



---

## **Constraints of Agricultural Development- A Case Study at Bokakhat Sub-Division, Assam**

*Podmakshi Dutta*

MA in Economics, Assistant Teacher, Balijan Higher Secondary School, Assam

E-mail: [bhairabtalukdar965@gmail.com](mailto:bhairabtalukdar965@gmail.com), M: 9864784779

---

### **ABSTRACT**

Agriculture is an indispensable part of Assam economy. It has a significant contribution to the GDP of Assam. The principal objective of this paper is to show different constraints of agricultural development in Bokakhat - a sub division of Golaghat district, Assam. This paper focuses on the study and explanation of agricultural constraints in Bokakhat sub-division. The paper will clearly show the impact of constraints on agricultural development. The paper will also suggest some proper measures to remedy agricultural constraints. This paper is based on both primary and secondary data. Survey and field study methods have been taken as the source of primary data. Agricultural development refers to the process of creating proper conditions that help in efficient plantation, harvesting and processing of crops. Agricultural development helps fulfill agricultural potential. But different constraints resist agricultural potential. This leads to lower production as well as unfulfillment of potentiality in agriculture. In Bokakhat sub-division different agricultural constraints restrict agricultural potentials. Various constraints stand as responsible for poor agricultural productivity in the sub-division. Farmers do not able to produce more as expected. Agricultural constraints cause terrible impacts in front of the living of people in the sub-division. Particularly, agricultural constraints immensely affect poor people.

**Keywords:** Agriculture, Agricultural constraint, Agricultural development

---

### **Introduction:**

Agriculture is an important source of occupation. More than 55% people in Assam depend on agriculture for living. Agriculture has an important contribution to both GDP of Assam and employment generation. Agriculture has about 17% contribution to the SGDP. Economy of underdeveloped countries is mainly agro based. Agriculture generates both large income and employment in underdeveloped. The word agriculture comes from the Latin word 'agricultura'. Agricultura is the derivation of two words 'ager' and 'cultura'. Ager means a field and cultura means cultivation. This means agriculture is a field cultivation. In broad sense, agriculture means a preparation of land for growing crops and rearing animals. Agriculture is under the primary sector.

Initially agricultural sector was the principal sector for most of the countries in the world. It had pivotal role in the economy. More than 90% people got engaged in agriculture and lived based on agriculture. But later other two important sectors- industrial and tertiary sectors developed gradually which led to decline in agricultural sector. Presently service sector plays a pivotal role in economic development in the place of agriculture. In India agriculture is an indispensable part of the economy. Most

of the Indian states are agro based including Assam, Punjab, Haryana etc. A major part of the national GDP and employment is from the primary sector. Without agriculture it can't be guessed what will happen in India or in Assam. India is the second highest populous country after China. Without agriculture people will die in hunger.

India is an agro-based country since the ancient period. The Harappan Civilization is the evidence of it. This is one of the oldest three civilizations. Evidence of rice, pond, well, granaries, plough etc acknowledges this truth. India is still very rich in agriculture. Different variety of rice, wheat, pulse, vegetables etc are cultivated in India. India exports a large amount of agricultural products to different countries. It earns a good amount of foreign income from agricultural products. Assam also has a significant contribution to the earning of foreign income by India.

Agricultural development means the process that creates proper conditions for plantation, harvesting and processing of crops in efficient manner. Development is a vital part of agriculture. Development helps farmers effectively perform agriculture. Agricultural development doesn't only help increase production but also makes agriculture environmental friendly. It lessens land degradation, soil erosion, misuse of fertilizer, water logging etc. This means agricultural development makes agriculture sustainable. It's necessary to make agriculture sustainable to ensure the future food security as

well as the security of future generation. The United Nations highly emphasizes sustainable development of agriculture to lessen hunger in the world. Misuses of fertilizer, pesticides etc, water logging, overuse of land, overgrazing etc highly pollute soil.

Constraint is common for all the development processes. Constraint means restriction that obstructs any development process. Agricultural constraint restricts agricultural development. Agricultural constraints are those which become hurdle in front of agricultural development. Agricultural constraints may vary from place to place or farmers to farmers. All the farmers have to somewhat face problems in agriculture. But their manners of problems are different. In India farmers from all states or union territories experience different kind of constraints or problems. Weather, availability of water, quality of land, use of technology, farming knowledge etc make agricultural constraints varied. Due to these constraints agricultural production becomes less than expected. Agricultural constraints also lead to land degradation, inefficient use of land for cultivation etc. Constraints are just curse for proper cultivation or agricultural development.

Bokakhat is a sub-division of Golaghat district in Assam. Assam is a beautiful north-eastern state of India out of the eight states. It is full of natural beauty. The world famous Kaziranga National Park is situated in this state. Bokakhat is an unavoidable part of this park. A lot of foreigners visit Bokakhat every year because of the Kaziranga National Park. Being under this park Bokakhat is well known inside and outside Assam as well as India. Bokakhat is also famous in Assam for a sweat called 'pera'. Foreigners also take this sweat with praise while visiting this site.

People of this Bokakhat sub-division are particularly agro based. They cultivate different crops. They also rear animals in less quantity. They basically rear goat, cow and pig. Cow is highly reared here. Earnings from livestock farming supplement the income of farmers. Most of the people have own agricultural land ranging from 1 to 4 bighas. The number of landless people in Assam is very less. The principal occupation of the people of this sub-division is agriculture. They just depend on agriculture for living. There are about 1 to 2% people in the sub-division who do not practice cultivation. Agriculture has the highest contribution to the income of this sub-division. But this sub-division has been undergoing different agricultural constraints. These constraints obstruct the agricultural development of the sub-division. People do not able to get expected production only because of these constraints. Agricultural constraints of this sub-division also represent the backwardness of agricultural sector of Assam as well as India.

---

### Objectives of the study:

The basic objectives of this study are-

1. To study the scenario of agricultural sector of Bokakhat sub-division.
2. To recognize and evaluate the constraints of agricultural development of Bokakhat sub-division.
3. To give suggestions on how agricultural constraints can be countered.

---

### Review of literature:

Agriculture is an important sector of economy which provides foods to the entire human population. A lot of economists studied the importance and development of agriculture as early as the time of Adam Smith. They contributed a lot to the agricultural sector. Baker was the first person to make study on agriculture. In India V.K.R V Rao made a study on agricultural production and productivity. After that Amartya Sen, Khan, Srinivasan etc studied growth and development of agricultural sector in India. They had a lot of contributions to the agricultural sector of India.

A very few scholars made research papers on agriculture in Assam. Dr. Dinesh Sarmah's thesis 'Problems and Prospects of Agricultural Sector in Assam- A Case Study of Sonitpur District' explains different problems of agriculture. But this thesis is just confined to Sonitpur district. No any scholar made any research paper or article on the constraints of agricultural development of Bokakhat sub-division. Different constraints experienced by farmers in Bokakhat sub-division do not appear in front of the people. To make their hardship, sadness, fighting with nature etc for agriculture known I have prepared this paper. This paper will show their constraints that resist in agricultural development in Bokakhat sub-division.

---

### Methodology:

This paper is mainly based on primary data. I have taken the help of survey and field study method to gather primary data. In surveys I have visited many households (nearly 200 households) to gather information from farmers on agricultural constraints. They have told me their problems related to agriculture. I asked them different questions on agricultural constraints. They answered responding to my questions. In the field study method I visited agricultural fields and collected data on different problems lying in agriculture. I have observed their agricultural products such as rice, vegetables, mustard, pulse etc and their agro-fields and livestock farming. All the farmers have told me about what kind of constraints they are facing in agriculture. I have rarely used secondary data. Nobody studied the constraints of agricultural development in Bokakhat sub-division. This is the basic reason for having very less secondary data in this paper.

---

### Discussion:

A few studies have been made to know the growth of production of crops. Different studies show it clearly that growth of production of crops leads to increase in variability in production. The growth of production of crops depends on quality of land, technology, use of fertilizer, irrigation facility, use of

pesticides etc. When production of crops increases variability in production also increases. In India 'Green Revolution' brought a drastic change to the agricultural sector. It's just a blessing for Indian economy. In 1960s Green Revolution occurred in India. Before the rise of Green Revolution in 1960s there was food scarcity in different parts of the country. Famine occurred in India year after year before this revolution. For example a neighboring state of Assam, Meghalaya experienced a high famine. But this revolution made food abundant in India. Due to this revolution production of food grains particularly rice and wheat increased largely in different states of India. It can't be imagined what could have happened in India if this revolution wouldn't come to India.

The Green Revolution led to increase in production of crops in India. This also helped increase variability in production of crops. Assam was not out of the influence of this revolution. It impacted on Assam a lot. Due to this revolution production of crops in Assam increased. The production of crops in Bokakhat sub-division also increased because of this. Variability in production of crops also increased. Presently different crops including rice, vegetables, mustard, pulse etc are highly cultivated in this sub-division. But different constraints obstruct agricultural development of this sub-division. Agricultural constraints found in this study are concisely discussed below-

1. **Improper distribution of land:** Improper distribution of land has a significant impact on productivity and utilization of land. In Bokakhat sub-division land is not properly distributed among farmers. It's a distinguishing constraint of agricultural development. Most of the farmers have very little land. A large quantity of land is confined to a very few farmers. Because of this production becomes less than expected. It's difficult to use modern technology in smaller size of land. More than 95% farmers become deprived of the use of modern technology in their agricultural lands due to fragmentation of land. This results in less production of crops. Those who have more land do not use effectively land in agriculture unlike marginal farmers.

Modern agricultural technologies like robots, temperature sensors, GPS technology, aerial images etc are used in agriculture to increase the production of crops. These modern technologies can only be used in large size of land not in smaller size of land. This is the basic reason for not being able to use them in agriculture by farmers in Bokakhat sub-division. Farmers have land in different place in smaller amount. Due to this fragmentation they are deprived of the use of modern technology. Both the governments Central and Assam have taken different policy to reform the land tenure system. Still those policies are not properly implemented. Consolidation of land is also an important part of the land reform policy. But the land reform system does not able to reach this objective. Farmers are also not aware of these policies.

'The Assam Fixation of Ceiling on Land Holding Act 1956' implemented by the government of Assam emphasized the redistribution of surplus lands to decrease inequality in the ownership of land. Consolidation of lands was also undertaken. But this act did not reach its targets. Farmers of this sub-division did not benefit from this act. To increase agricultural production in this sub-division, consolidation of lands and redistribution of lands are to be taken into consideration.

2. **Small land holdings:** Most of the farmers of this sub-division have small land holdings. More than 90% farmers of this sub-division have small land holdings ranging 1 to 3 bighas. Only about 2% farmers have more than one hectare of land. Sub-division of lands leads to decline in the size of lands. Basically division of family, sale of lands, providing land to relatives etc decrease land holdings in this sub-division. Due to small land holdings farmers become unable to produce different crops adequately as expected. They can't even use modern technology only because of this reason. Operational land holdings are very less in this sub-division.
3. **Flood:** Flood is a natural disaster. It highly impacts on agricultural production. Assam is a flood prone state. Agricultural production in Assam highly suffers from flood unlike other states in India. Most of the districts in Assam experience this problem. Bokakhat is also a flood prone sub-division. A large part of the sub-division has been suffering from flood every year. Flood occurs in this sub-division as an annual problem. Usually flood takes place during the monsoon season. Increased rainfall causes flood. The Brahmaputra river has the pivotal role in the rise of flood in this sub-division. Flood occurs two to three times from July to September.

Flood stands as a powerful constraint in front of the agricultural development of this sub division. Flood destructs a large amount of growing crops including rice along with livestock every year. Golden crops lose its existence in flood at the eye sight. A large number of livestock die due to flood. Besides due to flood farmers fail to cultivate crops at the right time in this sub-division. Flood becomes a terrible barrier in front of them. Flood also causes water logging problem. This delays cultivation a lot in this sub-division. Particularly two rivers Dhanshiri and Dufflo carry excess water of the Brahmaputra river and causes flood in this sub-division.

4. **Dependence on rainfall:** Rainfall is a natural component. It has a significant role in agricultural production. Rainfall supplies water and provides essential elements for the growth of crops. Irrigation facility is not adequate in this sub-division. Farmers mostly depend on rainfall for cultivation. Rainfall is not regular and adequate in this sub-division. Usually, rainfall starts from the month of June and continues up to September. The sub-division receives somewhat more rainfall during the period of July to August. This causes devastating flood in this sub-division.

The sub-division does not receive adequate rainfall at the right time when farmers need. Farmers practice Boro cultivation during the period of December to March. Boro is a variety of rice. During this period farmers do not receive adequate rainfall. This highly hampers cultivation. They have to wait for rainfall with patience for cultivation. They become unable to practice cultivation at the right time. Water is an indispensable part of cultivation. Without water cultivation is just impossible. Lack of adequate water leads to decrease in productivity of this sub-division. Besides, they do not receive rainfall enough for Shali cultivation and also for other cultivations like vegetables, mustard etc. Absence of timely adequate rainfall just becomes a terrible constraint in front of agriculture.

5. **Drought:** Drought is also a constraint of agricultural development in this sub-division. It hits agricultural productivity. Drought like situation occurs in this sub-division during both summer and winter seasons. Shali and Boro cultivations experience drought like situations every year. Due to lack of timely adequate rainfall drought like situations occur here. This leads to decrease in agricultural productivity. Farmers become unable to do cultivation at the right time as expected. They are also unable to cultivate more due to lack of rainfall. This just becomes a hindrance in front of agricultural development. More than 100 villages suffer from this problem every year.
6. **Lack of adequate irrigation facility:** Irrigation is a necessary element of agriculture. Irrigation facility is essential to supply water to agro-fields. Due to lack of adequate rainfalls farmers of this sub-division take the help of irrigation facility for cultivation. Basically they use diesel water pumps to irrigate their agricultural fields. Use of electric motor for irrigation also increases gradually but not by so as diesel water pumps. But most of the farmers don't able to get these irrigation facilities. Only about 3 % farmers have adequate irrigation facility. Solar pump facility has also become recently available but in very less. Due to lack of fund farmers are unable to avail irrigation facility.

Most of the farmers of this area take other's help who have water pump or other facility for irrigation. They have to give produced crops or money in return of irrigation facility. They can't cultivate more due to this. Productivity decreases because of this problem.

7. **Inadequate availability of HYV seeds:** High yielding varieties (HYV) of seeds are an important input of agricultural production. Productivity of HYV seed is higher than normal seeds. HYV seed is also disease resistant. Use of HYV seeds increases productivity rate of crops. The HYV programme was started in India during the Green Revolution to increase agricultural productivity. Since then the use of HYV seed is being encouraged across the country. But this dream doesn't yet get fulfilled.

Most of the farmers of this sub-division become unable to use these seeds because HYV seeds are not adequately available here. The agricultural department also doesn't provide HYV seeds at large. Besides HYV seeds are not flood resistant as they are imported. These seeds require adequate amount of fertilizer, water etc which are not available adequately in the sub-division. Only a very few farmers use HYV seeds in cultivation. Traditional varieties of seeds are mainly used here. This leads to decrease in productivity of crops.

8. **Lack of use of adequate fertilizer:** Fertilizer is an indispensable part of agriculture. Continuous cultivation lessens fertility of agro-fields. To recover fertility agro-fields require adequate fertilizer. Fertilizer increases fertility. But farmers of this sub-division don't use adequate amount of fertilizer required for crops. As this result productivity decreases. A large number of farmers are not aware of adequate use of fertilizer on their agro-fields. Availability of fertilizer is also less than required. Increase in price of fertilizer, less availability of fertilizer etc also lead to inadequate utilization of fertilizer in agro-fields.
9. **Lack of adequate plant protection measures:** Weeds and insects are common in agro-fields in Bokakhat. A significant amount of crops get lost every year due to weeds and insects. Insecticides and pesticides are measures used in agro-fields to protect crops. But farmers of this sub-division aren't aware of using pesticides and insecticides adequately and properly. Besides Bio Control Agents which are utilized as alternative of chemical agents are not available adequately here to protect plants from insects and pests. Due to lack of adequate protection measures a big amount of agricultural production gets lost.
10. **Not having adequate agricultural credit:** Credit is essential to strengthen agricultural sector. Farmers of this sub-division need a good amount of money to purchase machines, tractor, HYV seeds, pesticides etc for cultivation. They need fund also to start a farm like goat farm, pig farm etc. But they don't have enough money to purchase them. They need agricultural credit to fill up this need. But most of the farmers don't obtain this facility. The government of India has taken different schemes including KCC to avail institutional credit facility at low interest rate for farmers. In spite of this only a few farmers get this facility. This leads to low productivity in this sub-division.
11. **Lack of agricultural marketing:** Market is an indispensable part of agriculture. For selling and purchasing of agro-produce market is a vital organ. Farmers need a market for sale of their surplus agricultural products. But agricultural market is not available in this sub-division for farmers. They don't get the right price of their products. They have to sell their products like rice, pulse, vegetable, milk, meat, livestock etc at low price. Because of this they become unable to do capital accumulation. This leads to decrease in agricultural productivity.
12. **Lack of adequate grassing fields:** Livestock require grassing fields. Due to agricultural expansion, construction of houses, transportation etc grassing fields decline rapidly in this sub-division. This

becomes a great threat to livestock. Farmers become unable to rear them in large because of this. Besides farmers don't have knowledge enough about disease, care etc of livestock.

These are different constrains which resist in agricultural development of Bokakhat sub-division. Some remedial measures are briefly explained below-

1. Increase in government intervention: The government of Assam or India has to completely intervene in redistribution and consolidation of lands among farmers in the sub-division. Different acts related to it are to be properly implemented.
2. Control of flood and drought: The government and people both have to participate in the control of flood. Dams must be built in the right place to control flood. And stored waters of dams have to be used during drought like situation. This will also help in irrigation.
3. Farmers have to adequately and efficiently utilize fertilizer, insecticides and pesticides on agro-fields at the right time.
4. The government and farmers have to be aware of the use and availability of HYV seeds.

5. Livestock farming must be encouraged among farmers and farmers have to be aware of disease, care etc of livestock.
6. Agricultural marketing has to occur in this sub-division.
7. Farmers must have 100% access to institutional credit etc.

---

**Conclusion:**

Agriculture is an unavoidable organ of Assam economy. A large number of people are living only because of agriculture. Agriculture also plays a pivotal role in economic development. In the context of Bokakhat sub-division most of the people depend on agriculture for living. If above discussed constraints are eliminated agricultural productivity will grow high. This leads to agricultural development as well as economic development of the sub-division. To eradicate constraints both the government and people must be active at the same time.

**References:**

- 
- Bhagabati, A. K. "*Spatial Analysis of Small Scale Agriculture in Assam. (A Case Study of Nalbari District)*". 1990. Gauhati University, PhD thesis.
- Ray, N. "*Problems and Prospects of Agricultural Growth in the Barak Valley Region of Assam*". 1999. Gauhati University, PhD thesis.