

## BRINGING GREEN REVOLUTION IN EASTERN INDIA

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### Abstract

Bringing Green Revolution to Eastern India (BGREI), is a sub-scheme of Rashtriya Krishi Vikas Yojna (RKVY) which is being implemented in seven eastern states namely Assam, Bihar, Chhattisgarh, Jharkhand, Odisha, West Bengal and eastern Uttar Pradesh from 2010-2011 with the aim to address the constraints limiting the productivity of rice based cropping systems. Under this scheme, various activities like cluster demonstrations of improved package of practices, assets building, site specific activities and marketing support are being undertaken. The aim of the BGREI program is to harness the water potential for enhancing agriculture production in Eastern India which was hitherto underutilized.

### INTRODUCTION

The constraints which had limited the productivity of rice based cropping system gave birth to a new program called “Bringing Green Revolution to Eastern India” by Rashtriya Krishi Vikas Yojana (RKVY) in the year 2010-2011. This scheme aims to shift cultivation of water intensive crops from the north western part of the country to eastern states. This program was launched in seven states of eastern India namely; Assam, Bihar, Chhattisgarh, Jharkhand, Odisha, Eastern Uttar Pradesh (Purvanchal) and West Bengal. Under this scheme, various activities like cluster demonstration of improved package of practices, assets building, site specific activities and marketing support are being taken care of. The land area covered under BGREI is not covered under NFSM. The approach is focused on medium and long term strategies for asset building activities of water conservation and their utilization. The two prerequisite for bringing about this change was: improvement of institutions and input delivery mechanism.

### The Need for this program

Green Revolution propagated in India around mid sixties and the result was due to the use of high yielding varieties with excessive and imbalanced use of chemical fertilizer. It had enhanced the productivity and there was self sufficiency in the country. However green revolution was successful only due to assured irrigation facilities provided through the tube wells at that time.

As the time passed by people started over exploiting the water resources heavily, this started depleting the ground water table. As a result there was water scarcity in the area in respect to irrigation provided through tube well.

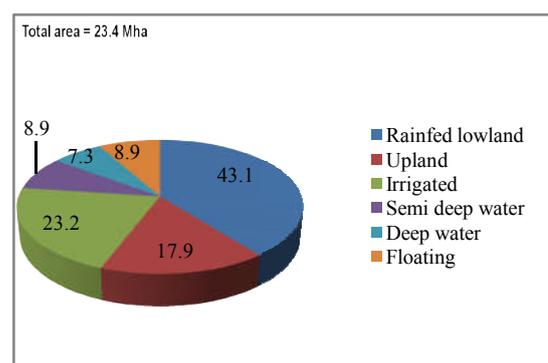


Fig 1 Rice Area (%) in Eastern region – Ecology-wise (Report by DRR)

Hence we needed an alternative way to overcome the environmental problems so that it would not affect the crop productivity. Thus there was the need of a new program called Bringing Green Revolution to Eastern India which would help in handling the environmental issues, also promote hybrid rice and other technologies. Rice is the predominant crop in eastern agro-climatic condition. Therefore, any intervention for enhancing agricultural production must include rice as its major component. Rice-based cropping system in eastern regions of India faces several constraints. The main factor constraining the productivity of rice-based cropping system is abiotic stress such as drought, flood, submergence and salinity. Rice production data indicated that drought hits eastern region the hardest.

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This is mainly due to over dependence on rain for farming. The abundance of surface and ground water and less intensive use of land resources mean that the region has considerable scope for increase in agricultural productivity and production. Therefore, Hon'ble Prime Minister is right to have called the region the ideal place for ushering in the Second Green Revolution

**Production Constraints of Eastern India (based on the report by DRR)**

The constraints faced in Eastern India which lowers the productivity of the crops are-

**Physical**

Over dependence on unpredictable monsoon  
Frequent drought/floods  
Low light intensity during *kharif*

**Technical**

Slow spread of HYV's  
Lower use of fertilizers/other inputs  
Low seed replacement rate

**Extension**

Weak extension machinery  
Lower credit facilities

**Aim & Objectives of BGREI**

The program takes care of needed technology in terms of assured provision for incentivized supply of recommended agricultural inputs to the farmers adopting cluster approach in order to ensure equity amongst farmers across selected locations in the BGREI States. The objectives of BGREI coming into existence were to improve water potential so that the water unavailability will not be one of the hurdles in increasing the productivity. It also had an objective to increase the productivity of rice based cropping system through various technology and different agriculture practices. The clear cut objectives defined by the government are below-

1. To increase the production & productivity of rice and wheat by adopting latest crop production technologies;
2. To promote cultivation in rice fallow area to increase cropping intensity and income of the farmers;
3. To create water harvesting structures and efficient utilization of water potential; and
4. To promote post harvest technology and marketing support.

Apart from the above objectives given by the government there are other technologies that will

usher the green revolution in eastern India. We need to adopt Integrated Management practices, go for soil health card, crop diversification and judicious use of water by adopting innovative cultivation method. The activities under BGREI were short term for the initial year but few states namely Bihar, Chhattisgarh and West Bengal had included water and soil conservation practices in the scheme that were medium or long term strategies. The activities these states included were construction of the check dams, minor irrigation tanks, lift irrigation points, re-excavation of old ponds and other water resources development works. The main concept of this program to come into action was adopting or implementing such approaches that were on medium and long run for asset building activities that were related to water conservation. Under this scheme, program like crop demonstration, asset building, supply of pump sets, transplanter, functioning of lift irrigation points, construction of community threshing floor, development of firm-cum-fish pond and supply of paddy seed cleaner-cum-grader are taken up.

The program is implemented through cluster approach, and the size of cluster for intervention is determined as 1000ha. Selection is done based solely on ecology. Care has been taken to take those villages only that does not come under any other national program. This program is a 3-tire monitoring system i.e., National level, State level and District level.

**CONCLUSION**

In order to feed the ever increasing population having limited land resource, India needs to boost its food production. Enough food grown domestically can only help in ensuring the food security in India. And it has been said that eastern region has the potential of a new Green revolution and that is why it will be the FOOD BOWL of the nation.