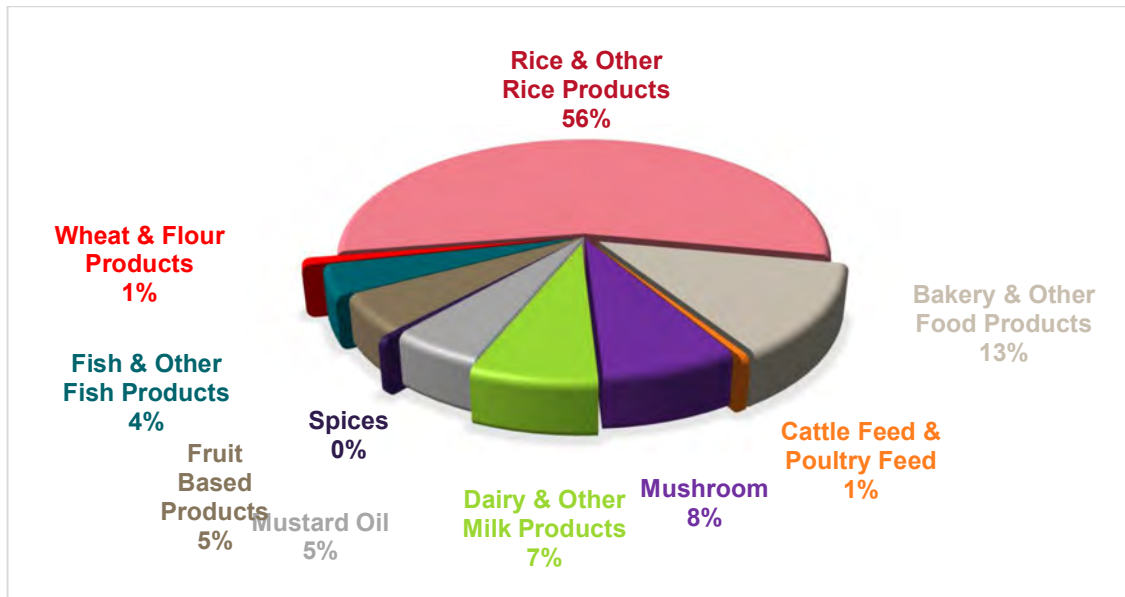


Distribution of employment, Investment and annual Turnover

**Products of Nalbari**

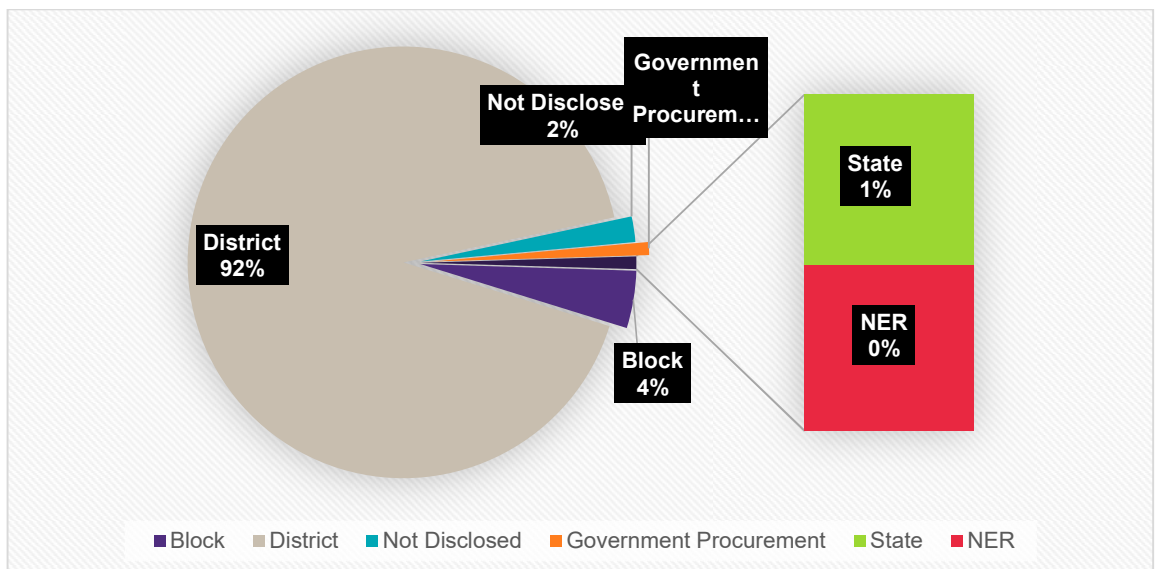
The baseline survey reflects that mainly 12 value chain products irrespective of Micro and small category units are there in the district, The product wise share in the district are 1. Rice 56%, 2.

Bakery & Confectionary 13%, in bakery we found highest value addition for example Bread, Cakes, Biscuits, Veg & Non Veg pastry, Roll cakes etc. **3.** Fruits & Vegetables 5%, has value addition of Pickles, Juice, squash etc. **4.** Spice 0% **5.** Fish 4% **6.** Mushroom 8% **7.** Mustard 5% **8.** Cattle feeds 1%, **9.** Wheat & Flour 1%, **10.** Dairy & other Milk Products 7%.



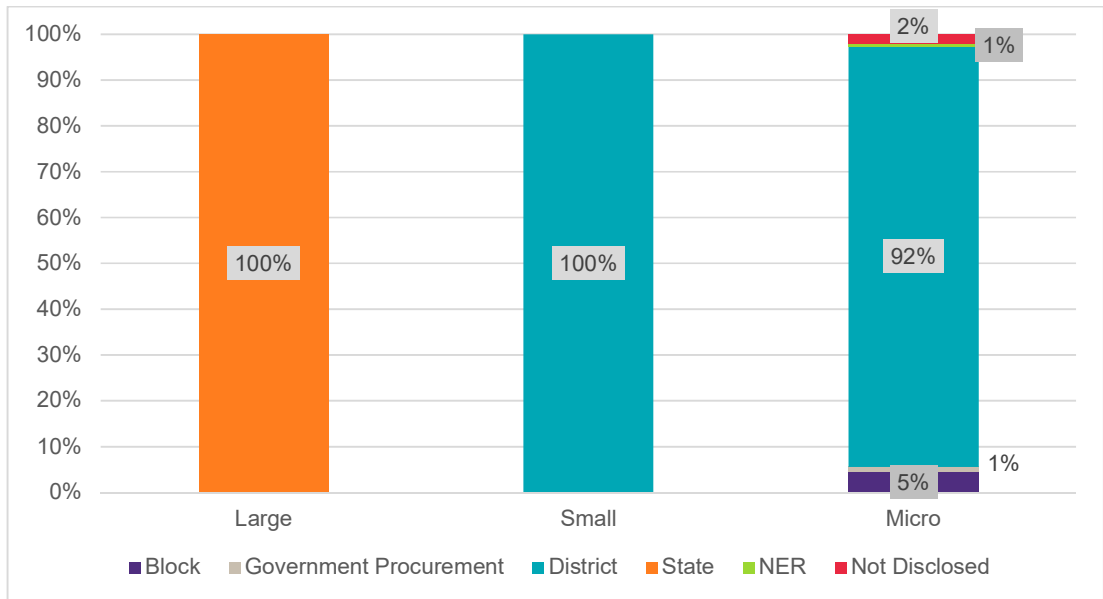
**Market share of Nalbari products:**

The products of the 215 agro based units in the district are mostly in sold in district market only, Around 92% of total production of 192 units are sold in District and 4% of total production is sold in Block by 9 units. Government procurement is only 1% from 2 units.



Total Market share of Nalbari production of 209 units.

Products of Micro units are sold in district 92%, Block 5%, in Govt. procurement 1% and not disclosed market share of micro unit is 2%. In Small category all products of 12 units are marketed in the district only and the production of 1 large unit is supplied into State market through traders.

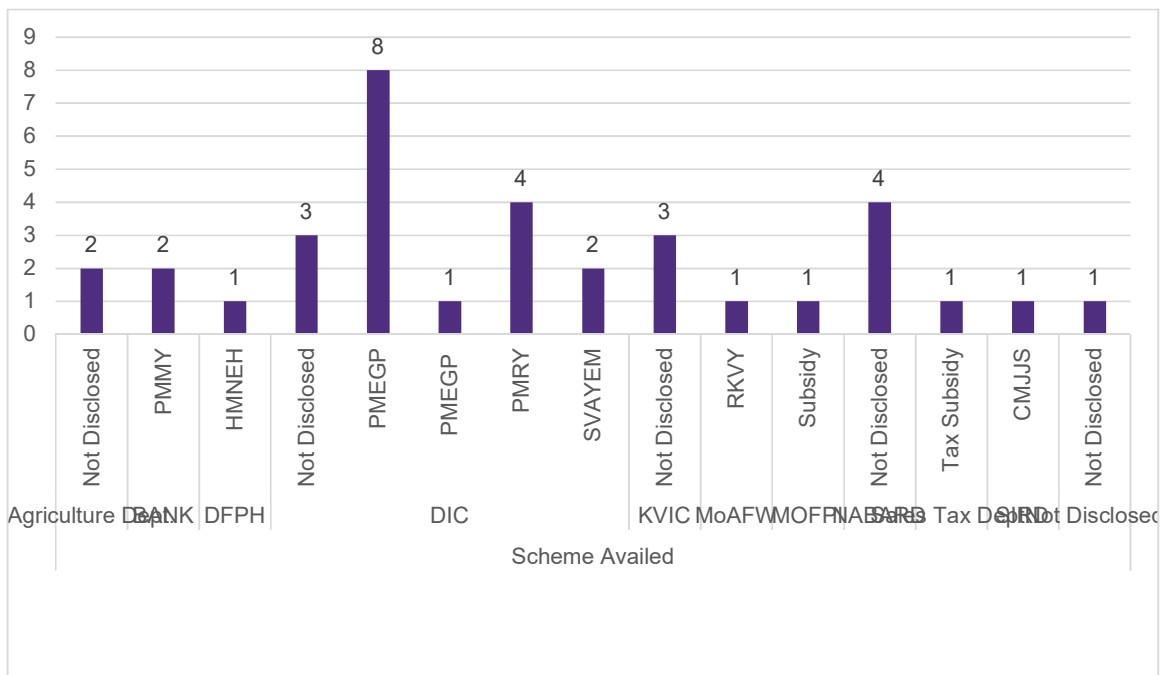


**Schemes availed in districts:**

Regarding scheme most of the total units of Nalbari have availed various types of schemes like PMEGP, PMRY, SVAYEM, Subsidy on tax, electricity etc. here to mention that highest availed scheme is PMEGP given by DICC Nalbari that is number 9 units. Other then DICC there are also some organization which has given schemes and loans to Nalbari units like MOFPI, NABARD, MoAFW, KVIC etc.

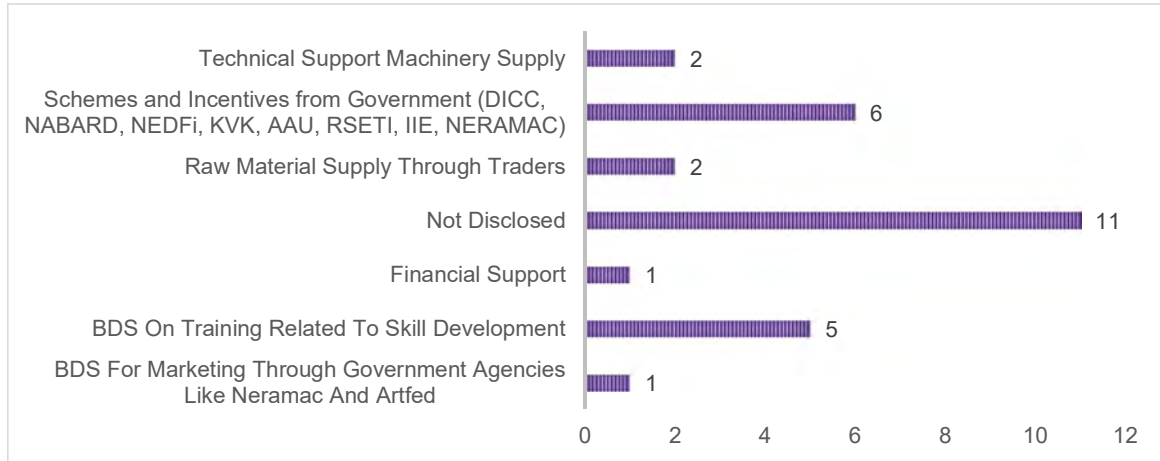
**BDS Availed & BDS required**

In Nalbari district out of 215 units 24 units have availed BDS service from different sources, from the graph below we can understand the BDS services the units have availed and the organization

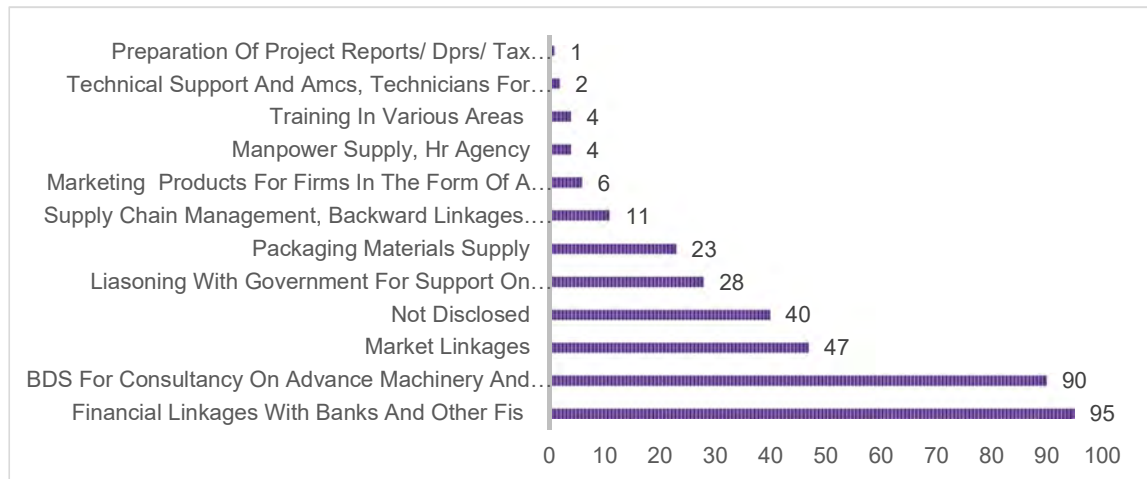


providing BDS services to this unit in Nalbari district. Out of 215 units 185 units need BDS service

in some specific subjects which are given in graph two number graph for example most of the units need financial linkages followed by BDS for consultancy service on advance machinery, market linkages, Liasoning with Govt. training agencies etc.



**CFC required:** In Nalbari District all most all the units of agro based need CFC, they want to get the benefits of CFC for they are also ready to invest their parts for the CFC, from the graph below we have found only 3% units doesn't need CFC benefit in rice value chain.

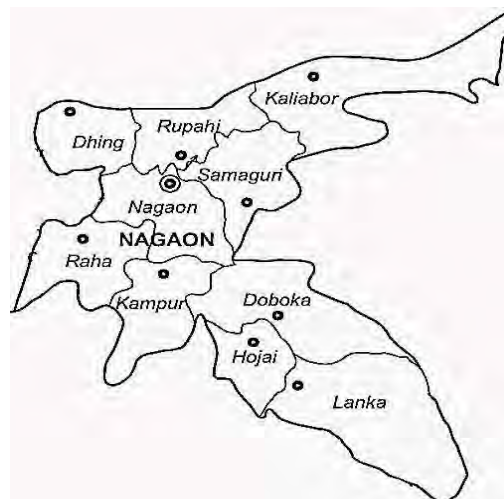




## 4.3 Nagaon

### 4.3.1 Geographic Details of Nagaon District

Nagaon district in Assam lies at the center of the state. It is situated on the southern bank of the river Brahmaputra and lies between 25° 45" and 26° 45" North latitudes and 91° 50" and 93° 20" East longitudes. It occupies an area of 3,973 sq. km. and has a population of 2,823,768 (as of 2011 census). Moreover, it is one of the most populated districts in the state and has a density/km<sup>2</sup> of 711. The district is mostly covered by thick forests and fertile lands with the river Brahmaputra flowing through it. Rice is the staple food of the inhabitants and the key crops grown are paddy, wheat, maize, mustard, vegetables and sugarcane.



The district is bounded by Sonitpur district & the Brahmaputra River in the north, Karbi Anglong and North Cachar Hills in the south, Karbi Anglong and Golaghat district in the east and Morigaon district in the west.

The Kolong river is the main river of Nagaon District which is the Tributary of the Brahmaputra River. There are several beels and marshy areas & swamps. There are several Educational Institutions, a Homeopathic Medical College & Hospital, Nagaon Polytechnique, College of Fisheries, Raha, Bhogeswari Phookani Civil Hospital, ITI, etc.

Nagaon is also famous as it gave birth to the Vaishnavite reformer Mahapurush Shrimanta Sankardeva in Batahraba in Dhing. There is a place called Phulaguri near Raha which was the battleground between British & Assamese. The Nagaon district consists of 3 Sub-divisions, 14 towns, 25 number of development blocks, 314 Gaon panchayats and 1065 revenue villages.

Sub-Divisions	Town	Blocks	Panchayats	Villages
3	14	25	314	1065

The district is connected by all means of transport which include airways, railways, roadways with other districts of Assam & other north eastern states of Assam. The Nagaon district has three national highways viz. NH-36, NH-37 & NH-54 connecting the other districts of Assam district and also with other north eastern states of Assam. There are 3 railway stations in Nagaon and nearby Airport is Tezpur and Guwahati

SL	Particulars	Total No.'s	Details
1	National Highway	3	NH-36, NH-37, NH-54
2	Railway Station	3	Nagaon Town, Haiborgaon & Hojai Station
3	International Airport	1	Lokpriya Gopinath Bordoloi International Airport
4	Domestic Airport	1	Tezpur Airport

### 4.3.2 Demographic Details

Undivided Nagaon Districts included Nagaon & Hojai districts. But now it is separated into 2 different districts.. The demographic details are as follows:

Description	Nagaon	Hojai
Population	28.26 Lakhs	9.31 Lakhs
Male	14.41 Lakhs	11.68 Lakhs
Female	13.86 Lakhs	11.17 Lakhs
Population Growth	22%	21.22
Area Sq. Km	3993 sq Km	258.21 sq km
Density/km2	711 per sq km	885 per sq km
Proportion to Assam Population		
Sex Ratio (Per 1000)	962	956
Child Sex Ratio (0-6 Age)	964	977
Average Literacy	87.23%	78.93%
Male Literacy	90.58%	71.79%
Female Literacy	83.76%	62.20%
Area Sq. Km	3973	258.21%

Source: Census 2011

### 4.3.3 Economic profile of the District

The economy of the district is basically agrarian with more than 75 percent of population engaged in agriculture and allied activities. Next to agriculture, handloom and weaving is the main industrial activity.

#### Agriculture

Nagaon district is primarily dependent on agriculture and forest products. Main source of income is paddy with surplus production. Rice, wheat, jute, maize, sugarcane are major crops of the district. The district has net and gross cropped areas of 2,17,805 hectares and 417218 hectares respectively, the net cropped area being 57 percent of the total geographical area. About 1,47,410 hectares (63.5%) out of the net cropped areas is put under multiple cropping with an average cropping intensity 192 percent as against 152.43 percent for the state. Besides rice, jute and sugarcane, mustard seed, vegetables etc. are other important agricultural products of the area. Dhing town is surrounded by a fertile area of land which produces jute, rice and mustard seeds abundantly.

#### Industry

The district of Nagaon is practically dependent on agriculture and has not yet assumed a dominant role in industry. Tea manufacturing is the predominant industry in the district. In addition to the tea industry, there are three large scale industries, two medium scale industries in the co-operative sector. In the private sector, one medium scale unit is presently in operation. Important industrial units of the district are as follows.

#### Hindustan Paper Corporation

This is mainly a forest product based unit, the main raw material being bamboo. The items and inputs required in the production of paper may be ancillaries, and also downstream industries can be established with HPC's surplus caustic soda and industrial waste like lime, coal ash, etc.

#### The Assam Spun Silk Mill

This was set up to consume the locally available Eri and Muga and also to supply the weavers with Spun Silk yarns. Ancillary and downstream industry can be developed in tiny sector. As regards

downstream unit, carpet making unit may be encouraged. Small carpentry unit for production of stick and bobbin may be encouraged.

#### Assam Co-operative Jute Mill

Nagaon is one of major jute growing areas of the country. A few cottage and household industries for producing jute bags, jute carpet and wall hangings may be set up for encouraging local prospective artisans with definite marketing arrangements. Highest concentration of agro-based industries is found in and around Nagaon town. Forest based units are also mainly concentrated in and around Nagaon town. Among the forest based units, saw mills have their dominance. Other forest based industries are Agarbatti, wooden furniture, cane and bamboo products manufacturing units.

#### Handloom and handicraft industries

Jute and tea are two important export items of the district. Timber and cotton are the principal exports of this important trade centre. Hojai is a principal wholesale market for rice and known as the granary of Assam. Agor industry of Hojai is another important one. Dry fish is one of the important items going out from Jagiroad to a number of locations of this region.

#### District Income

In Nagaon agriculture has been the largest contributor. But now the services sector is also growing along with manufacturing and other industrial activities. Yet, the primary sector is the largest contributor followed by the tertiary (service) and secondary (manufacturing industries) to the District Gross Domestic Product in (DGDP)

### 4.3.4 Agriculture Production Scenario/Trend

The district ranks first in Assam for egg production in 2017-18. The district produced 4,71,89,185 units of egg and ranked third in milk production by producing 77,464 MT of milk in 2017-18. The district witnessed an average annual growth rate of 12% in fish production from 2014-15 to 2017-18 and produced 40647 MT of fish.

The major products of Nagaon Districts are Paddy, Mustard Seeds, Vegetables, Maize, Turmeric, Ginger & fruits. For the Upliftment of Agriculture production in Nagaon, the dept. of Agriculture, Nagaon has taken various steps for uninterrupted production of paddy for the whole year. According to 2011 Census, over 346,000 are cultivators and over 196,000 are agricultural labourers. Nagaon has mainly fertile land with majority of the population concentrated in cultivation of rice with dairy, pisciculture, tea cultivation and poultry farming. Some of the other key crops grown in the district are wheat, maize, mustard seeds and sugarcane.

Additionally, most of the rabi crops grown in the state of Assam, are grown exclusively in Nagaon. Among them, summer rice, pulses and oilseeds are the most common and constitute the major food crops for the district as well as state. Rabi vegetables are also grown by farmers in the district, however they are mostly grown for commercial purposes. The production of key agricultural commodities is presented in the chart below.

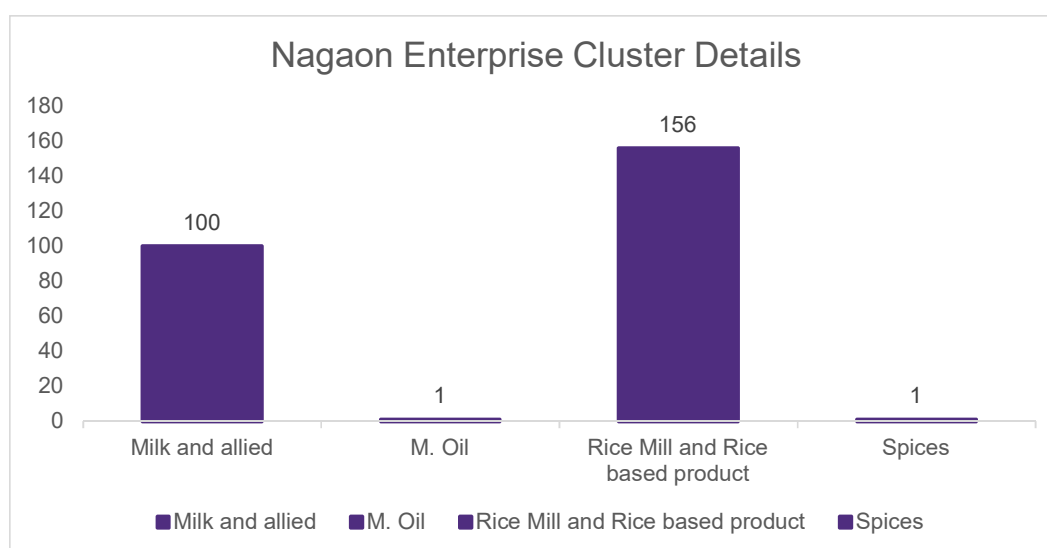
### 4.3.5 Industrial Infrastructure Details

Nagaon has an industrial estate, an IID as well as a TCPC at Kathiatali.

Name of Industrial Infrastructure	Open Space (Sq. M)		
	Total Open Space	Open Space Allotted	Space Available for Allotment
IID Bhomoraguri / Naltali	104364	10000	94364
Industrial Estate, Senchowa	8304.27	7839.59	464.68

### 4.3.6 Key Agriculture Based Industries

The district has 1850 registered industrial units including a large number of medium and large enterprises i.e. 57. There are a total of 283 Agro based industries, which include a large number of rice mills.



The concentration of Micro & Small industry in Nagaon is geographically scattered. In Nagaon there are 749 units comprising of Micro, Small & Medium Enterprises. As the production of Paddy is more in Nagaon there are around 504 units of Rice Mill in Nagaon. Listed below are the bifurcation of Units of each value chain comprising of Micro, Small & Medium scale Enterprises.

SL	UNITS	TOTAL
1	Bakery	43
2	Chira Mill	8
3	Dairy	8
4	Flour Mill	16
5	Food Processing Unit	86
6	FPO	2
7	Oil Mill	14
8	Rice Mill	504
9	Spices	35
10	Fishery	2
11	Mushroom	1
12	Maize	27

SL	UNITS	TOTAL
13	Muri	2
14	Channa	1
<b>TOTAL</b>		<b>749</b>

Some of the Small & Medium Scale Enterprises are:

SL	Firm Name	Communication Address	Main Product
1	M/s J.B.Industry	Lakhowa Road,haibargaon,Pin-782002	Mustard Oil
2	M/s Shree Khetawat Flour Mill	Lakhowa Road,haibargaon,Pin-782002	Flour Mill
3	M/s Shree Durga Mustard Oil Mill	Nagaon Town	Mustard Oil
4	M/s Satyam Vedant Agrotech	Barbheti Chariali,Owner	Rice
5	M/s Ganesh Industries Unit-II	Hojai Town	Rice
6	M/s Om Gurumata food products	Kaliabor,Missa	Rice
7	M/s. Borbhuyan Rice Mill	Lanka Town	Rice
8	M/s. Maa Monil Spice Grinding	Sonaribali,Samuguri,Nagaon	Spices
9	M/s. Rainbow Industry	Benganahati,P.O.-Chotahaibor,Near Panchayat office,Nagaon-782003	Fodd Processing Unit
10	M/s. Purnima Jam Jelly Udyog	Borkola,Nagaon-782144	Food processing
11	M/s J.B.Industry	Lakhowa Road,haibargaon,Pin-782002	Mustard Oil Milling

### Export Infra Availability

There is no Export Infra available in Nagaon

#### 4.3.7 Industrial Parks and Contribution to Agro Enterprises

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 optimization of resource use, output management, enhance farmer income, widening of markets, value addition to regional income and employment creation. 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. Most of the agro based industries are engaged in manufacturing or processing of food products. Raw material 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, oil mill, spice grinding, small flour mill, pickle making, unit etc. under food products and allied industries in Assam

#### 4.3.8 Support Institutions

CA Consultant, GST, Income-tax, Sale tax

Name of the person - Samir Das, Ramesh Kumar Rathi, Mr. Sameer Das, Swati Bagaria

Company Name – Samir Das & Associates, U.K. Rathi & Co., Saha Tax consultants & Company, Swati Bagaria & Associates

The tax consultants and CA firms provide assistance regarding maintaining financial records, auditing statements, and also assisting in filing Income Tax returns

Consultants may further be engaged for providing services related to the preparation of UAN, FSSAI licenses and other registration of industries with Govt. departments. They can also be trained on providing the information on ISO-9001 certifications to appropriate enterprises.

#### **Kisan Vikas Kendra (KVK) - Contact Person-Dr. Niranjan Deka (Head, KVK)**

KVK provides training to farmers on modern agricultural practices in the district. The part of their job role also includes researching on innovative agricultural practices and train the farmers on the same. The KVK at Nagaon organizes short-term and long-term vocational training courses in agriculture and allied sectors for farmers as well as rural youth. They have a special emphasis on generating capable manpower for improving the production on farms as well as utilizing self-employment opportunities. Additionally, the KVK operates a knowledge network that farmers can utilize in order to stay up to date on the latest developments in the agriculture sector. Through KVK, training can be arranged for Fruits and vegetables processor in the district.

#### **CTCC (Community Canning & Training center) – Contact person - Mr. Bishnujit Paul Choudhury**

CTCC is providing training to the food processing units' entrepreneurs on jam, jelly, pickles, squash and also provide packing materials to the units. It provides training to ladies and housewives throughout the state for preservation of fruits and vegetables. The following are the services provided by the CTCC:

- Home scale preservation and canning of seasonal fruits and vegetables under technical expert with his supervision and guidance for consumption in lean periods
- Encourage the preparation of value added produce such as Jam, Jelly, Squash, Juice, Sauce, Chutney, Pickles etc. at nominal charges
- Impart training on home scale preservation of fruits and vegetables for 1 day, 3 days and 6 days to the ladies, housewives through various organizations like Mahila Samiti, SHG, College girls etc. especially in rural areas (Dairy processing comes under 1-day training)
- Train individuals to start small scale cottage industries for fruits and vegetables for self-employment. The duration of these training will be of 7 to 15 days.
- Provide certificates to trained personals so that they can start their own enterprise

#### **College of Fisheries Science, Contact person-Mr.Siddique Fishery Development officer**

The Assam Agricultural University has set up a College of Fisheries Science in Raha Gaon in the district of Nagaon. The college believes that the entire North East region is deficient in fish production and reforms need be undertaken in order to scientifically manage and utilize the available resources. Therefore, it aims to produce technically adept manpower that has the ability to develop the fisheries sector and realise the potential for aquatic activities that the North East region of India offers. Additionally, the college offers assistance to and conducts training activities for the Directorate of Fisheries. It also has assistance from National Fisheries Development Board (NFDB) and working on the fish diseases, promote livelihood through fish drying, development of fish products and develop management policy for native fish species.

**Industrial Training Institute (ITI), Nagaon, Contact person - Mr. Ambi Ram Malakar (Sr. Principal)**

It is located at Sankar Mission Road, Nagaon. The ITI at Nagaon has been recognized as a “Centre of Excellence” by the government of India for developing the IT sector in the state of Assam. Additionally, the institute has a Food Processing Unit, which works to bring the latest technologies in food processing for the Nagaon district as well as the rest of Assam. The institute also works in collaboration with private companies in order to provide training opportunities for its students as well as manpower for various industries.

**Regional Agriculture Research Station (RARS). Contact person - Mr.R.P.Sharma**

This station was initially established to work on pulse crops, oilseed crops and jute under the State Department of Agriculture. The station was transferred to the University in 1973 and was reorganized in 1980 as the Regional Agricultural Research Station for the Central Brahmaputra Valley Zone (CBVZ) which comprises of Nagaon and Marigaon districts. The station is responsible primarily for conducting research on pulses, oilseeds, jute and allied fibres and wheat. It also conducts research on boro rice.

**Nagaon Polytechnic - Training for Skill Development.**

Nagaon Polytechnic is the only Technical Institute in the Middle Assam zone. It was established in the year 1960, in the Nowgong district of Assam, India and is providing a Diploma in Engineering under the Department of Technical Education, Govt. of Assam. It has four branches of engineering namely civil, mechanical electrical and computer engineering and all the branches are approved by All India Council for Technical Education (AICTE), New Delhi. The Faculty & supporting staff have requisite qualifications. Few have publications in refereed journals with Ph.D and thus are pursuing such higher qualification. The team spirit among the staff is one of the significant factors. Through their consorted effort the institute has performed numerous academic and non-academic events in fruitful manner. The in house campus interview is another beauty of this institute which has shown enough success for the placement of the students. Regular training & placement at different sectors have raised the prospect of the ongoing academic activities in this institute. Experienced senior faculty members are looking after this important matter keeping a close contact with the Principal. The institute has been maintaining consistently satisfactory performance in academic result. Majority of the student securing good academic performance usually take up the degree engineering as higher study.

IA with support of them can arrange short term training on repairing and maintenance of Plant and Machinery of Rice Mill, Fruits and Vegetables processing, Bakery and confectionery.

**Machine Suppliers** - M/s Prakash Engineering, M/s Gouri Shankar Khatuwala & Sons are currenting providing machinery based on the existing technologies. However, they may also be engaged in providing high quality technologies through exposure visits and linking with the manufacturers.

**United Bank of India** – UBI is the lead bank in the area is the United Bank of India. The bank offers various loans and other financial services that aid the growth and development of the farming and MSME sector in the district.

#### 4.3.9 Analysis from Baseline Data

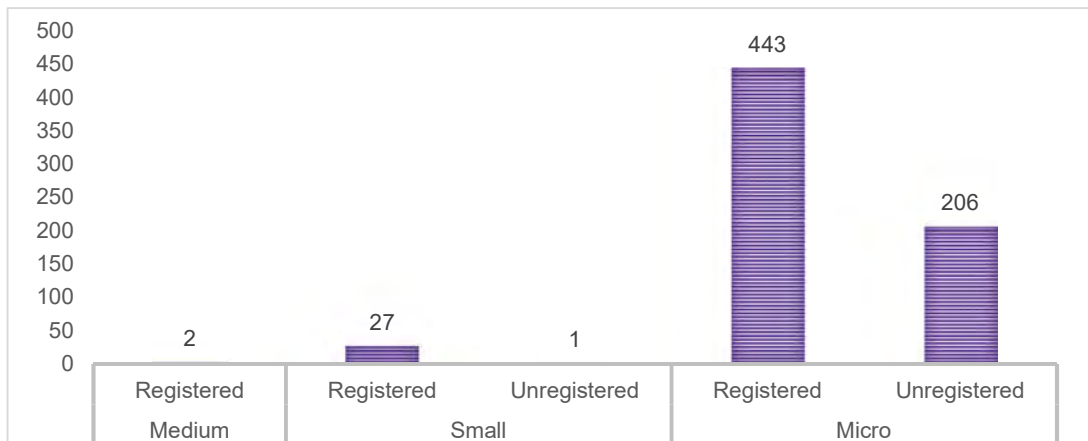
##### Baseline Units

As per the Baseline survey there are 679 units in Nagaon District. Out of 679 units visited, 3 units (Micro-1 unit, Small-2 Units) are operating within Industrial Area and 676 (Micro-648 units, Small-26 units & Medium-2 units) are not operating outside Industrial Area.

Under Micro Units, there are 443 registered units & 206 unregistered units, under Small units there are 27 registered units & 1 unregistered units and under Medium units there are 2 registered units. Index is shown in the graph below



There are total 472 Registered Units (Micro-443 Units, Small-27 Units, Medium-2 Units ) & 207 Unregistered Units (Micro-206 Units & Small-1 Unit). Index is shown in the graph below



**Block wise Contribution**

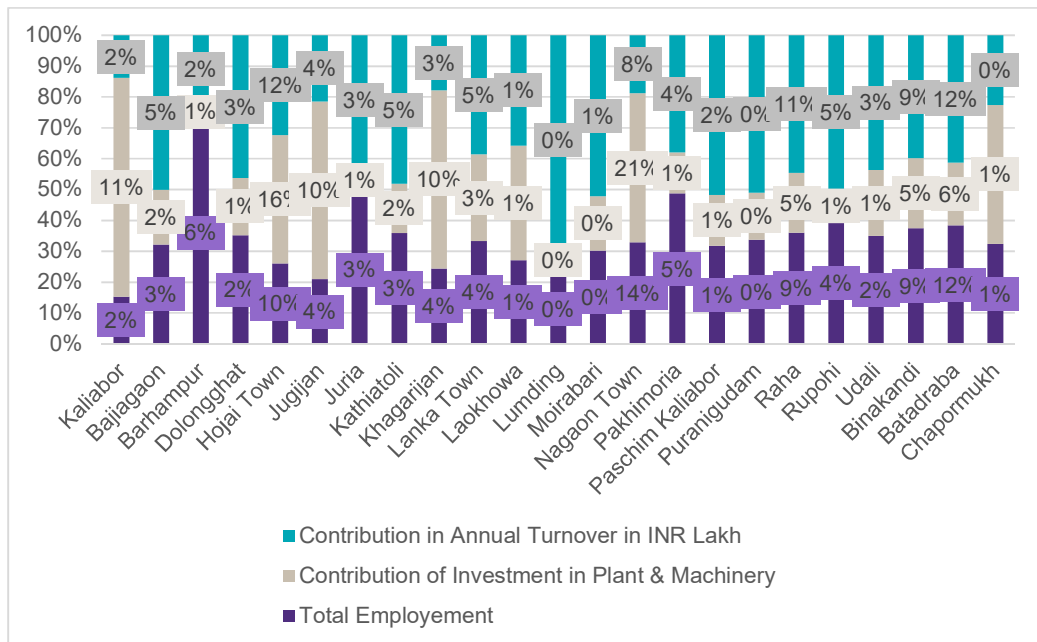
Nagaon district has 23 blocks. In the chart we have indexed 3 areas through chart viz. Contribution of Investment in Plant & Machinery, Contribution in Annual Turnover & Total Employees.

Total Employees blockwise are as follows Kaliabor block-2% (50 nos.)Bajiagaon block-3%(64 nos), Barhampur block-6%(121 nos),Dolonghat block-2%(46 nos.),Hojai town-10%(202 nos),Jugijan block-4%(74 nos.),Juria block-3%(66 nos),Kathiatoli block-3%(70 nos),khagirajan block-4%(87 nos),Lanka town block-4%(81 nos),Laokhowa block-1%(16 nos),Lumding block-(3 nos),Moirabari block-(7 nos),Nagaon Block-14%(296 nos),Pakhimoria block-5%(101 nos),Paschim kaliabor-1%(26 nos),Puranigudam-(2 nos),Raha-9%(178 nos),Rupohi block-4%(81 nos),Udali block-2%(46),Binakandi block-,9%(182 nos),Batadraba block-12%(237 nos),Chapormukh block-1%(13 nos)

Contribution of Investment in Plant & Machinery(in lakhs) blockwise are as follows Kaliabor block-11%(640.7), Bajiagaon block-2%(97.68), Barhampur block-1%(28.92), Dolonghat block-1%(66.95), Hojai town-16%(891.4), Jugijan block-10%(563.76), Juria block-1%(36.65), Kathiatoli block-2%(85.25) khagirajan block-10%(569.37), Lanka town block-3%(189.16), Laokhowa block-1%(60.75), Lumding block-(3.5), Moirabari block-(11.3), Nagaon Block-,21%(1200.35), Pakhimoria block-1%(75.95), Paschim kaliabor-1%(37.12), Puranigudam-(2.5), Raha-5%(263.9) , Rupohi block-1%(63.25), Udali block-1%(77.4), Binakandi block-5%(304.75), Batadraba block-6%(347.07), Chapormukh block-1%(50)

Contribution in Annual Turnover (In lakhs) blockwise are as follows Kaliabor block-2%(15),Bajiagaon block-5%(33),Barhampur block-2%(12),Dolonghat block-3%(20),Hojai town-12%(83),Jugijan block-4%(25),Juria block-3%(19),Kathiatoli block-5%(31),khagirajan block-3%(21),Lanka town block-5%(31),Laokhowa block-1%(7),Lumding block-(3),Moirabari block-1%(4),Nagaon Block-8%(56),Pakhimoria block-4%(26),Paschim kaliabor-2%(14),Puranigudam-(1),Raha-11%(73),Rupohi block-5%(34),Udali block-3%(19),Binakandi block-9%(64),Batadraba block-12%(84),Chapormukh block-(3)

Index is shown in the graph below



Block Average Turnover –Investment –Total Units  
Units covered blockwise are as shown below

Block Name	No. of Firm
Bajiagaon	33
Barhampur	12
Dolongghat	21
Hojai Town	83
Jugijan	25
Juria	19
Kaliabor	15
Kathiatoli	31
Khagarijan	21
Lanka Town	31
Laokhowa	7
Lumding	3
Moirabari	4
Nagaon Town	56
Pakhimoria	26
Paschim Kaliabor	14
Puranigudam	1
Raha	73
Rupohi	34
Udali	19
Binakandi	64
Batadraba	84
Chapormukh	3
<b>Grand Total</b>	<b>679</b>

Break-up of Average of Investment in Plant & Machinery Block-wise are shown below.

Block Name	Average of Investment in Plant & Machinery (in INR Lakh)
Bajiagaon	2.96
Barhampur	2.41
Dolongghat	3.19
Hojai Town	10.74
Jugijan	22.55
Juria	1.93
Kaliabor	42.71
Kathiatoli	2.75
Khagarijan	27.11
Lanka Town	6.10
Laokhowa	8.68
Lumding	1.17
Moirabari	2.83
Nagaon Town	21.43
Pakhimoria	2.92
Paschim Kaliabor	2.65
Puranigudam	2.5
Raha	3.62
Rupohi	1.86
Udali	4.07

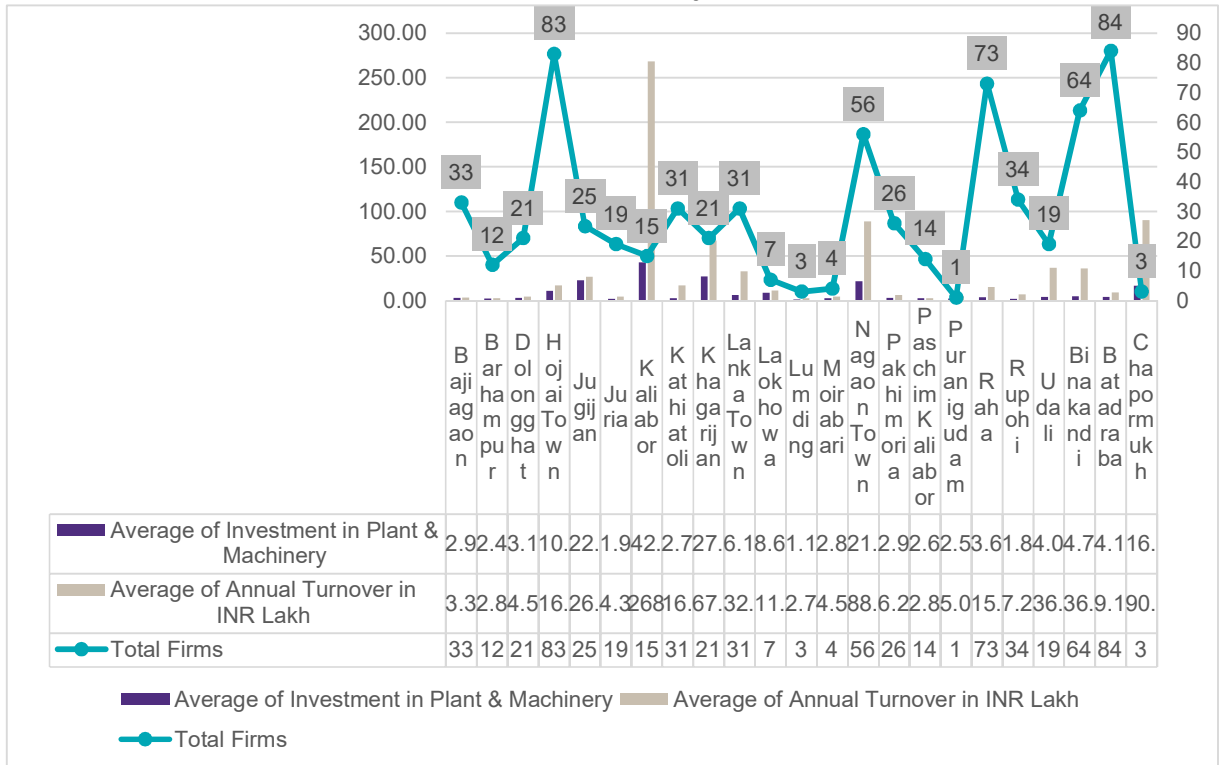
Binakandi	4.76
Batadraba	4.13
Chapormukh	16.67

Break-up of Average of Annual Turnover in INR Lakh Blockwise are shown below.

Row Labels	Average of Annual Turnover in INR Lakh
Bajiagaon	3.36125
Barhampur	2.818181818
Dolongghat	4.54
Hojai Town	16.87682927
Jugijan	26.5328
Juria	4.3
Kaliabor	268.2866667
Kathiatoli	16.7683871
Khagarijan	67.23333333
Lanka Town	32.818
Laokhowa	11.1
Lumding	2.733333333
Moirabari	4.5
Nagaon Town	88.63645833
Pakhimoria	6.2508
Paschim Kaliabor	2.852857143
Puranigudam	5
Raha	15.31328767
Rupohi	7.218787879
Udali	36.78947368
Binakandi	36.06190476
Batadraba	9.187804878
Chapormukh	90
<b>Grand Total</b>	<b>28.88630699</b>

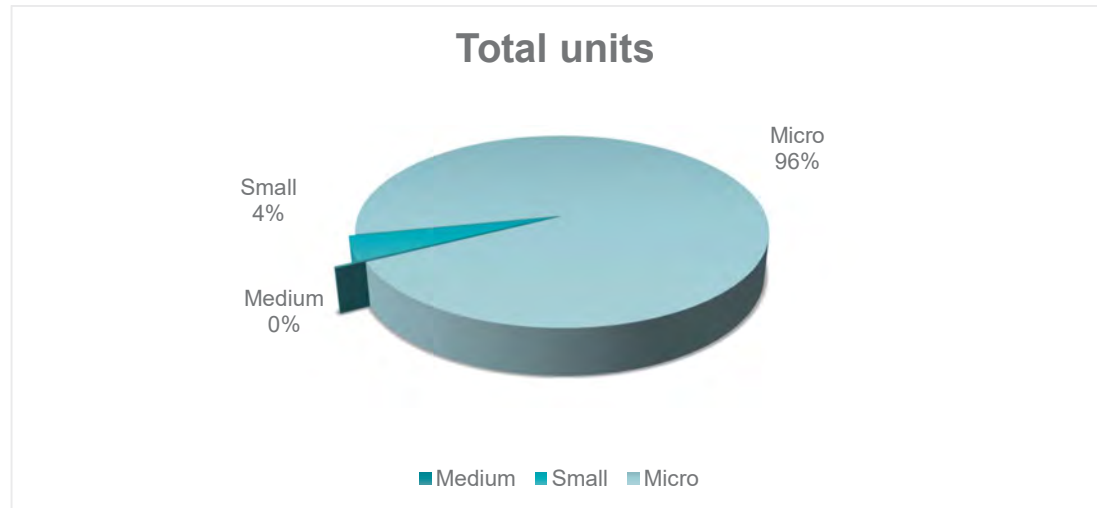
Index is shown in the graph below

Sum of Total Units, Investment in Plant & Machinery, Sum of Annual Turnover in INR lakh &

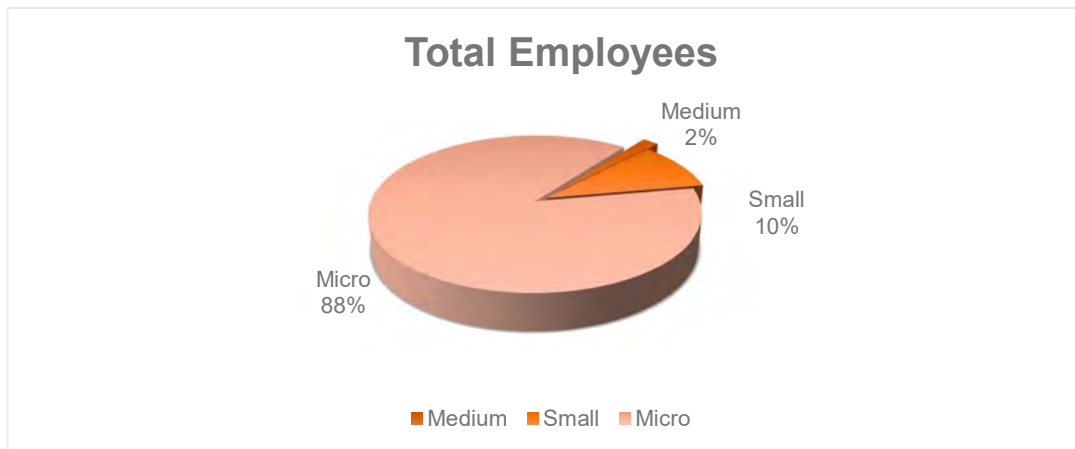


### Sum of Total Employees

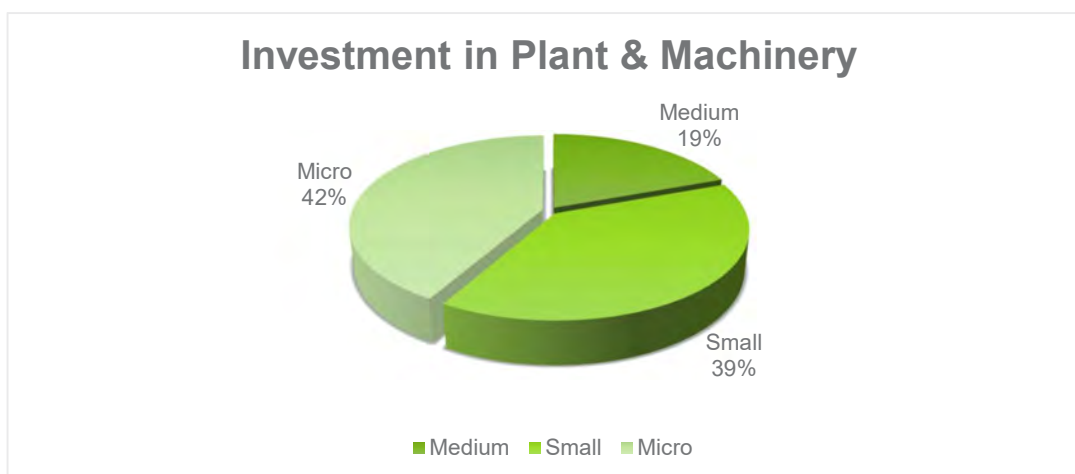
Total Units: Out of 679 units there are 96%(649 Units) are Micro, 4%(28 units) are Small & 0% (2 units) are Medium. Index is shown in the graph below



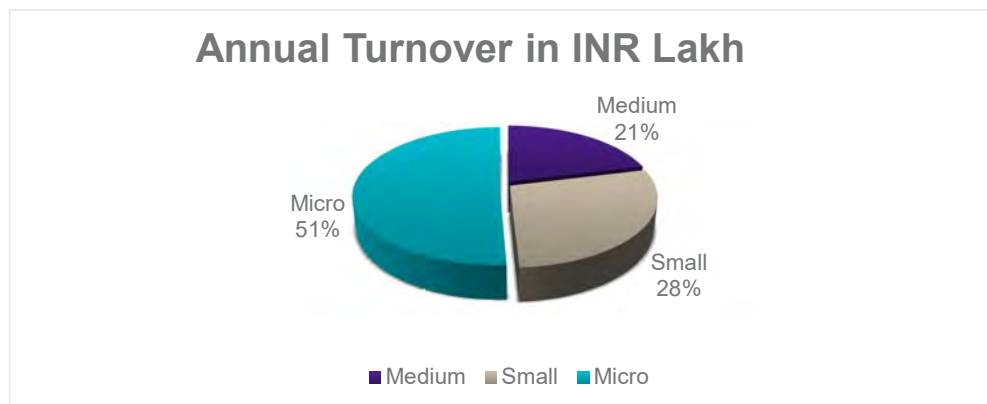
Total Employees: There are 88% (1804 nos.) are Micro unit employees, 10% (206 nos.) are Small unit employees & 2% (39 nos.) are Medium unit employees. Index is shown in the graph below



**Investment in Plant & Machinery (INR Lakh):** For Micro units investment in P&M is 42% (2364), Small Units investment in P&M is 39%(2203.68) & Medium Units investment in Plant & Machinery is 19% (1100). **Index is shown in the graph below**

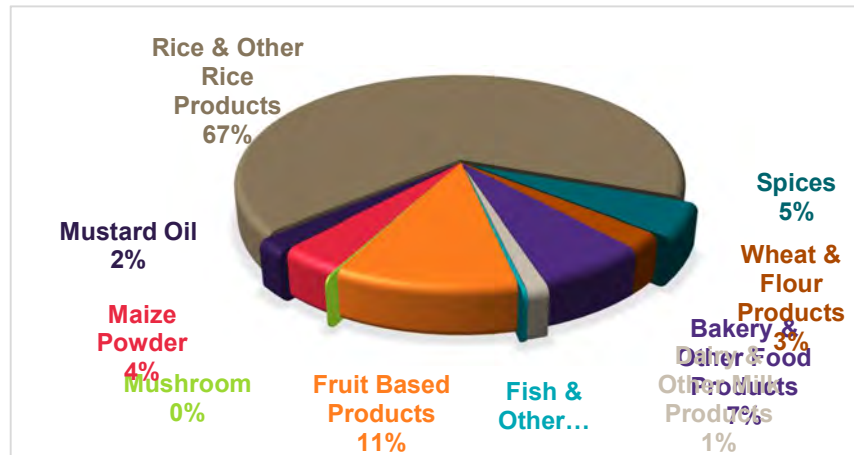


**Annual Turnover in INR Lakh:** Annual Turnover for Micro Units is 51%(9650.19), Small Units is 28%(5342) & Medium Units is 21%(4015). **Index is shown in the graph below**



## Products

There are 10 different products which is being identified in Nagaon District. There are 67% of Rice & other rice products (452 units), 7% of bakery & other food products (47 units), 11% of Fruit based products (76 units), 3% of wheat & flour products (16 units), 1% of dairy & milk products (9 units), 5% of spices (35 units), 2% units of mustard oil (14 units), 4% of Maize Powder (27 units), 2 units of Fish & other Fish Products & 1 unit of Mushroom.



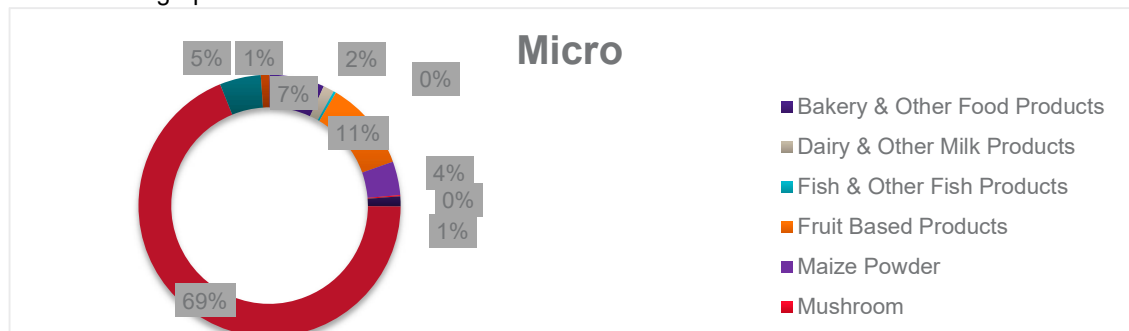
Product-wise Units are shown in Pie-chart.

## Product wise Category of Nagaon District

Here we will highlight product wise category of each units which fall under Micro, Small, medium & Large.

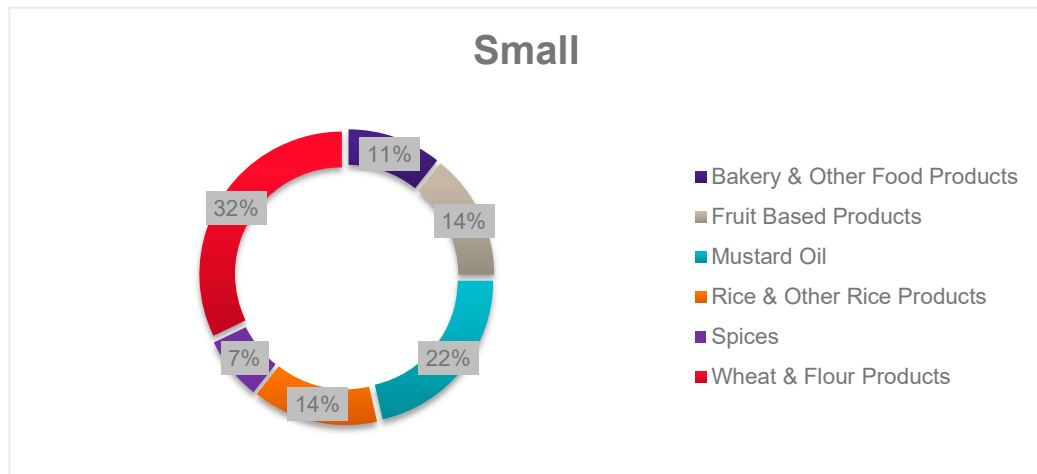
### Micro Units:

There are about 7% of Bakery & other Food Products (44 units), , 2% of Dairy & other Milk products (9 units) , Fish & other fish products (2 units), 11% of Fruit Based Products (72 units), 4% of Maize Powder (27 units), Mushroom (1 unit), 7% of Mustard Oil (8 units), 69% of Rice & other Rice products (446 units), 5% of Spices (33 units), 1% of Wheat & Flour Products (7 units). Index is shown in the graph below



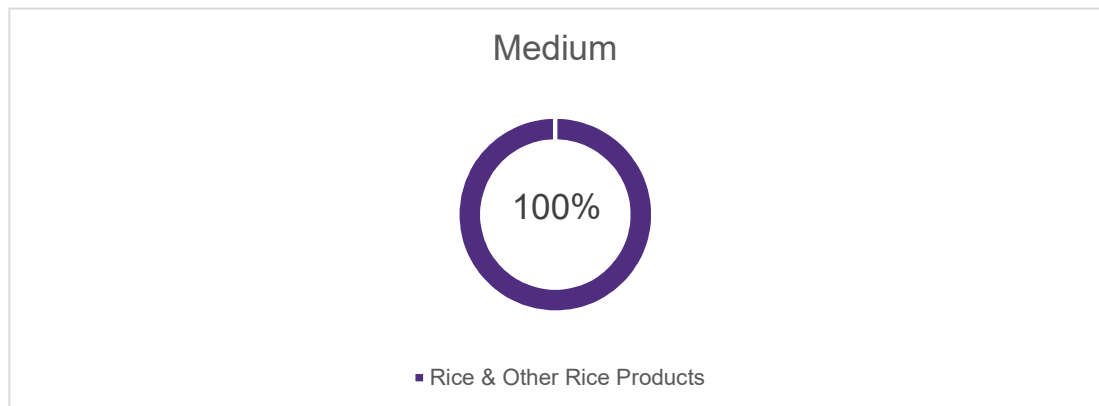
### Small Units

There are about 11% of Bakery & other Food Products (3 units), 14% of Fruit Based Products (4 units), 22% of Mustard Oil (6 units), 14% of Rice & other Rice products (4 units), 7% of Spices (2 units), 32% of Wheat & Flour Products (9 units). Index is shown in the graph below



### Medium Units

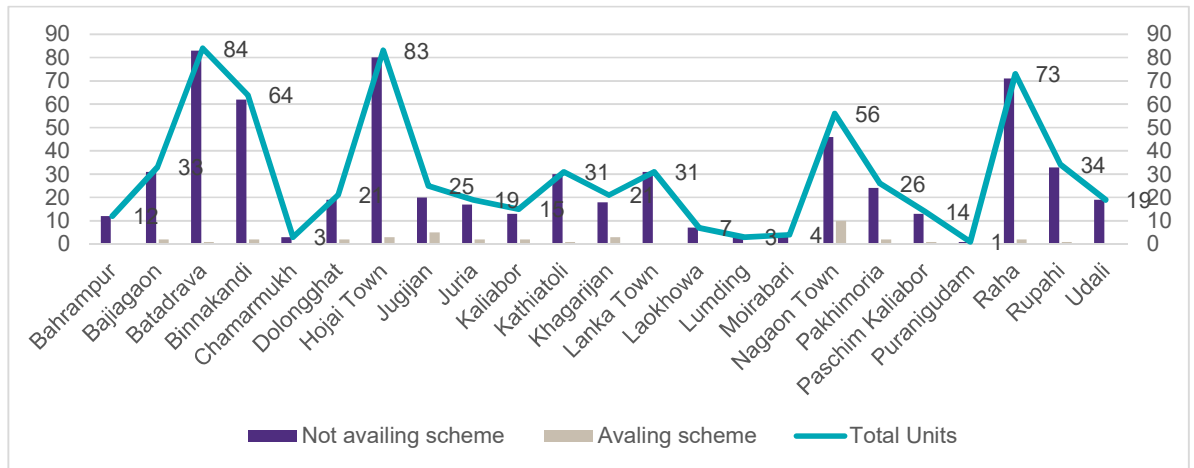
There is 100% of Rice & other Rice products (2 units). Index is shown in the graph below



### Block wise scheme of Nagaon District

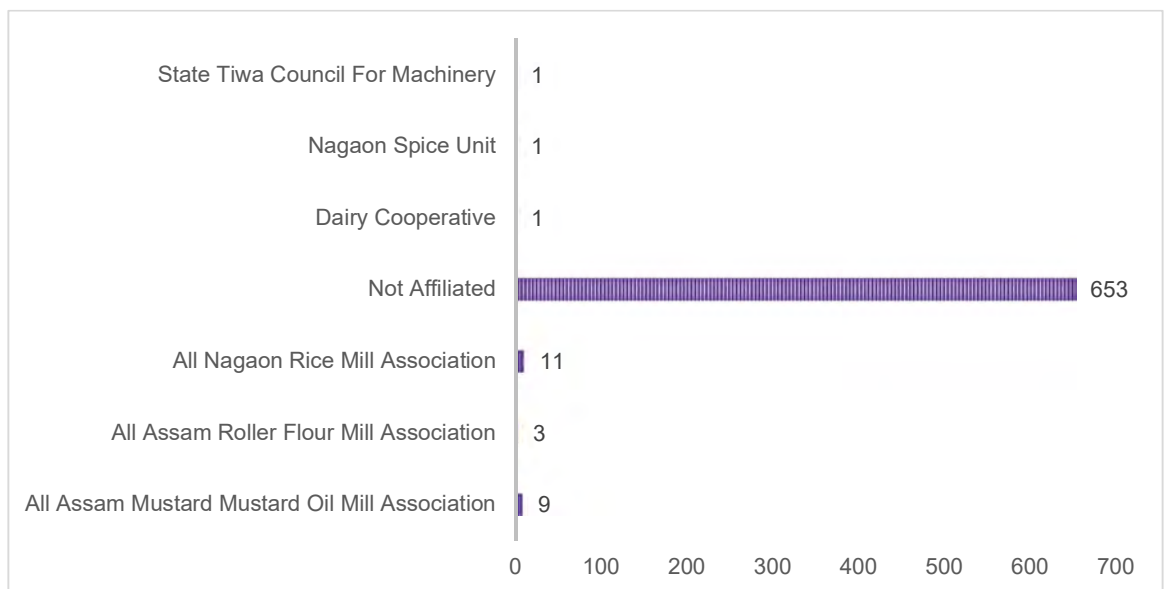
Out of 679 units 39 units availed schemes and 640 units didn't avail any schemes. Availing schemes- Kaliabor block- 2 units, Bajiagaon block-2 units, Dolonghat block-2 units, Hojai town-3 units, Jugijan block-5 units, Juria block-2 units, Kathiatoli block-1 unit, khagirajan block-3 units, Nagaon Block-10 units, Pakhimoria block-2 units, Paschim kaliabor-1 units, Raha-2 units, Rupohi block-1 unit, Binakandi block-2 units, Batadraba block-1 unit.

Not Availing Schemes-Kaliabor block- 13 units, Bajiagaon block-31 units, Barhampur block-12 units, Dolonghat block-19 units, Hojai town-80 units, Jugijan block-20 units, Juria block-17 units, Kathiatoli block-30 units, khagirajan block-18 units, Lanka town block-31 units, Laokhowa block-7 units, Lumding block-3 units, Moirabari block-4 units, Nagaon Block-46 units, Pakhimoria block-24 units, Paschim kaliabor-13 units, Puranigudam-1 unit, Raha-71 units, Rupohi block-33 units, Udali block-19 units, Binakandi block-62 units, Batadraba block-83 units, Chapormukh block-3 units. Index is shown in the graph below



### Association

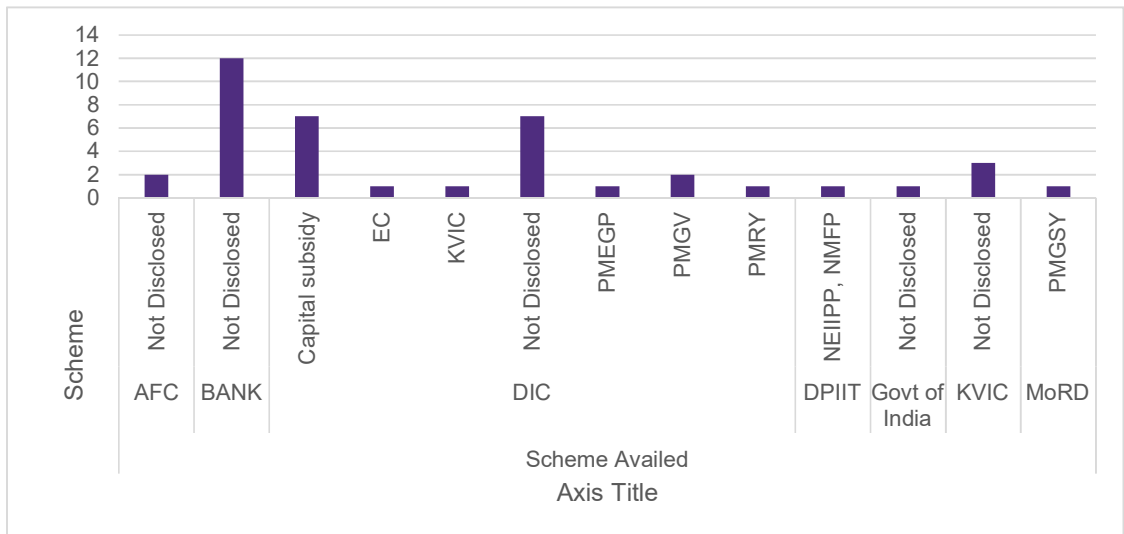
In Nagaon district 26 units are affiliated with any association/cluster/Gaon Panchayat. 1 unit is affiliated to State Tiwa Council for Machinery, 1 unit is affiliated to Nagaon Spice Unit, 1 unit is affiliated to Dairy Cooperative, 11 units are affiliated to All Nagaon Rice Mill Association, 3 units are affiliated to Kamrup Rani Rice Milling LMP Cluster-1, 1 unit is affiliated to Guwahati Bakery are affiliated to All Assam Roller Flour Mill Association, 9 units are affiliated to All Assam Mustard Oil Mill Association & 653 units are not affiliated to any associations. Index is shown in the graph below



### Scheme Specified

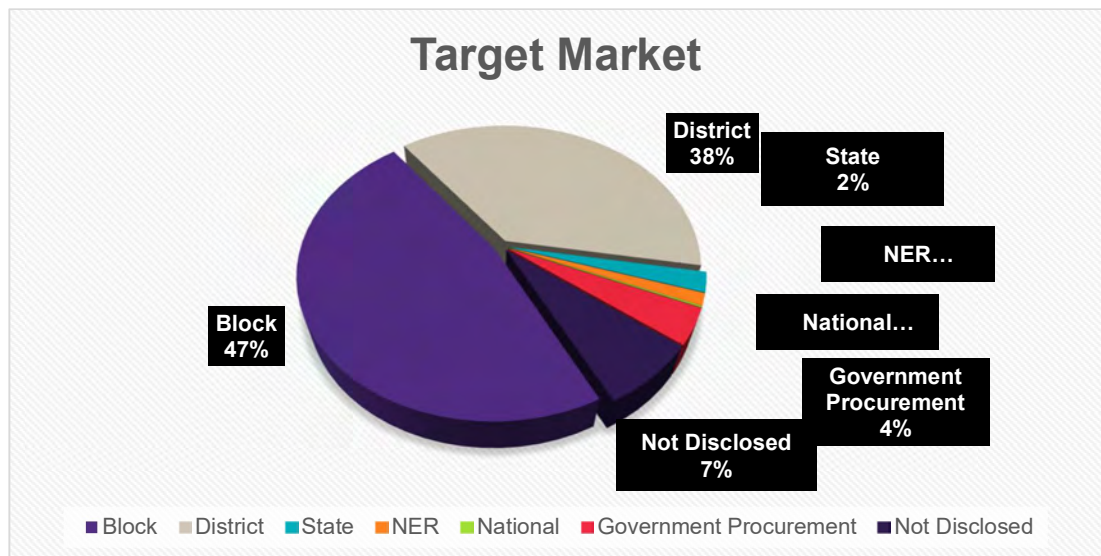
Various Schemes availed by units are indexed in the graph. 2 units availed schemes under AFC, 12 units availed schemes under Banks, Under DIC many units availed schemes are as follows-7 under capital subsidy, 1 under EC, 1 under KVIC, 7 units availed schemes but not disclosed, 1 unit availed schemes under PMEGP, 2 units availed schemes under PMRY, 1 unit availed scheme NEIIP, NMFP

through DPIIT, 1 unit availed scheme from Govt. of India, 3 units availed schemes under KVIC and 1 unit availed schemes under PMGSY through MoRD. Index is shown in the graph below



### Target Market

For Nagaon District, Target market is shown in the graph below. For Block its 47% (321 units), District is 38%(258 units), State is 2%(15 units), NER is 2%(9 units), National 0%(1 unit), not disclosed is 7%(48 units) & Government Procurement is 4%(27 units). Index is shown in the graph below



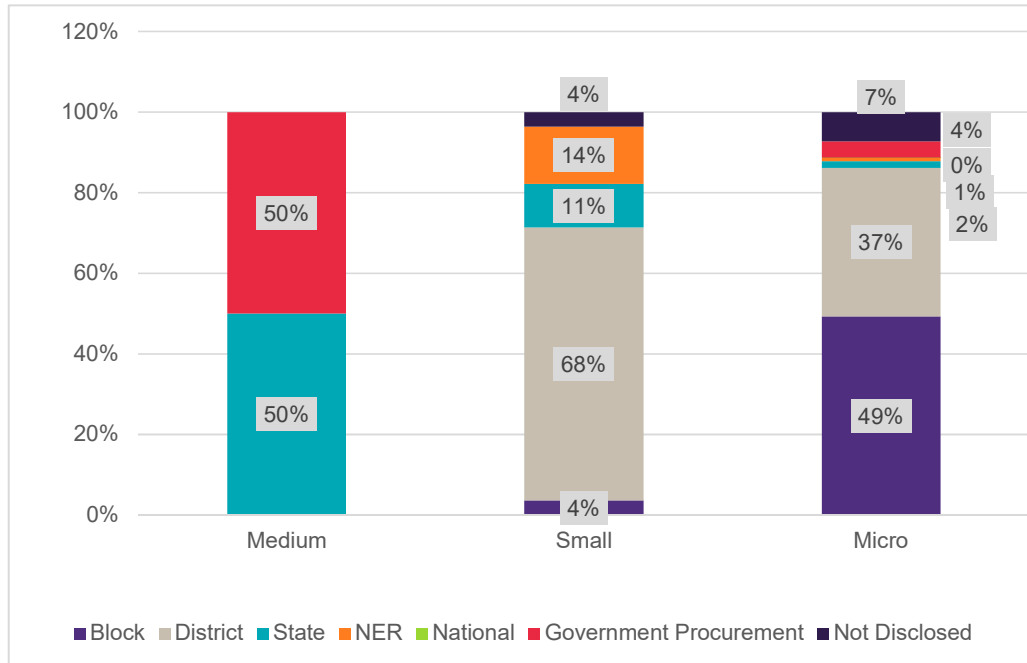
**Target Market-Category wise**

For Nagaon district we have indexed the Target Market Category wise which is shown in the graph below

**Micro Units** : A total 649 of units in Target Market :Block level-49%(320 units), District level-37%(239 units), State-2%(11 units), NER-1%(5 units), National-0%(1 unit), Govt. Procurement-4%(26 units) & Not disclosed-7%(47 units)

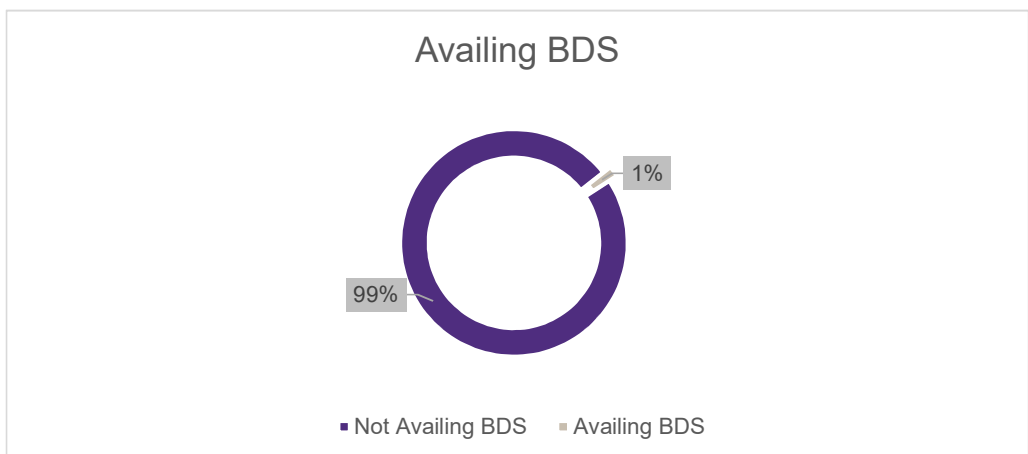
**Small Unit**: We have 28 units in Target Market: Block level-4%(1 unit), District level-68%(19 units), State-11%(3 units), NER-14%(4 units), Not disclosed-4%(1 unit).

**Medium Units**: We have 2 units in Target market : State level-50%(1 unit),Government Procurement-50%(1 unit). Index is shown in the graph below



**BDS**

BDS Availed: In Nagaon district the BDS availed are indexed in the graph below 1%(10 units) are availing BDS and 99%(669 units) are not availing BDS. Index is shown in the **graph below**



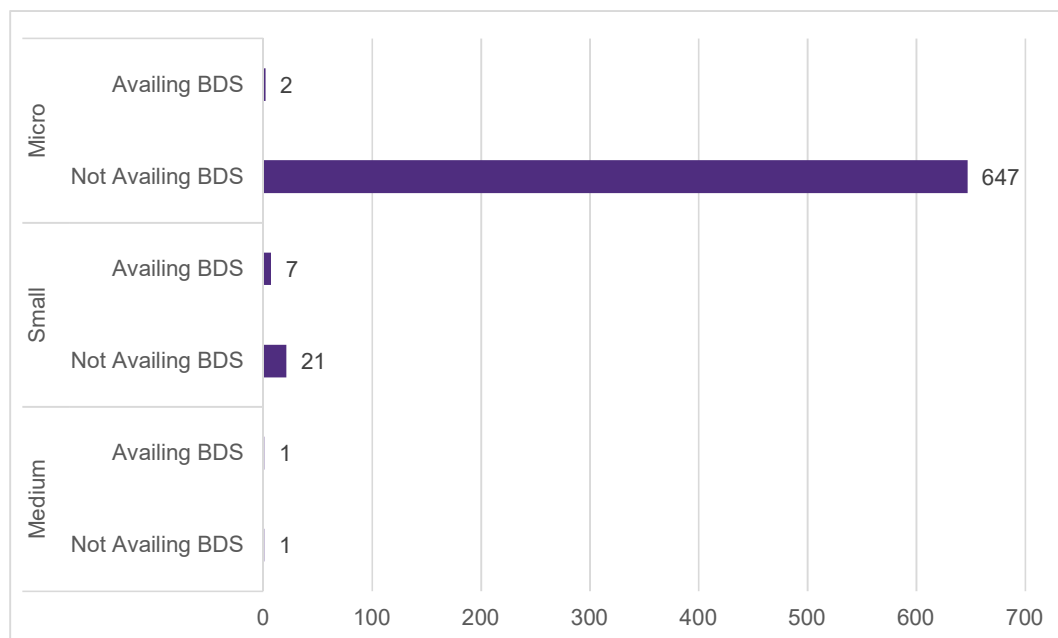
**BDS Aailed Category wise:** In Nagaon district the BDS aailed categorywise is indexed in the graph below:

**Micro Units-**2 units are availing BDS and 647 units are not availing BDS.

**Small Units-**7 units are availing BDS and 21 units are not availing BDS.

**Medium Units-**1 unit are availing BDS and 1 unit are not availing BDS.

Index is shown in the graph below



### Value chain wise CFC

Value Chainwise CFC requirement are as follows

- Bakery & Confectionary-16%(7 units) require CFC & 84%(36 units) don't require CFC.
- Dairy-100%(9 units) don't require CFC.
- Fishery-100%(2 units) don't require CFC.
- Flour and Pulses and Gram-100%(36 units) don't require CFC.
- Fruits & Vegetables-1%(1 unit) require CFC & 99%(74 units) don't require CFC.
- Maize-4%(1 unit) require CFC & 96%(26 units) don't require CFC.
- Mushroom-100%(1 unit) don't require CFC.
- Mustard-100%(14 units) don't require CFC.
- Rice-7%(30units) require CFC & 93%(421 units) don't require CFC.
- Spices-100%(37 units) don't require CFC.
- Wheat-100%(16 units) don't require CFC.

### BDS required specific

In Nagaon BDS required are as follows

- 665 units require BDS for Consultancy On Advance Machinery And Sourcing Asistance
- units require BFS for Financial Linkages With Banks And Other FIs
- 8 units require BDS for Market Linkages
- units require BDS for Preparation Of Project Reports/ Dprs/ Tax Consultancy
- 1 unit require BDS for Supply Chain Management, Backward Linkages. Developing Link With Traders, Suppliers, Farmers

## 4.4 Morigaon

### 4.4.1 Geographic Details of Morigaon District

The Morigaon district is situated in the central part of Assam between 26.150 degrees N and 26.50 degrees N latitude and between 26.50 degrees 92.0 degrees E to 95. 50 degrees E longitude. The district covers an area of 10,83,165 Bighas and 13 Lessas (1450.02 Sq. Kms). The district is bounded by the mighty Brahmaputra on the North, Karbi Anglong district on the South, Nagaon District on the East and Kamrup District on the West.



- Latitude of Morigaon city: 26.15 degrees North
- Longitude of Morigaon city: 92-degree East

The district is connected by all means of transport which include railways (railway station is Jagiroad), roadways with other districts and states of North East region. The district is well connected by NH 37 with the other districts of Assam and States of North East.

There are 7 (Full Blocks 3, part Blocks 4) Blocks in Morigaon District, named Bhurbandha Block, Dulanghat Part Block, Kapili Part Block, Moirabari Part Block, Laharighat Block, Mayang Block and Batatdwa Part Block. There are 85 nos. Gaon Panchayats which falls under the Zilla Parishad, Morigaon.

Sub-Divisions	Town	Blocks	Panchayats	Villages
		7	85	

### 4.4.2 Demographic Details

As per the Directorate of Census Operations in Assam in 2011, Morigaon had population of 957,423 of which male and female were 486,651 and 470,772 respectively. In 2001 census, Morigaon had a population of 776,256 of which males were 398,926 and remaining 377,330 were females. There was change of 23.34 percent in the population compared to population as per 2001. In the previous census of India 2001, Morigaon District recorded increase of 21.35 percent to its population compared to 1991. Average literacy rate of Morigaon in 2011 were 68.03 compared to 58.53 of 2001. As per 2011 census, 92.34 % population of Morigaon districts lives in rural areas of villages. The total Morigaon district population living in rural areas is 884,125 of which males and females are 449,123 and 435,002 respectively. In rural areas of Morigaon district, sex ratio is 969 females per 1000 males.

Description	2011
Population	9.57 Lakhs
Actual Population	957,423
Male	486,651
Female	470,772
Population Growth	23.34%
Area Sq. Km	1,551
Density/km2	617
Proportion to Assam Population	3.07%
Sex Ratio (Per 1000)	967
Child Sex Ratio (0-6 Age)	956
Average Literacy	68.03
Male Literacy	71.9
Female Literacy	64.04
Literates	539,902
Male Literates	289,698
Female Literates	250,204

#### 4.4.3 Agriculture Production Scenario / Trend

Rice, jute, rapeseed, mustard, pulses, maize, banana and other vegetables are key crops of the district. The Rice and Maize is an important crop of the district and is cultivated by the farmers due to availability of HYV and suitable agro-climatic conditions. The district is having a good number of micro level rice mills, food processing, animal Feed units. Dairy is also one of the most important sector in the district having 47 nos of Dairy Cooperative Societies. Sitajakahala Milk Cooperative is also one of the leading Dairy processing unit from the District with 20thousand Litres of Milk processing capacity daily.

##### **Agriculture and Allied Sector Scenario:**

Rice is the principal crop and staple food of the district due to its climatic adaptability and the farmers are sowing Bina 11, Ranjit, Masuri, MTO, Black Rice, Carbanom (Red rice), Bora and Joha rice, Aizong rice, Torabau, Bilbaou, Indiobaou, Dhepah. The major agriculture and allied enterprises are of Rice, Vegetables, Dairy, piggery, Fruit Processing and Poultry. The district has good potential for growing of fruits and vegetable crops which include banana, cabbage, cauliflower etc. Scope for Mushroom Cultivation is also higher due to proximity to the urban city of Guwahati.

#### 4.4.4 Industrial Infrastructure Details

In Morigaon District there are only one Industrial Infrastructure located at Dolbari. Besides, a proposed multi sector industrial infrastructure is at Jagiroad where the area of the site proposed is 18.33 acres. The nodal agency for implementation of this infrastructure is Assam Industrial Development Corporation Ltd (AIDC).

Sl. No.	Name of Ind. Areas	Land acquired (in hectare)	Land developed (in hectare)	No of allotted Plots
1	Dolbari Morigaon	10 Bighas (11596.11 sq mtr)	10 Bighas	1008776 Sq mtr (2 units)

Source: DICC, Morigaon

#### 4.4.5 Key Agriculture Based Industries:

The industries are varied and scattered in overall district of Morigaon. The industries which are mostly found in the district are Rice Mills as the district is having higher paddy production. The second important industrial sector belongs to Maize based products like Animal Feed (cattle, Fish, Pig) and primary processing units on Maize and Fruit Processing Sector relating to preservation of fruits and vegetables is the other prominent Industrial Sector. Besides, allied important industry belongs to Dairy sector.

Listed below are the list of some agro based enterprises in Morigaon District:

- H M S Animal Fish Feed Industry. (Products: Cattle/Fish/Pig/Poultry Feeds)
- AMK Fish and Animal Food Industries. (Products: Cattle/Fish/Pig/Poultry Feeds)
- Choudhury Food Industries (Products: Various Spices)
- Jeuti Food Processing Industry (Products: Fruit Processor)
- Surabhi Dairy and Animal Feed Processing Centre (Products: Dairy Products and Cattle Feed)
- Dipanka Rice Mill. (Product: Rice Milling)

Export Infra Availability:

The district is yet to come up on the map of Export Promotions and related infrastructure.

Industrial Parks and Contribution to Agro Enterprises:

There are two entrepreneurs available in the Dolbari, Morigaon in which two units are present. Kunkuni Rice Mill is functional though with occasional hiccups of backward integration of paddy and its storage. Besides, the other unit is a water hyacinth project under NEDFi.

#### 4.4.6 Support Institutions:

Support Institutions play a very important role in the process of establishing companies and helps them to scale up with recognition. Support institutions helps in creating an ecosystem which allows entrepreneurs to take benefits from the economy as a whole. The following are some of the support institutions available with the Cluster Morigaon:

##### **Krishi Vikash Kendra (KVK):**

This is the pioneer institute under Assam Agriculture University. They have vast resources on crop pattern and related matters. They are also forming clusters for field demonstration on various technologies and ideas besides also motivating farmers to take on new breed of crops. KVK is also imparting training on fruit processing. In Morigaon KVK is piloting new variety of Paddy seed that is BINA DHAN 11 as a part of APART project through local farmers. Through KVK training can be arrange for Fruits and vegetables processor in the district.

##### **National Bank for Agriculture and Rural Development (NABARD):**

National Bank for Agriculture and Rural Development is an Apex Development Financial Institution in India. The Bank has been entrusted with "matters concerning Policy Planning and Operations in the field of credit for Agriculture and other Economic activities in Rural areas in India. In Morigaon district NABARD through its district Development Manager is forming Farmer Producer Organization, Farmers Clubs. Morigaon in Fishery. They are also in the process of forming a Fishery Cluster in Morigaon.

##### **United Bank of India- Rural Self Employment Training Institute (UBI-RSETI):**

RSETIs are Rural Self Employment Training Institutes, an initiative of Ministry of Rural Development (MoRD) to have dedicated infrastructure in each district of the country to impart training and skill upgradation of rural youth geared towards entrepreneurship development. The UBI – RSETI Morigaon has its own training center, which can provide training of 30 candidates at a time.

Morigaon IA can access this facility to provided training to its members on different areas such as:

##### **Roha College of Fisheries:**

This is an institution under Assam Agriculture University which is imparting various courses to its students. This institution is also providing training on fish processing and is a source of data on fish related R&D.

They have developed a proto type dryer for “fish drying”. This prototype dryer has been provided to one Mr. Jiten Dutta of Dishangmukh, of Sivsagrah district. It can dry 25 Kg

of raw fish in to dry one. They are planning to increase the capacity of this dryer, if so it can be used by individual entrepreneurs also.

In the context of support training related to fish processing can be explored with them.

**Joint Director of Health:**

The department is entrusted to issue FSSAI certificates to the food handlers and processors of the district. They are well versed with the laws of the FSSAI and its implementation.

IA can work out some training on FSSI regards to compliance to be followed by entrepreneurs to get the registration and certification with their assistance.

**Morigaon Polytechnic:**

They are imparting vocational training to the self-employed and unemployed youths of the district including women of the region. They are currently providing three-year diploma courses on Civil, Mechanical and Electrical.

IA with support of them can arrange short term training on repairing and maintenance of Plant and Machinery of Rice Mill, Fruits and Vegetables processing, Bakery and confectionery.

**Chartered Accountants (CA):**

Morigaon district is having total three nos working chartered accountants of which one is located at Morigaon Town viz., Pankaj Anil Jain & Co and the other two are located at Jagiroad. They can impart knowledge on various accounting related documentation and also help in getting GST, Food License, Tax return Filing, UC preparation, DPR preparation among various other activities.

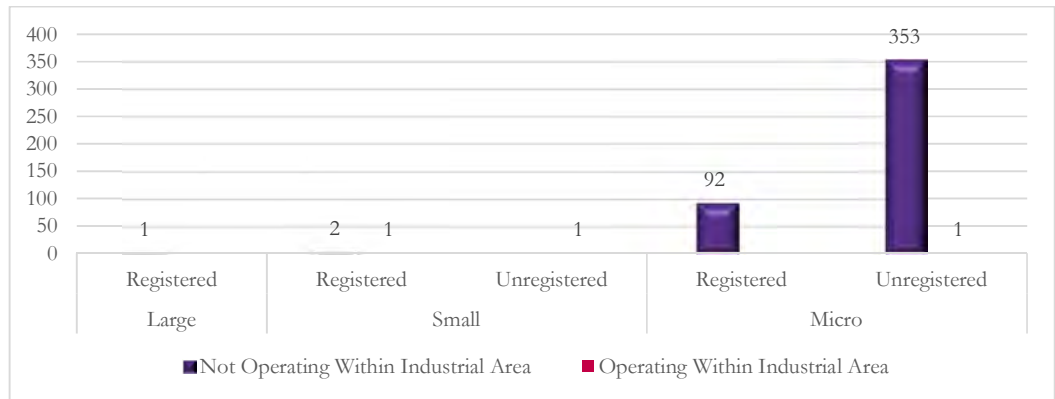
They can also have trained to provided ISO-9001 through external consultant so that they can provided this services to appropriate enterprises.

District Industries and Commerce Centre (DICC). The department is the nodal point of the district for the registration of industries and also to generate UAM for the entrepreneurs. Department is also implementing various government schemes for the development of MSMEs. They are presently supporting in generation of UAM and Registration of not-registered enterprises in the respective districts.

#### **4.4.7 Analysis from Baseline Data**

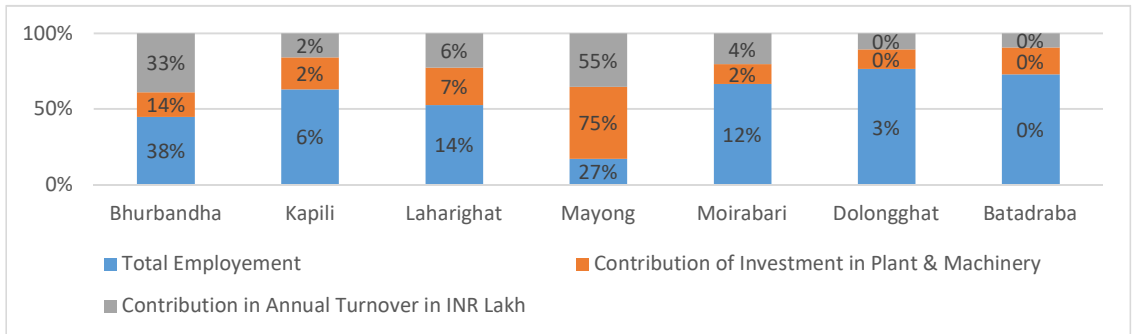
**Agro Based Enterprises:**

In Morigaon district, there are 451 agro based processing units as per our baseline survey out of which 24% units are registered and rest 76% are unregistered. Only three units are operating within industrial area and rest 448 units are operating outside industrial area. Almost 99% are micro-sized units, 1% units are in small and large category.

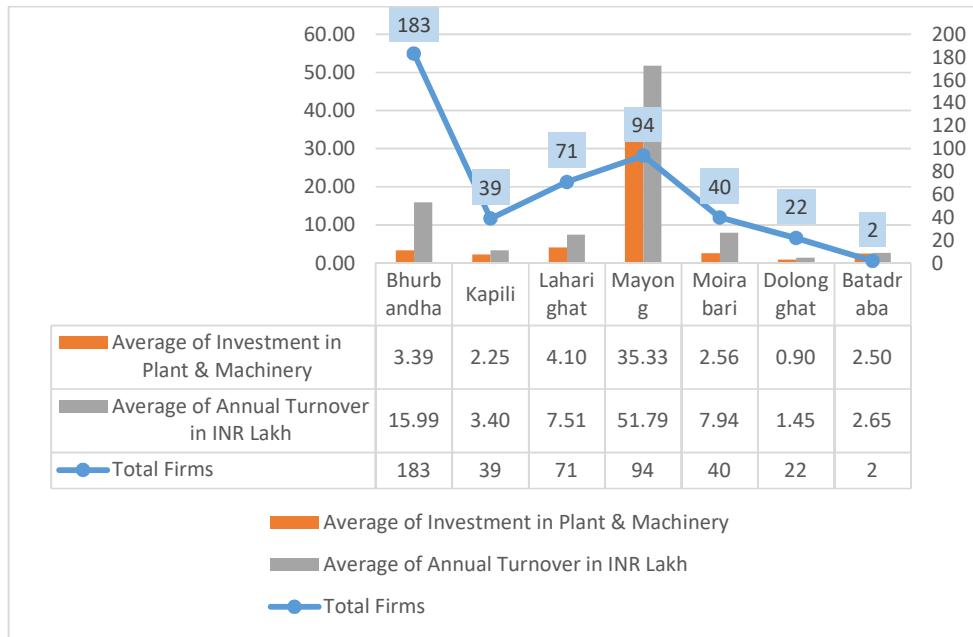


### Enterprises, Employment, Investment & Turnover Blockwise:

As it can be observed in the below two charts, most of the units out of total agro based units in the district are located in Bhurbandha (41%) followed by Mayong (21%), Laharighat (16%), Moirabari (9%), Kapili (9%). From our baseline survey it is clear that Bhurbandha, Mayong, Laharighat, Moirabari & Kapili emerge as a prominent blocks in terms of employment, investment in plant & machinery and annual turnover. Mayong contributes 27% in employment out of total employment in district, 75% in investment out of total investment in the district and 55% turnover out of total district turnover. Similarly, Bhurbandha contributes 38%, 14% & 33% in terms of employment, investment & turnover respectively, Laharighat contributes 14%, 7% & 6% in terms of employment, investment & turnover respectively, Moirabari contributes 12%, 2% & 4% in terms of employment, investment & turnover respectively and Kapili contributes 6%, 2% & 2% in

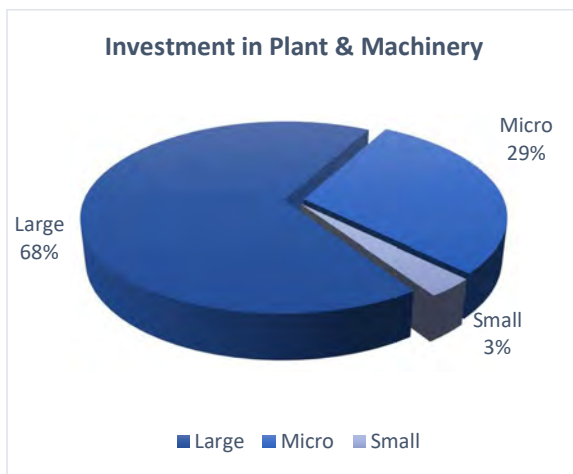


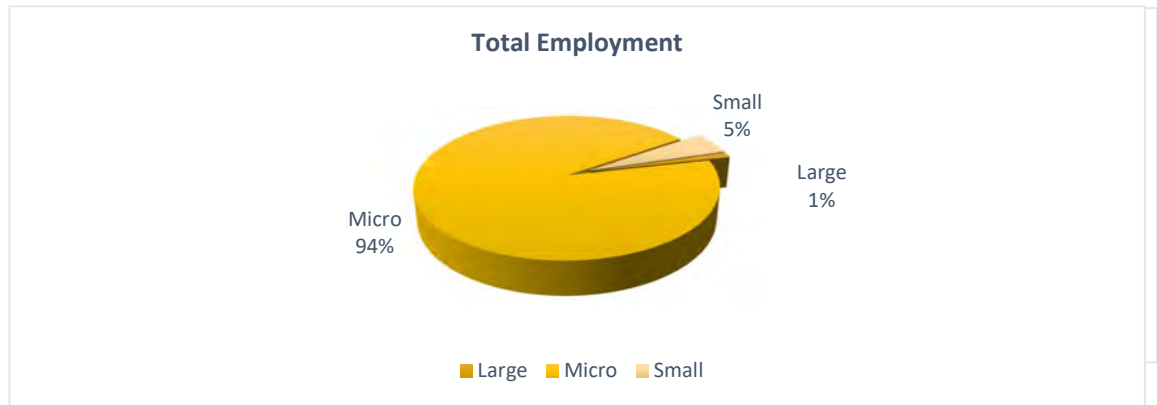
terms of employment, investment & turnover respectively.



**Enterprise Details Category Wise:**

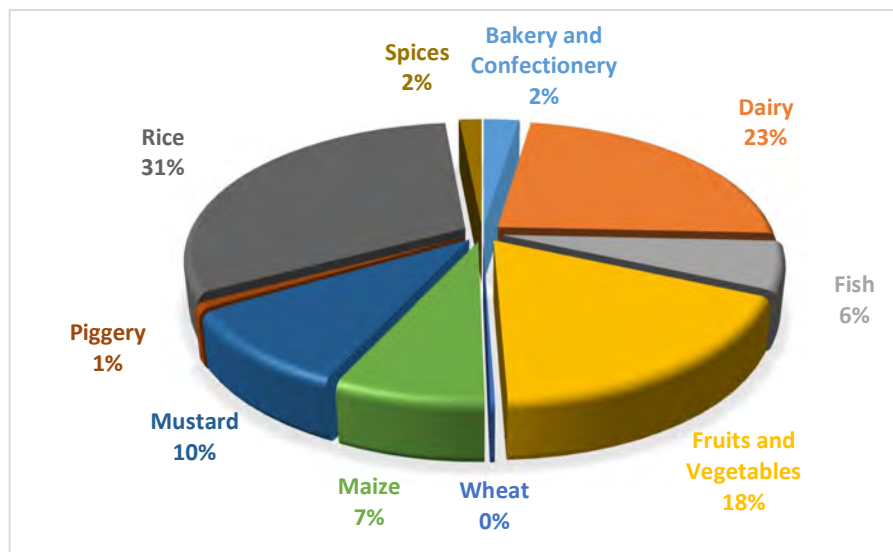
It is clear from below charts that out of total district investment in plant & machinery, investment in micro, small & large category enterprises are 29%, 3% & 68% respectively. Turnover for micro, small & large enterprises are 33%, 22% & 45% respectively. Similarly, employment provide by micro, small & large enterprises are 94%, 5% & 1% respectively.





**Distribution of Value Chain:**

From below charts, it is eminent that in Morigaon district, Rice, Dairy & Fruit based products emerge as the prominent value chains in the district followed by Mustard, Maize, Fishery, Bakery & spices.

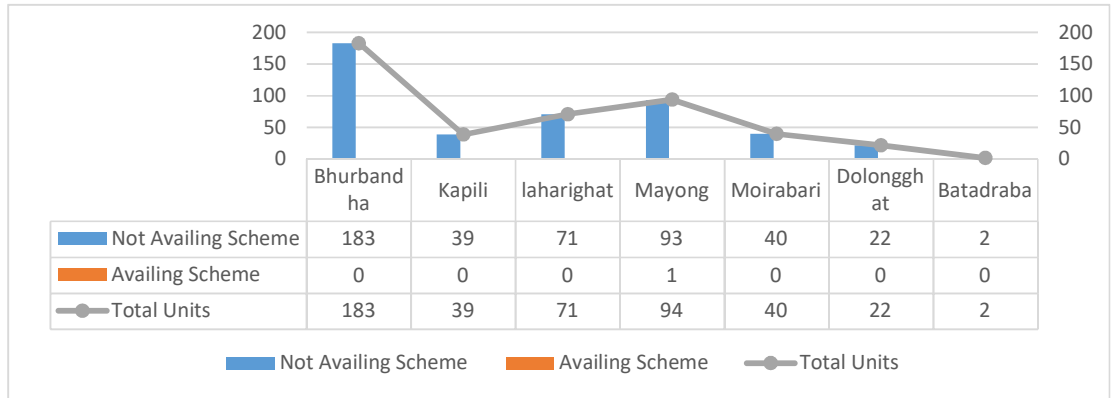


**Category-wise Products:**

It is clear from chart that the production of rice and rice production is 31%, whereas the production of dairy products, fruits based products, mustard oil, cattle feed, fishery and other agro based products in micro enterprises in the Morigaon district are 23%, 18%, 10%, 7%, 6% & 4% respectively.

In small category enterprises in the Morigaon district, the production of Spices is 50% whereas production rice and rice based products is 25% and dairy products is also 25%

In large category enterprises, only dairy & milk based products are produced.

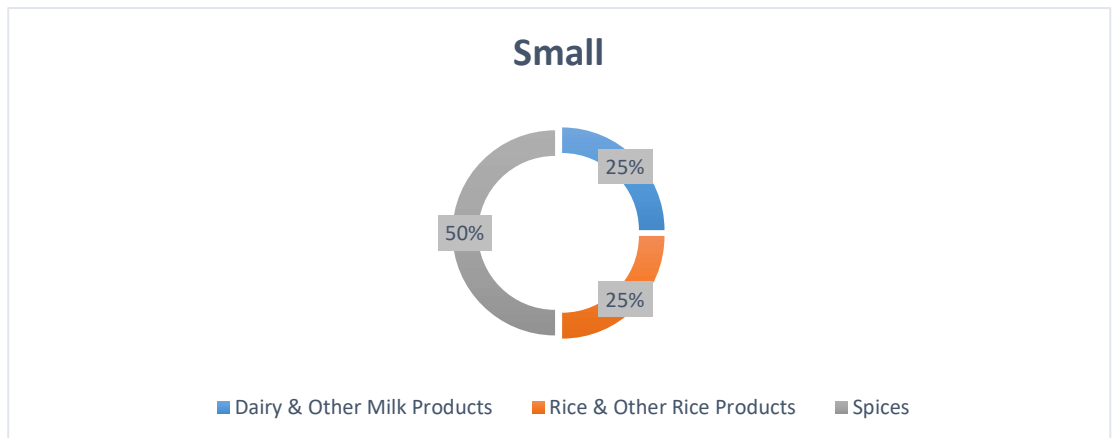
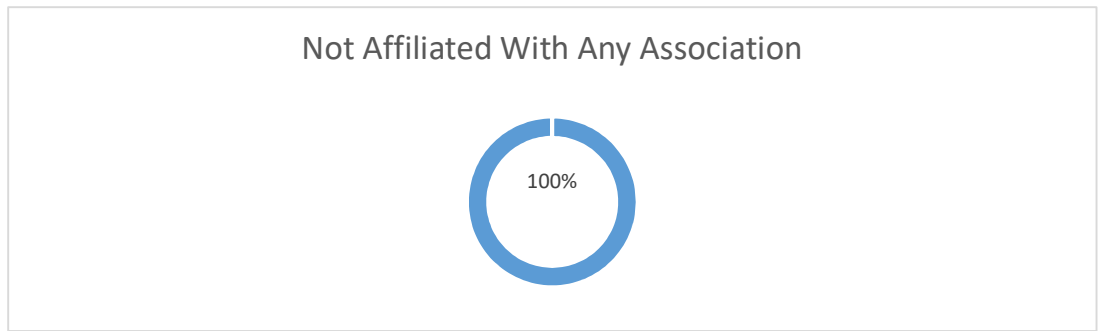


**Blockwise Scheme Distribution:**

From baseline survey 451 units have been identified by our baseline survey in Morigaon district, out of 451 identified units only one unit in Mayong block has availed the benefit of scheme and rest 450 units have not availed any scheme.

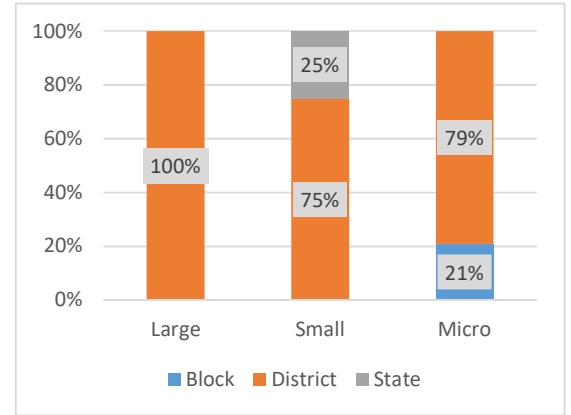
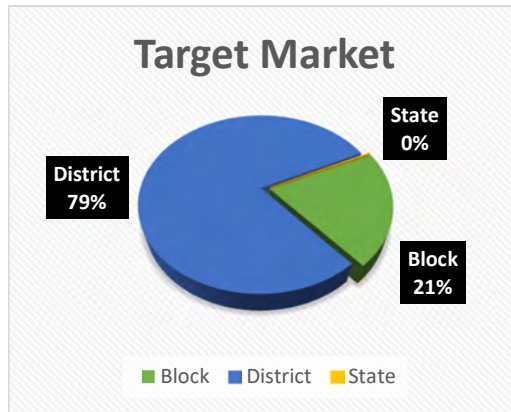
**Affiliation with Any Association:**

Out of 451 identified units not a single unit is affiliated with any kind of association.



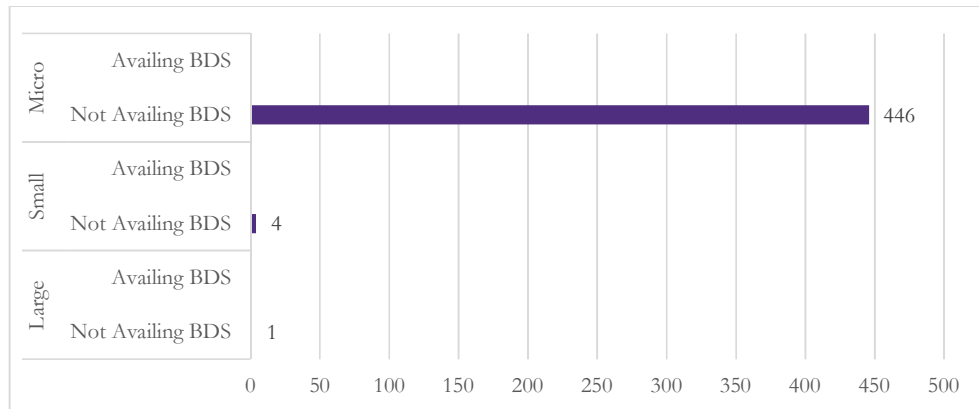
**Target Market Overview:**

It is evident from below given charts that 100% of produce are sold within the state, out of which 21% produce are sold within block. Micro enterprises sell 21% produce within block and 79% produce within district, small enterprises are selling 75% produce within district and balance units sell their produce in other parts of Assam and large enterprises are selling their produce within district only.



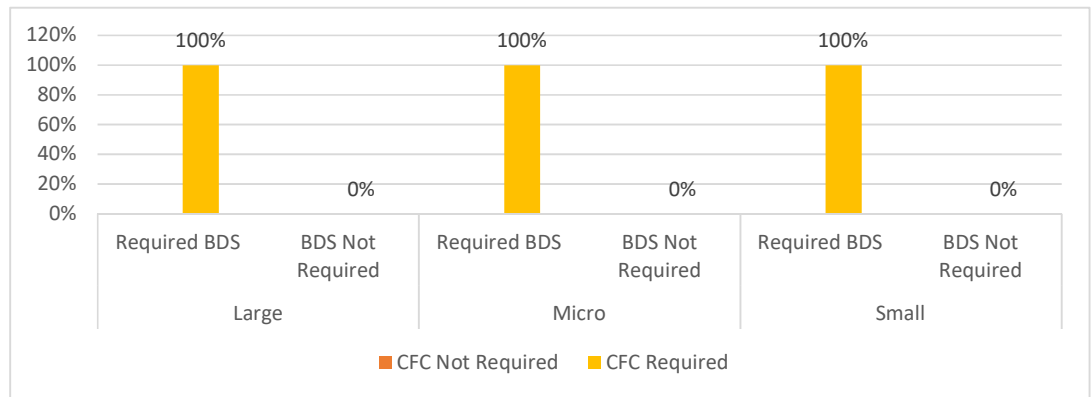
**BDS Availed:**

It is clearly visible from below chart that none of the enterprise in the district is availing Business Development Services (BDS).



**BDS & CFC Required:**

From our baseline survey it is evident that there is 100% requirement for CFC in all the categories of enterprises



## 4.5 Goalpara

### 4.5.1 Geographic Details of Goalpara

Goalpara is situated on the south bank of Brahmaputra river. It covers the area of 1911 Sq. km and is bounded by West and East Garo Hills districts of the state of Meghalaya on the South and Kamrup district on the east, Dhubri district on the west and mighty river Brahmaputra all along the north.

The Goalpara district consists of 2 Sub-divisions, 4 towns, 8 number of development blocks, 81 Gaon panchayats and 837 revenue villages.



Sub-Divisions	Town	Blocks	Panchayats	Villages
2	4	8	81	837

The district is connected by all means of transport which include airways, railways, roadways with other districts of Assam & other parts of India. The district has three national highways viz. NH-37, NH-51 & NH-62 connecting the other districts of Assam and other states of India. There are 2 railway stations in Goalpara and the nearest airport is Guwahati.

SL	Particulars	Total No.'s	Details
1	National Highway	3	NH-37, NH-51 & NH-62
2	Railway Station	2	Dudhnoi Town & Goalpara Town
3	Airport	1	Lokpriya Gopinath Bordoloi International Airport

### 4.5.2 Demographic Details

In 2011, Goalpara had population of 1,008,183 of which male and female were 513,292 and 494,891 respectively. In 2001 census, Goalpara had a population of 822,035 of which males were 420,251 and remaining 401,784 were females. The demographic details are as follows:

Description	Goalpara
Population	10.10 Lakhs
Male	5.14 Lakhs
Female	4.94 Lakhs
Population Growth	22.64%
Area Sq. Km	1911 Sq Km
Density/km <sup>2</sup>	553
Sex Ratio (Per 1000)	962
Child Sex Ratio (0-6 Age)	963
Average Literacy	67.37
Male Literacy	71.46
Female Literacy	63.13

Source: Census 2011

Average literacy rate of Goalpara in 2011 were 67.37 compared to 58.03 of 2001. If things are looked out at gender wise, male and female literacy were 71.46 and 63.13 respectively. For 2001 census, same figures stood at 64.86 and 50.85 in Goalpara District. Total literate in Goalpara District were 563,577 of which male and female were 304,302 and 259,275 respectively. In 2001, Goalpara District had 5,587,296 in its district.

### **Agriculture**

The economy of Goalpara district is primarily agriculture as 90% of the population depends on agriculture for their livelihood. Paddy is the major crop grown in this region and other important crops include wheat, maize, oil seeds, pulses, cash crop like jute, vegetables etc. The district is also known for its production of areca nut and banana. A big market for banana has also come up at Darangiri. The agro climatic conditions of the district is conducive for various agricultural activities. Agriculture in the district is characterized by over dependence on rainfall, predominance of seasonal crops and traditional methods of cultivation. Net cultivated area in the district is 43.5 percent of the total geographical area while the figure for the state as a whole is 35.4 percent. It is apparent that about 36.8 percent of the net cultivated area in the district is sown more than once which, however, is less than the state average of 43.6 percent.

### **Livestock and veterinary facilities**

In the essentially agrarian economy of Assam, livestock is an essential and important contributor to the NSDP. Dairy and poultry farming can augment incomes and increase purchasing power. As indicated earlier, since the economy of Goalpara district is basically agrarian, as such the economic development of the district is highly dependent on agriculture and allied activities. Traditionally, dairy farming is a subsidiary occupation of the farmers of the district. Nevertheless, despite large population of live-stock, the milk production in the district is low mainly due to predominance of local cows with a poor genetic make-up.

### **Sericulture**

The agro-climatic condition of the district is suitable for sericulture. The activity is specially practiced by the local people including SC/ST families. Since sericulture mainly involves women in rearing and spinning, it has great potential for creating employment opportunities for them. Around 290 villages in the district are involved in sericulture activities

#### **4.5.3 Agriculture and Allied Sector Scenario**

According to 2011 census, over 1,26,000 are cultivators and over 75,000 are agricultural labourers in the district. The district is also known for its production of areca nut and banana. Darangiri market in the district has become one of the most popular banana destinations in the region with inflow of businessmen from all over the country to procure banana. The agro-climatic condition of the district is conducive for various agricultural activities, and adoption of new agricultural technologies amongst the farmers has led to an increase in agricultural production. Every year, a substantial amount of revenue is generated from the agricultural products which helps the district to increase its economy to a great extent. The district has attained a remarkable position in production of vegetables of different varieties under rabi crops.

#### **4.5.4 Industrial Infrastructure Details**

Goalpara district has decent industrial infrastructure which includes industrial parks that come under the administration of Assam Industrial Development Corporation and DICC, Goalpara.

Name of Industrial Infrastructure	Open Space (Sq. M)		
	Total Open Space	Open Space Allotted	Space Available for Allotment
Industrial Growth Centre, Matia	1889503	10000	1879503
Growth Centre, Baladmari	35390	7200	28190
Commercial Estate, Dudhnoi	4384	0	4384
Commercial Estate, Lakhipur	1379.6	288	1091.6
TCPC Complex, Goalpara	35225.5	11251	23974.5

#### 4.5.5 Key Agriculture Based Industries

Goalpara being an administrative district of Assam has set up 887 enlisted units which provides employment opportunities and contributes for the upliftment of the district through investments. There are total of 63 agro-based micro and small units established with an investment of INR 378.20 Lakh. Some of the key agro-based enterprises in Goalpara district and nearby areas are listed below:

SL	Name of the Unit	Main Product
1	M/S Muktar Rice Mill	Rice Milling
2	M/S R. N. Bakery	Bread
3	M/S. Assam Green Tea	Green Tea
4	M/S J.B.G. Chira Mill	Chira

#### Export Infra Availability

There is no export Infra available in this region

#### 4.5.6 Industrial Parks and Contribution to Agro Enterprises

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 significant extent and ensure steady and better price to farming community. Relatively bulky, perishable and typically inedible raw material are converted into more useful, shelf-stable and delicious foods or beverages by food processing industries which facilitate export to domestic as well as global markets. These industries helps to preserve perishable agricultural products for a long time.

#### 4.5.7 Support Institutions

##### **Krishi Vigyan Kendra (KVK), Goalpara**

The institute was established in September 2006 under the administrative control of the National Research Centre on Pig and Indian Council of Agricultural Research, Rani, Guwahati, Assam. Amongst 20 KVKs in Assam, KVK Goalpara is the only one under direct control of the ICAR and the rest 19 are under the control of Assam Agricultural University. The Govt. of Assam had allotted 102 bighas (13.6 ha) of land at Udaypur, opposite the secretariat of Rabha Hasong Autonomous Council, Dudhnoi, for establishment of a permanent campus for the KVK.

Krishi Vigyan Kendra (KVK) works on the mandates presented below:

- Conducting 'on-farm testing' for identifying location specific sustainable land use system
- Organizing training for extension personnel to update knowledge on emerging advances in agricultural research on regular basis
- Organizing both short-term and long-term vocational training for farmers and the rural youth on agriculture and allied vocations with emphasis on 'learning by doing' to increase productivity and generate opportunities for self-employment.

##### **District Industries and Commerce Center**

The center aims to accelerate the overall industrialization in the district by acting as the focal point for the industrial activities of the region. They organize entrepreneurship development training programs, act as a link between the entrepreneurs and the lead bank of the district, and provide guidance to entrepreneurs. It also helps the units in registration under EoDB (Ease of Doing Business) to avail various subsidies under State Policies. They are also assisting the investors in terms of providing government land from the land bank of the district.

##### **UCO Bank**

The bank offers services and products which are tailored to support agro-based industries. It offers Kisan Credit Cards (KCC) and other facilities which assist farmers in meeting their short term credit requirements at affordable interest rates. Additionally, they are offering loans to set up Cold Storage as well as Agro and Food Processing units.

##### **Industrial Training Institute (ITI)**

The Institute is located in Goalpara- Mornoi Road and established with the objectives presented below:

- To provide semi-skilled/skilled workers to industry by systematic training
- To reduce unemployment among educated youths by equipping them with suitable skills for industrial employment & self-employment

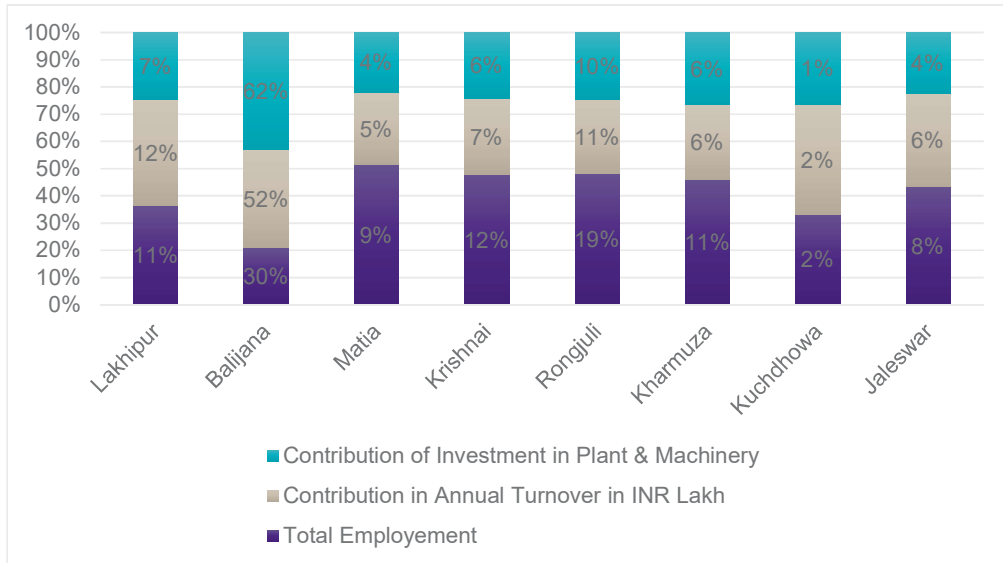
#### 4.5.8 Analysis from Baseline Data

##### Processing Infrastructure

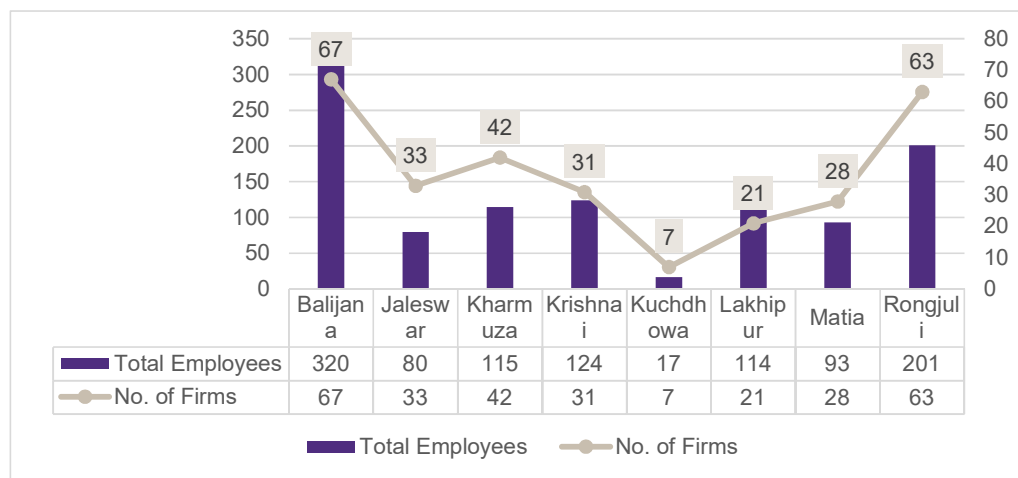
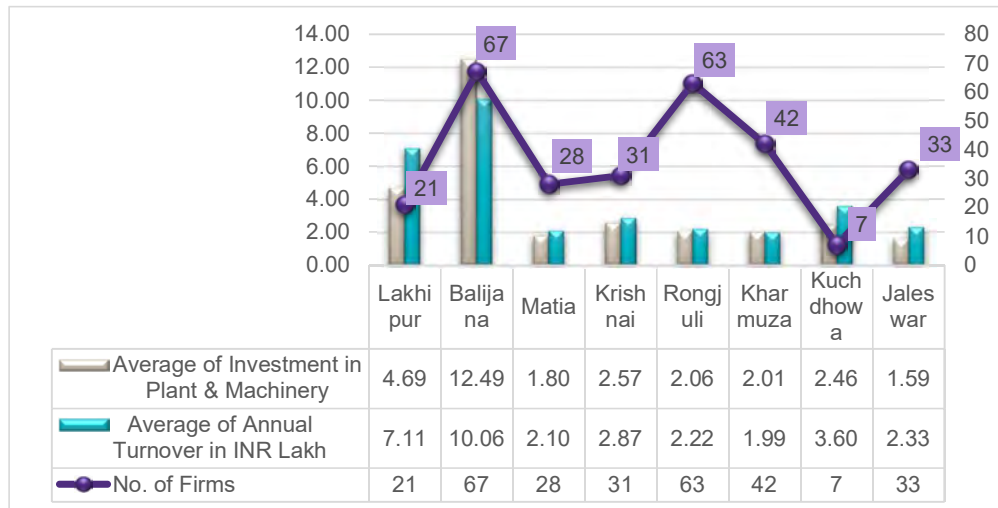
In the Goalpara district of the 16 project districts, the total number of units found during the baseline survey was 292 units. In micro category, the number of unregistered units are 233 and number of registered units are 54, whereas in the small category, registered number of units are 5. Units having registration and inside industrial area are also depicted. All the 292 units found in the district are not operating within the industrial area.



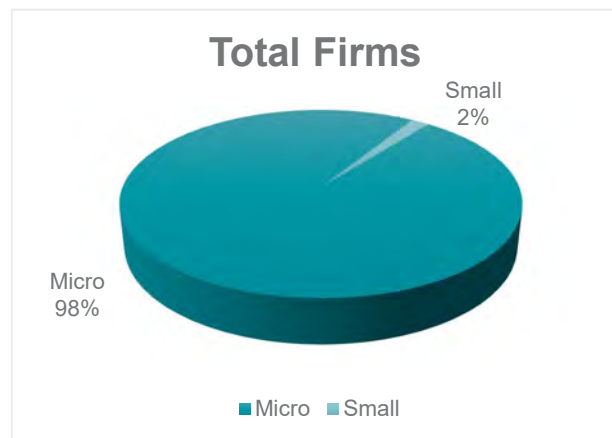
Lakhipur, Balijana, Matia, Krishnai, Rongjuli, Kharmuza, Kuchdhowa & Jaleswar are the blocks in Goalpara district. The Lakhipur Dist. total employment percentage contribution is 11%, contribution in annual turnover is 12% and contribution of investment in plant & machinery is 7 %. The Balijana District, total employment percentage is 30%, contribution in annual turnover in INR Lakh is 52% and contribution of investment in plant & machinery is 62%. The Matia block, 9% is the total employment percentage, 5% is the contribution in annual turnover in INR Lakh and contribution of investment in plant & machinery is 4%. The Krishnai block contributes 12% of the total employment, 7% of the contribution in annual turnover in INR Lakh and 6% is contributed in investment in plant and machinery. The Rongjuli District contributes 19% in the total employment, 11% in the annual turnover in INR Lakh and 10% is contributed in plant and machinery investment. The Kharmuza block contributes 11% in the total employment, 6% in the annual turnover in INR Lakh and 6 % in the plant and machinery investment whereas in the Jaleswar Dist. 8% is contributed in the total employment, 6% in the annual turnover and 4 % in the plant and machinery investment.



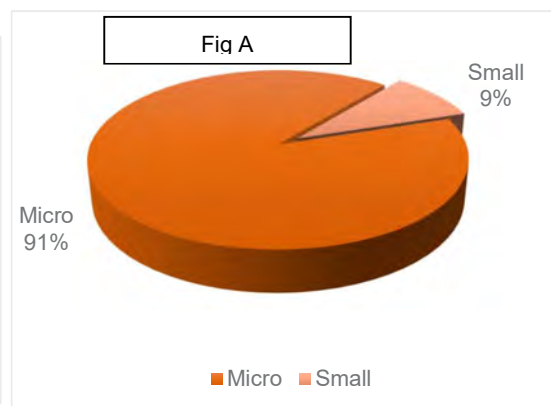
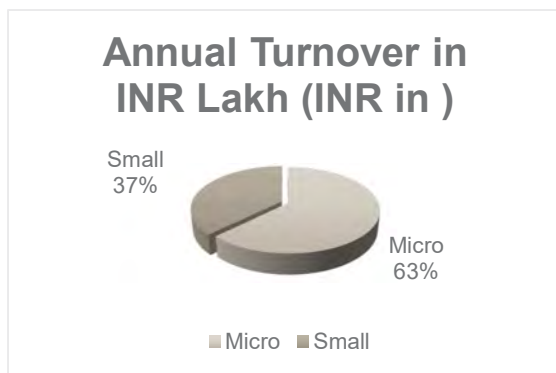
The distribution of units in the Goalpara Dist. with the annual investment and annual turnover is depicted in the above figure. In the Lakhipur block, there are 21 units wherein the average investment in plant and machinery is INR 4.69 Lakh and the average annual turnover is INR 7.11 Lakh. The Balijana block has 67 enterprises and the average investment in plant and machinery is INR 12.49 Lakh and the average annual turnover is INR 10.06 Lakh. In Matia block, the total number of units are 28 which has an average investment in plant and machinery of INR 1.80 Lakh and average annual turnover is INR 2.10 Lakh. In Krishnai block, there are 31 units and average investment in plant and machinery is INR 2.57 Lakh and the average annual turnover is INR 2.87 Lakh. In Rongjuli block, there are 63 units with an average investment in plant and machinery of INR 2.06 Lakh and average annual turnover is INR 2.22 Lakh. In Kharmuza Block, there are 42 units with an average investment in plant and machinery of INR 2.01 Lakh and average annual turnover is INR 1.99 Lakh. In Kochdhowa Block, there are 7 units with an average investment in plant and machinery of INR 2.46 Lakh and average annual turnover is INR 3.60 Lakh. In Jaleswar Block, there are 33 units with an average investment in plant and machinery of INR 1.59 Lakh and average annual turnover is INR 2.33 Lakh.



The employee share block wise in the Goalpara District is depicted in the above figure. In the Balijana block, there are 67 units and the total number of employees in these units is 320; in Jaleswar block, there are 33 units and the total units are 80. Kharmuza block has 42 units with total number of employees of 115. Krishnai block has 31 units with 124 employees. In Kuchdhowa block there are 7 units with 17 employees. In Lakhipur District, there are 21 units with 114 employees; Matia block has 28 units and 93 employees and Rongjuli block has 63 units and 201 employees.

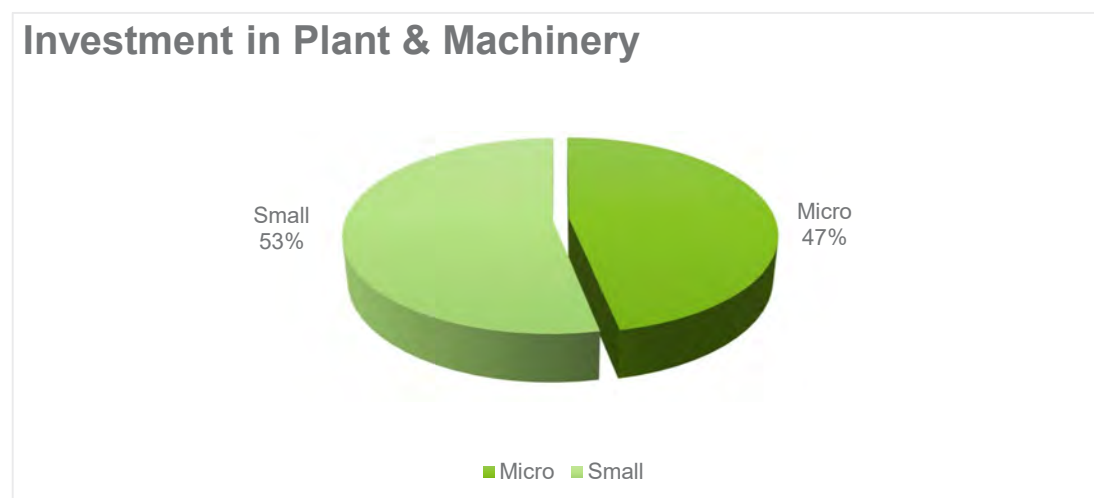


98% of the total units surveyed were found to be in the micro category and only 2% were found in the small category.



In the figure, the percentage of annual turnover is mentioned. 37% of annual turnover is contributed by the small category of enterprises whereas 63% of the annual turnover belongs to the micro category.

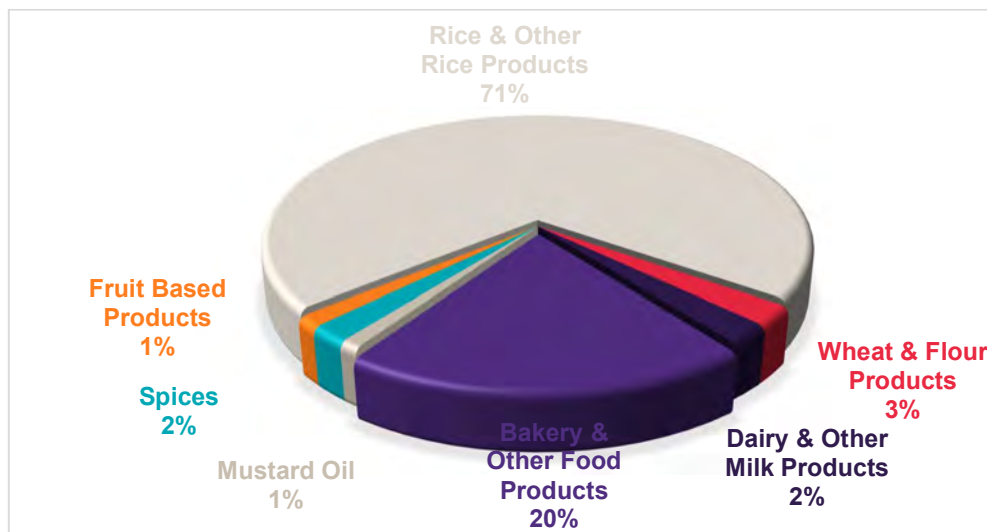
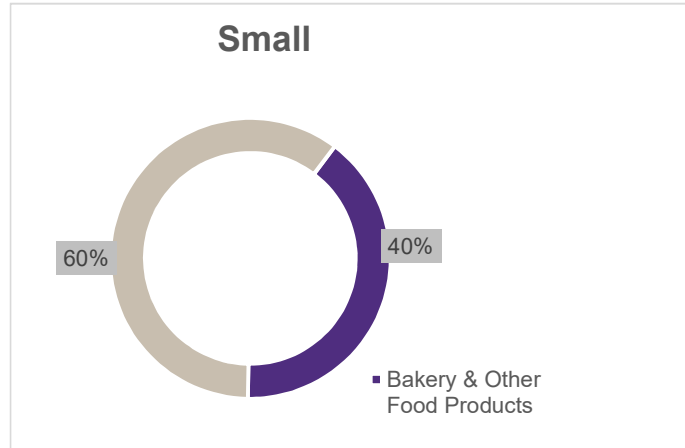
Figure A indicates the percentage of employees in each category. 91% of the employees are engaged in the micro category of units and only 9% of total employees are engaged in the small category of enterprises.



53% of the investment in plant and machinery are in the small category of enterprises and 47% of the investment is in the micro category of units.

#### Products produced in Goalpara Dist.

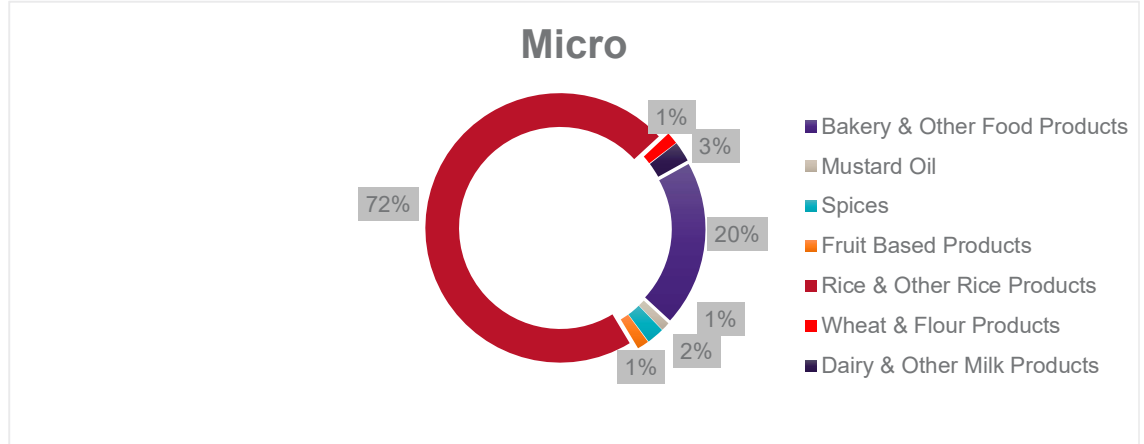
It is found that 1% of the units are engaged in fruits and vegetables based products, 2% in spices, 1% in mustard oil, 20% in bakery and other food products, 2% in dairy and other milk products and 3% in wheat and flour products.



**Products produced by small and micro entities:**

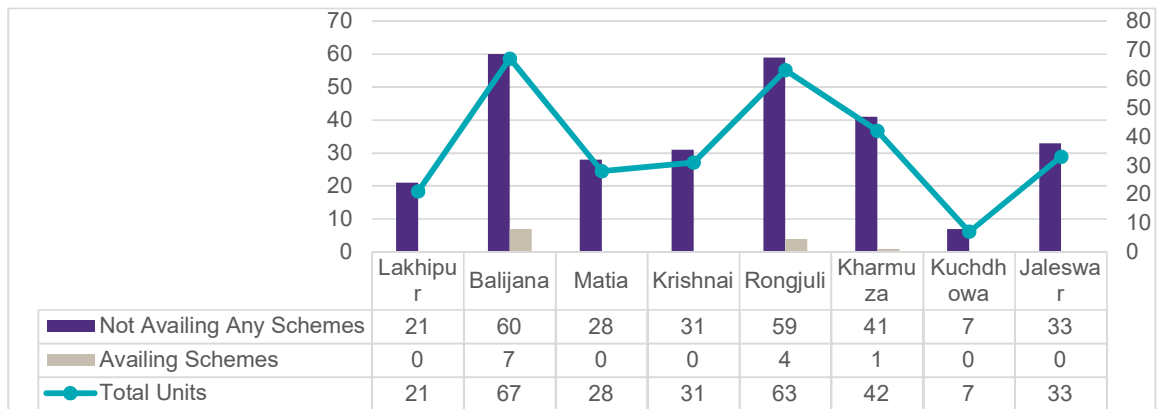
60% of the total enterprises are small enterprises and are involved in producing wheat and flour products. 40% of the total enterprises are small enterprises and are involved in producing bakery and other food products.

The micro category of the units is engaged in various value chains. 72% of the micro



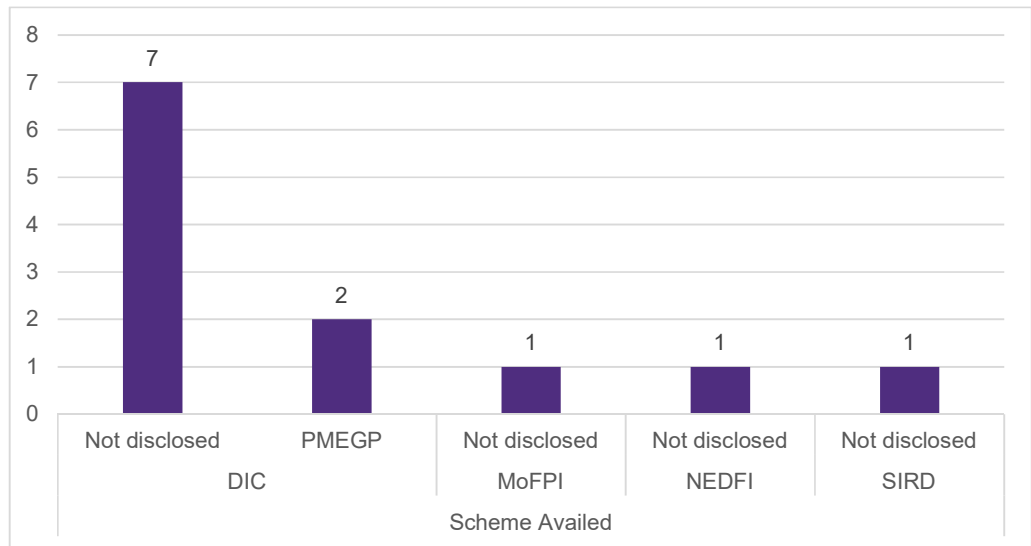
enterprises are engaged in rice and other rice products manufacturing. 20% of the enterprises in bakery & other food products manufacturing, 3% in dairy and other milk products processing, 1% in fruit based products, 2% in spices, 1% in wheat and flour products, and 1% in mustard processing.

The top 5 most produced products in the Goalpara district are rice and rice based products, bakery and other food products, wheat and flour products, dairy and other milk products and spices.



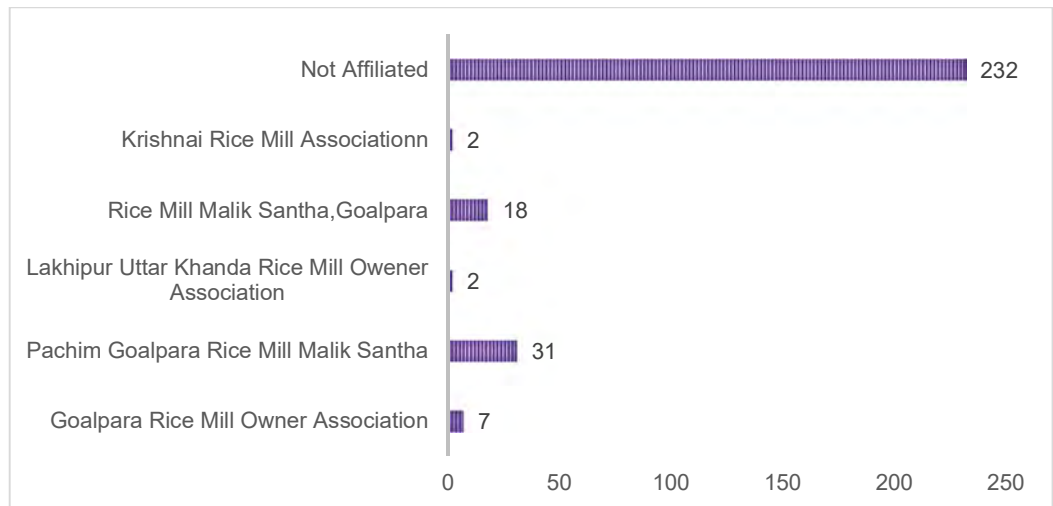
There are a total of 292 units in the Goalpara District out of which only 4% i.e., only 12 units have availed schemes from either state or central Government whereas 280 units which is 96% of the total units in the Goalpara district have not availed any schemes.

Balijana block has the highest number of units who has availed either state or central government schemes with 7 units out of total 67 followed by Rongjuli block with 4 units out of total 63 units. Kharmuza block has only 1 unit who has availed either state or central government schemes whereas Lakhipur, Matia, Krishnai, Kuchdowa and Jaleswar blocks does not have a single unit who has availed any schemes.

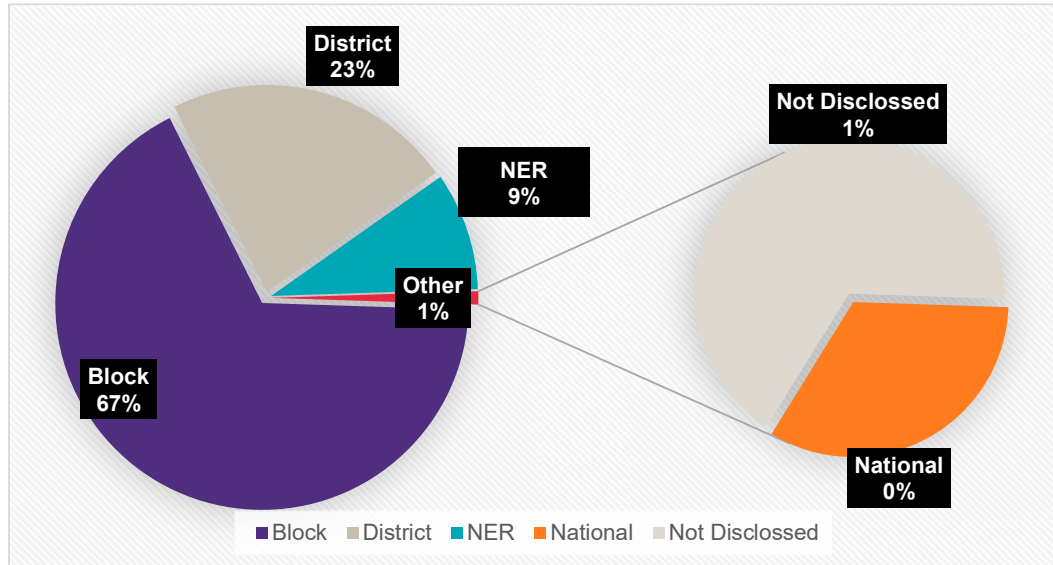


DICC has provided 9 schemes to the units in Goalpara, 2 under PMEGP and 7 under schemes not disclosed by DIC. The remaining schemes were provided by MoFPI, NEDFI and SIRD each to the units.

The following figure shows the number of units associated with any associations. 232 units has not been a member of any association. Only 2 units are associated with the Krishnai Rice Mill Association, 18 units are associated with the Rice Mill Malik Sanstha, 2 units are associated with Lakhipur Uttar Khanda Rice Mill Owner Association, 31 units are associated with Pachim Goalpara Rice Mill Malik Sanstha and 7 units are associated with Goalpara Rice Mill Owner Association.

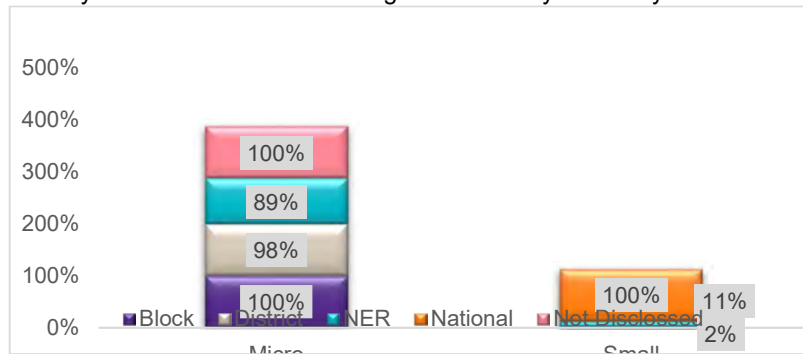


The following figure shows the target market overview. 67% of the products manufactured are marketed within the block, 23 % of the products are marketed within the district, 9% in the North East Region and only 1 % is marketed out of the NE Region.

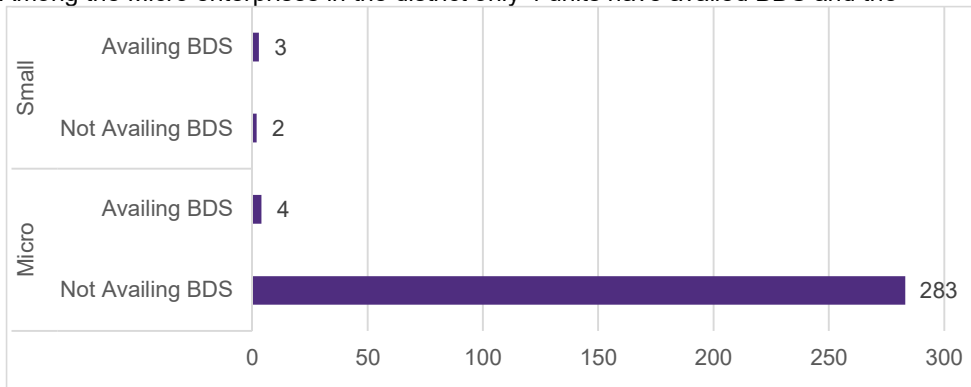


Following table indicates the target market of entities in the micro and small categories of units in the District. For the micro category units 100% of the products are marketed within the block, around 98 % of the units target the markets at district level, 89% of the units target the NER. The small category units target 100% markets throughout the country.

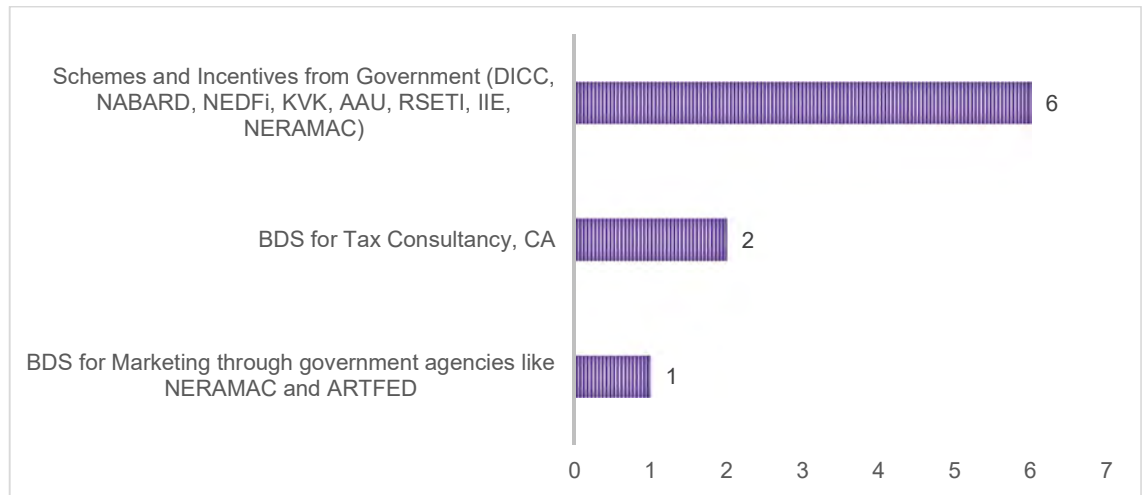
Both the above analyses show that units availing BDS are very low. Only 2% of the units in Goalpara district has availed BDS whereas the remaining 98% has not availed BDS.



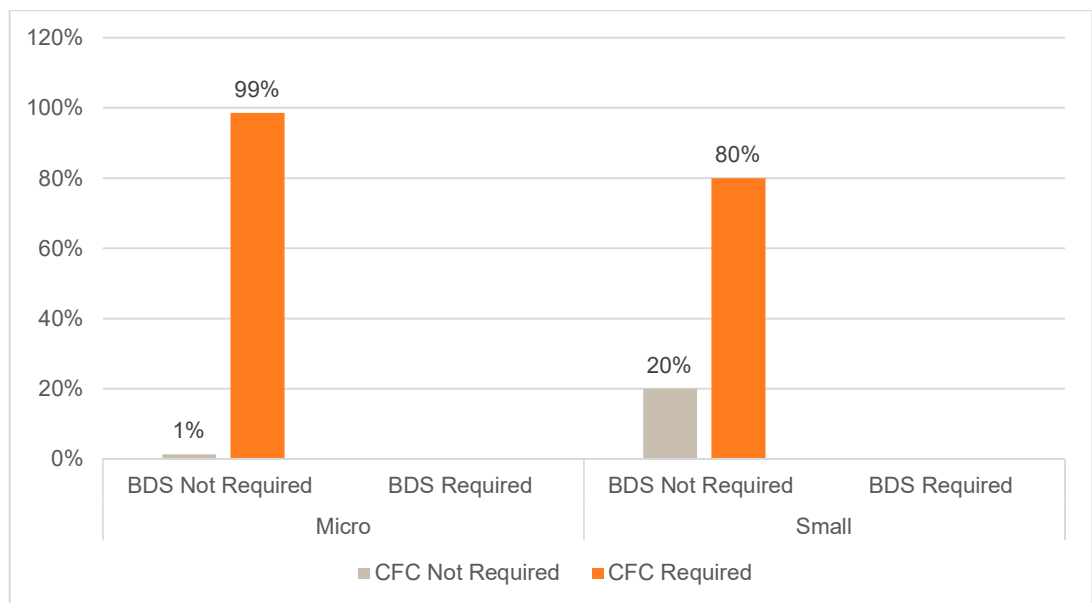
Among the Micro enterprises in the district only 4 units have availed BDS and the



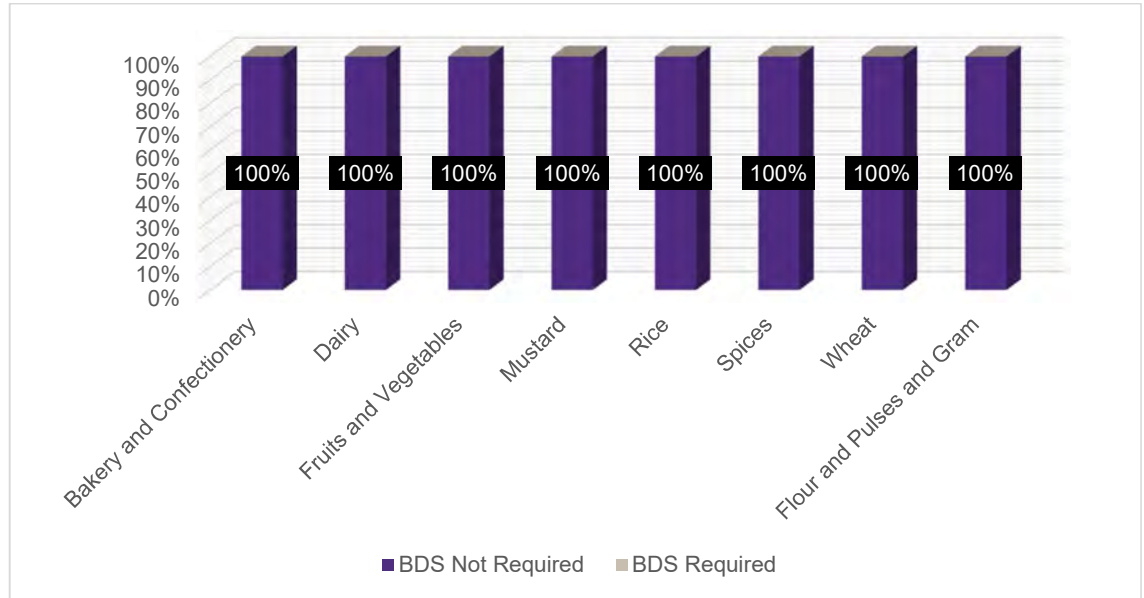
remaining 283 units have not availed BDS similarly among the small enterprises only 3 units have availed BDS whereas 2 units have not availed BDS.



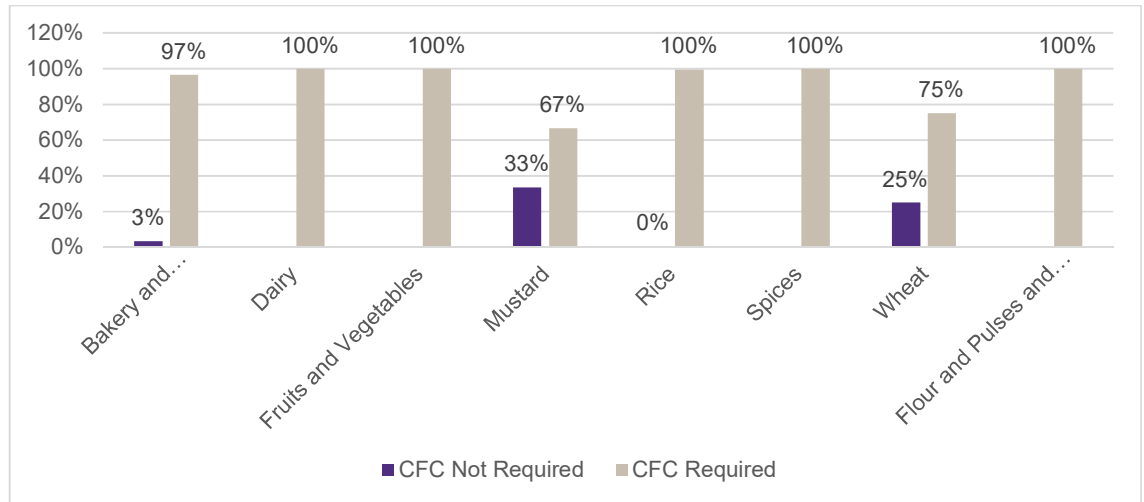
6 units have availed BDS in terms of schemes and incentives from Government namely; DICC, NABARD, NEDFi, KVK, AAU, RSETI, IIE, NERAMAC, 2 units have availed BDS for tax consultancy, CA and only unit has availed BDS for marketing through government agencies like NERAMAC and ARTFED.



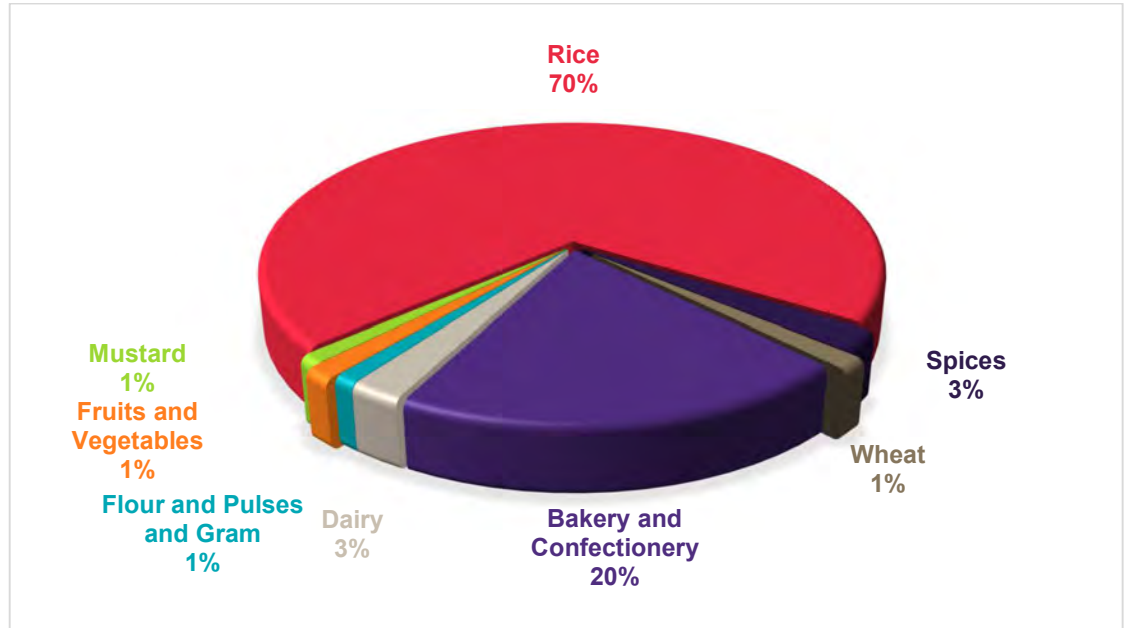
99% of the micro enterprises opined in favour of CFC.



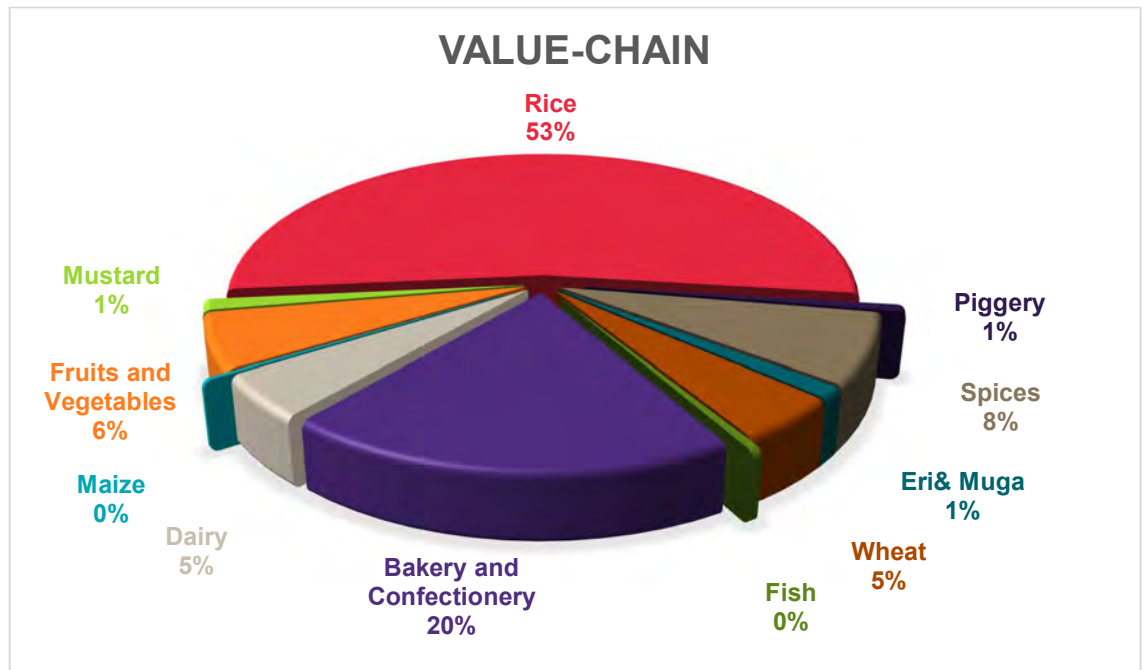
Across the 8 value chains i.e., Bakery and confectionery, Dairy, Fruits and vegetables, Mustard, Rice, Spices, Wheat and Flour, pulses and gram no enterprise wanted BDS.



Across the 8 value chains 22% enterprises under Mustard value chain do not want CFC whereas 67% wanted CFC, 25% enterprises under spices value chain do not want CFC whereas 75% wanted CFC, 3% enterprises under Bakery & Confectionery value chain do not want CFC whereas 97% wanted CFC. The remaining enterprises under value chains Dairy, Fruits & vegetables, Rice, Spices and Flour, pulses and gram preferred CFCs.



Enterprises has been distributed across the 8 value chains, there are 70% units under rice value chain followed by Bakery and confectionery value chain with 20% units, 3% units each under Dairy and Spices, 1% units each under Mustard, Fruits and vegetables, Flour, pulses and gram and wheat value chains.



## 4.6 Kamrup

### 4.6.1 Geographic Details of Kamrup District

The district of Kamrup is located in the western part of the State of Assam. The two districts, Kamrup (Rural) and Kamrup (Metropolitan) were merged into one which is now known as Kamrup district. The total geographical area of the district is about 4632 sq. km (4,63,200 ha) i.e. 6.19 percent of the total geographical area of the State. The district consists of 9 Sub-divisions, 28 towns, 17 number of blocks, 160 Gaon panchayats and 1284 revenue villages. Out of which, Kamrup Metro has 3 Blocks, comprising 21 Gaon Panchayat and 216 revenue villages; whereas Kamrup Rural has 14 Blocks, 139 Gaon Panchayats and 1068 Revenue villages. The district comprises of three Agricultural sub-divisions namely Guwahati, Rangia and Boko.



Sub-Divisions	Towns	Blocks	Panchayats	Villages
9	28	17	160	1284

Source: Statistical Handbook of Assam 2018

It is surrounded by the Darrang and Morigaon districts on the East, Nalbari and Goalpara

SL	Particulars	Total No.'s	Details
1	National Highway	3	NH-37, NH-52, NH-31
2	Railway Station	4	
3	International Airport	1	Lokpriya Gopinath Bordoloi International Airport
4	Domestic Airport	1	Lokpriya Gopinath Bordoloi
5	Nearest Port	1	Pandu Port

districts on the West and the boundaries touching Bhutan on the North and Meghalaya on the South.

The district is connected by all means of transport which include airways, railways, roadways and waterways, with other states of the North East region including the other parts of the Country. The Kamrup district has three national highways viz. NH-37, NH-52 and NH-31 connecting the district with the rest of North East & India.

Source: Statistical Handbook of Assam 2018

### 4.6.2 Demographic Details

The two districts, Kamrup (Rural) and Kamrup (Metropolitan) were merged into one which is now known as Kamrup district. In 2016, Kamrup had population of 15,17,542 of which male and female were 778,461 and 739,081 respectively. The details are as follows:

Average literacy rate of Kamrup in 2011 were 75.55. If things are looked out at gender wise, male

and female literacy were 81.30 and 69.47 respectively. Total literate in Kamrup District were 9,95,319 of which male and female were 5,50,219 and 4,45,100 respectively.

Description	2011
Population	15.18 lakh
Male	7,78 lakh
Female	7.39 lakh
Population Growth	15.69%
Area Sq. Km	3,105
Density/km2	489
Proportion to Assam Population	4.86%
Sex Ratio (Per 1000)	949
Child Sex Ratio (0-6 Age)	967
Average Literacy	75.55
Male Literacy	81.3
Female Literacy	69.47
Area Sq. Km	4,632
Density/km2	489

### 4.6.3 Agriculture Production Scenario/Trend

Rice, jute, rapeseed, mustard, potato, wheat, pulses, ginger, turmeric, orange, banana, pineapple and other vegetables are key crops of the district. The black gram is an important pulse crop of the district and is cultivated by the farmers due to availability of HYV and suitable agro-climatic conditions. The district also has presence of number of rice mills, food processing, spice processing and beverage units. Muga and Eri production are famous in the Kamrup district. Also Sericulture is practiced in almost all the 17 blocks of the district.

#### Agriculture and Allied Sector Scenario

Rice is the principal crop and staple food of the district due to its climatic adaptability. The rice crops are cultivated during three seasons of the year i.e. autumn (Ahu), winter (Sali) and summer (Boro) in the district. The major agriculture and allied enterprises are of Rice, Rapeseed, Vegetables, Banana, Pineapple, Orange, Coconut, Areca Nut, Dairy, Piggery, Poultry, Sericulture, Fishery etc.

The district follows 12 farming systems, of these 3 common farming systems that are adopted by both the rich and poor farmers, viz., Agriculture - Horticulture; Agriculture – Horticulture - Animal Husbandry; Agriculture – Horticulture - Animal Husbandry – Fishery; and one farming system i.e. Agriculture - Animal Husbandry - Fishery is predominantly used by resource rich category's farmers and Horticulture - Sericulture is followed only by resource poor farmers.

The dairy farming is practised by the small and marginal farmers and the landless labourers in the district who provides the economic security by serving as a hedge against crop failure. Traditionally, dairy farming is a subsidiary occupation of the farmers in the district.

In the areas of Horticulture, the district has good potential for growing of fruit and vegetable crops which includes pineapple, orange, banana, potato, cabbage, cauliflower etc. The district also offers scope for mushroom cultivation and floriculture due to its proximity to the urban city of Guwahati

#### 4.6.4 Industrial Infrastructure Details

In Kamrup District, there are Eight Industrial Infrastructures like Kalapahar, Jambari, Patgaon, Chaygaon, Rangia, Rani, Bamunimaidan. Amongst all the Industrial Areas, Bamunimaidan has most number of units (66 units) with the total investment of Rs.710 crore. Whereas, IGC Chaygaon Chatabari has 37 industries with a total investment of Rs.841 crore.

SL	Industrial Infra	Area	No. of Units	Total Investment (INR Lakh)
1	Assam Industrial Development Corporation (AIDC)	Kalapahar	24	461
2	Industrial Growth Centre (IGC)	Chaygaon, Jambari	31	45564
3	IGC	Patgaon	7	1752
4	IGC	Chaygaon, Chatabari	37	84184
5	Industrial Infrastructure Development (IID)	Rangia	24	16314
6	Industrial Area (IA)	Rani	20	4437
7	Industrial Estate (IE)	Bamunimaidan	66	71033
8	Mini Industrial Estate (MIE)	Kalapahar	32	747
		<b>TOTAL</b>	<b>242</b>	<b>2,24,492</b>

#### 4.6.5 Key Agriculture Based Industries

The largest concentration of industry is in and around Guwahati due to its easy access to the infrastructure facilities and proximity to the commercial and trading centres of the North East Region. There are about 191 numbers of agro-based Medium, Small and Micro units currently operational in the district.

Listed below are the list of Medium scale agro based enterprises in Kamrup district and nearby areas:

- M/s Amrit Feeds Limited, IIDC Moranjana, Rangia (Cattle Feeds)
- M/s S M CONSUMERS PVT LTD(UNIT-II), IGC Chaygaon, Jambari (Fruit Beverages)
- M/s M. L. Agro Food Products, Abhaypur, Amingaon, Guwahati (Food Products)
- M/s Laxmi Rice Mill, Bijoy Nagar, Kamrup (Rice Milling)

#### 4.6.6 Export Infra Availability

##### Export Promotion Industrial Park (EPIP) at Amingaon

<b>Name of the Project</b>	Export Promotion Industrial Park ( EPIP), Under Ministry of Commerce, DIPP
<b>District</b>	Kamrup (Rural)
<b>Location</b>	Amingaon, Kamrup
<b>Accessibility</b>	<p><b>Airport:</b> 18 KM from LGB International airport, Borjhar, Guwahati</p> <p><b>Railway Station:</b> 4 KM from Kamakhya Railway Station</p> <p><b>Road:</b> 10 KM distance from Guwahati City. Excellent road link with entire North Eastern states and rest of the country.</p>
<b>Total Project Cost</b>	Rs. 1462 Lakhs
<b>Total Allotted Area</b>	1,85,000 Sq.Mtr
<b>Area available for allotment</b>	Nil
<b>No of Units allotted</b>	59
<b>No of functioning Units</b>	41
<b>No. of Agro based Industries</b>	1 (Seven Foods Pvt. Ltd)
<b>Infrastructure Facilities available</b>	<ul style="list-style-type: none"> <li>• Internal road with drainage</li> <li>• Power supply system with street lighting</li> <li>• Water Supply Network with overhead Reservoir</li> <li>• 33 KV Power line, 2/5 MVA sub station</li> </ul>
<b>Approach Road</b>	About 1 km from the junction point of NH-31 and Hajo Road
<b>Manufacturing Units</b>	<ul style="list-style-type: none"> <li>• Plastic moulded furniture</li> <li>• Cosmetic items</li> <li>• Mosquito repellent</li> <li>• Steel furniture's</li> <li>• Food processing units</li> <li>• Ayurvedic Medicines &amp; Pharmaceuticals</li> <li>• Transformer Manufacturing units etc.</li> </ul>

1. Inland Container Depot (ICD) Amingaon

Terminal Details:	<b>Name:</b> Armingaon (ICDA) <b>District:</b> Kamrup <b>State:</b> Assam
Warehouse (area):	<b>Export:</b> Approx. 7500 sqm <b>Import:</b> Nil <b>Bonded:</b> 2454 sqm <b>Domestic:</b> Nil <b>Transit Warehouse:</b> 1076 sqm
Industrial Area:	Assam / Tripura / Meghalaya
Road Connectivity	<b>National Highway:</b> NH-37 <b>State Highway:</b> Hajo Road / North Guwahati Road <b>Others:</b>
Services & facilities	<b>LCL Service:</b> No <b>Bonded Warehousing Facility:</b> Yes <b>Bonded Trucking Facility:</b> No <b>Air Cargo Services:</b> No <b>Reefer Train Services:</b> No
Nearest Railway Stations for Passengers	Agthuri & Guwahati Railway Station
Nearest Airport	Lokpriya Gopinath Bordoloi International Airport, Guwahati

#### Pandu Port (Managed by IWAI)

Container cargo vessel carries a consignment of 53 Twenty-Foot Equivalent Unit (TEUs) through the Brahmaputra- National waterway-2 via Pandu Ghat. The vessel will reach IWAI's Pandu terminal in Guwahati after 12-15 days, sailing through national waterway 1 (Ganga), national waterway 97 (Sunderban), Indo-Bangladesh Protocol (IBP) route and finally national waterway-2 (Brahmaputra), travelling a distance of 1,425 KM

Guwahati Steamer Ghat

#### 4.6.7 Support Institutions

##### Krishi Vigyan Kendra, Kamrup

The mandate for application of technology/products through assessment, refinement and demonstration for adoption KVK has been established in Assam. To achieve the mandate effectively, the following activities are envisaged for each KVK:

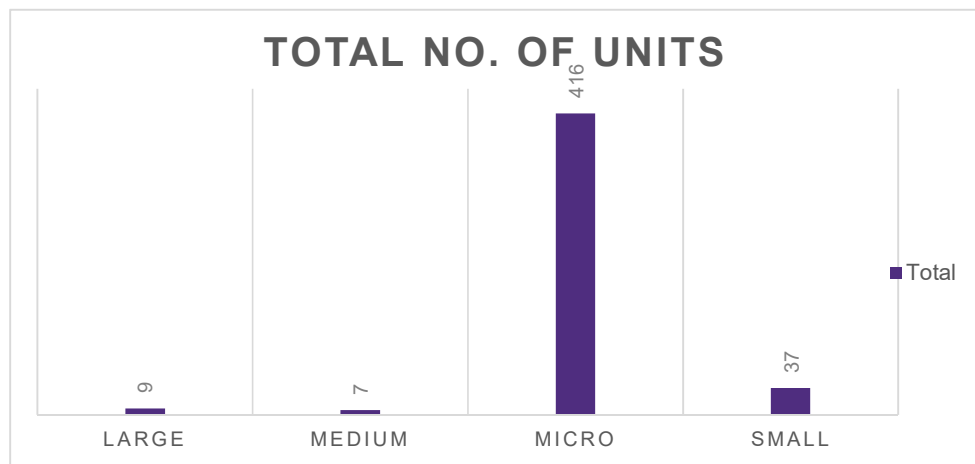
- On-farm testing to identify the location specificity of agricultural technologies under various farming systems.
- Demonstrations to establish its production potentials on the farmers' fields.
- Training of farmers to update knowledge and skills on modern agricultural technologies.
- Work as resource and knowledge centre of agricultural technologies for supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district.

- Produce and make available technological products like seed, planting material, bio agents, young ones of livestock etc. to the farmers
- Organize extension activities to create awareness about improved agricultural technologies to facilitate fast diffusion and adoption of technologies in agriculture and allied sectors.

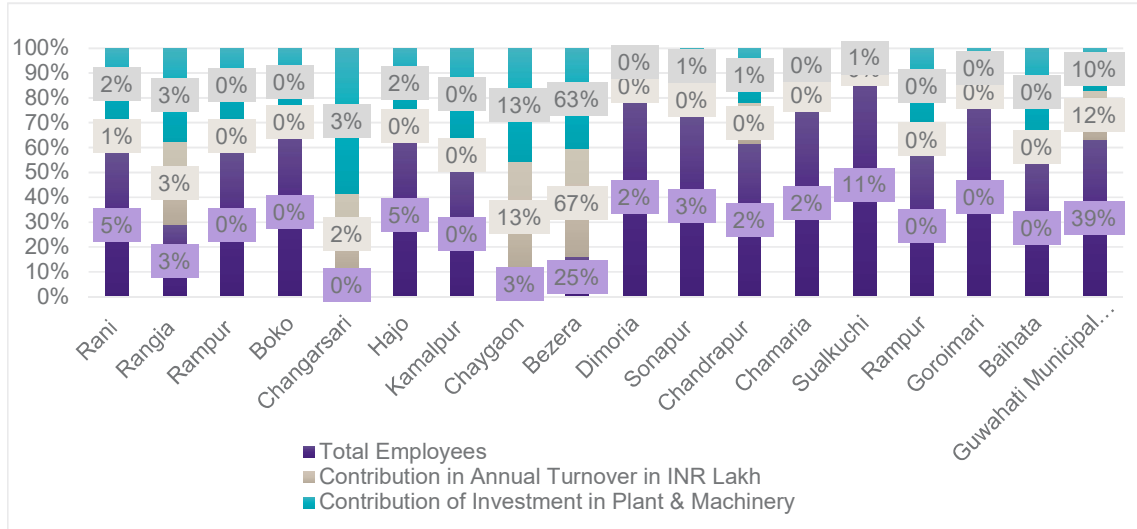
#### 4.6.8 Analysis from Baseline Data

##### Baseline Units

In the Kamrup district, the total number of units found during the baseline survey was 469 units. In micro category, the number of unregistered units is 127 and number of registered units are 251, in the small category, registered number of units is 33 and unregistered unit is 1 whereas in the large category there are 5 registered units and in medium category there are 4 registered units. Units having registration which are operating from the industrial area are also depicted. 5 units in the large category, 4 units in the medium category, 9 units in the small category, 4 units in the micro category which are registered are operating within the industrial areas in the district.



### Block wise contribution:



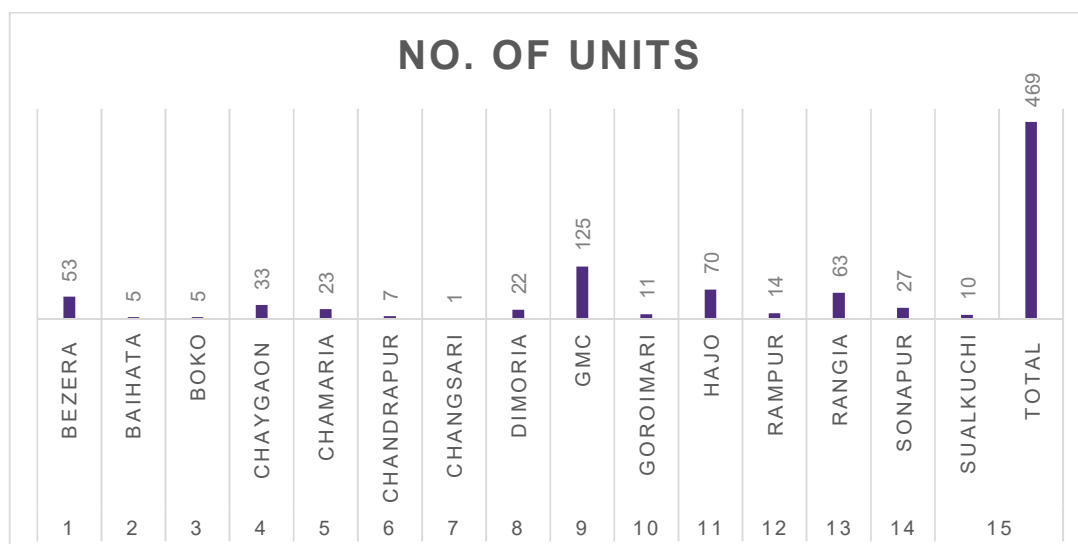
In the Kamrup district there are 18 blocks comprising of Rani Block, Rangia Block, Rampur Block, Boko Block, Changsari Block, Hajo Block, Kamalpur Block, Chaygaon Block, Bazera Block, Dimoria Block, Sonapur Block, Chandrapur Block, Chamaria Block, Sualkuchi Block, Goroimari Block, Baihata Chialiali and Guwahati Municipal Corporation.

The Guwahati Municipal Corporation has the highest contribution among the other Kamrup blocks with 39% in the total employment, 12% in the annual turnover in INR Lakh and 10% in the plant and machinery investment. The Bezera block contributes 25% in the total employment, 67% in the annual turnover in INR Lakh which is the highest among the other Kamrup blocks and 63% in the plant and machinery investment which is also the highest contribution among the other Kamrup blocks. The Chaygaon block contributes 3% in the total employment, 13% in the annual turnover in INR Lakh and 13% in the plant and machinery investment. The Rani block contributes 5% in the total employment, 1% in the annual turnover in INR Lakh and 2% in the plant and machinery investment. The Rangiya block contributes 3% in the total employment, 3% in the annual turnover in INR Lakh and 3% in the plant and machinery investment. The Changsari block contributes 0% in the total employment, 2% in the annual turnover in INR Lakh and 3% in the plant and machinery investment.

The Hajo block contributes 5% in the total employment, 0% in the annual turnover in INR Lakh and 2% in the plant and machinery investment. The Dimori block contributes 2% in the total employment, 0% in the annual turnover in INR Lakh and 0% in the plant and machinery investment. The Sonapur block contributes 3% in the total employment, 0% in the annual turnover in INR Lakh and 1% in the plant and machinery investment. The Chandrapur block contributes 2% in the total employment, 0% in the annual turnover in INR Lakh and 1% in the plant and machinery investment. The Chamari block contributes 2% in the total employment, 0% in the annual turnover in INR Lakh and 0% in the plant and machinery investment. The Sualkuchi block contributes 11% in the total employment, 0% in the annual turnover in INR Lakh and 1% in the plant and machinery investment.

### Block Average Turnover –Investment –Total Units

During the baseline survey, 469 units were found in 15 blocks of the district. Units covered during the baseline survey is shown block wise below. Guwahati Municipal Corporation has the highest number of units with 125 followed by Hajo block with 70 units.



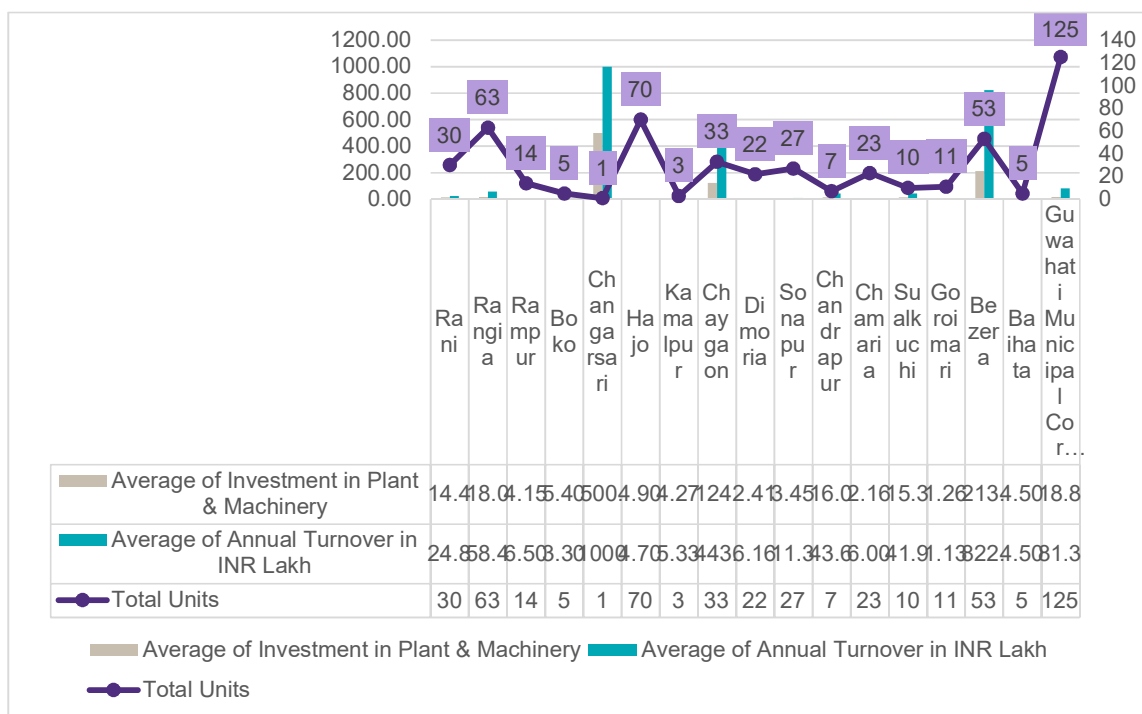
Break-up of Average of Investment in Plant & Machinery Block wise are shown below. The Average of Investment in Plant & machinery is highest for Changsari block is 500 followed by Bezera block with 213.40 and chayygaon block is 124.81.

Block	Average of Investment in Plant & Machinery
Rani	14.48
Rangia	18.02
Rampur	4.15
Boko	5.40
Changarsari	500.00
Hajo	4.90
Kamalpur	4.27
Chaygaon	124.81
Dimoria	2.41
Sonapur	3.45
Chandrapur	16.00
Chamaria	2.16
Sualkuchi	15.35
Rampur	8.83
Goroimari	1.26
Bezera	213.40
Baihata	4.50
Guwahati Municipal Corporation	18.83

Break-up of Average of Annual Turnover in INR Lakh Block wise are shown below. The highest Average Turnover in INR Lakh is for changsari block is 1000 followed by bezera block with 822.07 and chayygaon block with 443.29

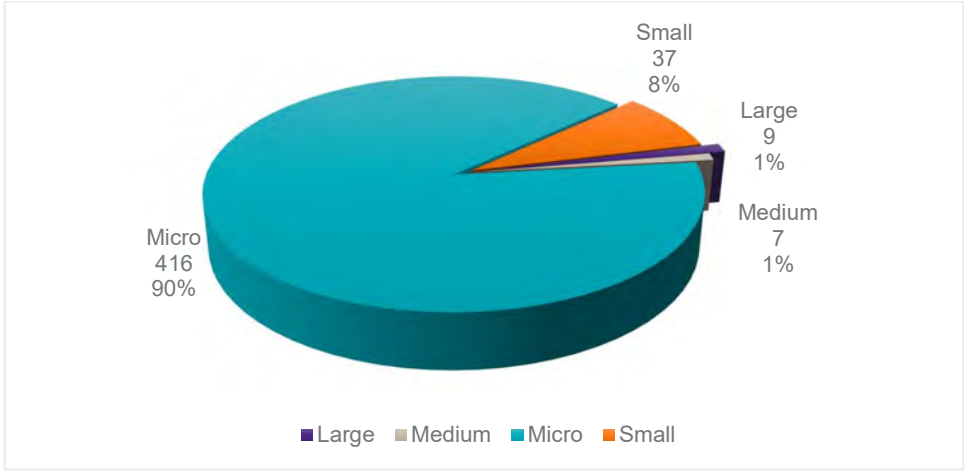
Block	Average of Annual Turnover in INR Lakh
Rani	24.84
Rangia	58.49
Rampur	6.50
Boko	3.30
Changarsari	1000.00
Hajo	4.70

Kamalpur	5.33
Chaygaon	443.29
Dimoria	6.16
Sonapur	11.35
Chandrapur	43.67
Chamaria	6.00
Sualkuchi	41.93
Rampur	13.33
Goroimari	1.13
Bezera	822.07
Baihata	4.50
Guwahati Municipal Corporation	81.37



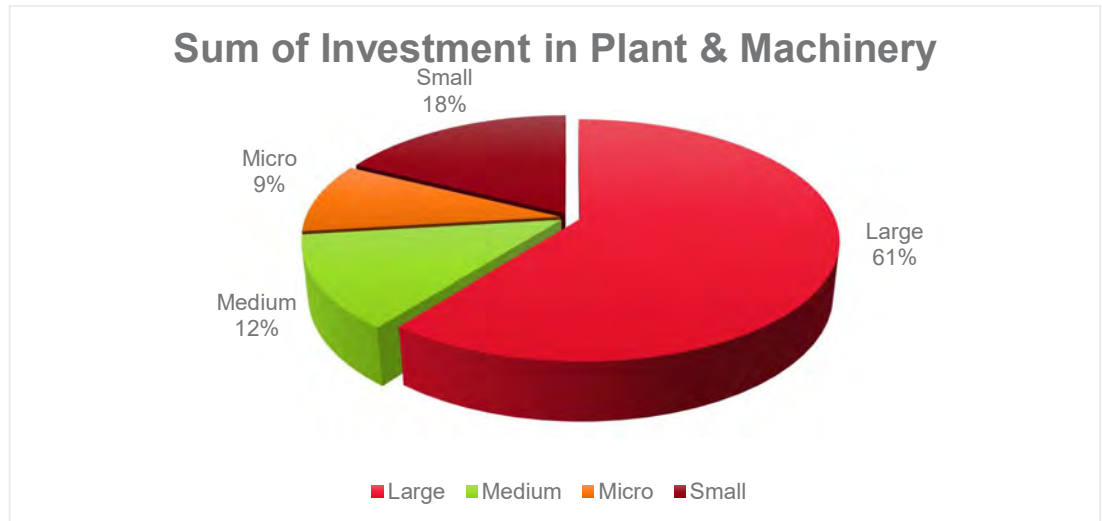
**Category wise**

90% of the total units surveyed in Kamrup district falls under micro category with 416 unit followed by small units at 8% with 37 units, medium and large units at 1% each with 7 and 9 units respectively.

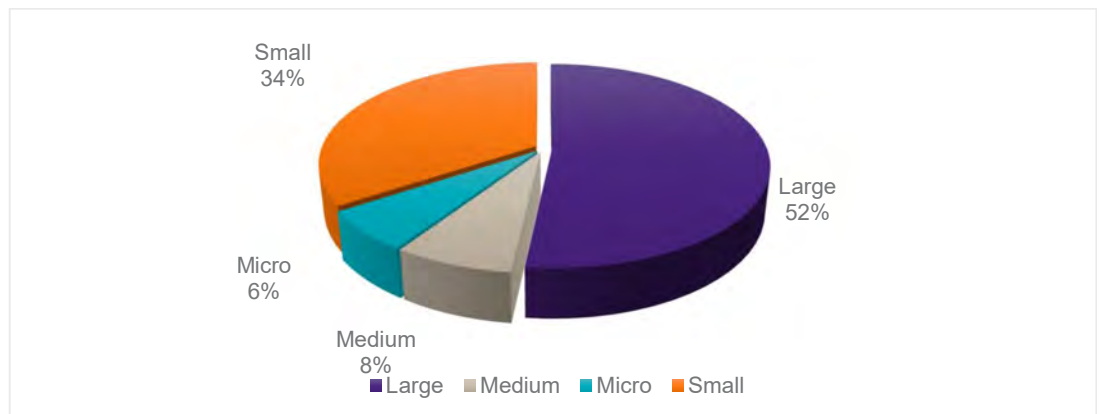


**Sum of Investment in Plant & Machinery, Sum of Annual Turnover in INR lakh & Sum of Total Employees**

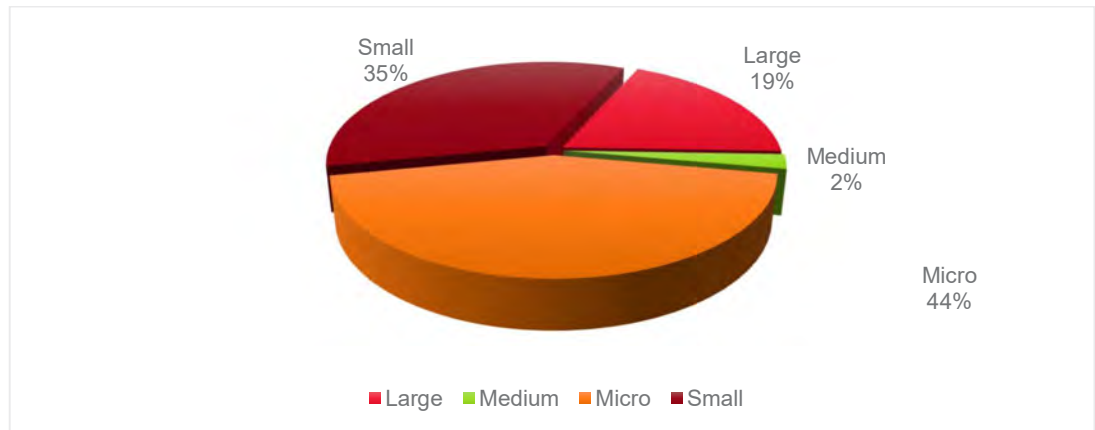
In Kamrup district investment in Plant & Machinery is highest for Large units which is 61% followed by Small units at 18%, Medium units at 12% and Micro units at 9%.



In Kamrup district annual turnover is highest for Large units which is 52% followed by Small units is 34%, Medium units is 8% and Micro units is 6%.

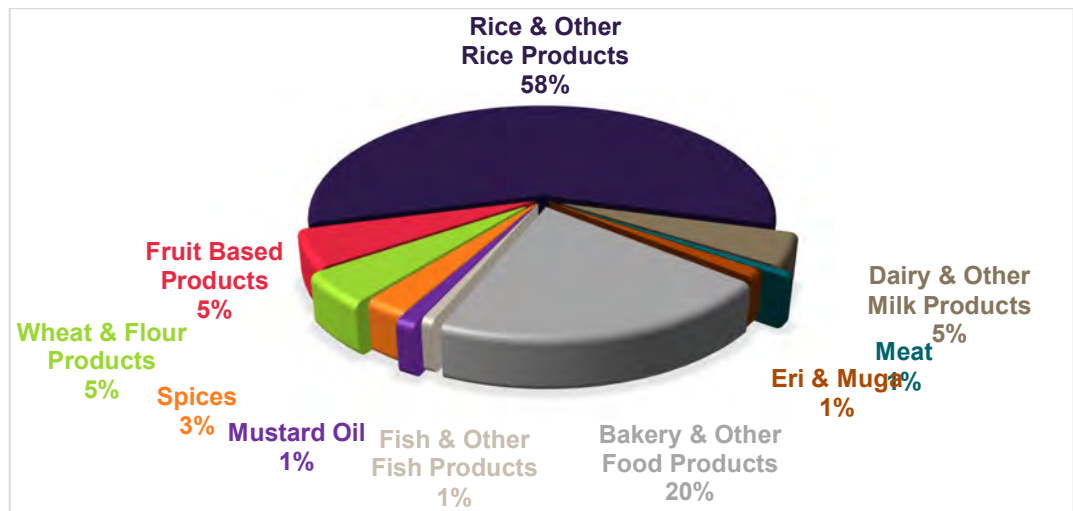


In Kamrup district Micro units employ the highest with 44% followed by Small units with 35%, Large units with 19% & Medium units with 2%.



**Products of Kamrup District**

There are 10 different products which has been identified in Kamrup district. In the figure below the number of units engaged in identified products is shown. 58% of the units are engaged in rice & other rice products, 20% of the units are engaged in bakery and other food products, 5% of the units are engaged in Fruit based products, 5% of the units are engaged in wheat & flour products , 5% of the units are engaged in dairy & milk products, 3% of the units are engaged in spices , 1% of the units are engaged each in mustard oil and Eri & Muga silk, Fish products and meat products.



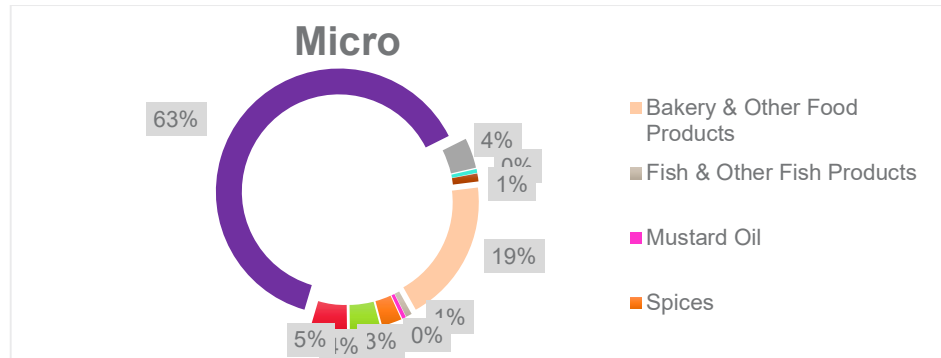
**Product wise Category of Kamrup District**

In this chart we will highlight product wise category of each unit which fall under Micro, Small, medium & Large.

**Micro Units:**

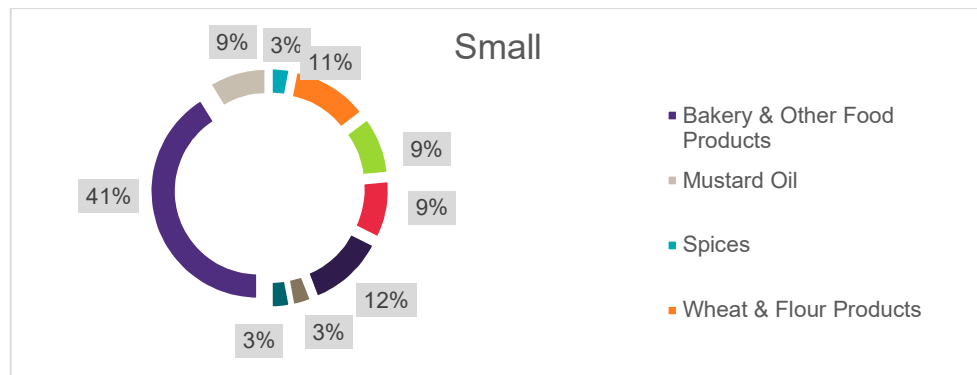
There are about 63% of the units engaged in of Rice & other Rice products ,19% of the units engaged in Bakery & other Food Products , 5% of the units engaged in Fruit Based Products, 4% of the units engaged each in Wheat & Flour Products and Dairy & other Milk products,3%

of the units engaged in Spices , 1% of the units engaged each in Eri & Muga , Fish & other fish products and Mustard oil & Meat



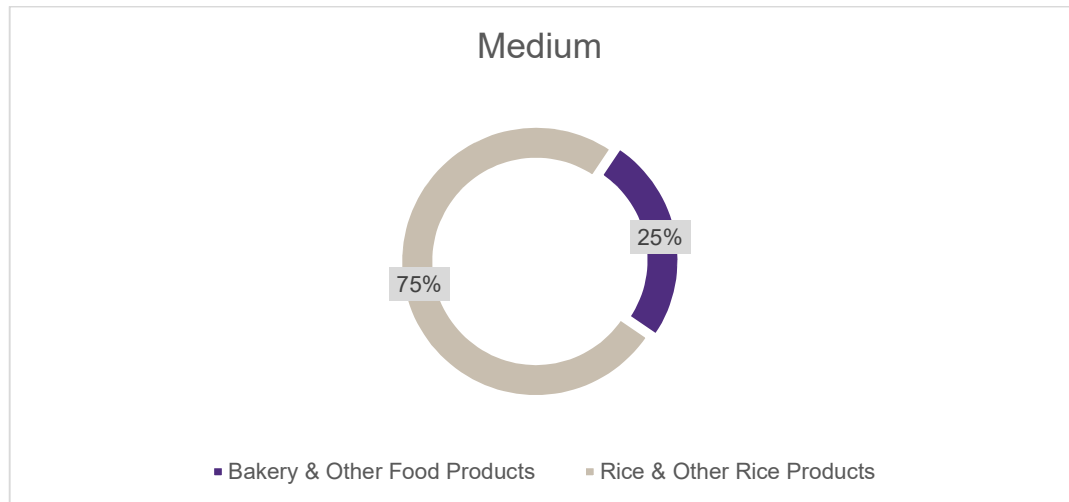
**Small Units**

There are about 41% of the units engaged in Bakery & other Food Products, 12% of the units engaged in Dairy & other Milk products, 11% of the units engaged in Wheat & Flour Products, 9% of the units engaged in Mustard oil, 9% of the units engaged in Fruit based products ,9% of the units engaged in Rice and other Rice products,3% of the units engaged in spices,3% of the units engaged in Meat & 3% of the units engaged in Eri & Muga.



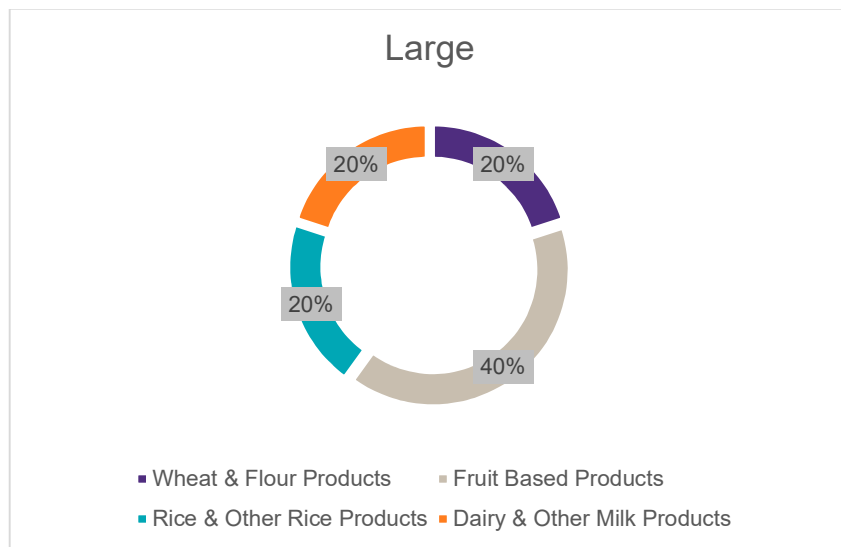
**Medium Units**

There are 75% of the units engaged in Rice & other related Rice products and 25% of the units engaged in Bakery & other food products.



### Large Units

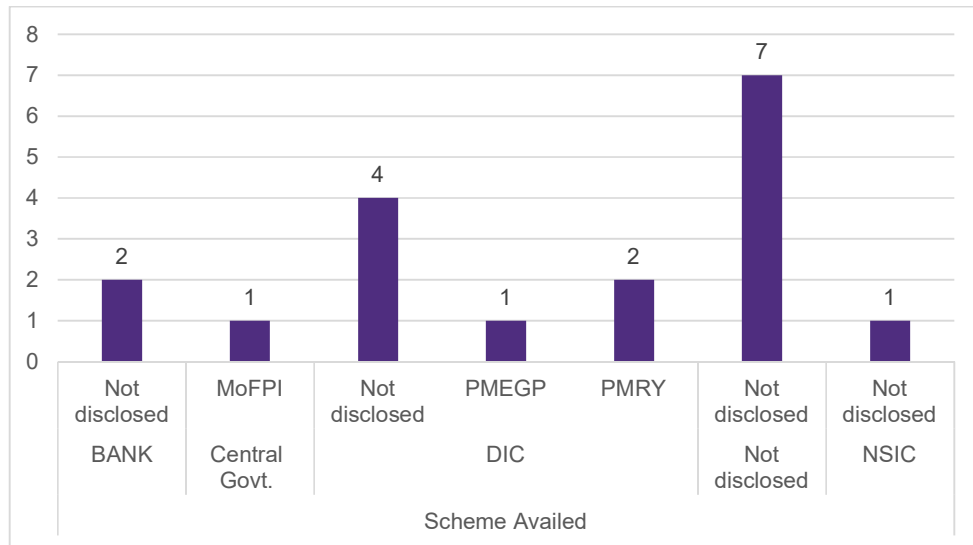
There are 40% of the units engaged in Fruit based products and 20% units each which are engaged in Wheat & Flour Products, Rice & Other rice products and dairy & other milk products.



### Scheme Availed

Different schemes availed by units in Kamrup district are shown below.

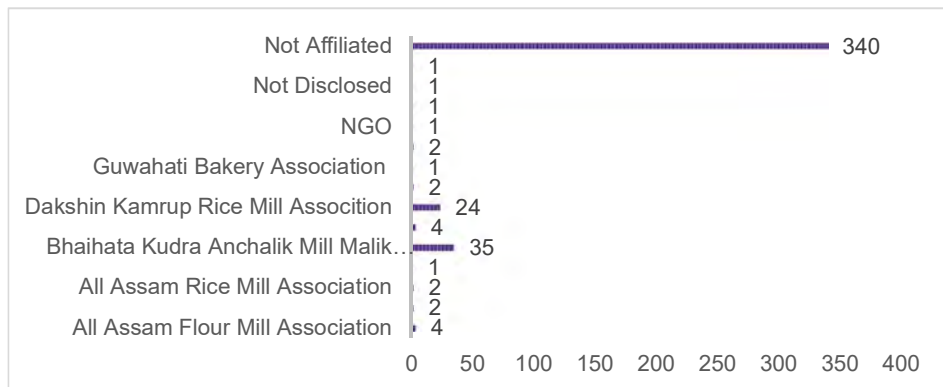
2 units have availed schemes from banks, from Central Govt. under MoFPI scheme only 1 unit has availed the scheme, from DIC under PMEGP only 1 unit has availed the scheme, under PMRY only 1 unit has availed the scheme, 4 units have availed scheme which was not disclosed during the survey, 7 units have availed schemes but the scheme name was not disclosed and under NSIC scheme 1 unit has availed schemes.



### Affiliation

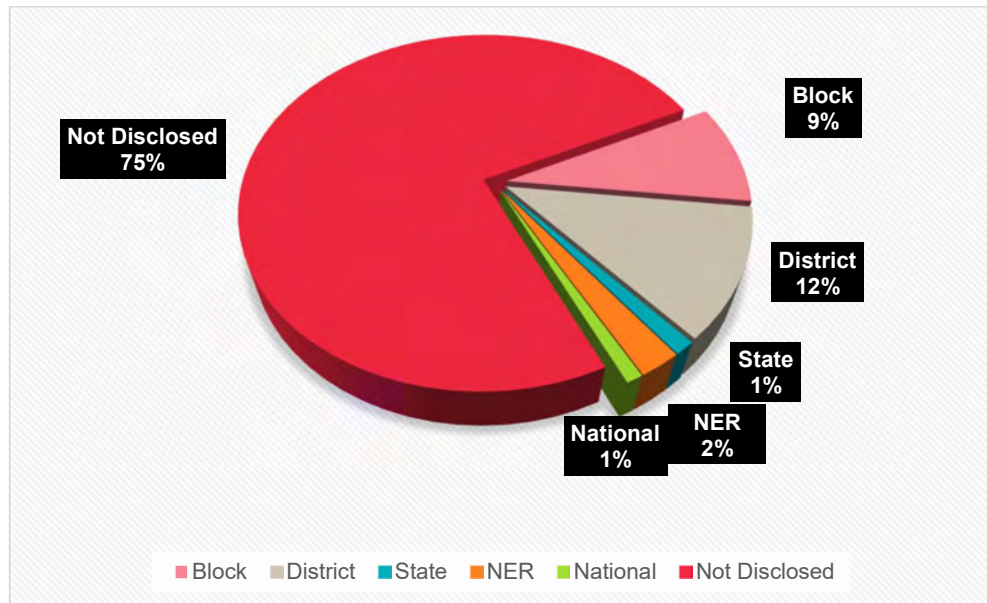
In Kamrup district 340 units are not affiliated with any association/cluster/Gaon Panchayat, 1 unit is affiliated to Dimoria Gaon Panchayat, 1 unit is affiliated to NGO-Ava Foundation, 1 unit is affiliated to an NGO, 2 units are affiliated to Kamrup Rani Rice Milling LMP Cluster-1, 1 unit is affiliated to Guwahati Bakery Association, 2 units are affiliated to FINNER, 24 units are affiliated to Chayygaon Mini Rice Mill Association, 35 units are affiliated to Baihata Khudra Anchalik Mill Malik Sangha, 1 unit is affiliated to baihati Vhariali, 2 units are affiliated to All Assam Rice Mill Association, 2 units are affiliated to All Assam Mustard Oil Association and 4 units are affiliated to All Assam Flour Mill Association.

### Target



### Market

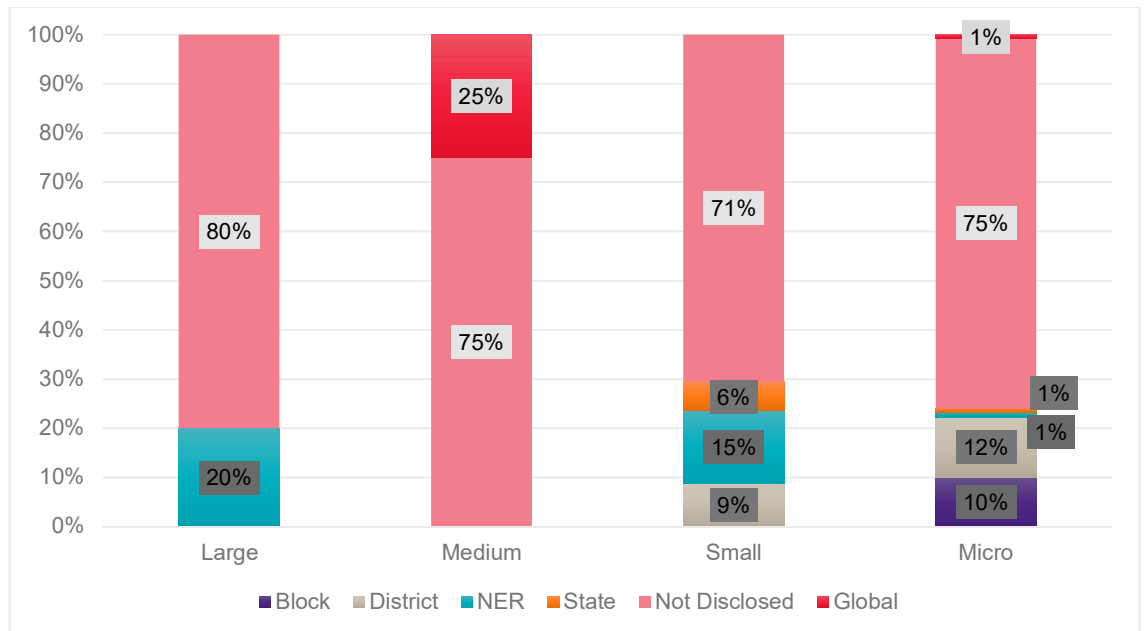
For Kamrup District, target market is shown in the graph below. 9% of the products manufactured are marketed within the block, 12% of the products are marketed within the district, 2% of the products manufactured are marketed in the North East Region, 1% is marketed within the state and only 1% is marketed out of the NE Region. 75% of the units have not disclosed their respective target market.



**Target Market-Category wise**

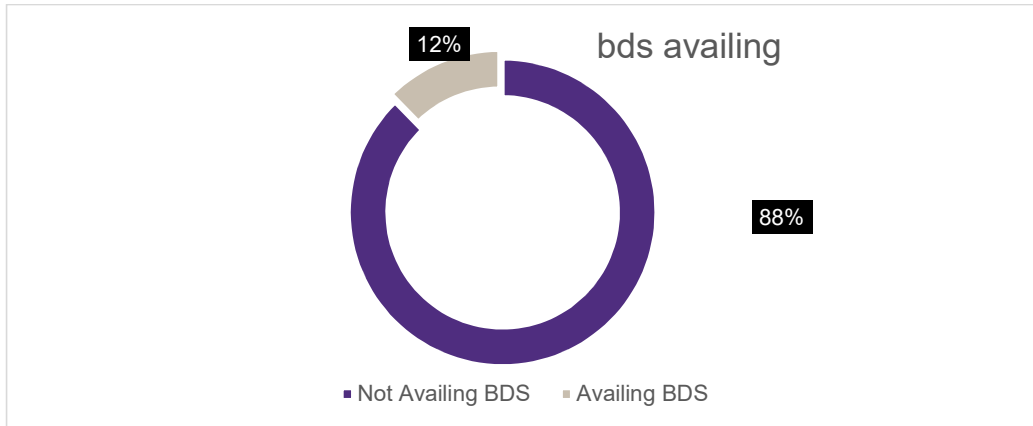
In the Kamrup district, the category wise target market is shown.

Micro Units : A total of 416 units are there in the micro category. 10 % of the units in this category targets the block level market, 12 % targets the district level markets, 1% targets the market in the North East region, 1% targets the market in the within the state, 1 % targets the global market. 75% of the micro units did not specifically disclose their target market.



**Business Development Services:**

In the Kamrup District, the business development services are availed and the following graph depicts the same. 12% of the units which is 52 units have availed business development services. 88% which is 369 units have not availed any business development services.



**BDS Availed Category wise:**

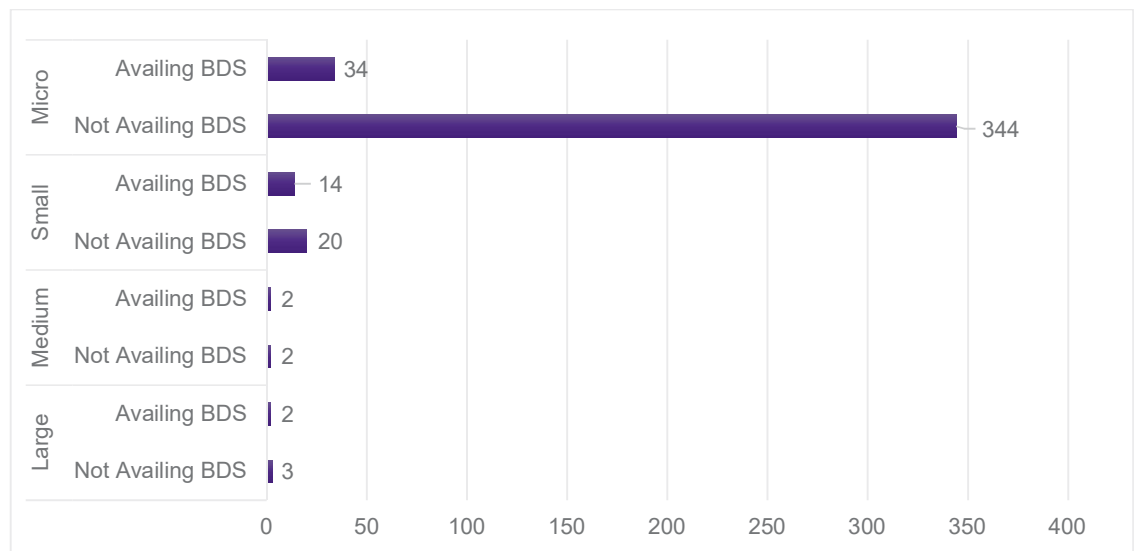
In Kamrup district the BDS availed category wise is indexed in the graph below.

Micro Units: There are 34 units which availed business development services

Small Units: There are 14 units in the small category which availed business development services

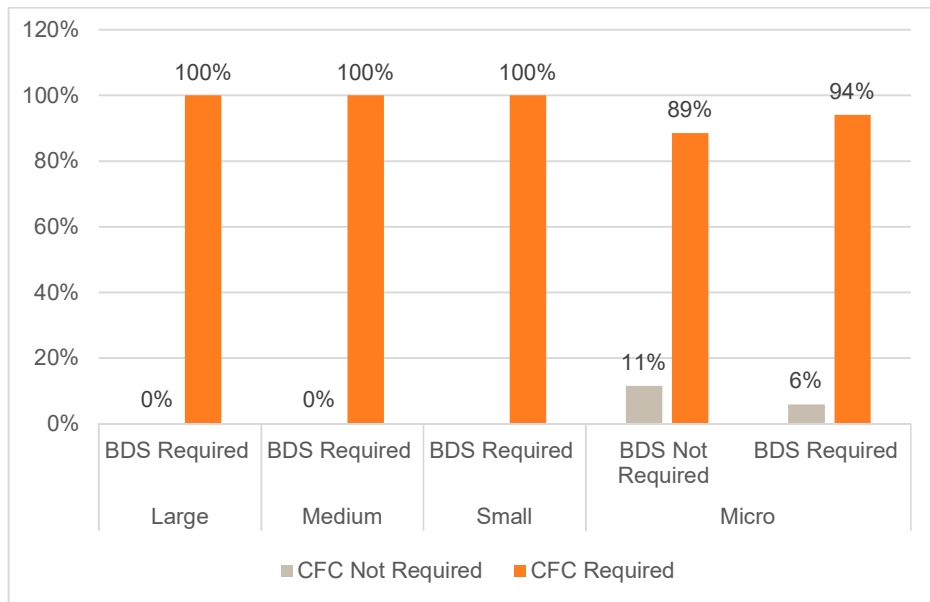
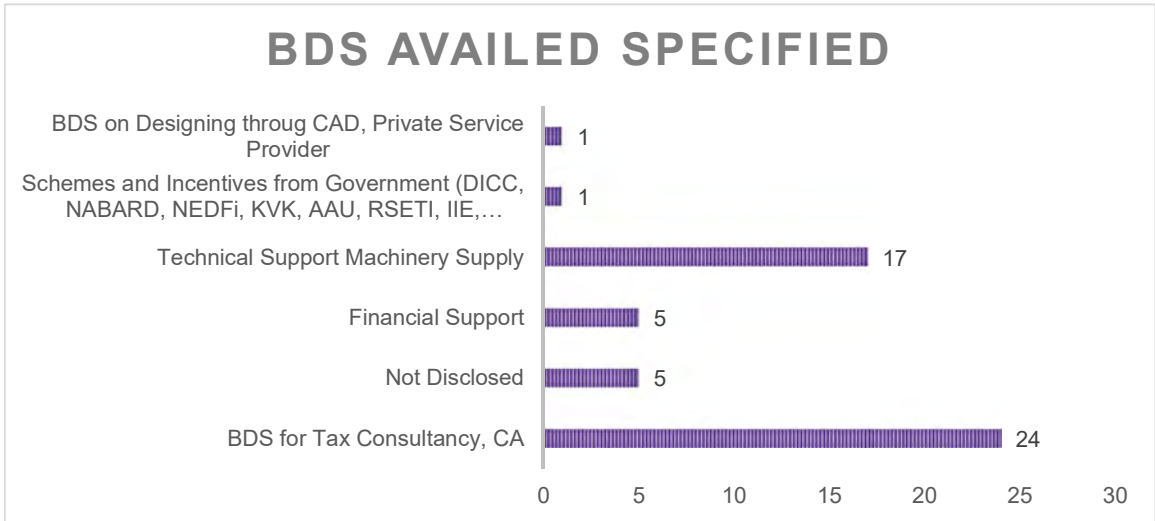
Medium Units: There are 2 units in the medium category of units which availed business development services

Large Units: There are 2 units which has availed business development services



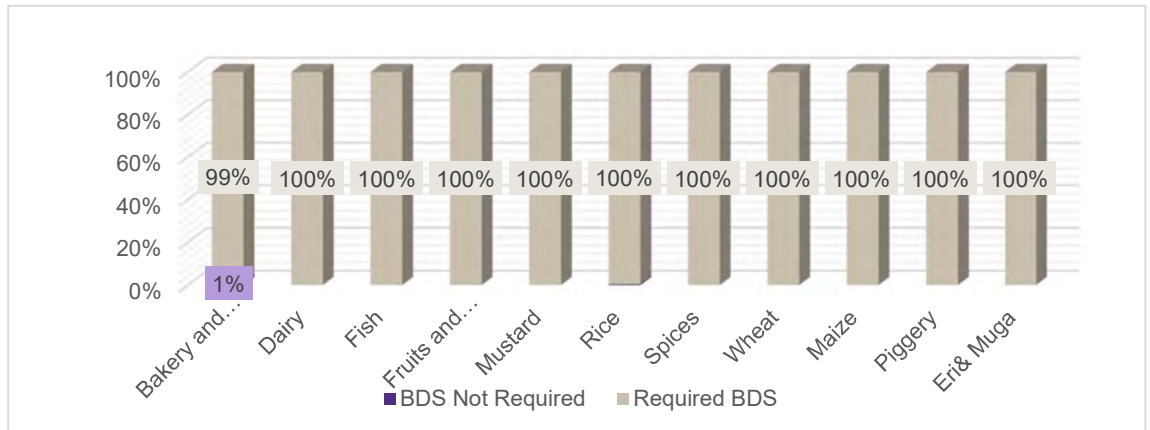
**BDS Aailed Specified:**

1 unit has availed business development services on designing through CAD, Private Service Provider, 1 unit has availed business development services through Schemes and Incentives from Government (DICCC, NABARD, NEDFi, KVK, AAU, RSETI, IIE, NERAMAC), 17 units has availed business development services through Technical Support Machinery Supply, 5 units has availed BDS through Financial Support, 24 units has availed BDS through Tax Consultancy, CA and 5 units has not disclosed name of any BDS provider.



**Requirement of Business Development Services**

100% of the units in the dairy, fish, fruits & vegetables, mustard, rice, spices, wheat, maize, piggery and eri & muga value chains requires business development services. In the bakery and confectionery value chain, only 1% of the units does not require business development services whereas 99% of the units does not require any such services.



**Business Development Services Requirement specified:**

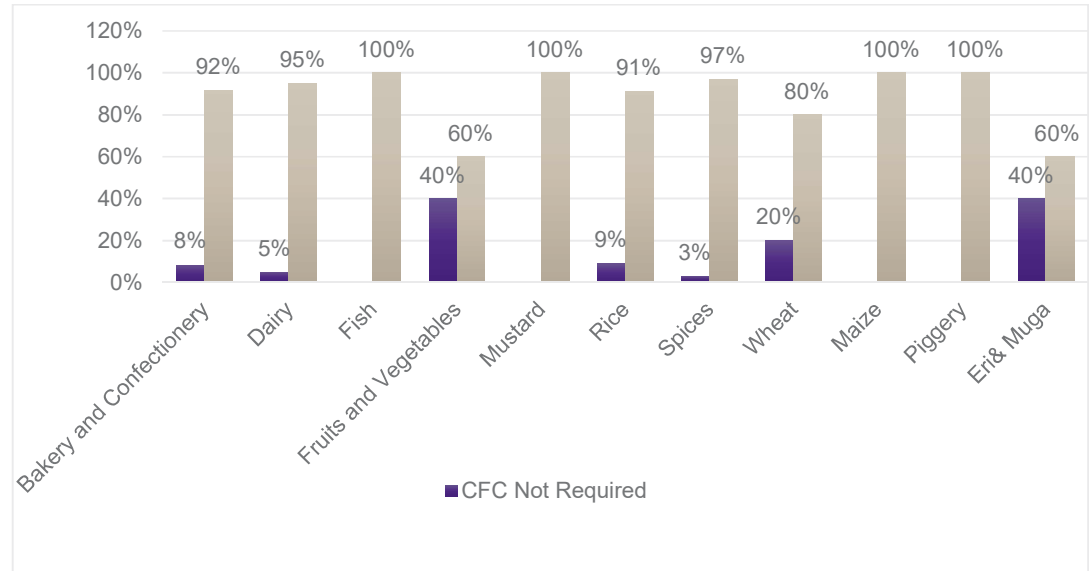
The following graph shows the specific requirement of business development services. 82 units requires services related to liasoning with the Government for support on upgrading infrastructure facilities. 1 unit requires services for preparation of project reports/Detailed Project reports and tax consultancy services. 82 units have requirements related to financial linkages with banks and other financial institutions.



**Requirement of Common Facility Centre :**

In the bakery & confectionery value chain, 8 % of the units does not require common facility centers whereas 92 % of the units requires the facilities. 5% of the dairy value chain units does not require any common facility centers whereas 95 % of the units require the facilities. In the fish, mustard, maize and piggery value chains, 100% of the units expressed their interest for the requirement of a common facility centers. In the fruits and vegetables value chain, 40% of the units does not require the common facility centre whereas 60% of the units require facilities related to the same. 9 % of the rice value chain units does not require facilities related to the common facility centre whereas 91% of the units are interested to avail the facilities related to

the same. 3% of the units in the in the spice value chain does not require any facilities in terms of common facility centre while 97% of the units requires the facilities. 20% of the units in the wheat value chain does not require facilities in the common facility centre while 80% of the units requires facilities related to the same. In the eri & muga value chain, 40% of the units does not require any facilities related to the common facility centre and 60 % of the units requires the same.



**Value Chain:**

Enterprises has been distributed across the 10 value chains, there are 53% units under rice followed by Bakery and confectionery with 20% units, 8% in spices, 6% under fruits & vegetables, 5% units under wheat & dairy, 1% each in piggery, mustard, eri & muga and 0% under the fish value chain.

## 4.7 Sivasagar

### 4.7.1 Geographic Details of Sivasagar District

Sivasagar, an administrative district of Assam, is located between 94°25' E to 95°25' E longitude and 26°45' N to 27°15' N latitude. It has an area of about 2,668 sq. km and a population of 1,151,050. The district has abundant rainfall, humid atmosphere and fertile soil, which makes the conditions favorable for agriculture. It is known for its tea production and grows some of the finest, most expensive varieties. Additionally, there is significant production of rice, rapeseed, mustard, potato, banana, papaya, areca nut and turmeric. There are a number of subsistence crops that are grown as well, which include fruits, vegetables, useful grasses, herbs and spices.



Agro-climatically, Sivasagar district is located in the Upper Brahmaputra Valley Zone. It is bounded on the north by Lakhimpur and Dibrugarh districts, on the east by Dibrugarh district and Arunachal Pradesh, on the south by Nagaland state and on the west by Jorhat district. It is well connected by railways as well as roadways with NH-37 passing through it. The closest airport is located in the Jorhat district, which is around 55 km from Sivasagar.

Sub-Divisions	Town	Blocks	Panchayats	Villages
3	3	17	118	875

Source: Statistical Handbook of Assam 2011

The district is connected by all means of transport which include airways, railways and roadways, with other states of the North East region including the other parts of the Country.

SL	Particulars	Total No.	Details
1	National Highway	1	NH-37
2	Railway Station	3	Simoluguri Junction, Sivasagar, Moran
3	Nearest Domestic Airport	2	Rowriah(Jorhat) & Mohanbari(Dibrugarh)

#### 4.7.2 Demographic Details

As per 2011 census, 90.44 % population of Sivasagar districts lives in rural areas of villages. The total Sivasagar district population living in rural areas is 1,040,954 of which males and females are 531,286 and 509,668 respectively. In rural areas of Sivasagar district, sex ratio is 959 females per 1000 males. The details are as follows:

Description	2011
Population	11.51 Lakhs
Male	589,216
Female	561,834
Population Growth	9.44%
Area Sq. Km	2,668
Density/km2	431
Proportion to Assam Population	3.69%
Sex Ratio (Per 1000)	954
Child Sex Ratio (0-6 Age)	960
Average Literacy	80.41
Male Literacy	85.84
Female Literacy	74.71
Area Sq. Km	2,668
Density/km2	431

Source: Census 2011

Average literacy rate in Sivasagar in 2011 was 80.41 compared to 74.47 of 2001. If considered gender wise, male and female literacy rates were 85.84 and 74.71 respectively. In the 2001 census, the same figures stood at 81.53 and 66.81 in Sivasagar District. Total literates in Sivasagar District were 813,505 of which male and female populace were 444,767 and 368,738, respectively.

#### 4.7.3 Agriculture Production Scenario/Trend

Agriculture occupies a very important role in the Economy of Sivasagar District and is the major source of income, providing livelihood to 92.76% of the rural population. Winter Paddy which is commonly known as Sali is widely cultivated throughout the District. Area under this crop is increased by 7594 Ha than 1997-98 due to absence of flood in the District during the years. Autumn Paddy being the next popular crop in the District with an area of around 1835 Ha. in 1999-2000 against 1420 Ha. During 1998-99. Other major crops cultivated in the District is Jute, Potato, Sugarcane, Rape and Mustard, Pulses (Matikali, Masur, Mug, Peas etc.) and Wheat.

Yielding variety of Paddy in Sivasagar,2000-2001(Area in Hectare)

Autumn Paddy	Winter Paddy	Summer Paddy	Total
444	43081	409	43934

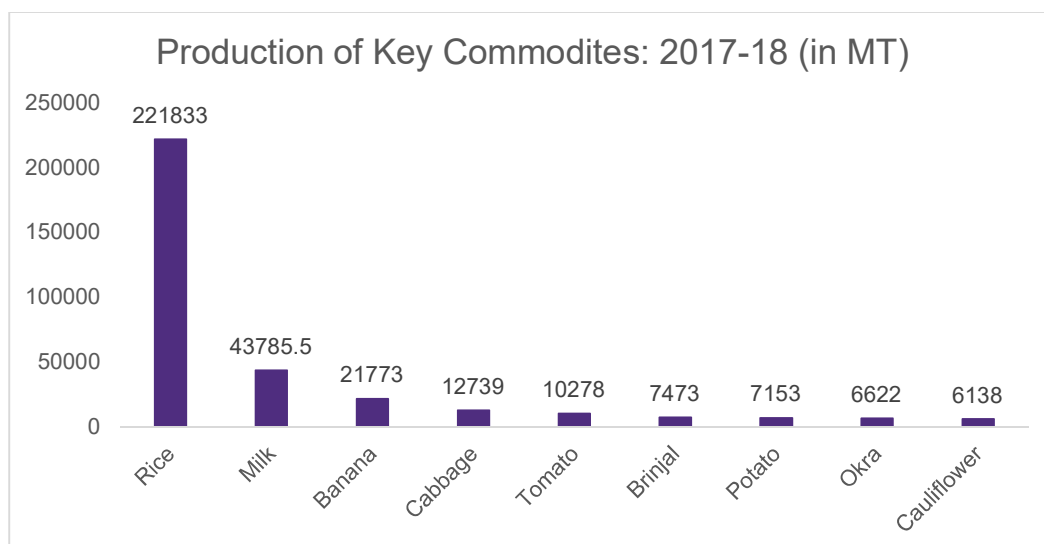
Source: District Administration Sivasagar.

#### 4.7.4 Agriculture and Allied Sector Scenario

The economy of the district predominantly depends on agriculture. The district has 136.822 hectares' cultivable land out of which 106.871 hectares is rain fed area, 3.874 hectares is irrigated area, and the remaining is the non-irrigated area. The district has an average annual rainfall of 2432 mm and an average annual temperature of 23.7 °C. Paddy is the main crop grown in Sivasagar district and covers a significant portion of the total area under

cultivation. Other crops that are grown in significant quantities in the district are potato, sugarcane, rapeseed, mustard, pulses and wheat. The local population is extensively involved in livestock rearing and mainly focuses on piggery, goaterly and poultry farming. Evidently, they depend on livestock for a number of demands such as drought power, milk, meat, egg and dung. The district stood third in egg production in the state and produced 37,693 tonnes of egg in 2017-18. Fishery is prevalent in the area as well and comprises of cultivation in low-lying paddy fields, lakes, river vines and ponds/tanks. The production of fishes in the district grew at an impressive average rate of 15.45percent from 2014-15 to 2017-18.

The existence of different types of soil in the district enables the production of a large number of fruits and vegetables such as banana, coconut, areca nut, jackfruit, mango, papaya, brinjal, tomato, potato, pea, cabbage, cauliflower, carrot, radish, lady finger, ridge gourd and other leafy vegetables. However, a significant area of the district is flood prone which can lead to high variability in the area under production from year to year. The graph below shows the production of major commodities in the district in 2017-18.



#### 4.7.5 Industrial Infrastructure Details

Two Industrial Estates have been established in Sivasagar with the aim to boost the economy, by providing adequate resources for growth and development of the industry. A food park and an Integrated Infrastructure Development Centre (IIDC) has also been established in the district.

Name of Industrial Infrastructure	Open Space (Sq. M)		
	Total Open Space	Open Space Allotted	Space Available for Allotment
IID, Demow	84000	18125	65875
Industrial Estate, Sivasagar	10006	10006	0
Commercial Estate, Bamrajaban	0	0	0
Commercial Estate, Moran	0	0	0
MIE, Sivasagar	699	0	699

#### 4.7.6 Key Agriculture Based Industries

There are a number of agro-based Micro and Small units registered as per the official data of DICC Sivasagar. The 7 agro-based Micro and Small units including household enterprises, artisans etc. with an employment of 50 have shown tremendous growth.

SL	Name of the unit	Main Products
1	M/S Gohain Rice Milling	Rice Milling
2	M/S B.S Industries	Rice Milling
3	Jogamaya Teas	Processing & Blending of Tea
4	M/S Sri Balaji Food Product	Processing of Atta
5	M/S Sanjukta Industries	Processing & Blending of Tea
6	M/s Kisan Food Product	Spice, Mixed
7	M/s Krishak Rice Mill	Rice Milling

#### Export Infra Availability

There is no export Infra available in this region.

#### 4.7.7 Industrial Parks and Contribution to Agro Enterprises

List of industries which have prospects in Sivasagar district is divided into the following four categories. This in view, an attempt has been made to analyse the resource endowment for industrial exploitation. List of industries which have prospects in Sivasagar district include:

1. Resource based
2. Demand based
3. Skill based
4. Other industries

#### 4.7.8 Support Institutions

Support Institutions play a pivotal role in the establishment, growth and expansion of enterprises. In Sivasagar District we have consulted the following institutions and departments that help or could help the enterprises through various hard and soft interventions by these Institutions or Departments.

**Krishi Vigyan Kendra (KVK):** Krishi Vigyan Kendra is an agricultural extension centre created by the Indian Council for Agricultural Research (ICAR) and its affiliated institutions at the district level to provide various types of farm support to the agricultural sector. In Sivasagar district it is under the purview of the Assam Agriculture University (AAU). The KVK here is also forming clusters for field demonstration on various technologies and ideas. They also motivate farmers to take on new breed of crops.

- A. To conduct "On Farm Testing" for identifying technologies in terms of location specific sustainable land use system.
- B. To organize front line demonstrations on various crops to generate production data and provide feedback information.
- C. To organize training to update extension personnel with emerging advances in agricultural research on regular basis.

KVK is also imparting training on fruit processing and PH value addition of agri based produces, Technology demonstration and field testing. KVK is basically an institution for

farmers but it also helps entrepreneurs through various Training Programs. Following activities are basically conducted by the KVK. Their services can be leveraged for training, technology demonstration and also linkages with farmers by prospective Industry Associations and their members.

**Lead Bank:** The Union Bank of India(UBI) as lead Bank of Sivasagar takes the lead about all finance issues related entrepreneurs. District Industries and Commerce centre directly contacts the Lead Bank to provide loans to new Entrepreneurs who have applied under various Government Schemes like PMEGP, KVIC etc. Moreover, Lead Bank also provide Loans to the existing Entrepreneurs to expand their Business.

The lead bank provides loans to the priority sector in the district. In the coming days entrepreneurs under Industry Association (IA) can leverage loan facility in bulk for entrepreneurs through common agreement.

**FSSAI:** Food business operators like small to medium sized manufacturers, storage units, transporters, retailers, marketers, distributors etc. are however required to obtain the FSSAI State License. The State License is issued by the State Government and it is important that you have operations in only 1 state, in order to obtain the State license. It is thus mostly for the units having an annual turnover of more than 12 lakhs. Based on Annual Turnover a FBO has to either apply for simple registration in FORM A with FSSAI or apply for a License given by FSSAI in FORM B.

- Annual Turnover Below 12 Lakhs required Registration FORM A
- Annual Turnover 12 Lakhs to 20 Crores required State License FORM B
- Annual Turnover Above 20 Crores required Central License

The FSSI registration support is provided by department of Food Safety and Health Government of Assam. Those enterprises related food products it is mandatory to have FSSI registration. Facilitation has to be done to make registration of units do not register under FSSI.

#### 4.7.9 Analysis from Baseline Data

##### Presence of Agro based enterprises:

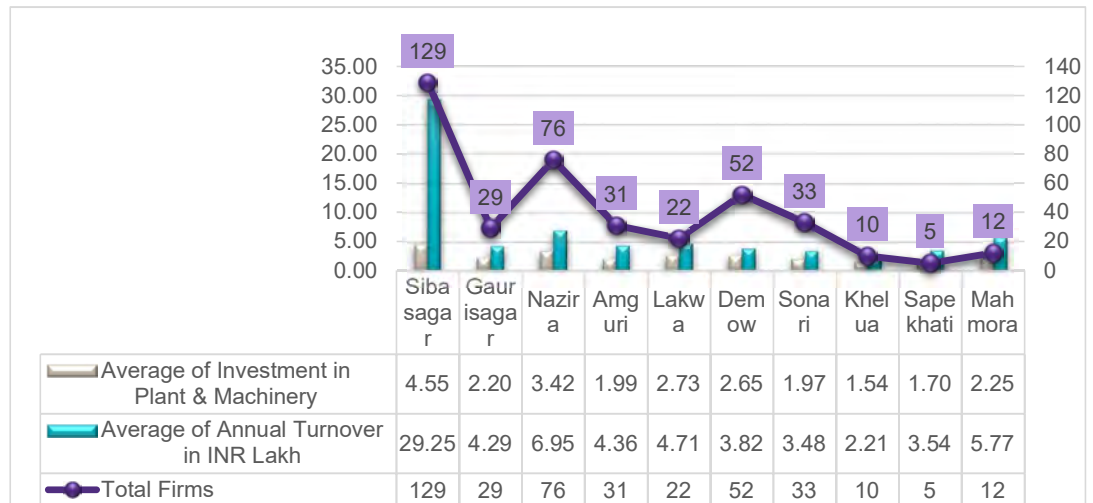
The Baseline Survey was undertaken in Sivasagar District. The Survey covered 399 units in which 285 are registered out of which 282 registered units are not operating within industrial area and 3 registered units are operating within industrial area and 106 units are



unregistered. It is also noticed that 282 units are identified as Micro level and 8 units are identified as Small level.

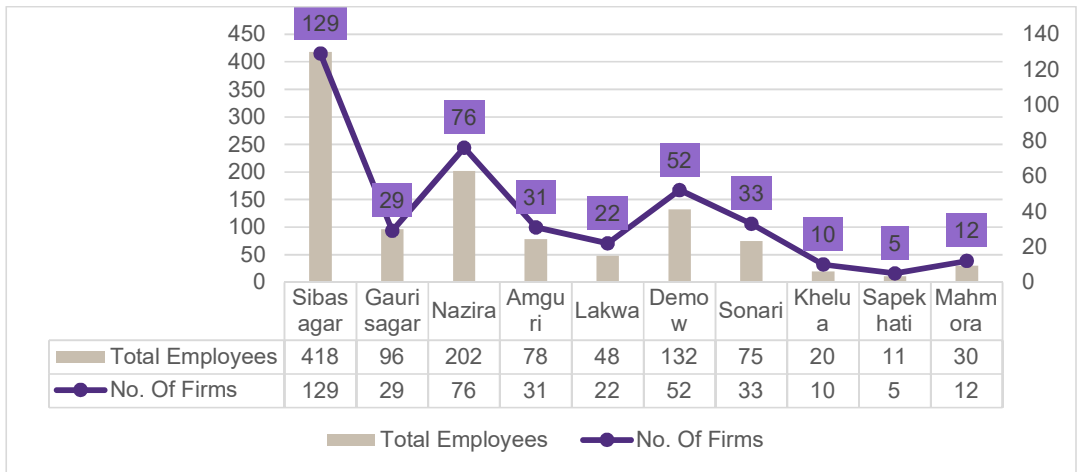
### Block wise Contribution:

In the below chart, the analysis interpreted 10 numbers of block. In Sibsagar block the total number of firm is 129 and the average of investment in plant & machinery is 4.55 and average of annual turnover is 29.25 lakh. In Gaurisagar block the total number of firm is 29 and the average of investment in plant & machinery is 2.20 and average of annual turnover is 4.29 lakh. In Nazira block the total number of firm is 76 and the average of investment in plant & machinery is 3.42 and average of annual turnover is 6.95 lakh. In Amguri block the total number of firm is 31 and the average of investment in plant & machinery is 1.99 and average of annual turnover is 4.36 lakh. In Lakwa block the total number of firm is 22 and the average of investment in plant & machinery is 2.73 and average of annual turnover is 4.71 lakh. In Demow block the total number of firm is 52 and the average of investment in plant & machinery is 1.97 and average of annual turnover is 3.82 lakh. In Sonari block the total number of firm is 33 and the average of investment in plant & machinery is 1.97 and average of annual turnover is 3.48 lakh. In Khelua block the total number of firm is 10 and the average of investment in plant & machinery is 1.54 and average of annual turnover is 2.21 lakh. In Sapekhati block the total number of firm is 5 and the average of investment in plant & machinery is 1.70 and average of annual turnover is 3.54 lakh. In Mahmora block the total number of firm is 12 and the average of investment in plant & machinery is 2.25 and average of annual turnover is 5.77 lakh. Therefore, it is found that Sibsagar block has the highest number of firm and the average of investment in plant & machinery and also the average of annual turnover in lakhs is the highest. Whereas, Sapekhati block has the lowest number of firm and vice-versa.

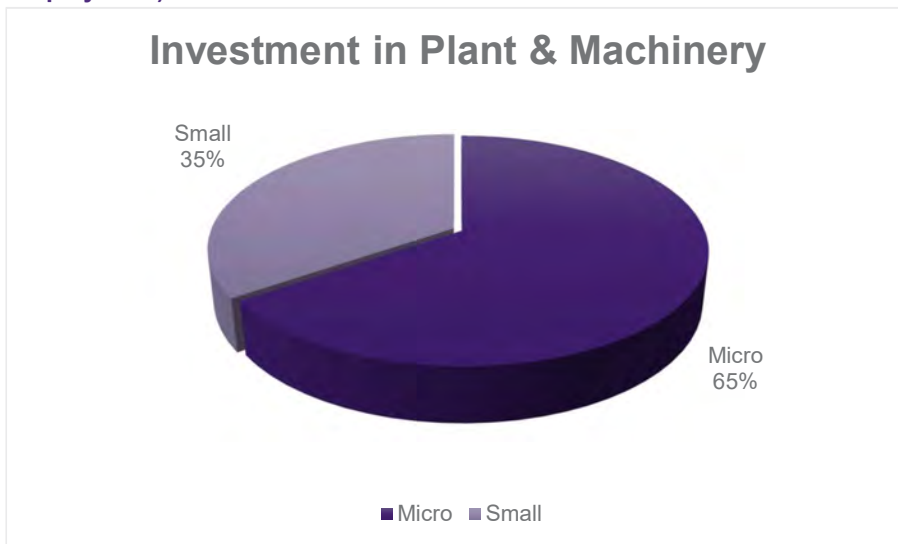


### Employment Details

From the below chart it has been found that the number of employees in Sibsagar block is the highest having 418 employees and number of firm 129. Whereas, Sapekhati block has lowest number of employees i.e. 11 and number of firm 5.

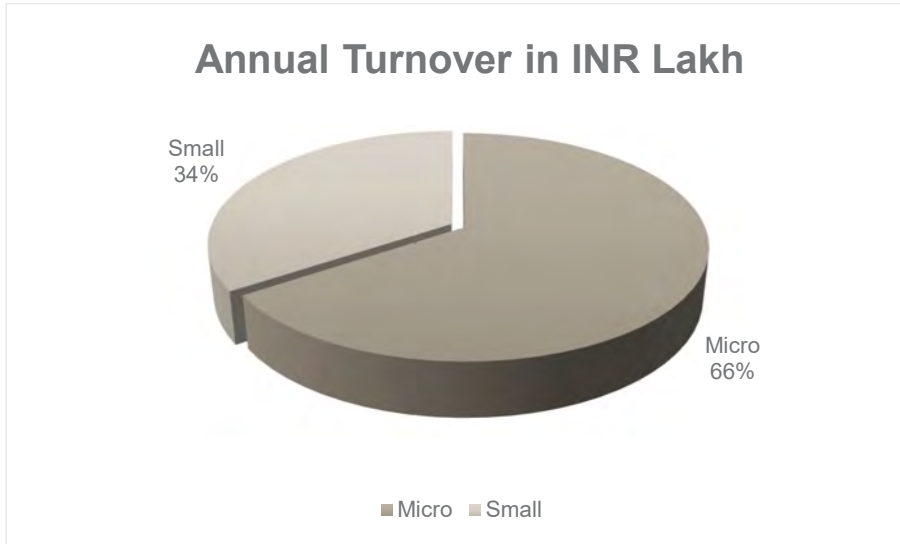


**Category (Investment in Plant & Machinery, Annual Turnover in INR Lakhs, Total Employment)**



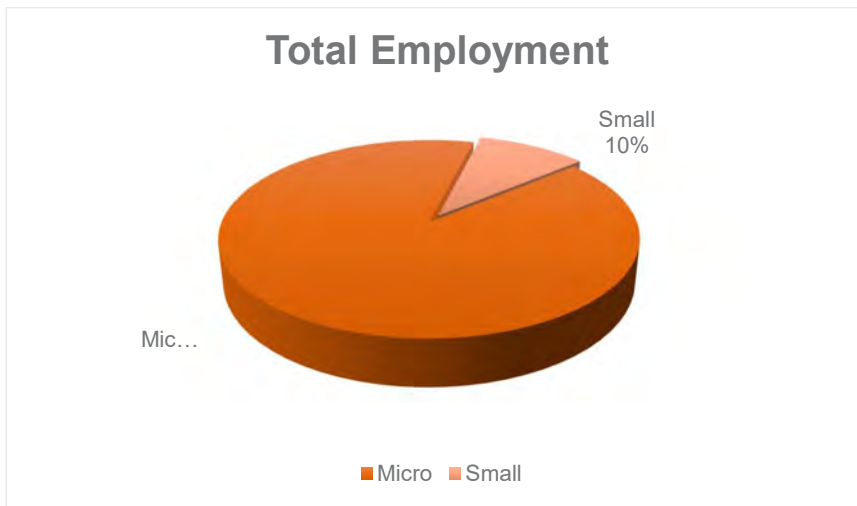
**Fig: A**

From the above Fig: A it is found that: Investment in Plant & Machinery in Micro level unit is 65%. Investment in Plant & Machinery in Small level unit is 35%



**Fig: B**

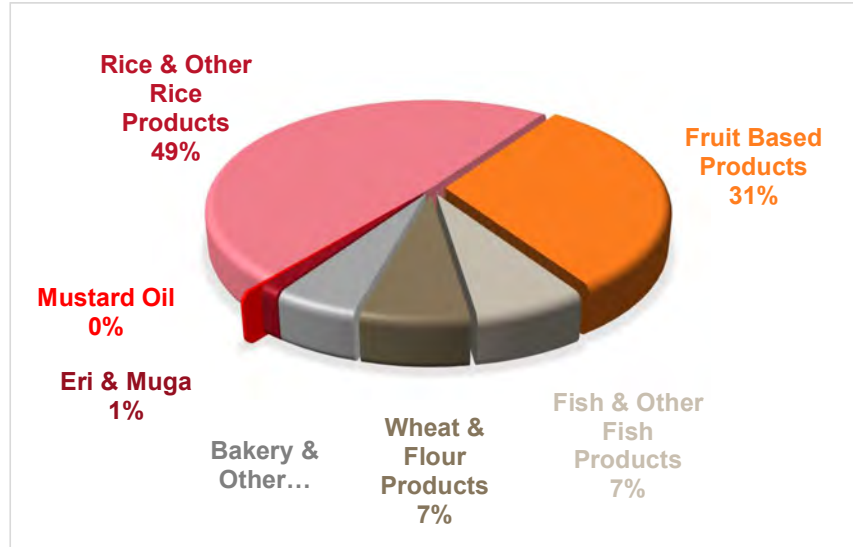
From the above Fig: B it is found that:  
 The Annual Turnover in Micro level unit is 66%. The Annual Turnover in Small level unit is 34%



**Fig: C**

From the above Fig: C it is found that:  
 The total employment in Micro level unit is 90%. The total employment in Small level unit is 10%

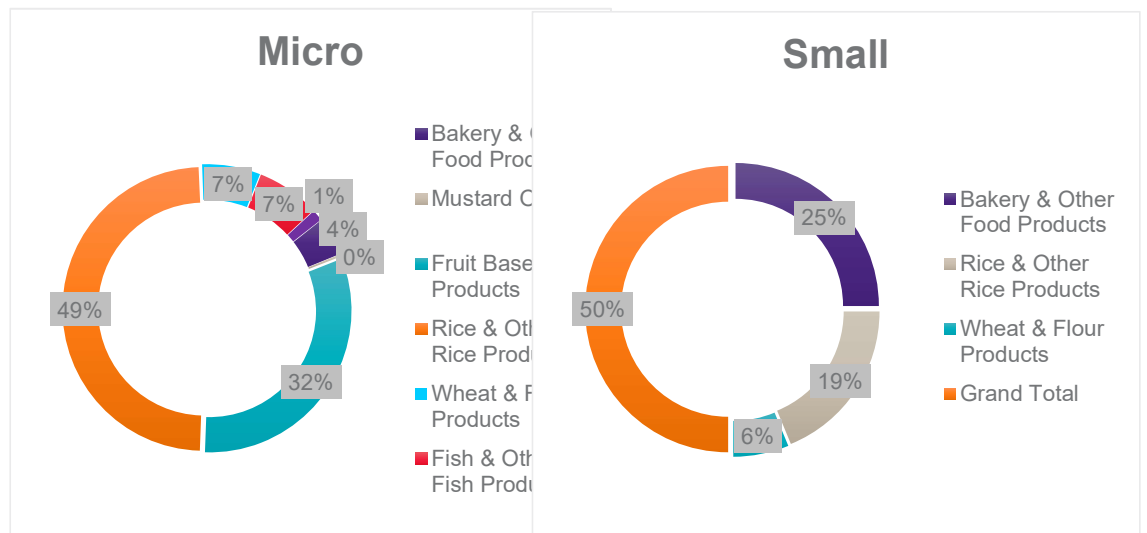
### Products Produced



From the above chart it is found that:

The rice and other rice products produced is the highest i.e. 49%. The fruit based products produced is 31%. The fish and other fish products is 7%. The Wheat and flour products is same as the above i.e. 7%. The bakery and other food products produced is 5%. The Eri & Muga produced is 1%. The lowest production is the mustard oil.

### Category of Products



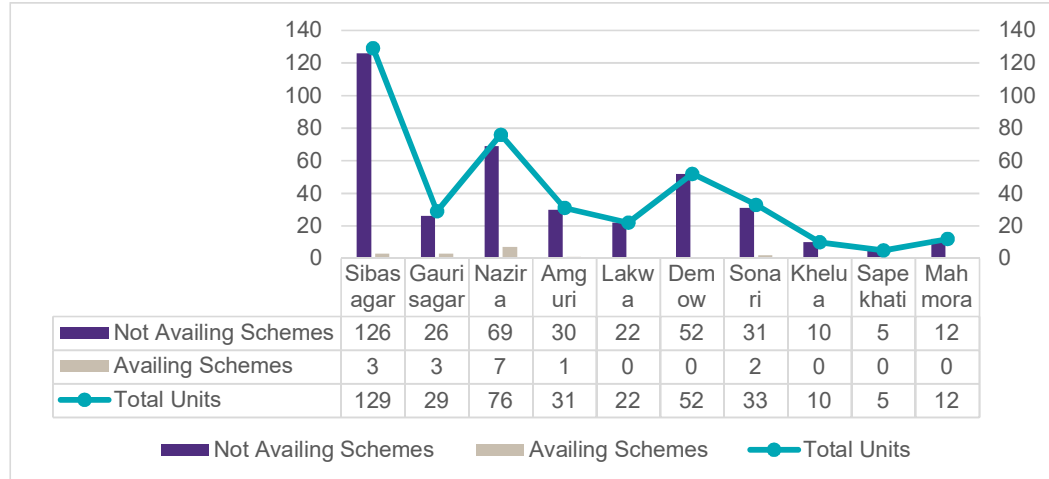
**Fig: A**

**Fig: B**

From the above analysis in Fig: A, it is found that:

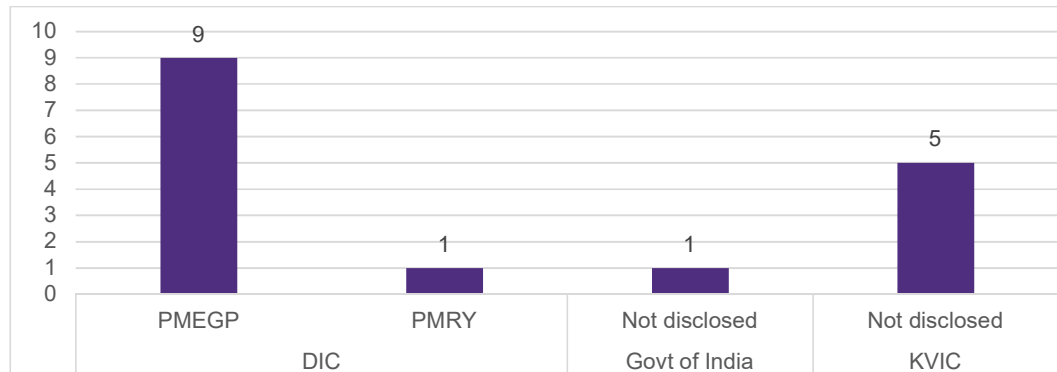
In Micro unit, the rice & other rice product is produced highest i.e. 49%. In Micro unit, the mustard oil is produced lowest. From the above analysis in Fig: B, it is found that: In Small unit, the bakery and other food product is highest. In Small unit, the wheat and flour product is lowest.

**Block wise Scheme:**



**Fig: A**

From the above Fig: A, it has been found that: Sibasagar block has the highest number of units i.e. 129 out of which only 3 units have availed the schemes and 126 units have not availed. Gaurisagar block has total number of 29 units out of which only 3 units have availed the schemes and 26 units have not availed. Nazira block has total number of 76 units out of which only 7 units have availed the schemes and 69 units have not availed. Amguri block has total number of 31 units out of which only 1 unit have availed the schemes and 30 units have not availed. Lakwa block has total number of 22 units out of which no units have availed the schemes. Demow block has total number of 52 units out of which no units have availed the schemes. Sonari block has total number of 33 units out of which only 2 units have availed the schemes and 31 units have not availed. Khelua block has total number of 10 units out of which no units have availed the schemes. Sapekhati block has the lowest number of units i.e. 5 out of which no units have availed the schemes. Mahmora block has total number of 12 units out of which no units have availed the schemes.

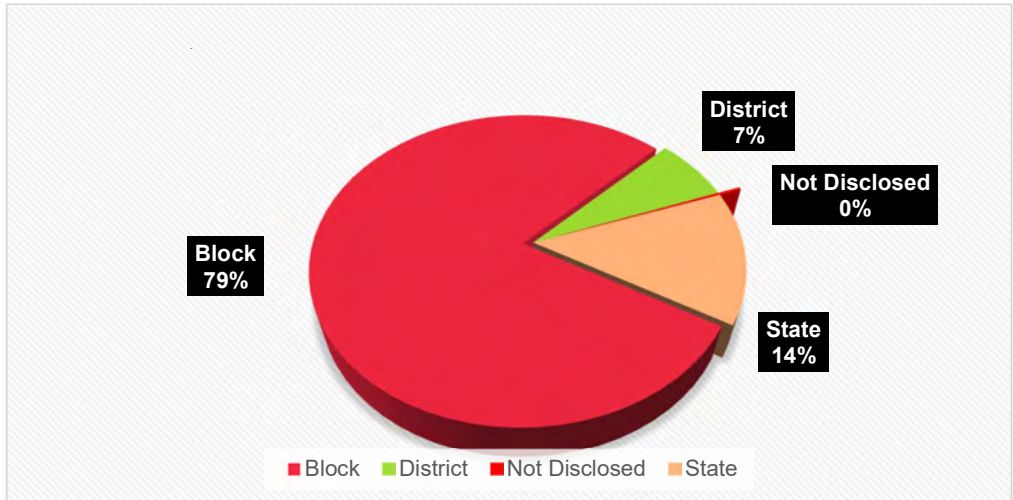


**Fig: B**

From the above Fig: B, it has been found that: 9 numbers of unit have availed PMEGP Schemes. 1 number of unit have availed PMRY Schemes. 1 number of unit is not disclosed by Govt. of India. 5 numbers of unit are not disclosed by KVIC.

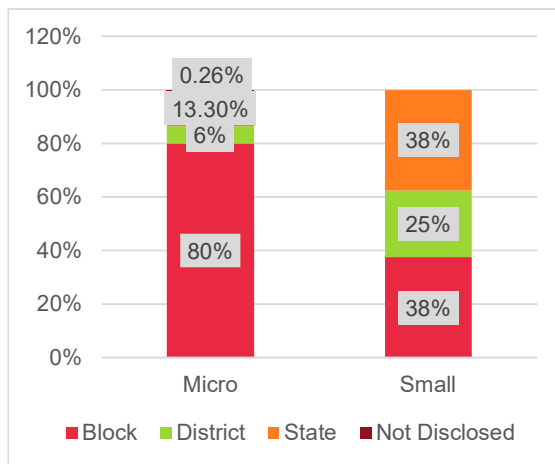
**Target Market:**

From the above analysis in Fig: A, it can be noted that: The block has the highest number of target market i.e. 79%. The state has 14% target market. The district has 7% target market.



**Fig: A**

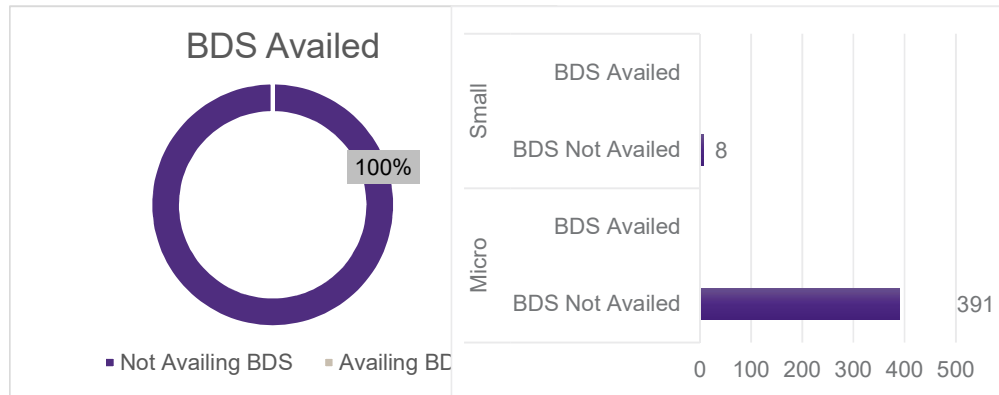
**Fig: B**



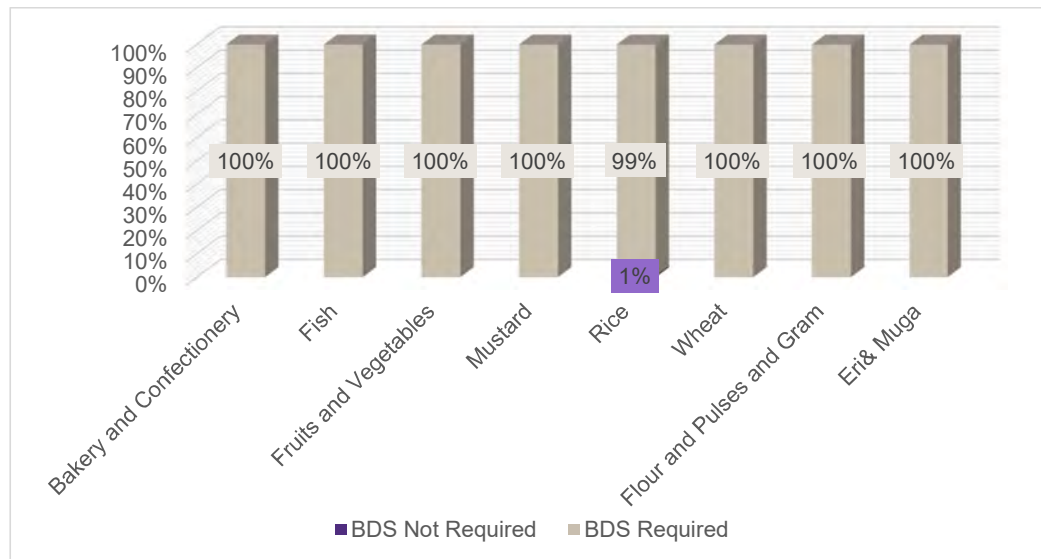
From Fig: B, it is analysed that:

- Block in the Micro level has the highest target market i.e. 80% and not disclosed has the lowest target market i.e. 0.26%
- State and not disclosed has the highest target market in Small level i.e. 38% and District has the lowest target market i.e. 25%

## BDS

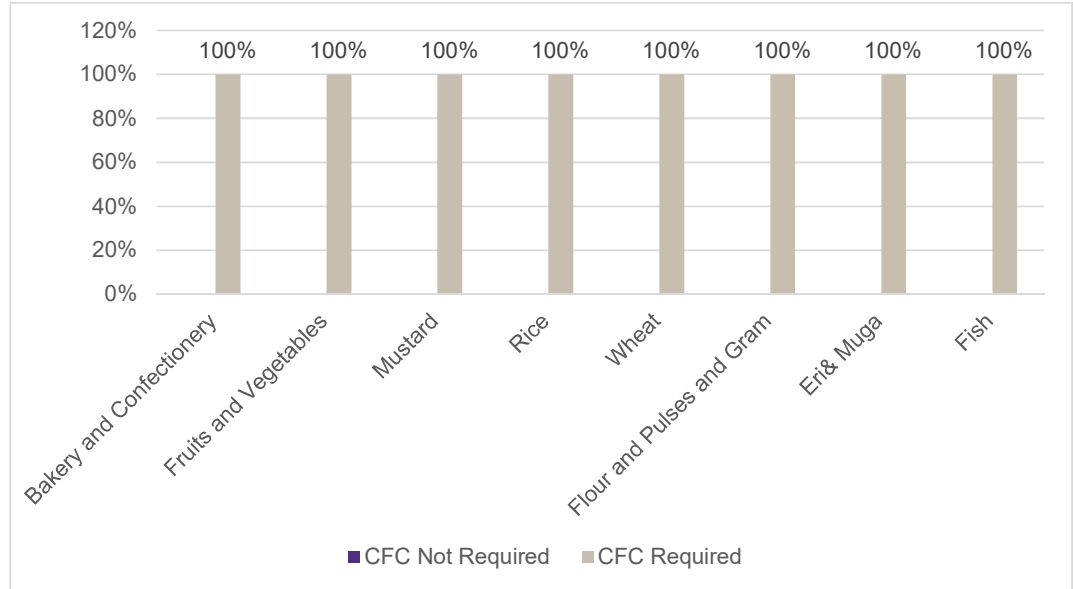


From Fig: A, it has been found that: 100 % is not availing BDS. From Fig: B, it has been found that: In micro level, 391 respondents have not availed BDS. In small level, 8 respondents have not availed BDS.



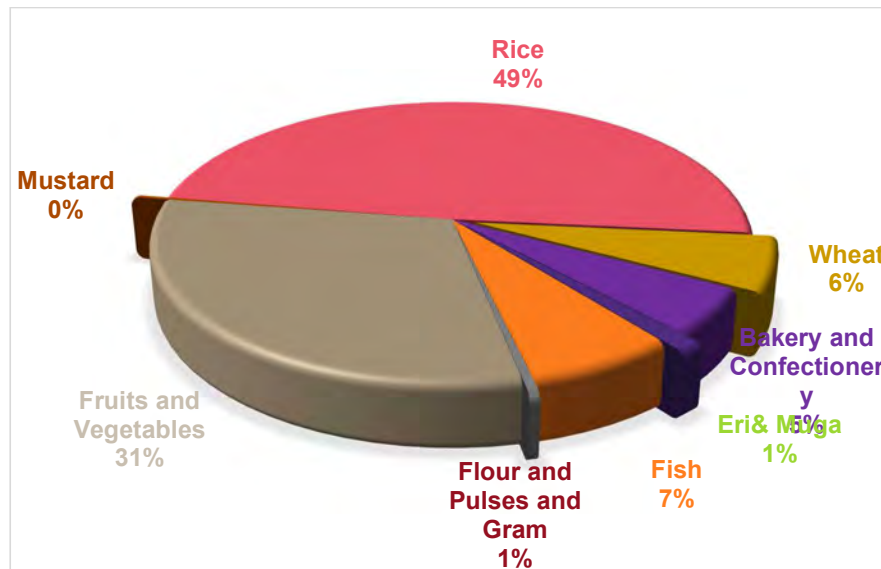
From Fig: C, it is found that: BDS required in Bakery and Confectionery, Fish, Fruits & Vegetables, Mustard, Wheat, Flour Pulses Gram, Eri & Muga is 100%, whereas, BDS required in Rice is 99%. BDS not required in Rice is 1%.

### CFC



From the above it can be interpreted that: CFC required in Bakery and Confectionery, Fish, Fruits & Vegetables, Mustard, Rice, Wheat, Flour Pulses Gram, Eri & Muga is 100%.

### Value Chain:

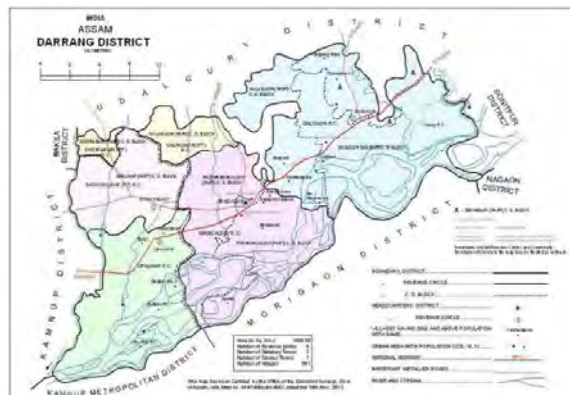


It is analysed that: Rice has the highest unit i.e. 49%. Whereas, Mustard has the lowest unit i.e. Nil.

## 4.8 Darrang

### 4.8.1 Geographic Details of Darrang District

The District Darrang is situated at the center of the state, which comes under North Bank Plain Zone (NBPZ) of Assam and occupies a geographical area of 1850.58 sq. km. The mighty Brahmaputra flows along the southern periphery of the district. Thus, the district is also well connected with the water ways. The district consists of 1 Sub-division, 6 blocks, 76 panchayats and 563 revenue villages. Rice is the prominent crop grown in this region.



Sub-Divisions	Blocks	Panchayats	Villages
1	6	76	563

Source: Statistical Handbook of Assam 2018

The district is surrounded in the north by Udalguri District, in the east by Sonitpur District and in the west by Kamrup District. The NH 52 runs through the district in East-West direction connecting it with neighbouring Kamrup and Sonitpur district. Darrang is not connected by rail; it has a good network of road transport system. The nearest airport is at Tezpur which is 110 km east to Mangaldai.

SL	Particulars	Total No.	Details
1	National Highway		
2	Nearest Railway Station		
3	Nearest International Airport	1	Lokpriya Gopinath Bordoloi International Airport
4	Nearest Domestic Airport	1	Lokpriya Gopinath Bordoloi International Airport
5	Nearest Port	1	Pandu Port

Source: Statistical Handbook of Assam 2018

### 4.8.2 Demographic Details

Darrang has a population of 928,500 of which male and female were 475,273 and 453,227 respectively. Average literacy rate of Darrang in 2011 were 63.08 compared to 54.31 of 2001. If things are looked out at gender wise, male and female literacy were 67.87 and 58.04 respectively. The details are as follows:

Description	2011
Population	9.29 Lakhs
Male	475,273
Female	453,227
Population Growth	22.19%

Description	2011
Area Sq. Km	1,585
Density/km2	586
Proportion to Assam Population	2.98%
Sex Ratio (Per 1000)	954
Child Sex Ratio (0-6 Age)	969
Average Literacy	63.08
Male Literacy	67.87
Female Literacy	58.04
Literates	487,039
Male Literates	268,666
Female Literates	218,373

Source: Census 2011

### 4.8.3 Agriculture Production Scenario/Trend

About 85 per cent of the population of Darrang is involved in agriculture and allied activities, making it the main source of livelihood. The diverse topography and unique agro-climatic condition of the region makes it conducive for growing various types of agricultural and horticultural crops. Also the average rainfall is quite high in the region, which makes the soil very fertile. The area is also known for its tea productions.

The residents of various developmental blocks are involved in farming of different crops. In Pachim Mangaldai community development block, the major crop grown is winter rice, while the development blocks of Dalgaon-Sialmari and Bechimari are majorly involved in the production of vegetables. However, the southern parts of Pub-Mangaldai community development block are prone to floods and are restricted to growing winter rice and kharif crops.

### 4.8.4 Key Agriculture based Industries in Darrang

The district has 1239 registered industrial units, out of which 215 are agro-based and food-based industries. There are no large-scale enterprises in the region, however few small and medium units are in operation. There are three medium scale food industries:

1. M/s Sunanda Ram Food Pvt. Ltd, Mangaldoi Industrial Area
2. M/s SRD Nutrients Pvt. Ltd, Mangaldoi Industrial Area
3. M/s Trinity Fructa Ltd, Mangaldoi Industrial Area

### 4.8.5 Industrial Scenario – Infrastructure Details

The district has few industrial areas and food parks which were established to aid growth and development of industry, including an Integrated Infrastructure Development Centre (IIDC), which was established under a MSME scheme.

Name of Industrial Infrastructure	Open Space (Sq. M)		
	Total Open Space	Open Space Allotted	Space Available for Allotment
IID, Dalgaon	86340	36000	50340
Industrial Area, Mongaldai	38971.24	36306.88	2664.36
Industrial Area, Dalgaon	19549.77	5351.22	14198.55

#### 4.8.6 Support Institutions

##### **Krishi Vigyan Kendra (KVK) Darrang**

Krishi Vigyan Kendra (KVK), Darrang was established in the year 2007. It is a scheme sponsored by Indian Council of Agricultural Research (ICAR) and run by Assam Agricultural University (AAU), Jorhat, Assam.

The aim of the Krishi Vigyan Kendra, Darrang is technology assessment and refinement through demonstration of technology products and dissemination through training of farmers and extension personnel. The Krishi Vigyan Kendra can also arrange off campus trainings on need based topics in farmer's village. Sponsored trainings also have been arranged on specialised topics on and off campus. Krishi Vigyan Kendra scientists have to pay diagnostic visits to their problematic fields for getting curative and diagnostic recommendations. It provides training on Pre and Post-Harvest Management system in agricultural and horticultural commodities. KVK can be helpful in providing training and technical assistance to the entrepreneurs who are using agricultural and horticultural commodities as inputs in their enterprises.

##### **North East Small Finance Bank, Mangaldoi, Darrang**

It is located in Mangaldoi. The bank is an excellent source for micro loans and other financial services at affordable rates for self-help groups as well as under privileged, unbanked and under banked sections of the society. They have been instrumental in providing the capital necessary to set up small scale agro related industries in the district.

NESF Bank can provide loan to our agro based entrepreneurs under their "Entrepreneurs Development Loan" scheme.

##### **Prayojan Group, Mangaldoi**

It is located in Mangaldoi. The aim of the NGO is to uplift the rural masses and has plans to do so by conducting extensive research on the various cause for the poor development of our society and providing them viable solutions. Additionally, they have set up self-help groups to empower youth through skill development and educating about self-employment schemes.

##### **UCO Bank**

The bank offers a number of services and products which are tailored to support agro-based industries. It offers Kisan Credit Cards (KCC) and other agro. specific programs which allow farmers to meet their short-term credit requirements at affordable interest rates. Additionally, it offers loans to set up Cold Storage as well as Agro and Food Processing units.

##### **UCO RSETI**

Provides training to the youth on various small term courses for the entrepreneurship development. E.g.: Beautician, Tailoring and a few food processing related course. The same may be provided to the existing enterprises in the district.

##### **Nightangle Micro Finance Ltd:**

Nightangle Micro Finance started operation in Mangaldoi from 2011. From the start it has played a major role in financing MSME's in the region, specifically to women SHGs. They have till now provided loans to about 25-30 units, not exceeding the limit of INR 1 Lakh. The organization has been of great help to groups who were seeking loans in small amounts to start SHG or industrial unit.

**Food Processing Training Department at Mangalgor College:** The institute offers training courses to the food processing industries in their specific fields. Currently, the department is providing B.VOC course trainings on food processing & testing facilities to the students. The department may provide the trainings to existing enterprises of Darrang

**TIDE (Tribal Integrated Development & education Trust), Mangaldoi**

TIDE was established in the year 2002, in Deomornoi area near Mangaldoi and currently providing training to SHG's, farmers etc. related to Organic Farming, Mushroom cultivation, Agarbatti making etc.

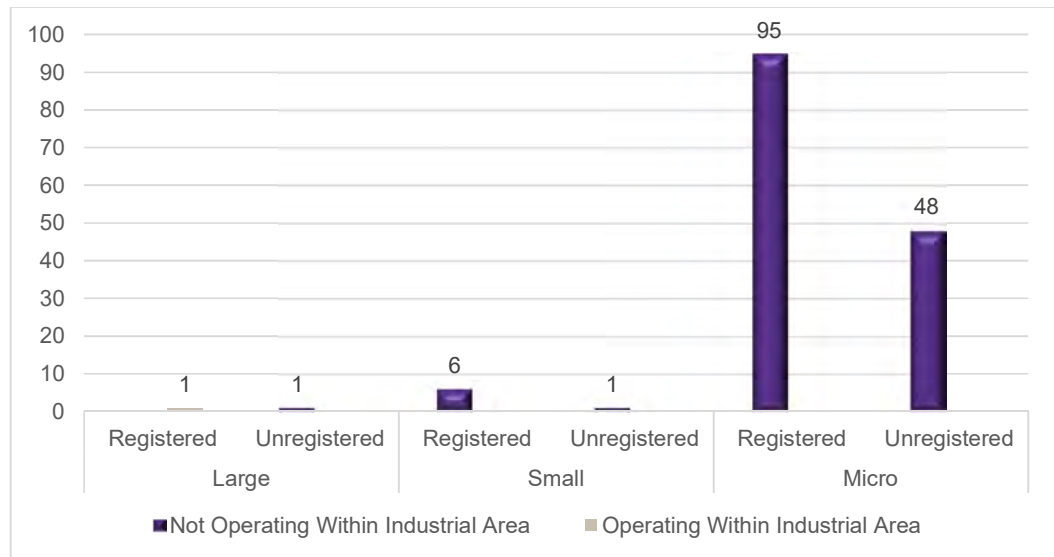
**Mr. PULAK DAS: (Tax Consultant, Mangaldoi)**

Mr. Das is actively involved in handling and maintain all tax related works like IT Return file, Income tax, GST for corporate, Individuals, etc. He may further be involved for the registration of UAN, FSSAI licenses and other registrations required by the enterprises.

#### 4.8.7 Analysis from Baseline Data

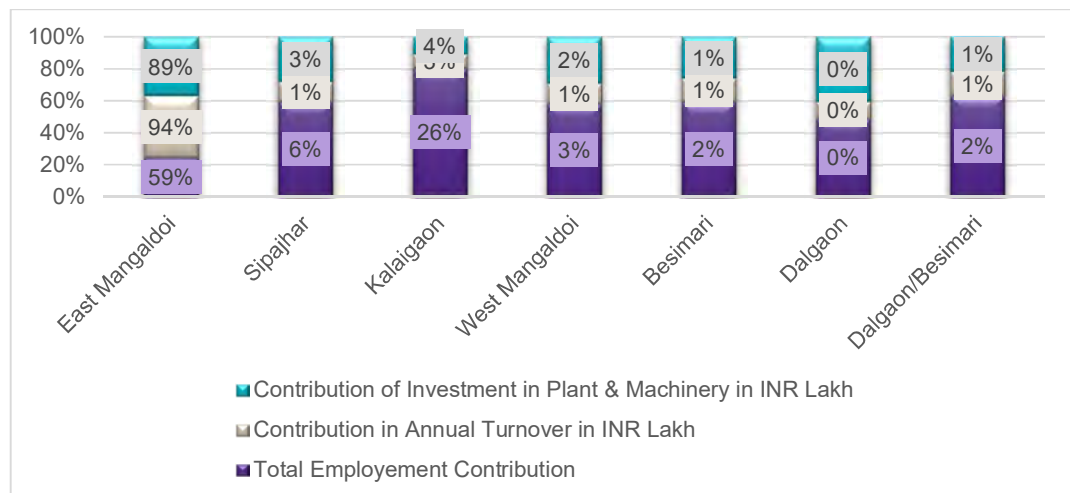
##### Agro Based Enterprises

In Darrang district, there are 152 agro based processing units as per our baseline survey out of which 2 are large category units, 7 are small category units and 143 are micro-sized units. Out of the total 152 more than 67% (102) are registered units and balance 33% (50) are unregistered units. Only one unit is operating within industrial area. Almost 94 per cent are micro-sized units, most of these units are involved in public milling of rice, mustard & spices.



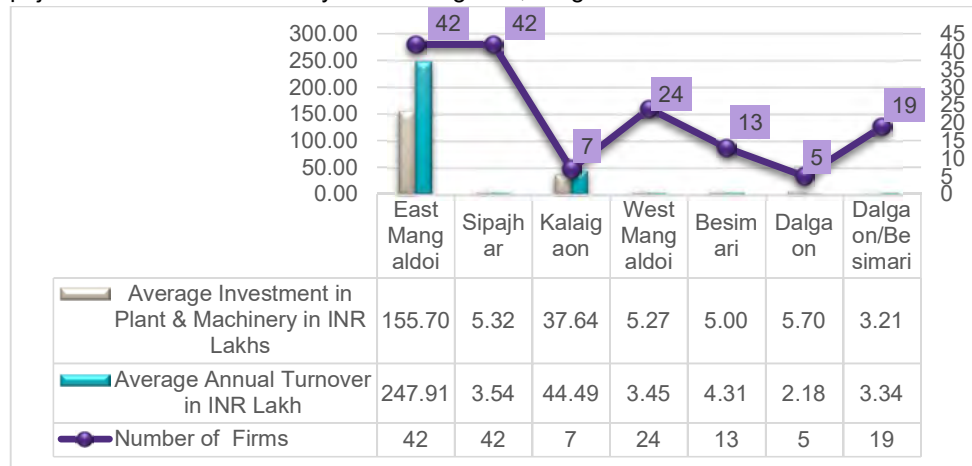
##### Employment, Investment & Turnover

As it can be observed in the graph below, most of the units are located in East Mangaldoi & Sipajhar. East Mangaldoi consists of large, small & micro-sized units whereas in Sipajhar there are only micro-sized units. East Mangaldoi emerges as a prominent area from our baseline study in terms of investment, turnover & employment. East Mangaldoi contributes 59% of total employment, 94% of total district annual turnover & 89% of total district investment in plant & machinery followed by Kalaigaon and Sipajhar.



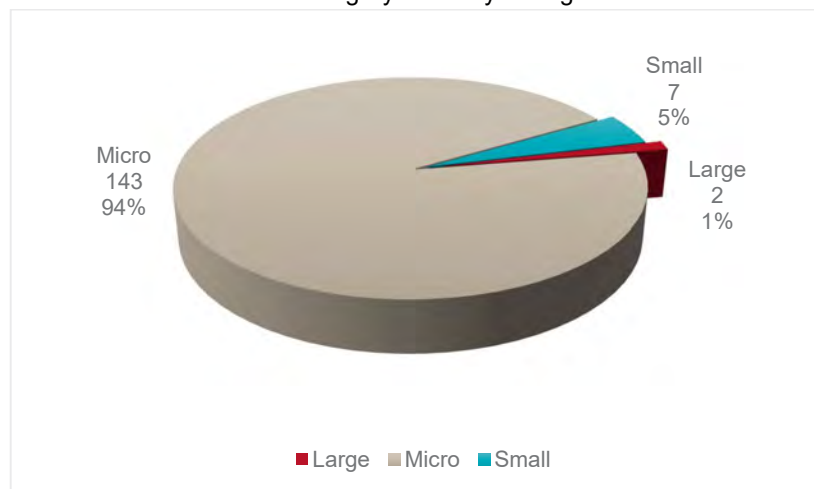
### Blockwise Enterprises details

From below graph, it has been observed that total number of firms in East Mangaldoi and Sipajhar is 42 each followed by West Mangaldoi, Dalgaon & Besimari.



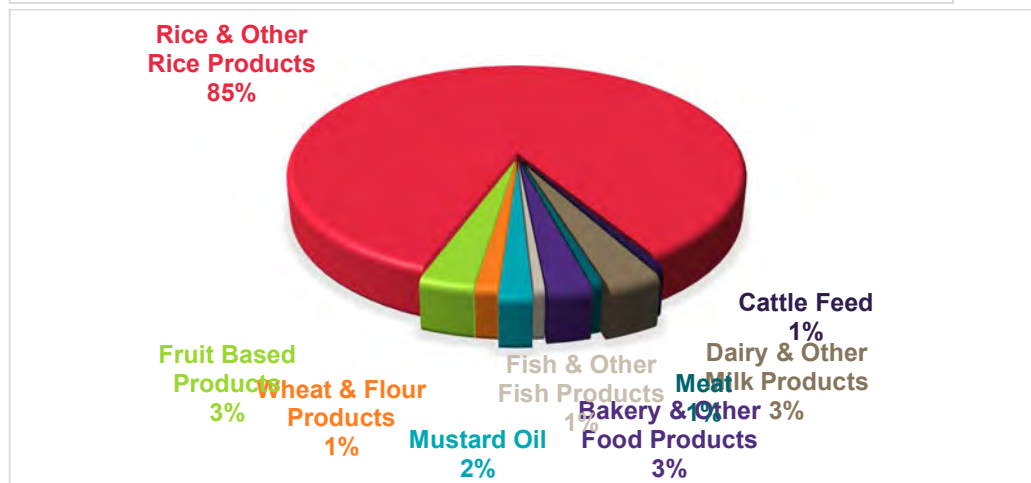
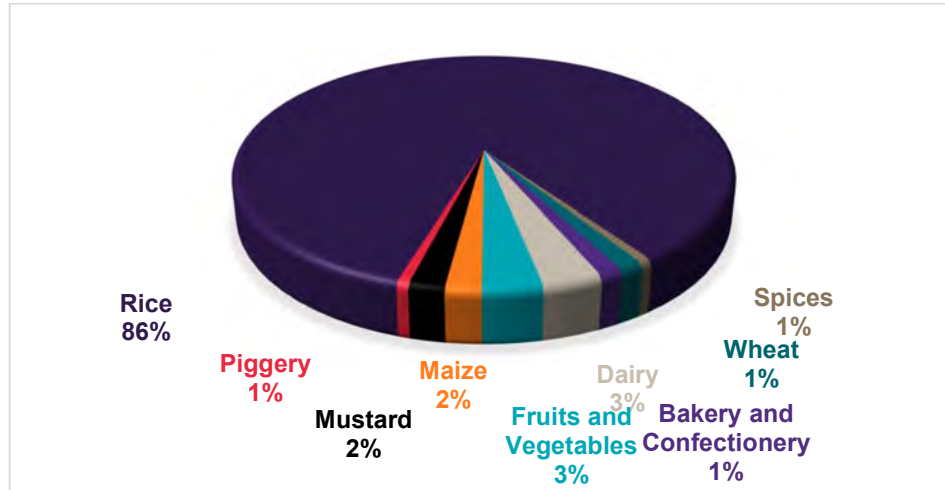
### Category of Enterprises

From below graph, it is found that 94% agro based units fall under micro category, 5% agro based units fall under small category and only 2% agro based units fall under large category.

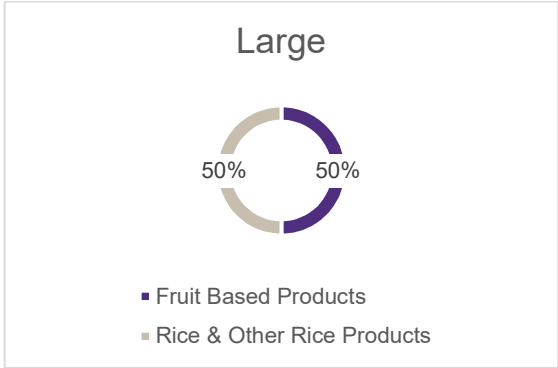


### Distribution of Value Chain

From our baseline survey, rice emerges as prominent crop in Darrang district, around 85% rice and rice products like parboil rice, flatten rice, puffed rice and Rice flour are produced in the district followed by Dairy products, Bakery products and Fruits-based products around 3% each. Around 2% of mustard oil is also produced in Darrang district.

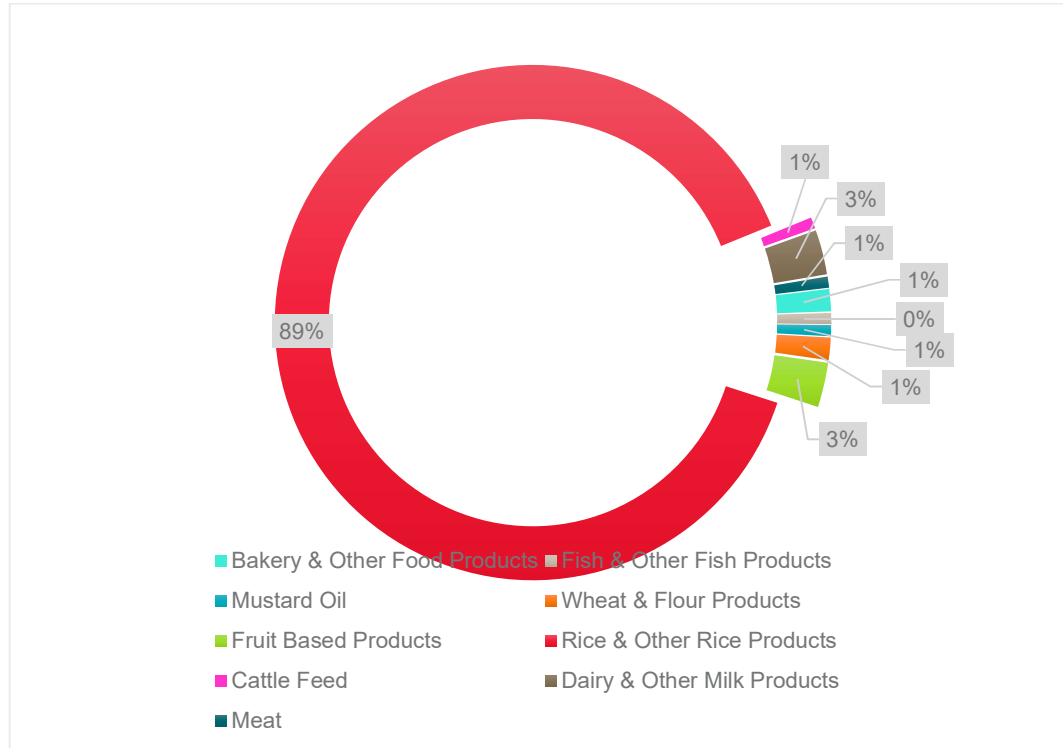


From below charts, out of 2 units identified under large category, one is producing rice and rice-based products and the other one is producing fruit-based products. In small category chart, 29% units are producing mustard oil, another 29% units are producing rice and rice products, 28% units are producing Bakery and other food products and rest units are involved in producing dairy products.



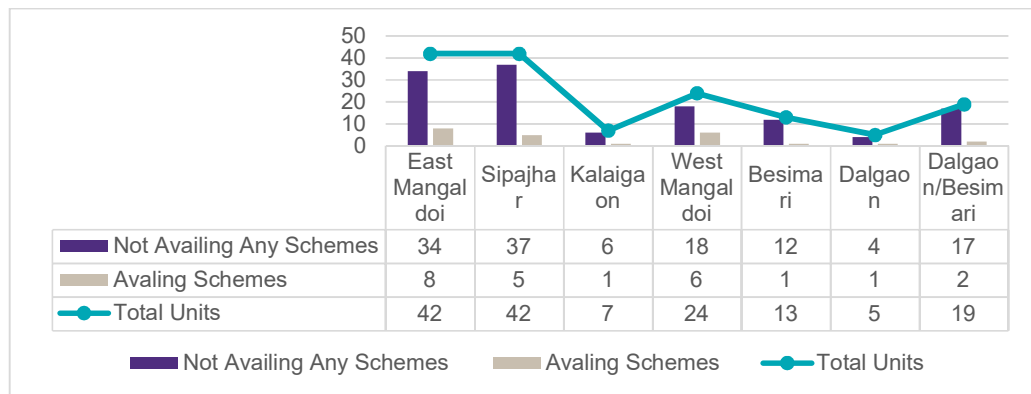
**Products Produced by Micro Entities**

From below chart, it is evident that 89% micro-sized units produce rice and rice-based products like Parboiled rice, Flatten rice & Puffed rice followed by Bakery products, fruits based products, Bakery products, mustard oil, etc. Most of these units are operating on job work basis, farmers of nearby area bring paddy, mustard and wheat for milling and pay charges for milling to these units.



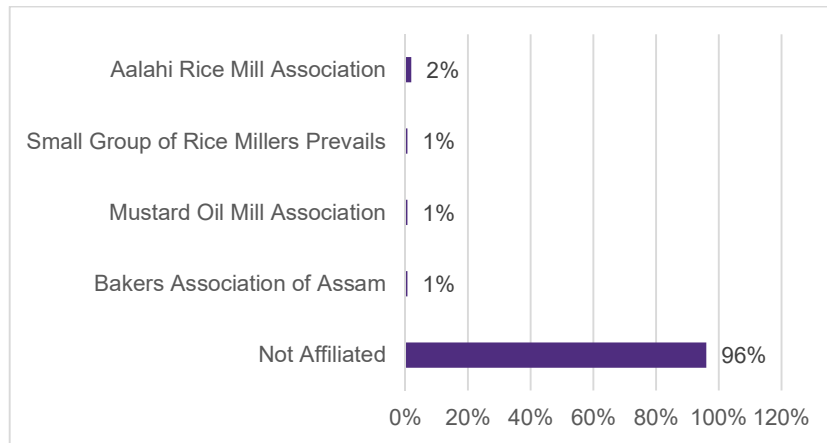
### Block-wise Government Scheme Distribution

There are 152 units identified by our baseline survey in Darrang district, out of 152 units 16% units have availed the benefits of any schemes and rest 84% have not availed any schemes. East Mangaldoi block emerges as a prominent in availing the benefits of any schemes, out of total district units which availed the schemes, 33% units are from East Mangaldoi, 25% from West Mangaldoi, 21% from Sipajhar.



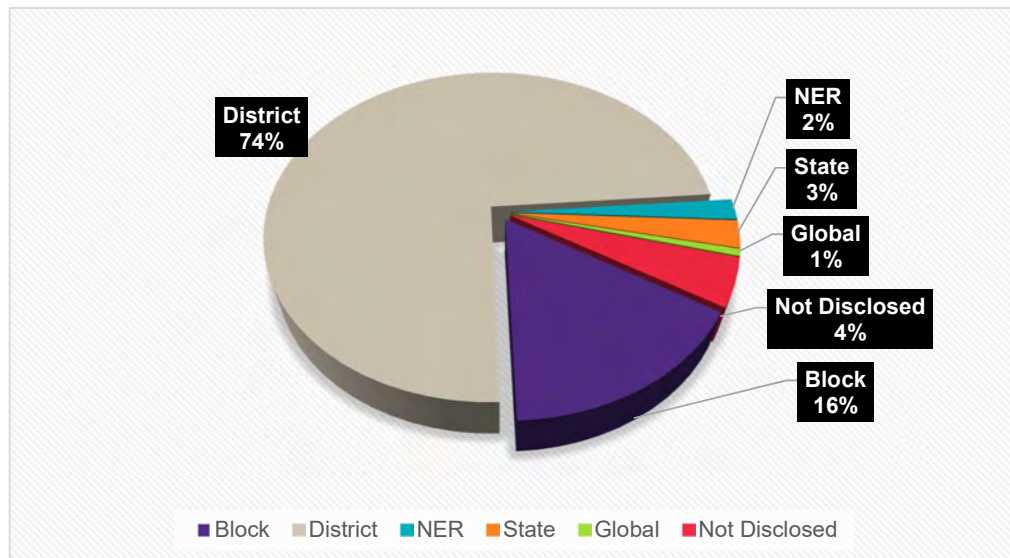
### Affiliation with Any Association

Out of 152 identified units 96% units are not affiliated with any association, only 4% units are affiliated with any association. Only 2% rice units are affiliated with rice mill association like Aalahi Rice Mill Association. 1% bakery units are affiliated with Bakers Association of Assam & 1% mustard units are affiliated with Mustard Oil Mill Association.



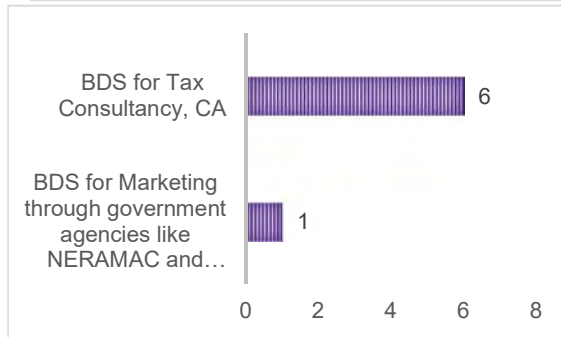
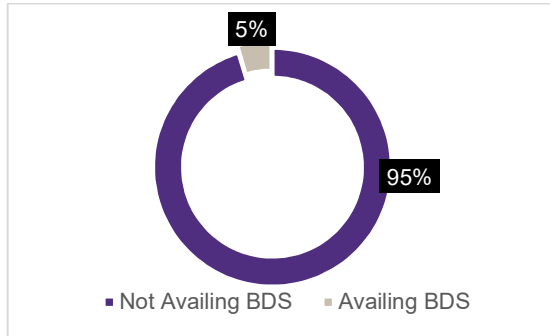
### Target Market Overview

It is evident from below given chart that 90% of produce are sold within the district, out of which 16% produce are sold within the block. Out of rest total produce 3% are sold in other district of Assam, 2% are sold in North East states, 4% are sold to not disclose location and only 1% of total produce is exported. It is cleared from below chart that whatever are produced in Assam, around 93% are consumed by Assam itself.



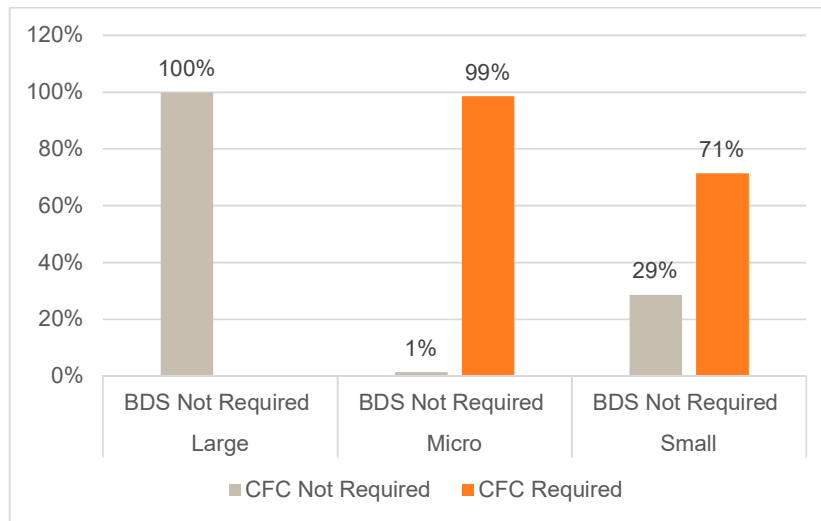
### BDS Availed

Out of total units of district only 5% units are availing Business Development Services (BDS) and rest 95% units are not availing BDS. Most of the units are availing the services of Chartered Accountant (CA) and tax consultant, only one unit is availing the service of government agencies like NERAMAC & ARTFED for marketing.



### BDS & CFC Required

In micro category, 99% units require the services of Common Facility Centre (CFC), only 1% units are not interested in CFC. In small category, 71% units have shown interest in availing the services of CFC, whereas 29% are not interested. In large category, none of the unit is interested in availing the service of CFC because they already have all types of facilities. It is evident from below chart that the micro & small categories of units are looking for the services of CFC to grow their business.



## 4.9 Cachar

### 4.9.1 Geographic Details of Cachar

The District of Cachar is located in the southernmost part of Assam and is one of the oldest districts of Assam. The district is situated between 24 degrees 22' N and 25 degrees 8' N latitude and between 92 degrees 24' E and 93 degrees 15' E longitude. It is bounded by Barali and Jayantia hill ranges on the north, Mizoram state on the south, Manipur state on the east and districts of Hailakandi and Karimganj on the west. The district headquarter is located at Silchar.



The total geographical area of the district is 3,786 sq. km which is 4.8 percent of the total area of the state. Agro-climatically, the district falls in the Barak Valley Zone. Rice/paddy, banana, cabbage, tomato, pineapple, brinjal, etc. are some of the key crops that are produced in the district.

Cachar is mostly made up of plains, but there are a number of hills spread across the district. The climate is tropical with hot summers and cool winters. The district receives an average annual rainfall of more than 3,000mm. Silchar, the district headquarter town, situated on the south bank of the Barak river is an important commercial centre of the state. It is home to a large number of tea gardens of the state. Lakhimpur town of the district is the richest pineapple growing area in the country. The district is well connected by road networks, with NH-53 and NH-54 passing through Silchar. Silchar Railway Station is the major railway station of the district. The Silchar Airport is located at Kumbhirgram which is 29 kms from the city.

The Cachar district consists of 2 Sub-divisions, 12 towns, 15 number of development blocks, 163 Gaon panchayats and 816 revenue villages.

Sub-Divisions	Town	Blocks	Panchayats	Villages
2	12	15	163	816

The district is connected by all means of transport which include airways, railways, roadways with other districts of Assam & other parts of India. The Cachar district has one national highways viz. NH-37 connecting the other districts of Assam and also with other states of India. There is 1 railway station in Cachar, and nearest Airport is Guwahati.

S	Particulars	Total No.'s	Details
1	National Highway	1	NH-37
2	Railway Station	1	Silchar Railway Station
3	Airport	1	Lokpriya Gopinath Bordoloi International Airport

#### 4.9.2 Demographic Details

The demographic details are as follows:

Description	Cachar
Population	17.36 Lakhs
Male	8.86%
Female	8.50%
Population Growth	20.19%
Area Sq. Km	3786
Density/km2	460
Proportion to Assam Population	
Sex Ratio (Per 1000)	958
Child Sex Ratio (0-6 Age)	954
Average Literacy	79.34%
Male Literacy	84.78%
Female Literacy	73.68%

Source: Census 2011

#### 4.9.3 Agriculture profile of the District

The economy of Cachar district is basically agrarian in nature with about 80 per cent of the population dependent on agriculture. Paddy is the major crop. Other important crops include oil seeds, pulses, cash crop like jute, vegetables, etc. The agro climatic conditions of the district are conducive for various agricultural activities. Agriculture in the district is characterized by over dependence on rainfall, predominance of seasonal crops and traditional methods of cultivation. The gross cropped area in the district is 146,219 hectares while the net sown area is 115,489 hectares; the cropping intensity in the district is 126 percent. The district has about 207,119 farm families and majority of them are landless and marginal farmers. Only about two percent of the net cropped area is covered by irrigation facilities. According to NABARD projections in the PLP-2007, it is estimated that the present rate of cropping intensity at 123.5% can be raised up to 150% by extending assured irrigation facilities. Further, the use of certified seed covers only 1.15% of the total cropped area and the fertilizer consumption is only 30.58 kg/ha in the district. The sectoral contribution of income in the Gross District Domestic Product shows that 40 per cent of the total income is derived from agriculture while the secondary sector contributes 14 per cent. The tertiary sector's contribution is estimated to be 46 per cent. The per capita Gross District Domestic Product of Cachar estimated at INR 11,621 is less than the average district gross domestic product for the state.

#### Industry

The viable industries in the district based on local resources like cane, bamboo, pineapple and other agro based and fruit processing industries have potential for growth. The total industrial area in the district is spread across 38.68 acres of land. The district has 1,984 SSI units, of which 295 have been registered after the announcement of N.E. Industrial Policy in 1997. The major manufacturing units in the district comprise of food products and beverages and non-metallic mineral products.

#### Livestock and veterinary facilities

Dairying is practiced by most of the small and marginal farmers and landless labourers in the district. For them, this activity provides economic security by serving as a hedge against crop failure. The economy of the district is basically agrarian and as such the economic development

of the district is highly dependent on agriculture and allied activities. Traditionally, dairy farming is a subsidiary occupation of the farmers of the district. Despite the large population of live-stock and the milk production in the district is low mainly due to predominance of local cows with a poor genetic make-up.

Though the district has conducive climatic condition for poultry farming, particularly commercial broilers, the activity has not made any significant progress as majority of the population practicing poultry farming are under SF/MF categories whose risk bearing capacity is very less.

### Sericulture

The agro-climatic condition of the district is suitable for sericulture. The activity is specially practiced by the SC/ST families in the district. Since sericulture mainly involves women in rearing and spinning, it has great potential for creating employment opportunities for them. About 180 villages in the district are involved in sericulture activities. The present status of development is as follow: Status of sericulture in Cachar district – No. of families involved in yield of cocoons (MT), production of silk yarn (MT), area under silk worm food plants (ha), no. of reeling units. The silk and weaving industry of Assam is one of the traditional handicraft activities which has generated employment and provided livelihood opportunities to people in the district. It is the most important agro based cottage industry in the district in terms of employment and income generating activities.

### Plantation and Horticulture

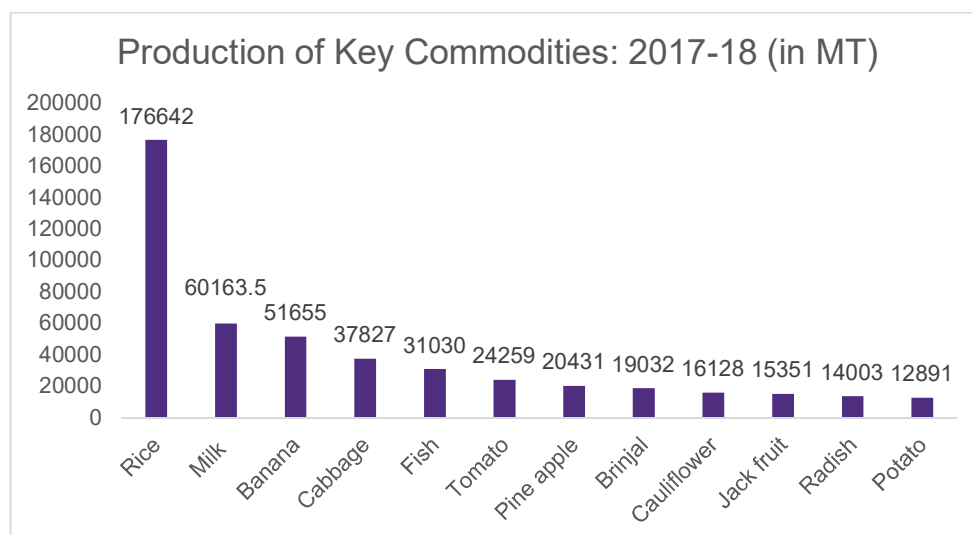
The major plantation sector in the district comprises of 143 tea gardens with a total area of 4075 hectares. The average yield of tea in the district is 1,178 kg. per hectare and is the lowest among all the tea producing districts in the State. The district has favourable agro climatic conditions for the development of various horticulture crops. However, the horticulture and plantation crops are generally not grown on commercial scale in the district. The district has high potential for growth of citrus fruits, pineapple, areca nut, lemon, banana and coconut besides rubber and bamboo plantation.

#### 4.9.4 Agriculture Production Scenario/Trend

Paddy is the principal crop and the staple food of the district due to its climatic adaptability. 3 crops of paddy, namely autumn, winter, and summer are grown in the district. The district produces 6 percent of the total milk in the state. The fish production of the district increased by 41 per cent in the year 2017-18 when compared with 2014-15. The district produced 31,030 MT of fish which was 10 per cent of the total production in the state. The district ranked second in fish production for the year 2017-18.

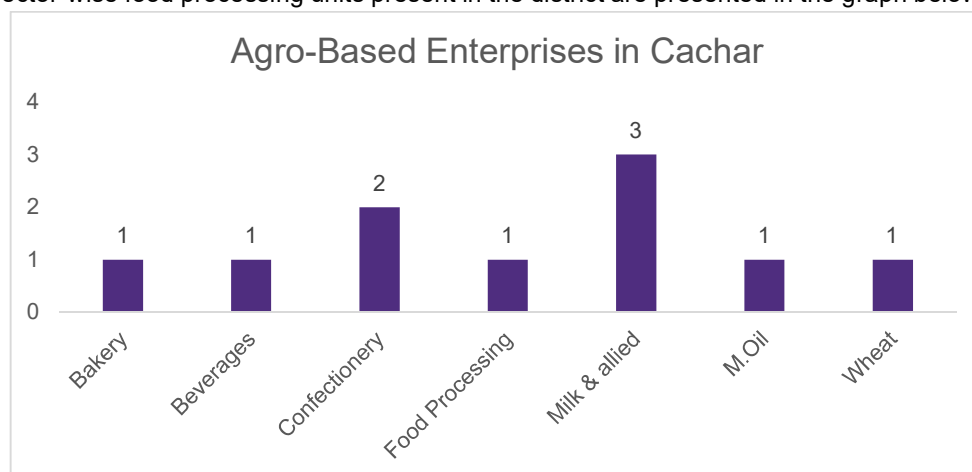
The major crops and vegetables include paddy, banana, cabbage, tomato, pineapple, brinjal, cauliflower, jackfruit, radish, and potato.

The district also produces a good quantity of okra and Assam lemon every year. The district is home to a large number of tea gardens. A chart indicating the production of major agricultural commodities in the district in 2017-18 is presented below.



#### 4.9.5 Agriculture and Allied Sector Scenario

The sector-wise food processing units present in the district are presented in the graph below.



#### 4.9.6 Industrial Infrastructure in Cachar

The district of Cachar has over 650 registered industrial units. The existing micro and small enterprises cater to various industries such as Agriculture, Textile, Wood and Furniture and Engineering among others. The table presented below provides the details on the type of industry in the district, and their number of units.

The district has a total of 1,63,553 sq. mt. of industrial land. The Integrated Infrastructure Development Centre (IIDC), Malinbeel, has been established to provide infrastructural facilities for small industries in the district. The centre is established near N H-53 and is in close proximity to Silchar Railway Station and the Barak River.

There are 2 Industrial Infrastructure available:

- A. Integrated Infrastructure Development Centre (IIDC), Malinbeel, Cachar
- B. Industrial Area, Malinbeel

#### 4.9.7 Key Agriculture Based Industries

The major crops cultivated are Rice, Maize, Wheat, Sugarcane, Jute, Black gram, Chickpea, Lentil Lathyrus, Rapeseed & Mustard, Sesame, Linseed, Niger, Banana, Pineapple, Papaya, Orange, Guava, Litchi Jackfruit, Mango, etc.

#### Export Infra Availability

There is no export infra available in the region

#### 4.9.8 Industrial Parks and Contribution to Agro Enterprises

Agro-based industries are easy to establish and provide income in rural areas with low investment. Agro based industries are labour intensive and can 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 converted into more useful, shelf-stable and delicious food or beverages. These industries help to preserve perishable agricultural products for long time.

#### 4.9.9 Support Institutions

##### **Krishi Vigyan Kendra (KVK)**

The institute is located in Tarapur Part 1, which provides specialised, need-based trainings to the farming community on various aspects related to agriculture and allied sectors. The mandate of KVK is to impart vocational training to the practicing farmers, rural youth and field level extension functionaries, conducting on-farm trial, front line demonstration and transferring latest technologies to the farming communities.

##### **Industrial Training Institute (ITI)**

It is located in Srikona. The major objectives of the institute are:

- To provide semi-skilled/skilled workers to industry by imparting requisite training
- To reduce unemployment among educated youths by equipping them with suitable skills for industrial employment and self-employment

##### **Assam University, Silchar**

The university is located at Silchar, where the Agriculture and Biotechnology department is working on field projects on agriculture and allied fields, particularly in food processing sector, to develop and improve the agriculture sector in the region, and to enhance livelihood and incomes of farmer and populace.

##### **NIT Silchar**

It is a technology Institute working on developing farming technology for irrigation and harvesting.

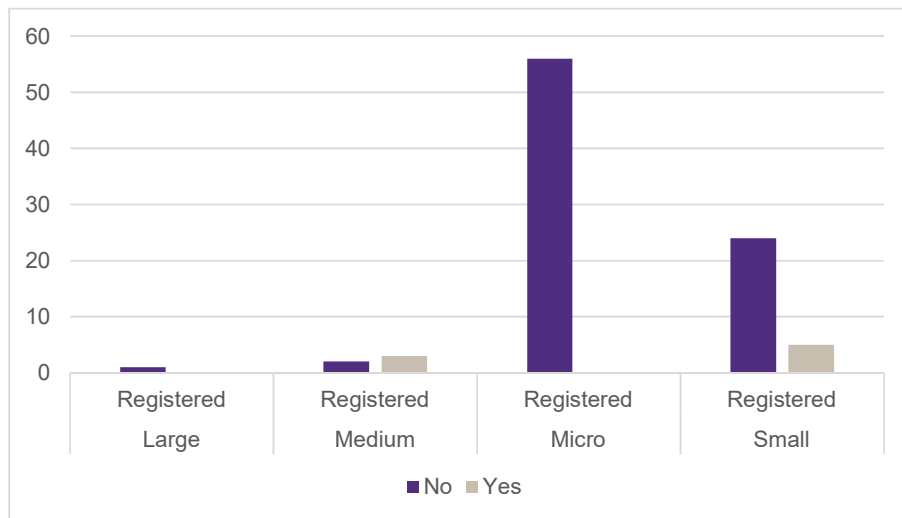
##### **Polytechnic, Silchar**

The institute is grooming professionals to carry out research on micro and nano technology.

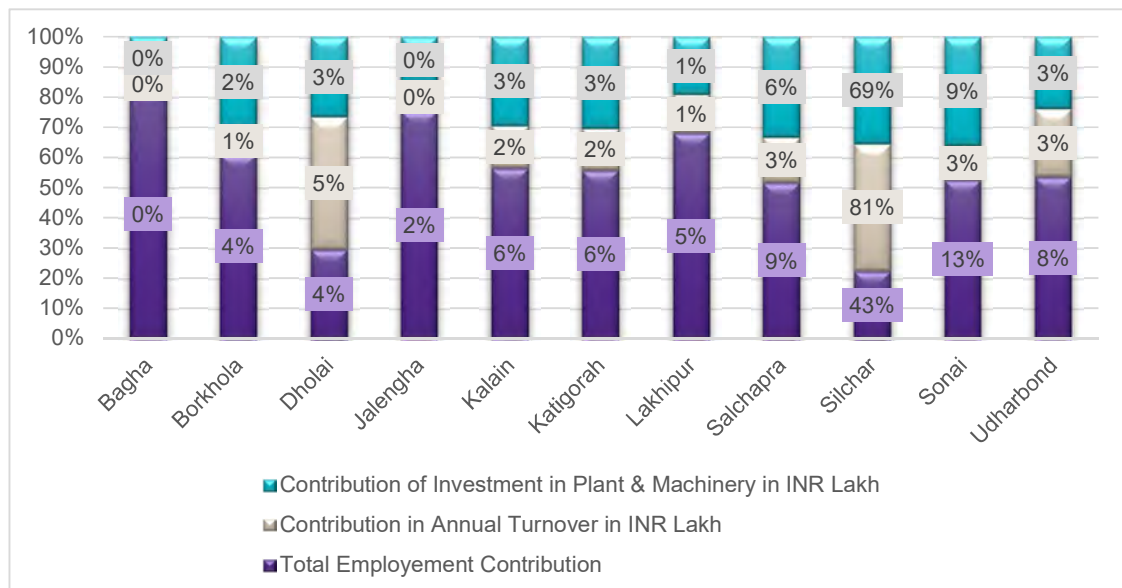
#### 4.9.10 Analysis from Baseline Data

In the Cachar district, there are 212 agri based enterprises which have been found operational. Out of which 121 units, i.e., 57 per cent and 91 units, i.e., 43 per cent are non registered and

registered respectively. In respect to total operation units 130 units fall under Micro, 74 units fall under small category as per MSME guideline. In terms of percentage, 61 per cent of units are under Micro category and 36 per cent are under small category as per baseline survey conducted. Only 8 units out of 212 units have been set up within the industrial area of the district. These units are from Small and Medium category.



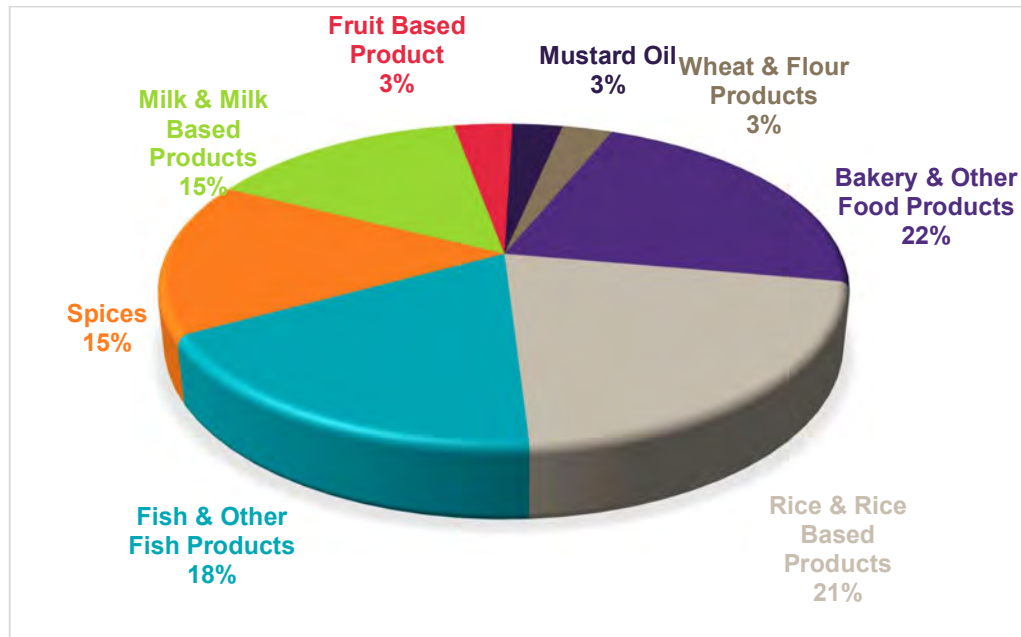
In Cachar district 11



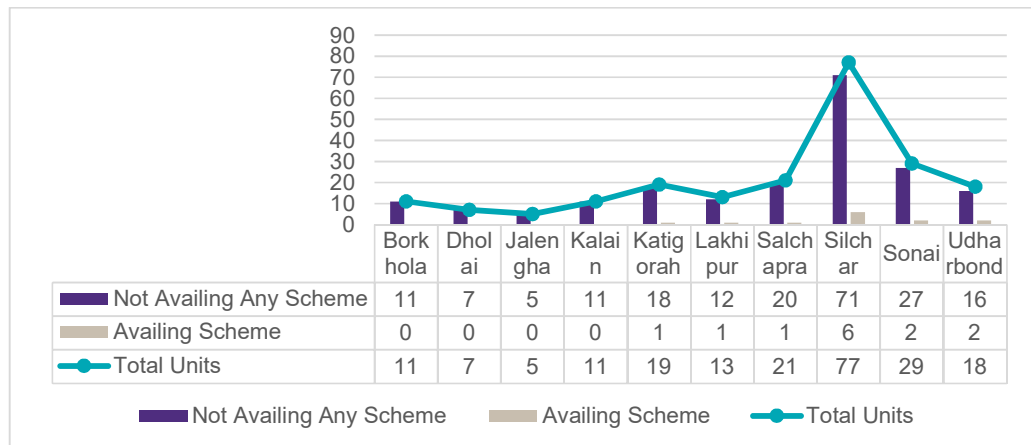
Administrative Blocks is available. The population of agri enterprises is the highest, i.e., 77 units in Silchar Block among the all Blocks. It also contributes highest numbers employment, i.e., 1,007 and 81 per cent generated within the district. Moreover, Silchar being the district headquarter of the district, has comparative advantage against other blocks of district. Sonai is next prominent block which is also home of 29 enterprises contributing 13 per cent in employment generation. In terms of investment and annual turnover Silchar is leading way and followed by Sonia block.



It has been found based on baseline survey that Micro category units contributes only 13%, Small category by 32%, Medium category by 17% and 39% by Large category of units. Having the least number in larger category but contributes more in terms of turnover. It means more fund flow into the market towards employment generation by 45% in Micro category and 47% in Small category of units. Medium and Large units are contributing less in terms of employment generation, though it has more individual investment and turnover. Small units share 44% of total invested money in agri enterprises in the district followed by Medium 25% and Large is 18%. However, in spite of highest number of Micro units it shares in plant and machinery is 13% only.



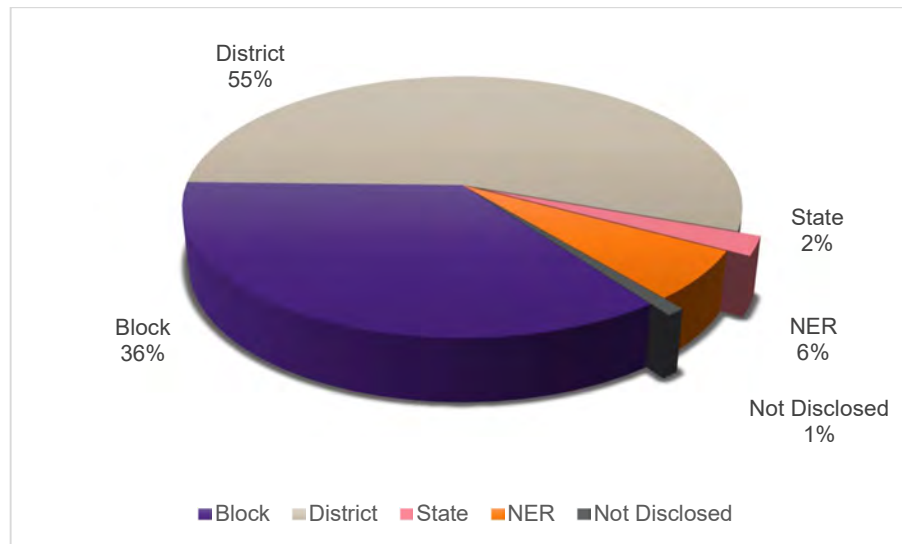
In Cachar district Bakery and confectionery products contributes highest percentage, i.e., 22% followed by Rice & Rice based products, i.e., 21% and fishery and fish-based products (dry fish) contributes 18%. Spices and milk products have also good contribution, i.e., 15% each in to the agri business pie. Medium category units produce 60% Bakery based products, whereas, large category units produce 100% bakery products in the district. These two categories have the market dominance in the district. Among the Micro category, highest product produces based (29%) on rice and are followed by Spices (20%). In Small category of units, bakery products (29%) are followed by fish and fish-based products (24%) and 20% is Milk and Milk based products. Bakery and bakery based products are the most produced product by agri enterprises and spices being the least produced product in the district.



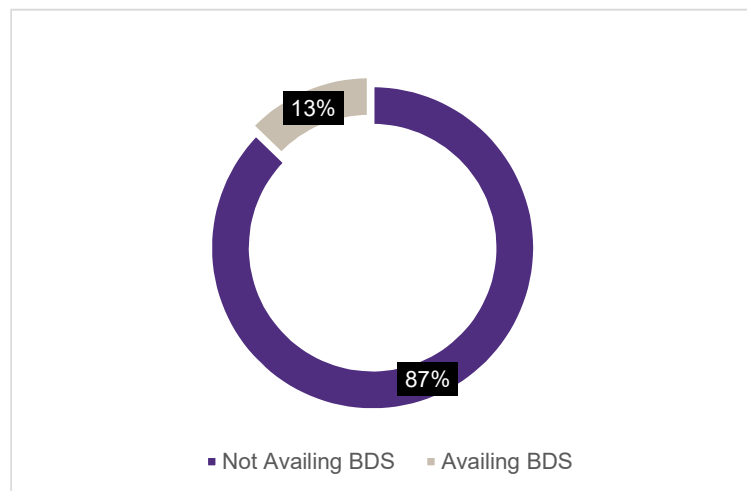
In Cachar district, enterprises are very poor in enhancing the benefit of the schemes provided by various Govt. department at state and Central level. Only 6% is availing the benefit, whereas, the over whelming 93% is not availing the schemes. This may happen due to poor awareness among the entrepreneurs, DICCs and also dissemination of information by respective support institution. In the district, none of the units are part of any formal or informal association.

In the district surveyed, agri enterprises are marketing their products which has a share of 55%, followed by block 36%. They also sell their products to outside states by 6%, specifically to

Mizoram, which is adjacent state. Micro units are selling their products in the district - 55%, next level market is in block - 39%. Small units are also selling their product in district - 58%, in blocks - 30% and 6% in North East market. Medium units are selling their products in the North East region which is 60% of their total sales followed by block and district by 20% each.



Based on baseline survey, all four category units (93%) did not avail any type of Business Development Services (BDS). Only 13% units availed BDS in the district. In Micro category, only 11 units availed BDS on the other hand 119 units did not avail any BDS. In Small category, 65 units did not avail BDS out of total 76 units. In medium and Large category only 4- and 1-units avail BDS respectively. In Cachar district 9 value chains have been identified. 100% enterprises under 7 value chains express their requirement of BDS whereas in Dairy and Bakery value chain 96% and 84% express their requirements towards BDS respectively.



Common Facility Center (CFC) is the major point of attraction among the entrepreneurs in the district. In Cachar district 100% enterprises have shown their interest to have a CFC within the 6 value chains. On the other hand, 97%, 94% and 81% enterprises shown interest towards CFC in Fishery, Dairy and Bakery and Confectionery value chain respectively.

In Cachar district, 49 units are from Rice sector, which is 23%, followed by 22% from Dairy, 17% from Spices and 17% from fishery sector that comprises the entire agri enterprises canvas.

## 4.10 Barpeta

### 4.10.1 Geographic Details of Barpeta

Barpeta District is situated in the lower part of Assam with the District Head Quarter at Barpeta, which is 140 Kms from the State capital Guwahati. The District covers a territory of 2679 sq. Kms., and is bounded by Baksa District in the North, Nalbari and Kamrup Districts in the East, Bongaigaon District in the West and Goalpara District in the South. The Area lies between 26°32 North and 91°00 East. The all-out population of the District is 16, 93,190.



The economy of Barpeta mainly depends on agriculture. Barpeta is additionally famous as the granary of Assam. Rice, vegetables, jute and organic products from Barpeta are marketed not only in Assam but also in different parts of India as well.

Barpeta is the gateway to Manas National Park, one of the world heritage sites of Assam and a tiger reserve of India. Barpeta is well connected with the rest of Assam and Bengal through the NH-31. There is a railway station located 21 km away from town. The Barpeta district consists of 2 Sub-divisions, 9 towns, 11 number of development blocks, 129 Gaon panchayats and 844 revenue villages.

Sub-Divisions	Town	Blocks	Panchayats	Villages
2	9	11	129	844

The district is connected by all means of transport which include airways, railways, roadways with other districts of Assam and other parts of India. The Barpeta district has one National Highway viz. NH-31 connecting the other districts of Assam and also with other states of India. There are 3 railway stations in Barpeta, and the nearby Airport is Guwahati.

S	Particulars	Total No.'s	Details
1	National Highway	1	NH-31
2	Railway Station	3	Pathsala, Barpeta Road and Sorbhog
3	Airport	1	Lokpriya Gopinath Bordoloi International Airport

#### 4.10.2 Demographic Details

The demographic details are as follows:

Description	Barpeta
Population	16.94 Lakhs
Male	8.67 Lakhs
Female	8.27 Lakhs
Population Growth	21.43%
Area Sq. Km	3245
Density/km <sup>2</sup>	520
Sex Ratio (Per 1000)	953
Child Sex Ratio (0-6 Age)	961
Average Literacy	63.81%
Male Literacy	69.29%
Female Literacy	58.06%

Source: Census 2011

#### 4.10.3 Economic profile of the District

The district of Barpeta is one of the leading agriculture districts of Assam. Although the total gross cropped area in Barpeta District is 3,10,000 hectares, the net cropped area is only 1,76,900 hectares. The cropping intensity is 175 per cent and integrated area is 45,192 hectares. The district has 1,86,205 nos. farm families out of which, 19,798 nos. are big farm families, 6543 nos. are marginal farm families, 78,582 nos. are small farm families and 22,394 nos. are landless families. The main crops grown in the district are paddy, wheat, mustard oil, jute, potato, pulses, fruits, vegetables, etc. The land distribution for cropping is as stated below:

Particulars	Details
Paddy	190875 hectares
Oil seed	29435 hectares
Pulses	13238 hectares
Fruits	8335 hectares
Vegetables	27706 hectares
Wheat	14575 hectares
Potato	9850 hectares
Jute	7840 hectares

The District has attained a remarkable position in production of vegetables of different varieties under Rabi crops. Agriculture being the main occupation of inhabitants of the Char Areas, a large number of populations of the Char areas is engaged in agricultural activities. Though there are 6 nos. of Urban areas in the District. The size of population in these urban areas has been formed from the migration of people from nearby localities in search of livelihood. No major industries in public or private sector in the urban areas has come up due to lack of infrastructure facilities and basic amenities, but there are some small-scale industries like bell/brass metal at Sarthebari town, besides some brick kilns in scattered areas in the private sector, contributing to the State economy to a limited extent.

#### 4.10.4 Agriculture Production Scenario/Trend

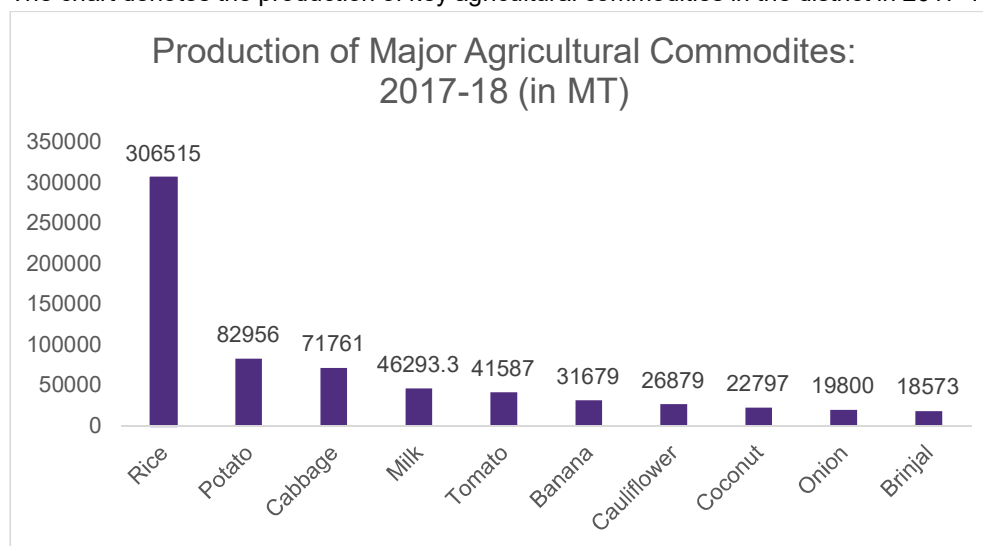
The district of Barpeta is one of the leading agriculture districts of Assam. The district has about 1,86,205 nos. farm families out of which, 19,798 nos. are big farm families, 6,543 nos. are marginal farm families, 78,582 nos. are small farm families and 22394 nos. are landless families. Barpeta produced 8 per cent of the state's egg production in 2017-18 and ranks second in total production. The district produced over 81,000 bales of 180 kg jute in 2017-18.

The primary harvests of the district are paddy, wheat, mustard, tea, lentil, green gram, dark gram, potato and vegetables. Besides this a large number of crops are produced in the region which are traded in different regions including Guwahati like tomato, cabbage, lentils, gourd, cauliflower, brinjal cucumber, pumpkin, ladyfinger, bean and so on during the peak-season of the vegetables. This region positions first in the state for the production of potato.

Barpeta area has a plain geology with a delicate slant towards the South. The area has a high diversity of populace, i.e., about 632 people for each sq. km as against a state level diversity of 397 people per sq. km. Pisciculture is a noteworthy venture in the region. Domesticated animals give valuable income to countless households and certain pockets like Bajali, Gobardhana, Mandia and so forth are known for steers, poultry, goat and piggery.

The district has attained a remarkable position in production of vegetables of different varieties under Rabi crops. Agriculture being the main occupation of inhabitants of the Char Areas, a large nos. of population of char areas is engaged in agricultural activities.

The chart denotes the production of key agricultural commodities in the district in 2017-18.

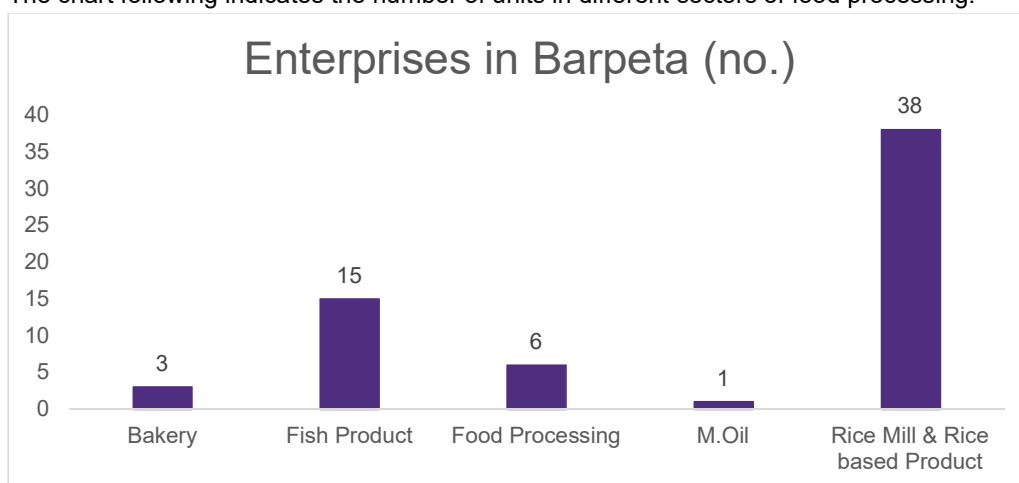


#### 4.10.5 Key Agriculture Based Industries

An administrative district in the state of Assam (Barpeta) has 1548 enlisted units which provide employment opportunities and contribute extensively in investment. There is a total of 178 Agro based micro and small units with an investment of INR 457.60 Lakh.

Sl. No	Name of the Unit	Main Product
1	M/S Dutta Rice Mill	Rice Milling
2	M/S Saily Ice Factory	Ice Cream
3	M/S Radhe Silk Udyog	Silk
4	M/S Abul Hussain Rice Mill	Rice, Flour & Red Chilli Milling
5	M/S Joy Gopal Biscuits Industries	Bread
6	M/S.Sahara Lucky Fruit Processing Unit	Fruit Juice (Litchi, Orange, Mango, etc.)
7	M/S B.B.K Pure Mustard Oil Mill	Mustard Oil

The chart following indicates the number of units in different sectors of food processing.



#### 4.10.6 Industrial Infrastructure Details

##### Export Infra Availability

There is No Export Infra

#### 4.10.7 Industrial Parks and Contribution to Agro Enterprises

Agro based industries have urgent need for agricultural, industrial and economic development in Assam. These 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 converted 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.

#### 4.10.8 Support Institutions

##### National Bank for Agriculture and Rural Development (NABARD)

NABARD is located in Gandhi Nagar, Barpeta and aims to promote sustainable and equitable agriculture and rural development through participative financial and non-

financial interventions, innovations, technology and institutional development for securing prosperity.

### **Krishi Vigyan Kendra**

KVK is located in Howly-Khatalpara Road, Nagarjar. The institute provides specialised need-based trainings to the farming community on various aspects related to agriculture and allied sectors. The prime mandate of KVK is to impart vocational training to practicing farmers, rural youth and field level extension functionaries, conducting on farm trial, front line demonstration and transferring latest technologies to the farming communities.

### **Industrial Training Institute (ITI)**

The institute is located at B.B. Road, Barpeta. The major objectives of the ITI are:

- To provide semi-skilled/skilled workers to industry by systematic training.
- To reduce unemployment among educated youths by equipping them with suitable skills for industrial employment and self-employment

### **UCO Bank – Lead Bank**

The bank offers a number of services and products which are tailored to support agro based industries. It offers Kisan Credit Cards (KCC) and many other programmes, which allow farmers to meet their short-term credit requirements at affordable interest rates. Additionally, it offers loans to set up cold storage as well as Agro and Food Processing units. The bank appraises entrepreneur’s proposal for banking support.

### **Surovi Krishak Unnayan Samity**

Surovi Krishak Unnayan Samity is an NGO working on key issues of animal husbandry, dairying fisheries, aged/elderly people, agriculture, art & culture, biotechnology, children, civic issues, differently abled, disaster management, Dalit upliftment, drinking water, education & literacy, environment & forests, food processing, health & family welfare, HIV/aids, housing, human rights, information & communication technology, legal awareness & aid, labour & employment, land resources, micro finance (SHGs), minority issues and micro small & medium enterprises.

### **Financial Services providers:**

Chartered Accountant based at Barpeta Road is providing financial, legal and compliance related issues like tax filing, preparation of Bankable proposal, GST registration and filing to the enterprises of Barpeta district. Some of the firms and professional are as follows:

<b>Professional name and Firm name</b>	<b>Address</b>	<b>Contact no &amp; Email</b>
CA. Manish Kumar Sethi Manish K Sethi & Co.	R.K Complex, 1st floor, Amtol, Barpeta Road, Assam	M: 9435123022 E: manishksethico@gmail.com
FCA. Amit Agarwal FCA. Sumit Kr Bhansali	2 <sup>nd</sup> Floor, Above Axis Bank, Barpeta Road	M:9859980361 M:9706414619 E: amitbishnu@gmail.com
CA. Raj Kumar Jain	Barpeta Road, Assam	M: 9435040798

### **FSSAI**

All the FSSAI registration, which belongs to food items is with Joint Director Health Service, Barpeta Bidyapith High School Road, Barpeta, through submission of relevant documents (hard copy).

### Machinery supplier

The machinery related to Rice Mill is purchased from M/s. Assam Machinery, Barpeta Road and M/s, Archana Machinery Store, Jail Road Guwahati.

### Dairy Development Board, Howly

DDB is providing the support for tools and equipment like milk can, electrometer, milking machine, etc. to the producers. They are also providing trainings to the enterprises for the preparation of value-added products like curd, paneer, ghee, etc.

#### 4.10.9 Analysis from Baseline Data

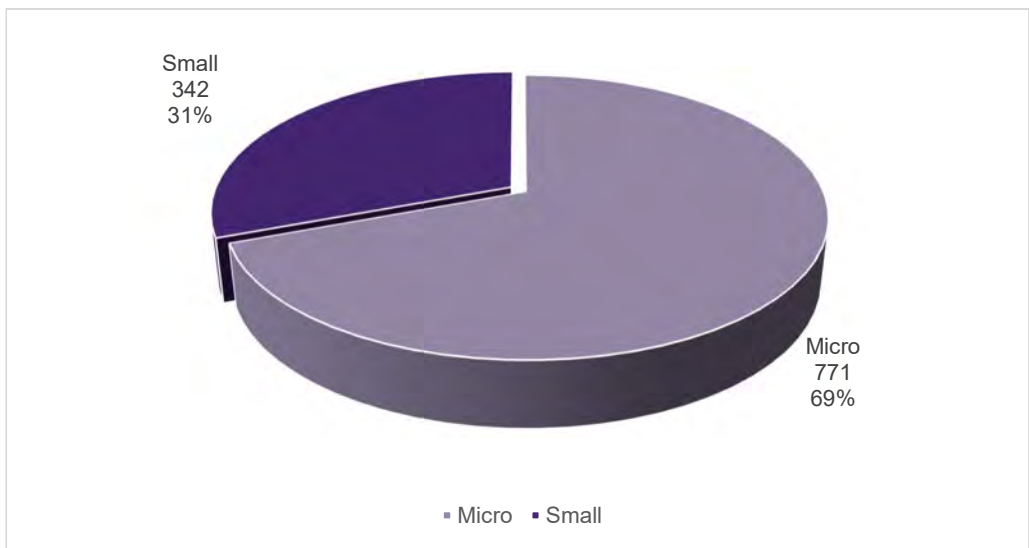
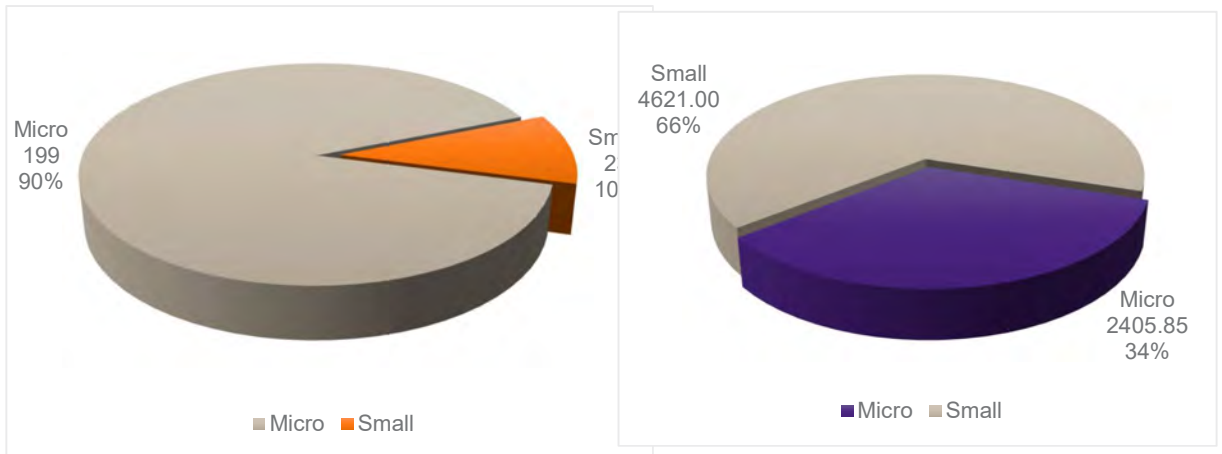
##### Baseline Units:

Throughout Barpeta district we have found 222 active agro based processing units comprising of different value chain like in Rice - 124 units, Bakery & Confectionary - 29, Fruits, vegetables & spices - 16, Maize - 1, Mustard - 9, Dairy - 24, Fish – 13 and Wheat - 6. From the total units 10.36 per cent units are small-size and out of 10.36 per cent, 22 units are registered, 1 are unregistered and 89.64% are micro category. Out of total micro units 110 units are registered and 89 are unregistered units under DICC Barpeta.



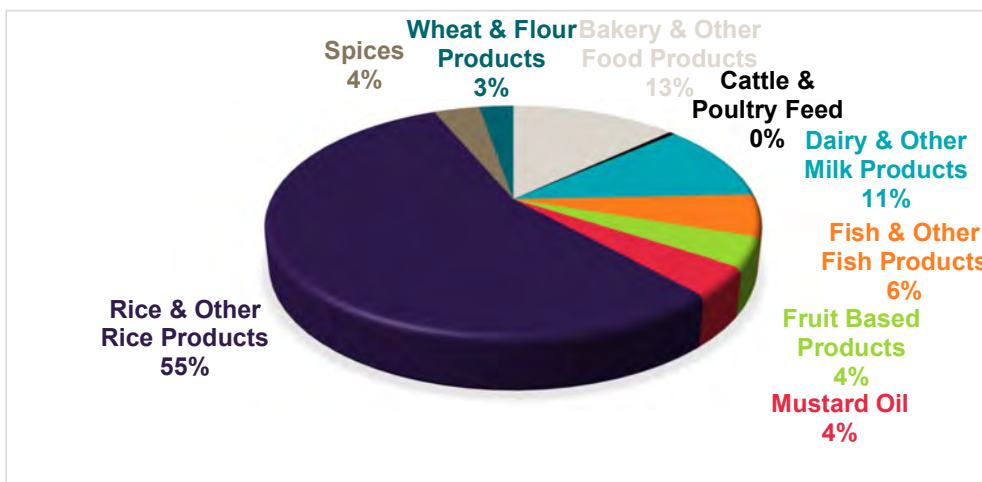
##### Category

We have analysed the contribution in category wise, i.e., Micro and Small units are actively working in agro processing business in Barpeta. The annual turnover of Small category units is 4,621 Lakh, 66 per cent with an investment of INR 2,212 Lakh, even though the number of units are only 23, and the turnover of micro units is 2,405 Lakh, 34 per cent with an investment of INR 1260 Lakhs contributed by 199 comprising of all value chain. In terms of employment about 342 employees are engaged in Small Category units, whereas, about 771 employees are engaged by Micro level units in Barpeta.



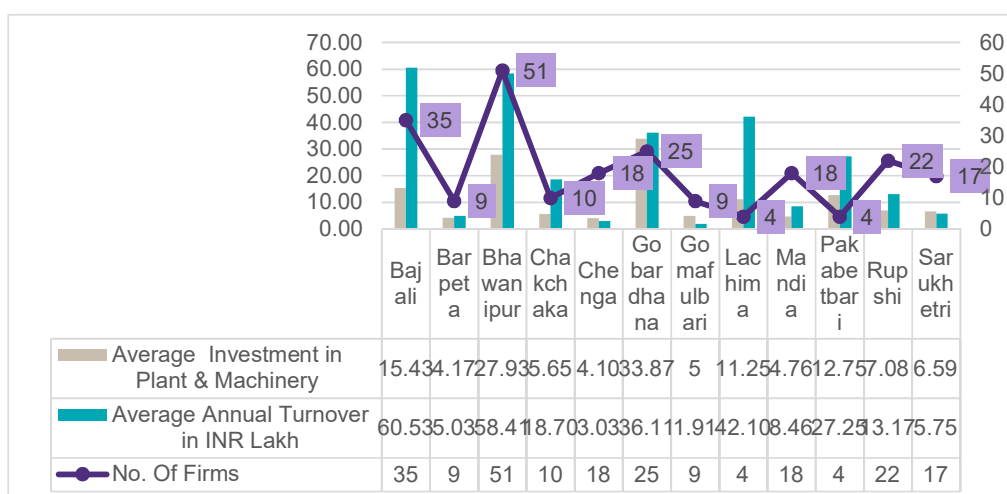
**Baseline Value chain wise:**

In Barpeta, we have identified few very important value-chain units having huge potentials for growth, in terms of business as well as employment generation. About 124 units are in rice milling business in Micro and small size. Secondly, 29 units are in bakery & confectionary, and thirdly 24 units are in dairy products which are concentrated in Bhawanipur, Bajali and Gobardhana Block. Number of units in fruits, vegetables & spices is 16 in Barpeta town & Pathsala.



### Baseline of Agro Based Processing Units in Block Wise:

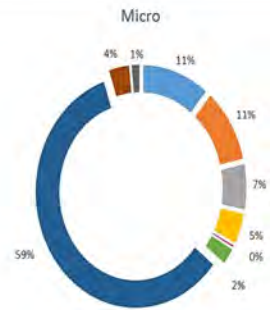
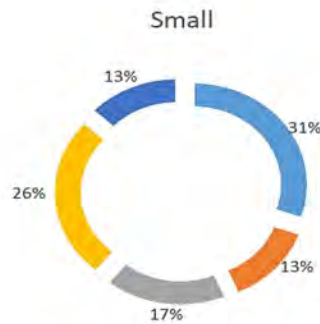
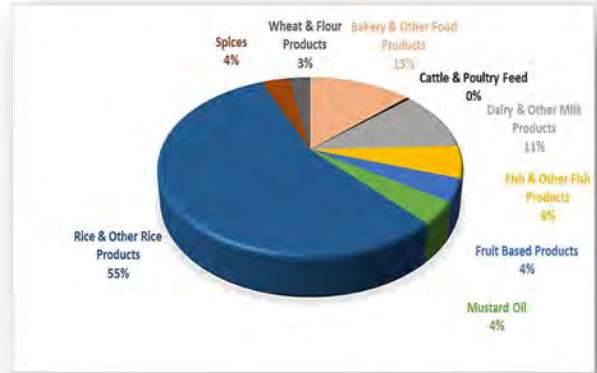
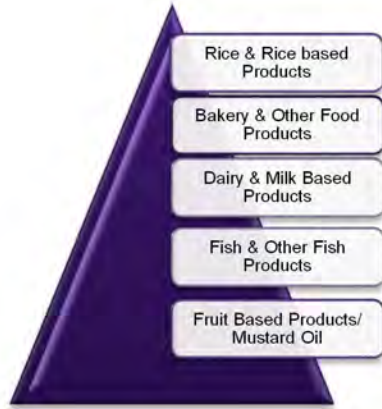
We have also analysed the block wise agro based processing units concentrated in some specific block based on the production of raw material availability, namely, the Bhwanipur, Bajali, Gobardhana, Rupshi blocks have the highest paddy production in Barpeta. Here to mention Bajali Block has turnover of about INR 60.53 Lakh with investment of INR 15.43 lakhs average of 35 active unit of different value chain, Bhwanipur block has about 52 different value chain units and its annual turnover is about INR 58.41 Lakh, with investment of INR 27.93 Lakh in average. Likewise, Gobardhana has annual turnover of INR 36.11 Lakh with investment of INR 33.87 Lakh of 25 active different value chain units. Lachima has 4 different value-chain units, but most of them are micro category which has annual turnover of INR 42.10 Lakh with investment of INR 11.25 Lakh. In terms of employment, Bhwanipur has the highest number of employments, i.e., 313 in 51 units, Bajali - 202 in 35 units, Gobardhana - 170 in 25 units, Mandia - 114 in 18 units, Rupshi - 87 in 22 units, and Chenga & Sarukhetri have 42 nos manpower in 18 - 17 units.



### Products of Barpeta

As per our baseline survey, there are mainly 9 value chain products irrespective of Micro and Small category units. In few units they have also done value additions. In Barpeta, top most products available are: **1. Rice:** in rice, no value addition has done till now in the entire district; **2. Bakery & Confectionary:** in bakery, we found highest value addition, for example Bread, Cakes, Biscuits, Veg & Non-Veg pastry, Roll cakes, Chana, Bhujia and

other food products; **3.** Fruits & Vegetables has value addition of Pickles, Juice, squash, Jelly, etc.; **4.** Spice has Turmeric powder, Ginger paste, dry, King chili paste, dry pods, etc.; **5.** Dairy has value addition like Curd, Sweets, Ice Cream, Paneer, Milk in pouch, etc.; **6.** Feed has only two units of poultry feed and cattle feed; **7.** Mustard oil is also used in rice mill unit in entire Barpeta; **8.** Fish products, mainly, dry fish in loose or packaged are available in some places seasonally and **9** Wheat is produced in two units as per baseline data.



■ Bakery and Confectionery ■ Dairy ■ Mustard ■ Rice ■ Wheat ■ Bakery and Confectionery ■ Dairy ■ Fish ■ Fruits and Vegetables ■ Malze ■ Mustard ■ Rice ■ Spices ■ Wheat

**Market share of Barpeta products:**

It is found that most of the agro based units of Barpeta are micro in category and the rice milling units are mostly public milling in nature, Hence, the market share for those products is concentrated in local markets which include personal consumption, also in block or in district with 98 per cent of market share of products of 218 units. State market share is 1 per cent of two unit production of different value chain, in North-East region market.

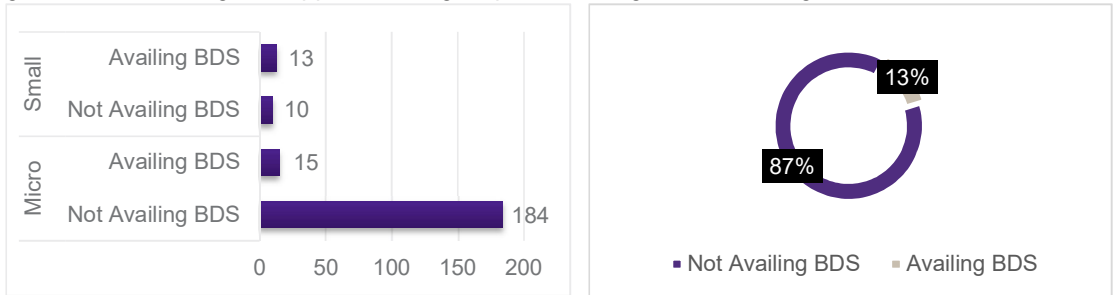
**Schemes availed in districts:**

In Bhwanipur block we have found that out of 51 units 3 units have availed govt. scheme, but 48 units couldn't have access. Similarly, in Bajali block, out of 35 units 7 units have got govt. schemes but 28 couldn't get that. The graph below is showing the scenario of Barpeta agro based units which are not getting proper boost up access for their growth. Only 26 units have got different kind of govt. schemes, but about 196 couldn't able to avail any benefits for their growth such as PMEGP, Electricity subsidy, exposure in marketing, handholding support on documentation, etc.



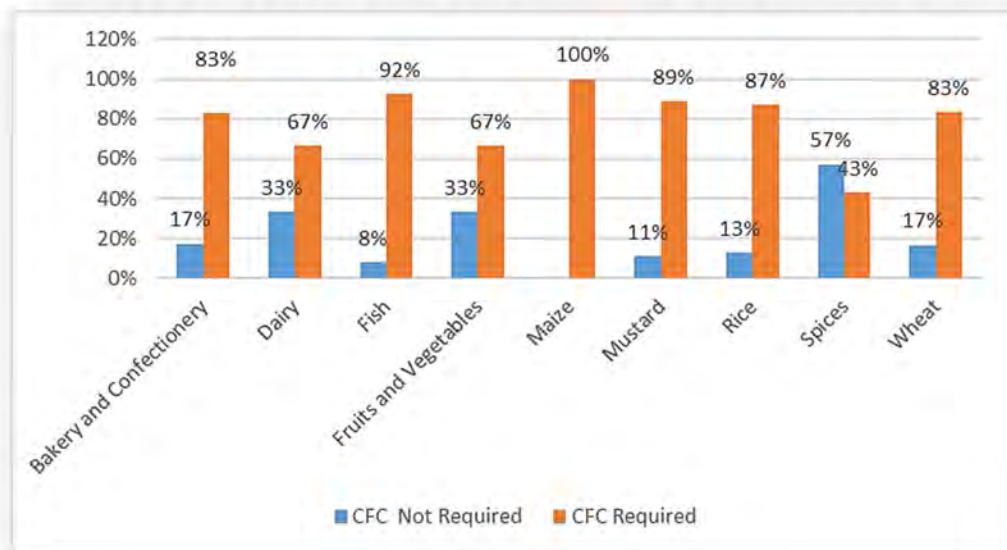
### BDS availed and required

From our baseline survey it is found that, in Barpeta, out of 222 units only 28 units have availed BDS service from their own source these are as services on taxation, documentation, testing laboratory, promotion of products, consultancy for financial linkages, etc. Similarly, out of 222 units, about 193 units need BDS services on financial guidance, technological support, training, exposure with global marketing, etc.



### CFC Required

In terms of CFC requirement in Barpeta district it is understood very clearly from the graph shown below in rice we have 124 unit out of 124 units 16 units doesn't need CFC but 108 units need CFC, In Bakery 29 units 5 units doesn't need CFC but 24 need CFC, In Fruits,



Vegetables & Spices we have found 16 units out which 9 units need CFC but 7 need doesn't want to get benefits of CFC, similarly in fish and dairy maximum units need CFC.



## 4.11 Dhubri

### 4.11.1 Geographic Details of Dhubri

Dhubri district is situated in the extreme western corner of Assam between at 30 meters above the sea level. The river Brahmaputra flowing through the district, with the sub divisions of Dhubri and Bilasipara situated at the Northern Bank and that of Salmara and Mankachar in the southern bank. The district is bordered by Kokrajhar district in the north, Meghalaya & Bangladesh in the south, Bongaigaon & Goalpara district in the east and West Bengal and Bangladesh in the west. The district is bounded by Bangladesh in the western and southern side. The total area of the



district is 2,838 sq. km which is 3.6 percent of the total area of the state. Agro-climatically, Dhubri falls in the Lower Brahmaputra Valley Zone. Potato, cabbage and cauliflower are the major crops grown in the area. The region is also a large producer of jute.

The district has fewer tea gardens when compared to other districts of the state. The climate of the district is warm and the region receives a good amount of rainfall during summers with scanty rainfall in the winters. The district receives an average annual rainfall of 2916 mm. Dhubri district consists of 2 Sub-divisions, 4 towns, 13 number of development blocks, 168 Gaon panchayats and 1133 revenue villages.

Sub-Divisions	Town	Blocks	Panchayats	Villages
2	4	13	168	1133

The district is well connected with other districts of Assam and India by all means of transport which include airways, railways, roadways. Dhubri district has two national highways viz. NH-31 & NH-37 connecting it with the other parts of the state as well as the country. There is 1 railway station in Dhubri and the nearby airports are Rupshi Airport & Guwahati Airport.

Particulars	Total No.'s	Details
National Highway	2	NH-31 & NH-37
Railway Station	1	Dhubri Railway Station
Airport	2	Rupshi Airport & Lokpriya Gopinath Bordoloi International Airport

#### 4.11.2 Demographic Details

The demographic details are as follows:

Description	Dhubri
Population	19.49 Lakhs
Male	9.98 Lakhs
Female	9.51 Lakhs
Population Growth	24.44%
Area Sq. Km	2838
Density/km2	941
Sex Ratio (Per 1000)	953
Child Sex Ratio (0-6 Age)	968
Average Literacy	58.34%
Male Literacy	63.10%
Female Literacy	53.33%

Source: Census 2011

#### 4.11.3 Economic profile of the District

Dhubri district is primarily agrarian in nature with heavy dependency on agriculture and forest products. Main source of income is generated through farming activities with rice being the most prominent crop. The district has surplus production of paddy along with cash crops including Jute and Mustard. From forest mainly timber and bamboo add to the income. Other secondary sources of income are based on stone quarrying and sand mining. Fish, milk, meat and egg have small contribution to the economy. Devoid of any industrial production the district is considered as one of the poorest districts of Assam. The share of different sectors contributing income in the district are Primary-75.8%, Secondary-6.2% and Tertiary-18%. The district has only three urban locations of which Dhubri is rated as class IV township. The total employment in agriculture sector of the district is 75.8 per cent with 28.84 per cent of agricultural labourers. Major cropping pattern of the district is rice based cropping system in which combinations like winter rice - wheat, winter rice - mustard - jute, summer rice - winter rice - vegetables, and summer rice - mustard/pulses/potato/vegetables are followed. The farming system of the district is traditional in general, so far farm mechanization is concerned in general. The industrial scenario of the district is not much encouraging. As per statistical handbook of Assam 2018, the number of registered MSME units in the district is 54.

##### Plantation and Horticulture

The district has vast potential for development of plantation and horticultural crops. There has been an impressive growth of horticultural crops in the district in recent years. At present horticultural crops are cultivated in 47150 with fruits and nut crops 20000 hectares, vegetables 11000 hectares, root and tuber crops such as tapioca, colocasia, sweet potato etc. in 6200 hectares. Besides, other horticultural crops are also cultivated in the district. Most of these horticultural crops are cultivated in traditional ways. Therefore, the yield and quality of these products are not up to the commercial grades available in 15 the market. Government record reveals that there are about 19300 hectares of additional area which can be brought under horticulture with minimum effort. Regarding sericulture activities, Dhubri enjoys the reputation of being one of the important locations in Assam for producing the good quality Eri cocoons and its fabric. Since the feedstock is abundantly available, the district has very good potential for the development of eri culture in particular. The Department of Sericulture has so far established two Eri Concentration Centres(ECC) at Bongishijhora & Ujanpara along with four Collective Mulberry Gardens(CMG) at Kajigaon, Duligaon, Bonnyaguri and Borshijhora to produce Eri and Mulberry reeling cocoons and for free distribution of Eri and Mulberry food

plants to the private rearers to conduct commercial rearing for producing more cocoons. At present the District has undertaken to plant 116.50 hectares of Eri food plants, 23 hectares of Muga food plants and 70.50 hectares of Mulberry food plants covering 107 sericulture villages among 4260. In the year 2000, the District has produced 12,753 Kgs. of Eri cut cocoons and 472 Kgs. of Mulberry raw silk. A central project has been introduced in this district under Catalytic Development Programme since 1998-99 for three years covering 60 acres of Eri food plants, 80 acres of Muga food plants and 25 acres of Mulberry food plants. The DRDA, Dhubri has sponsored a “Golden Thread Project “for the development of 250 of Eri farmers.

#### Livestock and Diary

Livestock farming and dairying practices are common in the rural households of Dhubri district. However, such activities have not properly been developed to be called for commercial ventures. As per the Livestock Census of 2003, the district has different types of livestock including cattle, buffaloes, sheep, goats, pigs, horses, fowls and ducks.

The poultry farming is a growing business in Dhubri. The per capita per annum availability of eggs in the district is at 20 as against the state average of 18 eggs.

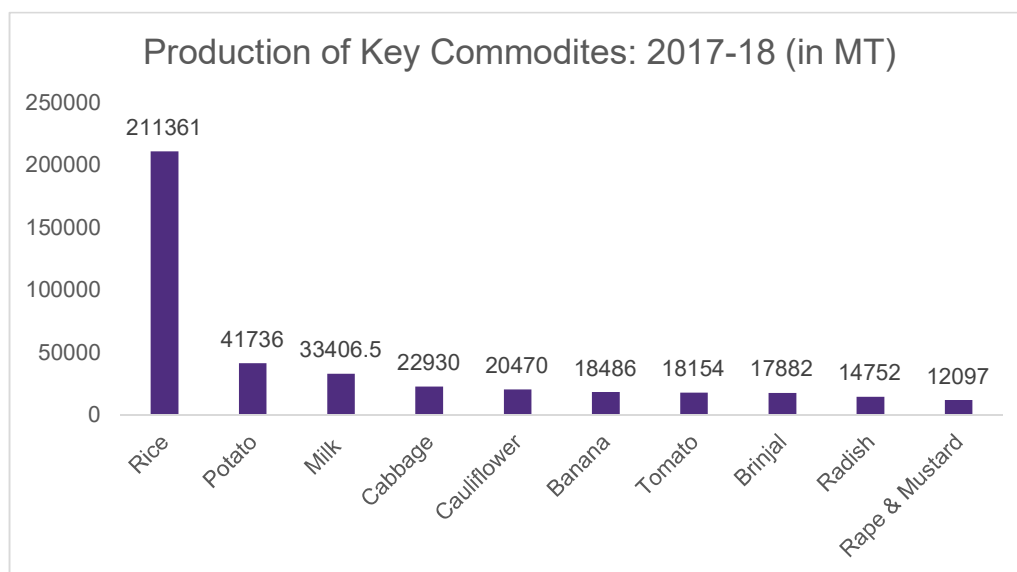
#### Other Non-Farm Sectors

The district of Dhubri various natural resources like minerals, forest wealth besides adequate water from many rivers covering major part of the district. Based on these resources, productive units may be established. The district is potential enough to set up industries based on the raw materials available in this district, such as Jute, Bamboo, 16 Paddy, Pulses, Wheat, Potatoes and Mustered Oil seed. Moreover, fruits and vegetables such as Pineapple, Tomato, and Raw Cashew nuts can play significant role in respect of food processing industries. Handicraft Industries are performing a major role in upliftment of economic condition of rural artisans engaged in making items from Jute (Chalakura, Dhubri, Gauripur and Alomganj etc.), Bamboo, Pith craft (Debottar Hasdaha, Jhapusabari, Gauripur and Bishkhowa), Terrakotta (Asharikandi, Agomoni and Bilasipara) etc. A few localities have become cluster area in a particular type of trade as indicated below which are providing vast employment to the people of this district. The skill of weaving is inherited by almost every household in the district mostly by the Bodos, Rabhas, Rajbongsis, Tanti and Ansari communities. They have their own distinctive patterns, designs & motifs with magnificent colour combinations. Agro-processing units like rice mills, flourmills and mustard oil extraction mills are also available in Dhubri.

#### 4.11.4 Agriculture Production Scenario/Trend

Agriculture is the main source of livelihood for majority of the people. About one-third of the total workforce are involved in agro-based activities for livelihood. According to 2011 Census, over 200,000 people are cultivators and over 170,000 are agricultural labourers in the district. Other than agriculture, a small portion of work-force are engaged in livestock, forestry, fishery etc. The district contributed 3.39 percent, 4.88 percent and 4.19 percent of the state’s total production in milk, egg and meat respectively in 2017-18.

Paddy is the principal crop and the main staple food of the district due to its climatic adaptability. 3 crops of paddy, namely autumn, winter and summer are produced in the district. Major agriculture and allied enterprises are rice, potato, cabbage, cauliflower, banana, tomato, brinjal, radish, rapeseed and mustards. The district also produced a large amount of onion, okra and carrot in the year 2017-18. A chart indicating the production of major commodities in the district in 2017-18 is presented below.



#### 4.11.5 Industrial Infrastructure Details

The district has over 500 registered industrial units. The existing micro and small enterprises cater to various industries such as agriculture, repairing and servicing, textile and steel fabrication among others. The table presented below provides the details of the major industries present in the district.

Name of Industrial Infrastructure	Open Space (Sq. M)		
	Total Open Space	Open Space Allotted	Space Available for Allotment
Industrial Area, Gauripur	12379	652.41	11726.59
Growth Centre, Bilasipara	0	0	0
Commercial Estate, Halakura	2409.97	0	2409.97
Common Service Workshop, Gauripur	0	0	0
Common Service Workshop, Bilasipara	7351.76	4819.4	2532.36

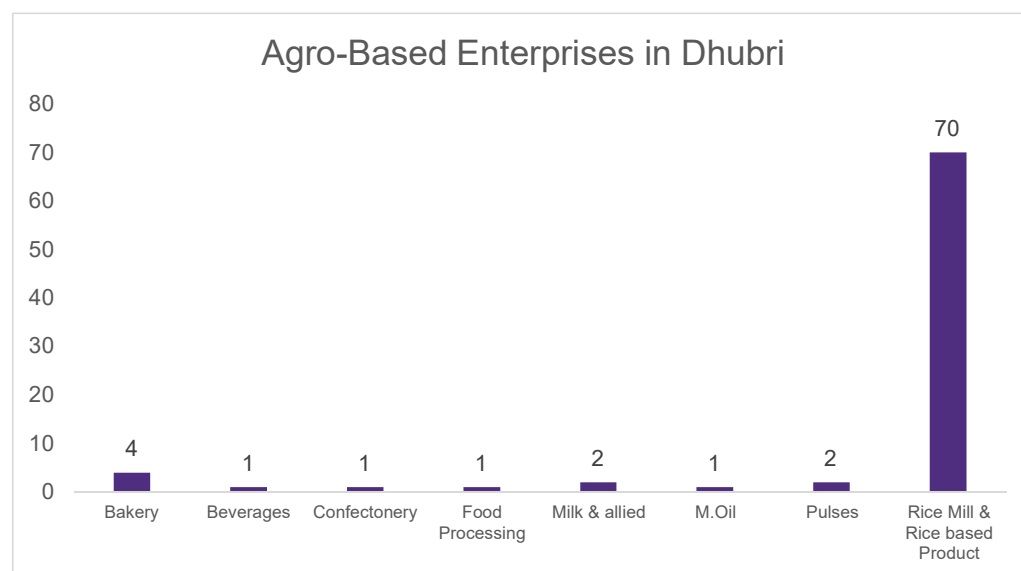
#### 4.11.6 Key Agriculture Based Industries

Listed below are the major agriculture based industries in the district.

S. No.	Name of Unit	Type of Product
1.	Choibari Tea & Industries Limited	Beverages
2.	M/S Tripti Mustard Oil	Fats and Oils

S. No.	Name of Unit	Type of Product
3.	Dhubri Agro Industries	Cereals
4.	M/S Assam Mustard Oils	Fats and Oils
5.	Bothra Agro Industries	Fruits and Vegetables
6.	M/S Sanjib Rice & Atta Mill	Rice & Flour Mill
7.	M/S Mahamaya Industries	Rice & Flour Mill
8	M/S SK Rice & Atta Mill	Rice & Wheat Mill
9	M/S Nabajyoti Chira Mill	Chirra Mill
10	M/S Roy Rice Mill	Rice Milling
11	M/S Gari Ganesh Mini Modern Rice Mill	Rice Milling
12	M/S Bhai Bhai Industries	Spice Grinding
13	M/S Samrat Spices Grinding & Mustard Oil Ind.	Spice Grinding & Mustard Oil

The district has a significant number of rice mills and rice processing units. The sector-wise food processing units in the district are presented in the graph below.



#### Export Infra Availability

There is No Export Infra

#### 4.11.7 Industrial Parks and Contribution to Agro Enterprises

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.

#### **Support Institutions**

##### **Krishi Vigyan Kendra (KVK)**

The institute is located in Bilasipara, and provides specialized need-based trainings to the farming community on various aspects related to agriculture and allied sectors. The mandate of KVK is to impart vocational training to the practicing farmers, rural youth and field level extension functionaries, conducting on farm trial, front line demonstration and transferring latest technologies to the farming communities. KVK Dhubri is currently providing training on Scientific rearing of dairy cattle, Scientific Rearing of Pig, Scientific poultry production, fishery science, Formation and management of SHGs for economic development, Leadership & managerial skill development amongst SHG members and vocational training on Mushroom, Fishery, fruits and vegetables. The department can be helpful in providing the Entrepreneurship Development programs for fruits and vegetables and value addition of fish for self-employment.

##### **Industrial Training Institute (ITI)**

The Industrial Training Institute is located in Gauripur block of the district. The objectives of the ITI are:

- To provide semi-skilled/skilled workers to industry by systematic training
- To reduce unemployment among educated youths by equipping them with suitable skills for industrial employment & self-employment

##### **Sarat Chandra Singha College of Agriculture, Assam Agricultural University**

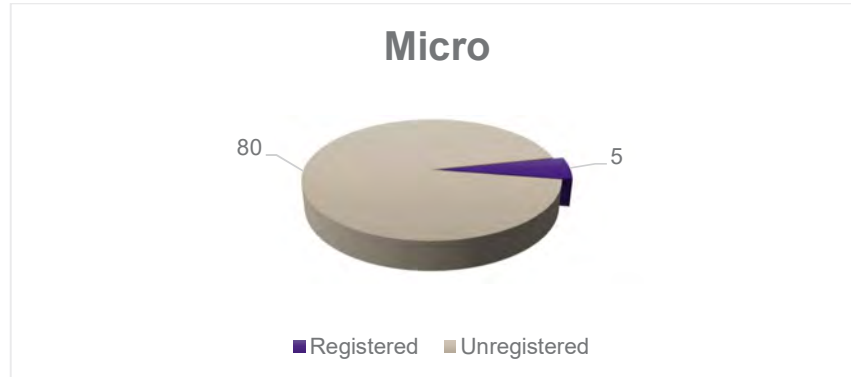
The institute aims to produce globally competitive human resources in the farm sector, and carry out research in both conventional and frontier areas for productivity optimization. The University wishes to help the producers and traders involved in the sector by emphasizing on sustainability, equity and overall food security at household level. Through extensive research, the University developed 113 new crop varieties, out of which 55 belonged to rice, 7 to green gram, 7 to black gram, 2 of lentil, 8 of toria, 2 of sesame, 8 of sugarcane, 2 of jute, 2 of forage and 20 of vegetable varieties

##### **UCO Bank**

The bank offers services and products which are tailored to support agro-based industries. It offers Kisan Credit Cards (KCC) and other schemes which assist farmers in meeting their short term credit requirements at affordable interest rates. Additionally, it is offering loans to set up Cold Storage as well as Agro and Food Processing units.

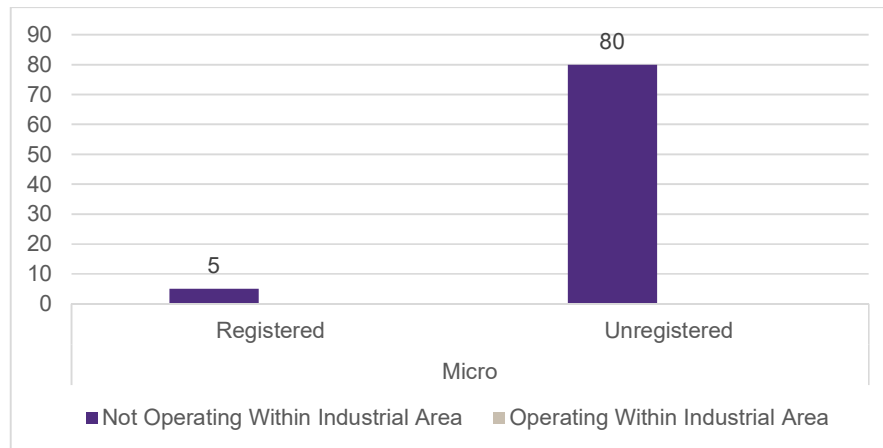
#### 4.11.8 Analysis from Baseline Data

##### Status of Entities in District Dhubri



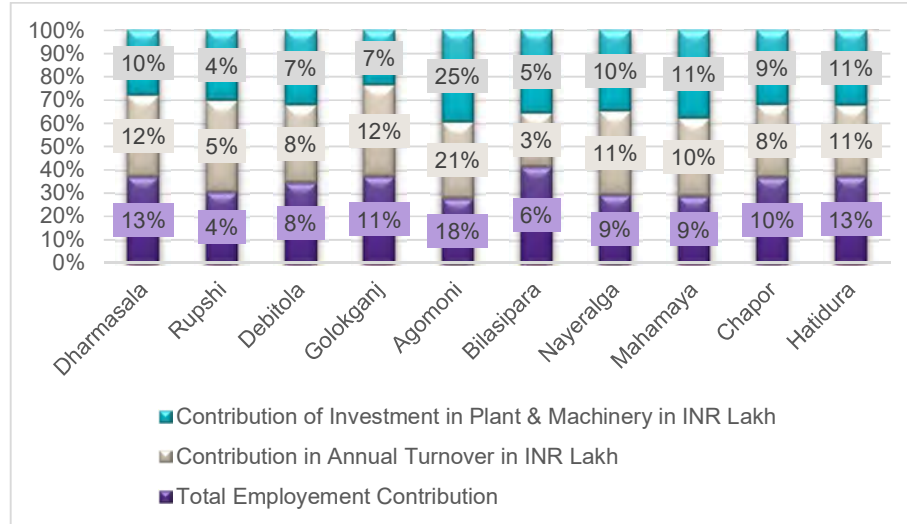
During the Baseline survey, GT found a total of 85 active enterprises in the district. Out of the total identified, only 5% were registered while the rest 80% were unregistered units. N.B. Only micro entities operate in Dhubri.

##### Registration Status & Industrial Area



After the analysis, it was found that 100% of the enterprises in the district, both registered and unregistered, function outside the industrial area.

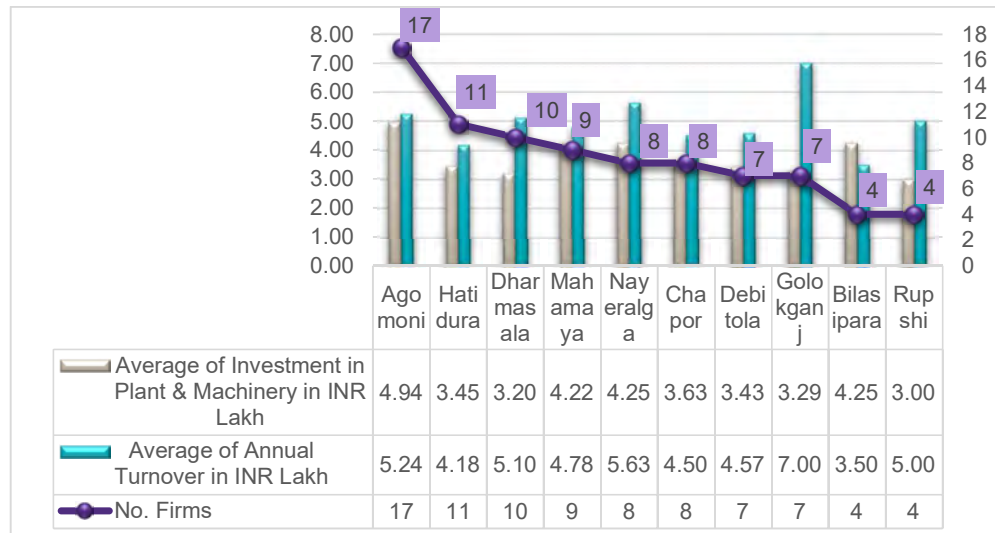
### Block Wise Contribution of Distt. Dhubri



Through the survey, GT found that the Agomoni block in Dhubri district had the highest percentage in terms of Total Employment Contribution as well as its contribution in the annual turnover of Dhubri. The block also ranks highest in terms of its contribution of investment in plant and machinery in the region.

Other blocks like Mahamaya, Hatidura, Dharmasala and Nayeralga contribute 10% to 13% in the district's investment in Plant and Machinery, the total employment contribution and the contribution in its annual turnover.

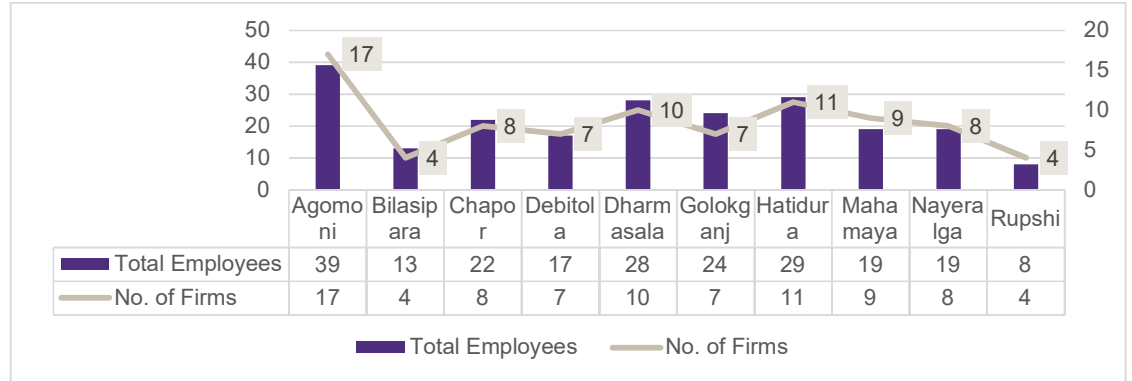
### Distribution of Units in Distt Dhubri with Annual Investment & Annual Turnover



The micro units present in the Golakganj block are found to have the highest average of Annual Turnover in the Dhubri district. It is followed by the Nayeralga, Rupshi and Agomoni blocks which have relatively higher percentages compared to rest of the blocks in the region.

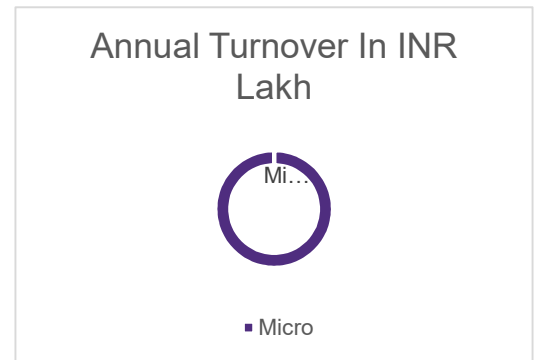
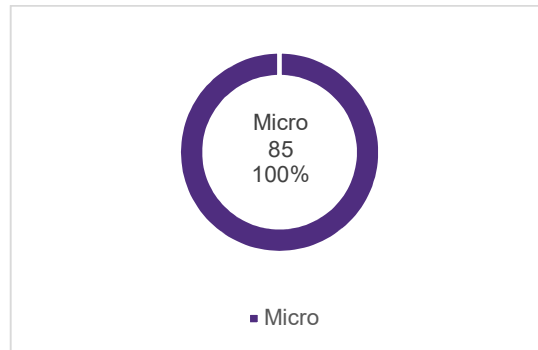
The highest average in terms of number of firms and investment in plant and machinery was that of the Agomoni block.

### Employment Share of Dhubri Distt. – Block Wise



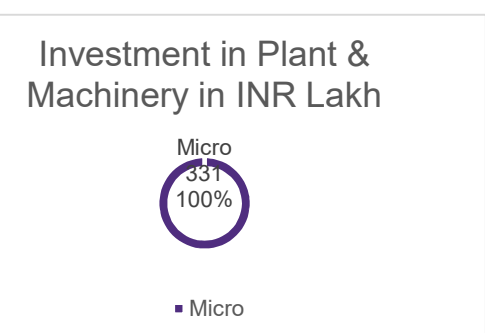
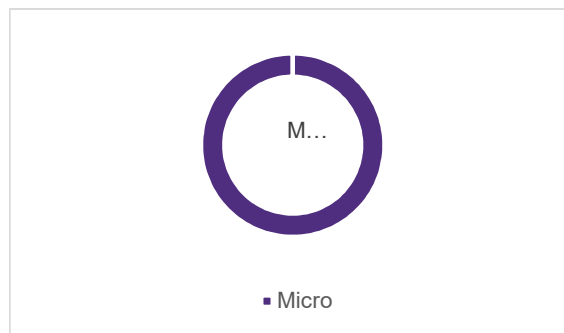
After the survey, it was identified that Agomini block has the maximum number of firms as well as highest employment percentage in the entire Dhubri district. Rupshi showed the lowest percentage in terms of both total number of firms and total employees in the region.

### Count Of Entities and % of Annual Turnover In Each Category



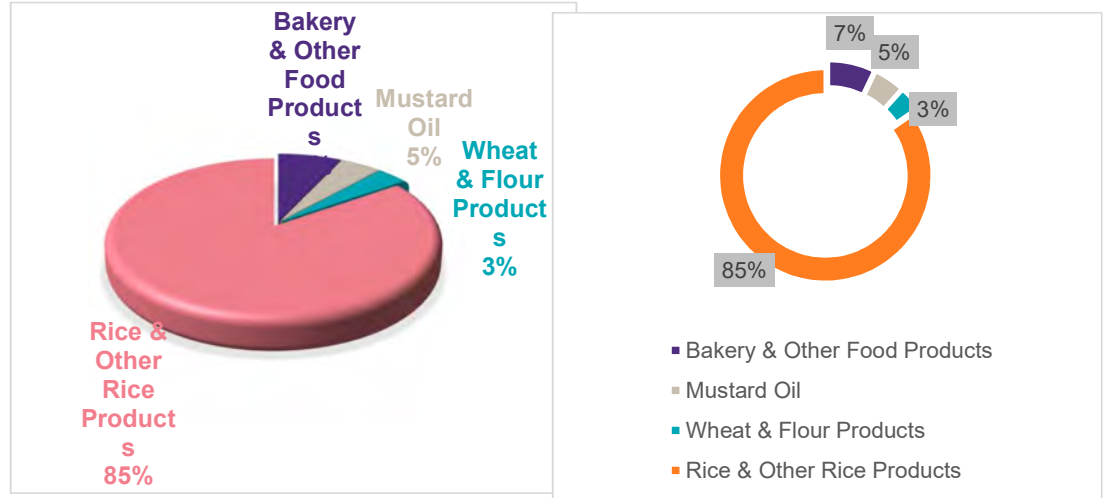
85% of the total enterprises surveyed in the Dhubri district were found to be Micro enterprises. During the survey it was found that the Annual Turnover of the micro units was around 425 INR Lakh.

### % of Employees & Investment in Each Category



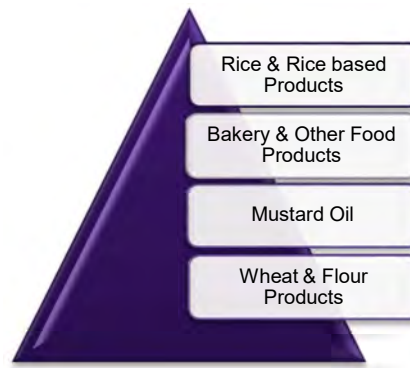
From the baseline survey, GT found that a total of 218 people are employed in the micro units across the districts. The investment in plant and machinery by these units was 331 INR Lakh.

### Products Produced By Micro Entities in Dist. Dhubri



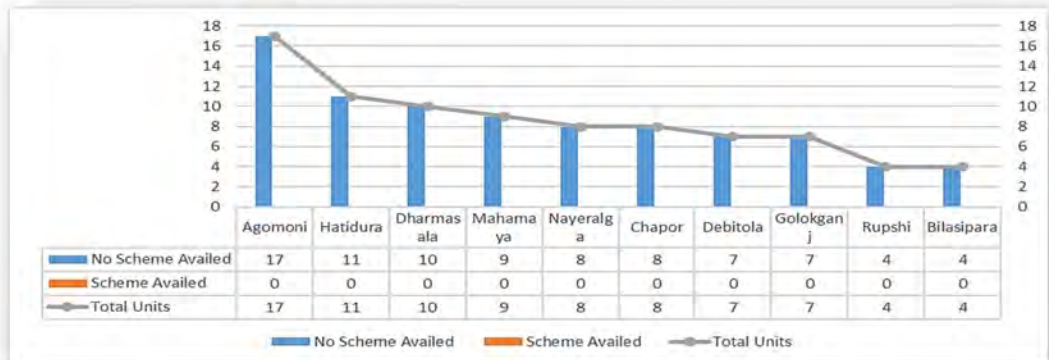
Rice and other rice based products comprised 85% of the total products produced in the Dhubri district. The other 15% included bakery & other food products, mustard oil and wheat and flour products. The major products manufactured by the Micro enterprises of the region are rice and based products with a total of 85%. Bakery & other food products comprise 7% while mustard oil amounts to 5% of the total produce. The last 3% produce include wheat and flour based products.

### Top 5 Most Produced Products in Dhubri



The top five products identified during the baseline survey include Rice and Rice based products, bakery & other food products, mustard oil and wheat and flour products.

## Blockwise Scheme Distribution



During the Baseline Survey it was found that not a single enterprise of the district availed any State/Central level Schemes.

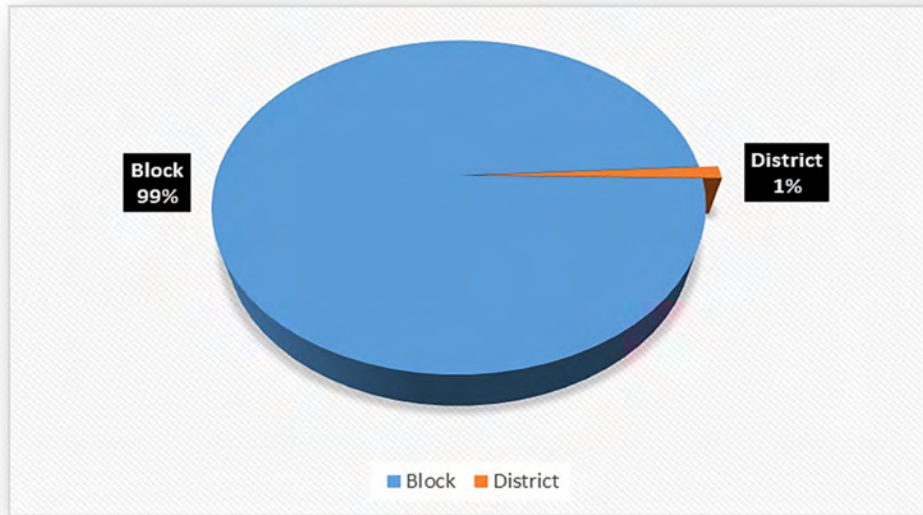
## Affiliation With Any Association

### Not Affiliated To Any Association



None of the Micro units functioning in the district are affiliated with any association.

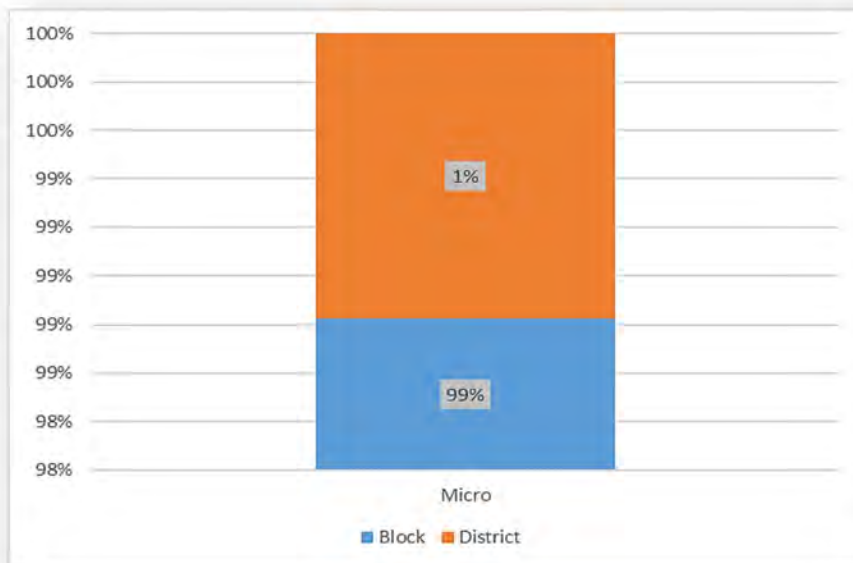
## Target Market Overview



Maximum of the produce is sold locally at the block level while only 1% reaches to markets at the district level.

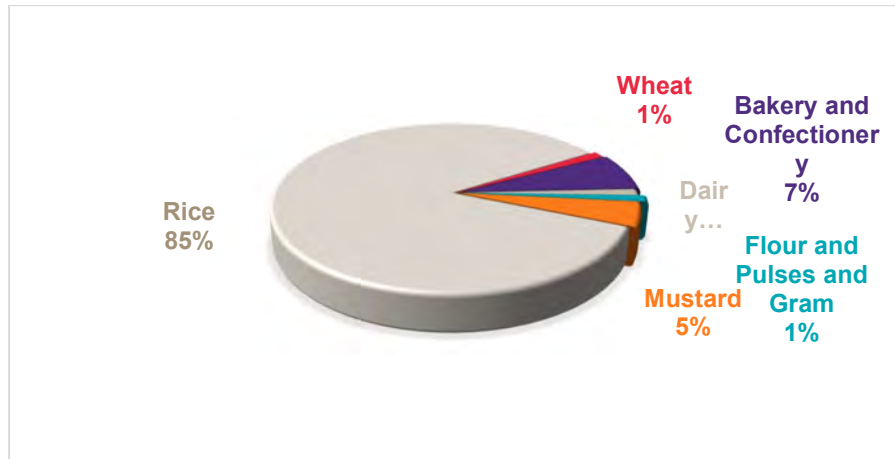
This is because all the units existing in Dhubri belong to the Micro category which is evident from the side below.

**Target Market of Entities of Distt Dhubri**



Therefore, when surveyed, all the enterprises were interested in availing BDS services and CFC facilities as seen from the graph above. This would in turn help in the business growth of the related enterprises.

#### Distribution Of Value Chain



During the baseline survey, GT found that 85% of the total micro units in the Dhubri district belong to the Rice value chain. 7% belong to the bakery & confectionery value chain, wheat and flour, pulses and gram comprise 1% while 5% of the units belong to the Mustard value chain.

## 4.12 Kokrajhar

### 4.12.1 Geographic Details of Kokrajhar District

The District of Kokrajhar is located on the north bank of river Brahmaputra and shares international boundary with Bhutan in the north and interstate boundary with West Bengal in the west. Its location is strategically important. The district is bounded by the Himalayan kingdom of Bhutan on the north, Dhubri district on the south, Chirang and Bongaigaon district on the east and state of West Bengal on the west. The district occupies a geographical area of 3169.22 sq. km. The district consists of 3 Sub-divisions, 11 number of blocks, 134 Gaon panchayats and 966 revenue villages. Rice is the prominent crop grown in this region.



Sub-Divisions	Blocks	Panchayats	Villages
3	11	134	966

Source: Statistical Handbook of Assam 2018

The Gossaigaon Haat is the nearest railway station for rail communication and Lokpriya Gopinath Bordoloi International Airport, Guwahati is the nearest airport located at 205 km distance. For the purpose of business and tours, there is hassle-free movement of the people across the international border as well as a fine road which leads from the Shyamthaibari point on the NH- 31(C) to Gelephu.

SL	Particulars	Total No.'s	Details
1	National Highway	1	NH-31
2	Nearest Railway Station	1	Gossaigaon Haat
3	Nearest International Airport	1	Lokpriya Gopinath Bordoloi International Airport
4	Nearest Domestic Airport	1	Lokpriya Gopinath Bordoloi International Airport

Source: Statistical Handbook of Assam 2018

### 4.12.2 Demographic Details

Kokrajhar has population of 887,142 of which male and female were 452,905 and 434,237 respectively according to the census of 2011. Average literacy rate of Kokrajhar in 2011 was 65.22 compared to 52.29 of 2001. The details are as follows:

Description	2011
Population	8.87 Lakhs
Actual Population	887,142
Male	452,905
Female	434,237
Population Growth	5.21%
Area Sq. Km	3,296

Description	2011
Density/km2	269
Proportion to Assam Population	2.84%
Sex Ratio (Per 1000)	959
Child Sex Ratio (0-6 Age)	954
Average Literacy	65.22
Male Literacy	71.89
Female Literacy	58.27
Total Child Population (0-6 Age)	136,924
Male Population (0-6 Age)	70,085
Female Population (0-6 Age)	66,839
Literates	489,305
Male Literates	275,220
Female Literates	214,085

Source: Census 2011

#### Agriculture Production Scenario/Trend

According to 2011 Census, over 156,000 are cultivators and over 115,000 are agricultural labourers in the district. The major field crops grown in the district are autumn paddy, winter paddy, Jute, Mesta, Black Gram, Sesame during Kharif season and Summer Paddy, Wheat, Toria, Niger, Linseed, Lentil, Buckwheat, during Rabi season. Winter paddy is distributed throughout the district under rainfed condition. Under horticulture crops both kharif and Rabi vegetables, fruit trees namely Banana, Pineapple, Citrus, Jackfruit etc., Chilli, Ginger, Turmeric, Black pepper as spices, tuber crops like potato, Tapioca, Colocasia and plantation crops viz. Areca nut, Coconut etc. are commonly cultivated in the district. In case of fishes, different indigenous and exotic breeds like Catta, Rahu, Mrigal, Calbasu, Bato, Bhangon, Puthi, Borali, Chitol, Kandhuli, Silghria, Prawn etc. are grown. In Animal Husbandry segment, distinctive indigenous and cross breeds are raised by the farmers of the Kokrajhar area. The district is also a major producer of Jute. Over 39,000 bales of 180 kg of jute were produced in 2017-18.

The district has been divided in to three Agro-Ecological situations (AES) based on physiography, hydrology, soil, climate and cropping patterns –

1. Plain zone
2. Hill and Hillock zone
3. Foothill area.

Plain zone is the biggest zone covering 56.7% of all out territory while slope and hillock zone is the smallest zone with 12% of region in the south. The foothill region zone comprises 31.3% of the area in the district. Agriculture is the principle occupation of Kokrajhar and contributes a major part in the economy. Horticulture advancement is the prime thought for rolling out radical improvements in the district through the marginal, small and landless farmers. The chart drawn below shows the production of major agricultural commodities for 2017-18.

### 4.12.3 Key Agriculture based Industries in Kokrajhar

An administrative district in state of Assam (Kokrajhar) has set up 97 enlisted units which provide the employment opportunity and contribute extensively in the investment. The district has a total number of units with an investment of INR 11, 76.17205 Lac and employment of 985 persons. The district also has the largest concentration of forests in the state. The soil in the district is fertile and suitable for paddy cultivation. Below is a list of agro based enterprises in Kokrajhar district and nearby area:

Sl. No	Name of the Unit	Main Product
1	M/S Mother Tea Factory Co-Operative Society Ltd.	Tea
2	M/S Mahanta Rice & Chira Mill	Rice and Chira Milling
3	M/S P.M. Tea Industries	Black Tea, Orthodox Tea, Green Tea
4	M/S Gwjwn Rice Mill	Rice

### 4.12.4 Industrial Infrastructure Details

The district, being an authoritative locale in province of Assam, has industrial infrastructure, which includes industrial park set up by the Assam Industrial Development Corporation (AIDC).

Name of Industrial Infrastructure	Open Space (Sq. M)		
	Total Open Space	Open Allotted	Space available for allotment
IID, Serfunguri	133776	0	0

### Export Infra Availability

There is one Land Custom Station (LCS) available at Hatisar (in Kokrajhar district), but due to lack of adequate infrastructure, the LCS is not functioning.

### 4.12.5 Support Institutions

**KRISHI VIGYAN KENDRA (KVK):** Krishi Vigyan Kendra, Kokrajhar is situated at Gossaigaon sub division of Kokrajhar district which is the gateway to Assam and is 50 km far in the west from district head quarter. It was established in 1985 with financial support from ICAR, Delhi. KVK, Kokrajhar shares the campus with Regional Agricultural Research Station (RARS) of AAU for Lower Brahmaputra Valley Zone (LBVZ) of Assam. Increased Agricultural productivity through the marginal, small & landless agricultural community is the prime consideration of KVK for bringing radical changes in the district.

Over the years, KVK, Kokrajhar has grown to impart need based training (both on campus and off campus), On Farm Testing on identifying technologies and Front Line Demonstration to generate production data and feedback information. Several other activities such as Field Day, Kisan Mela, Farmers Scientist Interaction, Kisan Gosthi, Advisory Services, Radio Talk, TV Show and Publication in the newspaper are also conducting by KVK to create awareness of Agriculture activities. The multidisciplinary pool of KVK staff are doing hard work and

coordinated effort towards bringing about a visible and positive changes in the mindset of Agricultural community of Kokrajhar district.

- Farm Advisory Services.
- Training Programme for different categories of people.
- Front Line Demonstration.
- On Farm Testing.
- Training Programme for the extension functionaries.
- Providing Technology dissemination to farmers

Enhancing the socio-economic standards of rural farmers by upgrading their knowledge and skills is the main objective of transfer of technology. We can leverage KVK activities to build the capacity at entrepreneurs and famers to support the backward linkages with enterprises. They can support in the areas of

- Assess and upgrade Technologies
- Production of quality seeds and planting material
- Marketing Linkage through Agri Expo/Trade Fair/Buyer-Seller meet etc.
- 4. Conducting Soft Skill Intervention like EDP, SDP, MDP etc.

### **Central Institute of Technology: Kokrajhar**

Central Institute of Technology (CIT), Kokrajhar is situated in Kokrajhar District of Bodoland Territorial Council (BTC) in Assam. CIT has been to provide courses in technological and vocational training to produce the required manpower to give the impetus to economic growth of this area. It is a Centrally Funded Institute under the Ministry of Human Resource Development, Government of India. CIT is mandated to impart Technical and Vocational Education such as Information Technology, Bio-Technology, Food Processing, Rural Industries, Business Management, etc. Central Institute of Technology, Kokrajhar, offers courses in Bachelor of Technology (B. Tech), Bachelor of Design (B. Design.) and Diploma courses:

Bachelor of Technology (B. Tech) is offered under the following disciplines:

- Civil Engineering
- Computer Science and Engineering
- Electronics and Communication Engineering
- Instrumentation Engineering
- Information Technology
- Food Engineering and Technology
- Electrical Engineering
- Mechanical Engineering

Bachelor of Design (B. Design) is offered as an independent course, with classes on campus. Diploma engineering courses are available at CIT Kokrajhar under the following disciplines:

- Electronics and Telecommunication Engineering
- Computer Science
- Food Processing Technology
- Control and Instrumentation
- Animation and Multimedia Technology
- Construction Technology

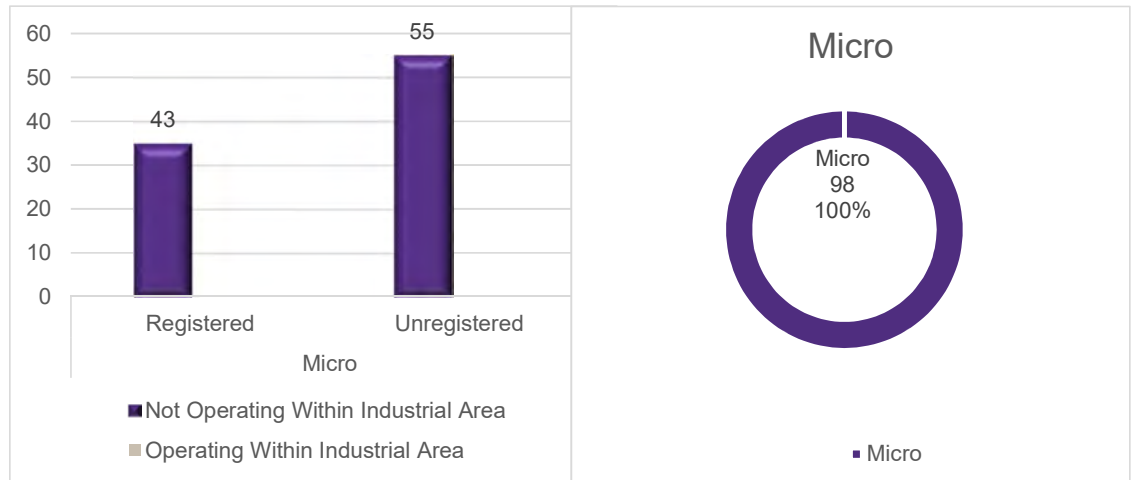
CIT can support in the areas of:

- Design Developed
- Developing Packaging material
- Technique for Value added product

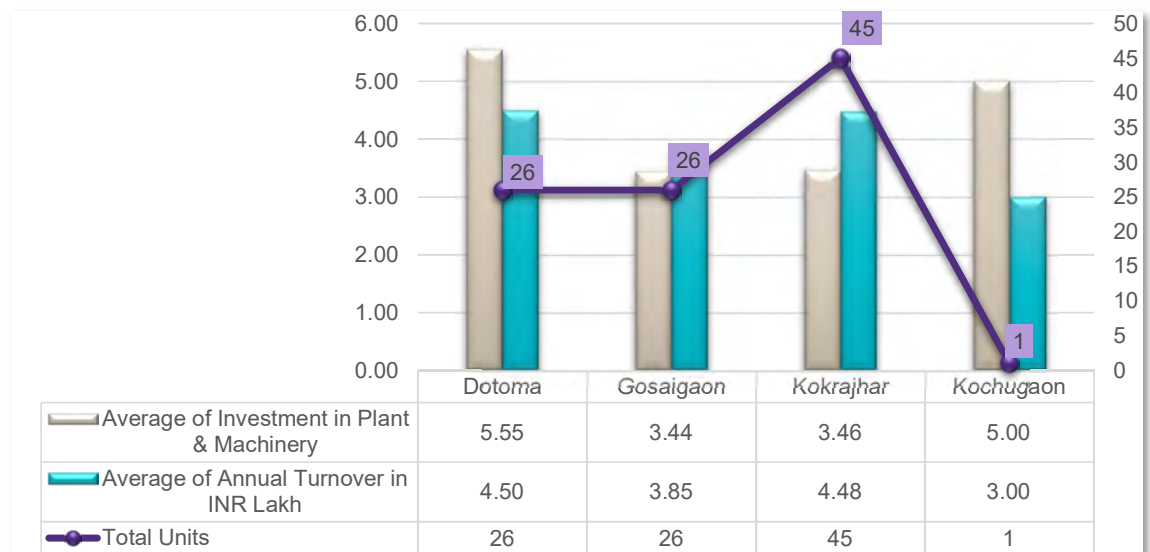
- Quality Testing and training on food product.

#### 4.12.6 Analysis of Baseline data:

A total of 98 units were identified in the district of Kokrajhar during the baseline survey of which 43 units are registered whereas 55 units are unregistered. During the survey it was observed that all the units are in the micro category. The results of the survey are presented in the below chart.

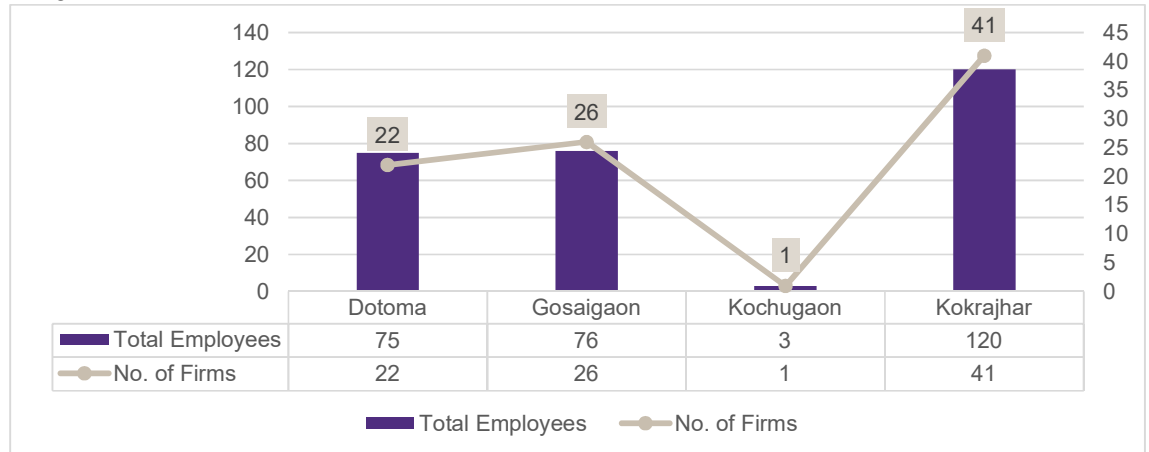


#### Block wise contribution:

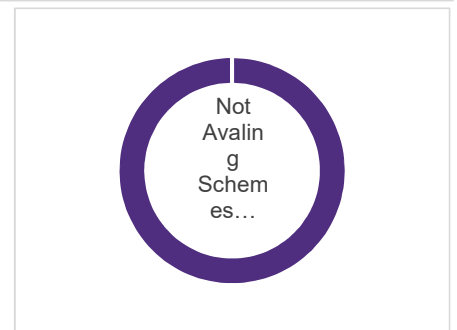


The blockwise distribution of units reveal that although the number of units is the highest in Kokrajhar block the average investment is higher in Kochugaon block and highest in Dotoma block. However, in terms of turnover, both Kokrajhar and Dotoma block have an average turnover of around INR 4.5 lakh. Kochugaon block has a huge discrepancy in terms of investment and turnover. The investment in the block is much higher in comparison to the

turnover. Similar is the case in Dotoma block where the investment in plant and machinery is higher than the annual turnover.

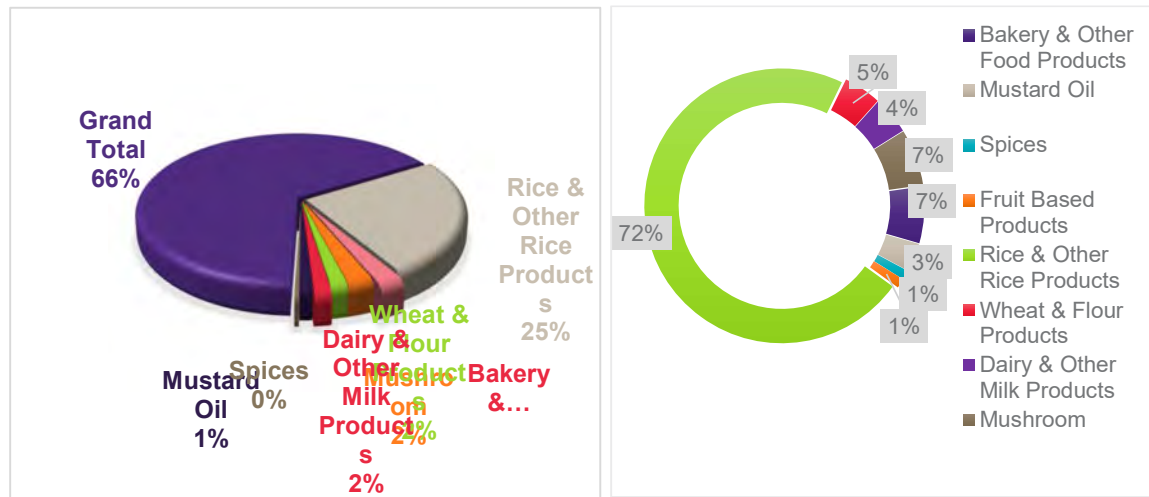


None of the units in the district has taken any Government assistance. The reason for this could be lack of awareness about the schemes and policies available for the enterprises.



**Value Chain:**

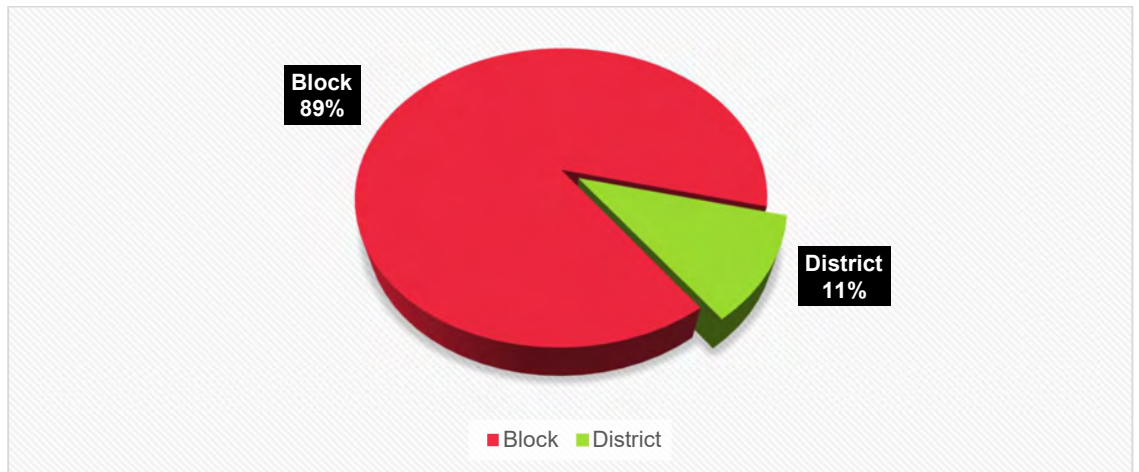
The major products produced in Kokrajhar district are Bakery & other food products, Mustard oil, Spices, Fruit Based



products, Rice & other Rice products, Wheat & Flour products, Dairy & other Milk product and Mushroom. The dominant value chain in the district is the rice value chain followed by Mushroom, Bakery and Other Food Products .

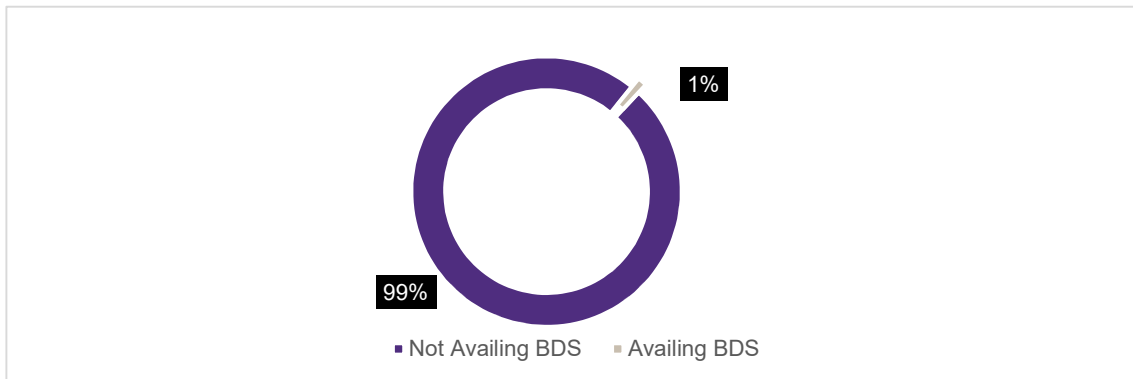
**Market Overview:**

Out of 98 units of Kokrajhar District 89% of Production is sold locally in the blocks and only 11% of total production is sold within the District.



**BDS and CFC:**

In Kokrajhar District out of 98 units only 1 unit has availed BDS.



All the 98 units of various value chains requires CFC. Out of which 4 numbers of Dairy, 1 number of Fruits & Vegetables, 6 numbers of Mushroom, 3 numbers of Mustard, 73 numbers of Rice, 1 number of Spices and 10 numbers of Wheat requires CFC.

## 4.13 Jorhat

### 4.13.1 Geographic Details of Jorhat District

**Jorhat** is an administrative district, located in the upper part of Assam and one of the major district of Assam. It lies between the mighty Brahmaputra river on the north and Nagaland on the south. Jorhat is located at latitude 26.75°N and longitude 94.22°E. Earlier it was a sub division of undivided Sivsagar District & in the year 1983 it was declared as a separate district. The total geographical area of the district is 2,852 square km, which represents 3.6 % of the total Geographic area of the State. The district consists of 6 Sub-divisions, 4 Statutory towns 8 number of development blocks, 110 Gaon Panchayats and 848 revenue villages. The district comprises of three Agricultural sub-divisions namely Jorhat and Titabar



**On 27<sup>th</sup> June, 2016, Majuli Sub division was declared as a separate district by Govt. of Assam.** But Majuli is covered under DICC-Jorhat and APART Project.

Sub-Divisions	Town	Blocks	Panchayats	Villages
6	4	8	110	848

Source: Statistical Handbook of Assam 2018

The district is bounded by Lakhimpur District on north, Nagaland State on the South, Sivsagar on the East and Golaghat on the West. It is well connected by all means of transport. National Highway 37 (India) connects with Jorhat. Jorhat Airport known as Rowriah Airport is located approximately five kilometres from the Jorhat Town. Jorhat Town Railway Station and Mariani Junction railway station are major stations of Jorhat which are falls under the NF Railway zone. All-important trains connecting the Mariani Junction railway station with major cities of the country, which is 16 km from Jorhat City.

SL	Particulars	Total No.'s	Details
1	National Highway	1	NH-37,
2	Major Railway Station	2	Jorhat , Mariani Railway Junction
4	Domestic Airport	1	Rowriah Airport
5	Nearest Port	1	Nemati Port

#### 4.13.2 Demographic Details

As per 2011 census, Total population of Jorhat district is 10,92,256 which include 5,590,10 male and 5,332,46 females. Jorhat District Urban population was 2,19,565 of which males and females were 1,13,555 and 1,06,010 respectively, while the rural population was 8,71,730, male 4,44,389 and female 4,27,341. The district has SC and ST population of 7.61% and 12.09% respectively of the total population. However, the Majuli Sub-Division has a tribal population of 70% who are primarily "Misings". Density of population is 383.

Description	2011
Population	10.92 lakh
Male	5.57 lakh
Female	5.35 lakh
Population Growth	9.31%
Area Sq. Km	2851
Density/km <sup>2</sup>	383
Proportion to Assam Population	3.50%
Sex Ratio (Per 1000)	962
Child Sex Ratio (0-6 Age)	964
Average Literacy	82.15
Male Literacy	87.63
Female Literacy	76.45

Source: Census 2011

#### 4.13.3 Agriculture Production Scenario/Trend

The economy of Jorhat district is mainly agrarian with agriculture and allied activities. Rice is dominating crop of the district. occupying 82.12 per cent of the gross cropped area. Mustard, pulses, black gram, lentil, green gram, are key crops of the district. In the areas of Horticulture, the district has good potential for growing of fruit and vegetable crops which includes pineapple, banana, potato, cabbage, cauliflower, King Chilli, Assam lemon etc. The district also has presence of number of rice mills, food processing, spice processing and beverage units. Muga and Eri production are famous in the Titabar area of the district.

##### Agriculture and Allied Sector Scenario

As per census data 2011, 1,45,885 persons are cultivators. Paddy is the principal food crop and common in all the areas of the district. Climate and soil conditions of Jorhat Districts are favourable for cultivation of various horticulture crops. Three crops of paddy, namely autumn, winter and summer are grown here. The high land areas are suitably used for tea plantation and tea is the one of the major industries in the district because of the presence of many tea gardens in the area. Earlier, those farmers used their high lands for cultivation of sugarcane and other horticulture crops, now they have used that lands for tea plantation. Tea is the one of the major industries in the district because of the presence of small and big tea gardens in the area.

Growing of tea, paddy, sugarcane, vegetables, fruits, flowers, etc. is found extensively carried out, crops like pulses, mustard seeds are grown in plenty. In fruits banana, pineapple, citrus, jackfruits, guava, litchi are grown & occupy important places. Coconut and areca nut are major plantation crops in the district. The district has plenty of livestock. Cattle and goats are almost common to the households. Buffaloes, sheep, pigs, ducks, poultry are found in large numbers. There is a huge potentiality of commercial poultry, pig,

quail, duckery goaterly farming in Jorhat District. There is immense potentiality for the development of Pisciculture in the district. The demand of fishes has gone up with the increase of population. The favourable areas for fish are mostly found on the southern bank of the river Brahmaputra and Majuli area.

Sericulture is very common in Jorhat District. A large portion of rural households earn their livelihoods from this sector. As per data received from Sericulture department, at present approx. 15000 rural families are engaged in this industry. Golden Yellow Muga Silk and Eri Slik are mostly common and silkworm food plants such som, soalu etc are grown in the district. There are lots of suitable lands for agriculture is available in the district.

Majuli, Titabor, Allengmora, Garumora, Teok, Boloma etc are main hubs of agriculture production. Titabor and Borhola is famous for rice cultivation.

The dairy farming is practised by the small and marginal farmers. Traditionally, dairy farming is a subsidiary occupation of the farmers in the district.

The district follows 4 farming systems, viz., Agriculture – Horticulture-Animal Husbandry-Fishery; Agriculture – Horticulture - Animal Husbandry; Agriculture – Horticulture – Fishery; and Agriculture – Horticulture.

#### 4.13.4 Industrial Infrastructure Details

The industrial estate, Cinnamora was constructed during the year 1959 in 11 acres of land. It currently has 20 functional units. The units produce electrical cables, carton boxes, flour and bakery products etc.

Name of Industrial Infrastructure	Open Space (Sq. M)		
	Total Open Space	Open Space Allotted	Space available for allotment
IID, Titabor	80163	5332	74831
Industrial Estate, Cinnamora	16041.50	16041.50	0
Commercial Estate, Nagajanka	2630.90	393.00	2237.90
Commercial Estate, Titabor	2608.50	0	2608.50
Commercial Estate, Phulani, Majuli	2622.00	0	2622.00

#### 4.13.5 Key Agriculture Based Industries

The largest concentration of industry is in and around Jorhat Town and located in the North West Block. There are about 205 numbers of agro-based Medium, Small and Micro units currently operational in the district. Below is the list of major agriculture based industries in the District:

SL	Name of Unit	Main Product
1	M/S Shiv Shakti Rice Mill	Rice and Para Boil Rice
2	M/S BR Rice Mill	Rice

3	MADHOPUR RICE MILL	Rice
4	M/S Mahalaxmi Agro Industries	Rice and Para Boil Rice
5	Titabor Agro Product	Rice
6	Shiv Roller Flour Mill Pvt. Ltd	Wheat
7	Amrit Food Product	Wheat
8	Eastern Roller flour Mills Pvt.Ltd	Wheat
9	M/S Sigma Spice Industry Pvt. Ltd.	Spice
10	M/S Lovely enterprise	Spice
11	Frontal Agritech Private Limited	Hot Chilli
12	Mahabir Food Industry	Fruits
13	Popular Industrial Food Product	Fruits
14	Gattani biscuit Industry	Bakery unit
15	Assam Valley Food Products	Bakery unit
16	Manisha Bakery	Bakery unit
17	Food Villa	Bakery unit
18	Bazzarie Funde Pvt. Ltd	Pickels
19	Maghalee food products	Juice, squash, pickles
20	M/S Goswami Milk Food product	Dairy

Out of total unit 58% units are rice mills and rice based products units.

#### Export Infra Availability

At Present Export Infra facilities are not available in Jorhat. In Jorhat town, there is a separate railway goods yard and which is used by most of traders & also by Food Corporation of India Jorhat District is well connected by roads, train and inland water.

Industrial Area:	Cinamora, Guwahati
Road Connectivity	<b>National Highway:</b> NH-37 <b>State Highway:</b> Jorhat –Marian –Nagaland Road/ Jorhat –Titabar-Borholla-Nagaland Road
Services & facilities	<b>Bonded Warehousing Facility:</b> Yes <b>Bonded Trucking Facility:</b> No <b>Air Cargo Services:</b> No <b>Reefer Train Services:</b> No
Nearest Railway Stations for Passengers	Jorhat, Titabar Railway Station and Mariani Titabar Railway Junction.
Nearest Airport	Roriwah Airport

Nimati Port (Managed by IWT, Assam): Inland water transport terminal, Nimati Ghat to be develop under Advantage Assam programme and which could be used for better trading in near future.

#### 4.13.6 Industrial Parks and Contribution to Agro Enterprises

In Jorhat district, the contributions of Industrial parks are very less. Only three Agro based industry are within Cinamora Industrial area. Most of the entrepreneurs are not aware about the profits of Industrial parks.

#### 4.13.7 Support Institutions

##### **Assam Agriculture University, Jorhat:**

The Institute aims to produce globally competitive human resources in farm sector and carry out research in both conventional and frontier areas for optimization of production. The university wishes to help the producers and traders involved in the sector by emphasizing on sustainability, equity and overall food security at household level. The university by its extensive research has developed 113 new varieties of crops, out of which 55 belong to rice, 7 to green gram, 7 to black gram, 2 of lentil, 8 of toria, 2 of sesame, 8 of sugarcane, 2 of jute, 2 of forage and 20 of vegetable crops. The Training & Placement Cell is an essential component of Assam Agricultural University, Jorhat catering to the needs of its students for their career development. The cell organizes training programmes on Personality Development, Communication Skills, Leadership and such other areas. The cell facilitates Campus interviews and placement in various government and non-government organizations. Large number of the graduate and post graduate students of this university have been placed in different organizations involved in Research and Development, Business, banking areas in Agriculture, Veterinary Science, Fishery Science and Home science and all of them have undergraduate and postgraduate programmes. This institution is a good source of training and technology.

The department can be useful in providing the training to the enterprises on their developed varieties of crops like Rice, Vegetable crops, Lentil, Green gram and Black gram. The department may also be engaged in providing trainings to the enterprises on courses for Agriculture, Veterinary science and Fishery science.

##### **Krishi Vigyan Kendra, Jorhat:**

The KVK is only 35 km away from its host institute, Assam Agricultural University, Jorhat. The Krishi Vigyan Kendra, Jorhat under the jurisdiction of Directorate of Extension Education, Assam Agricultural University, Jorhat was started in the year 2007 from a rented house at Jogduar. Several demonstration units like goatery, piggery, dairy, poultry, fishery, vermicompost and mushroom have been established in the kendra under Rashtriya Krishi Vikas Yojana (RKVY).

KVK Jorhat is currently providing services like Cluster demonstration on pulse crop, composite fish farming, distribution of poultry feed under Tribal Sub Project (TSP) project, exhibition on Kisan Mela, production program on Paddy, use of bio-fertilizers in Paddy, organic farming, popularization of mushroom cultivation, promotion on fruits and vegetable cultivation, promotion of poultry and piggery under Tribal Sub Plan, production of scientific Bhut Jolokia, trainings for women empowerment. The department can be engaged in providing the aforementioned services and trainings to the enterprises.

##### **Lead Bank, Jorhat, United Bank of India:**

It is the lead bank in the district. The bank offers a number of services and products which are tailored to support agro based industries. It offers Kisan Credit Cards (KCC) and many other programmes, which allow farmers to meet their short term credit requirements at affordable interest rates. Additionally, it offers loans to set up Cold Storage as well as Agro and Food Processing units. It offers Kisan Credit Cards (KCC) and many other programmes, which allow farmers to meet their short term credit requirements at affordable interest rates. Additionally, it offers loans to set up Cold Storage as well as Agro and Food Processing units.

##### **Regional Agricultural Research Station, Titabor, Jorhat**

Regional Agricultural Research Station, Titabar, was established in 1969 by Assam Agricultural University. It is one of the funded centers under AICRIP and was nominated for testing and coordinating rice trials in the country for different ecosystems. The station has developed 45 rice varieties which were recommended for cultivation during various seasons and ecosystem in the state. Research on rice is being undertaken in six disciplines viz., Plant Breeding, Agronomy, Soil Science, Plant Pathology, Entomology and Plant Physiology. At present, a team of eight scientists is thriving hard to evolve high yielding varieties for diverse rice growing situations, cultural practices, plant protection measures and technology for maintaining soil physical health for sustainable rice production. Titabar has so far developed more than 54 rice varieties through its breeding program.

The RAR department may be useful for the cultivars in utilizing the breeding programs within and outside the state, conducting trainings for the farmers on hybridization and providing trainings on Entrepreneurship Development programs.

#### **Indian Institute of Plantation Management, Jorhat, Assam.**

The institute in the district acts as a think tank and an intellectual resource base for the plantation and associated agri-business sector. It is an exclusive sectoral school of management based on a new model of intensive institute-industry interaction. It has been undertaking research projects in frontier areas of concern at the industry, national and global levels, sponsored by corporate organizations, national and international bodies. IIPM Centre, Jorhat offers a full array of the following customized programs that address the strategic needs of plantation and associated agri-business sector:

- Executive Development Programmes (EDP) for the industry
- Small Growers' (SGs) Enterprise Management
- Family Business Management Programmes
- PG-Certificate (PGC) Programme (15 weeks) on Plantation and Agri Business Management
- R&D Management
- Commodity Extension Management
- Grassroots Workforce Management

#### **North East Agriculture Technology Entrepreneurs Hub (NEATEHUB)**

The North East Agri Technology Entrepreneurs Hub (NEATEHUB) is an Incubator for Innovation and Agripreneurship under the aegis of Assam Agricultural University, Jorhat. Assam Agriculture University has established this wings to facilitate absorption and commercialization of various agri and allied-agri technologies to promote ventures and businesses in the North East region. The NEATEHUB has been set up to create a robust and sustainable entrepreneurial ecosystem/ support infrastructure to build successful start-ups in the area of agri and allied agriculture.

This incubation centre may be engaged to provide the entrepreneurship development programs for existing enterprises, as well as for the new start-ups ventures.

#### **Council of Scientific Industrial Research – North East Institute of Science and Technology**

The institute aims to design, develop and deliver knowledge bases and technologies for gainful application based on natural resources available in North Eastern region of India. The laboratory has generated more than 100 technologies in the areas of Agro technology, Biological and Oil Field Chemicals of which about 40% were of commercial success culminating in setting up of various industries throughout the country.

#### **Industrial Training Institute (ITI), Jorhat**

The major objectives of the ITI are:

- To provide semi-skilled/skilled workers to industry by systematic training.

- To reduce unemployment among educated youths by equipping them with suitable skills for industrial employment & self-employment.

#### **United Bank of India**

The lead bank in the area is the United Bank of India. The bank offers various loans and other financial services that aid the growth and development of the farming and MSME sector in the district.

#### **North Eastern Small Scale Industries Association (NESSIA)**

North Eastern Small Scale Industries Association (NESSIA) was established under Societies Registration Act (1860) in the year 1995-96 for the common cause of entrepreneurs in North Eastern states. Its head office at Jorhat Town. As a nodal agency, it works towards promoting the cause of small entrepreneurs in the region as an advocacy, policy promotion and capacity development agency. It has been operational for over 20 years and is proactive in addressing key organisational and functional challenges of entrepreneurs in the region.

#### **Upper Assam Chamber of Commerce, Jorhat**

Upper Assam Chamber of Commerce, an association of traders, businessman, professionals and social workers of Assam. It is a socio-economic organization with an outlook to develop economic growth as well as social security of our people.

#### **FSSAI, Jorhat**

The FSSAI district office is in Jorhat District. The district designated officer, having office at Old Civil Hospital campus, Jorhat.

As majority of the Micro Industries in Jorhat does not have the FSSAI licenses and Operating a Food Business without a license is a punishable offence. FSSAI is responsible for protecting and promoting public health through the regulation and supervision of food safety. FSSAI can be helpful for providing the FSSAI licenses to the existing enterprises as it is one of the major compliance under the Ministry of Health & Family Welfare, Government of India.

#### **Chartered Accounts**

There are CA firms like Somnath Chakraborty & CO, Gar-Ali, Kalani & Associates, Mayur Complex, and individual CAs like Arup Talukdar, Tax Consultant, Chandra Bihani, CA Jorhat in the Jorhat district that perform audit and tax returns filing for the companies.

The CAs can be helpful for providing the awareness on industry related compliances like registrations of Udyog Adhar Number (UAN), MSME Databank registrations, FSSAI licenses, DICC registrations etc.

#### **Rural Self Employment Training Institutes (RSETI-Jorhat)**

RSETI is managed by Assam Gramin Vikash Bank. It provides free skill trainings to rural youths on various agriculture and allied activities like dairy, poultry, apiculture, horticulture, sericulture, mushroom cultivation, floriculture, fisheries, food processing training like pickles, bakery products etc. The institute has also facilitated the trained beneficiaries to access any scheduled bank for loan/credit to establish enterprise. This institute is also supporting in providing skill training. RSETIs are imparting comprehensive quality residential training programme in personality and skill development areas to rural youth free of cost and facilitating them in settlement in vocations.

RSETI organises the training courses related to food processing and skill development for various enterprises. The institute may be helpful in organizing such trainings for the existing Agri Processing enterprises in Jorhat district.

#### **Farm 2 Food Foundation(NGO-Jorhat)**

The NGO in the district aims to provide training and tools which will enable local communities to take control of their production and development processes in order to build a productive, change-oriented and self-reliant society. Farm 2 Food Foundation is a non-profit social enterprise that builds partnerships with communities, providing the training and tools for taking up sustainable, farm based livelihoods. By engaging in farm and food entrepreneurship, individuals and households become self-dependent, and children who have enough nutritious food to eat attend school more, and perform better. By selling the products that they create (such as vermi-compost), farm-preneurs are able to generate income, and eventually invest in education and nutrition in their communities. Further by practicing sustainable organic farming techniques, the environment around these communities benefits, enabling future generations to thrive.

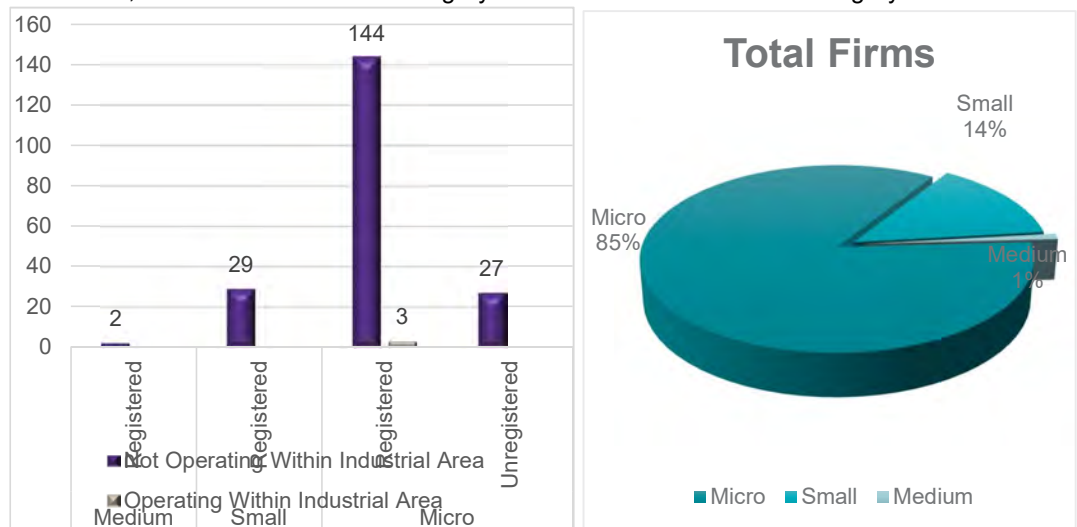
**Technical Agencies Involved**

In case of small units there are in-house support for technology experts. Most of the micro units do not engage any technical consultants. Most of the Micro units takes helps for technology support from the local machinery suppliers like Modern Machinery & Eastern Machinery. However, there are CAs for small, medium enterprises that assists in preparing their DPR and financial appraisal report for sanctioning of bank loans, and accordingly on sanction of loan the units set up the technology in their plant on their own. Apart from that, DICC personals also assists few micro units for preparing their DPRs up-to 5 lakhs.

**4.13.8 Analysis from Baseline Data**

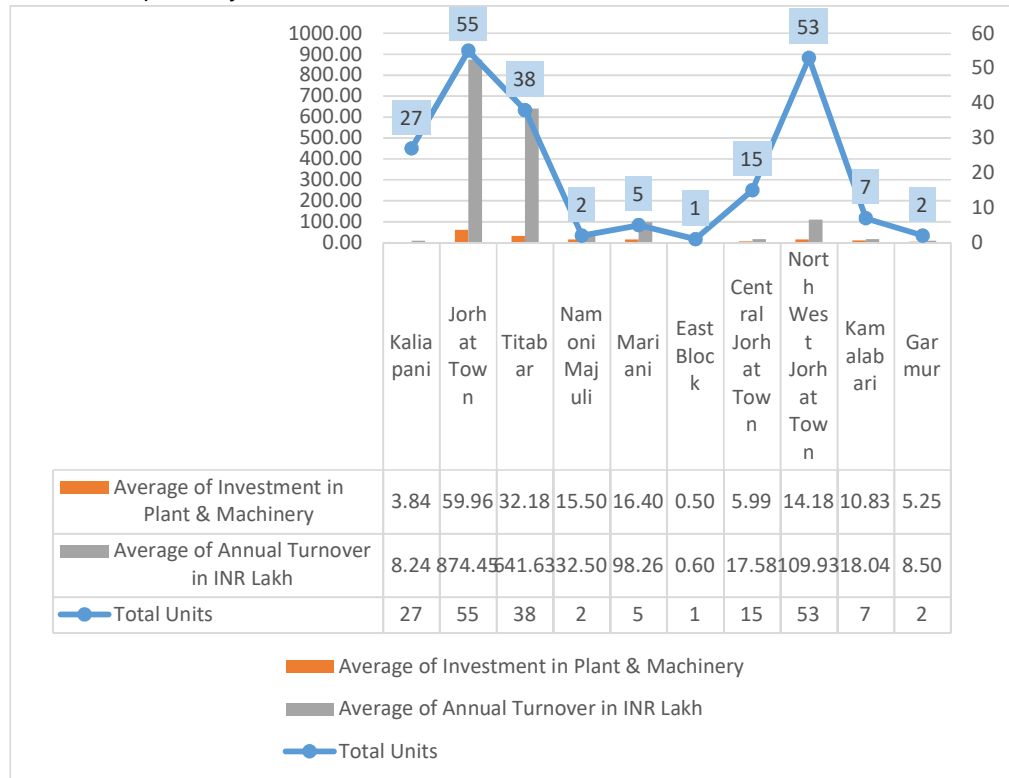
**Agro Based Enterprises:**

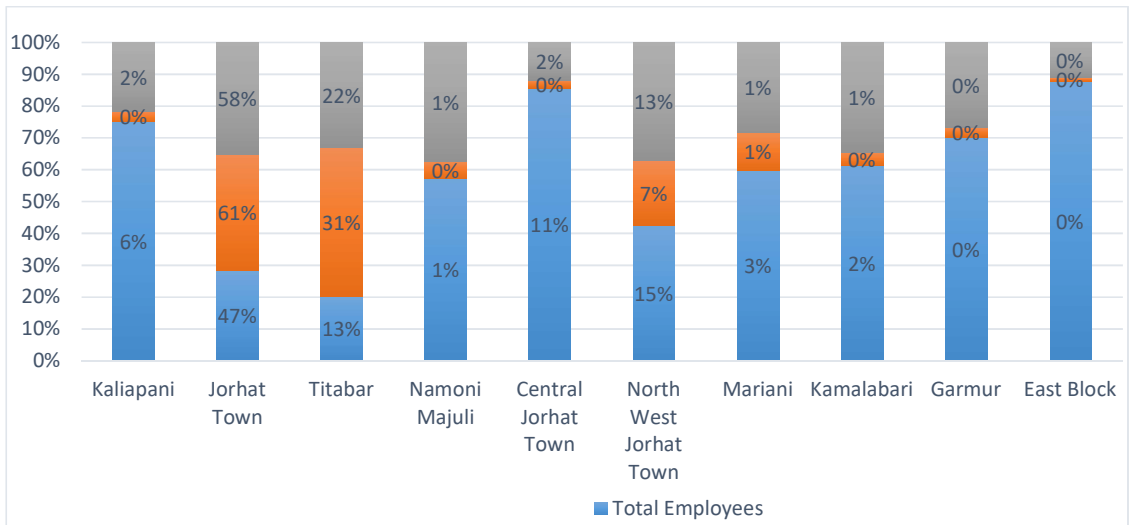
In Jorhat district, there are 205 agro based processing units as per our baseline survey out of which 85% units are registered and rest 15% are unregistered. Only three units are operating within industrial area and rest are operating outside industrial area. Almost 85% are micro-sized units, 14% units are in small category and rest 1% are in medium category



**Enterprises, Employment, Investment & Turnover Blockwise:**

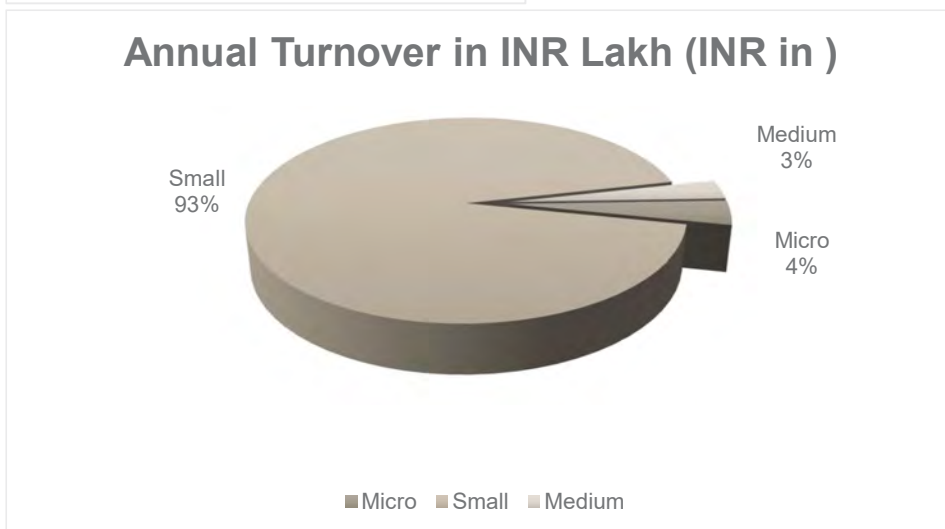
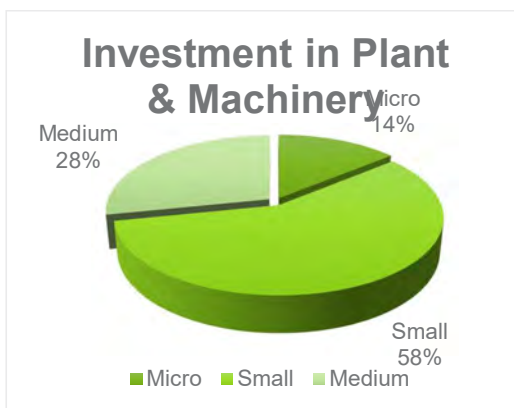
As it can be observed in the below two charts, most of the units out of total agro based units in the district are located in Jorhat Town (27%) followed by North West Jorhat Town (26%), Titabar (18%), Kaliapani (13%), Central Jorhat Town (7%). From our baseline survey it is clear that Jorhat Town, Titabar & North West Jorhat Town emerge as a prominent blocks in terms of employment, investment in plant & machinery and annual turnover. Jorhat Town contributes 47% in employment out of total employment in district, 61% in investment out of total investment in the district and 58% turnover out of total district turnover. Similarly, Titabar contributes 13%, 31% & 22% in terms of employment, investment & turnover respectively and North West Jorhat Town contributes 15%, 7% & 13% in terms of employment, investment & turnover respectively.

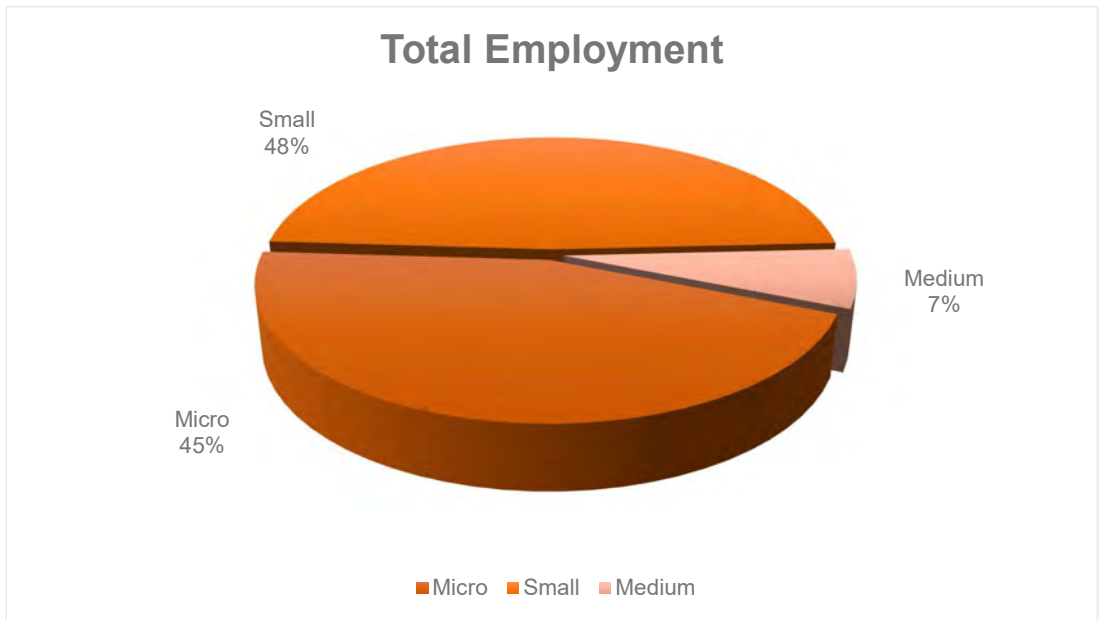




**Enterprise Details Category Wise:**

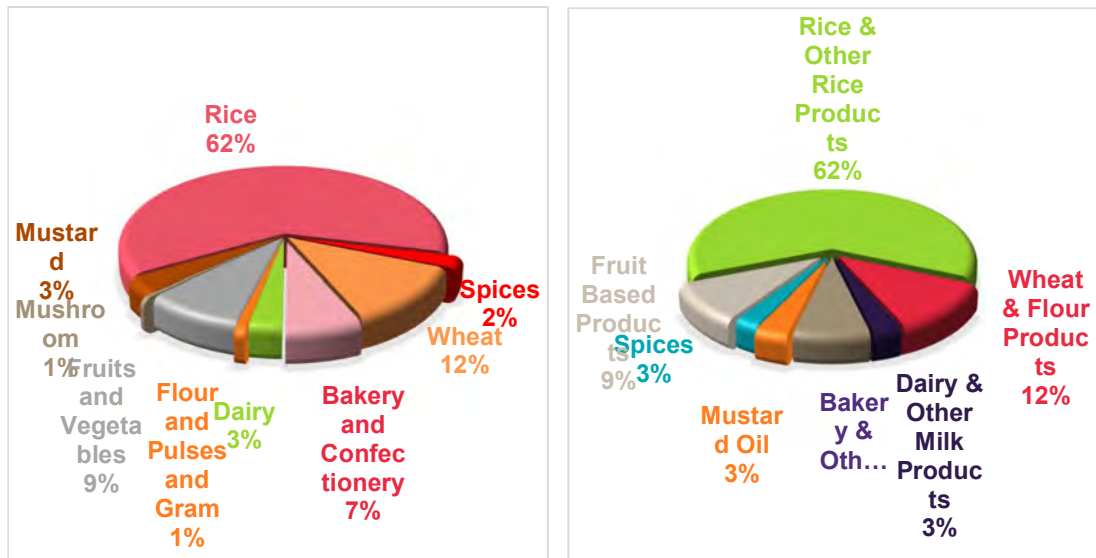
Out of total district investment in plant & machinery, micro, small & medium category unit investment is 14%, 58% & 28% respectively. Category wise turnover for micro, small & medium enterprises are 4%, 93% & 3% respectively. Similarly, category wise employment given by micro, small & medium enterprises are 45%, 48% & 7 % respectively.





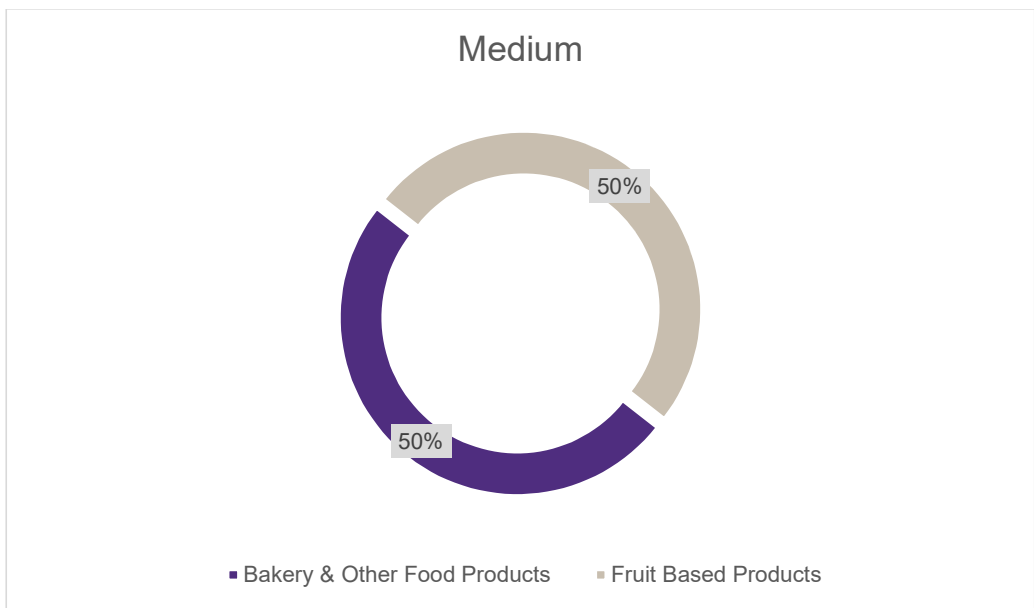
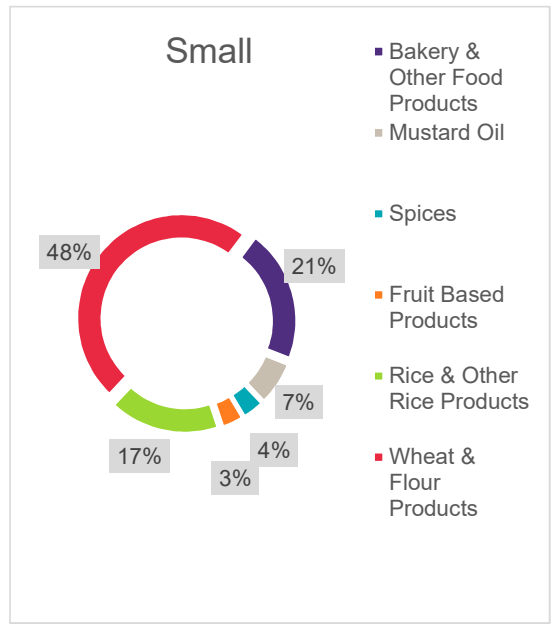
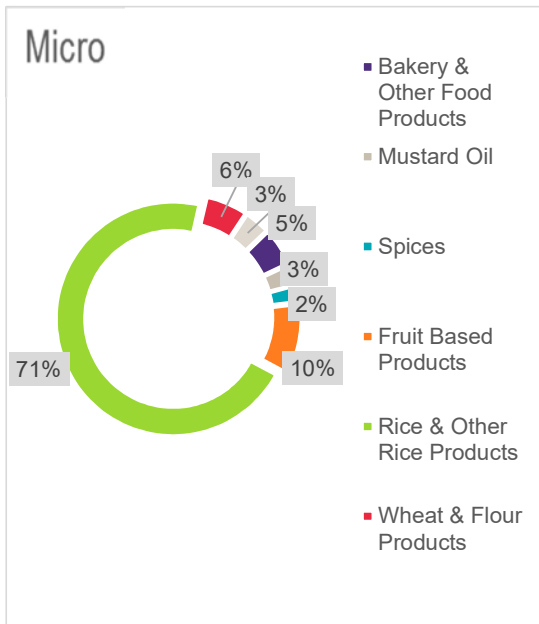
**Distribution of Value Chain:**

From our baseline survey rice emerges as prominent value chain crop in Jorhat district at 62% followed by Wheat at 12%, Fruits & Vegetables at 9%, Bakery at 7%, Mustard & Dairy at 3% each.



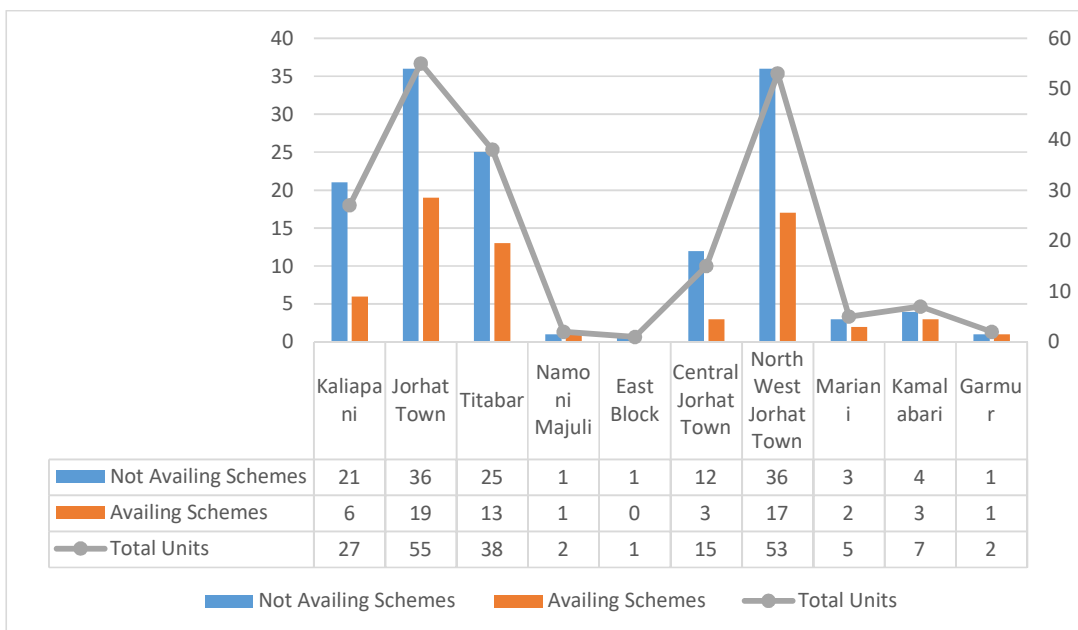
**Products Produced By Micro, Small & Medium Entities:**

It has been observed from our baseline survey that in micro category enterprises 71% rice and rice base products are produced followed by 10% production of fruits based products, 6% production of wheat based products, 5% production of Bakery. In micro category rice emerges as prominent value chain. In small category, 48% wheat based products are produced followed by bakery & rice products. In medium category, bakery & fruit based products are produced only.



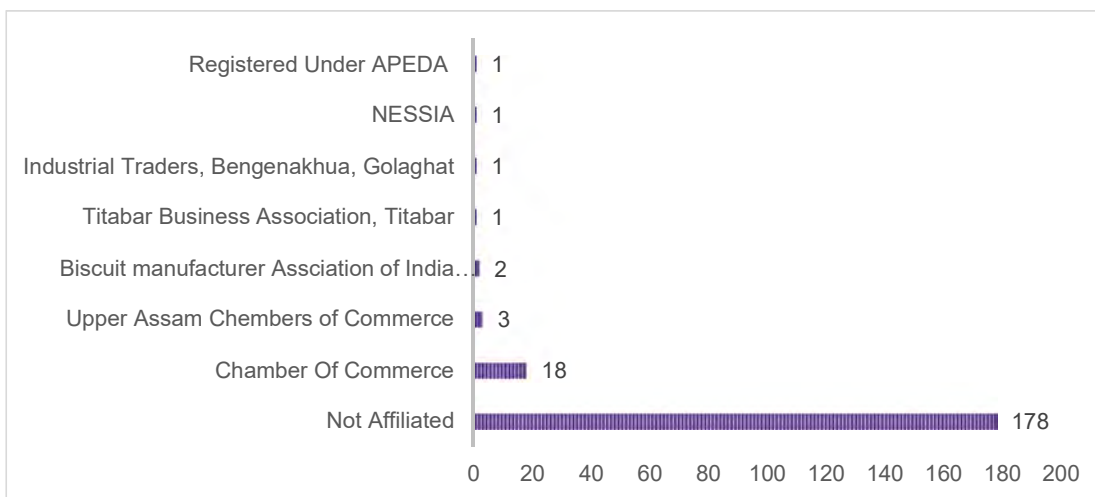
**Block wise Scheme Distribution:**

There are 205 units have been identified by our baseline survey in Jorhat district, out of 205 identified units only 32% have availed the benefit of scheme and rest 68% units have not availed any scheme. From below chart, it is evident from below chart that Jorhat Town, North West Jorhat Town & Titabar blocks have availed maximum scheme.



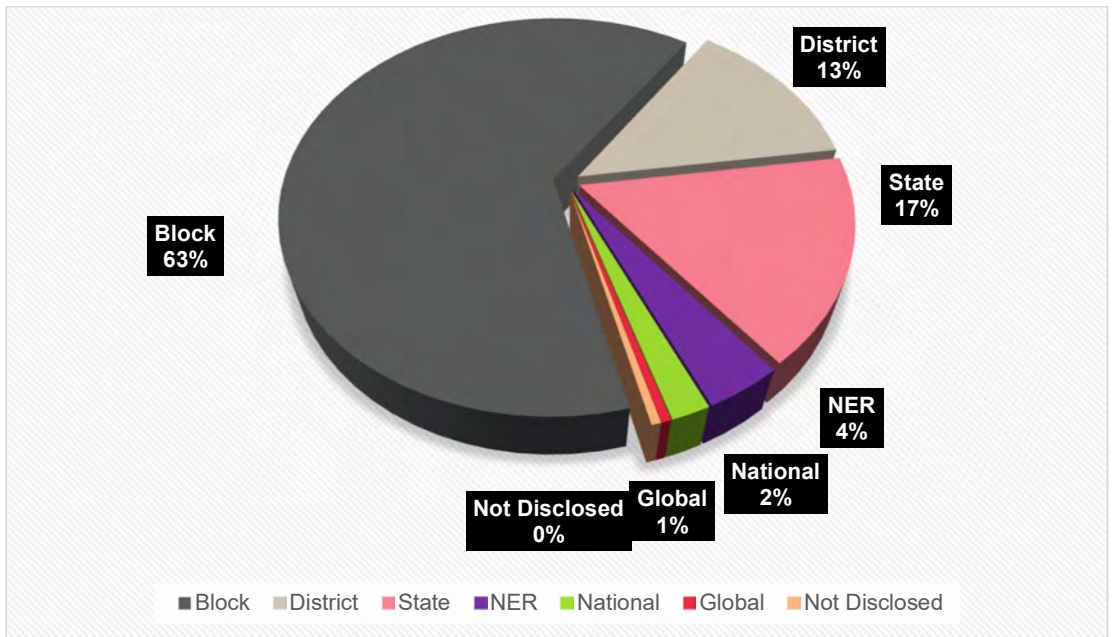
**Affiliation with Any Association:**

Out of 205 identified units 87% units are not affiliated with any association, rest 13% units are affiliated with any association. 9% units are registered under Chamber of Commerce, 1.5% units are registered under Upper Assam Chamber of Commerce, 1% units register under Biscuit Manufacturer Association of India and rest units are registered under APEDA, NESSIA, Titabar Business Association & Industrial Traders, Bengenakhua Association.



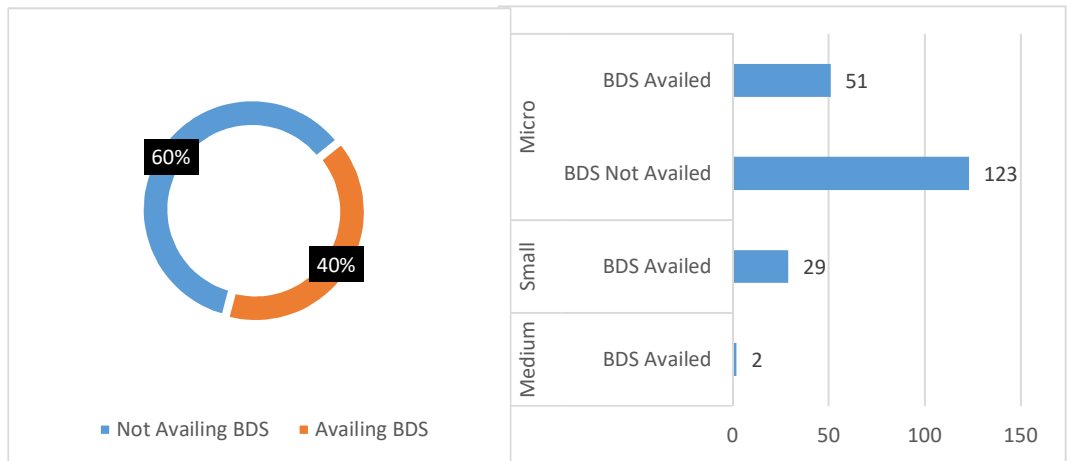
**Target Market Overview:**

It is evident from below given chart that 76% of produce are sold within the district, out of which 63% produce are sold within the block. 17% produce are sold within state of Assam, 4% produce are sold in North Eastern State, 2% produce are sold in other states and 1% produce are exported to other countries.

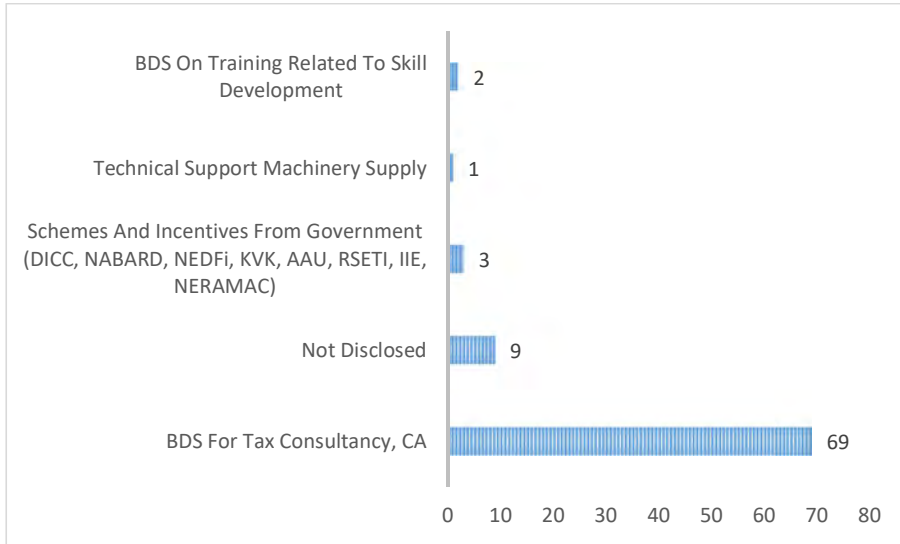


**BDS Availed:**

Out of total units of district only 40% units are availing Business Development Services (BDS) and rest 60% units are not availing BDS. In micro 29% units have availed BDS like tax consultant, Chartered Accountant (CA) and rest 71% units have not availed any BDS. In small & medium category, all the units have availed BDS.



It has been observed from our baseline survey that 82% units have availed the services of CA & Tax consultant and rest units are availing BDS like skill development training, technical support on machinery & services of NABARD, KVK, DIC, NEDFi, IIE & NERAMAC.



**BDS & CFC Required:**

In micro category, 99% units require the services of Common Facility Centre (CFC), only 1% units are not interested in CFC. In small category, 71% units have shown interest in availing the services of CFC, whereas 29% are not interested. In large category, none of the unit is interested in availing the service of CFC because they already have all types of facilities. It is evident from below chart that the micro & small categories of units are looking interested for the services of CFC to grow their business.

## 4.14 Sonitpur

### 4.14.1 Geographic Details

The Sonitpur District is located on the north bank of the river Brahmaputra and lies between 26° 30' N -27° 1' N latitude and between 92° 16' E – 93° 43'E E longitude. Total geographical area of the District is 5324 sq. km and the total population is 19,24,110 (2011 census). The key



agricultural crops grown in the district are **paddy**, tea and mustard and the key horticultural crops grown are **litchi**, coconuts, **banana**, **pineapples** and **oranges**. There are some pulses that are produced as well, of which Matikalai, arahar, masur, matar, are some of the significant ones. The district has a number of industries with a total of **495+ registered and unregistered units** of agro based industries. The major industries consist of tea processing, cane products and food products etc. The major players include Dabur India and Patanjali Ayurveda. Moreover, based on the availability of raw materials it can be seen that there is room for further development of food processing enterprises.

Agro-climatically the Sonitpur District falls in the Sub-Tropical climatic region and enjoys monsoon type of climate. It is bounded by the state of Arunachal Pradesh towards north, Morigaon, Nagaon, Jorhat and Golaghat Districts of Assam towards south, Lakhimpur District in the east and Darrang District in the west. The District has three railway stations, namely Biswanath Chariali, Rangapara, and Dekargaon, which connect it to major cities like Delhi and Kolkata. Moreover, it is well connected by roadways as there are two national highways viz. NH-52 and NH-31 that pass through it. There is an airport in Tezpur which has flights from several cities, however the closest international airport is located 181 km away in Guwahati.

Sub-Divisions	Town	Blocks	Panchayats	Villages
4	4	17	158	1615

### 4.14.2 Demographic Details

The population of Sonitpur district is 1,924,110 as per 2011 Census. It is the third most populous district of Assam after Nagaon and Dhubri. The demography of Sonitpur district is not entirely homogenous as several linguistic, religious and ethnic communities and groups live in Sonitpur District.

The undivided Sonitpur districts comprises of Sonitpur and Biswanath Chariali. Following table contains the information related to the District:

Description	2011
Population	19.24 lakhs

Male	983,904
Female	940,206
Population Growth	15.55%
Area Sq. Km	5,204
Density/km2	370
Proportion to Assam Population	6.17%
Sex Ratio (Per 1000)	956
Child Sex Ratio (0-6 Age)	966
Average Literacy	67.34
Male Literacy	73.65
Female Literacy	60.73
Area Sq. Km	5,204
Density/km2	370

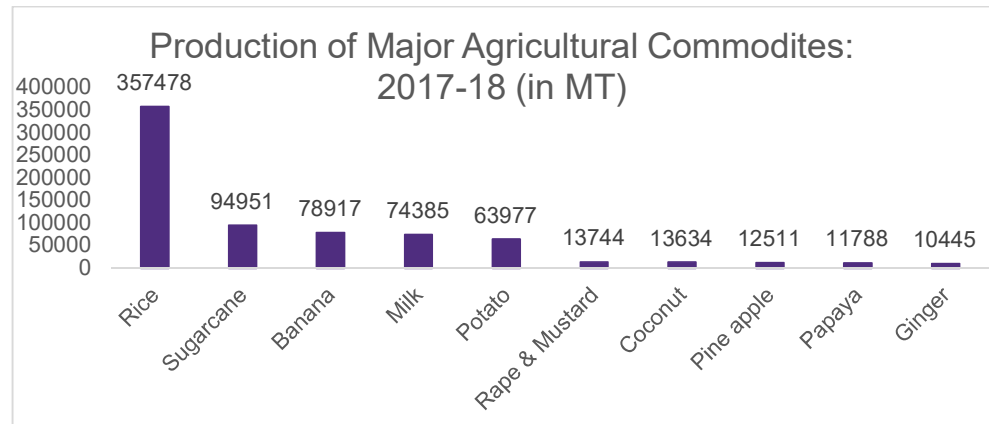
Source: Census 2011

#### 4.14.3 Economic Profile of the District:

The economy of the District is Agriculture based-the traditional one. The economy of Sonitpur is underdeveloped and has its own pace, trend, tradition and development process. Sonitpur is the Trade Center for Bomdilla, Tawang, Sepa and Itanagar of Arunachal Pradesh. Tezpur, Dhekiajuli, Rangapara, Biswanath Chariali and Gohpur are important trading centers in the District. Sonitpur is basically an agrarian economy. Approximately 80 percent of the population depends on agriculture allied (Primary Sector) activities for their livelihood. Rain fed cultivation of single paddy crop still continues in most areas of the District. However, with the help of irrigation facilities like shallow tube wells, high yielding variety of seeds and tractors have made multiple cropping possible. Both Rabi and Kharif cropping is done in the District. Sonitpur is famous for its tea gardens, rice, milk, banana & litchi production. The Major food processing industry Dabur India Ltd and Patanjali Ayurveda Ltd established their Plants in the District. Moreover, Sonitpur is like a defense hub with the Army and Air Force cantonments, Tezpur Central University, Medical College, Mental Hospital and lots of like institutions, three ways of transportation (Road, Air, Water) makes the District in an important renown market place of Assam.

#### 4.14.4 Agriculture Production Scenario/Trend

The Sonitpur District is an agrarian economy with over 80% of the population depending on agriculture and related activities for their livelihood. Based on 2011 Census data, over 249,000 and over 114,000 are cultivators and agricultural laborers in the District. The District ranked 3rd, 4th and 5th in production of meat, milk and egg respectively out of all the Districts in the state. The district observed an average annual growth rate of 14.92% in fish production from 2014-15 to 2017-18. The livestock sector plays an essential role and generates a significant number of jobs. Tribal and other weaker sections of the society are traditionally involved in pig rearing and even the poultry production is mainly Desi bird oriented and in the hands of the rural population. Rice is the staple and three types of rice are grown; Ahu (Autumn rice), Sali (Winter) and Boro (Summer). Additionally, Tezpur Chilly (Locally known as bhoot jolokia) and Tezpur Litchi are famous agro-products, which are promoted by Agricultural Department of Sonitpur. Rain fed cultivation of single paddy crop is still common however with the advent of modern techniques as well as technology people have begun moving towards multiple cropping. The chart below indicates the production of major agricultural commodities produced in the district in 2017-18.

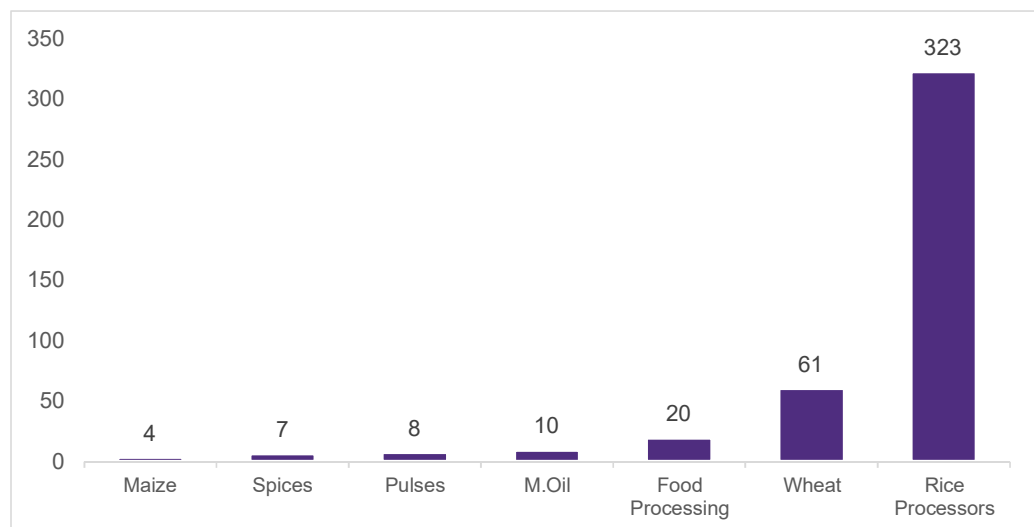


#### 4.14.5 Industrial Scenario - Sector Wise:

Sonitpur has a number of established small scale industries, which provide significant employment opportunities and contribute immensely to the district economy. Some of the major ones include rice, flour as well as oil mills. Some of the prominent ones are listed below.

SL	Name of the Unit	Main Product
1	Dabur India Ltd	Food and Ayurveda
2	Patanajali Ayurveda Ltd	Food and Ayurveda
3	Nezone Group	Biscuits & Snacks
4	Om Kalyani Group	Rice and rice bran
5	Spring Valley Group	Bakery and Food Processing
6	J K Food Product	Soya and Cattle and fish Feed
7	Madhuban Foods	Bread & Biscuits
8	M D Food products	Dalmoot and Bhujia
9	My Food	Biscuits & Snacks

The various food processing units across different sector are shown in the chart below.



## Infrastructure Details

SI No	Name of Industrial land Area	Land Acquired Hectare	No of Alloted Plots	No of Units in Production
1	Industrial Estate, Dhekiajuli	38338 sq mtr	5 Nos.	7 Nos.
2	Industrial Area Dhekiajuli	604800 sq ft	-	-
3	Industrial Area Kundrabari, Dekargaon	46749 Sq Mtr	6 Nos.	4 Nos.
4	Industrial Area Gotlong	9090 sq mtr	4 Nos	4 Nos
5	Industrial Area Sadharu, B. Chariali	8057 sq mtr	1 No.	1 No.
6	I.A. Dolabari (under AIIDC Control)	61470 sq mtr	15 Nos.	12 Nos.
7	Commercial Estate, Sootea	428.53 sq mtr	4 Nos. (Shed)	3 Nos.
8	Commercial Estate, B. Chariali	111.50 sq mtr	5 Nos. (shed)	5 Nos.
9	Growth Centre Balipara	400 Acre	-	-

Source: General Manager, DICC Sonitpur

### Export Infra Availability

Tezpur is situated in the river bank of Brahmaputra and mid of Assam with well transportation connectivity of road, air & water. There is a good prospect of export hub.

#### 4.14.6 Industrial Parks and Contribution to Agro Enterprises.

Sonitpur has a number of industrial areas as well as an Industrial Growth Centre which have been established with the goal to foster an environment that supports growth and development. Two food parks, which cater specifically to agriculture related industries have also been established. They are the M/s Nezone Food Industries and Industrial Growth Center Balipara. Tezpur.

The Industrial Growth Centre Balipara, is highly sophisticated and environment friendly Industrial Growth Centre develop to provide infrastructural facilities of high standard to promote Industries. The basic objectives of the Growth Centre are:

- To build and provide industrial infrastructural facilities in an integrated manner.
- To encourage growth of industrial units in the State.
- To sustain the involvement and interest of the State Government in building and maintaining such facilities.

#### 4.14.7 Support Institutions

##### Department of Agriculture, Tezpur, Sonitpur

Background: Sonitpur Agriculture district comprises one subdivision in Tezpur. There are seventeen Agricultural Development officers circle in the district. The main objective of the Department is to uplift the standard of living of the farmers by raising their farm income through adaption of Advance Agricultural technologies

Present Activities: Agriculture Department is looking after the Agricultural vision of the government, maintaining agricultural statistics, crops calendar, financial service, Kisan call center, Regulated market authority, Seed banks etc.

Role on SME: This institution is a good source of training and technology. They have food processing lab cum training center where the entrepreneurs could have training.

Scope for collaboration (respect to cluster product): Agriculture department is providing various support such as organizing training, exposure visit, Sales cum display fair. IA can use these platforms to showcase and sales their product.

#### **Krishi Vigyan Kendra, Napam Tezpur, Sonitpur**

Background: A Krishi Vigyan Kendra (KVK) is an agricultural extension center in India. The name means "farm science center". Usually associated with a local agricultural university, these centers serve as the ultimate link between the Indian Council of Agricultural Research and farmers, and aim to apply agricultural research in a practical, localized setting. All KVKs fall under the jurisdiction of one of the 11 Agricultural Technology Application Research Institutes (ATARIs) throughout India.

Present Activities: The KVK has three main functions, which are conducting on farm trials, organizing front line demonstrations and executing training programs for farmers as well as extension personnel. It has been instrumental in familiarizing the locals with technological advances happening around the world and organizes an average of 50 training programs for farmers and rural youth every year. Additionally, it offers many facilities such as a soil testing laboratory and offers assistance in various areas such as vermicomposting and goat, poultry as well as pig rearing.

#### **North Eastern Regional Institute of Water and Land Management (NERIWALM)**

##### **Dolabari, Tezpur, Assam.**

Background: The North Eastern Regional Institute of Water and Land Management was established on 23rd December 1989 as a registered society under the aegis of North Eastern Council, Ministry of Home Affairs (now under Department of Development of North Eastern Region), Government of India. Presently NERIWALM is under Ministry of Water Resources, River Development and Ganga Rejuvenation, Govt. of India

Present Activities: It works towards generating local specific and problem oriented technologies through its different disciplinary divisions and caters the requirement of all the states of North Eastern Region through different awareness and training program.

##### **Tezpur Central University, Tezpur, Sonitpur, Assam**

Background: The university has a Department of Food Processing Technology which focusses on areas like engineering, analysis and packaging of foods and technologies for processing food. It aims to generate manpower that is trained in all spheres of food processing and is equipped to succeed in entrepreneurial enterprises.

Present Activities: Providing different courses related to various aspect of Food Processing. They have a lab facility where practical experiences can be done.

##### **Biswanath College of Agriculture (BNCA) Biswanath Chariali, Sonitpur**

The Biswanath College of Agriculture (BNCA) is an affiliate of the Assam Agricultural University, Jorhat, Assam. It is an institution of higher education in Agricultural sciences and participates in technical advice and support for organizing various programmes related to agriculture.

##### **Industrial Training Institute (ITI), Bhairabpar, Tezpur, Assam**

Background: To provide semi-skilled/skilled workers to industry by systematic training.

To reduce unemployment among educated youths by equipping them with suitable skills for industrial employment & self-employment.

Present Activities: ITI is conducting training courses on various trade such as Electrician, welding, Machine and Automobile repairing. In fact, some of the ITIs are also conducting vocational courses.

##### **Lead Bank, Sonitpur, UCO Bank:**

Background: It is the lead bank in the district. The bank offers a number of services and products which are tailored to support agro based industries. It offers Kisan Credit Cards (KCC) and many other programmes, which allow farmers to meet their short term credit requirements at affordable interest rates. Additionally, it offers loans to set up Cold Storage as well as Agro and Food Processing units.

Present Activities: It offers Kisan Credit Cards (KCC) and many other programmes, which allow farmers to meet their short term credit requirements at affordable interest rates. Additionally, it offers loans to set up Cold Storage as well as Agro and Food Processing units.

##### **Assam Gramin Vikash Bank**

One of the leading bank who provides major services in Agriculture and Village areas.

##### **FSSAI**

Joint Director Health office, Tezpur, Assam. Contact Person: Mr. Deepjyoti Borah, Phone No: 7576860046

**Supplier Agro based (Machinery and others)**

North Eastern Region Farm Machinery Training & Testing Institute, Biswanath Chariali, Sonitpur, Assam. Contact Person: Mr. S G Pawar, Phone No: 7891781022.

**CAs & CSs & BDS providers of Sonitpur.**

- Surendra Dugar, AC Plaza, Main road, Tezpur – 9435084209.
- Ram Avatar Gorudia, Ex police line Tezpur – 9435081184.
- Ramesh Gorudia, Biswanath Chariali-9435081564
- Raj Kumar Nahata, B B Complex, N B Road, Tezpur 9435081355.
- Rachita Sharaf, M C Road, Tezpur, 8013027534.
- Surajit Chakrabarty, Tezpur 8011631406.
- Ankit Sethia, Majgaon, Tezpur 8822222266
- Sekhar Agarwal, Jahajghat, Tezpur 8638281007.
- Raj Kumar Rawniar, Biswanath Chariali 9864893577
- Mahendra Sewda, C. K. Das road, Tezpur 8638003543
- Riju Pathak NC Road, Tezpur 6000269843
- Pintu Sen 9435017528
- Ashok Joshi 9864027603

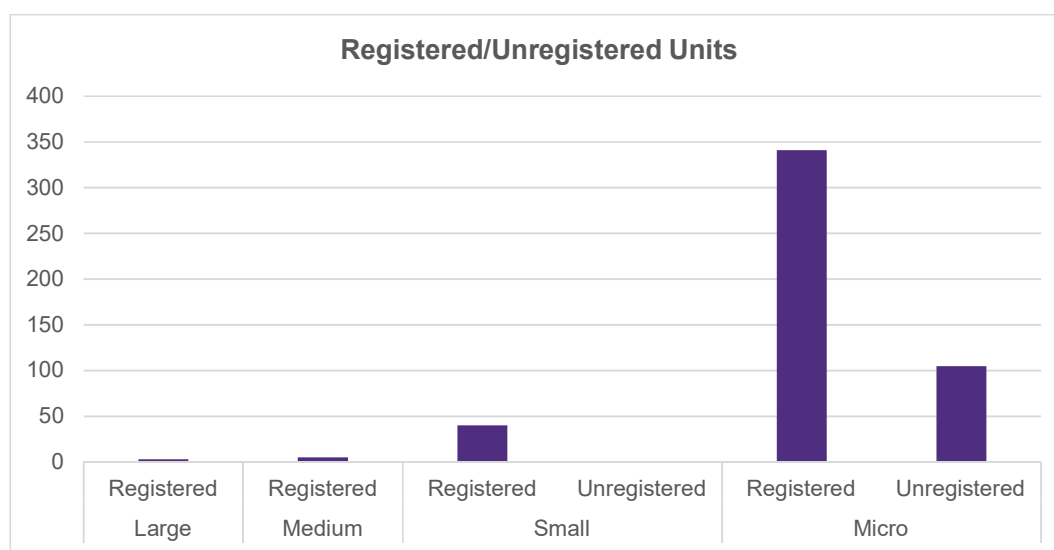
The CAs & CSs are the institutions who provides business development services in the district.

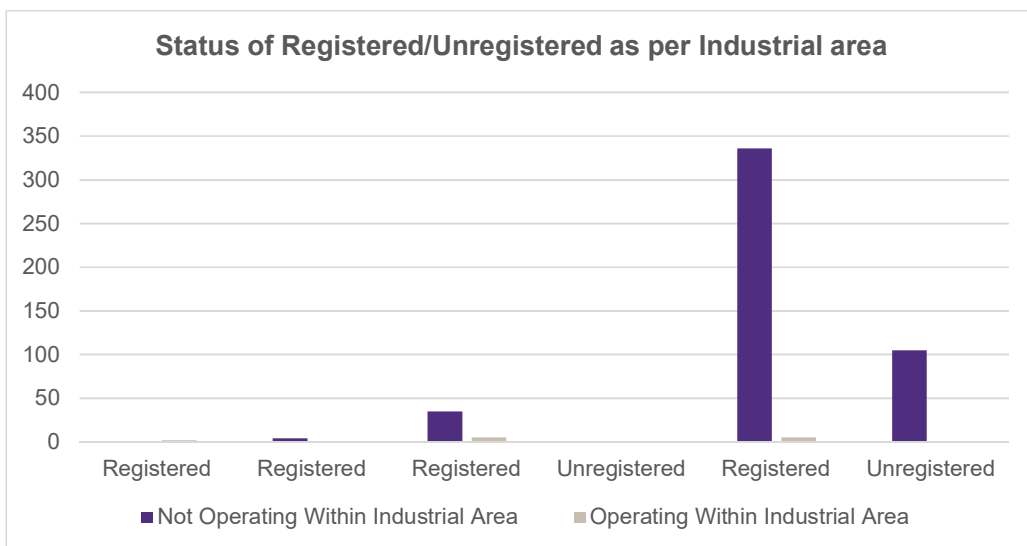
These support institutions and BDS providers are providing services to the client on one to basis. As IA are common platform for enterprises, where they can identify the required services such as technology upgradation, training, financial reporting, DPR preparation can be done through these services providers. Whenever support institution is able or capacity to provide required services IA should get first priority, so that it can be sustainable and easily accessible.

**4.14.8 Analysis from Baseline Data**

As per baseline Survey, Total 495 (Approx.) units are available in undivided Sonitpur District. Out of that 390 units are registered and 106 units are unregistered. In terms of the size of the industries 2 large, 14 mediums, 35 small and 445 micro units are available in the District. The District is very rich in rice processing value chain. It has a Total 334 Approx. rice processing units.

Through its baseline survey, Grant Thornton was able to identify a total of 495 enterprises in the Sonitpur district. Out of that, 389 i.e. 79% are registered while the remaining 106, i.e. 21% of the units are unregistered.



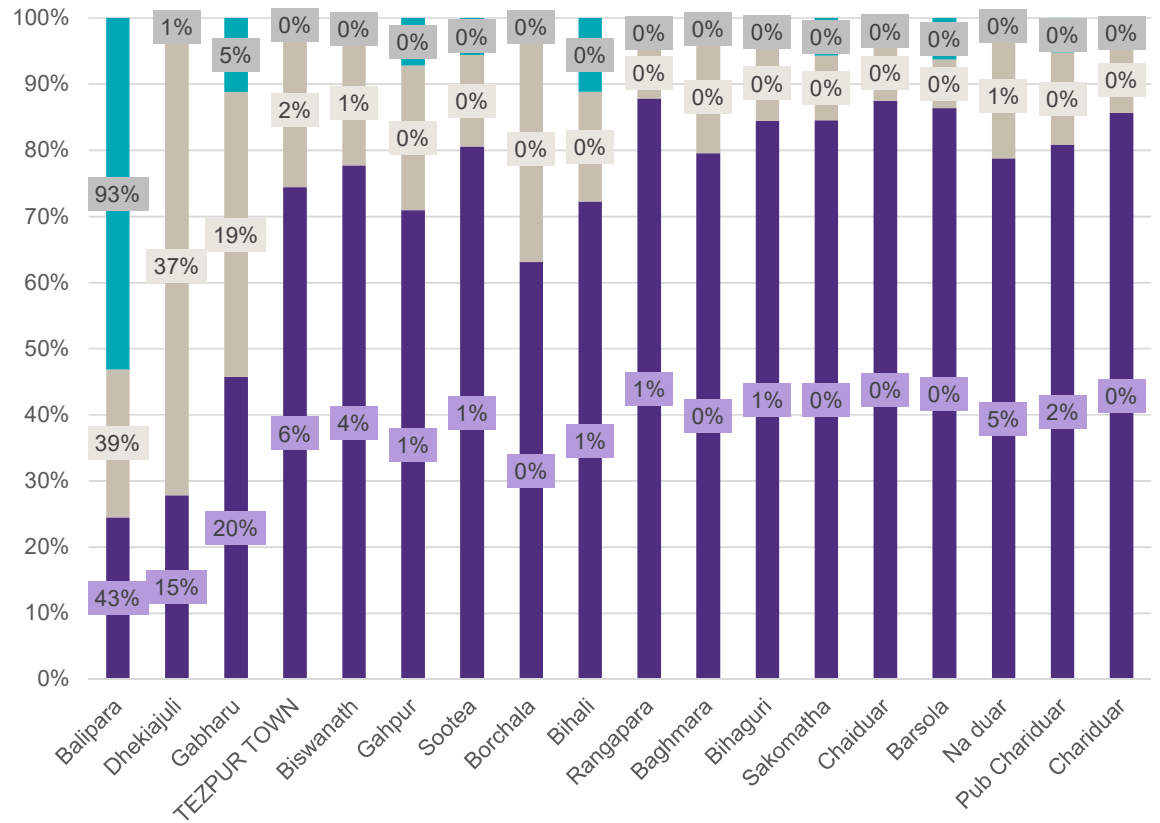


From the baseline survey it was found that the enterprises in Sonitpur district belonged to the four categories, namely large, medium, small and micro categories.

Out of them, all the enterprises belonging to the large and medium categories were registered. Among the small category, only one was unregistered while the rest 40 units were registered under the DICC. Further, it was found that 341 of the units were registered and 105 units unregistered under the micro category.

In terms of the location of the enterprises, GT found that two out of three large units, and only one out of five medium units were operating within the industrial area of Sonitpur district. Maximum of the registered and unregistered units in both small and micro categories were found to be functioning outside the industrial area.

### Block Wise Contribution of Dist. Sonitpur



\*Five entities including Dabur & Patanjali have not disclosed their annual turnover.

- Total Employees
- Contribution in Annual Turnover in INR Lakh
- Contribution of Investment in Plant & Machinery

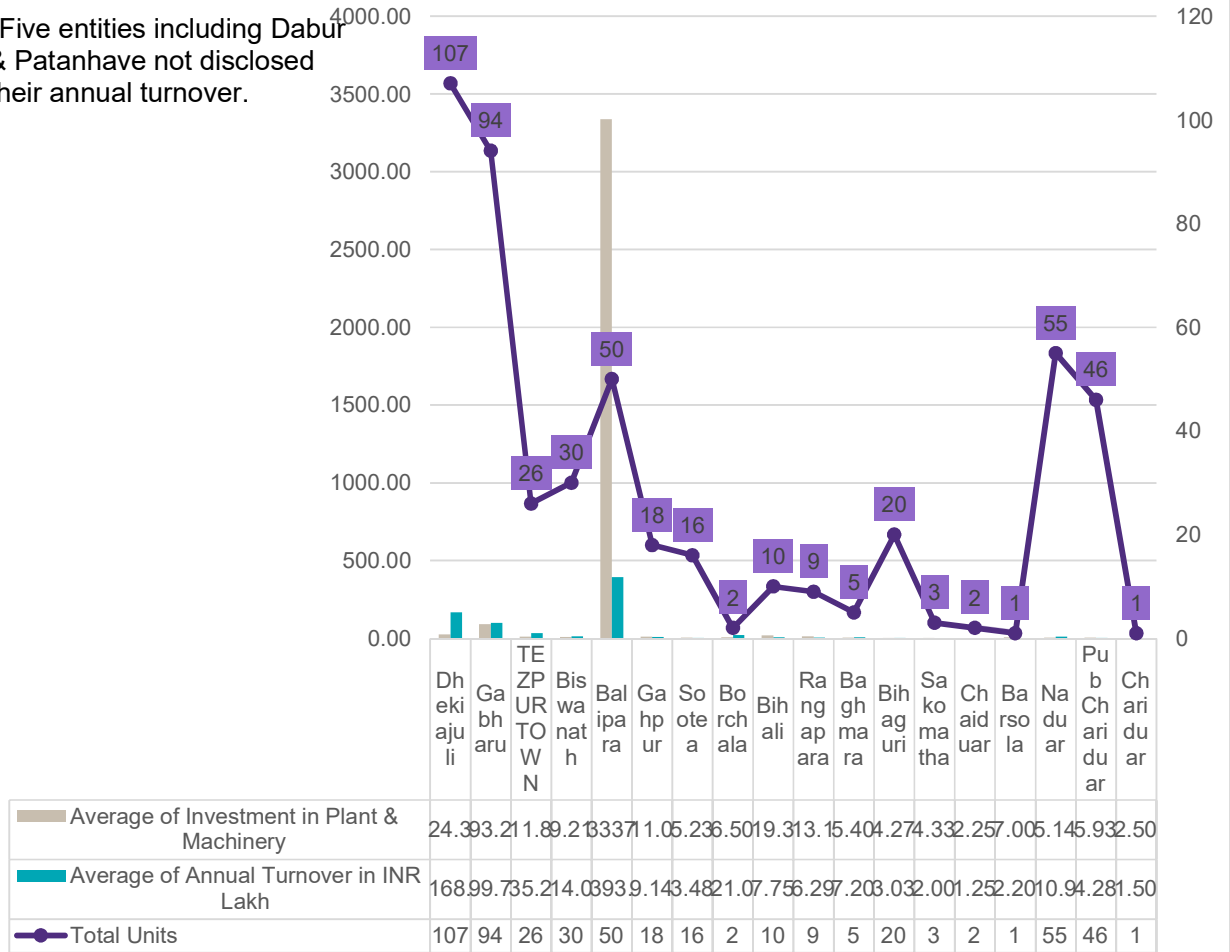
The survey found that Balipara block of Sonitpur district contributes the highest percentage in terms of the annual turnover and investment in plant and machinery of the region. Moreover, the Balipara block tops in terms of the percentage of total number of people employed in the district. Balipara block is followed by Dhekiajuli and Gabharu blocks in terms of their contribution in annual turnover of the district.

From the baseline survey, it was found that Dhekiajuli block has 107 functioning units, the maximum in the district, followed by Gabharu and Naduar blocks with 94 and 55 units each.

The average of investment in plants and machinery ranked highest in the Balipara block, followed by

### Distribution of Units in Dist Sonitpur with Annual Investment & Annual Turnover

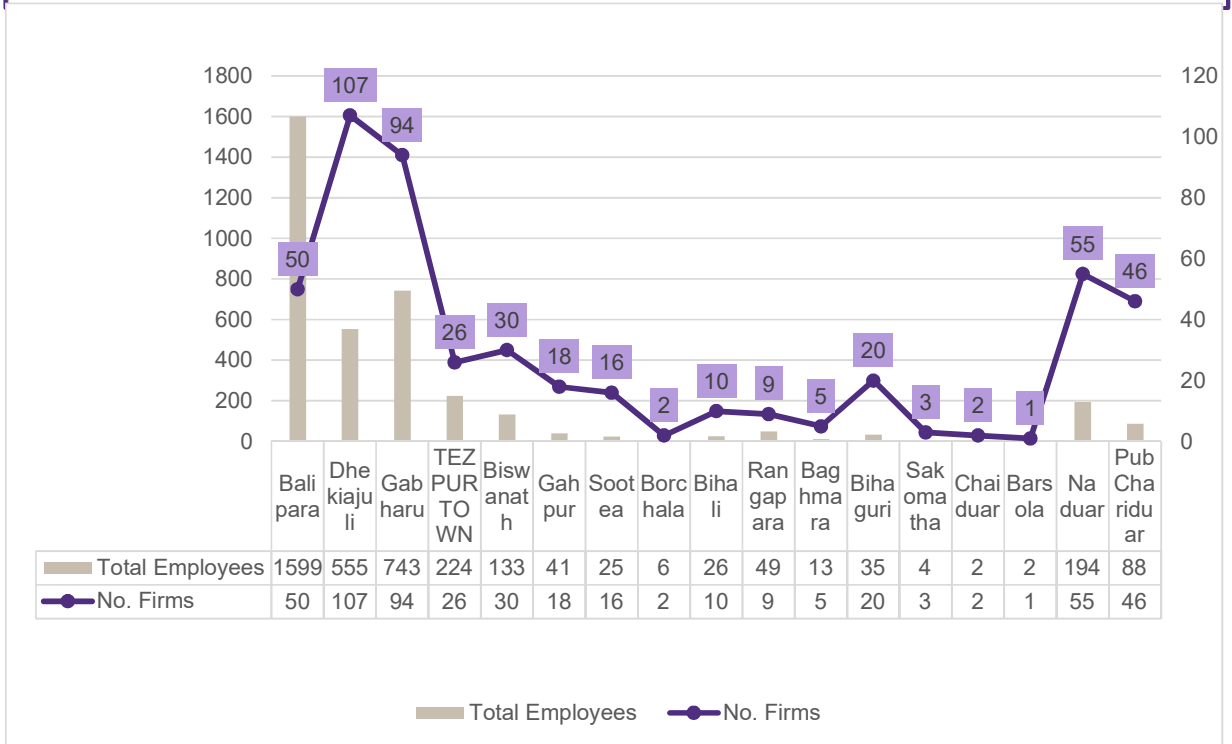
\*Five entities including Dabur & Patan have not disclosed their annual turnover.



Average of Investment in Plant & Machinery      Average of Annual Turnover in INR Lakh  
 \*Five entities including Dabur  
 Total Units

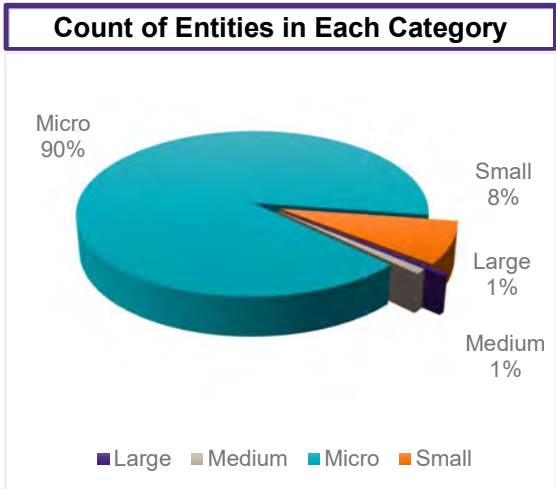
Gabharu and Dhekiajuli blocks of Sonitpur district. Further, it was also found that most of the blocks of the district ranked very low in terms of the annual investment and annual turnover.

### Employment Share of Sonitpur Distt. – Block Wise



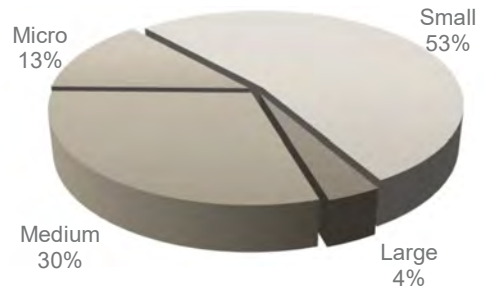
In terms of the number of employees, the Balipara block ranks highest with a total of 1599 employees in the 50 units existing in the area while Gabahru ranks second with 743 employees working in the 94 functioning units of the block. Dhekiajuli block has the largest number of enterprises, i.e. 107 units with a total of 555 workers employed under them.

In the Sonitpur district, 90% of the surveyed units belonged to the Micro category. Small enterprises comprised 8%, while large and medium enterprises constituted one percent each.



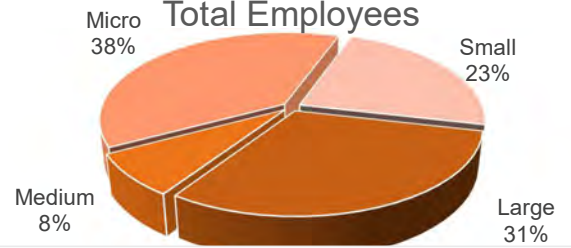
After the baseline survey it was found that the small enterprises contribute 53% to the district's annual turnover. Medium enterprises contributed 30% while micro and large enterprises contributed 13% and 4% respectively. Two Large & Three Micro entities including Dabur & Patanjali Ayurved

### Annual Turnover in INR Lakh



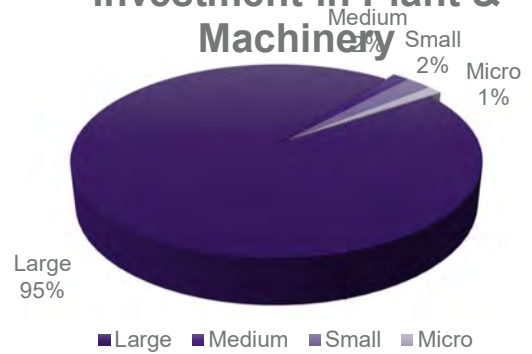
In the Sonitpur district, it was found that maximum percentage of employees belonged to the Micro and Large categories with 38% and 31% respectively. Further, the Small enterprises of the district has an employment percentage of 23% while the medium enterprises have 8% employment ratio.

### Total Employees



The Baseline survey helped GT identify that the maximum investment in plants and machinery came from the Large units of the district at 95%. The rest five percent is shared by the Medium and Small units with 2% each and 1% by the Micro enterprises of the region.

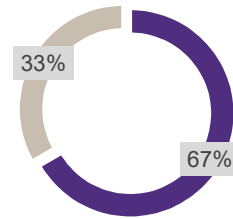
### Investment in Plant & Machinery



After the baseline survey, it was found that 67% of the products manufactured by the large enterprises were bakery and other food products while the rest 33% were other consumer products.

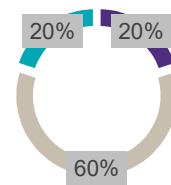
### Products Produced in Distt. Sonitpur

#### Large



Among the medium category, rice and other rice products are the highest manufactured products at 60%, followed by 20% bakery and other food products and cattle feed and poultry feed each.

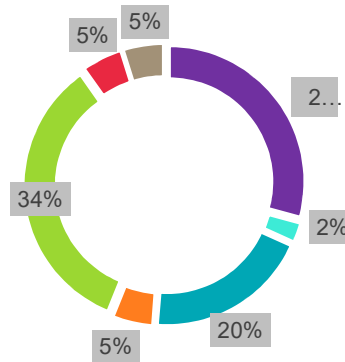
#### Medium



- Bakery & Other Food Products
- Rice & Other Rice Products
- Cattle Feed & Poultry Feed

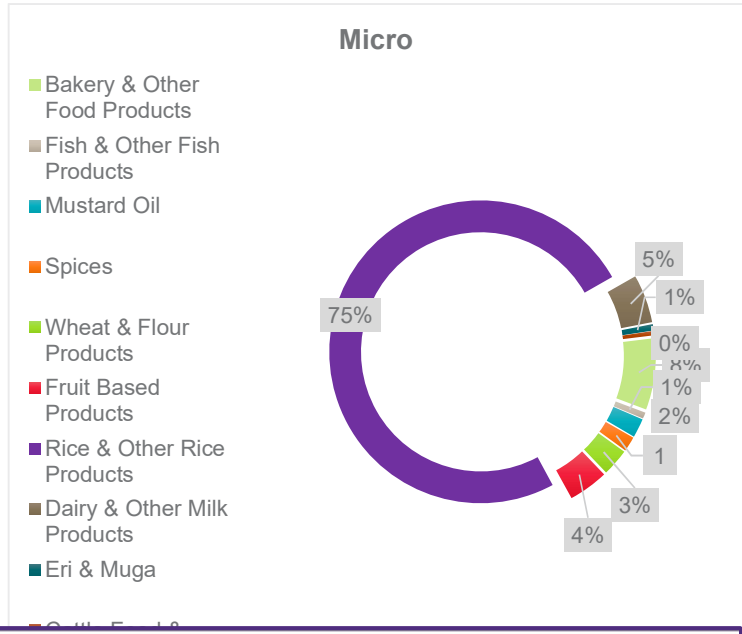
A variety of products are found to be manufactured by the small units in the Sonitpur district. Maximum is that of rice and other rice products with 34%, followed by bakery and other food products at 29%. Fruit based products, dairy and other milk products and comprise 5% each of the total products produced by the small units. Only 2% of the total products manufactured by the small enterprises belong to fish/other fish products and cattle feed/poultry feed

#### Small

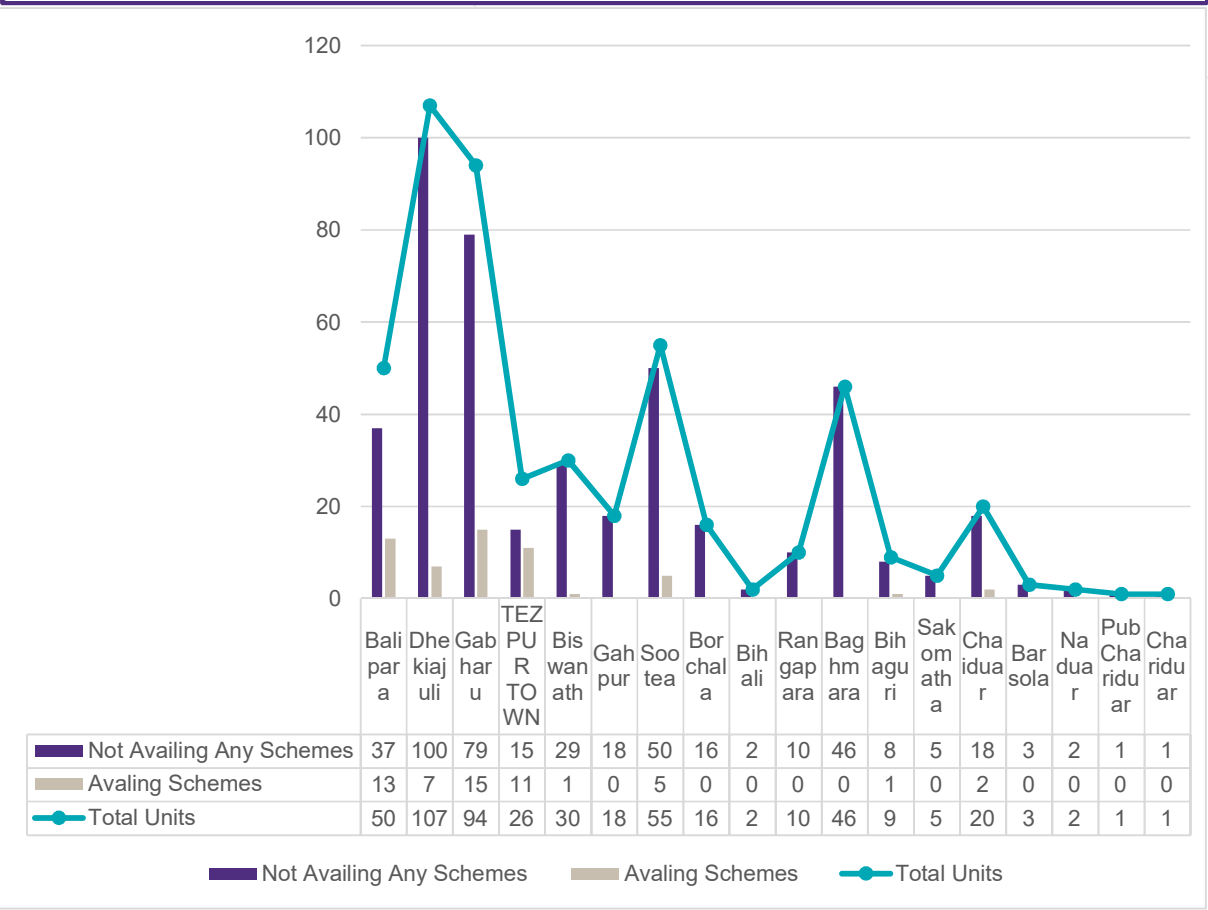


- Bakery & Other Food Products
- Fish & Other Fish Products
- Wheat & Flour Products
- Fruit Based Products
- Rice & Other Rice Products
- Dairy & Other Milk Products

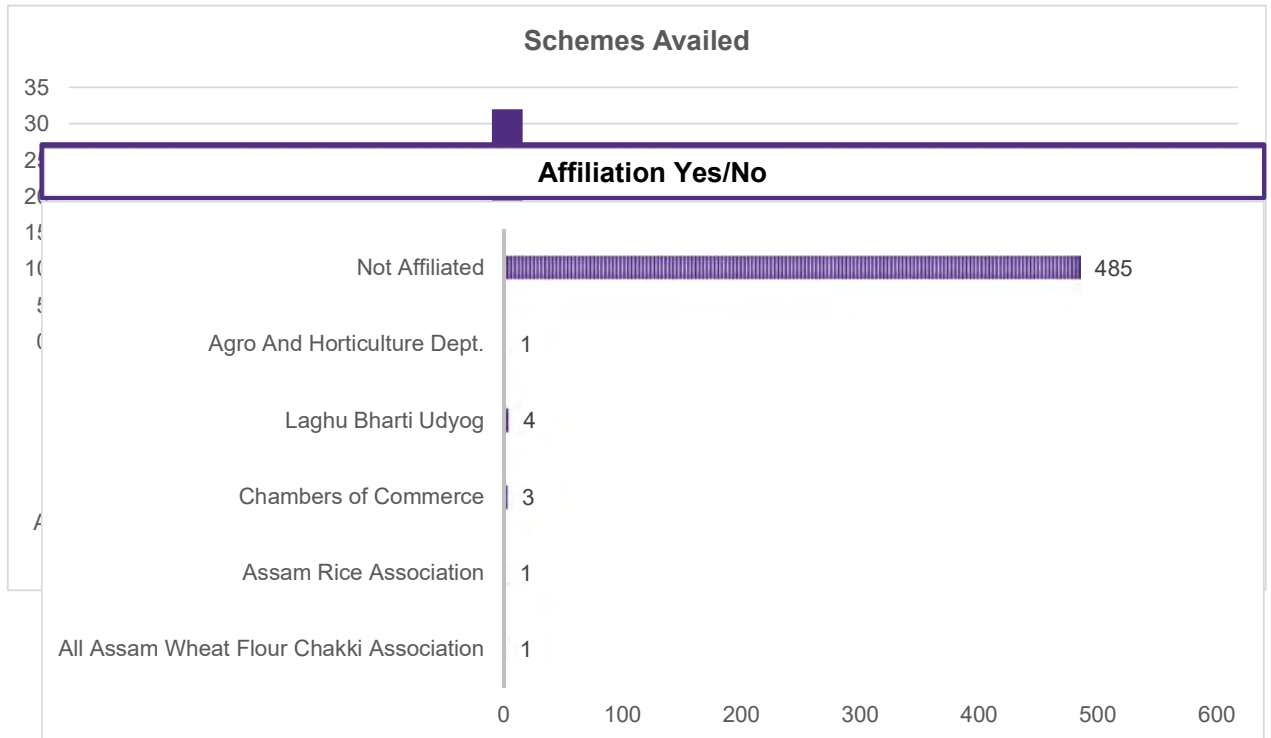
Rice and other rice products constitute 75% of the total products produced by the micro units of the district. Others like bakery and other food products, dairy and other milk products and fruit based products constitute 8%, 5% and 4% of the total produce. Products made from wheat and flour, mustard oil, eri and muga, fish and other fish product and spices constitute the remaining percentage of the total produce of the micro units.



### Block-wise Scheme Distribution

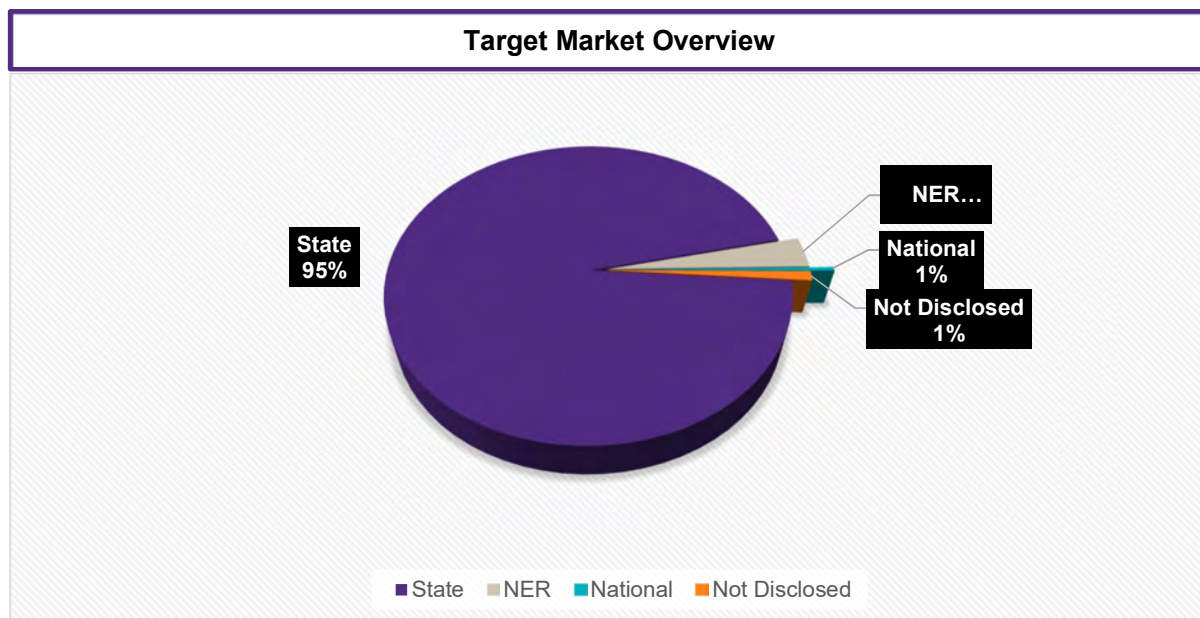


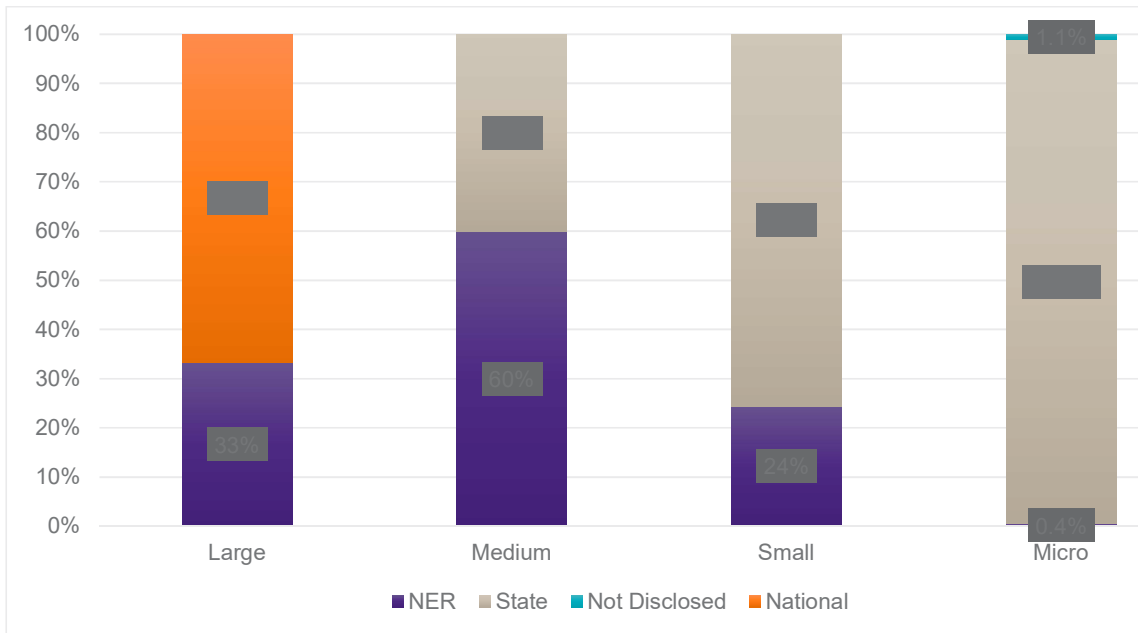
During the baseline survey, it was found that Dhekiajuli block has the highest number of units in the district, followed by Gabharu and Sootea blocks with 94 and 55 units each. The units in Gabharu and Balipara blocks ranked top in terms of availing schemes, with 15% and 13% respectively. The baseline survey further assisted in identifying that most of the units in the district were not availing any kind of central or state level schemes.



Some of the schemes that were availed by the enterprises were from banks, PMEGP and few other government agencies. Most of the other schemes that were availed by the enterprises were not disclosed by them.

Out of the 495 enterprises found in Sonitpur district, 485 are not affiliated with any association. One each is affiliated with Agro and Horticulture Department, Assam Rice Association and All Assam Wheat Flour Chakki Association. Further it was found that 4 enterprises are connected with Laghu Udyog Bharti while remaining 3 with the Chambers of Commerce.

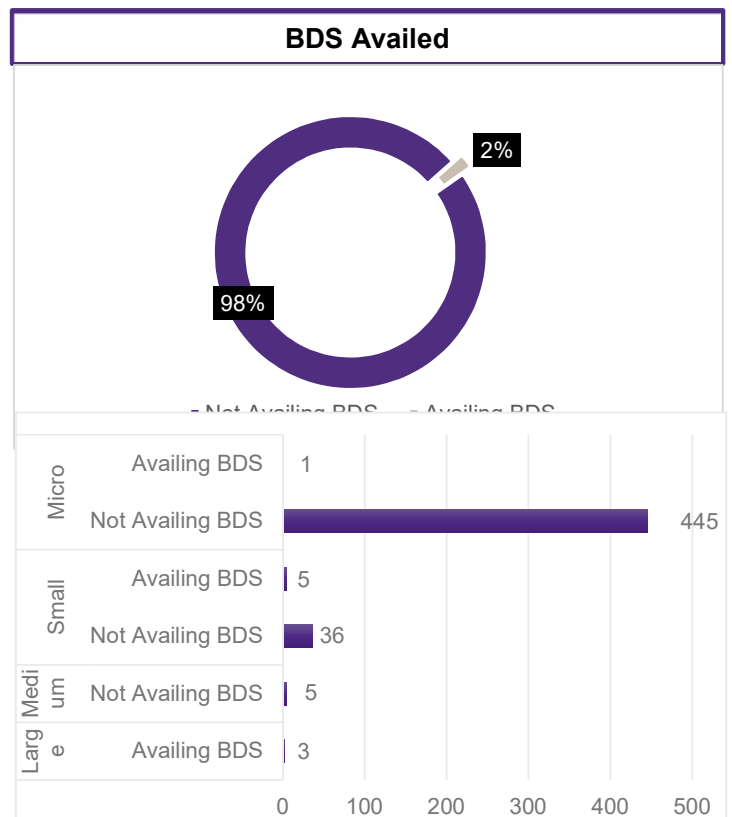




Out of the total, 33% of the products by the large units are sold within the NER while 67% reaches National level markets. Among medium categories, 60% of the produce are sold within the NER and 40% in the state level. 24% of the products manufactured by small units reach the NER while 76% are sold within the state itself. Further it was also found that 98.4% of the products manufactured by micro units are sold only within the state level markets.

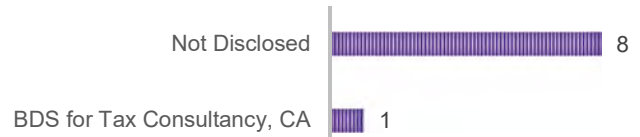
During the baseline survey it was found that out of the total surveyed enterprises, only 2% availed some or the other kind of BDS while 98% of the units did not take assistance of any BDS.

Among the units who did not avail any BDS, 445 belonged to micro enterprise, 36 small enterprises and 5 medium enterprises. Only the large units took the assistance of some or the other type of BDS service.

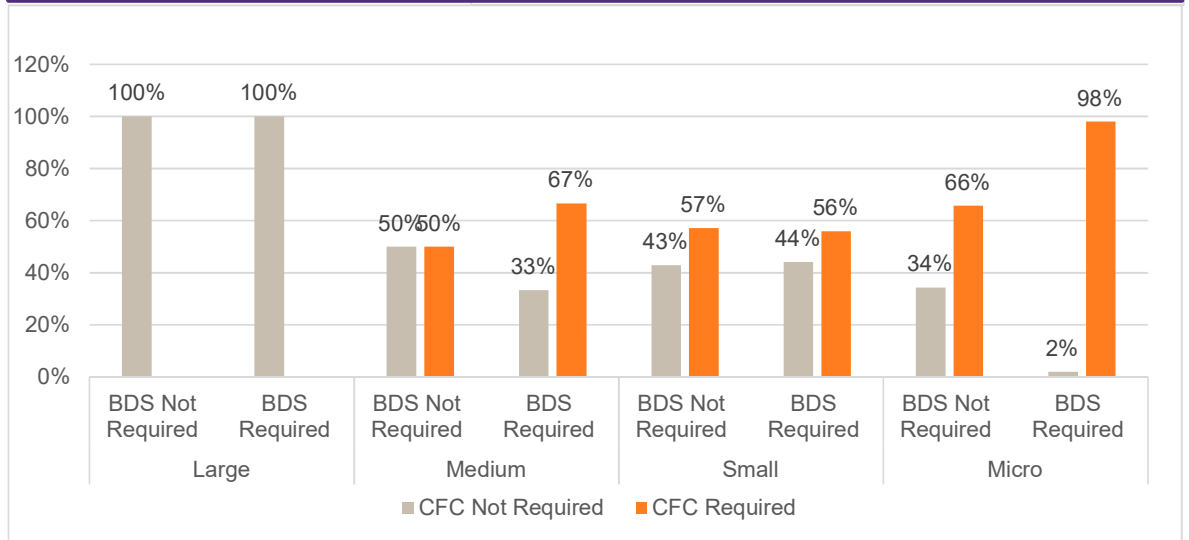


BDS for Tax Consultancy and CA were found to be one of the most sought after BDS service by the units of Sonitpur district. However, the other types of BDS availed by the units were not disclosed by the entrepreneurs.

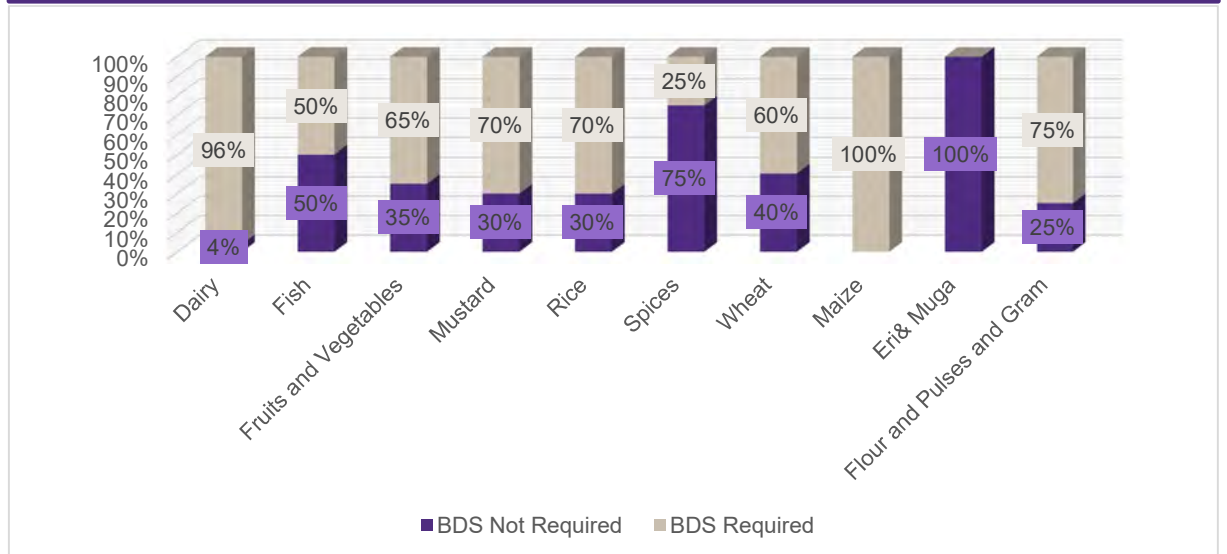
## BDS AVAILED SPECIFIED



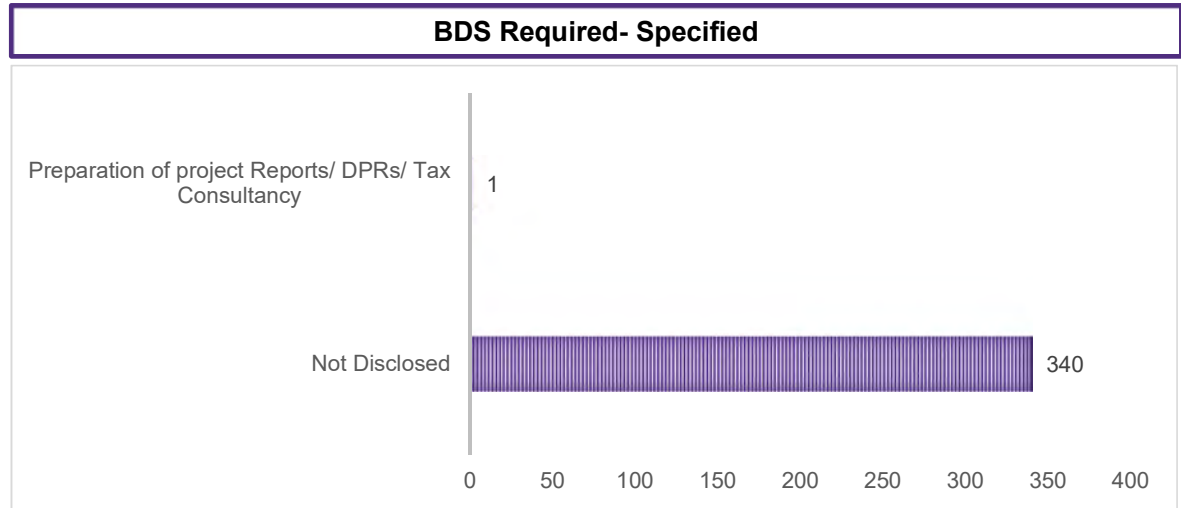
### BDS & CFC Required



### BDS Required- Value Chain Wise

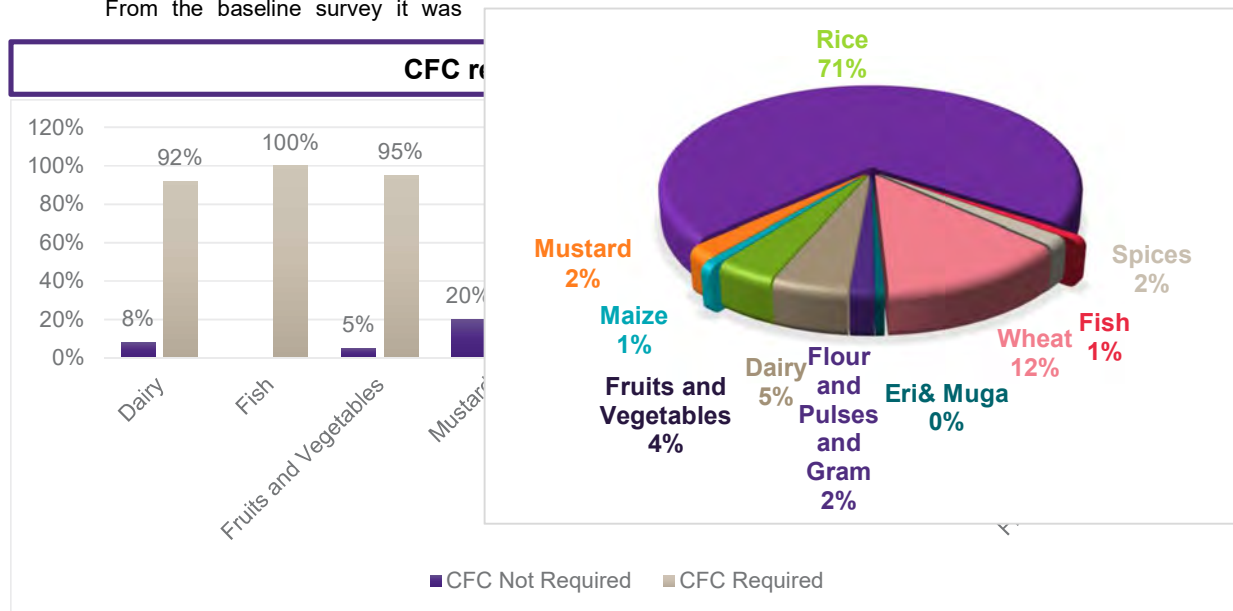


Out of the surveyed enterprises, 100% of the units belonging to maize value chain and 96% belonging to dairy value chain require BDS service. Other enterprises which showed interest in acquiring BDS belonged to flour, pulses and gram, mustard, rice, fruits and vegetables and wheat value chains.



Most of the enterprises did not disclose the type of BDS that were required by them. Only 1% specified that they needed services like preparation of project reports, DPRs or of Tax consultants.

From the baseline survey it was



found that enterprises belonging to most of the value chains needed common facility centers for their business.

100% of the enterprises belonging to the fish value chains required CFC whereas, 92% dairy and 95% fruits and vegetables value chains showed interest in having CFCs. Other value chains requiring CFC include spices, flour, pulses and gram, spices, rice, mustard and maize value chains.

During the baseline survey it was found that 71% of the enterprises belonged to the rice value chain. Wheat value chains comprised 12% of the total surveyed enterprises. The other value chains were those of dairy, fruits and vegetables, mustard, spices, flour, pulses and grams, maize and fish.

## 4.15 Lakhimpur

### 4.15.1 Geographic Details of Lakhimpur District

Lakhimpur is an administrative district in the state of Assam, which covers an area of about 2277 sq. km. It is situated on the North East corner of Assam and at the north bank of the River Brahmaputra. The district lies between 26° 48' and 27° 53' Northern latitude and 93° 42' and 94° 20' East longitude. The district is headquartered at North Lakhimpur and has a population of 10,42,137 (as of the 2011 census). The soil of the district is very fertile and supports a flourishing agricultural economy and the district is characterized by abundant growth of paddy. Additionally, the district enjoys abundant availability of fish, meat, vegetables and milk as well. The district is bounded on the north by Siang and Papumpare district of Arunachal Pradesh, on the east by Dhemaji district and Subansiri river, on the south by Majuli–Jorhat, and on the west by the Sonitpur district. NH-15 passes through the district and connects it to the neighboring districts. Additionally, the Lilabari Airport, which is located at a distance of 5 km from the district headquarters, connects it by airways. There is direct rail connectivity from Guwahati and major railway stations are Tatibaha, Harmoti and North Lakhimpur. It's the gateway to Arunachal Pradesh, via Bandardewa



Sub-Divisions	Town	Blocks	Panchayats	Villages
2	5	9	81	1188

Source: Statistical Handbook of Assam 2018

1	National Highway	1	NH15
2	Railway Station	6	Uttar Kathoni, Tatibahar, Tipling, Harmoti, North Lakhimpur, Gogamukh
3	Airport	1	Lilabari

Source: Statistical Handbook of Assam 2018

### 4.15.2 Demographic Details

In 2011, Lakhimpur had population of 1,042,137 of which male and female were 529,674 and 512,463 respectively. In 2001 census, Lakhimpur had a population of 889,010 of which males were 455,691 and remaining 433,319 were females. The details are as follows:

Description	2011
Population	10.42 Lakhs
Actual Population	1,042,137
Male	529,674
Female	512,463
Population Growth	17.22%

Area Sq. Km	2,277
Density/km2	458
Proportion to Assam Population	3.34%
Average Literacy	77.2
Male Literacy	83.52
Female Literacy	70.67
Literates	683,486
Male Literates	375,552
Female Literates	307,934

Source: Census 2011

Average literacy rate of Lakhimpur in 2011 were 77.20 compared to 68.56 of 2001. If things are looked out at gender wise, male and female literacy were 83.52 and 70.67 respectively. For 2001 census, same figures stood at 77.06 and 59.59 in Lakhimpur District. Total literate in Lakhimpur District were 683,486 of which male and female were 375,552 and 307,934 respectively. In 2001, Lakhimpur District had 6,715,475 in its district.

#### 4.15.3 Agriculture Production Scenario/Trend

The state of industries in Lakhimpur is very modest and as a result the district economy is heavily dependent on agriculture and allied activities. The district contributed 3.27%, 3.69%, 4.24%, 3.91% in milk, egg, meat and fish production of the state in 2017-18 respectively. The district produced over 75,700 kilos of jute in 2017-18. Deuri and Missing Tribes inhabiting in this District are mostly involve piggery activates as supporting livelihood. The key crops grown in the district are rice, mustard, pulses and sugar cane, Sali paddy being the most common. Additionally, there is extensive cultivation of tea in the district as well and the plantations occupy almost 20% of the total agricultural land.

#### Agriculture and Allied Sector Scenario

Rice is the principal crop and staple food of the district due to its climatic adaptability. The rice crops are cultivated during three seasons of the year i.e. autumn (Ahu), winter (Sali) and summer (Boro) in the district. The major agriculture and allied enterprises are of Rice, Rapeseed, Vegetables, Banana, Pineapple, Orange, Coconut, Areca Nut, Dairy, Piggery, Poultry, Sericulture, Fishery etc.

The district follows 12 Integrated Farming Systems (IFS), of these 3 IFS that are adopted by both the rich and poor farmers, viz., Agriculture - Horticulture; Agriculture – Horticulture - Animal Husbandry; Agriculture – Horticulture - Animal Husbandry – Fishery; and one farming system i.e. Agriculture - Animal Husbandry - Fishery is predominantly used by resource rich category's farmers and Horticulture - Sericulture is followed only by resource poor farmers.

Dairy farming is practised by the small and marginal farmers and the landless labourers in the district who provides the economic security by serving as a hedge against crop failure. Traditionally, dairy farming is a subsidiary occupation of farmers in the district.

#### 4.15.4 Industrial Infrastructure Details

There are five industrial estates/ areas in the district.

SL	Industrial Infra	Location	No. of Units/shed	Area-Bigha
1	IGC	Lilabari	6	14
2	Industrial Area	Telahi Div		9
3	Industrial Estate	Bihpuria	5	35
4	Commercial Estate	Bongalmara	5	3

5	IIDC-AIDC	Bandardewa		90
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#### 4.15.5 Key Agriculture Based Industries

The scenario of Agro base industry in the District is mostly revolving around micro sized units. Only few big units of Mustard oil and Rice Mill is existing in the District, though raw material are available.

- MR Agro Industries
- Basanta Oil and Rice Mill
- 

#### 4.15.6 Support Institutions

##### **Lakhimpur College of Veterinary Science**

The Lakhimpur College of Veterinary Science is still at a nascent stage. Within this capacity it is imparts undergraduate courses in the discipline of veterinary and animal husbandry. This graduates are will be a great help to provide much needed extension services in the rural areas of district and Assam. Additionally, the Institute provides expert services in the management and health care of wild life in the sanctuaries and national parks of the region. It also works to bring about sustainable improvement in the livestock and poultry production through improved breeding, feeding, management and health care.

Their services can be linked with farmers or producers so that a vibrant health care services in revenue based can be initiate. As the Piggery is one of major value chain that has emerged in the district their services will be a great help in supplying quality animal to the processors.

##### **Regional Agricultural Research Station (RARS):**

RARS is located in the district conducting research is Agriculture sector specific to seed and plant. They are conducting research on submerge rice variety, impart training to farmers, technology transfer to farmers, production training, Technology demonstration. RARS is basically involve R&D can be avail the services for Mustard oil value chain in back ward linkage. Their services can be leverage for better technology, package of practices, Pest management and post harvesting technology. This can reduce loss as well as increase yield also.

Their services will be required in Mustard value chain where expert suggestion is essential for processing and validation of quality of product.

##### **Krishi Vigyan Kendra, Lakhimpur:**

The KVK centre is located in village Boichagarumaria of the district. The KVK scientists at Lakhimpur are responsible for providing various advisory services in order to aid the implementation of different state schemes. They also impart trainings, organize farmers' fairs and exhibitions and participate in Scientist-Farmers interaction programmes. They can support in Technology dissemination, avail the facility of hatchery on PPP mode etc. It's a one window technology service for all agriculture sector like Animal husbandry, poultry, apiculture, fishery, sericulture, Horticulture and mushroom production.

##### **United Bank of India:**

The lead bank in the area is the United Bank of India. The bank offers various loans and other financial services that aid the growth and development of the farming and MSME sector in the district.

#### **Industrial Training Institute (ITI):**

It is located in North Lakhimpur. The major objectives of the ITI are:

- To provide semi-skilled/skilled workers to industry by systematic training.
- To reduce unemployment among educated youths by equipping them with suitable skills for industrial employment & self-employment

ITI can provide trained manpower in the plant and machinery operation, repairing, maintenance. They also support in validation of new technology that is suitable for the crops and reason.

#### **Assam Gramin Vikash Bank:**

The AGVB is a RRB. They cater the financial need of the rural customers. The AGVB aims to provide financial inclusion services as well as spread Banking Literacy to each household of its area of operation. It has various financial product initiate appropriate intervention for economic uplift of the people of Assam through Agriculture, Micro, Small and Medium Enterprises to accomplish the mandate set out for the RRBs and thus emerging as a strong, vibrant and socially committed 'Mass-Class Bank'. AGVB provides

To boost up Trade advances backed by marketable tangible assets in the form of mortgage of immovable property or in the form of liquid securities like NSC/KVP/LIC policy (surrender value).

Eligibility : The applicant should be a registered or licensed trader and should exclusively bank with us.

Loan amount : Term loan Maximum Rs.1.00 crore and working capital maximum Rs.25.00 lac.

#### **4.15.7 Analysis from Baseline Data**

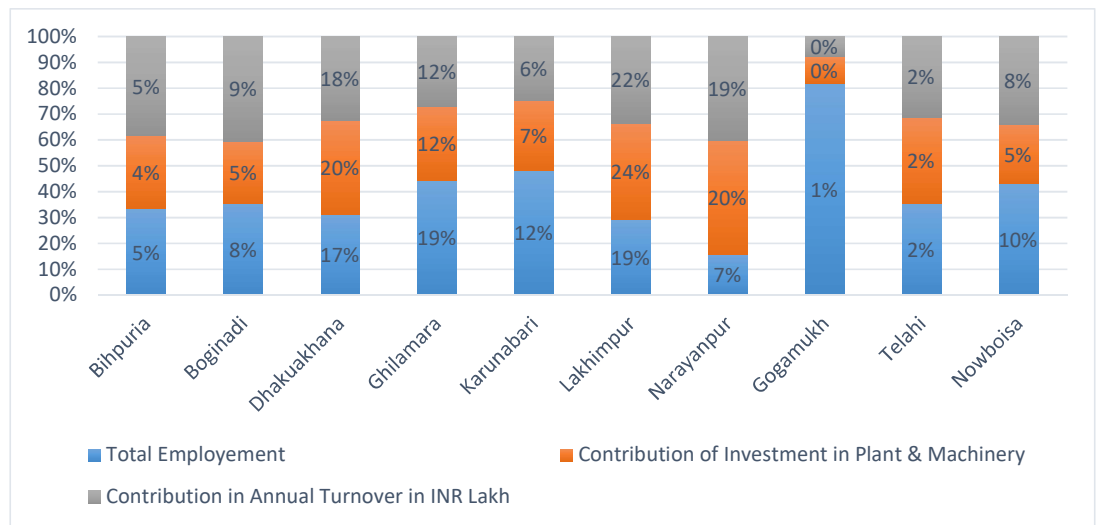
##### **Agro Based Enterprises:**

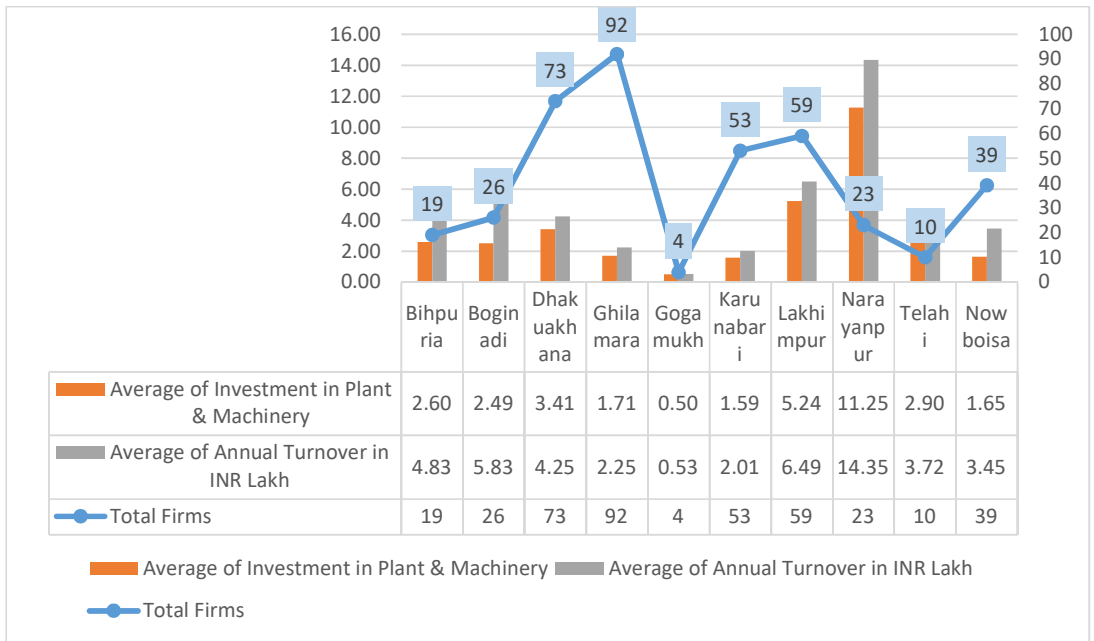
In North Lakhimpur district, there are 398 agro based processing units as per our baseline survey out of which 43% units are registered and rest 57% are unregistered. Not a single agro based unit is operating within industrial. In micro category there are 99% units and rest units come under small category.



### Enterprises, Employment, Investment & Turnover Block wise:

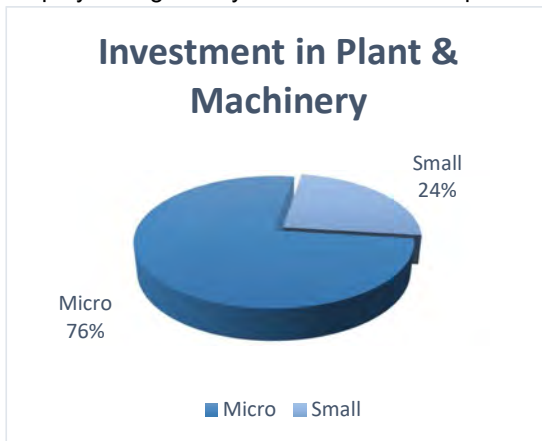
As it can be observed in the below chart, most of the units out of total agro based units in the district are located in Ghilamara (23%) followed by Dhakuakhana (18%), Lalhimpur (15%), Karunabari (13%), Nowboisa (10%), Boginadi (7%) and Narayanpur (6%). From our baseline survey it is clear that Ghilamara, Lakhimpur, Dhakuakhana, Karunabari, Nowboisa, Boginadi & Narayanpur emerge as a prominent block in terms of employment, investment in plant & machinery and annual turnover. Lakhimpur contributes 19% in employment out of total employment in district, 24% in investment out of total investment in the district and 12% turnover out of total district turnover. Similarly, Ghilamara contributes 19%, 12% & 12% in terms of employment, investment & turnover respectively, Dhakuakhana contributes 17%, 20% & 18% in terms of employment, investment & turnover respectively, Karunabari contributes 12%, 7% & 6% in terms of employment, investment & turnover respectively, Nowbaisa contributes 10%, 5% & 8% in terms of employment, investment & turnover respectively & Narayanpur contributes 7%, 20% & 19% respectively.

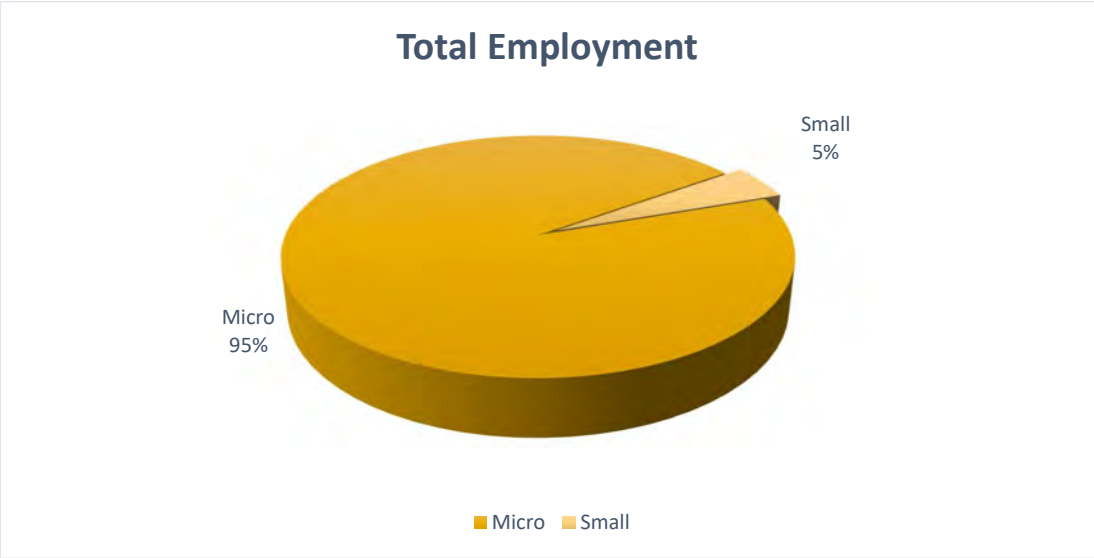




**Enterprise Details Category Wise:**

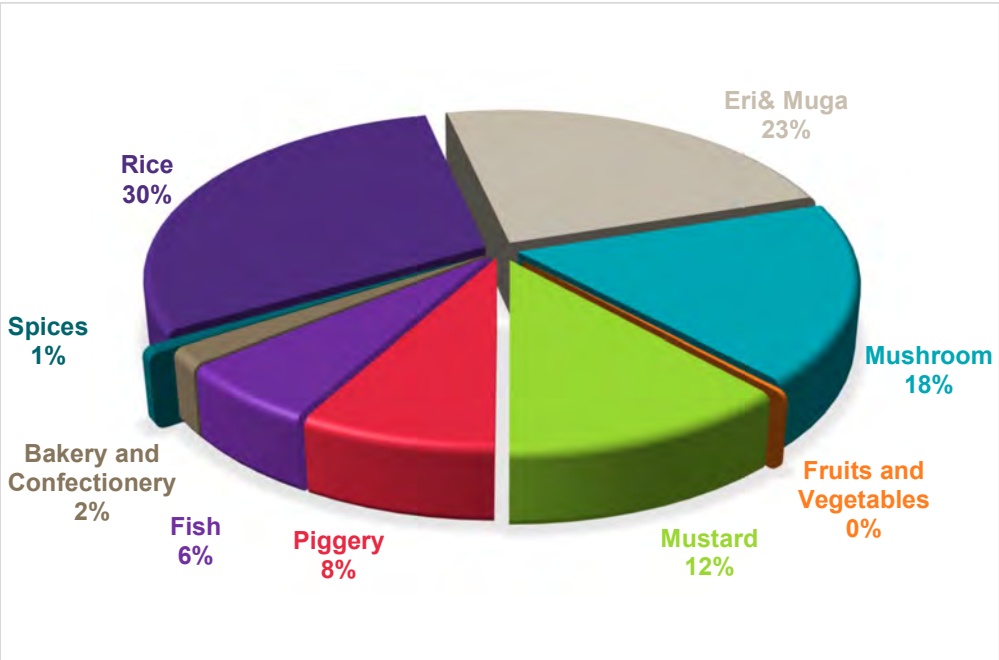
Investment in plant & machinery for micro & small categories are 76% and 24% respectively. Annual turnover for micro and small categories are 84% and 16% respectively. Similarly, employment given by micro & small enterprises are 95% and 5% respectively.





**Distribution of Value Chain:**

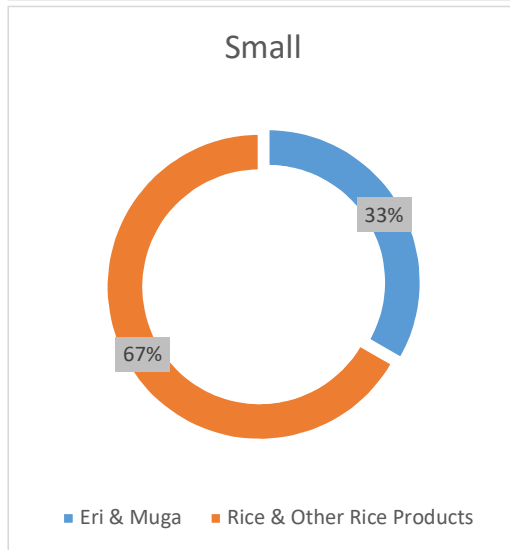
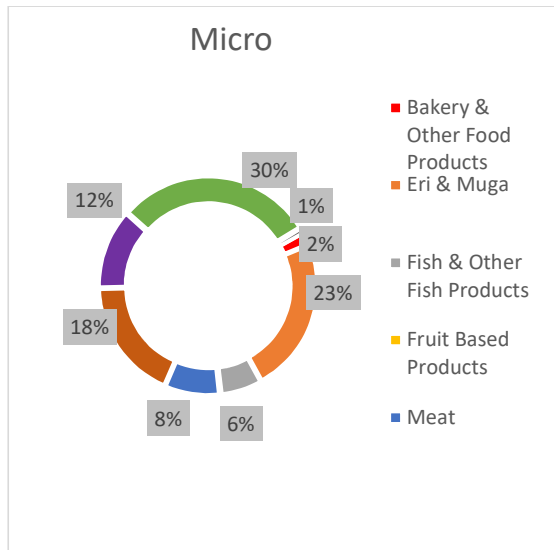
From our baseline survey rice emerges as prominent value chain crop and production is 30% out of total agro based products production in the district followed by Eri & Muga production at 23%, Mushroom production at 18%, Mustard oil production at 12%, Piggery production at 8%, Fishery production at 6% and rest total value chain products production at 3%. There is huge potential for mustard as mustard processing unit production are less compare to mustard seed production in that area, similarly scenario is same for Eri & Muga.



**Products Produced by Micro, Small & Medium Entities:**

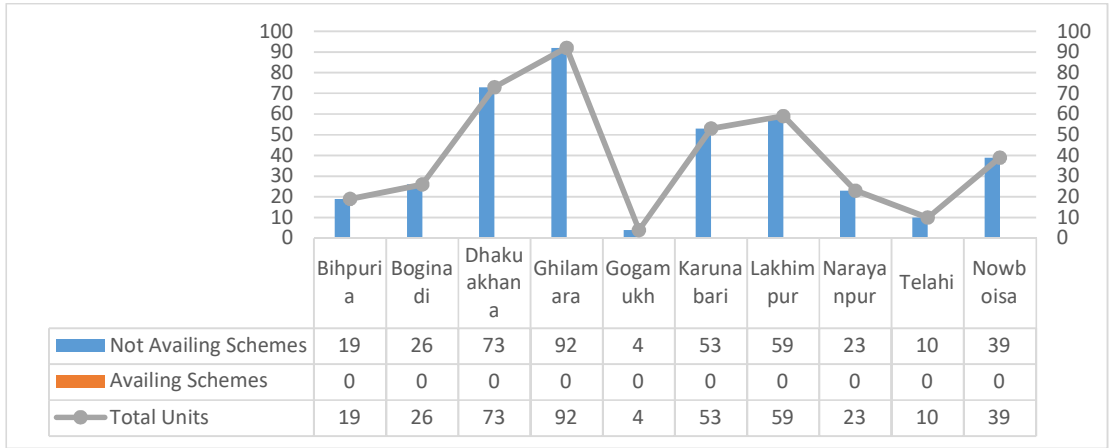
It has been observed from our baseline survey that in micro category enterprises 30% rice and rice base products are produced followed by 23% production of Eri & Muga, 18% production of Mushroom, 12% production of Mustard oil, 8% production of meat (pork), 6% production of fish based products and rest 3% include bakery product, spices & fruits based products. In

small category, there are only two value chain base units, one of Rice & other one is Eri & Muga.



**Block wise Scheme Distribution:**

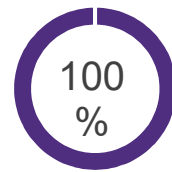
There are 398 units which have been identified in our baseline survey in North Lakhimpur district, out of 398 identified units, not a single unit has availed any scheme. Lack of awareness among the entrepreneurs is one of the reason.



**Affiliation with Any Association:**

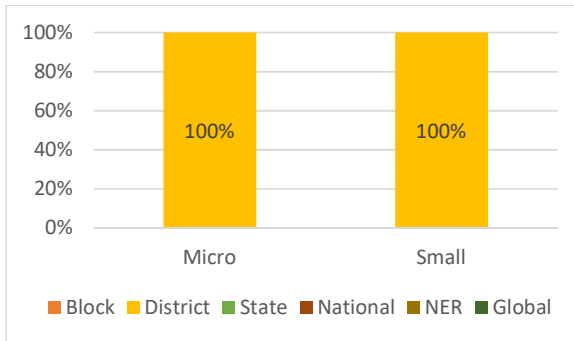
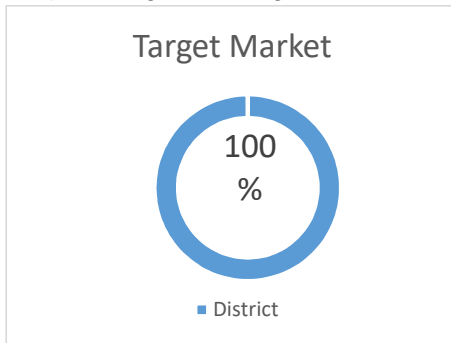
Out of 398 identified units not a single unit is affiliated with any kind of association.

**Not Affiliated With Any Association**



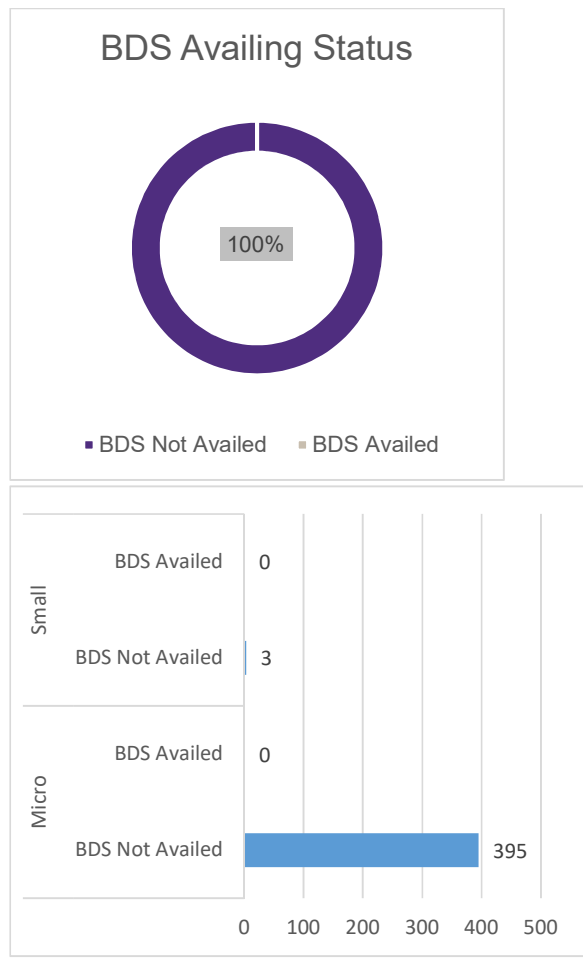
**Target Market Overview:**

It is evident from below given charts that 100% of total produce are sold within the district only. Whatever micro & small categories enterprises are producing, are selling within the district only.



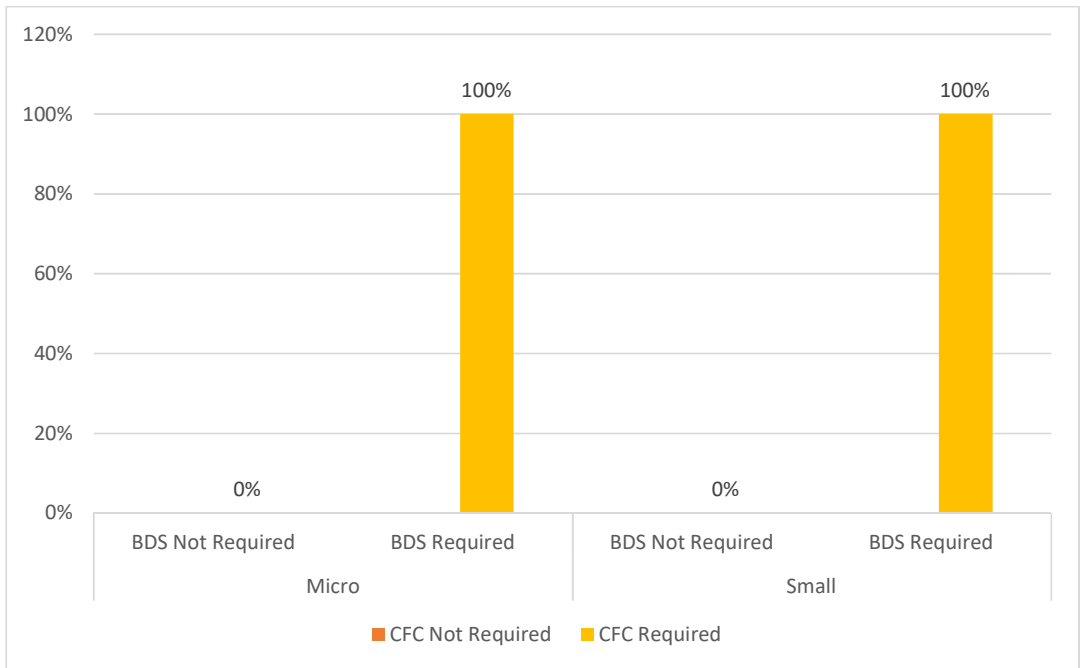
**BDS Availed:**

It is clearly visible from below charts that none of the enterprise in the district is availing Business Development Services (BDS). It means there is requirement for BDS to grow the business in the district.



**BDS & CFC Required:**

From our baseline survey it is evident that there is 100% requirement for common facility Centre (CFC) in all the categories of enterprises. There are need of CFC in prominent value chains like Mustard, Eri & Muga, Rice & Piggery.





## 4.16 Golaghat

### 4.16.1 Geographic details of Golaghat

The District Head Quarter of Golaghat is situated at Golaghat Town. The district occupies an area of 3502 km<sup>2</sup> and lies 100 m above sea level. The district falls between Longitude 26.3185° N, and latitude 94.0907° E. and surrounded by the river Brahmaputra to the north, the state of Nagaland to the south, Jorhat district to the east and Karbi Anglong and Nagaon district to the west. It is sharing Three noteworthy roads goes through Golaghat District to be specific NH-37, NH-39 and Dhodar Ali (State Highway). NH-39 begins at Numaligarh and subsequent to navigating 47.00 KM of through Golaghat District it goes into Karbi-Anglong at Garampani. Dhodar Ali keeps running crosswise over Golaghat District from Komargaon to Kakodonga River.



Agriculture is the main source of livelihood of the occupants of the district. Winter paddy is the major crop. During Rabi season, pea, mustard and vegetables are grown in a commercial scale.

Sub-Divisions	Blocks	Panchayats	Villages
4	8	102	622

#### Air

Rowriah Airport of Jorhat is the nearest airport from Golaghat.

#### Rail

The Golaghat railway station is located at Bet Mahal, and the main railhead is Furkating junction

#### Road

Golaghat is well connected by roadways to all the cities and towns in Assam.

NH-37, NH-39, State roads throughout the district.

### 4.16.2 Demographic Details

Description	2011	2001
Population	10.67 Lakhs	9.46 Lakhs
Actual Population	1,066,888	946,279
Male	543,161	490,286
Female	523,727	455,993
Population Growth	12.75%	14.27%
Area Sq. Km	3,502	3,502
Density/km <sup>2</sup>	305	270

Description	2011	2001
Proportion to Assam Population	3.42%	3.55%
Sex Ratio (Per 1000)	964	930
Child Sex Ratio (0-6 Age)	963	963
Average Literacy	77.43	69.38
Male Literacy	83.56	77.14
Female Literacy	71.09	60.99
Total Child Population (0-6 Age)	134,793	142,939
Male Population (0-6 Age)	68,662	72,807
Female Population (0-6 Age)	66,131	70,132
Literates	721,764	7,010,217
Male Literates	396,475	3,848,421
Female Literates	325,289	3,161,796
Child Proportion (0-6 Age)	12.63%	15.11%
Boys Proportion (0-6 Age)	12.64%	14.85%
Girls Proportion (0-6 Age)	12.63%	15.38%
Population Growth		12.75%
Area Sq. Km		3,502
Density/km <sup>2</sup>		305
Proportion to Assam Population		3.42%
Sex Ratio (Per 1000)		964

Source: Census 2011

#### 4.16.3 Economic profile of the District

Economy of Golaghat district is basically agro based. Tea, rice, and sugarcane are the major crops grown in the district. Except Numaligarh Refinery, there is no other substantial businesses in the region as such. Tea is the biggest agro based industry of the district. There are 63 enormous tea gardens delivering about 2000MT of tea per year. Moreover, rise of small tea growers in the agrarian scene has proclaimed another transformation in the locale. Small scale tea cultivation has got considerable popularity here because of high profit in comparison with other high land crops. Rearing and reeling of Muga and Eri, creation of Japi (headgear) and pottery and extraction of Agarú oil are some other livelihood sources for the occupants of the district. Quality Muga silk and Agarú oil in Golaghat region are considered as superior. Long neck earthen pots made in Dhekai, mainly used for storing molasses is one of its kind as such pots are not made anywhere in the world. Japi of Naharani in Deragaon finds a market in whole Brahmaputra valley.

#### 4.16.4 Agriculture and Allied Sectors Scenario

The geo-climatic condition of the district is conducive for the cultivation of a variety of agricultural crops. However, paddy is the principal crop followed by vegetables, pulses, oilseeds, tuber crops in the district. Among the horticultural crops Banana, Citrus, Pineapple,

Areca nut and Coconut are grown by the farmers in the district. Generally, Winter rice, Ginger, turmeric, sericulture fodder plants, sugarcane etc. are practiced in monoculture in majority parts of the district. The average productivity of the district is reported to be marginally higher as compared to state level productivity. However, the productivity of individual crops is lower than that of national average and far below the potential productivity of crops. The chart below shows the production of major agricultural commodities in the district.

#### 4.16.5 Industrial Scenario – Sector wise

The district has good industrial infrastructure, which includes a Tea park, an Industrial Park set up by the Assam Industrial Development Corporation (AIDC) at Jonakinagar, and open land at Numaligarh.

##### Infrastructure Details.

Name of Industrial Infrastructure	Open Space (Sq. M)		
	Total Open Space	Open Allotted Space	Space available for allotment
Industrial Area, Jonakinagar	76664.33	13615.24	63049.09
Open Land (ASIDC), Numaligarh	14185	0	14185

#### 4.16.6 Key Agriculture Based Industries

Golaghat district has 1057 registered industrial which provide employment opportunity and contribute immensely to the district's economy. Out of these 259 units are in the agri business sector.

The district has a significant number of mustard oil, rice and wheat processing units. The various food processing units in the district are shown below.

Some of the units in the Agribusiness sectors are listed below.

Sl. No	Name of the Unit	Main Product
1	M/S R P Rice Mill	Rice Milling
2	M/S Kanu Bakery	Bakery Products
3	New Rangali Tea Plantation Pvt. Ltd (Factory Unit)	Black Tea
4	M/S B. R. Enterprise	Puffed Rice
5	M/S Priyanka Food Product	Fruit Juice
6	M/S Momata Food Product	Pickles
7	Radhabari Tea Company Private Limited	Black Tea

##### Export Infra Availability

There is no Export infrastructure available in Golaghat district.

#### 4.16.7 Industrial Parks and Contribution to Agro Enterprises

The industrial parks and estates play very important role in developing the Industrial scenario of Golaghat district, Golaghat district has mainly tea and paddy processing unit beside some other agro based enterprises. 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, 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, Jiggery making, spice grinding, small flour mill, pickle making, unit etc. under food products and allied industries in Assam

#### **4.16.8 Support Institutions**

##### **Krishi Vigyan Kendra, Golaghat**

KVK, Golaghat is located in Khumtai in Golaghat district of Assam, which was established on 21st February, 1995 under Assam Agricultural University, Jorhat. The institute provides specialized need based trainings to the farming community on various aspects related to agriculture and allied sectors. The prime mandate of KVK is to impart vocational training to the practising farmers, rural youth and field level Extension functionaries, conducting on farm trial, front line demonstration and transferring latest technologies to the farming communities. The following are the services provided by KVK in the district:

1. Organizing vocational training on agriculture and allied disciplines for practicing farmers, rural youth.
2. Conducting on-farm testing
3. Organizing front-line demonstration on newly released varieties, technologies etc.
4. In-service training from grass root level extension functionaries
5. Distribution of Seeds and Plants

##### **Dergaon Kamal Dowerah College**

Dergaon Kamal Dowerah College was established in 1962 with a vision of academic, social, cultural and economic development in greater Dergaon area and with clear objectives to provide better education to meet the global requirements successfully. The institution ascertains the unity and integrity among the people of different communities and religions and also the uplift of the downtrodden of the region

Objectives:

- Providing better training and better education to the students to meet the global requirements successfully.
- Promoting the scientific ideas and the use of technological advancement and innovation in the institution and thereby help the students to shape and realize their dreams and aspiration and to create a better society.

##### **Industrial Training Institute (ITI)**

It is located in the Narakanwar village. The major objectives of the ITI are:

- To provide semi-skilled/skilled workers to industry by systematic training.
- To reduce unemployment among educated youths by equipping them with suitable skills for industrial employment & self-employment

##### **United Bank of India**

The United Bank located at Bhoga Gaon, Golaghat is the lead bank in the district and the place where most farmers and Agro processors go for their financial needs. The bank offers a crop loan which can be utilized by farmers to meet all the expenses that are involved in raising a particular crop. Additionally, it also offers small short and medium term loans that can be used by the farmers to purchase things like seeds, fertilizers and pesticides.

##### **Assam Gramin Vikash Bank**

The regional branch of AGVB Golaghat is located on Kushal Path, New Amolapatty with a of total 69 Branches under GOLAGHAT Regional Office. The institute aims to financially include

as well as spread Banking Literacy to every household of its area of operation and initiate appropriate intervention for economic uplift of the people of Assam through Agriculture, Micro, Small and Medium Enterprises to accomplish the mandate set out for the RRBs and thus emerging as a strong, vibrant and socially committed 'Mass-Class Bank'.

**District Agriculture Department**

In Golaghat district, the head of the Apart project is looked after by ADO Mr. Rahman. The department is currently providing services related to the distribution of seeds, machine, loan, exposures, buyer seller meet, training, other awareness camps on their schemes etc.

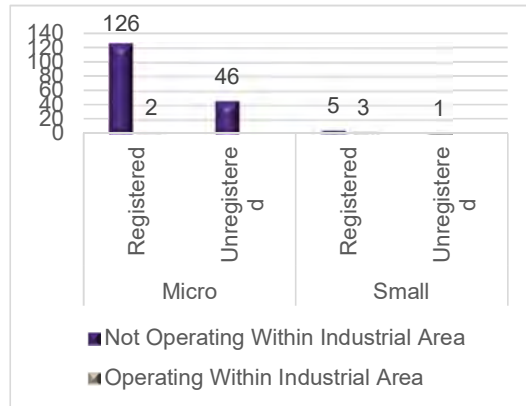
**Agricultural Technology Management Agency (ATMA)**

ATMA is majorly involved in Farmer Oriented Activities. It includes development of SREP, mobilization of farmer groups, women food security groups, training/ exposure visit of farmers, arranging demonstrations. All are aimed at empowering farmers and improving their participation in technology dissemination process

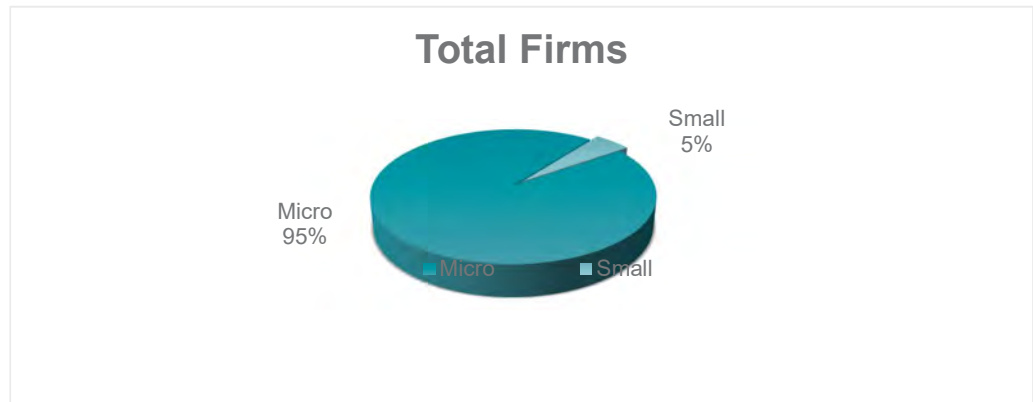
**Analysis from Baseline Data**

**Baseline Units:**

In Golaghat the 95% of agro based units are micro in category and only 5% are in small category. Out of 95%, 174 units of micro size only 126 are registered and 46 are unregistered, out of 5%, 9 units of small size only 8 registered and 1 is unregistered.



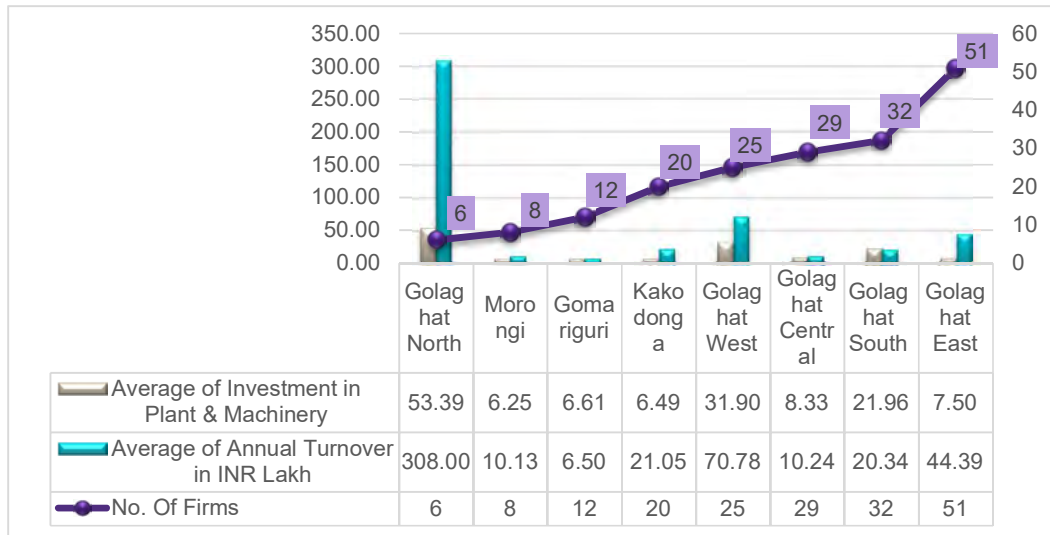
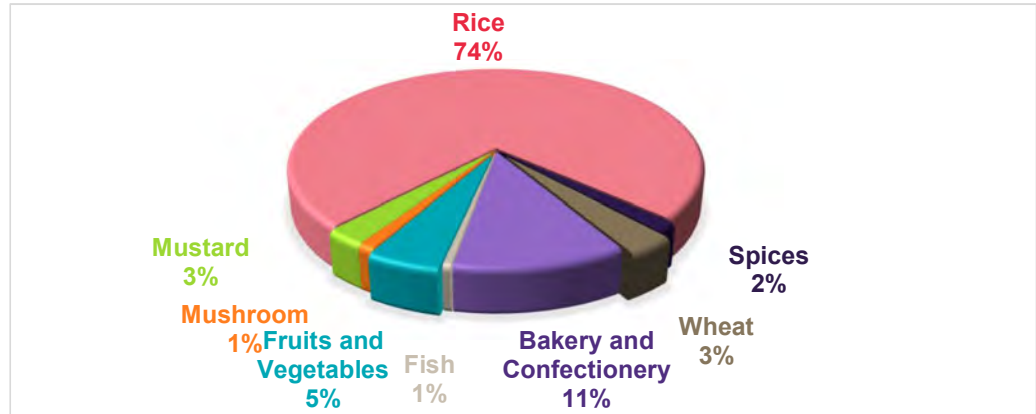
**Category:** From the baseline analysis we have found that the contribution of micro category units to the annual turnover of Golaghat district is 47% with investment of Rs. 1153.14 lakhs in average of 174 units



whereas small category unit contribution to annual turnover is 53% with investment of Rs. 1550.33 lakhs in average of 9 units.

**Baseline Value chain wise:**

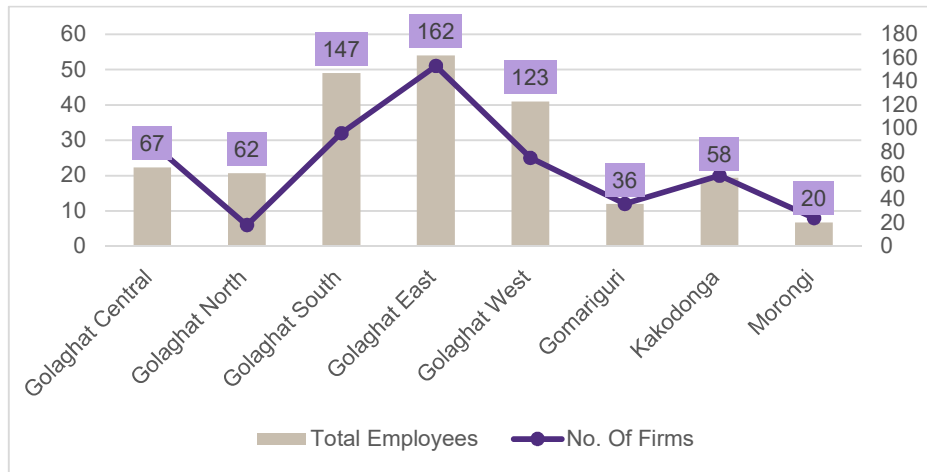
From the baseline analysis we have found in Golaghat there are 8 numbers of different value chain like rice has 136 numbers of units, Bakery and confectionary has 21 units, Fish has only 1 unit, Fruits & vegetables has 9 units, Mushroom has 2 units, Mustard has 5 units, spice has 3 units, and Wheat has 6 units.



**Baseline of Agro Based Processing Units in Block Wise:**

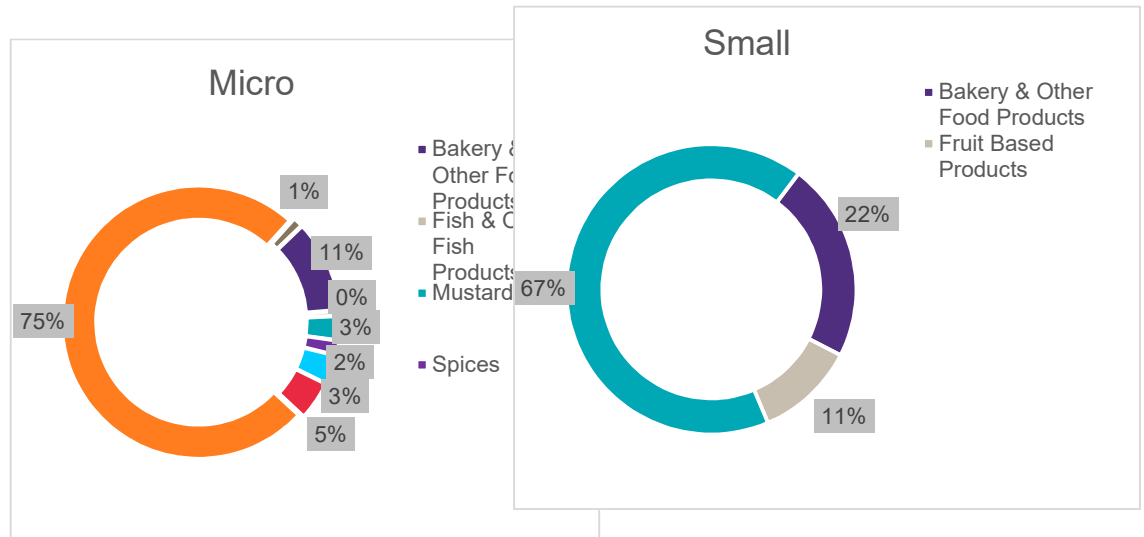
From the two graph below we can classify the investment, turnover and employment in block wise. Golaghat north has the highest turnover of Rs. 308 lakhs with investment of Rs. 53.39 lakhs in average of 6 units which has employment of 62 employees. Like that Golaghat west has Rs. 70.78 lakhs of turnover with investment of Rs. 31.90 lakhs in 25 units with employment of 123, similarly Golaghat east block has third highest turnover 44.39 lakhs with investment of 7.50 lakhs in average of 51 units with employment of 162

Distribution of employment, Investment and annual Tournover



### Products of Golaghat

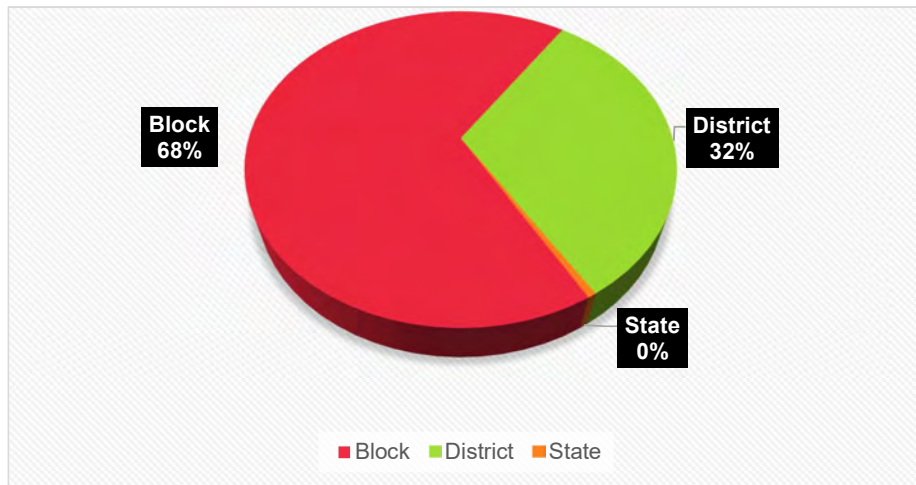
We have found in our baseline survey mainly 8 value chain products irrespective of Micro and small category units, in few value chain there are also has done value addition. In Golaghat most products we have found are **1. Rice 75%**, **2. Bakery & Confectionary 11%**, in bakery we found highest value addition for example Bread, Cakes, Biscuits, Veg & Non Veg pastry, Roll cakes etc. **3. Fruits & Vegetables 5%**, has value addition of Pickles, Juice, squash etc. **4. Spice 2%** **5. Fish 0%** (1 unit) **6. Mushroom 1%** **7. Mustard 3%** **8. Food & other food products 3%**.



### Market share of Golaghat products:

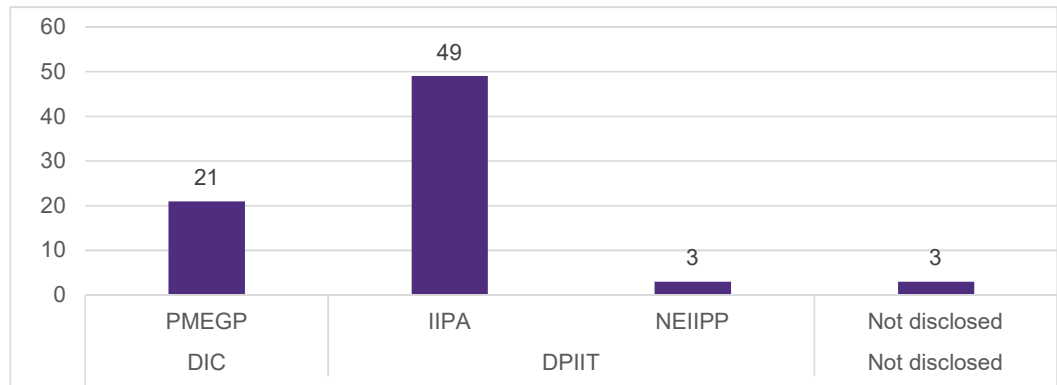
The 183 agro based unit's total production are mostly in sold in local market only, around 68% of total production of Golaghat district of 124 units are sold in and around the units own block, similarly only 32% of total production of 58 number of units are sold in and around the Golaghat district, only 1 unit's production has state level market share.

In Golaghat 174 micro units 120 unit's production is sold in block only, 54 units' production is sold in district through traders, similarly out of 9 small categories unit's production of 4 units sold in Block, production of 4 units' is into district and only 1 unit's production goes to state market



**Schemes availed in districts:**

In Golaghat district out of 183 active agro based units 76 units (Micro & small) could have availed different types of Govt. schemes, 21 units got PMEGP from DICC, 49 units availed IIPA from DPIIT, 3 units have availed NEIIPP from DPIIT and 3 units have not disclosed any name of schemes.



**BDS and CFC status:** In Golaghat out of 183 units 97% units have not availed any BDS services. We also have found that 93% units have expressed the requirement of CFC.

# 5. Value Chain Analysis

In spite of several significant natural advantages which Assam enjoys, the region faces inefficiencies at several levels. Further, the true potential of the region is not getting harnessed and the region has not been growing at par with the rest of the regions in the country. Realising the same, ARIAS with CDTA proposed a detailed study to understand in detail the bottlenecks in the processing infrastructure for tapping the true potential of Assam and thereby prepare a comprehensive and actionable road map to implement in the later stage of the assignment, taking into consideration all the stakeholders involved.

Thus, the scope of work for this section of the baseline survey involved the following activities:

- Capturing the key production clusters based on the secondary production data available from concerned state departments
- Analysis of district profile to understand the agro-climatic and infrastructure availability of the region
- Identifying most promising agriculture industries that are available in Assam and which offer huge market potential.
- Capturing the existing situation of processing capacities and product portfolio
- Mapping of processing clusters, infrastructure, exports potential, government support, support institutions etc. of each of the identified value chain.

This section will also capture the prominent aggregation points in each value chain highlighting the prominent market channels and will further be useful in identifying potential market gaps to be addressed during the course of the project. At present with the change in the culture and standard of living of the people both in the urban and rural areas, the consumption and buying of processed food from the market have increased a lot

Assam is an agricultural state. Its 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 also suitable for the processing of edible items. But the growth of the units is not evenly distributed throughout the state. In some districts units processing certain items are yet to be started. The table 4.1 shows the district wise analysis of the various food processing units.

## 5.1. Rice

Rice is the principal crop of the North-eastern region contributing to the economy, food and nutritional security to the people. The crop is cultivated in all the states with varying degrees of diversity in terms of agronomical practices, varietal differences and end use reflecting the diversity in climatic conditions, terrain and local preference in the region. Assam is one of the center of origin for rice and houses a wide range of varieties including indigenous/ wild and cultivated. Some of the locally adapted pigmented, aromatic and quality rice landraces are cultivated for their local preference, high market, and social values. Almost every district Assam is home to local landraces like Bao (Red rice), Joha (Aromatic rice), Black/ Purple rice etc.

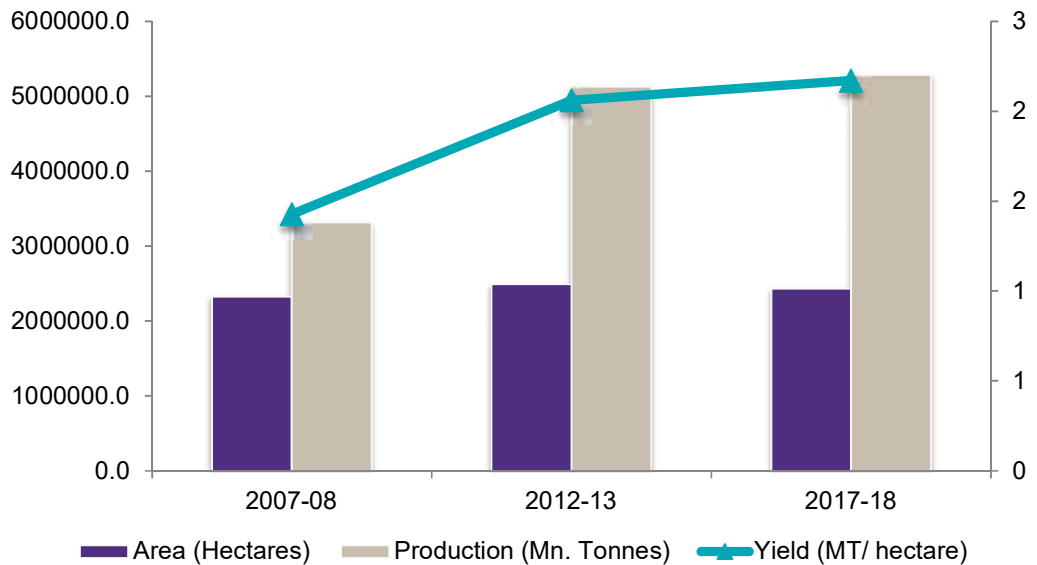
### Production Scenario and Production Clusters APART Districts

The state has its climatic and physiographic features favourable for rice cultivation and the crop is grown in a wide range of agro-ecological situations. It is grown from hill slopes of Karbi- Anglong to very deep-water areas of North Lakhimpur and Dhemaji during very wet humid months to drier period of the year. Wide variation of physiographic features and climatic characteristics have resulted three distinct growing seasons of rice viz., ahlu (Feb /March - June /July), sali (June /July - Nov /December) and boro (Nov /December -May /June).

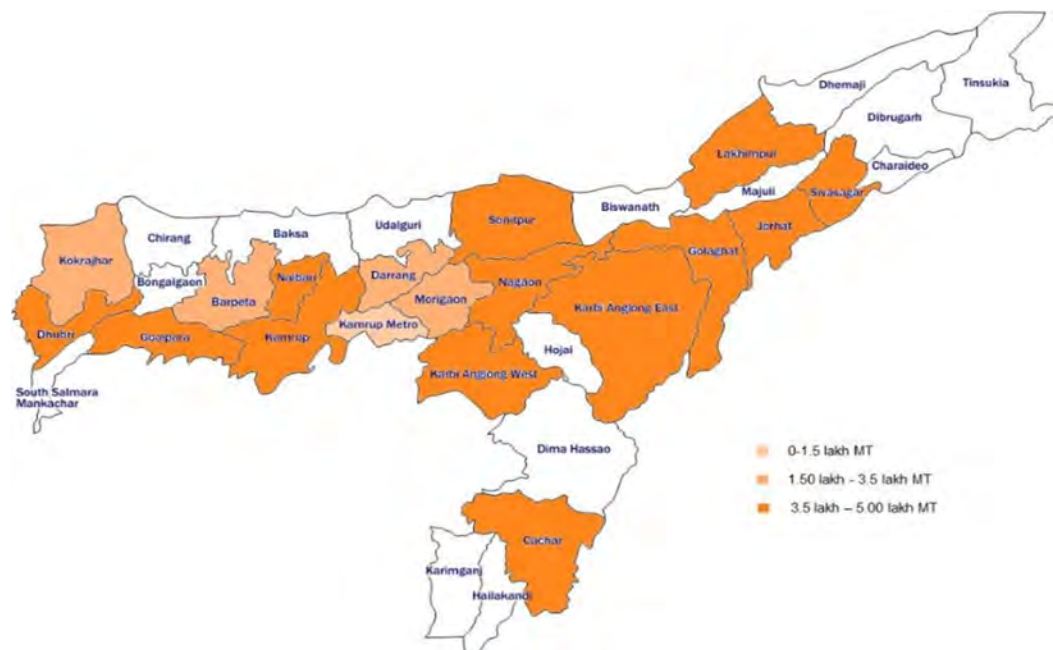
Some of the special classes of rice in the state include johas or aromatic rice, bora or waxy rice and chokuwa or soft rice. Most of the rice produced in the region is limited for self-consumption and any

additional quantity left is traded. The price of Joha rice is high as compared to any other rice in the domestic market. Further, many communities in the region also prepare high class rice beer out of bora rice. Sali or winter rice is dominant crop of the state covering 17 lakh hectares (71 percent of rice area) and contributing 73 percent of the total rice production.

The below graph shows the area, production and productivity trend for past 10 years for the rice crop in Assam. It can be seen that there is a consistent trend in the area and production data for rice in the District.



It may be seen from the below map that all the 16 districts of APART have significant production of paddy. Further, 12 out of 16 project districts together contribute to more than 60% of the total paddy production.

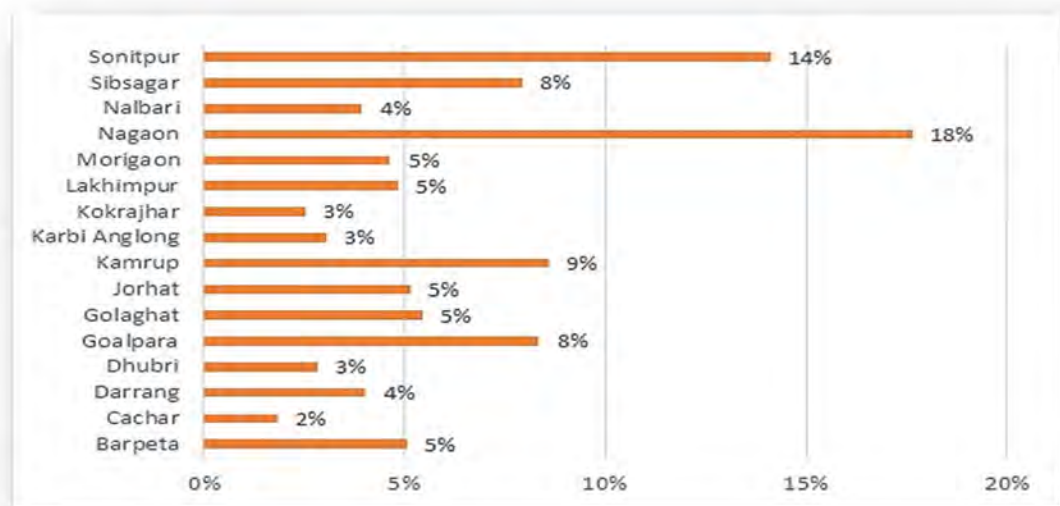


## Mapping of Processing Clusters

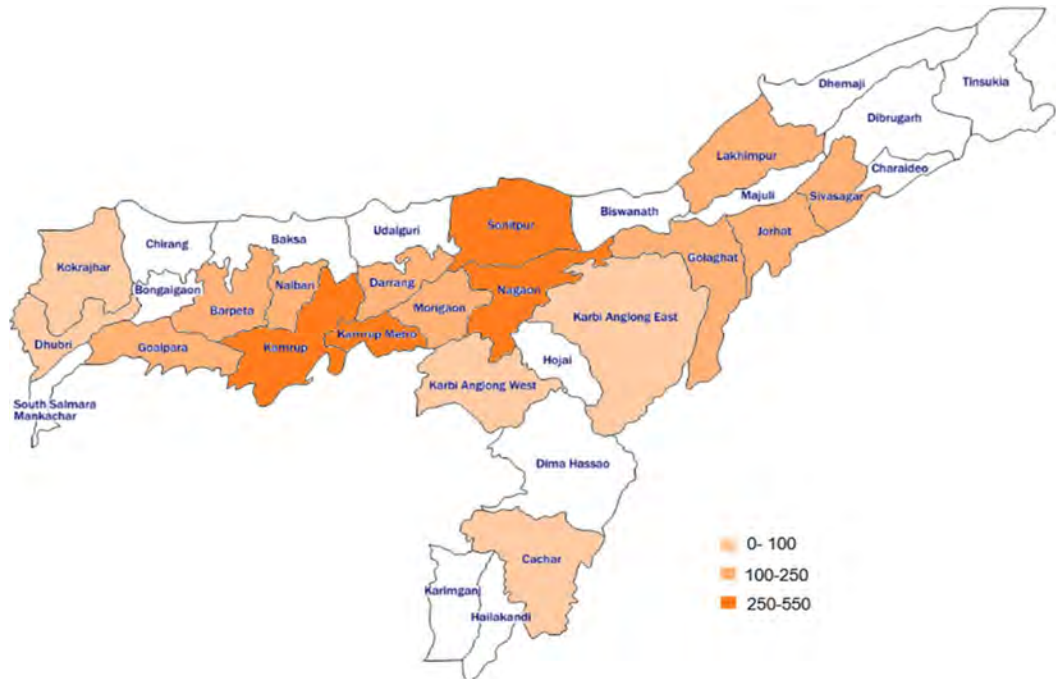
Out of 4605 food processing units in Assam there are 2592 rice processing units which majorly comprise of public rice millers, private rice millers and millers registered with FCI and other state agencies. Rice as a value chain accounts for total investment of INR 28242.74 lakh in Assam.

Major concentration of rice processing units is in districts like Nagaon, Sonitpur and Kamrup. It was noted through baseline survey that, these districts being near to major city and consumption centre i.e. Guwahati serves as preferred region for setting up of processing units.

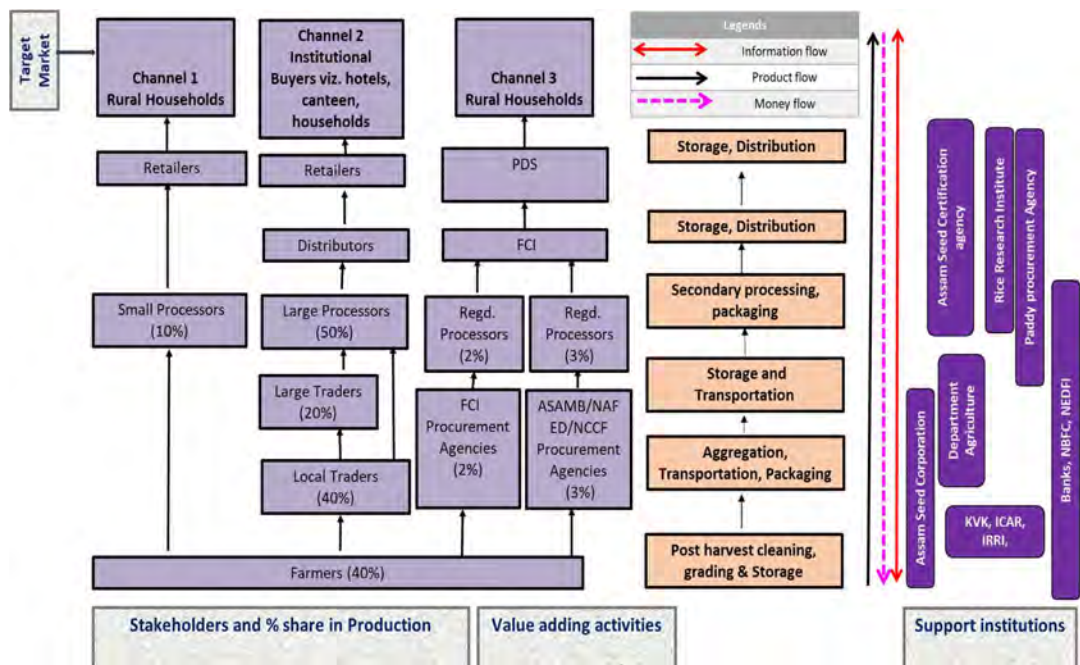
From the graph above it can be easily understood that the growth of the units is not evenly distributed in all the districts.



Due to the availability of raw materials within the state the cost of transportation of bringing the raw materials to the place of production is also quite cheap. The equipments required and installed within the state for rice milling are not very costly and are available locally itself. Further, they do not even require significant technical expertise. It is therefore, evident that more than 50% of the total agri-processing units are rice mills. Notably, the concentration of rice processing enterprises in various districts ranges from 10 to 460.



Indicative Value Chain Mapping:



There are 4 major production- distribution channels in the paddy value chain; Micro size units; small and medium units; Units into Value added paddy rice, black rice and red rice; Units into value added products as illustrated above. Lead larger farmers / local traders collect paddy from farmers at the village level and then sell the same to milling units. These traders collect the paddy from farmers in bags and transport the same in pick-up vans. Capacity of these vans is 2-3 tons. Primary processing is done by farmers at the farm level. After primary processing, farmers store their paddy in traditional godowns called Bhorals. Around 50% of paddy harvested by small and marginal farmers holding 1 or 2 acres each is used by farmers for own consumption, and the remaining is marketable surplus. Farmers carry paddy to local rice millers for milling & pay INR 80 to 100 per quintal for milling. In some parts of Assam, farmers sell their paddy at the nearby haat (weekly market) also where local traders / processors purchase paddy from them. Local traders aggregate and supply to large traders where not much o value addition is done and is further sold to processors.

Micro and cottage-sized units have a turnover of a few Lakh per unit. These units are typically into job-working operations for local farmers. Typically, larger micro and small sized units have investment in plant and machinery of upwards of INR 20-25 Lakhs. These have turnover of 4-5 Crore and above and process about 6 tons per day for 300 days a year. Many such small-sized units also have a 2 tons tempo or transport vehicle. Units typically have basic sheller, huller and rubber polisher and further may have de-stoner and de-husker depending on investment size.

The markets for different varieties of rice are regional, state level, NE region as well as export. FCI procures from multiple state level and central level procurement agencies and pays far more than market rates for many top grade varieties but their scale of operations is low and hence do not distort the market very significantly. Market demand for many varieties of paddy- local, NER and even export is growing adequately.

Value addition is mostly in terms of de-husking, cleaning, sorting, grading, polishing and milling. Value addition through steam plant / parboiling apparently yields a higher price in the market for paddy of upto 20-30% or INR 5-6 per Kg. The health benefits of red and black rice are many, propelling demand.

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. Development of the agriculture sector in Assam, therefore, contributes to inclusive development. Agriculture is considered as the major component and plays imperative role in state's economy. Agro-economic activities in Assam have paramount importance as source of livelihood to its people. As per the data available at Department of Agriculture, Govt. of Assam the total area under paddy cultivation in 2017-18 was estimated at 93.2% of the total area under food grain in the state and total paddy production is 52.8 lakh tonnes. The State contributes around 4.5% of India's total paddy production and ranks 9th among the paddy producing States.

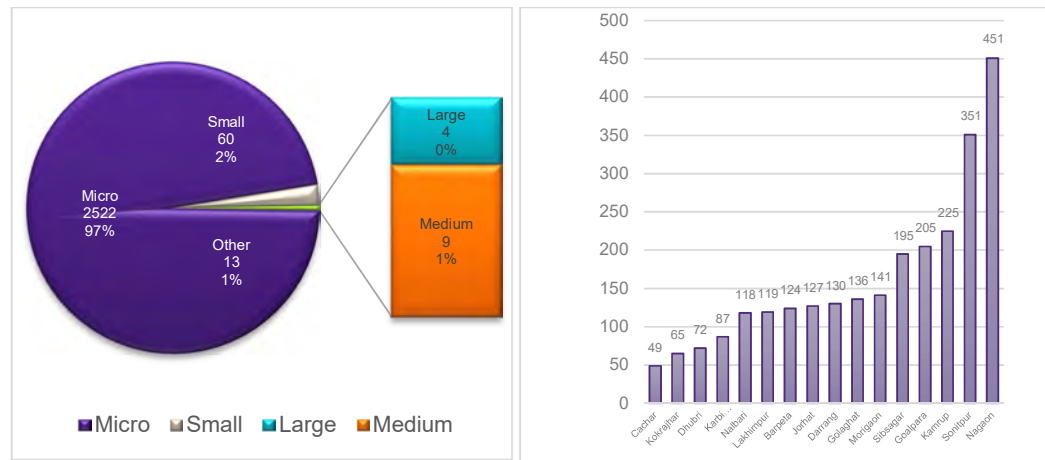
In terms of productivity of rice the national average is 2.6 MT per hectare and the productivity of rice in Assam is lower than the national average which stood at is 2.17 MT per hectare in the year 2017-18. The average yield in other States like Punjab is 3.98 MT per hectare, in Tamil Nadu it is 3.91 MT per Hectare and in Haryana it is 3.07 MT per hectare.

Food Corporation of India, the nodal central agency of Government of India, along with other State Agencies undertakes procurement of wheat and paddy under price support scheme. Coarse grains are procured by State Government Agencies for Central Pool as per the direction issued by Government of India on time to time. The agency was set up for effective price support operations for safeguarding the interests of the farmers, Distribution of foodgrains throughout the country for public distribution system (PDS) and Maintaining satisfactory level of operational and buffer stocks of foodgrains to ensure National Food Security. As per the information available FCI targeted to procure 35 lakh MT of rice from Assam. However, they were only able to procure 1.20 lakh MT from Assam, The reasons like delay in release of notification for procurement by FCI, willing of farmers, high transportation cost to farmers contributed to lesser procurement volumes. Agencies, like Assam State Agricultural Marketing Board, National

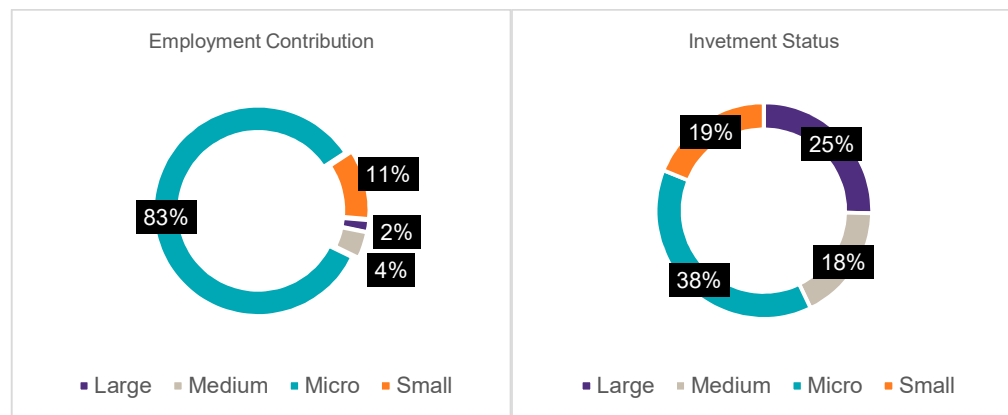
Federation of Farmers' Procurement, Processing and Retailing Cooperatives of India Ltd, (NACOF), National Agricultural Cooperative Marketing Federation of India Ltd.(NAFED) at State level were also involved in procurement on behalf of FCI.

### Rice (Value Chain) Analysis from Baseline Data:

As per the baseline analysis rice is the most prominent value chain in Assam, as 56% of the total units are involved in manufacturing of rice. A total of 2595 units of rice and allied products are operating out of Assam. Mostly the units are involved into public rice milling on job work basis. Out of the total units more than 97% are micro in nature. It can also be observed in the below graph that Nagaon District has maximum concentration of rice enterprises, followed by Sonitpur and Kamrup District.



Rice being the prominent crop for the State and has got highest number of units in Assam. Kindly refer below graph for analysis of turnover, investment and employment district wise in comparison to the number of units operating in Assam. The analysis of category wise contribution to important parameters like employment, investment along with registration status and product category is mentioned below:



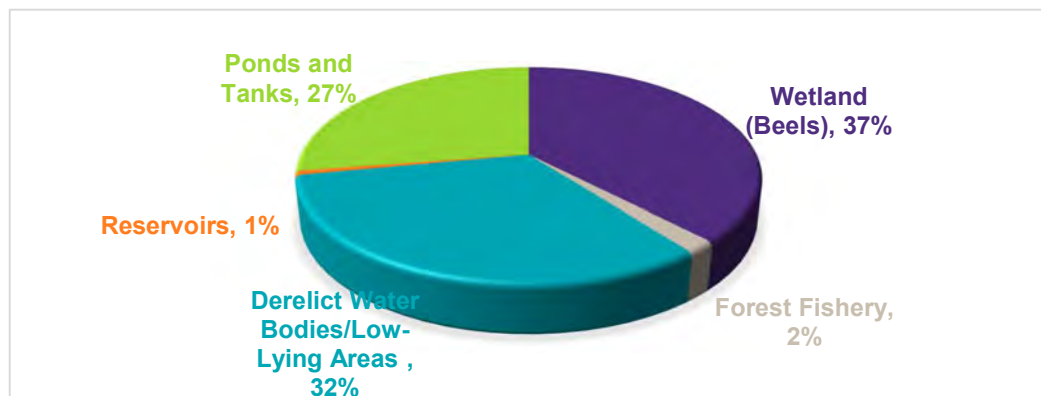


## 5.2. Fish

Fish are a class of aquatic vertebrates. Vertebrate means they have a spinal cord surrounded by bone or cartilage. Fish have gills that extract oxygen from the water around them. Fish are covered in scales which are often covered in a layer of slime to help their movement through water. Today, fish provides more than one billion poor people with most of their daily animal protein. Fish provides nutrients and micronutrients that are essential to cognitive and physical development, especially in children, and are an important part of a healthy diet. Fish as an affordable animal source of protein in some of the poorest countries and is the primary source of nutrition, creating growing demand for this staple.

### Production:

Fishery Resources, Assam in rich in inland surface water resources with total coverage of 266634 Ha except River Fishery and tributaries of 4820 km. The lentic water resources are in the form of ponds & tanks 73065 Ha, Wetlands (locally called 'beels') 100817 Ha, Derelict/swamp/low-lying areas 86204 Ha, Reservoirs 1713 Ha and forest fisheries 4835 Ha. While the river and tributaries are mainly capture fisheries, the wetlands are capture cum culture fisheries and the ponds/tanks are purely the culture fisheries. Both ponds/tanks and wetlands are the prime potential resources for production enhancement



Fish production in Assam during the year 2017-18 was estimated at 3.27 lakh MT. The annual growth of fish production is average 4% during last five years. Every year, culture fisheries area in the form of ponds and tanks is expanding due to construction of new ponds by large numbers of farmers throughout the state for commercial farming. The table below indicates fish production in Assam and its growth rate during last 5 years. Average productivity of pond fisheries in the state was about 1.5 ton/ha/yr. This has been enhanced to around 3.2 kg/ha/yr under World Bank assisted AACP. However, there is scope to enhance productivity to a level of around 6 ton as is already being achieved by few progressive farmers in the state. In case of beel fisheries, production enhancement is from 173 kg/ha/yr to 1008 kg/ha/yr under the Project. River fisheries are presently revenue generating resource and source of fish biodiversity and conservation.

Fish seed production in Assam is around 8000 million fry in the year 2017-18. Spawn is mostly produced by 523 hatcheries though private and Govt Eco hatcheries. Over 700 seed growers and the hatchery farms mostly produce fry and production of stackable size (150-200 mm) seed is very poor. Quality of fish seed is poor because of inbreeding depression and breeding of undersized brood fish.

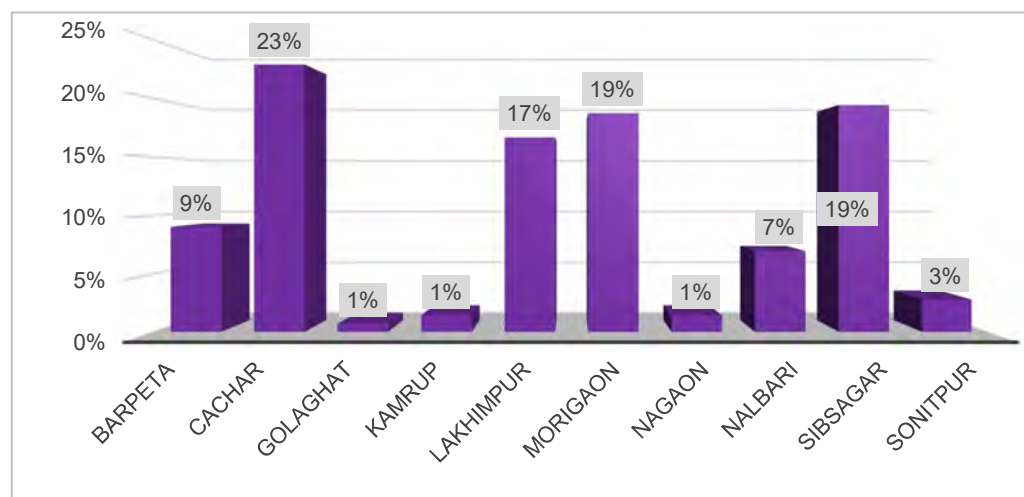
Year	Fish Production-Requirement and GAP (in lakh MT)		
	Fish production	Fish requirement @ 11 kg/individual per annum	GAP in fish production
2013-14	2.67	3.25	0.58
2014-15	2.82	3.31	0.49
2015-16	2.94	3.36	0.42
2016-17	3.07	3.42	0.35
2017-18	3.27	3.48	0.21

Over the period of 5 years the gap between production and consumption is gradually narrowing. However still there is a gap of 0.21 lakh MT in the last year 2017-18.

Fish is the major staple food for the Assamese community. The average consumption of fish per capita per year is 11 Kg. Therefore, Assam export fish from the states like Andhra, Uttar Pradesh.

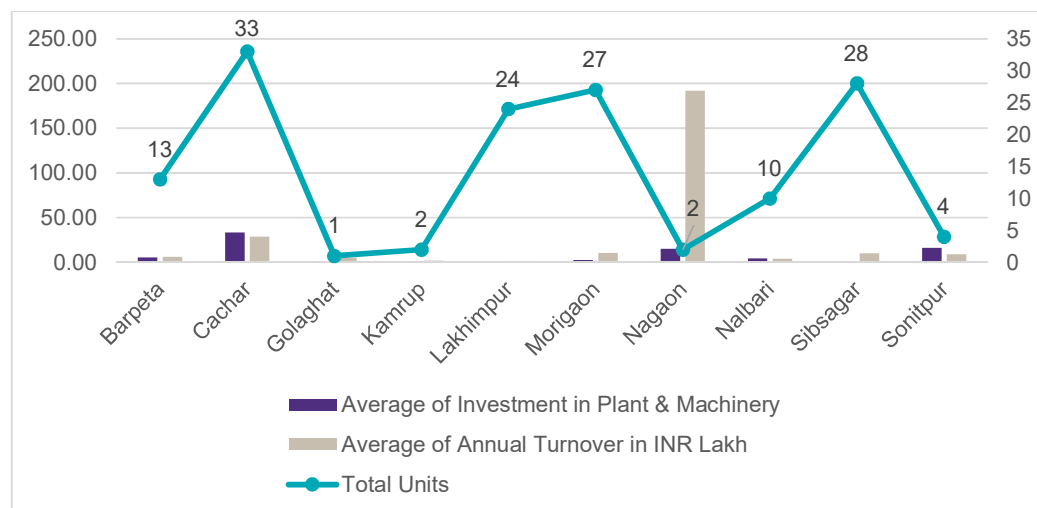
### Analysis of Baseline Survey:

The total numbers of fishery unit as per baseline has been found to be 144 nos. The above mentioned graph represent the fish enterprises in the project district. Highest number of fish unit as per baseline survey is in Cachar district i.e. 33 no. with 23%. Followed by 28 in

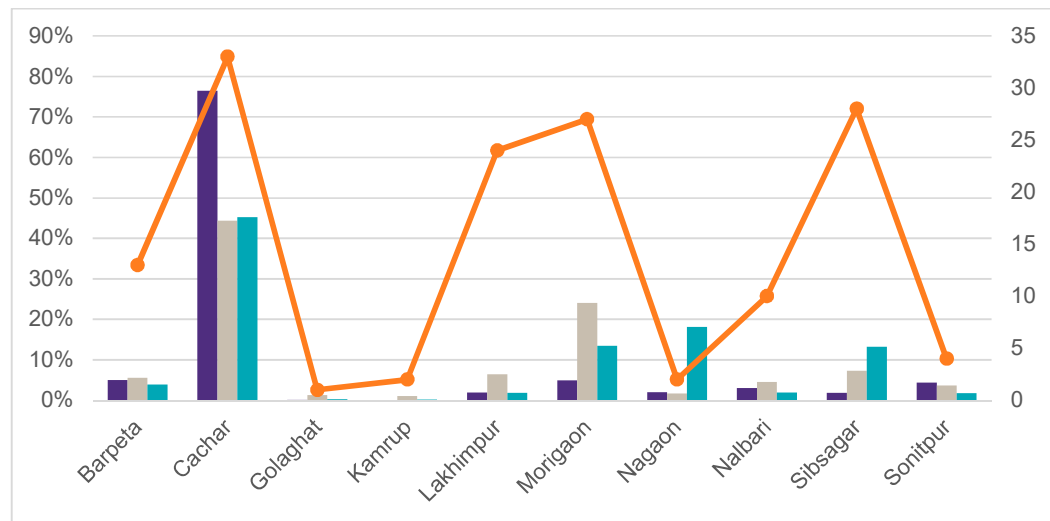


Sibsagar, 27 in Morigaon and 24 in Lakhimpur districts respectively.

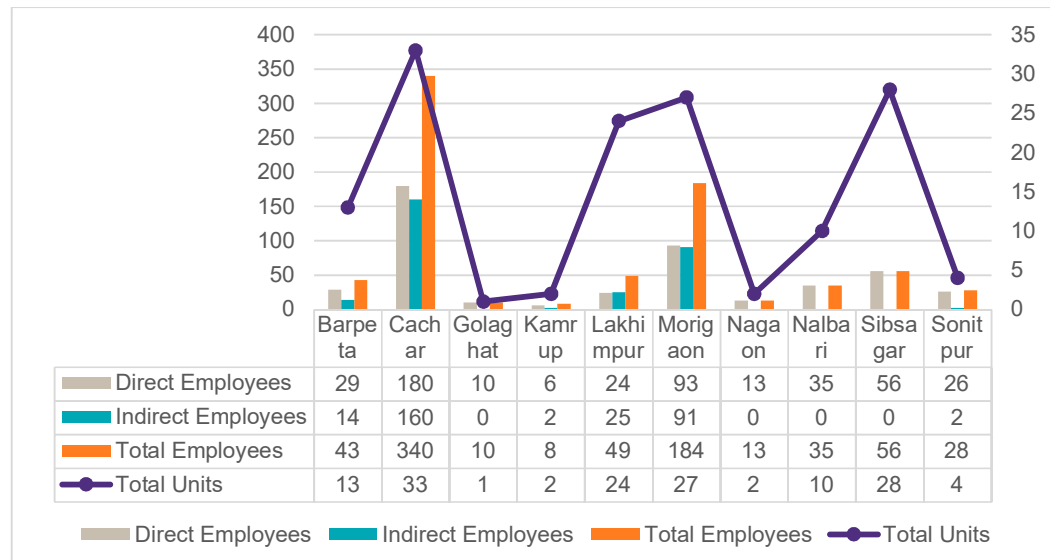
The average investment in the plant and machinery of Cachar district is found to be highest among all district i.e. INR 33.73 Lakh. Followed by Sonitpur district INR 16.05 Lakh, INR 15.00 lakh in Nagaon. The annual turnover is found to be highest in Nagaon district, which is INR 192 Lakh. Next highest turnover is INR 29.00 Lakh coming from Cachar district with most number of fishery unit located. The average turnover across the district is INR 1.87 Lksh. These units are processing raw fish in dry form and sold it to market.



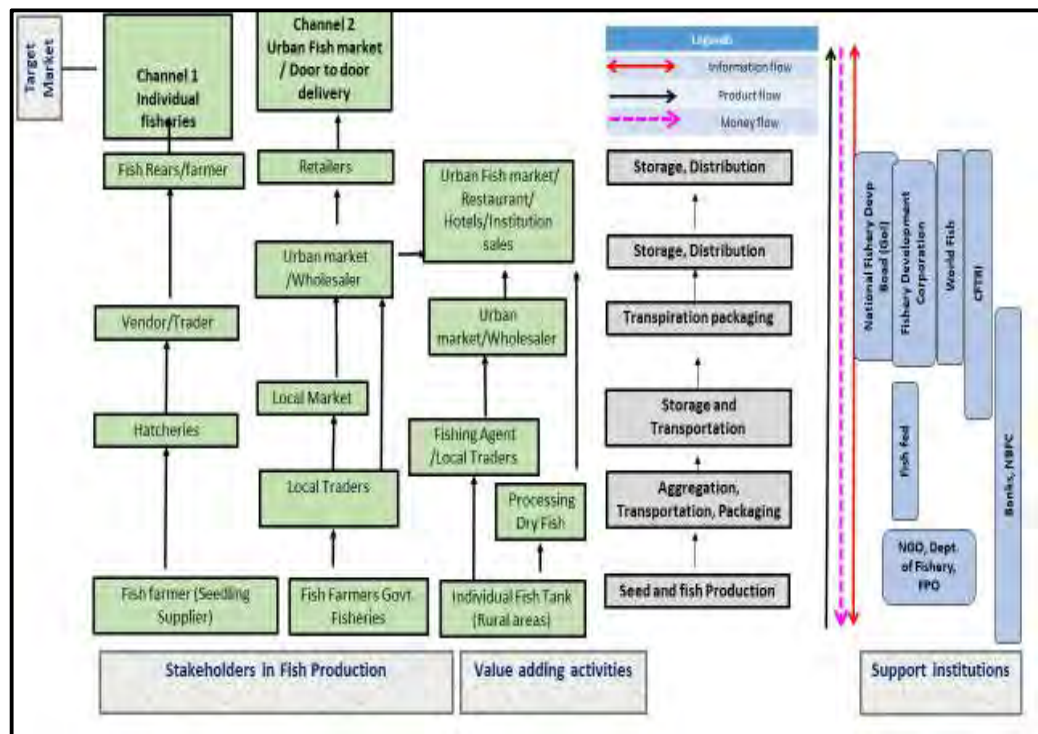
As evident from the graph above Cachar district has highest share in investment in 76% in plant and machinery, 45% in annual turnover and 44% in employment across the district. Followed by Morigaon where employment is 24% and annual turnover is 13%. Lowest is in Golaghat district.



As per baseline survey highest no of employment provided by Cachar district which is 340 noes, followed by Morigaon 184 and Sibsagarh 56 no. However, in terms of individual units average 10 no of employee in Cachar and Golaghat and 7 each by Nogaon, Morigaon and Sonitpur district. Lowest by 2 and 3 by Sibsagrah and Barpeta respectively.



## Value chain mapping of fishery



There are 4 major production and distribution channel in the fishery value chain. Fish seedlings are transferred to Hatcheries to traders and to fish farmers for rearing. Fish production is carried out at Govt farm level and at Individual level. Govt farm and Beel (large water body) is leased to a Fish rearer in yearly basis at a bided price. On the other hand, large numbers of Individual fish producers have their own Pond (water body) to rear fish. The size of the pond varies from 1 bigha of land to 100 bigha of land. The major variety of fish grown in the districts are Rohu, Katla, Craps (which are fast grown) and other local variety of fish. After harvesting of fish by farmers either through a contract basis or at per kg basis sold to a local trader. In terms he sold to wholesaler at urban market and some part in local market also. In case of Govt farm after harvesting by lessor, he sells fish through a bidding process as per Govt norm. The price variation of fish depends upon it size and weight. Fish less than 1 kg of weight is sold at 90 kg to traders and reach consumers at 120-140 Kg. Whereas fish more with 2-3 Kg weight sold at a price INR 200 to traders and reach consumers at a price INR 300-350 per kg.

In terms of fish processing or value addition in Assam dry fish is the most common form of fish processing in the district. Micro and small dry fish processors dry local fish that are catches from the river and ponds. They mostly use sun dry as a sources of energy to dry the fish. The ration of raw fish to dry fish is 4: 1 Kg. The micro and small dry fish processor sold their dry to local market, where local traders are the customer. These local traders are sold and also export to other North Eastern states like Nagaland, Mizoram, Manipur through traders based at respective states. Price of dry fish varies from 300 /Kg to 700/Kg depending upon the variety such as “Mowa fish” cost is INR 700 /kg sold at Sibsagar market.

The average turnover of micro and small dry fish processors is in the range of INR 10 Lakh to 25 lakh per year. Potential to be increases at least 2 times through commercial intervention.

There is no organised market or data available for dry fish. Though Jagiroad dry fish market is the largest dry fish market is the North East region. However dry fish sold in this market is imported from other states and are sea fish.

There are growing demand of dry local fish in the region, however due to lack of any scientific and commercial intervention fish processing is a low volume and low quality product.

## 5.3. Milk

Milk is the high potential value chain of the North-eastern region contributing to the economy, food and nutritional security to the people. Milk is produced in all the states with varying degrees of diversity in terms of agronomical practices, varietal differences and end use reflecting the diversity in terrain and local preference in the region. Assam is one of the center of origin for Milk.

### Production Scenario and Production Clusters APART Districts

Milk production in the state carried out throughout the year. Contrary to the recommended norms of Indian Council Medical Research which is 208 ml per head per day, per capita /per day milk consumption in Assam is only 74 ml, according to the Economic Survey of Assam, 2015-16.

There has been a steady growth of milk production in Assam in recent period. However, estimated per day per capita consumption has remained almost same with the increase in population.

Total milk production in Assam during 2014-15 was 872.98 million litres, against 857.39 during 2013-14. This was a 1.9 per cent growth from the previous year.

The survey reveals that milk processing capacity has been increased from 15,000 litres per day in 2006-07 to 2,16,000 litres per day in 2014.

Indigenous cattle still contribute to large share of the state's total milk production with 54.41 per cent of the entire milk production. Contribution of crossbreed milk to the entire milk production is 28.18 per cent. Altogether Cattle milk contribute to 82.61 per cent of the total milk production

of the state. Sharing of Buffalo milk to total milk production is 14.46 per cent and goat milk 2.94 per cent.

The utilization data of milk, published by State Animal Husbandry and Veterinary Department has shown that approximately 41.28 per cent of total milk is consumed by households as fluid milk. The remaining quantity 59.70 per cent is sold as fluid milk, and only 29.43 per cent is used as milk product.

## Milk Processing

Dairy processing occurs world-wide. The basic dairy processes haven't changed much. Although, specialised processes such as ultrafiltration (UF), and modern drying processes that were formerly discharged have increased the opportunity for the recovery of milk solids. Moreover, all processes have become much more energy efficient. The use of electronic control systems has reduced the cost and led to improved processing effectiveness.

## Milk production:

The processes taking place at a typical milk plant include:

- Receipt and filtration/clarification of the raw milk
- Separation of all or part of the milk fat (for standardisation of market milk, production of cream and butter and other fat-based products, and production of milk powders)
- Pasteurisation
- Further product-specific processing
- Packaging and storage, including cold storage for perishable products
- Distribution of final products

## Indigenous Milk Products

**Curd:** Curd is very common produced product in Assam.

**Ghee:** Ghee production.

**Paneer:** Paneer refers to the indigenous variety of Assam.

**Products of Chhana:** Sandesh, Rossogolla.

## Milk Procurement

Milk production is mostly carried out in rural areas from where it is transported to the milk processing or selling centres of Assam. Milk is regularly collected and transported twice a day, morning and evening. The usual methods of milk collection and reception at a dairy plant are:

**Milk procurement through individual producers:** In this case, milk is brought to the dairy plant by the individual producers in their own vessels of any type. This is possible for those producers who are located nearby milk collection centre.

Milk collected through co-operative organizations: In this case, one or more co-operative societies form an organization which is responsible for the uninterrupted supply of milk to the dairy plant. This system is beneficial to the producers due to the absence of middlemen.

Milk is collected at various milk collection centres from nearby villages in 40 litre cans. It is weighed, tested for fat content and kept ready to be dispatched to the milk chilling centre. This milk is then picked from these collection centres in an open truck and brought to the milk centre or dairy plant.

Based on the supply of milk the major player has introduced in Assam are

1. West Assam Milk Producers Co-operative union Limited and
2. Sitajakhala Milk Producers Co-operative society limited.

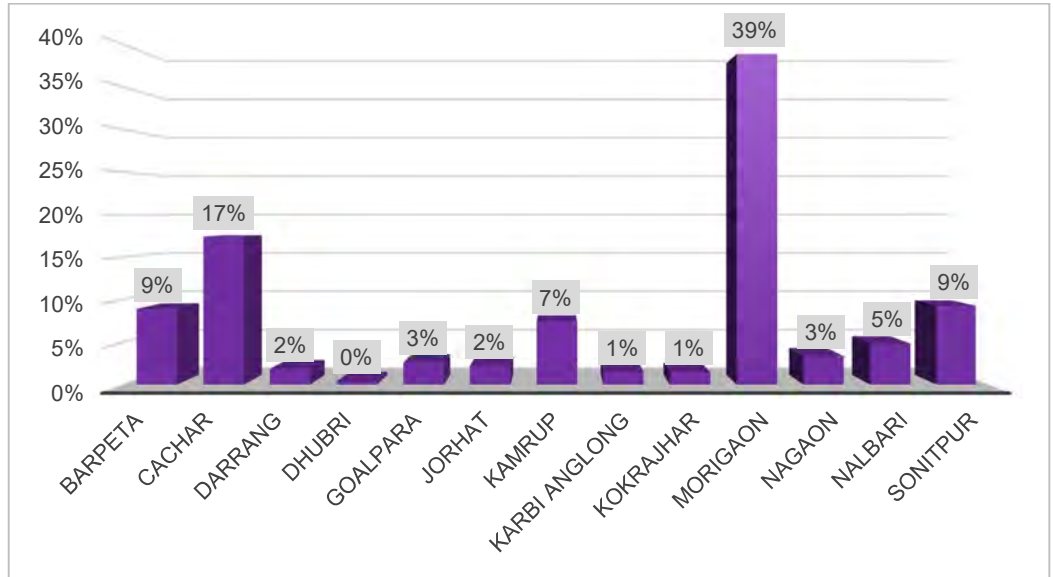
Purabi is the brand name for milk and dairy products manufactured by West Assam Milk Producers' Co-operative Union Ltd. (WAMUL). Approved by FSSAI, it is one of the largest and most active dairy units in entire North East India.

WAMUL came into existence in 1976 as a milk union of Milk Producers' Co-operative of Nagaon, Morigaon, Goalpara, Nalbari and Kamrup districts of Assam. The Union was set-up under the Operation Flood Programme of National Dairy Development Board (NDDB) for dairy development in Assam. Over time, it has gone one to create a symbiotic relationship between milk producers, techno professionals, the market and the consumers.

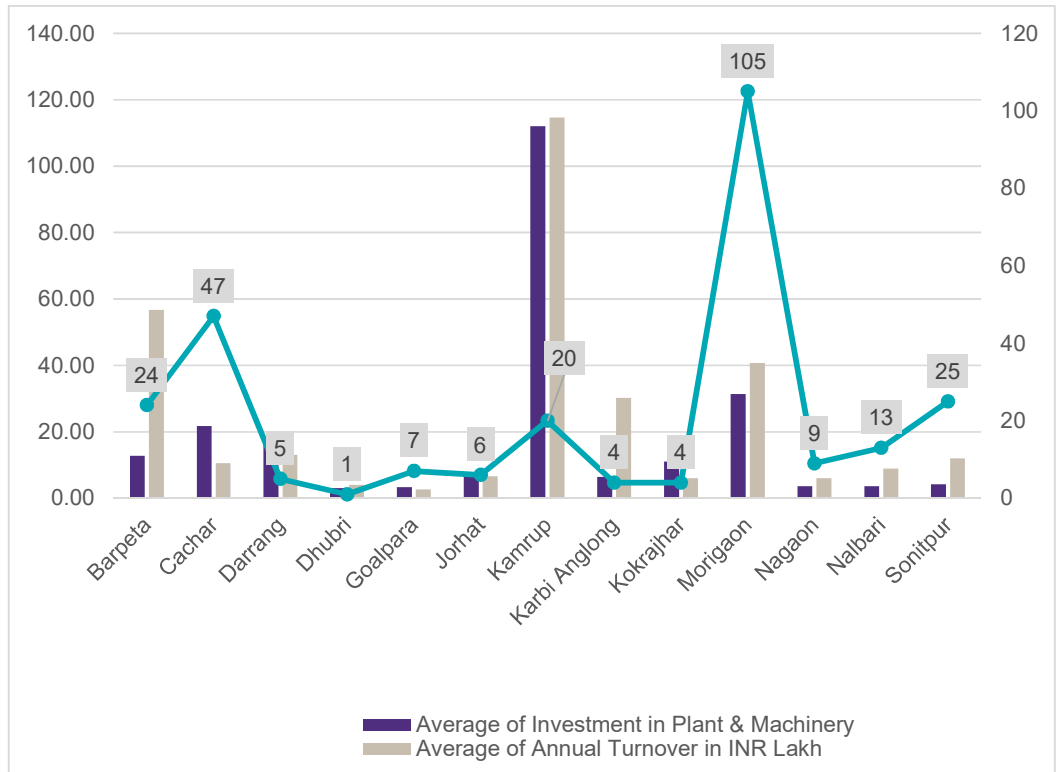
Sitaiakhala Milk Producers Co-operative Society Ltd., Jagiroad : Sitajakha Milk Producers Co-operative Society Ltd. Jagiroad was established in Jagiroad ( now in Morigaon District) and registered the year 1958. Originally there were 17 members including the chairman and secretary with a capital of Rs. 200. During this Forty-Five years, the society has made a remarkable progress in fostering dairy activities. The area covered by it is approximately 150 sq. km. covering Southern and South-West part of Morigaon District and Eastern part of Kamrup District. The Society has two classes of members, namely, Producer members and shareholder members. Presently, there are 400 producer members and 252 share holder members. The Co-operative society collects about 10,000 litres of milk per day from its producer members. The Society is selling milk locally at Jagiroad and supplies to Nagaon under Nagaon Town Supply Milk Scheme, Central Dairy, Khanapara (Guwahati), 59 WAMUL,Guwahati and in some private dairy farms at Guwahati. The society also produces milk products, namely, Cream, Ghee, Curd, Paneer etc.

## Analysis of the baseline survey

As per the below graph Morigaon has the highest milk processing unit with 39% share among all the 16 Districts of Assam.

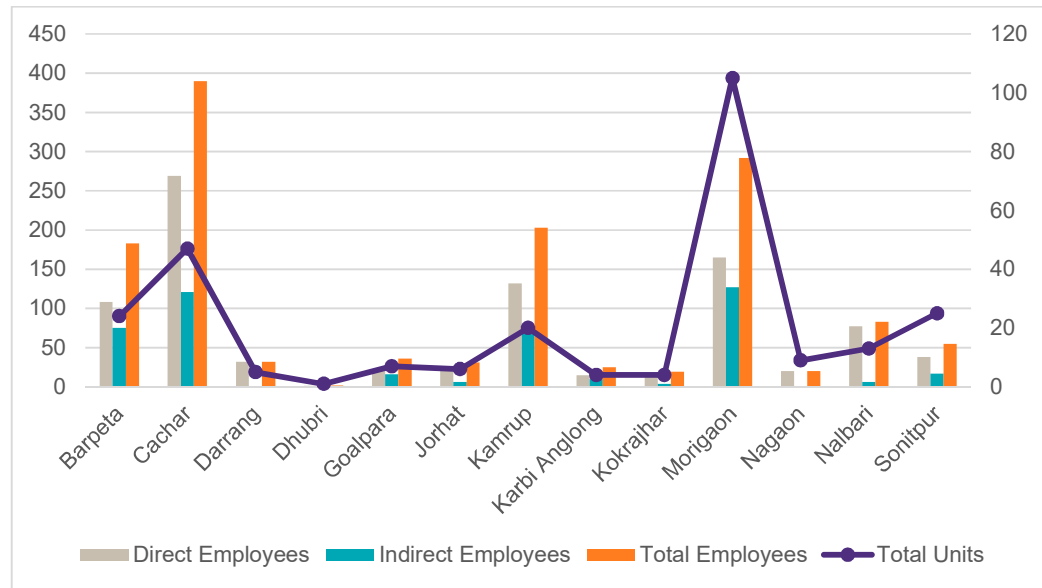


Below graph is showing the average investment in plant & machineries and average of annual turnover in INR Lakh.



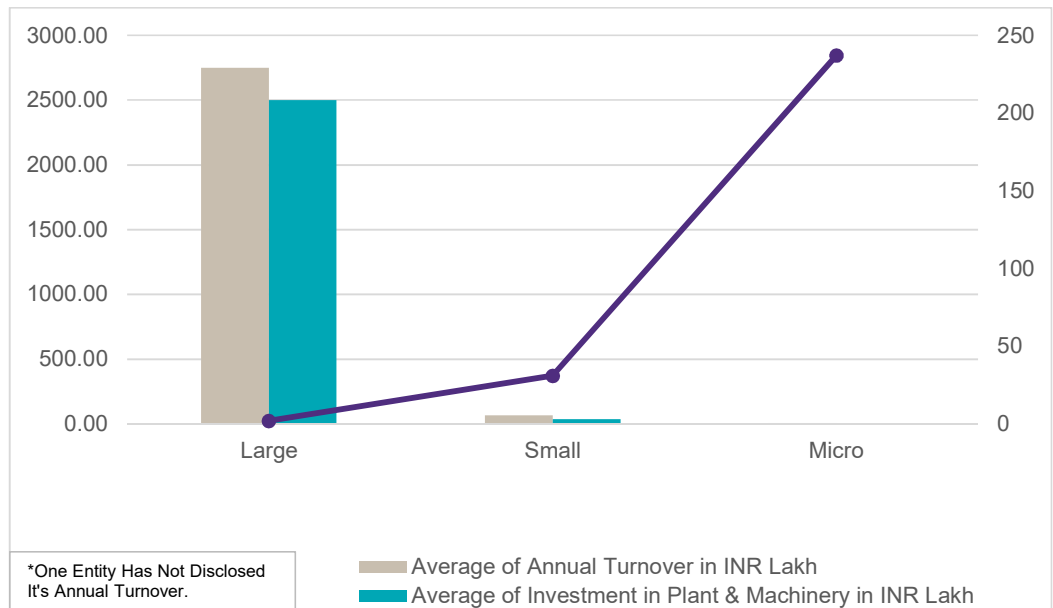
The total unit District wise for 16 APART Districts with average investment in plant & machinery and average of Annual Turnover in INR Lakh has shown in the diagram. Kamrup district has highest average of investment in plant & machinery of 12.06 Lakh and annual turnover of 14.63 Lakh.

Total Distribution of Employment has been shown into the below chart.



The chart has shown the direct employees, indirect employees, total employees and total units of 16 district under APART project. Cachar has highest staff of 390 numbers followed by Morigaon of total staff 292.

The below graph shows the analysis of average annual turnover of Large, Small and Micro Units operating our of Assam:



## 5.4. Mustard

Mustard seeds (Brassica Napus) also known as Rape, Oilseed rape, Rapeseeds and Canola are very widely cultivated throughout the world. Mustard seed is the third leading source of vegetable oil in the world after Soya bean oil and palm oil. Notably world’s second leading sources of protein meal after soybean meal. Mustard seed oil content varies from 33% to 46% and average oil recovery is around 32% to 38%. After oil extraction, the remaining part of the seed is used to produce rapeseed/mustard meal, an important source of cattle and poultry feed. It is basically a winter crop and it requires a temperate climate to prosper.

Indian mustard (Brassica juncea) is predominantly cultivated in the states of Rajasthan, Uttar Pradesh, Haryana, Madhya Pradesh, and Gujarat which contribute 81.5% area and 87.5% production (2001-02 to 2005-06). During 2016-17, more than 80 % of the total rapeseed-mustard acreage and production in the country is accounted for by these states, out of which more than 40% contributed by Rajasthan state alone. The crop takes 135-150 days to mature.

### Production Scenario and Production Clusters APART Districts

Rape & Mustard is the principal oilseeds grown in the State which occupied about 8% of the total crop area. The area of this crop during 2017-18 was 2.9 Lakh Hectare, the production was 1.85 Lakh MT and the productivity was 639 Kg/Ha. It is significantly lower than the agriculturally advanced states like Punjab, Gujarat and Haryana. This lower productivity is mainly due to non adoption of improved method of cultivation. Moreover, method of cultivation remains traditional and no technological breakthrough have been achieved and hence productivity of this crop has not increased.

The highest productivity states are Gujarat (1396 kg/ha), Haryana (1343 kg/ha) and Rajasthan (1185 kg/ha) with overall national yield of 1151kg/ha, whereas productivity of Assam is 639 (kg/ha) which is low compare to overall national yield. Assam is the seventh highest mustard producing state in India. Lakhimpur, Kokrajhar, Dhubri, Barpeta, Sonitpur & Nagaon are the highest producing districts of the Assam.

The below table shows the area, production and productivity during the year 2017-18

Crop	Area (Lakh Ha)	Production (Lakh MT)	Productivity (Kg/Ha)
Mustard	2.90	1.85	639

It may be seen from the below map that all the 16 districts of APART have significant production of mustard. Further, 10 out of 16 project districts together contribute to more than 65% of the total mustard production.

### Mustard production map



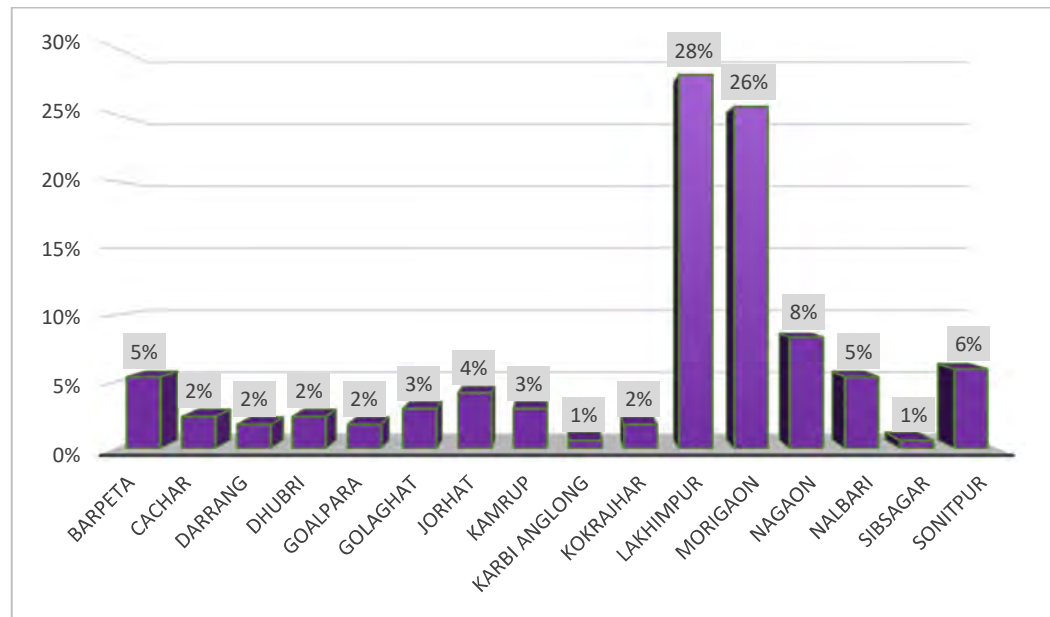
### Mapping of Processing Clusters:

Out of 4765 food processing units in Assam there are 168 mustard as their main value chain which is only 4% of the total agro processing units. Mustard as a value chain accounts for total investment of INR 2546.24 lakh in Assam.

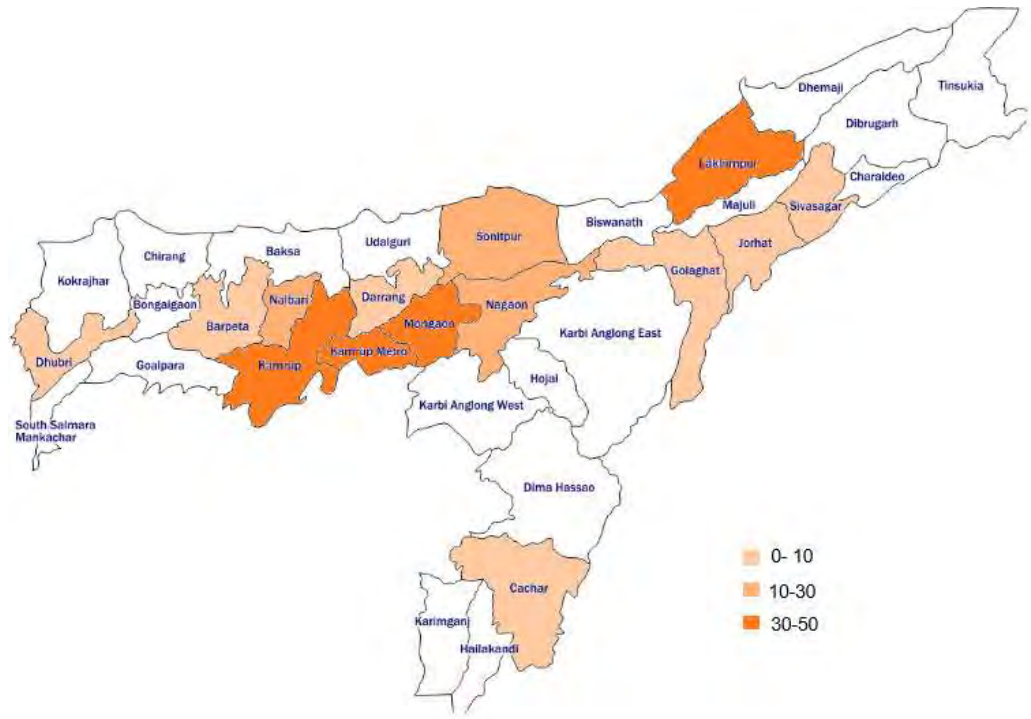
Major concentration of mustard processing units is in districts like Lakhimpur, Morigaon, Nagaon, Sonitpur & Barpeta. It was noted through baseline survey that, these districts being

near to major city and consumption centre i.e. Guwahati serves as preferred region for setting up of processing units.

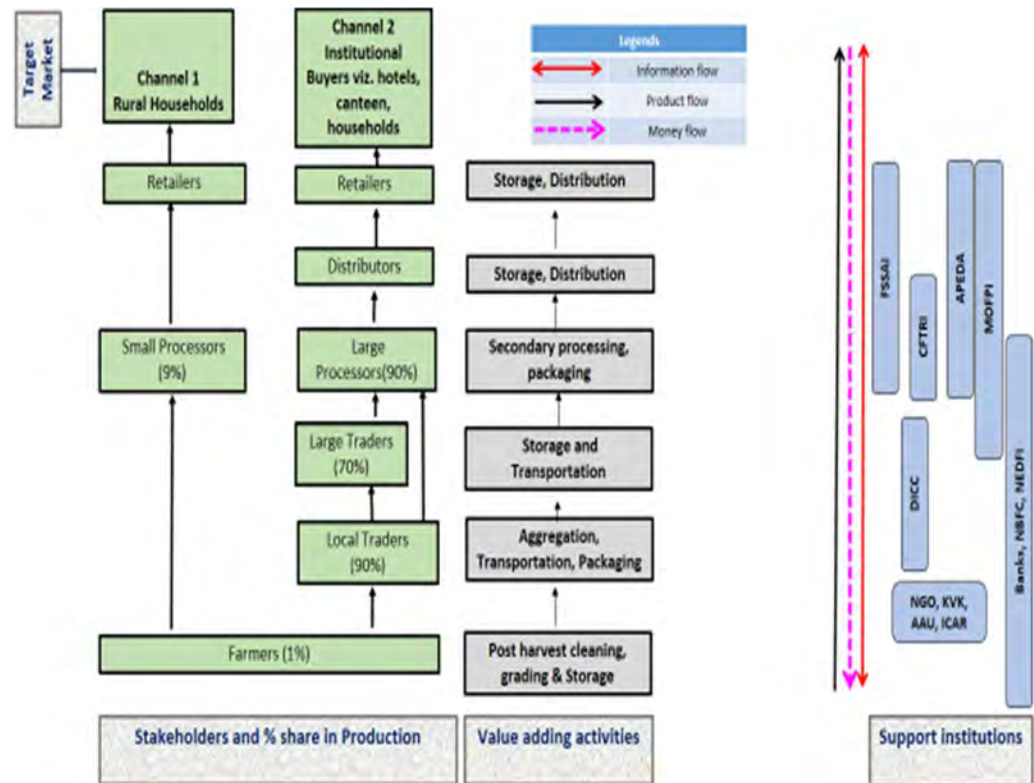
From the graph above it can be easily understood that the growth of the units is not evenly distributed in all the districts.



Due to availability of raw material in Lakhimpur, Morigaon, Nagaon, Sonitpur, Nalbari & Barpeta district, the concentration of mustard processing units in these district are more. In Assam, around 88% units are micro-sized, these units have only oil expeller and manual filter. These units are mostly involve in public milling. Average investment & turnover in micro category 5.21 Lakh & 25.54 Lakh respectively. There are two solvent extraction plants in Assam



**Indicative Value Chain Mapping of Mustard:**



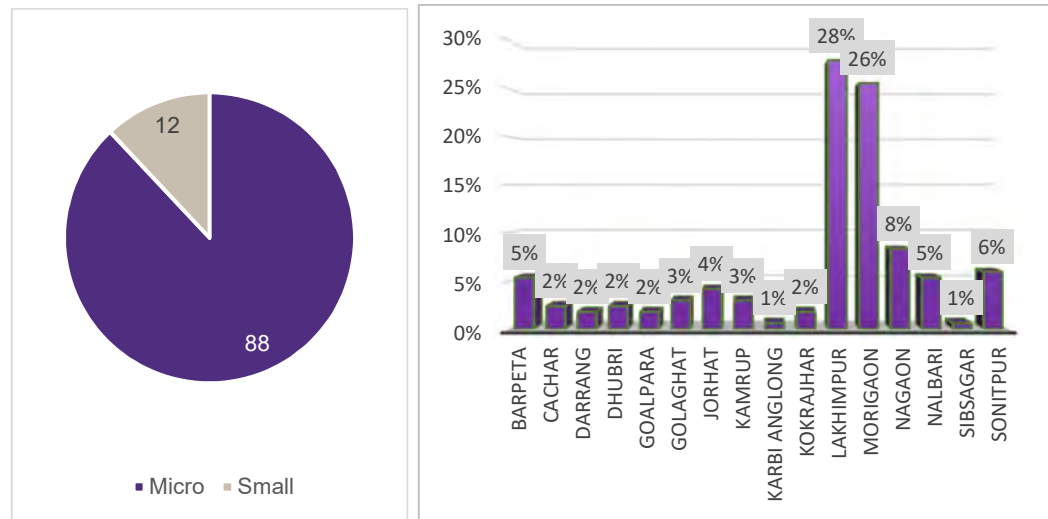
After post-harvest, there are two major distribution channels. In first channel, small processors purchase mustard seed directly from farmers and after processing (mustard oil), these units sell their produce to retailers and then it reaches to end consumer. In second channel, local traders procure from farmers and aggregate the produce. After aggregation, local traders do the primary processing manually like cleaning and packaging and later transport it to large traders / processors. After secondary processing, products are sold to distributors who later sell to retailers and then to end buyers like hotels, canteen & households.

Around 88% of the units are micro-sized, average annual turnover is around INR 26 Lakh and average investment is INR 5.21 Lakh. Contribution of micro category enterprises is 68%. Similarly, in small category, average investment is INR 88.75 Lakh and average turnover is INR 216.84 Lakh.

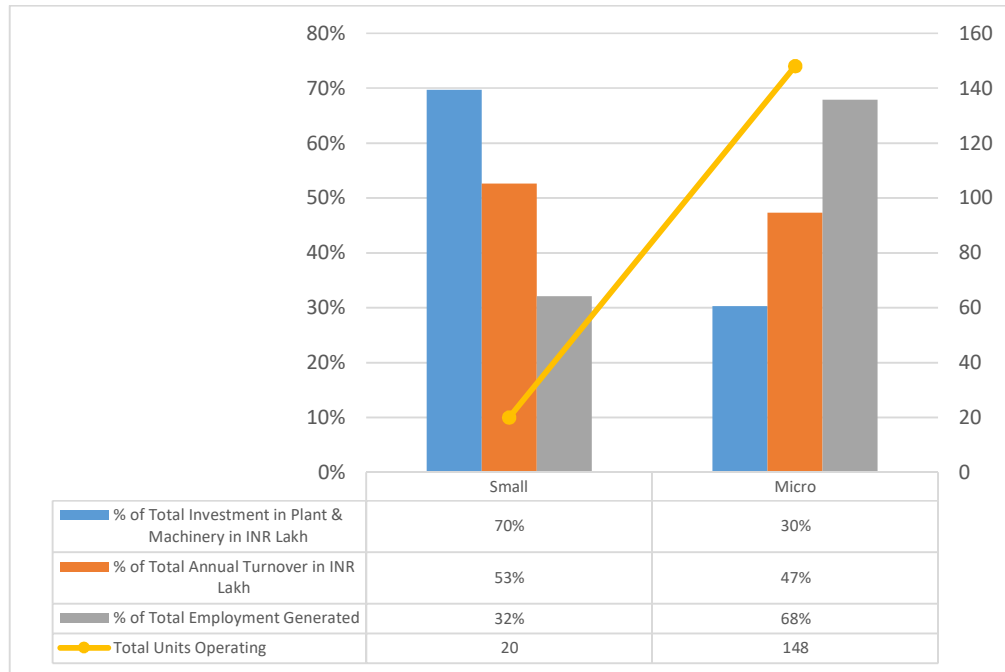
Due to huge local demand of mustard oil in the Assam, whatever mustard oil is produced are sold within state only. By-product oil cake are sold to cattle feed units in Sonitpur, Kamrup, Nagaon & Morigaon district. Mustard oil selling price per litre is INR 80-85 and oil cake selling price is INR 23 per kg. Some processors in Guwahati are procuring oil tanker from Rajasthan and later they are packaging and selling it to local market. Few companies from other states are also marketing blended oil, which is cheaper compare to mustard oil, this blended oil is also spoiling the market.

### Mustard (Value Chain) Analysis from Baseline Data:

As per the baseline analysis mustard is the most prominent value chain in Assam, as 4% of the total units are involved in manufacturing of mustard oil. A total of 168 units of mustard oil and allied products are operating out of Assam. Mostly the units are involved into public mustard milling on job work basis. Out of the total units more than 88% are micro in nature. It can also be observed in the below graph that Lakhimpur district has maximum concentration of mustard processing enterprises, followed by Morigaon and Nagaon district.



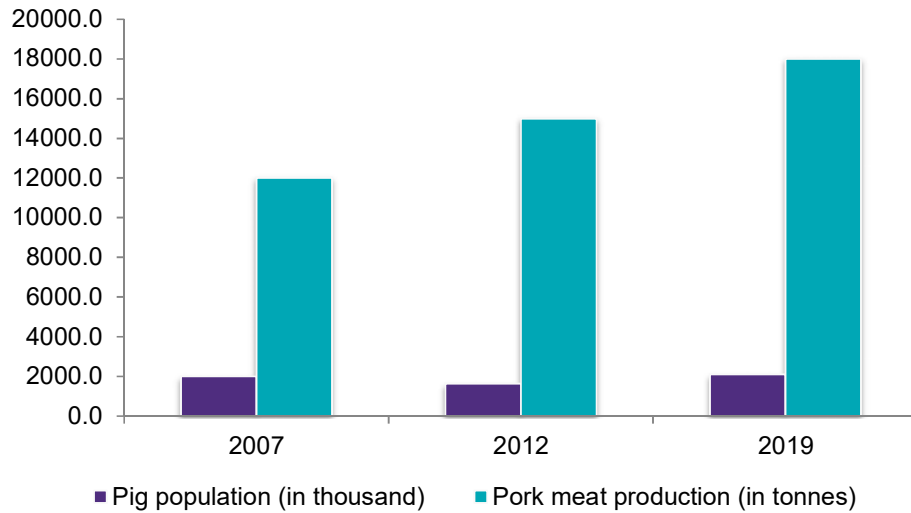
Mustard being the prominent crop for the State and has got 168 number of units in Assam. Kindly refer below graph for analysis of turnover, investment and employment district wise in comparison to the number of units operating in Assam. Out of total units in the district, 64% are registered and rest 36% are not registered. The analysis of category wise contribution to important parameters like employment, investment along with registration status and product category is mentioned below:



## 5.5. Piggery

The North Eastern Region is dominated by a huge non vegetarian population where the consumption of pork meat is quite high in comparison to the other states of India. The sector is still highly unorganised in nature across the country with rearing done in traditional manner by small holder farmers with low-input production system which is primarily demand driven. 70% of the country's pig population is reared under traditional manner except for some limited number of semi-commercial pig farms in Kerala, Punjab and Goa. In Assam too the concept of commercialisation is gradually picking up with few entrepreneurs engaged in commercial production of high yielding cross breeds particularly in the districts of Kamrup, Sonitpur and Lakhimpur districts of the state.

Of the entire livestock population about 1.7% is contributed by pigs across the country as per data of the 20<sup>th</sup> livestock census. Distribution of pig population across the country is skewed in nature with higher concentration of pig population in the eastern (2.8 million) and north-eastern (4.5 million) states; highest being in Assam (2 million), followed by Uttar Pradesh (1.35 million), West Bengal (0.82 million), Jharkhand (0.73 million) and Nagaland (0.70 million). Most of the pig population is again in the tribal belts of the country where the people are non-vegetarian. While the total pig population in the country is on a decline in comparison to the previous census of 2012 by 12.03% the state of Assam has recorded an increase in pig population by 28% in comparison to the last census of 2012.

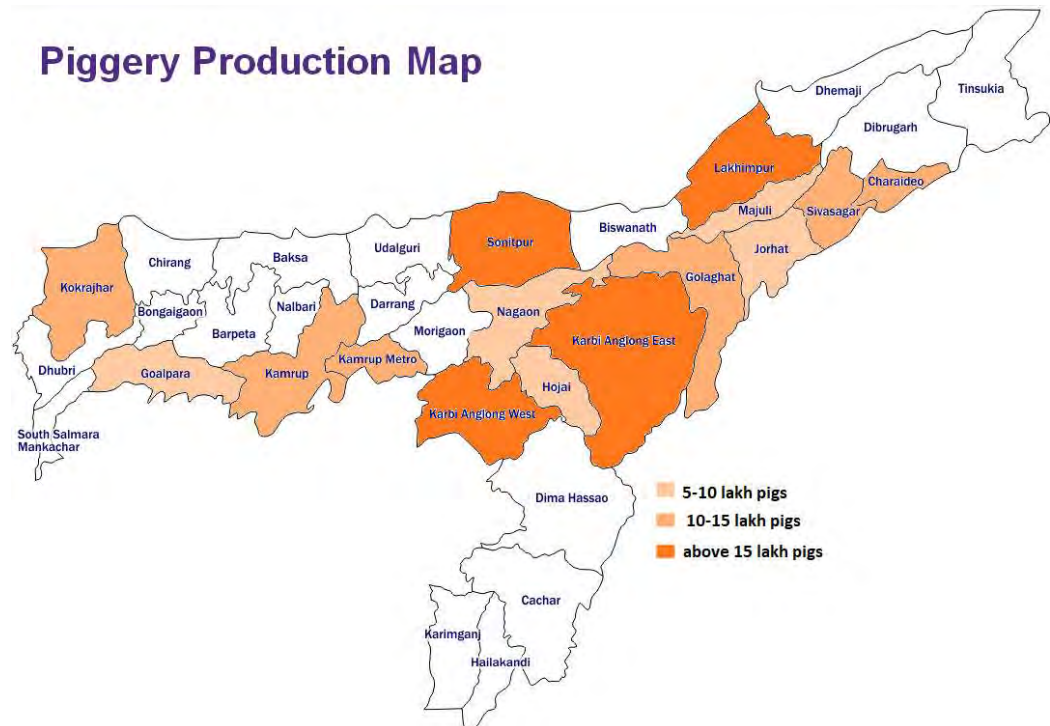


*\*Production figures of pork for 2019 is extrapolated from the 19<sup>th</sup> census data based on the total pig population. (Population figures for 2019 is as per 20<sup>th</sup> livestock census)*

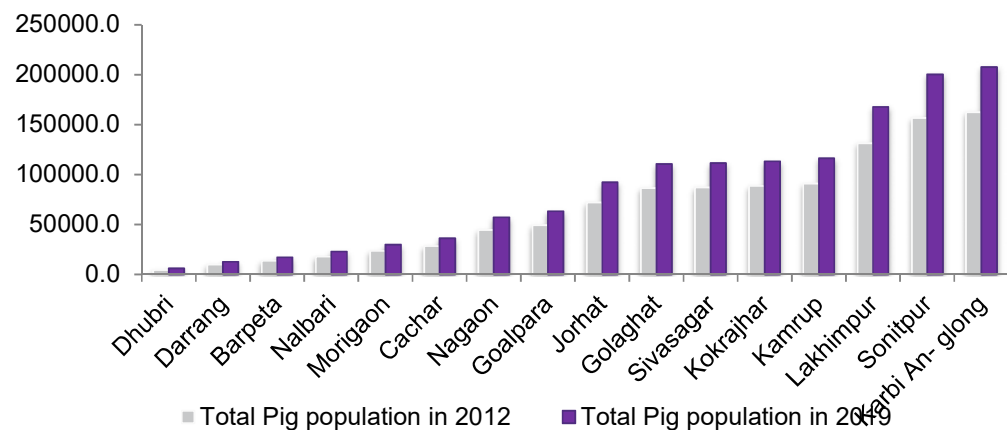
However, the sector still being at a very nascent stage in terms of commercial breeding requires a lot of handholding support as pig rearing is still unorganized venture that requires science and technology driven support to make it a vibrant enterprise. The major constraint for the sector is the absence of sufficient number of pig breeding farms due to which sufficient quality pigs are not available for the fattener farmers for the production of meat.

## Production Scenario and Production Clusters APART Districts

### Piggery Production Map



It may be seen from the above map that primarily the districts of Sonitpur, Karbi Anglong and Lakhimpur are dominant in terms of the number of pig population in the state contributing 27% of the total pig population of the entire state. Further, the districts of Kamrup, Kokrajhar, Sivasagar and Golaghat constitute another 21% of the total pig population of the state. The distribution of pig population across the sixteen APRT districts is presented in the graph below.



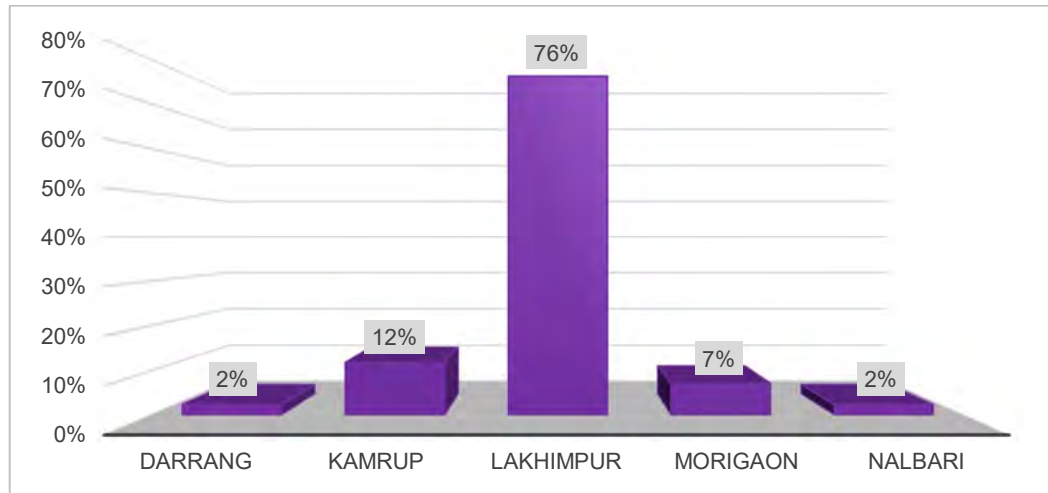
Source: Livestock Census 2012, and provisional data of Livestock Census 2019

## Mapping of Processing Clusters:

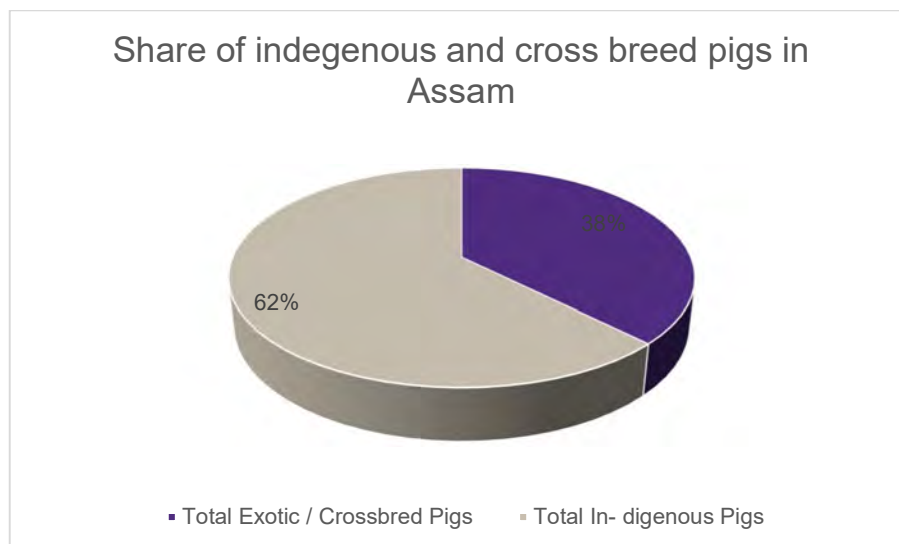


The enterprise data in the piggery value chain however present a contrary picture to the production data. Among the enterprises identified during the baseline survey in the 16 districts, Lakhimpur district emerges as the most prominent district with the presence of 76% pig processing enterprises in the district. The next district of prominence is Kamrup with 12% of the enterprises operating from the district. The number of enterprises is much less in comparison to the population of pig in the state. The reason for this could be the lack of scientific processing centres and slaughter houses and the demand for fresh meat among the pork eating population of the state. The reason for the fewer number of processing units in the state can be further analyzed from the investment and turnover figures of the enterprises. The meagre number of enterprises in the state could also be a result of the traditional methods used by the local population for processing of meat. Because, traditionally processed pork is considered to be any part of pork which has been modified, in order either to improve its taste or to extend its shelf life by traditional methods. The tribal groups in Assam which are predominantly involved in the piggery sector, are confined to their traditional ways and customs where a sizeable portion is preserved using their indigenous methods and ingredients.

District wise distribution of Piggery Enterprises in the 16 surveyed districts of Assam

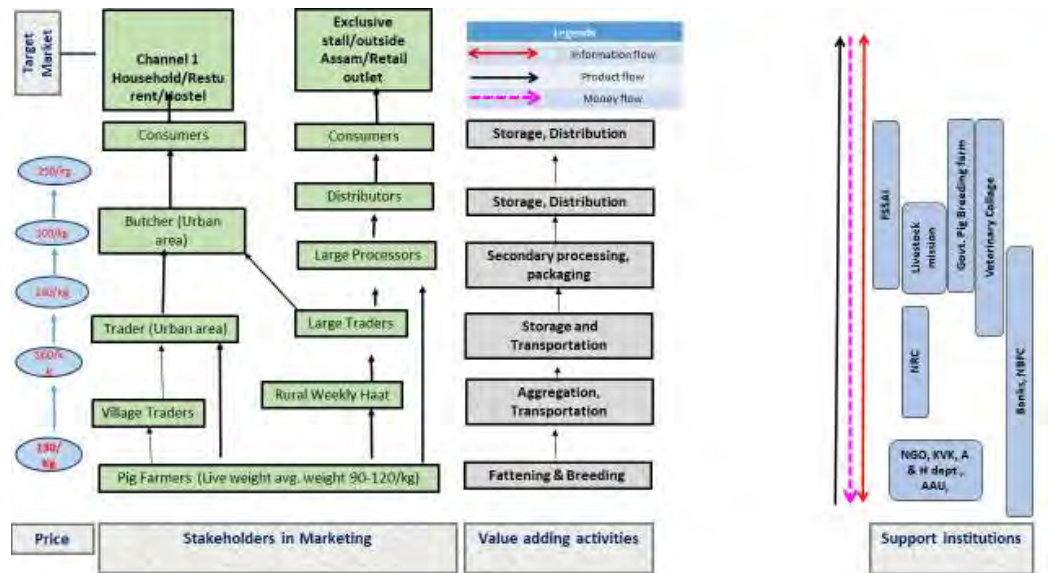


Most of the piggery enterprises are engaged in fattening activity here the piglets are reared to grow to a particular size to be sold for meat. About 80-90% households rear pigs for fattening. The availability of good quality breed for pigs is also a constraint. The majority of the pig is of indigenous breeds. Although the number of exotic cross breed has decreased by 22% in comparison to the last Livestock Census of 2012 in the country, in Assam the number of exotic cross bred pigs have increased by 23% in 2019 in comparison to 2012. The exotic breed mainly comprises Hampshire, Large White York Shire, Duroc while the popular indigenous pig breed includes Ghungroo.



The pig production sector in Assam is still largely a small-scale backyard enterprise practised mainly by tribal communities as a secondary income source. Most of the households do not breed their own pig but buy piglets from breeders to rear for sale as slaughter pigs. The slaughtering in most cases is also done traditionally without scientific and hygienic equipment and most of the times the meat is sold fresh locally in the local markets.

## Indicative Value Chain Mapping:



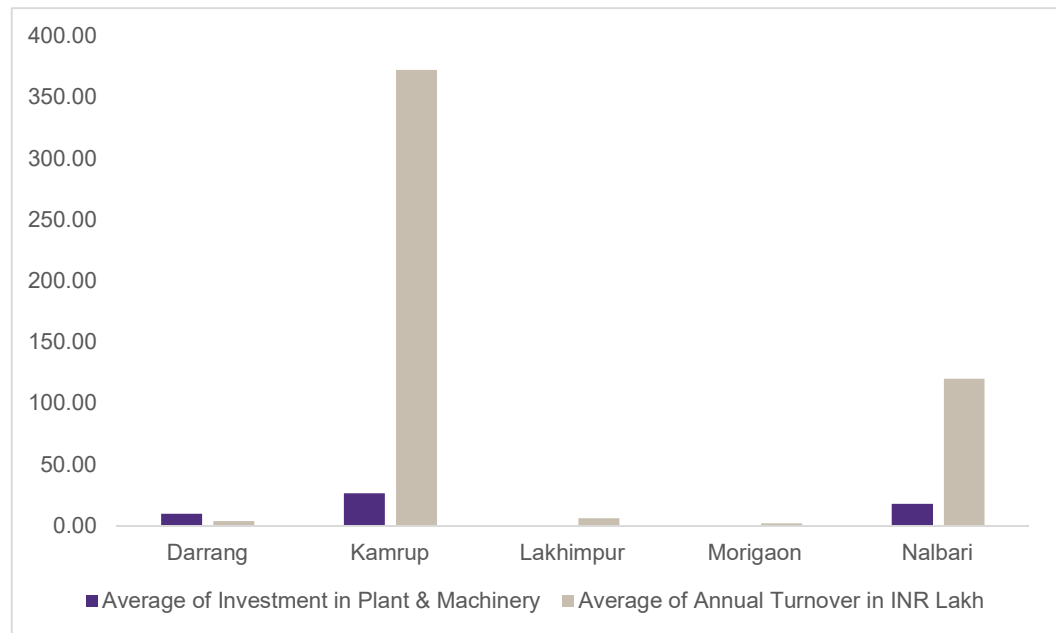
There are 2 major production- distribution channels in the piggery value chain; Pig Farmers; Village Traders; Urban Traders; Large Processors; Distributor as illustrated above. In the first Channel, farmers sell the animal to local traders at the village level from whom urban traders collect the animals and sell to the butchering house where the meat is cleaned and packed and sold to consumers. In the second channel, the large processors source the meat directly from farmers or through traders at the rural or urban market. Thereafter the animals are slaughtered in their privately owned slaughter houses and sold as raw meat or further processed to make sausages, ham and bacon and sold to retail outlets either directly or through distributors. Most of the meat is sold locally through local retail outlets. A handful few of the processors sell their products outside the state though their own retail network or through distributors.

Value addition in meat is mostly done in terms of cleaning and packaging and to some extent smoking and drying the meat and then packaged. Value addition through processing is done with advanced processing machines in a few of the units where the product is made into sausages, hams and bacons and sold to retailed outlet with proper branding.

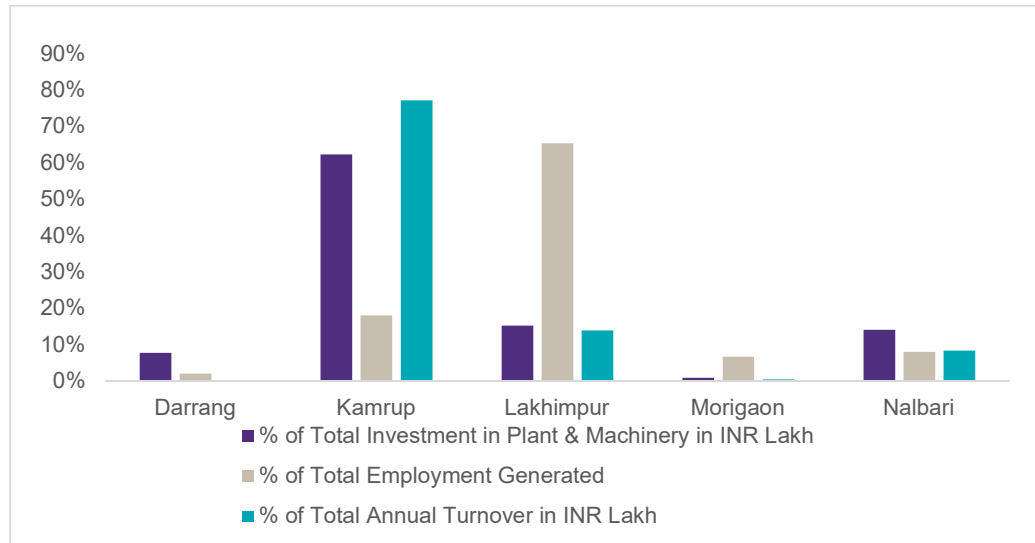
The price of fresh meat varies from Rs 250-280 per kg of fresh meat. For smoked meat the price is Rs 320-350 per kg and in case of processed products like sausages and ham the price is .....

### Piggery (Value Chain) Analysis from Baseline Data:

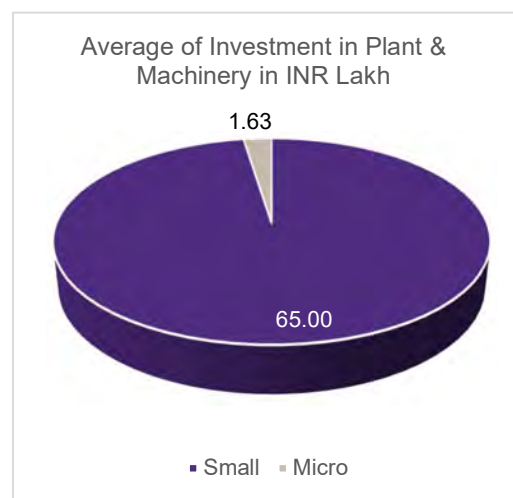
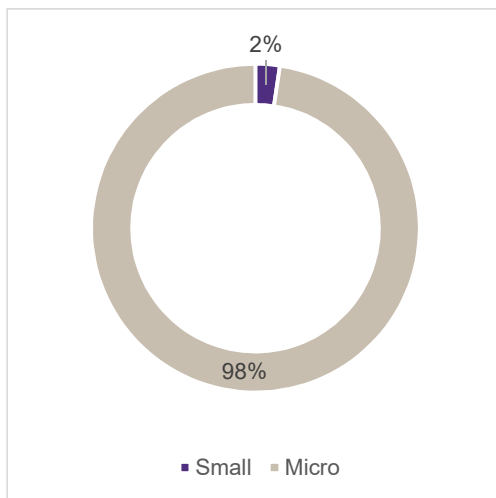
Lakhimpur district has the highest number of enterprises in the piggery value chain in the state with 76% units belonging to the district. Most of these units are involved in the processing and selling of raw meat and in some cases value added products like smoked pork. Although the number of units in the district is high, the average investment in these units is very low compared to the other districts. It has been observed that in the district of Kamrup, although the number of units are much less in comparison to Lakhimpur, the average investment and annual turnover is the highest. The reason for this can be attributed to the presence of two sophisticated pork processing units in Kamrup producing value added products like sausages and salami along with dressed meat.

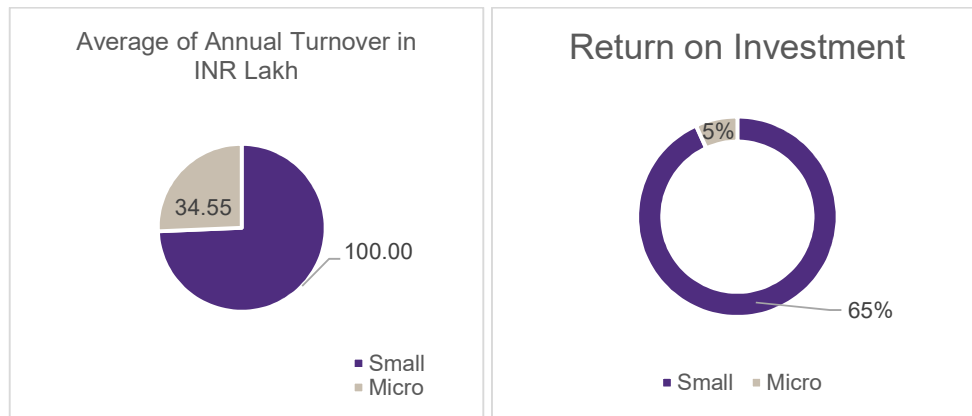


In analyzing the overall contribution in investment, employment and turnover it has been found that Kamrup contributes majorly to the total investment and turnover while Lakhimpur contributes majorly to the total employment in the sector. Thus it can be inferred that the units in Lakhimpur are highly labour intensive and are majorly based on human capital. There is tremendous scope for scaling up these units with the production and availability of raw material in the district along with resources in terms of labour. This is depicted in the graph below:



The category wise analysis of the enterprises in the piggery value chain shows that only 2% of the units belong to the small category with investment of more than 25 lakhs while 98% of the units belong to the micro category with investment ranging from INR 25000 to 18 lakh. The category wise distribution of units is depicted in the graphs below:





The average annual turnover of the small units is INR 100 lakh while that of the micro units is INR 34.55 lakh. The return on investment in case of the small units is very high at 65% while that of the micro units is only 5%. Therefore, it can be inferred that technological intervention to scale up these units to produce value added products will result in benefitting the piggery enterprises to a great extent.

## 5.6. Maize

Assam's economy is based on agriculture largely. Over 70 percent of the state's population relies on agriculture as farmers, agricultural labourer or both for their livelihood. About 89 per cent of state's population of about 3 cores lives in rural areas and about 70 per cent of the total work force is engaged in agriculture and allied activities. Maize is the third important cereal crop in the world after wheat and rice with respect to area and production. India is the fifth largest producer of maize in the world, contributing 3% of the global production, though productivity is much lower than other potential maize growing countries like USA, Argentina and China. In Assam, maize is the second most important crop, next to rice. Maize production plays a significant role in ensuring food security and is used both for consumption as well as for Animal Feed. The popular several varieties presently cultivated in the region are from private sectors only. The crop is now in a status of emerging crop in the state and constant increase in acreage is being observed in recent years. Maize being a crop of high potential can give a boost to the economy of the state. The main limiting factors like suitable hybrids and seasonal heavy rainfall.

Maize is the raw material for most of the feed products. In Assam, presently the crop has cultivated land of 31000 ha and production of 91000 tones with a productivity of 2911 kg/ha (2017-18). The popular varieties presently cultivated in the region are from private sectors only. The Monsanto varieties under DKC series are performing well and are the front runners in the popularity chart. Some of the popular varieties worth mentioning are viz. DKC 9081, DKC 9035, DKC 9120, PAC 751, PAC 712, PAC 740 etc.

### Area, Production and Yield scenario of maize in Assam

The crop acreage in the state is growing year wise in the present scenario. The area increased by 52%, production by a massive 600% and the yield by 360% in 7-8 years from 2007-08 to 2014-15 in the state. It is mainly because of shifting of maize cultivation from OPVs and

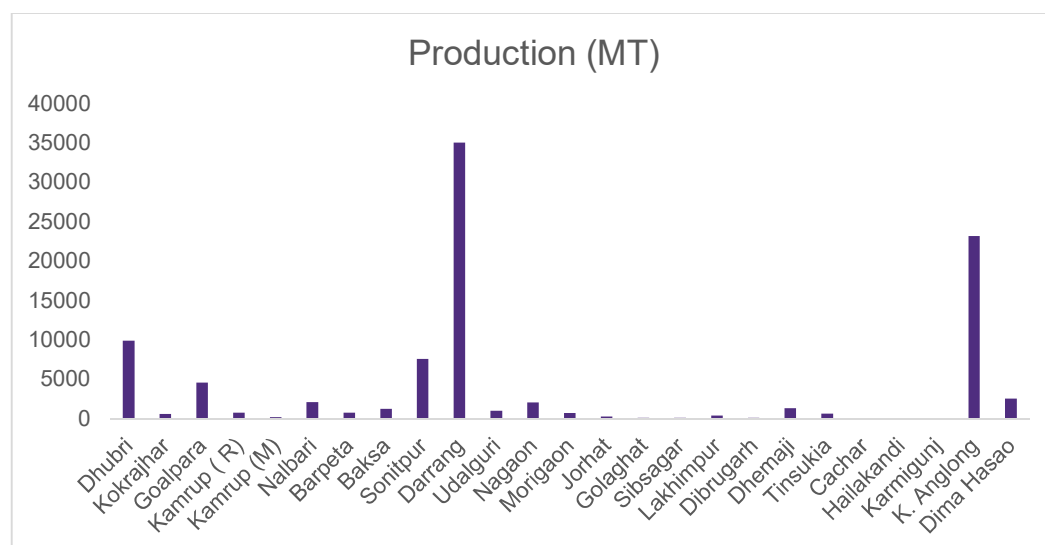
composites to Hybrids. Table 1 shows the change in area, production and yield of the crop year wise in the districts and the state as whole.

In addition to some of the major problems such as land fragmentation, lack of modern technology, or continued reliance on rain for irrigation, there are several other problems that hinder the development of agricultural sector in Assam which are as follows:

- Natural Calamities
- Capital Deficiency: (loans from banks or other credit agencies, is not generally accessible to farmer's in Assam)
- Marketing Problems
- Non-Economic factors

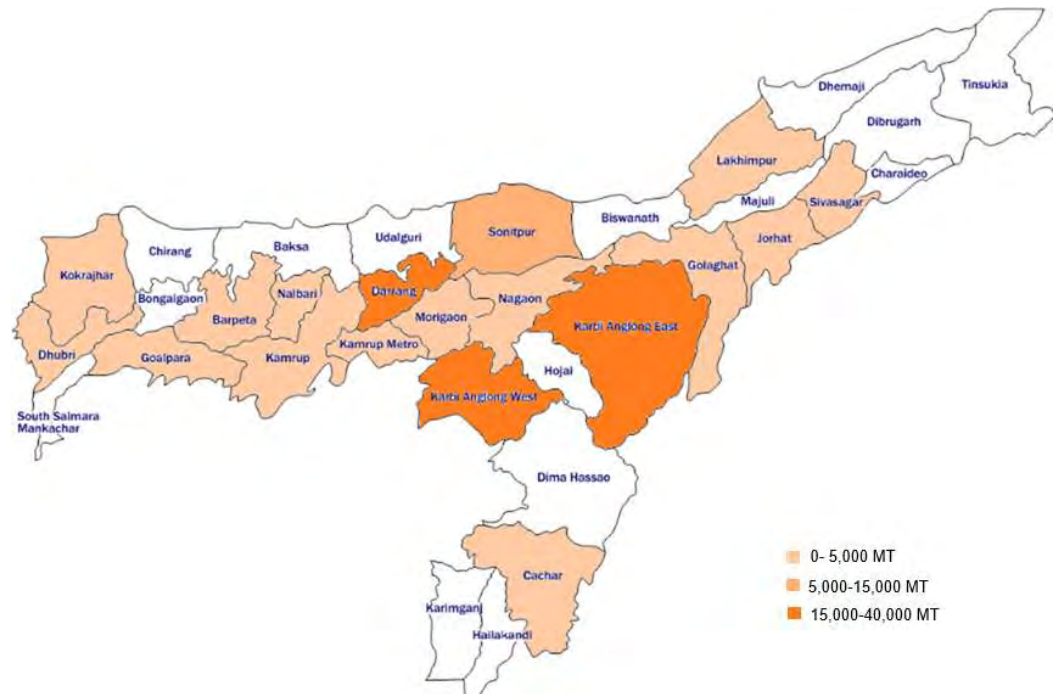
As mentioned above, the natural calamities and marketing problem are two main key constrains for maize production in Assam. The crop is mainly grown in kharif season, and sown during June-August. During the time the state receives most of the rainfalls and the areas of medium to low lands get flooded, sowing of seed gets delayed. Even if the sowing is done, the continuous rainfall makes the crop vulnerable for early damage during germination to seedling stage. Again in some parts though rabi maize is practiced, germination get affected due to low temperature and drought.

The below graph shows the production of Maize during the year 2017-18



It may be seen from the below map that all the 16 districts of APART have significant production of mustard. Further, 4 out of 16 project districts together contribute to more than 75% of the total maize production.

## Production Map for Maize



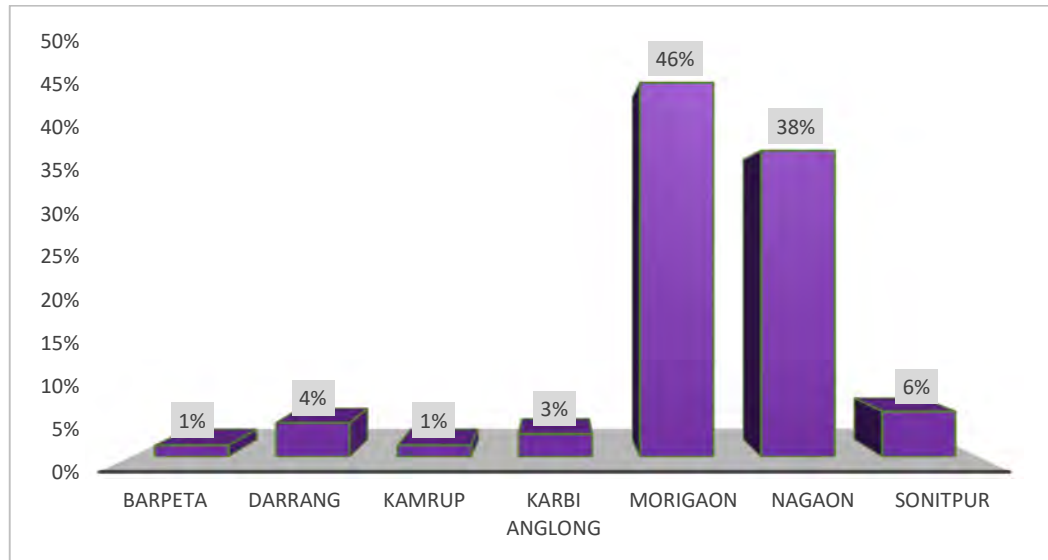
As there is no regulated market for maize, the growers have to sell their produce in local market or to some middle man. Thus the appropriate price for the crop is not received by the farmers. Nowadays some small industries are coming up (like feed industries), which are making the marketing a bit ease for the growers. Still, the cases of middle agents are there where the farmers have to sell their products in a low price are in the process.

## Mapping of Processing Clusters:

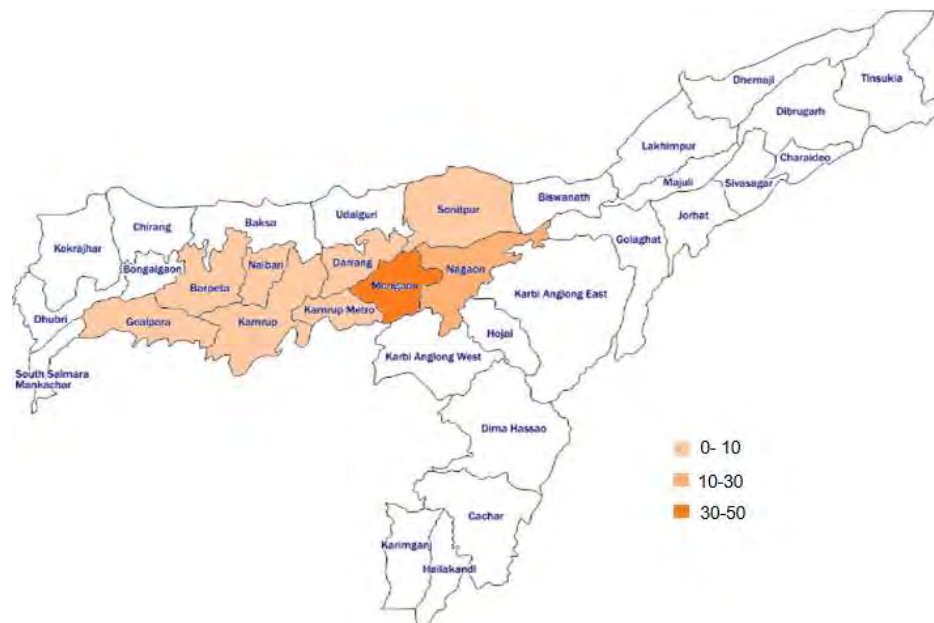
Out of 4765 food processing units in Assam there are 71 maize as their main value chain which is only 2% of the total agro processing units. Mustard as a value chain accounts for total investment of INR 480 lakh in Assam.

Major concentration of mustard processing units is in districts like Morigaon & Nagaon. It was noted through baseline survey that, these districts being near to major city and consumption centre i.e. Nagaon, Guwahati serves as preferred region for setting up of processing units.

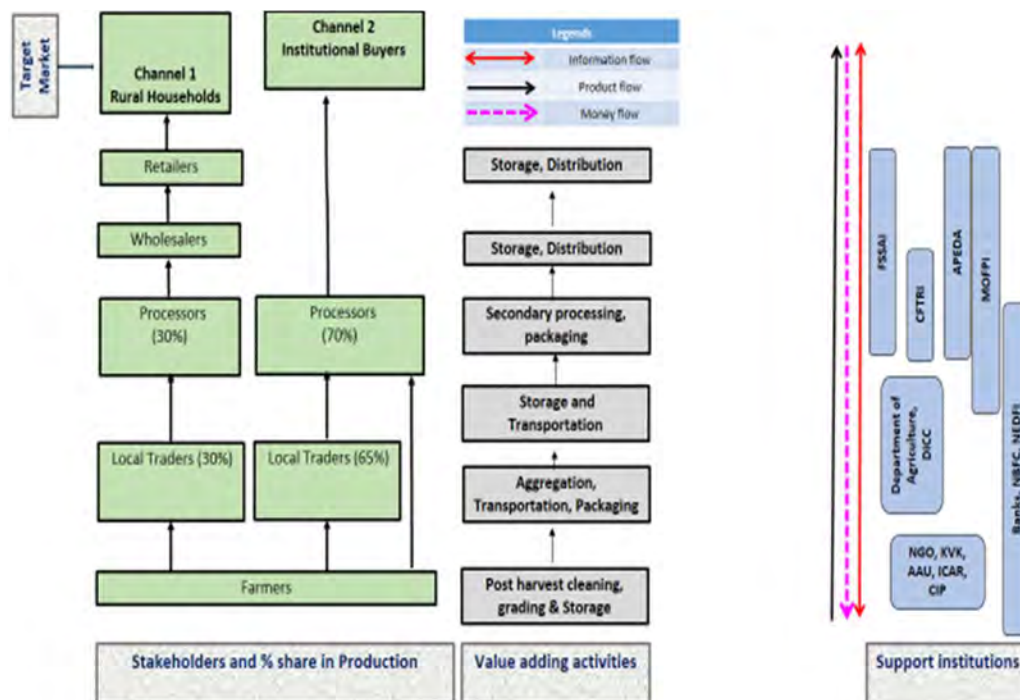
From the graph above it can be easily understood that the growth of the units is not evenly distributed in all the districts.



Due to availability of raw material in Morigaon, Nagaon & Sonitpur district, the concentration of maize processing units in these district are more. In Assam, around 93% units are micro-sized, Average investment & turnover in micro category INR 3.77 Lakh & 9.20 Lakh respectively. Average investment & turnover in Morigaon is INR 5.63 Lakh & 12.36 Lakh respectively, whereas in Nagaon district the average investment & turnover is INR 1.62 Lakh & 4.13 respectively.



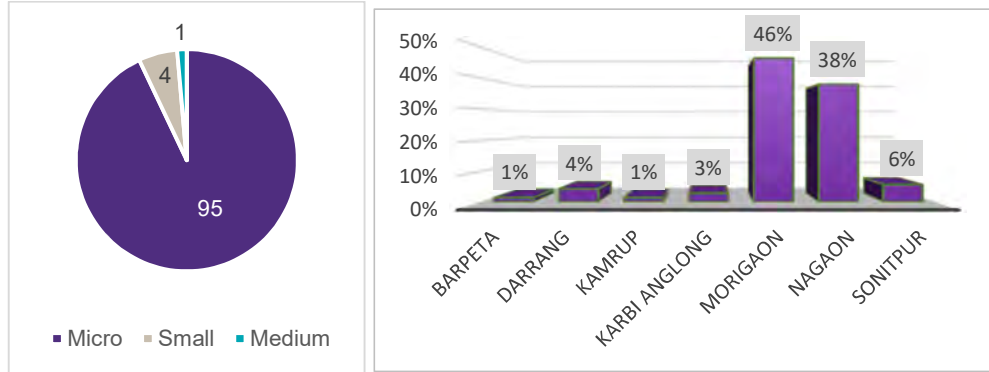
## Indicative Value Chain Mapping:



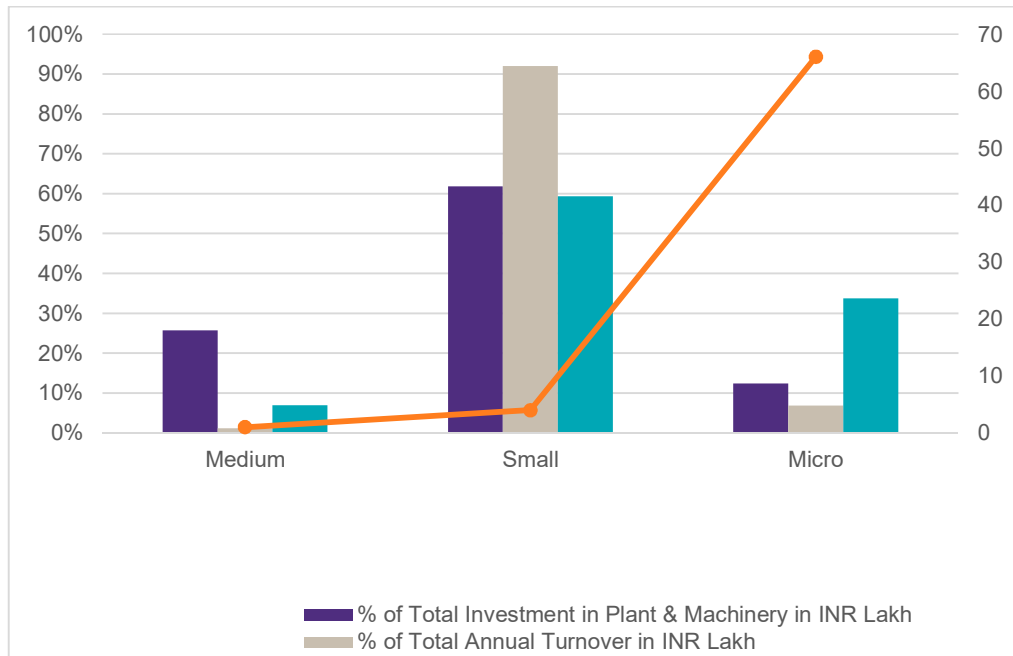
There are 2 major production- distribution channels in the Maize value chain; Micro size units and small units into value added products as illustrated above. Larger farmers / local traders collect Maize from the farmers at the village level and then sell the same to the Animal Feed Mill Enterprises. The local traders collect maize from the farmers which are sun dried at farm level after primary processing and aggregate for later pick up according to the requirement of the traders / units. Traders and Processing units collect maize from the farmers after deducting logistic charges from the cost mutually agreed. Farmers keep their sun dried produce in traditional Bhoral without use of any modern scientific storage techniques. In Assam, 99% maize production are consumed by cattle feed, poultry feed & fish feed units.

## Maize (Value Chain) Analysis from Baseline Data:

As per the baseline analysis maize is the most prominent value chain in Assam, as 2% of the total units are involved in manufacturing. A total of 71 units of maize and allied products are operating out of Assam. Out of the total units more than 93% are micro in nature, 6% are in small in nature and rest 1% are in medium nature. It can also be observed in the below graph that Morigaon & Nagaon districts have maximum concentration of maize processing enterprises, followed by sonitpur district.



There are 71 Maize based units in Assam. The graph below shows analysis of turnover, investment and employment district wise in comparison to the number of units operating in Assam. Out of total units in the district, 14% are registered and rest 86% are not registered. The analysis of category wise contribution to important parameters like employment, investment along with registration status and product category is mentioned below:



## 5.7. Spices

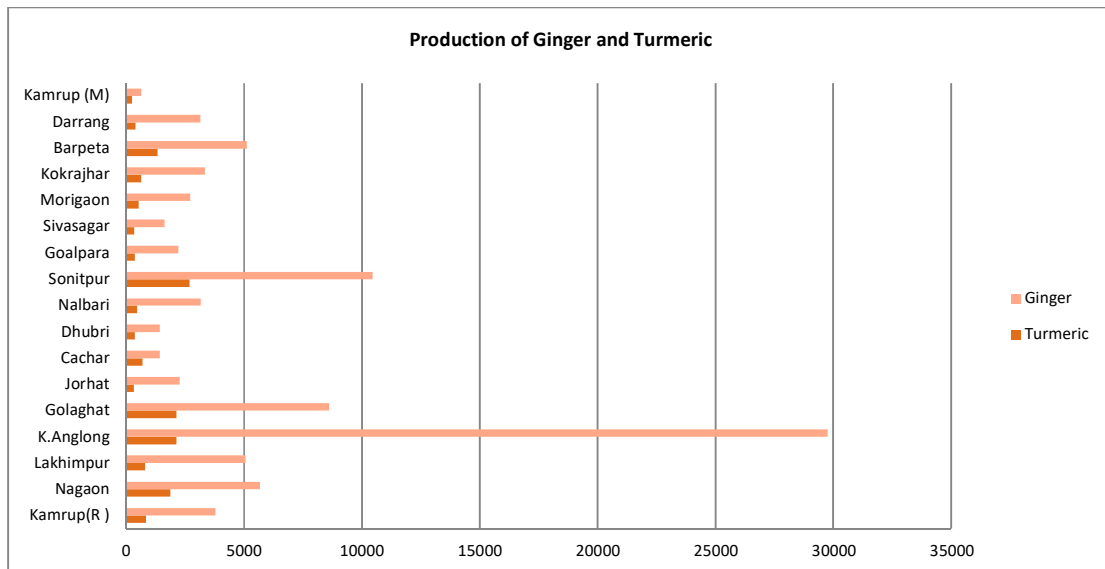
The agro climatic situation and the geographical terrain of the state is suitable for cultivation of variety of spices. The farmers have been growing a variety of spices, among which ginger, turmeric, coriander and chilli have been the most common ones. The state agriculture department targeting to cover an additional 1,000 hectares for turmeric, 500 hectares each for black pepper and ginger, and 300 hectares for chilli. The districts of Jorhat, Sivasagar, Dibrugarh and Karimganj have been identified for black pepper and Dhubri, Chirang, Golaghat, Lakhimpur and Karbi Anglong are the districts where 500 hectares have been identified for fresh cultivation of ginger. Ten districts have been identified for taking up turmeric cultivation in 1,000 additional hectares to meet the growing demand. Among all spices, ginger is the main cash crop supporting the livelihood and improving the economic level of many ginger growers of north eastern region.

### Production Scenario and Production Clusters APART Districts

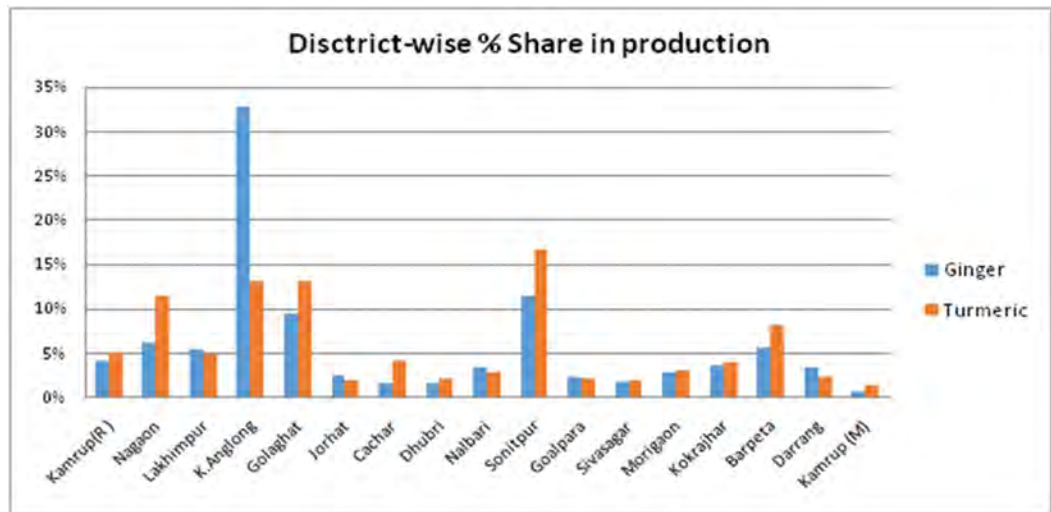
The state has its climatic and physiographic features favourable for spices cultivation and the crop is grown in a wide range of agro-ecological situations. For this study we have considered two spices namely ginger and turmeric and attempted to analyse the production and value chain for the same. The Lakadong variety of turmeric is cultivated to a large extent in the state, which is highly curcumin rich and used for manufacturing turmeric oleoresin. Besides local varieties as certain indigenous ginger types namely Maran, Bhola and Jorhat Local of Assam have been reported to be equally good in rhizome yield as well as in size.

If looked into the total cropped area spices are cultivated in varying degrees in 17 districts of the state. Here we would consider only ginger and turmeric and would attempt to analyse its production. The hill district of Karbi Anglong has the highest production of Ginger while Sonitpur produces maximum of turmeric

The graph below depicts the district-wise production of ginger and turmeric in the state.



- The total Production of ginger is 90367 lakh MT in the state with the district of Karbi Anglong accounting for 33% of the total production
- The total Production of turmeric is 16067 lakh MT in the state with the district of Sonitpur accounting for 17% of the total production
- The district-wise share in the total production is graphically presented below:



As depicted in the map below 17 districts of APART have production of Ginger on a commercial basis. In majority of the districts the production is less than 5000 MT while the highest with a range of 15000 to 30000 MT is being produced in the districts of Karbi Anglong

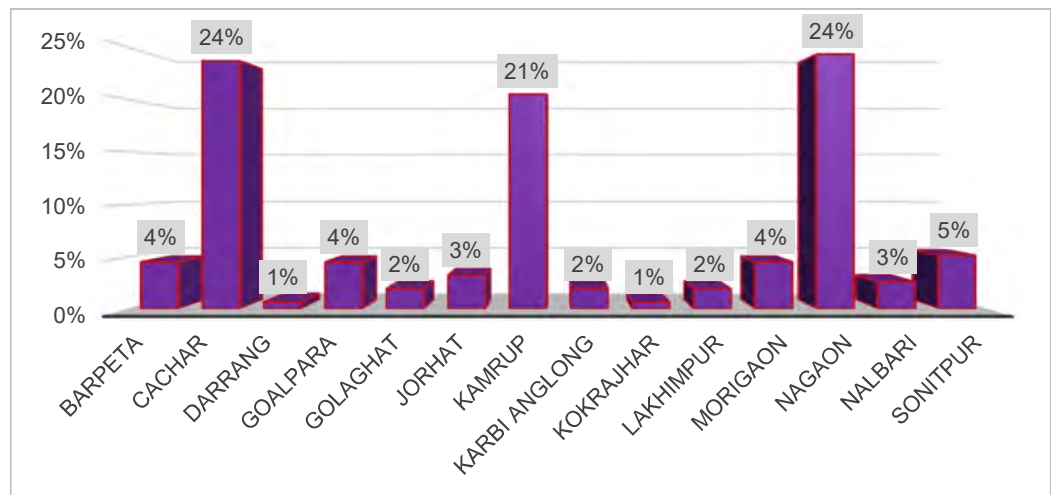


As far as turmeric is concerned in majority of the district the production ranges between 5000 to 15000 MT as shown in the map below:

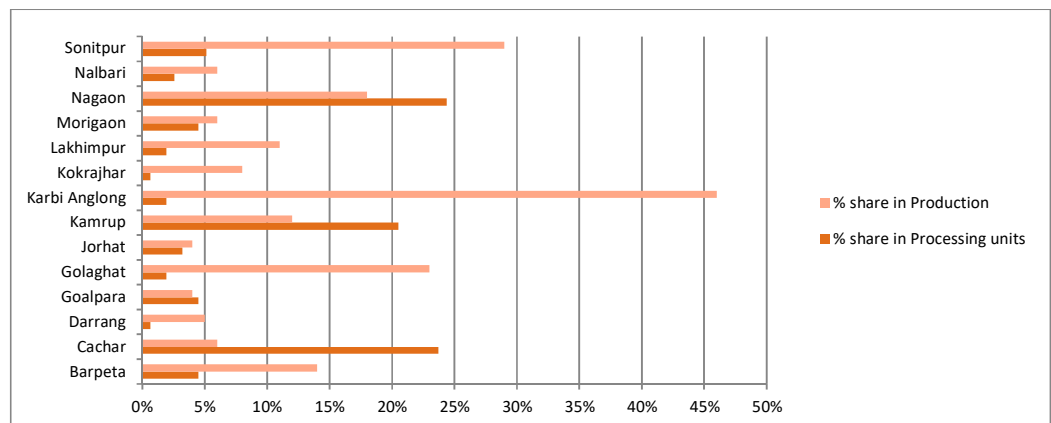
### Mapping of Processing Clusters:

The processing cluster in the state is limited compared to the total food processing centres. Out of 4605 food processing units in Assam there are 126 spice processing units. Spice as a value chain accounts for total investment of INR 27059 lakh in Assam with a total annual turnover of Rs. 9719,77 lakh.

If we look into the distribution of processing units in relation to production, it is noticed that the growth of processing unit is not related to the production in that particular district. Kamrup district has the highest share in the number of processing unit while it has a share of 5% in the production of ginger and 7% in turmeric. The graph below shows that the concentration of spices processing units is not evenly distributed.



If we attempt to compare the processing unit with the production, it is seen that value addition is not taking place in the producing district. The graph below shows the share in total number of processing units in relation to percentage share in total production for the districts.



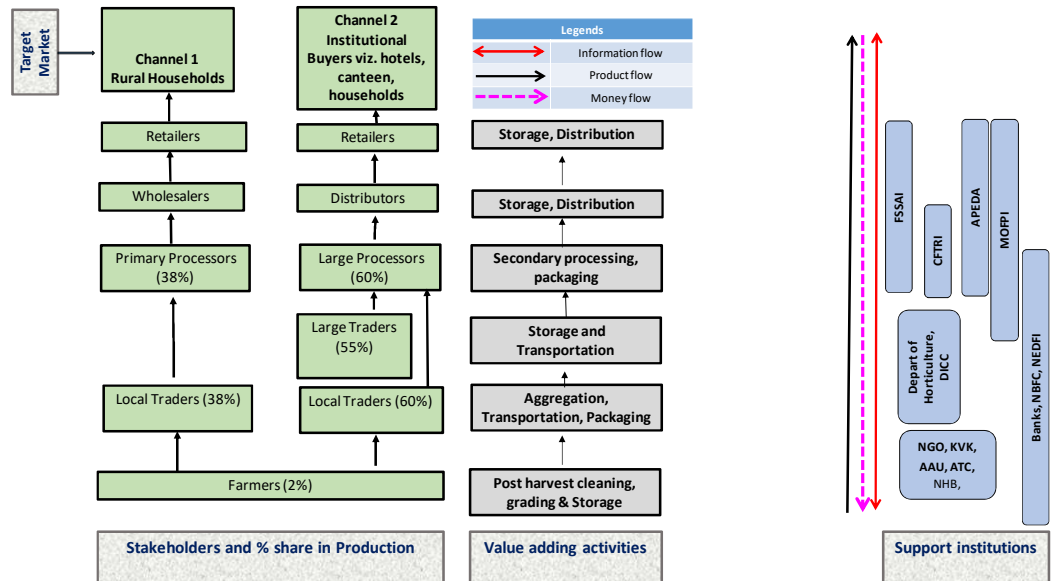
In terms of investment, it can be said that since majority of the units are small units with a total of 156, the investment being made in plant and machinery is low. As has been mentioned a total investment of INR 127059 lakh has been made in spices processing units. As evident major investment has been made by units in Cachar district.

As it is seen that the units are not located in the producing districts, there is a transportation cost involved even for the procurement within the state. The majority of the district has a concentration of upto 10 units with only one district reflecting a concentration of 30-80 units as shown in the map below.



**Value Chain Mapping:**

The value chain for the product comprises the following

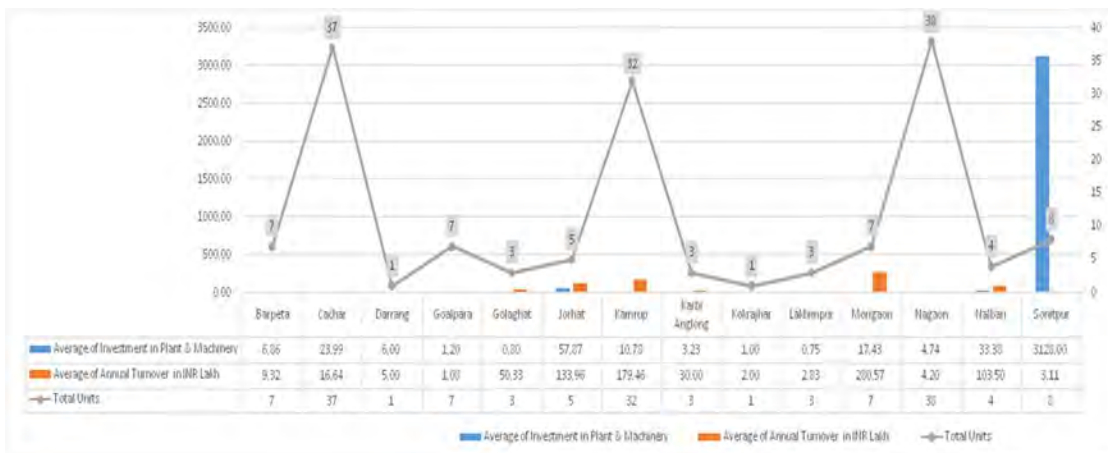


### Investment and Turnover

The average investment is found to be highest in Cachar District as the district has access to producing areas of Karbi Anglong as well as neighbouring state of Mizoram followed by Marigaon district. The investment and turnover in Spices units is found to be impacted by the following factors:

- ✓ Proximity to market for the products
- ✓ Connectivity and infrastructure status
- ✓ Locational distance from raw material sources and major urban centre

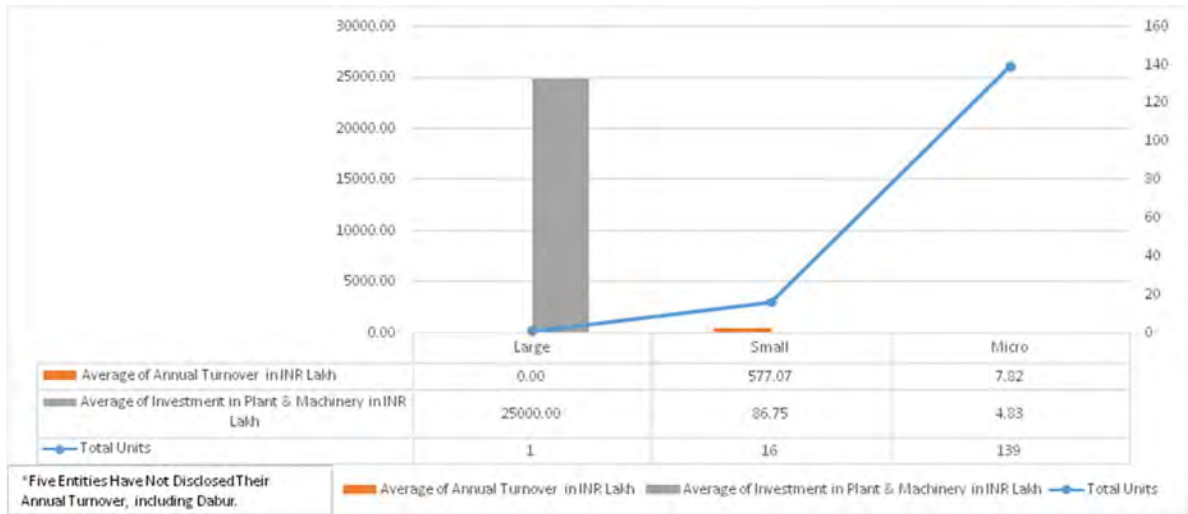
The district-wise breakup of investment and turnover is presented below:



- Though Cachar district has the highest average investment, the units in Morigaon are performing better with the highest average turnover with INR 280.57 lakh
- The units in Darrang and Kokrajhar are found to be performing low in terms of average turnover with a figure of INR 2 to 5 lakh

- Kamrup district seems to be performing satisfactorily in terms of average turnover with an average of INR 179.46 though in terms of average investment the district ranks 3<sup>rd</sup> after Cachar and Marigaon considering the easy market access and connectivity

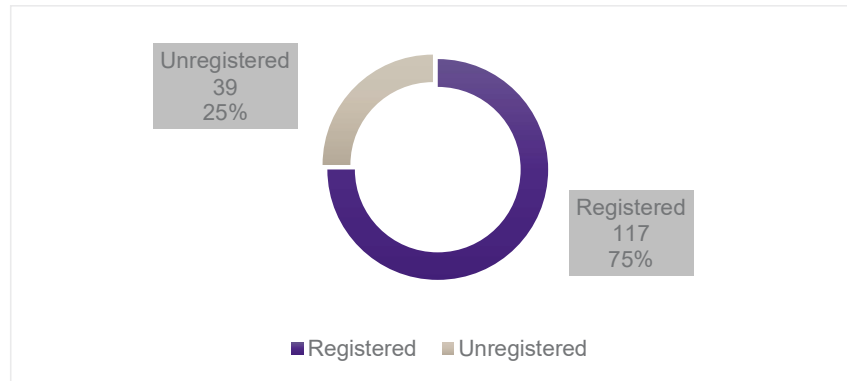
The small units units of the state are being set up with an average investment, of INR86.77 lakh are having the maximum turnover in the state The graph below shows the category-wise investment and turnover of the spices processing units in the state.



- The average turnover of the large units could not be analysed due to non disclosure by the unit
- The small sized units are performing comparatively better with an average turnover of INR 577.07 lakh. The market for the products of these units and the larger penetration is one of the major reason for this trend
- The Micro units are also performing well if the average annual turnover is weighted against the average investment. With an average investment of INR 4.83 lakh the units are having a turnover of INR 7.82 lakh

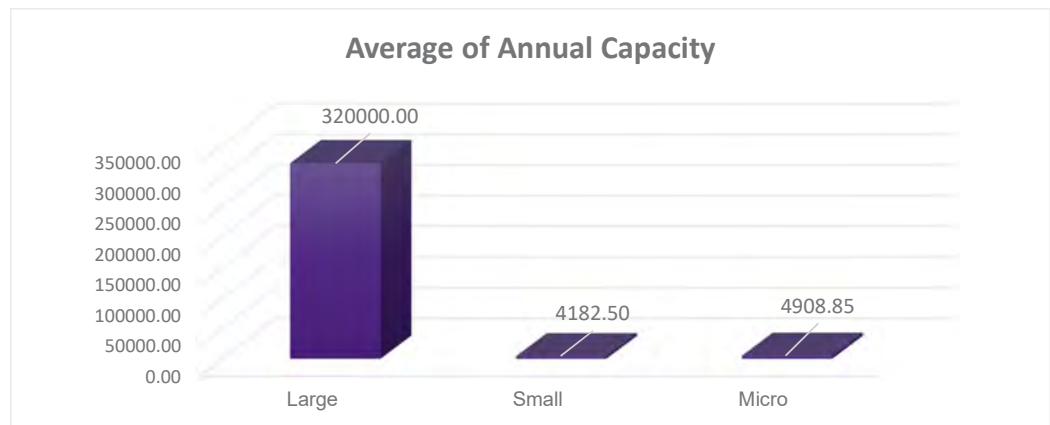
### Categories and Capacity of Value Chain

The units of spices value chain as already mentioned are distributed primarily among 17 districts of the state. However all the units are not found to be operating under proper registration. This reflects that the units are operating at a very low scale. The status of registration is as graphically presented below:



- Out of 156 processing units 39 are not registered and this are primarily operating in a low scale with minimum investment
- The non registered category are mostly operating for the local market with not much emphasis on quality and variety

The average capacity of the units operating in the state shows that as evident the micro units are having a very low average capacity. This is graphically presented below



- The Small Unit is having a average capacity lower than the micro units as found during the baseline survey. This indicates that there is wide variance in the size of the units under this category.
- Among the micro units too it is found that around 33% of the units are having capacity below the average for this category
- The large units have scope for further penetration into the market if the average capacity is compared with the annual average turnover

### Value Chain and Employment Generation

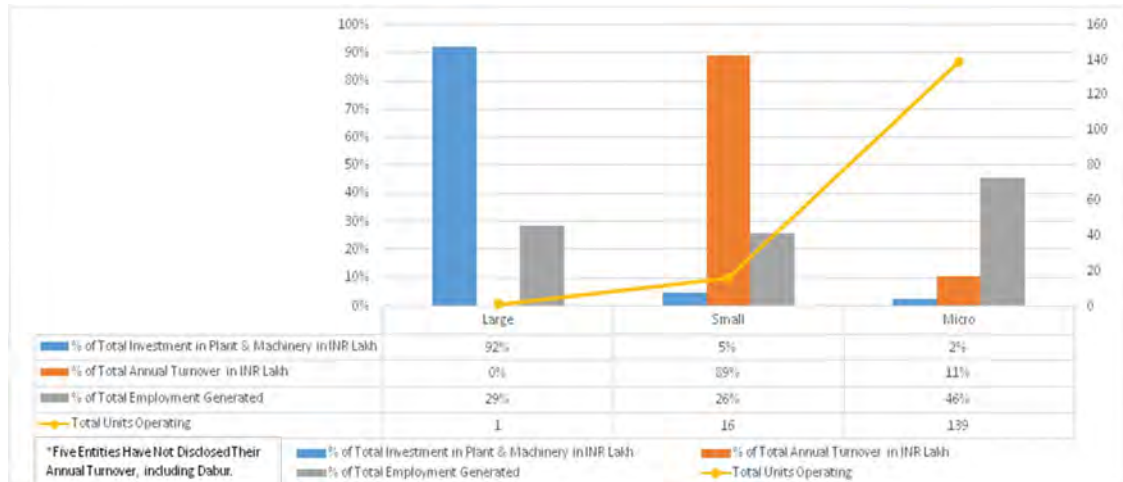
The value chain of the spice sector has contributed substantially in employment generation. Though low scale of production in the small and micro units and mechanisation in the large unit have kept the employment opportunity low, this can be taken care of by expanding the processing sector as production

is not a problem. The value chain of spice is contributing towards employment generation in the state and generating both direct and indirect employments. The graph below shows the employment status in value chain of spices.



- A total of 1140 employees are found to be working in the units based on spices with major being employed in the micro units
- Though the large units are creating the maximum employment opportunities the indirect employees constitute about 19.76% of the total employments
- The small units are creating greater avenues of employment if employment to investment ratio is looked into

The baseline survey also attempted to look into the share in employment generation by the different categories of units. The same is graphically presented below:



- Though the small units are having 89% of the total turnover their share in total employment is only 26% which leaves scope for improvement in the turnover-employment ration
- The Micro units with an investment share of only 2% are contributing towards 46% of employment with only 11% share on the total turnover. These units are found to be more labour intensive.
- The large Units even though have more investment in plant and machinery with a share of 92% are creating employment opportunities to only 29% of total employed in spice value chain.

# 6. Awareness Campaigns, Group Discussions with Enterprises

## 6.1. Baseline Survey, Enterprise Mapping and Awareness Campaign

Awareness campaigns may be defined as a sustained effort to educate individuals and boost public awareness about a cause or issue. In addition to building awareness, such campaigns aim at generating action among potential supporters. Awareness among the public is important to increase enthusiasm and support, and mobilise local knowledge and resources. This informs and increases concern among the targeted audience and consequently the desired behavior is achieved. Most effective forms of awareness campaigns include several forms of communication such as dissemination of printed material, organizing public meetings and training, professional consultation, communication and information through social and mass-media and using informal networks for information dissemination.

In India, the micro, small and medium enterprises play a vital role in the economic development of the country. But such enterprises are growing at a very slow pace due to factors like lack of information and knowledge about schemes, rejection of their application on unfair grounds, paperwork, delay in sanction of loans etc. The same stands true even in the state of Assam. Despite the fact that there is no dearth of schemes meant for MSME units, the problem arises is that enterprises are not well aware of them. As a matter of fact the ministry of MSME alone offers around 58 schemes, in addition there are other bodies such as the NSIC, KVIC, and Coir Board who have innumerable schemes to offer. But despite the number of schemes available, awareness levels about them is rather poor and the units lack proper guidance in terms of whom to approach for support. As a result, implementation of the schemes suffer.

These are some of the common and typical constraints which have been addressed in the mass awareness drives initiated by Grant Thornton India LLP.

Under the World Bank Funded APART Project, the Cluster Development Technical Agency, Grant Thornton India LLP has initiated substantial drives to spread awareness among the micro, small and medium enterprises of Assam and address the major problems being faced by them.

As a part of the project engagement, GT carried out awareness building programmes like Focus Group Discussions (FGDs), Technology Meet, Business Development Services (BDS) Providers Meet, one-on-one interactions and Industry Association meets in almost all 16 project districts of the state, as well as participated in Cluster Development Technical Workshops and Buyer-Seller Meet.

To make this project beneficial for local entrepreneurs, proper awareness is very necessary. In order to gain efficiency of these micro, small and medium units, GT has been undertaking massive drive and continuously working towards spreading awareness among the MSME units about the schemes available through focus group discussions, BDS and Technology meets,

one-on-one interview sessions, training programs and seminars in the 16 project districts in the past six months since initiation of the project. Mobilization of hundreds of entrepreneurs to evolve industry associations have also been successful as a result of such consultation. Frequent meetings are held to review the progress of the project at regular intervals.

The success of this project would prove to be a major breakthrough in the state's industrial scenario and it could be easily achieved through displaying appropriate means of awareness generation. Encouraging the local entrepreneurs to support the cluster model and adopt new innovations will speed up growth of these units.

### 6.1.2. Focus Group Discussions (FGD)

Focus Group Discussions (FGDs) are crucial for developing a better understanding of successful innovative behaviour in various clusters. Innovation of firms rarely happen in isolation, rather in networks of production. Most innovative activities involve multiple actors and stem from combining competencies and knowledge of various actors. Such FGDs function as a means to evolve consensus on constraints and opportunities.

Focus Group Discussion typically involves discussion among deliberately selected persons who participate in a planned discussion intended to elicit information related to the set objectives in a positive environment. It is one of the most popular qualitative research tools that serves to solicit participants' attitudes and perceptions, knowledge and experience, and practices, shared in the course of interaction with different people. Focus group discussions are usually for 1.5 - 2 hours, but depending on the requirements of the set objectives, they can be both brief (up to 60 minutes) or extended (up to 4 hours). In comparison to other forms of interview, FGD creates conducive atmosphere for discussion and dissemination of information between the participants more clearly and comfortably.

#### **Why FGDs?**

FGD is a tested method where information from stakeholders can be obtained without conducting a survey. Focus Group Discussions are carried out as part of a series in which the participants vary but the area of interest remains constant. Conducting several focus groups can help smoothen and control for possible group differences. The purpose of a focus group is not to arrive at a consensus, some level of agreement, or to decide what to do about certain discussion point. Rather, such discussions are designed to isolate the perceptions, and views of participants about a particular product, service, constraint or solution. Thus, it is a relevant instrument for identifying implementation strategies in a cluster framework as this requires joint action, and group dynamics play a very important role in ensuring the success of the project.

#### **Procedure for FGDs**

While conducting a FGD, the first step is deciding on the objectives of the discussion. These objectives are to be set based on the perceived outcome of the discussion. For example, in the initial phase of the project implementation process, it is vital to understand the group dynamics in existing clusters. Therefore, the objective of the initial FGDs would be to understand the nature of enterprises, extent of cooperation between the cluster actors and their level of investment. Hence, the discussion guide is designed in a manner so as to retrieve required information from the group.

The operational planning for a FGD includes preparing and developing protocols and information dissemination forms/invites and obtaining official approval of concerned

participants (particularly, if Government Departments are involved). Following that, orienting assisting staff (e.g. moderator, minute taker, and observer) for a FGD, planning time and place of an interview and arranging a venue that allows for a relaxed, safe and comfortable interaction.

After deciding on the ideal number of participants for discussion, the number of participants is to be selected in such a way that there is sufficient representation of the group set. Two approaches are used to compose groups; one in which there is sufficient homogeneity to facilitate comparison between groups, and the other with sufficient diversity within groups. The first approach seeks to help reach some consensus on the subject, while the second approach proposes that bringing together people with various roles and diverse backgrounds will yield broad based results.

Generally, stakeholders in FGDs include entrepreneurs from different value chains, government officials from DIC, Agriculture Department, KVK, NSIC, MSME-DI, IIFPT, IIE, NEDFi, NABARD, lead banks, CAs, machinery and packaging material suppliers etc.

A typical FGD starts with an ice breaking round, followed by an introduction of the main topic and the overall objective (e.g. orally, on a poster or as a projected presentation) and asking specific questions. Finally, summarizing the impressions of the FGD helps to realise the desired result.

### **Outcome of FGDs**

The 133 Focus Group Discussions that were carried out in the 16 project districts by Grant Thornton India LLP, were mainly to sensitise the local entrepreneurs and farmers on the objectives of the APART project. The Focus Group Discussions also included discussions among Government officials and entrepreneurs which led to understanding of the challenges and opportunities in terms of better market linkages, technical needs, financial support, and schemes and subsidies offered by the State and Central Government etc. Valid and detailed information about the enterprises run by individual enterprises were also obtained during these discussions. Through such FGDs, the Cluster Development Technical Agency, Grant Thornton India LLP has been able to meet its objectives of identifying Industry leaders from respective sectors (rice, dairy, bakery, oil mill, food processing etc.). Further, these focus group discussions allowed Grant Thornton to motivate and mobilise entrepreneurs to work together in unison.

Mobilisation was facilitated through detailed discussions with industry leaders of specific value chains during the FGDs. DIC officials and other public and private support institutions like banks, machinery suppliers, CAs were also present during such discussions. Information about the APART project and all the schemes and facilities that can be utilized by the micro, small and medium enterprises for their development were the major points emphasized during the group discussions. The entrepreneurs had the chance to highlight the gaps that they are presently facing in their business. Major gaps, included insufficient knowledge about the available schemes, lack of proper financial support or market linkages etc. These meetings helped GT understand the problems, identify the gaps and plan for the appropriate kind of intervention that need to be taken for better linkages among the entrepreneurs and the business development services provider. All these activities have helped Grant Thornton to build trust among the local entrepreneurs of the region.

The 133 FGDs also helped bring to light that maximum of the enterprises of the region are not registered with the DICC or do not have FSSAI registration which guarantees the safety of their products. Thus, Grant Thornton has not only assisted in mobilizing and spreading awareness, but it has also been able to facilitate in the generation of almost 100 DICC registrations, 500 Udyog Adhaar Numbers and more than 50 FSSAI registrations.

### Future Envisaged Outcome of FGDs

The primary aim of Focus Group Discussions is to create complete awareness about the APART project as well as inform the local entrepreneurs about the schemes and programmes offered by the State and Central Government. For long-term success and smooth functioning of these enterprises, excellent linkages with all the stakeholders are also to be formed through such focus group discussions.

Listed below is a table of Focus Group Discussions held in each district along with key points discussed:

#	District	FGDs Held	Key Points Discussed
1	Sonitpur	7	<ul style="list-style-type: none"> <li>• Creating awareness about APART Project</li> <li>• Informing about the benefits of “active” clustering and Industry Association (IA)</li> <li>• Mobilizing people to become part of an IA</li> </ul>
2.	Darrang	6	<ul style="list-style-type: none"> <li>• Creating linkages among public and private business development service providers</li> <li>• Informing about the importance of registration with the DICC and FSSAI</li> <li>• Gaps being faced by the local entrepreneurs</li> </ul>
3	Lakhimpur	8	<ul style="list-style-type: none"> <li>• Interventions necessary to bridge the existing gaps and upgrade units</li> <li>• Availability of various government and non-government schemes, subsidies, loans etc.</li> <li>• Advantages of establishing a Common Facility Center (CFC)</li> </ul>
4	Sivasagar	23	<ul style="list-style-type: none"> <li>• Importance of value addition to products</li> <li>• Building better technology and market linkages</li> </ul>
5	Golaghat	5	<ul style="list-style-type: none"> <li>• Creating awareness about APART Project</li> <li>• Creating linkages among public and private business development service providers</li> <li>• Gaps being faced by the local entrepreneurs</li> </ul>

<b>6</b>	Karbi Anglong	6	<ul style="list-style-type: none"> <li>• Creating linkages among the public and private business development service providers</li> <li>• Informing about the importance of registration with DICC and FSSAI</li> <li>• Gaps being faced by the local entrepreneurs</li> </ul>
<b>7</b>	Jorhat	5	<ul style="list-style-type: none"> <li>• Creating awareness about APART Project</li> <li>• Mobilizing entrepreneur to become part of IA</li> <li>• Gaps being faced by the local entrepreneurs</li> </ul>
<b>8</b>	Cachar	15	<ul style="list-style-type: none"> <li>• Informing about the importance of registrations with DICC and FSSAI</li> <li>• Gaps being faced by the local entrepreneurs</li> <li>• Advantage of having a Common Facility Center (CFC)</li> </ul>
<b>9</b>	Nagaon	8	<ul style="list-style-type: none"> <li>• Informing about the importance of registration with DICC and FSSAI</li> <li>• Interventions necessary to bridge the existing gaps and upgrade units</li> <li>• Availability of various government and non-government schemes, subsidies, loans etc</li> <li>• Advantage of having a Common Facility Center (CFC)</li> </ul>
<b>10</b>	Morigaon	14	<ul style="list-style-type: none"> <li>• Informing about the benefits of “active” clustering and evolving an Industry Association (IA)</li> <li>• Mobilizing entrepreneur to become part of an IA</li> <li>• Interventions necessary to bridge existing gaps and upgrade units</li> <li>• Building better technology and market linkages</li> </ul>
<b>11</b>	Kamrup	8	<ul style="list-style-type: none"> <li>• Informing about the benefits of “active” clustering and evolving an Industry Association (IA)</li> <li>• Mobilizing entrepreneur to become part of an IA.</li> <li>• Interventions necessary to bridge existing gaps and upgrade units</li> <li>• Advantage of having a Common Facility Center (CFC)</li> </ul>

<b>12</b>	Goalpara	12	<ul style="list-style-type: none"> <li>• Creating linkages among public and private business development service providers</li> <li>• Informing about the importance of registration with DICC and FSSAI</li> <li>• Availability of various government and non-government schemes, subsidies, loans etc</li> </ul>
<b>13</b>	Nalbari	6	<ul style="list-style-type: none"> <li>• Informing about the benefits of working in clusters and Industry Association (IA)</li> <li>• Creating linkages among public and private business development service providers</li> <li>• Gaps being faced by local entrepreneurs</li> </ul>
<b>14</b>	Barpeta	3	<ul style="list-style-type: none"> <li>• Mobilizing entrepreneur to become part of IA</li> <li>• Creating awareness among the local entrepreneurs about the APART project</li> <li>• Gaps being faced by local entrepreneurs</li> <li>• Advantage of having a Common Facility Center (CFC)</li> </ul>
<b>15</b>	Dhubri	1	<ul style="list-style-type: none"> <li>• Creating awareness about APART Project</li> <li>• Informing about the benefits of working in clusters and Industry Association (IA)</li> <li>• Mobilizing people to become part of IA</li> </ul>
<b>16</b>	Kokrajhar	5	<ul style="list-style-type: none"> <li>• Informing people about the APART project</li> <li>• Informing about the benefits of working in clusters and Industry Association (IA)</li> <li>• Mobilizing people to become part of IA</li> <li>• Gaps being faced by local entrepreneurs</li> </ul>

### 6.1.2. Technology Meets

Technology today is not just limited to enhancing productivity and quality, but rather plays a more strategic role in developing competitive advantage. Availability of proper equipment and process in technology is one of the typical challenges constraining the MSME sector. The need to innovate, explore modern technology and put in place strategies to cut costs, gain in productivity and quality, as well as further improve production, marketing and management functions is critical.

Micro, Small and Medium Enterprises (MSMEs) are the growth engines in the cluster model of intervention. These enterprises are however inhibited by 'limited interaction' between technology providers and technology seekers, and have minimal knowledge about upcoming technologies. A sub-sector wise gap analysis is taken as a guideline to identify the critical

technological gaps and to compare the feasible technologies to enhance productivity and/or quality in the related value chain.

Thus, Grant Thornton, as the cluster development technical agency has been conducting technology meets in the targeted clusters in order to initiate technological upgradation initiatives amongst MSMEs in the region. Technology meets are designed to bring the machinery suppliers and technology related institution and service providers closer to the local entrepreneurs.

Thus, well-planned technology meets help in bridging these gaps and keep the MSME sector up-to-date by offering them an effective information base on network to support and deliver information related to technology to different users. Such meets can also help in forecasting technology developments and provide a framework to plan and execute new technological growth.

### **Why Technology Meet**

Technology meets essentially helps identify the technological gaps that are existing in Micro, Small and Medium Enterprises in specific value chains and help connect them with the right kind of service providers like local machinery suppliers, technical institutions, agricultural universities etc. These service providers can assist units to reduce their cost of production, wastage and enhance productivity and product quality due to low quality equipment, and help in upgrading them to improved quality equipment. Obviously, some equipment and process technology interventions may be required at the individual enterprise level and some at the joint CFC level.

### **Procedure for conducting Technology Meets**

In order to conduct a successful technology intervention, the first step is to establish an objective for the meeting and understand what the technology meet is expected to achieve. This will help in the proper identification of the specific technological gaps and necessary interventions is a value chains/ cluster which may be in the form of common facility centers deploying related equipment and technology as well.

For achieving the desired goal, it is imperative to undertake a gap analysis in order to understand an enterprises' needs and identify their constraints. Based on the objectives, a gap analysis will strive to identify specific requirements in technology in the value chain. Based on the current state of business and set objectives, interventions need to be identified to meet these gaps. MSMEs in particular, can greatly benefit from a technology gap analysis when determining ways to allocate resources. Also, potential service providers need to be identified and a list of such service providers need to be compiled

Once the basic analysis is completed and probable service providers identified, a technology meet can be conducted with the relevant stakeholders of the particular value chain. While conducting the technology meet it is important to be aware of the receptiveness of participants and their level of comfort in accepting a new technology. This may also be in terms of necessary investment outlay.

Documenting the proceedings of the event and noting down the recommendations and suggestions of both the participants as well as service providers entails the final step in the process.

### **Outcome of Technology Meet**

Technology Meets are aimed at building strong connections among the units and service providers. After detailed analysis of the existing gaps, Grant Thornton has been able to suggest interventions and inform the enterprises about the services that can be availed of Under the APART project, GT has been successful in conducting more than 10 technology meets across the project districts of Assam. Such meets have helped enterprises undertake the of upgraded machines that are available in order to reduce their wastage and cost of production. Through these meetings, GT has helped in building connection among the local entrepreneurs with some of the biggest machinery suppliers of the region.

### **Envisaged Outcome of Technology Meets**

By holding regular technology meets, Grant Thornton aims to remove the disconnect that exists among the micro, small and medium enterprises and the service providers. It is also aimed at spreading more awareness about the newly developed machines, and processor and making units more conscious of proper equipment and processes in technology. The end goal of technology meets is to help the enterprises explore modern technologies and innovate in strategical ways so as to improve their production capacity and cut back on wastages created by low-quality equipment.

### **6.1.3. Business Development Services Meet (BDS Meet)**

Business Development involves tasks and processes for developing and implementing growth opportunities for a particular business or organization, either by cultivating partnerships or other commercial relationships, or identifying new markets for its products or services. Business Development Service providers include both, private and public service providers like banks, MSME-DI, KVK, machinery suppliers, CAs, quality management system related, tax consultants etc. Business Development Services are very important for supporting the development of micro, small and medium enterprises of a region.

A Business Development Service providers meet involves participants from both public and private sectors who gather to offer knowledge about their services and facilities to the enterprises in the target value chains. BDS providers may be categorized into Operational BDS providers, Short and/or medium term strategic BDS providers, and Long term strategic BDS providers. A BDS meet, therefore, helps enterprises get into direct contact with the service providers and discuss about knowledge gaps in terms of availing loans, schemes and subsidies from banks, DIC, NABARD, NEDFi, MSME- DI, NSIC and other financial institutions.

In India, the services of several public as well as private BDS providers may be availed by MSMEs.

### **Why BDS Meet?**

Business Development Services meets are necessary for sensitizing local entrepreneurs about various service providers that are not available and the means to avail related service. In such meetings, entrepreneurs have the opportunity to learn about ways to develop their business. BDS providers offer services ranging from day-to- day operations like tax consultation, to availing benefits in terms of securing market linkages or ideally sourcing institutional finance to reduce cost of working capital. Other long term services may include activities such as brand building in the market or establishing industrial parks so as to improve enterprise performance in the long-run.

### **Procedure for Conducting BDS Meets**

There are some key factors that need to be looked into while conducting any BDS meet. A proper analysis of the services required by the MSME clusters and other stakeholders need to be done along with mapping of the existing BDS providers in the area. BDS meets were organized in the districts by Grant Thornton in association with the DICC, Banks, NABARD, NEDFi, MSME-DI, IIE, IIFPT, NSIC, ITI, tax consultants, CA's, machinery suppliers etc. They elaborated in there service in there meets and scope for twinning with MSMEs is different locations

While utilising private BDS providers and exploring means of ensuring sustainable delivery of services is an agenda, BDS are being identified and facilitated in a manner that would be employed by MSMEs on a continuous basis, (or where appropriate, on a commercial/quasi-commercial basis) depending on nature of their services viz. private or public.

Notably effectively synergising roles of public BDS providers (often institutions) to cluster SME needs/industry association initiatives also contribute towards greater and appropriate industry–institution linkages.

#### **Outcome of BDS Meets**

Through Business Development Services meets, Grant Thornton has been able to make the Micro, Small and Medium Enterprises of the districts more aware of different service providers as well as of schemes and subsidies available. Moreover, interviews with entrepreneurs helped GT identify the knowledge gaps in terms of availing loans, schemes and subsidies from banks, DICC, NABARD, NEDFi, MSME- DI, NSIC and other financial institutions. A total of around 10 successful BDS meets have helped the team of Grant Thornton in sensitizing entrepreneurs on various services and facilities that are offered for the development of MSME units.

#### **Envisaged Outcome of BDS Meet**

The Micro, Small and Medium Enterprises are usually quite unaware of what business development services are, and the kind of services that are offered for the growth of such units. BDS meets are organized with the aim of sensitizing the owners of such enterprises and linking them with the best service providers in terms of management and entrepreneurship training, packaging, patents, credit and creating global linkages. BDS meets also help entrepreneurs initiate skills or use services to excel in their business, use latest technology as a means to add value to their products as well as opt for product diversification.

#### **6.1.4. One-on-One Interview**

One-on-one is a more direct and conversational form of communication that happens between the interviewer and the interviewee. The interview as per format is discussed at the beginning and questions are asked by the interviewee towards the end.

One-on-one interview sessions with Micro, Small and Medium Enterprises help in detailed analysis of units and help service a clearer picture of how the unit is functioning. Such interviews with the owners of the enterprises allow the interviewer to ask direct questions and closely evaluate the unit in terms of its production, capacity, invested amount and turnover, the kind of technology being used, if any, BDS availed etc.

As the Cluster Development Technical Agency of the APART project, Grant Thornton has reviewed a list of around 2500 registered enterprises provided by the Industries & Commerce Department of Assam. In addition to surveying these 2500 registered units operating in the 16

districts of Assam, GT has been able to locate and survey another 2000+ units that were not registered with the government. All these enterprises were individually visited by GT members and a census survey was conducted to map the enterprises. A structured questionnaire was developed for consultation with the entrepreneurs. Approximately 95% of the existing enterprises were mapped.

As a result of the one-on-one interview sessions, Grant Thornton has successfully completed the baseline survey of 5037 units, out of which 4592 have been found to be active units while the rest are either closed or inactive. In addition, enterprise mapping of 1420 units have also been done by the respective GT Team in the project districts.

### **Why One-on-One Interview?**

In certain cases, administering the questionnaire survey technique was not enough to get the required information due to various reasons like inability to spare the required time in filling up the questionnaire, lack of interest, resistance in disclosing information related to turnover, investment, etc, and sometimes, relatively low level of literacy. In such cases, discussion and meetings with the owners/managers in the form of one-to-one interviews were used.

One-on-one interviews help in better understanding of the enterprise and bringing clarity of issues faced during the day-to-day functioning of the specific enterprise. Such interviews also help bring clarity is problems faced by entrepreneurs in general in the course of running an enterprise. Thus, one-on-one interviews give a more realistic picture of the industrial scenario that is present and makes it easier to identify the interventions required.

### **Procedure for conducting One-on-One Interview**

The Grant Thornton team in every district has been assigned with one cluster team leader (CTL) and two cluster facilitators (CFLs) to carry out visits to the enterprises and interview the owner/manager of the unit. The interviews were based on structured questionnaire schedules that focused on probing parameters such as registration of enterprises, their source for procurement of raw material, packaging material, understand whether any schemes or subsidies been availed, their registration with the MSME or DICCC, or if any training programmes have been undertaken by the entrepreneurs. A number of questions were also designed to understand the need for FSSAI registration, training programmes, loans for working capital etc.

After consultation with the project team members, a detailed field plan was prepared and finalized, and at least two focus group discussions (FGDs) and pocket meetings covering all the blocks in the districts have been conducted by the respective GT teams. Finally, the data collected during the interviews were entered in excel sheets and analysed for further intervention.

### **Outcome of One-on-One Interview**

One-on-one interview helped the CDTA secure direct contact with the Micro, Small and Medium Enterprises of the projects 16 districts. Such interviews helped in developing a clearer picture of the present industrial scenario and helped map the gaps existing in the system. Through these interviews, the kind of business development services that are required among the units were also determined. It also came to notice that most entrepreneurs were either unaware of various government and non-government schemes and loans that existed, or facing problems in processing their registration.

Within six months, Grant Thornton India LLP has been successful in the generation of almost 500 UAM, of Micro, Small and Medium Enterprises across different value chains in the 16 districts of Assam, and bringing them in from the informal to the formal sector.

#### **Envisaged Outcome of One-on-One Interviews**

Through these detailed interviews the survey data collected and mapping of enterprises becomes more validated. As such, the real gaps will be easily identified and disc interventions to be carried out can be well decided.

#### **6.1.5. Industry Association Meet (IA Meet)**

An Industry Association, is an organisation that is formed or founded and funded by business units operating in a specific sector and/or location. Industry associations participates in public relations activities such as advocacy, information discrimination education and publishing, and play an important role in providing a collective voice for individual businesses within an industry.

An Industry Association is a formal organisation with rules and/or bye-laws, governing body, executive members and members from social or business. It is an association of any group of people who have joined together for a purpose from social to business, and meant to be a continuing entity.

In the context of The APART project, Industry Associations (IAs) will be formed among the agro-based enterprises (primary) and producers (those who are willing to become entrepreneurs or processors) in a project district. An industry association meet involves getting together all stakeholders of the association to discuss regarding issues concerning industry, developing standards and establishing rules for best practice within their industry.

The prospective members of an Industry Association (IA) are promoters of rice mill units, oil mill units, bakery & confectionary units, fruit processing (pickle making, jam, jelly, sauces, papad, chips, etc.) units spice processing (ginger and turmeric), feed manufacture (cattle, poultry and piggery), milk producer/processor units, fish processor/producer and pork producers/processor. Support institutions like technical institution, financial institution, government departments, raw material supplier, plant and equipment suppliers, chartered accountant (CA) and/or agency/institution may also be members of association (if they provide support through their services).

#### **Why Industry Association Meet?**

The role of an industry association is much greater than a group of firms in pursuit of common commercial objectives. Firstly, association caters to the requirements of all or most SMEs in a cluster since this volume refers to associations in the cluster context. Secondly, an association in the cluster may have multiple roles, the most common among them being advocacy. Other possible roles include disseminating information and knowledge among its members. An industry association offers micro, small and medium units a bigger platform to put forward their problems to the authorities. Member units of an association can also benefit by opting for collective procurement and selling of their inputs and outputs.

Associations also take up the responsibility to provide BDS services by themselves, coordinate BDS provisions through other providers, enter into partnerships with other institutions including public entities to set up common infrastructure, undertake R&D and pursue strategic marketing initiatives. Associations could also take upon themselves the task of helping small consortia of

their members evolve and strengthen their resolve to pursue common objectives, mostly commercial in nature. Finally, some of the industry associations have also been able to include social responsibility among their charter of activities.

### **Procedure for conducting Industry Association Meet**

Associations are normally registered under Societies Registration Act as not for profit entities whose main objective is to further the cause of members and cluster enterprises; revenues accrued are disbursed towards further declared objectives and not distributed amongst members.

Before forming the Industry Associations, Grant Thornton India LLP began with identification and mobilization of industries' list given from DIC and APART, followed by identification of industry leaders to be part of the Industry Association.

An Ad-hoc committee is formed for mobilization of industries, and for conducting a general body meeting. After finalizing a date and venue for the general body meeting, invitations are sent to stakeholders for finalization of the agenda for the meeting. Election of the executive committee (EC) by the general body is held during the ad-hoc committee meeting where draft by-laws are discussed and KYC document of EC members are collected.

These KYC applications of the EC members collected are submitted on the online portal, after which an acknowledgement is received with the generation of Unique Association Identification Number. Once the unique identification number is generated, and draft by-laws and other necessary documents are finalized, the process of issuance of registration certificate of the Industry Association is underway.

### **Outcome of Industry Association Meet**

Grant Thornton has organized a considerable number of Industry Association meets for mobilizing local entrepreneurs and bringing them together under one strong association. A great many number of enterprises have been mobilized by GT across the 16 districts under the APART Project. Industry leaders of different value chains have been identified in almost all the districts. Moreover, in the district of Morigaon an Industry Association by the name of AAPIAM, Allied Agricultural Processors Industry Association Morigaon, has already been formed while four other districts, Lakhimpur, Nagaon, Nalbari and Sivasagar have submitted their Letter of Intent (LoI) for the formation of IA in their respective districts.

Regular industry association meetings have helped make local entrepreneurs more aware of the schemes, and BDS services that can be availed for business development. For instance, only months after formation of the Morigaon IA, the executive members of the Morigaon IA, has already attended various buyer-seller meets, seminars, and mainly, applied for skill training for lot of other local entrepreneurs of the area.

### **Envisaged Outcome of Industry Association Meet**

The aim of the Industry Association meet is to make the clusters strong and independent in terms of production quality and quantity. Cluster model of industrialization is seen to be successful only with the formation of strong and sustainable associations. Thus, with in another five years of the APART project on hand, GT is in the process of forming Industry Associations in all the districts and make each one of them economically sustainable and independent.

