VI

CONSTRAINTS AND POLICY IMPLICATION
CHAPTER VI

CONSTRAINTS AND POLICY IMPLICATION

Agriculture continues to occupy a pre-dominant place in the economy of Assam and the farmers living in rural areas constitute the backbone of Assam agriculture. However, the socio-economic standard of this huge segment of rural population is far from satisfactory mainly due to under-utilization of available resources, unemployment and underemployment, low per capita income and poverty. The state has completed 11th Five Year Plan by the end of the year, 2012 and yet, the state has been chronically suffering from food deficit since early 60s due to low productivity of food crops, shortage of infrastructural and institutional support and high growth of population. Moreover, poor performance of agriculture sector can be attributed to small holdings, low cropping intensity, low level of adoption of new farm technology, inadequate irrigation facility and consequently low productivity of principal crops as compared to the national average. A healthy agricultural farming economy is the only
solution for all round socio-economic development of the state in context of ongoing economic reforms with liberalized trade policy. But despite having much potentiality, agriculture sector of Assam is still far behind as compared to the other developed states of the country.

6.1 Constraints

In the foregoing chapter, the different aspects of farming systems of the study area are analyzed. The study sufficiently established that the diversification of agriculture is indispensable for increasing total production and income on the marginal and small holdings, for fuller employment in the farm households so far, for stabilization of farm income over the seasons and for conservation and enhancement of natural resources. But the process of diversification is associated with many problems. Lack of irrigation facilities, inadequate financial facilities, lack of HYV seeds’ supply etc. are some of the major constrains faced by the farmers in Assam in agricultural diversification. Haque et al., (2010) in their studies
pointed out that the major constraints reported by marginal and small farmers for crop diversification towards high value crops were proper irrigation facilities, lack of knowledge and information and non-availability of timely credit. Further although, the government of Assam is putting much emphasis on enhancing the production and productivity of crops by harnessing the best in frontier technologies there exists a host of limitations from enhanced crop production. Based on the analysis of the study area and observations, the major problems faced by the sample farmers are presented below:

i) \textbf{Pre-dominance of small and fragmented holdings}

In this study area, 72.88 per cent of the sample farmers belong to small and marginal category. It is one of the major factors hindering the proper utilization of new farm technology. Due to scattered and tiny plots of land, irrigation potential created through STW, can not be utilized properly. Most of the sample farmers possessing STWs do not have the compact minimum area of land required for maximum utilization of the created potential of STWs.
With such small and fragmented holdings, full utilization of created potential was not possible. This was considered to be one of the major problems for which most of the STWs remained under-utilized.

ii) Lack of access of irrigation facilities

Existing irrigation facilities created in the study areas had many shortcomings. Although most of the sample farmers did have STWs, it became difficult to extract the necessary water during rabi and summer seasons because of low water table. Besides, farmers of the sample area generally cultivated rabi pulses, vegetables, mustard and potato for home consumption with little commercial motive. Hence due attention was not paid on irrigation for better production. Also, it was reported during the field survey that a number of STW pump sets became non-operational due to lack of proper maintenance. The STWs required periodical repairing due to high iron content by the water sources. But due to absence of technically trained manpower in the locality these pump sets remained non-
operational which affected the maximum utilization of STWs to its potential.

iii) Lack of access of institutional credit facilities

The flow of credit to the farmers is an important criterion to encourage them for intensive cultivation and adoption of new farm technology in crop cultivation. Availability of agricultural credit in Assam per hectare is only 30 percent of the national average. In the study area, some of the small and marginal farmers reported to have availed loan from the private sources at an exorbitant rate of interest for investment in field crop cultivation and livestock/birds activities.

iv) Non-adoption of proper cropping pattern

Non-adoption of proper cropping pattern is one of the major problems of field crops cultivation on the part of the farmers. It was found in the study area that most of the farmers were risk averter and were skeptical in trying new crop varieties. It was also observed that the farmers were not aware of the concept of crop planning and
the efforts made by the state agriculture department to educate the farmers did not yield much effect.

v) **High cost and non-availability of certified seeds in time**

Non-availability of HYV certified seeds in time is one of the important problems faced by the farmers. The seeds are supplied from other states of the country and are largely in the hand of private traders. So, the supply of improved seeds to the farmers in time is almost entirely in the hands of the private traders. The higher prices of seeds also affected the poorer section of the farmers.

vi) **Lack of extension, training and field demonstration etc.**

The productivity of field crops can be increased to a considerable extent by adoption of scientific technology. It is an established fact that unless scientific technology is demonstrated to the farmers in their field, they are not likely to utilize such improved technology. Low adoptions of improved technology by farmers are due to lack of extension facilities and also poor resource base on the
part of the farmers. Similarly training provisions for livestock/birds enterprises should be made available to the farmers.

vii) Low and imbalanced rate of fertilizer consumption

Fertilizer is one of the most important inputs constituting towards crop production. The average rate of fertilizer consumption in the state is very low, only 58.30 kg/ha as against 128.58 kg/ha at national level (Gogoi and Bordoloi, 2011). This has resulted into low and erratic yield responses under rain-fed conditions. The situation was not different in the study area. Moreover, the sample farmers were not so financially sound to purchase the required amount of fertilizer on time. Further, they were unaware of the recommended doses for different crops and the farmers could not harvest the benefits to desired level.

viii) Lack of proper marketing facilities

Availability of marketing with assured price is one of the best incentives to motivate the farmers to adopt new farm technology for
enhanced crop production. But there are no proper market facilities for agricultural produce to cope with the requirement of delicate perishable commodities. It is also observed that most of the rural markets (weekly/bi-weekly) in the study area do not have the basic infrastructure to attract the producers and traders of these commodities. Due to lack of adequate market yardstick, most of the farmers sold their produce to the traders in their field at the price offered by the traders. Thus the farmers are deprived of remunerative prices.

Further, the farmers do not have information on market demand and prevailing price of products in different markets. Most of the farmers do not have any contact with the central market; as a result they accept whatever price the trader offers to them.

ix) **Fast growing prices of fuel and electricity**

Continuous rise of fuel price and irregular electricity supply are also responsible for lower production and productivity of field crops. Due to the financial hardships and lack of institutional credit,
farmers were unable to run the diesel operated pump sets as and when required and thus huge amount of potential created through farming remained underutilized. It was also observed that the supply of electricity was quite irregular in the study area.

x) **Lack of cold storage facilities**

As the vegetables are highly perishable, it needs cold storage facility to retain its quality in fresh form. Due to lack of such facility the farmers had to sell the product immediately after the harvest at whatever price offered by the traders. The middlemen took full advantage of the situation and exploit the farmers from remunerative prices.

xi) **Lack of soil testing facilities**

Soil testing is considered to be an important step to determine the requirement of soil nutrients for different crops for better production. The basic objective of soil testing is to guide the farmers for efficient and economic use of soil nutrients and other
required inputs in crop cultivation. Although the state has 12 soil testing centres, most of the sample farmers in the study area were not aware about the benefit of soil testing and failed to reap better harvest from the cultivation practices.

xii) **Vagaries of Climate causes damage to vegetables crops**

Natural calamities and vagaries of untimely rain etc., causes damage to vegetables is one of the major problems faced by the sample farmers. Incessant rainfall during the rabi season and sudden hail storms causes immense damage to vegetable crops. On the other hand, due to lack of assured water supply to vegetable crops the yields are not found to be satisfactory. Flood and incessant rain is yet another problem to the grower of kharif vegetable crops.

xiii) **Problem of Stray Cattle**

Another important observation made in the study area was that the farmers found it very difficult to protect the cultivable areas from stray cattle. The problem was more acute during rabi season
because of which rabi crops were affected and the farmers’
willfulness to cultivable rabi crops had been less.

On the basis of the data collected from the sample farmers,
the score of each constraint on a 10.00 point scale is presented in the

Table 6.1.

Table 6.1: Score Table for Constraints of the Different Categories of
Sample Farmers

<table>
<thead>
<tr>
<th>Sl.</th>
<th>Constraints</th>
<th>Marginal</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
<th>Pooled data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre-dominance of small and fragmented holdings</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3.25</td>
</tr>
<tr>
<td>2</td>
<td>Lack of access of irrigation Facilities</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>5.75</td>
</tr>
<tr>
<td>3</td>
<td>Lack of access of institutional credit facilities</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6.25</td>
</tr>
<tr>
<td>4</td>
<td>Non-adoption of proper cropping pattern</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3.50</td>
</tr>
<tr>
<td>5</td>
<td>High cost and non-availability of certified seeds in time</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4.50</td>
</tr>
<tr>
<td>6</td>
<td>Lack of extension, training and field demonstration etc</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2.50</td>
</tr>
<tr>
<td>7</td>
<td>Low and imbalance rate of fertilizer consumption</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>4.00</td>
</tr>
<tr>
<td>8</td>
<td>Lack of proper marketing facilities</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>7.50</td>
</tr>
<tr>
<td>9</td>
<td>Fast growing prices of fuel and electricity</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2.00</td>
</tr>
<tr>
<td>10</td>
<td>Lack of cold storage facilities</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>6.00</td>
</tr>
<tr>
<td>11</td>
<td>Lack of Soil testing facilities</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2.00</td>
</tr>
<tr>
<td>12</td>
<td>Vagaries of Climate causes damage to vegetables crops</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>3.75</td>
</tr>
<tr>
<td>13</td>
<td>Problem of stray cattle</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4.00</td>
</tr>
</tbody>
</table>
The pooled data of the table revealed that the four major constraints faced by the sample farmers were lack of proper marketing facilities, lack of access of institutional credit facilities, lack of cold storage facilities and lack of access of irrigation facilities in the study area.

6.2 Policy Implication

Based on the findings of the study and the constraints/problems identified at the grass root level, the following policy implications may be considered for increased farm's net return and employment. The state departments which can implement these suggestions can consider these as indicative for taking appropriate action in the study area as well as the state.

i) Diversification with appropriate enterprise mix needs to be attempted for increasing income and employment.

FS 03 crop + dairy cow + goatery + poultry farming system or FS 05 crop + dairy cow + goatery + duckery
farming system should be encouraged for the potential of more income and employment of these systems.

ii) Liberalized credit facilities further promote diversification. The optimal plan can be made more effective only when the constraints in resource availability like timely supply of credit as well as supply of other farm inputs are removed. The National Commercial banks, gramin Vikash Banks and NABARD must come forward with attractive schemes of credit so that the poor farmers do not have to go to the private sources of finance. The terms and conditions applicable for getting loan through Kishan Credit card should be relaxed for marginal and small farmers.

iii) Agricultural extension personal should take initiative to motivate the farmers towards optimal resource use and diversification. Further to enhance the resource use efficiency, farmers should be trained for proper farm
management practices i.e., Fxtension and training programmes on improved practices for crops, livestock, poultry, goatery etc., need to be strengthened.

iv) The farmers can adjust in allocation of area to more remunerative varieties which will fetch higher return per unit of area. So, the Government seed supply agencies should take up the distribution of HYV seeds at proper time and at subsidized prices for benefit of the farmers.

v) As there is no system of providing market information on supply, demand and prices, the farmers are not aware of the demand for their produce in different consuming areas. So to promote diversification, the state government may enforce market information and intelligence service through media and posturing to make the growers aware of different market situations and prevailing prices.
Also there is need to strengthen the regulated market systems which can eliminate unhealthy practices and also ensure fair price to the farmers. The state Government must operate in an effective way in regulating the marketing of agricultural produce in general and oilseeds like mustard and pulses in particular. Through regulated market and through procurement drive, the farmers may get remunerative prices for their farmers.

vi) As the vegetables are perishable commodity, it requires appropriate storage facilities to maintain its quality and standard. Cold storage facilities should be established at the assembling market places.

vii) It is considered necessary to safeguard the interest of the farmers from exploitation of the traders. An important step towards this direction will be the development of organized marketing system to ensure remunerative price to the farmers. The viable co-
operative society may even offer credit to the needy farmers for investment in various inputs for field crop cultivation in commercial lines.

viii) Establishment of agro-processing industries will help in changing the cropping pattern and will also create additional employment in both farming and non-farming sectors of the rural areas. Another means of changing the cropping pattern in favour of labour intensive crops would be an improvement of marketing facilities. Some perishable crops, such as fresh vegetables, are very labour intensive, and face a rapidly increasing demand with rising income and urbanization. An improvement in the marketing facilities of these crops would probably be effective in expanding areas under these crops.

ix) The problem of stray cattle can be tackled through community effort to control the cattle during crop
season. Expansion of area under double cropping will compel the farmers to control the stray cattle.

x) As the fertilizer requirements in crop production depends mainly on soil characteristic, the farmers must get the soil tested before applying fertilizer through the soil testing departments. At present only the major nutrients can be tested by the department of agriculture. The government should provide necessary aids to the departments so that even the micro nutrients can be tested in sub-divisional and district agricultural offices. Moreover, Mobile Soil Testing facilities need to be strengthened to cover large areas.

xi) The government under RKVY (Rastriya Krishi Vikash Yojana) programme has been providing various farm equipments like power tiller, tractors, pump sets, weeder, STW etc. at 50 per cent subsidy, DTW at 70 per cent subsidy and Small Flow Irrigation at 90 per cent subsidy. Yet the needy farmers are sometimes
deprived of the facilities. Proper screening should be done by the Department of Agriculture before distributing the farm equipments so that these are handed over to the needy farmers and also the farmers cannot resell them to earn profit.

dii) It was found that frequent floods prevent farmers from adopting improved techniques of production in the study area. The farmers in flood affected areas should also be encouraged to make rabi season and summer season as the main cropping seasons. The state Agriculture Department must come forward with specific programmes to provide inputs in time to use the post flood season. Infrastructure like irrigation facilities is required for crop cultivation in rabi season and summer season. The need is to develop suitable technologies of paddy for flood affected and water logging situations.
xiii) As has been mentioned earlier, plantation crops are grown by sample farmers in their homestead area, characterized by high density of perennial plants, low inputs and low yields. It is, therefore, imperative that any development effort for improving productivity of plantation crops in the study would have to focus on development of homestead cultivation. This would call for a specialized extension strategy to be developed by the Assam Agricultural University and different Implementing Agencies of Governments through participatory efforts with the help of available technologies.

xiv) The use of modern technology in crop production depends on the availability of assured water supply. Irrigation continues to be a major constraint as less than 10 per cent of cropped area is covered by irrigation in the state. Therefore, to cover more and more area under irrigation facilities, the department of
irrigation must formulate proper planning by incorporating the views and ideas of the farmers. At present, the government is also providing motor operated irrigation facilities under National Food Security Mission. This facility must be made available to the farmers so that cost of irrigation is reduced. Installation of STWs through financial assistance from banks or private agencies can be encouraged by government.

The above analysis of constraints and policy measures indicates that the constraints that are faced by the sample farmers can be overcome through proper policy measures and effective implementation of the programmes. What is needed is sincere effort on the part of the government to provide the basic facilities for cultivation, storage and markets so that the farmers, especially the marginal and small farmers can increase production and augment their income and employment through agriculture diversification. It
needs to be mentioned here that the suggestions cannot be generalized for all area but these have implications for similar situations.

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