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Negative Impact of First Green Revolution and Second Green Revolution in India

Introduction: The green revolution in India refers to a period when Indian Agriculture was converted into an industrial system due to the adoption of modern methods and technology such as the use of HYV seeds, tractors, irrigation facilities, pesticides and fertilizers.

This was the part of the larger Green Revolution endeavor initiated by Norman Borlaug in the USA and M.S. Swami Nathan in India.

Green Revolution: It was an effort to increase agricultural production in India through a package of industrial agriculture technologies such as hybrid seeds and use of advanced technologies. It was funded by the US and the Indian Government and the Ford and Rockefeller Foundation.

B. Negative impacts of Green Revolution are-

a) HYVP was restricted to only five crops - Wheat, Rice, Jowar, Bajra and Maize. Therefore, non-food grains were excluded from the ambit of the new strategy. Wheat has remained the mainstay of the Green Revolution over the years. Thanks to the new seeds, tens of millions of extra tonnes of grain a year are being harvested.

b) Deceleration in Agricultural Growth Rates in the Reform Period: After registering impressive performance during 1980s, the agricultural growth decelerated in the economic reform period

(commencing in 1991). As is clear, the rate of growth of production of food grains fell from 2.9 per cent per annum in 1980s to 2.0 per cent per annum in 1990s and stood at 2.1 per cent per annum in first decade of the present century. The period since 1991, therefore, emerges as a kind of watershed at a time when growth in Indian agriculture, resurgent from the middle 1960s, was arrested.

Causes of Deceleration in Agricultural Growth: The main reasons for the deceleration in agricultural growth in the post-reform period have been:

- Significant deceleration in the public and overall investment in agriculture
- Shrinking farm size
- Failure to evolve new technologies
- Inadequate irrigation cover
- Inadequate use of technology
- Unbalanced use of inputs
- Decline in plan outlay
- Weaknesses in credit delivery system

c) Regional Dispersal of Green Revolution and Regional Inequalities

HYVP was initiated on a small area of 1.89 million hectares in 1966-67 and even in 1998-99 it covered only 78.4 million hectares which is just about 40 per cent of the gross cropped area. Naturally, the benefits of the new technology remained concentrated in this area only. Moreover, since Green Revolution remained limited to wheat for a number of years, its benefits mostly accrued to areas growing wheat.

- Interpersonal Inequalities: There seems to be a general consensus that **in the early period of the green revolution, large farmers benefited much more from new technology as compared with the small and marginal farmers.** This was not unexpected as the new technology called for substantial investments which were generally beyond the means of a majority of country's small and marginal farmers. Larger farmers have continued to make greater absolute gains in income because of lower costs per acre and by reinvesting earnings in non-farm and farm assets, including purchase of land from the smaller cultivators who could not make the transition to the new technology.

- The Question of Labour Absorption: Although there is difference of opinion amongst economists regarding the effects of new agricultural strategy on interpersonal inequalities and real wages of agricultural labourers, there is a general consensus that the adoption of new technology has reduced labour absorption in agriculture.
- Change in Attitudes: A **healthy contribution of green revolution** is the change in the attitudes of farmers in areas where the new agricultural strategy was practised. Increase in productivity in these areas has enhanced the status of agriculture **from a** low level subsistence activity to a money-making activity. The Indian farmer has shown his willingness to accept technical change in the pursuit of profit thus nullifying the age-long criticism against him that he is backward, traditional and unresponsive to the price and productivity incentives.

d) Environment degradation

The Second Green Revolution:

The green revolution of 1960s has delivered India food security and sufficiency which was critical at that time. This progress and security had its own costs in terms of environment and economic viability. There is a need for a Second Green Revolution in India, which is more sustainable, ecological friendly, more dispersed across the regions with more diversify baskets of agricultural products. This new revolution is formally ever refer to as **Evergreen Revolution in Agriculture.**

THE LIMITS OF SUCCESS

- India's agricultural sector is growing but much slower than the rest of the economy.
- Although largely self sufficient in food production, India still needs to import edible oil every year.
- Green Revolution has not reach large parts of the country, especially dry land areas, where poverty incidence and farming risk tend to be high.
- GR also involved environmental costs: Unsustainable ground water extraction, fertilizers run off, pesticide residues and salinization.

Father of Second Green Revolution in India: Dr. Bhavarlal Jain

Areas: North-Eastern states, eastern Uttar Pradesh, Bihar, Odisha, West Bengal, Chhattisgarh.

Crops: Horticulture sector (covering fruits, vegetables, flowers), Jowar, Bajra, Ragi, promotion to Organic Farming.



Unprecedented Support to Farmers with Hike in MSP & Record Procurement



Farmers to get **1.5 times** of the production cost as MSP for Kharif crops

Extent of buffer stock of Pulses increased from 1.5 lakh tonnes to **20 lakh tonnes**

About **16.24 lakh** metric tonnes of pulses procured (as on 22.3.2018)

Initiative taken by Government towards the Second Green Revolution-

- Promotion of organic farming in India
- Mission for Integrated Development of Horticulture – National Horticulture Mission, National Bamboo Mission
- Rastriya Krishi Vikas Yojna
- National Mission for Sustainable Agriculture Mission
- Promotion of Dry land Agriculture
- Initiatives in Budget 2014

What does it include?

- It involves the use of biological materials, avoiding synthetic substances and maintaining ecological balance thereby minimizing pollution and wastage .
- It includes processes like crop rotation, green manure, organic waste management, biological pest control , etc .

