

CHAPTER – 7

FINDINGS AND SUGGESTIONS

7.1. PROBLEMS OF BORO PADDY IN MAYANG:

In the present study an attempt has been made to highlight the problems and prospects of Boro Paddy cultivation in Mayang in the District of Morigaon in Assam. On the basis of the both primary and secondary data including available literature of different authors of different times, the whole report is prepared under seven chapters.

Cultivation of Summer (Boro) rice in the flood-prone areas of Mayang Development Block of Morigaon District has gained momentum with the introduction of Shallow Tube Well for irrigating the paddy fields in non-traditional areas. The study area of the Mayang Development Block is highly flood-affected. Although Boro rice is traditionally cultivated in swampy ecologies, recently, as a result of serious damage to the main Sali crop by chronic flooding, a large area has been brought under Boro rice cultivation by the creation of irrigation facilities. These ecologies comprise low lying deep-water rice areas as well as chronically flood-affected Sali rice areas. The farmers in this flood-prone areas were in search of alternative cropping pattern for producing staple grains. Now the summer rice has emerged as an important cereal crop in the Block. Massive efforts have been made by the government for production of summer rice in the Block through installation of Shallow Tube Wells in the non-traditional areas has been identified as a capital intensive, high cost but highly productive crop, affecting soil health and environment in contrary to the low-capital, low-cost and high-return rain fed summer rice in the traditional areas. Market distortions and price uncertainties

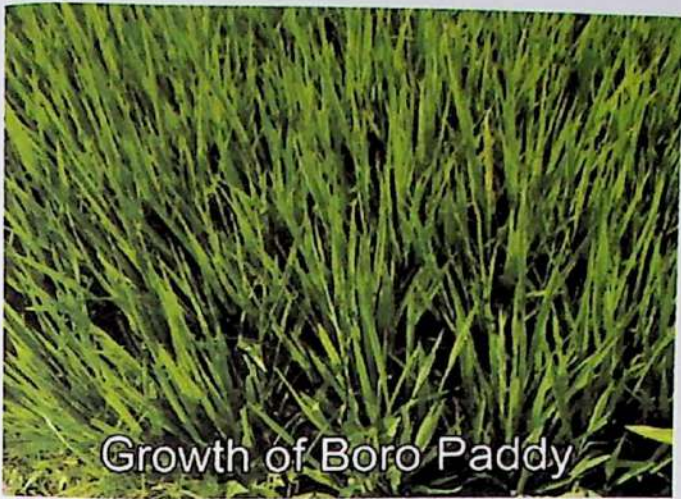
have further aggravated the situation in the flood-affected areas and the marginal and small farmers who are the main participants are adversely affected.

After the Shamridhi Krishak Yojana (SKY), a poverty alleviation program of the Government of Assam, Shallow Tube Well irrigation is popularized in the Block. But there were practice of using Shallow Tube Well irrigation by individuals in a very limited extent before launching SKY. All the pumps are acquired by the farmers from National Bank for agriculture and Rural Development (NABARD) and Assam Rural Infrastructure for Agricultural Services Program (ARIASP) through the District Agriculture Department.

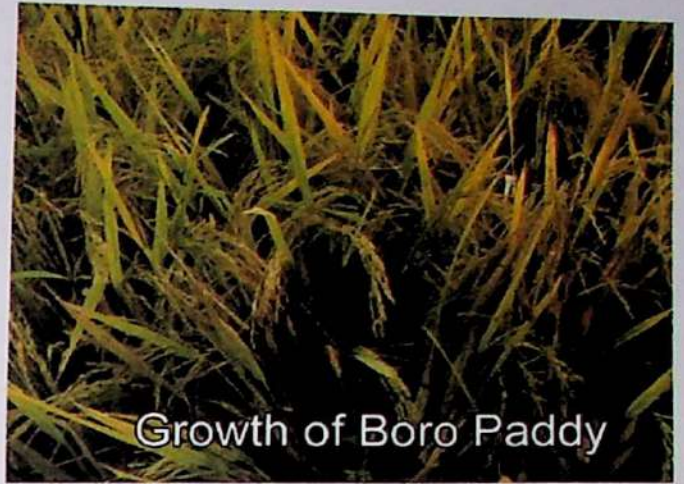
The productivity of Summer rice is greater than Winter or Autumn rice. Its growth rates in area, production and productivity have been faster in the recent decades. Marginal farms have benefited less from the summer rice cultivation. Shift in productivity of HYV summer rice has been higher at higher level of technology. Use of chemical fertilizers is essential in summer rice cultivation under irrigated conditions. Income shift has been lower due to low output price and other market distortions. The extension and technology gaps in summer rice cultivation have been quite low. It has also been observed that if Boro rice is cultivated instead of Ahu and Sali rice, there would be a yield advantage. Productivity of summer rice is more stable.

There is also a facility of Lift irrigation covering a small part of the Block. Water is supplied through Lift irrigation pump sets from Kolong river which flows on the Southern part of the Block. Irrigation through Lift system by electricity is cheaper than Shallow Tube Well which is run by diesel oil.

Cultivation of Boro rice needs, as a first step, to prepare wet seed beds. These are known as nurseries. Farmers apply fertilizer to encourage the growth of seedlings. At the time of maturity of seedlings (after 45-60 days), seedlings are



Growth of Boro Paddy



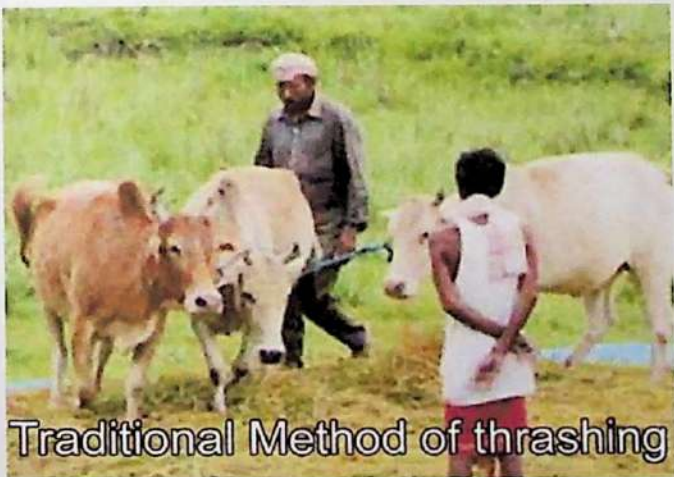
Growth of Boro Paddy



Matured Boro Paddy



Harvesting of Boro Paddy



Traditional Method of thrashing



Modern Method of thrashing

used for transplanting in the ready fields. Fields are made ready for transplanting by ploughing the land from four to six times either by country ploughs drawn by bullocks or by power tillers or by tractors. Since boro rice is a water loving rice, farmers have good control over water. The maintenance of optimum plant populations are also important aspects. Majority of the farmers adopt intermittent irrigation to keep the soil saturated, although most of them are also unaware of irrigation measurements. Regarding fertility management, the study has revealed that, in general, farmers in swampy situations do not apply, while all the farmers in irrigated situations apply the fertilizer. At times there emerges weed problem in Boro rice. Farmers have weeded by hand or by chemicals. At the time of harvesting, farmers use sickles. Then grains are separated from straw by using thrasher machines or manuring bullocks or running power tiller over the harvested crops. After that produces are sold in the village market keeping a part for themselves for the whole year.

On the basis of the data and information of farmers and related officers and persons of the study we have found the following as problems of Boro paddy cultivation in the study area of Mayang Development Block.

i) Flood: Flood is considered as the main problem of Boro rice cultivation in the Mayang Development Block. As already mentioned the entire area of the Block is flood prone. Early flood is extremely dangerous to the farmers. It destroys all the crops by flooding over the standing crops. Flood depends on rain. Early monsoon helps to early flood. Farmers do not have anything to harvest if flood comes at an early date.

ii) High prices of inputs: High prices of fuel and fertilizer also aggravate the problems of Boro paddy cultivation in the study area. A lots of diesel is needed to run the pumps of the Shallow Tube Wells for irrigation. How many times irrigation

is needed depends on weather. If the amount of rains is irregular, much diesel is needed. Black market price of fertilizer also hinders the cultivation of boro rice in the Block. The prices of insecticides and pesticides have also been increasing tremendously which hamper the cultivation.

iii) Lack of Finance: There is lack of adequate financial facilities for the farmers in the Block and thus they have to depend on the village money lenders as on other parts of the state of Assam, who charge very high rate of interest. Commercial banks advanced a very little amount of finance to agriculture in the Block in comparison to its needs. Farmers borrow from village money lenders, sell the grains after harvest when their prices are in depressed to repay the debt obligation. The vicious circle resulting in poverty, debt and high interest rates holds the small cultivator in a tight grip.

iv) Inadequate marketing facilities: The farmers in the Mayang Development Block are deprived of due prices of their product due to defective marketing system available. Middleman takes away a major portion of the profit, paying a very minimum price to the farmers. Farmers are not guaranteed fair and remunerative prices of their products thus creating little inducement to increase Boro rice production.

v) Small size of Holding: The size of agricultural holdings in the Block is very small. As a result of the unrelenting pressure of population and lack of alternative employment opportunities outside agriculture, the size of holding has become very small. Small holdings along with growing fragmentation of lands stands in the way of modernization of Boro Paddy cultivation in the Block.

vi) Sharecropping method detrimental: There is a method of Sharecropping. The medium and large farmers do not cultivate their own lands, they lease the land to the farmers on contract who do not possess any land of their own. The farmers do

not take care to develop the land instead they use more fertilizer to get more produce. There is also an injustice to the farmers, If they do not gather the crops due to early flood, they have to pay the capital amount and interest to the land owner for the money they borrowed during the cultivation.

vii) After Shallow Tube Well irrigation and intensive cropping, chemical fertilizer, insecticides, pesticides are used. As a result the normal crops productivity has also become dependent on these chemicals. Lands become degrade due to Boro Paddy cultivation.

viii) Farmers having Shallow Tube Well are not trained on pump sets and Shallow Tube Well management and possible advantages of crops of different cropping combinations. The facilities like training is available with the Agriculture Department for various programs and such trainings are imported. But there is no provision of specific training pertaining to maintenance of power pump, schedule of irrigation etc. in respect of Shallow Tube Well.

ix) A large numbers of Shallow Tube Wells are unsuccessful. There is no provision for taking back of such Shallow Tube Wells by the authorities. Farmers need to blame his luck for such unsuccessful Shallow Tube Well. Reason for non-functioning in case of most of the Shallow Tube Wells are stated to be low ground water table and in some areas draw down of water table in winter season.

x) It is found that a member of a Field Management Committee (FMC) tends to use the Shallow Tube Well in individual capacity instead of using it as a common property of the FMC, which deprive another member of the Pathar Parichlana Sammittee who has no means to own the Shallow Tube Well (i.e. marginal farmer).

xi) Farmers are reluctant to invest money on the inputs for multiple cropping due to high prices of them.

xii) All the paddy fields are not yet irrigated due to lack of money. Due to the absence of sufficient assured and controlled water supply, the Boro paddy cultivation in the Mayang Development Block is still depending on rainfall which is neither regular nor even.

xiii) The farmers in the Block are still following the orthodox method of Boro Paddy cultivation. Most of the farmers are still relying on the centuries old wooden plough to turn the land, the crude sickle to harvest crops. While farmers in some other states of India are shifting from primitive methods to modernized methods of cultivation, the farmers in the Mayang Development Block and in the state of Assam are still basing on their old methods. Their methods are far from the best for raising productivity in the Block.

xiv) The supply of high yielding seeds are very minimum in the Block. The farmers are mostly using the traditional variety of seeds whose average yield is just half of the yield of improved variety. So, the lack of HYV seeds in the Block is a very important cause of the low Boro rice productivity in the Block.

xv) Constant cultivation of land causes deterioration of its fertility which requires application of fertilizers. But poor cultivators cannot afford to purchase costly chemical fertilizers for their lands. Poor cultivator cannot even spare full quantity of cow dung for their land which is a good kind of organic manure. Due to the absence of use of fertilizer on agricultural lands in the Block, Boro rice productivity of the Block remains poor.

xvi) Nature still dominates agriculture in the Mayang Development Block as in the state of Assam. It is said to be a gamble of monsoon. The rains are totally uncertain. Sometimes rains are insufficient and sometimes we have too much of rain resulting in heavy floods. Like drought and flood, other natural calamities such as hailstorm, frost or attack by pest and insects are also of common

occurrence in the Block. These natural factors always go against the farmers in stepping up Boro rice productivity.

xvii) Lack of storage facilities is another problem of the farmers in the Mayang Development Block. When flood submerges the inhabited areas, the farmers immediately sell their produce at a low price due to lack of storage houses in the Block.

xviii) The farmers are unable to produce standardized rice due to the moisture of the climate during harvesting time of Boro Paddy which prevents them getting fair prices of their produce.

xix) Labour-use is another important aspect in Boro rice as the crop is highly labour-intensive. The findings show that land preparation, transplanting along with irrigation and harvesting utilize more than 80 percent of total labour used. But due to the higher wage rate of the labour, the inputs cost is also high.

xx) Low economic status and poor purchasing power of marginal and small farms have hindered the Boro Paddy cultivation in the non-traditional areas in the Mayang Development Block.

xxi) Socio-economic factors like farmers' conservative outlook, ignorance, illiteracy etc. stand in the way of adoption of modern techniques in Boro Paddy cultivation in the Block. Further, the antiquated organization of Boro Paddy cultivation run by illiterate, ignorant and ill-equipped person cannot raise the agricultural productivity of the Block. Adoption of progressive agricultural technique is to some extent impossible under the present position.

xxii) Groundwater rich in iron content is very common in the Brahmaputra valley of the Block. Unplanned irrigation with such water is increasing the iron toxicity of the soil.

xxiii) Agricultural research in the state of Assam is very poor in comparison to its needs. Whatever research is being conducted is not even made available to the farmers fully and thus the problems faced by the farmers still remain unattended. There are few micro-level case studies at the village level or at the block level and fewer at the district level. These case studies generally pertain to farmers' adoption behavior, gender, energy use pattern and impact assessment. The case studies are important for improving the production environment at the local level but hardly capable to address broader policy issues at the regional level. Studies at the zonal or regional level, based on homogeneous agro-ecosystem, are very limited. Further, research in other frontier areas such as credit constraints, risk management, crop diversification, efficiency, marketing and trade, export and socio-economic are necessary. These research areas are critical not only to the Block but also to Assam in the context of fast changing global agricultural order.

We, therefore, find that there are gross absence of many basic facilities in the agricultural sector in the Mayang Development Block which are responsible for the low rate of Boro rice productivity in the Block.

7.2. PROSPECTS AND SUGGESTIONS:

The present study has found some prospects of Boro Paddy cultivation in the Mayang Development Block during its investigation. The prospects are put forwarded as suggestions in the following.

i) Extensive flood control measures should be adopted to prevent huge loss and devastation created by ever-recurring floods in the Block.

ii) Sufficient irrigation facilities must be provided to the agriculturists through the extension of medium, minor and if possible major irrigation works by

utilizing huge irrigation potential available in the Block. This will save the agriculturists from unprecedented drought.

iii) Adequate quantity of insecticides and pesticides should be made available to the farmers either free of cost or at cheaper rates along with the knowledge to apply it.

iv) Regular floods at proper time is beneficial to the farmers of the Block. Floods wash away the chemicals used during cultivation. It also increases the fertility of the soil.

v) Provision be made for the manufacture of cheap modern tools and equipments in large scale which will reduce the cost of farming in the Block.

vi) Farmers must follow scientific rotation of crops and careful crop planning. Improved variety of seeds should be supplied in sufficient quantities.

vii) For the improvement of Boro rice productivity in the Mayang Development Block, the quality of the farmers must be improved through education, both general and technical. Farmers should shed off their fatalism and adopt new ideas which will make them more rational and help them to gain self-confidence.

viii) Prices of Boro rice should be remunerative. Government should fix the prices of Boro rice and make arrangement for procurement of Boro rice.

ix) Some storage houses should be constructed place to place, so that at falling prices farmers may store the rice. Sub-market of the regulated market should be extended to the area.

x) In order to reduce the fragmentation of holdings, the farmers of neighbouring area should unite through Self Help Groups. The Self Help Groups help to modernization of Boro Paddy Cultivation.

xi) Slow vegetative growth during the early crop season, combined with intermittent irrigation, result in weed problems in Boro rice, particularly in irrigated situation. Evolving effective and economic weed control measures would reduce farmers workloads and help to increase productivity.

xii) The Commercial Banks should advance more money to the farmers in their needs. Mention is made that Boro rice cultivation in non-traditional areas is expensive and costly. Farmers are generally poor. So, without credit from commercial banks, the farmers cannot carry out the cultivation.

xiii) Crop insurance system should be made popular among the farmers so that at time of early flood they can gain compensation.

xiv) Government should supply more Shallow Tube Wells through various schemes to the farmers of this Flood-Prone areas of the Block.

xv) A strong linkage between commodity and money market will further encourage the marginal and small farmers for cultivating high cost Boro rice in the non-traditional areas of the Mayang Development Block.

Subsidized input, better price policy, removal of market distortions and short duration photo-insensitive varieties may encourage the farmers of the Block to cultivate Boro rice in the non-traditional areas for economic sustainability.

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