

# Availability of and Accessibility to Food in Assam

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## Abstract

*The present study provides an overall assessment of food security in Assam considering two important elements of food security such as availability of and accessibility to food. While the availability of food depends upon production, access to food is guided by purchasing power of the people. Assam has been experiencing a positive growth of yield rate of total food grain production, but availability of food alone cannot ensure food security. Assam ranks very low in terms of access to food and a number of factors are working behind it.*

**Key Words:** *Food security, Access to food, Productivity, Poverty, Unemployment, PDS.*

## Introduction :

Access to food at all times of everyone is interpreted as food security. Food security is in fact the vital prerequisite for an active and healthy life of individuals and for the economic and social stability of a nation. It is the foundation of economic security and economic security leads to national security and other forms of social security like health security and education and employment opportunity (Kalam, 2004).

Food security as a concept originated only in the mid 1970's, in the discussion of international food problems at a time of global food crisis (FAO Corporate Document Repository). Food security has evolved and developed considerably in late nineties. Different scholars have looked the issue of food security from their own perspective as a result, there are divergent views on how

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to define the food security (Power, 1998). The concept of food security implies, “a situation that exists when all people, at all time, have physical, social, economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO,2002). The concept has further been refined and enlarged, as elaborated by the National Commission on Farmers (NCF, 2006), which implies that every individual has the physical, economic, social and environmental access to a balanced diet that includes the necessary macro and micronutrients, safe drinking water, sanitation, environmental hygiene, primary healthcare and education so as to lead a healthy and productive life. Food insecurity may be chronic, seasonal or temporary and it may occur at the household, regional and national level. Food insecurity and malnutrition result in catastrophic amounts of human suffering. The World Health Organization (WHO) estimates that approximately 60% of all childhood deaths in the developing world are associated with chronic hunger and malnutrition.

The food security issue is essentially an integration of three sub concepts: food availability, food accessibility and food utilization (Awasthi and Singh, 2010). Therefore, food security can be studied from three different view points. First, availability of food which depends upon production; second, access to food that is guided by purchasing power; and third, food absorption or utilisation. Food absorption implies being able to assimilate the food consumed in order to live a healthy and long life. This can come about with good sanitation facilities and better health care infrastructure. Nutritious and safe diets, an adequate biological and social environment, a proper health care to avoid diseases ensure adequate utilization of food (Gross, Schoeneberger, Pfeifer and Preuss, 2010).

Despite its continuous efforts, ensuring sufficient food to its population has been a challenge to India till now. India is the home of one-fourth of the world’s hungry and poor. During the last one decade, despite having achieved national level (macro) food security and the boost in the overall GDP growth, agricultural production and rural income growths have slowed down considerably and outstripped by the population growth rate. With little reduction in the number of undernourished and poor people, the country is far behind in achieving the Millennium Development Goals and the targets set at the World Food Summit.

A recent spiral increase in the domestic and international prices of food articles have again raised a question on food security in the country where 25% of the country's citizens are living below the poverty line and half a billion people live on agriculture and allied sectors for their livelihood.

Assam, one of the north eastern states of India, has also been facing challenge in providing sufficient and nutritious food to its citizens. The economy of Assam continues to be predominantly agrarian. However, the state is still having a very low growth rate of agriculture sector. The net cultivated area of the State is 28.11 lakh hectares (2009-10) of which 23 per cent area are either flood or draught prone. Every year land available for cultivation is reducing and becoming unproductive. The average operational holding is 1.15 hectare only and more than 83 per cent of the farmers are small and marginal farmers (2005-06, Agricultural census). The contribution of the agriculture sector to the GSDP (at constant prices; 1999-2000 prices) was pegged at 22.04 per cent in 2011-12 after steady decline from 25.6 per cent in 2004-05. However, this sector continues to support more than 75 per cent population of the State directly or indirectly providing employment of more than 53 per cent of the workforce (Economy Survey Assam, 2011-12).

With this backdrop, an attempt has been made to study the level of food security in Assam by highlighting two indicators of food security, i.e., availability of and accessibility to food in this paper.

#### **Methodology and Data Source:**

The paper is basically analytical and is based on the secondary data. Information and scholarly inputs have been taken from different sources like books, journals, statistical handbooks, planning commission report, etc. and these are analyzed to fulfill the objective of the paper.

To assess the availability of food grains, several factors like area under cultivation, the yield of food grains, total food grain production, the quality of seed sown, irrigation facility, population growth etc. can be considered. Here area, yield and production of some crops as well as availability of irrigation facility are taken into account to assess the availability of food grains in Assam.

On the other hand, to judge the access to food some factors like per capita income, average monthly per capita expenditure, rate of poverty, unemployment rate that reflect the resources available with people to acquire adequate food are considered.

### Discussion:

One of the important indicators that determine the production of food grains is the area under crops. The following Table-1 shows the area under some principal crops during the period 2001-02 to 2010-11.

The Table-1 reveals that there has been a gradual declining trend in cultivable area under total food grain production in Assam since 2001-02. It was 27.55 lakh hectares in 2001-02 which has declined to 23.82 lakh hectares in the year 2006-07. After that it has slightly increased to 27.67 lakh hectares in 2010-11. The trend in the production of rice, wheat and pulses is also similar. The percentage change in the cultivable area under total food grain production has increased only by 0.44% during 2001-02 to 2010-11 and that of total rice and wheat by 1.34% and 6.77% respectively. Regarding the area under wheat production a negative change of 37.5% is found. There are so many reasons behind it, but mainly, agricultural land has been utilized for non agricultural activities like industrial activity, real estate, house construction etc. Moreover high growth of population and frequent occurrence of flood have been creating an alarming threat to the area under cultivation.

**Table-1**  
**Area Under some Principal Crops in Assam**

(In lakh hectare)

Crops	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Total rice	25.37	25.40	25.29	23.83	24.20	21.89	23.24	24.84	25.30	25.71
Wheat	0.72	0.69	0.70	0.64	0.50	0.60	0.56	0.50	0.60	0.45
Total pulses	1.18	1.11	1.14	1.08	1.00	1.07	1.13	1.14	1.19	1.26
Total foodgrains	27.55	27.48	27.41	25.82	25.97	23.82	25.18	26.71	27.35	27.67

Source: Economic Survey Assam 2011-12, Directorate of Economics and Statistics

Although area under total food grains production has been increasing at a very low rate, but Table-2 reveals that production of total food grains has increased by 168.39 percent in 2010-11 over the preceding year. Actually the state has experienced a very high growth of the yield of total rice in that period which contributes such a positive change in the yield rate of total food grain production. The remarkable change in the yield rate of total rice may be due to increase in the total area under HYV rice which has increased from 13.45 lakh hectares in 2006-07 to 16.97 lakh hectares in 2010-11. The area coverage under HYV rice in 2010-11 was 6.73 percent more over the preceding year i.e., 2009-10.

**Table-2**  
**Production and Average Yield of Some Important Crops in Assam**  
(Production in thousand tonnes and yield in kg/hectare)

Crops	Production			Average Yield		
	2009-10	2010-11	% change*	2009-10	2010-11	% change*
Total rice	4409	5033	14.15	1765	5671	221.30
Wheat	65	56	-13.84	1087	1256	15.54
Total pulses	66	72	9.09	558	564	1.08
Total food grains	4557	5178	12.09	1686	4525	168.39

Source: Economic Survey Assam 2011-12, Directorate of Economics and Statistics.

\*calculated by the author

It can be mentioned that the positive growth of yield rate of total food grain production during this time may be due to good monsoon and government's initiatives of installation of Shallow Tube Wells (STWs) for assured water supply to the farmers field with the financial aid from National Bank for Agriculture and Rural Development (NABARD) and Assam Rural Infrastructure and Agriculture Service Project (ARIASP). It may be mentioned that optimizing the irrigation potential and its utilization is the major challenge faced by the State. There exists large gap between irrigation potential created and irrigation potential utilized. According to economic survey 2011-12, the causes for gap were - general wear

and tear of the schemes, damage caused by natural calamities like flood, storm etc., erratic power supply in respect of the electrically operated schemes (Surface Lift and Ground Water Lift), damage of transformer, change of river course in respect of Surface Flow and Surface Lift Irrigation Schemes, damage of canal System, no demand from cultivators, non-functioning of the schemes due to theft of motors/ pumps and other accessories, imposition of Irrigation Service Charges by the government for realization from the cultivators. According to the CSO report, New Delhi the ultimate Gross Irrigation Potential (Annually Irrigable Area) has been estimated at about 27 lakh hectares in 2009-10, which constitutes 65.8 percent of the Gross Cropped Area (41.05 lakh hectares) of Assam, while in some states like Punjab (96.9%), Haryana (85.3%) it is remarkably higher.

Comparison of growth rate of population and growth rate food grains production in Assam suggests that Assam is not a food deficit State. The average annual exponential growth rate of food grains production in Assam was 12.77 percent during 2009-10 and 2010-11 which is much higher than the exponential growth rate of population (1.58%) in Assam during 2001-11. Having found that, the question of possibility of any gap between availability of and accessibility to food grains in Assam need to be examined.

Good production of food grains helps in maintaining constant supply of food to masses but supply of food alone cannot ensure food security of any country (Awasthi and Singh, 2010). Food security is a function not only of availability of food, but also of the purchasing power of the people. It is therefore important that every household should have the purchasing power to acquire it. It has to be appreciated that a country may be food surplus, but all its citizens may not be enjoying food security, as some may have no purchasing power (Singh). Assam ranks very low in terms of access to food. This is essentially because Assam has a very low level of per capita income, low level of per capita consumption expenditure, relatively high percentage of population below the poverty line and a very poor development of rural infrastructure. A significant proportion of population is still threatened by a lack of access to a means of livelihood and is potentially vulnerable to food insecurity.

The slow progress towards the attainment of food security is related to the

slow growth of per capita income of a country. The per capita income of the state reveals stagnant economic growth and thereby purchasing power of masses. In 2010-11, the per capita income of Assam at constant (2004-05) prices was Rs. 21406, while that in 2009-10 and 2008-09 was Rs. 20193 and Rs. 18922 respectively. In terms of growth rate, it has increased by 3.1 per cent in 2006-07 but declined to 2.9 percent in 2007-08. After that it increased gradually and reached 6.72 percent in the year 2009-10. But again it slowed down to 6 percent in 2010-11.

During the entire period from 2004-05 to 2010-11, the growth rates of per capita income in India were higher than the state growth rates. This information shows a grim picture of Assam's per capita income which may be responsible for low purchasing power of masses.

**Table-3**  
**Per Capita Income of Assam and India at Constant (2004-05) Prices**  
(In rupees)

Year	Assam*	Growth Rate* (In %)	India**	Growth Rate** (In %)
2004-05	16782	-	24,143	-
2005-06	17050	1.60	26,015	7.75
2006-07	17579	3.10	26,015	7.89
2007-08	18089	2.90	30,332	8.07
2008-09	18922	4.61	31,754	4.69
2009-10	20193	6.72	33,901	6.76
2010-11	21406	6.0	36,342	7.20

Source: \*Economic Survey Assam 2011-12, Directorate of Economics and Statistics, Assam  
\*\* Planning Commission of India

Amartya Sen states that the cause of hunger in India currently is the wide prevalence of poverty. There is a close relationship between poverty and under nutrition (Rao, 2003). It is difficult for poor individuals to acquire adequate food and nutrient consumption for themselves and their families. The under nutrition diminishes muscular strength, immunity to disease, and the capacity to do productive work. Moreover undernourished persons suffer from depression, lower

intellectual capacity, lack of motivation etc.

Poverty in India is officially measured in terms of calorie consumption. The poverty line is the monthly per capita expenditure which was Rs 49 in rural India and Rs 57 in urban India in 1973-74, ie. people below this expenditure are considered as poor. In 2011-12, monthly per capita poverty line became Rs 816 for rural areas and Rs 1000 for urban areas. These expenditures correspond to a total household expenditure are estimated as sufficient to provide 2400 calories daily in rural areas and 2100 calories daily in urban areas, plus some basic non-food items. In Assam the monthly per capita poverty line is Rs.828 for rural areas and Rs.1008 for urban areas during 2011-12 (68<sup>th</sup> round of NSSO). The 68<sup>th</sup> round of National Sample Survey report reflects that during 2011-12, 101.27 lakh people of Assam did not have adequate purchasing power to meet their daily food requirement out of which 92.06 lakh people belonged to the rural area. Table 4 reflects that the incidence of both rural and urban poverty in Assam has been higher than the All India average. The poverty ratio of the State is also much higher than that of many states of India like Goa (5.09), Kerala(7.05), Punjab(8.26) etc.

**Table-4**  
**No. and Percentage of Population below Poverty Line in 2011-12**  
**(Tendulkar Methodology)**

No. of persons (In lakhs)

State/ Country	Rural		Urban		Combined
	Monthly per capita poverty line	No. and Percentage of Poor	Monthly per capita poverty line	No. and Percentage of Poor	No. and Percentage of Poor
India	816	2166.58 (25.7%)	1000	531.25 (13.7%)	2697.83 (21.92%)
Assam	828	92.06 (33.89%)	1008	9.21 (20.49%)	101.27 (31.98%)

Source: 68<sup>th</sup> round of NSSO, Planning Commission of India

Moreover, the most alarming feature of the State is growing unemployment



problem. According to the Economic Survey, Assam 2011-12, the number of persons employed in organized economic activity (comprising both Public and Private Sectors) was 11.19 lakh in the year 2006 thereby registering a decrease of 1.78 per cent in employment over the previous year.

**Table - 5**  
**Total Employment in Organized Sector**  
**(Both Private and Public Sector)**

In lakhs

<b>Year</b>	<b>Employment</b>
2005	11.4
2006	11.19
2007	11.7
2008	10.8
2009	11.03
2010	11.14

Source: Economic Survey, Assam 2011-12,  
 Directorate of Employment and Craftsmen Training

In 2008, the number of person employed again decreased to 10.08 lakh. In the year 2010, this became 11.14 lakh showing a slight increase of 0.99% over the preceding year. The job-seekers specially educated job-seekers are increasing year by year. As per data available from the Employment Exchanges of the State it is revealed that during 2008 the number of job-seekers on the Live Register of Employment Exchanges stood at 20.06 lakh which increased to 20.80 lakh in 2009 showing an increase of 3.69% during this period.

The efficiency and coverage of food safety nets such as public distribution system also affect access to food (Singh). Public Distribution System (PDS) evolved as a major instrument of the government's economic policy for ensuring availability of food grains to the public at affordable prices as well as for enhancing the food security for the poor. It is an important constituent of the

strategy for poverty eradication. PDS is operated under the joint responsibility of the Central and the State Governments. But this system is also not free from corruption. The PDS involves huge anomalies including forgery and fraud that took place in most of the states of India. A section of Government officials, black marketers and corrupt elected representatives are involved in the diversion of PDS food grains and other PDS items worth thousand of rupees in the State to the black market. Assam topped the list in terms of diversion of PDS food grain to the black market prepared by National Council for Applied Economic Research, 2010 (NCAER). Contrary to this, the same report has shown the performance of New Delhi, MP, Uttarakhand, Kerela and others is far better than Assam. Rajasthan is having the most effective PDS system with zero diversion of rice and wheat according to this report.

**Table - 6**  
**PDS Allocation and off take of Assam**

<b>Year</b>	<b>Rice allocation (metric tones)</b>	<b>Off take %</b>	<b>Wheat allocation (metric tones)</b>	<b>Off take %</b>
2005-06	1418.636	66.3	337.024	83.2
2006-07	1460.52	86.4	254.221	98.4
2007-08	1081.116	104.8	264.411	99.4
2008-09	1181.892	99.9	224.364	98
2009-10	1208.46	97.4	264.411	80.4

Source: Department of Food and Public Distribution

The table reveals that the off take of food grain by Assam government remains very high. The off take percentage is 97.4 of 1208.46 metric tones of rice and 80.4% of wheat during 2009-10; 99.9% of 1181.892 MT of rice and 98% of 224.364 MT of wheat during 2008-09. But the problem is that food grain does not reach the actual target group in the State living in the lowest strata of society despite the high percentage of off take of food grain. The NCAER evaluation shows that 44.97% of rice allocated for BPL families and 83.28% of rice allocated for APL families under

PDS are diverted to the black market in the year 2008. So the figures relating to off take and the percentage of diversion shown by the NCAER evaluation have clearly reflected the Government's failure to nail the racketeers involved in the process. In spite of increase in food grain production and average yield of some major food crops in recent years, lakh of poor and downtrodden people of Assam have been deprived of their due and are forced to live in hunger and poverty in the state, the reason is inefficient distribution system.

These all reflect a disappointing picture of access to food by the people of Assam. At the same time the skyrocketing hike in prices of all essential commodities in the recent period has made the lives of these people who came under the target group of the PDS system miserable. Food prices are very sensitive indicator for accessibility (Gross, Schoeneberger, Pfeifer and Preuss, 2010). High rate of inflation may result food insecurity among a section of people of a country as the targeted beneficiaries of the PDS have to purchase food grain from the open market as availability of PDS items in the fair price shops is highly irregular and even when it is made available is transferred to the black market. Rising food prices may have caused poorer households to adopt less nutritious diets.

Besides the Public Distribution System, the government has implemented several programmes such as MGNREGA, MID-day Meal programme, National Food Security Mission (NFSM) etc. so that poor people can have adequate availability and access to food. The State government has given utmost importance to create more employment avenues in the State. In order to increase employment through generation of gainful employment opportunities the State Government has been implementing various schemes like Swarnajayanti Gram Swarajgar Yojana (SGSY), Prime Minister Employment Generation Programme (PMEGP), Assam Bikash Yojana, Udyogjoyoti Scheme etc and all these schemes at the same time also aim at economic upliftment of rural people at the grass root level.

### **Conclusion**

In spite of all efforts, the problem of food insecurity prevails in Assam to a greater extent. In order to make the State food secured, government should maintain buffer stock of food grains and utilize its stocks to ensure supply and

bring down prices. In this connection Food Security Bill will no doubt bring desired result provided that actual poor are recognized. At the same time, in order to maintain food stock for distribution, post harvest infrastructure should be improved and for this, godowns in every district of the state should be constructed. At the same time technical inputs like irrigation, fertilizers, genetically modified crops etc. are necessary to be improved. Moreover funds allocated under several schemes must flow into desired channels through good governance and effective implementation. To ensure effective implementation of government policies, proper monitoring system should be introduced so that it will help to reach services to the poor ones. Besides there should be effective participation of Panchayats, urban local bodies and self help groups and also linkages among them.

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