

Green Revolution Impetus for Uttar Pradesh's Agricultural Sector Development

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Abstract:

The Green Revolution means a huge increase in agricultural production due to the use of high yielding seeds, increased use of fertilizers and irrigation. The Green Revolution made India independent in food grains. India first introduced high-yielding seeds in 1965. All credit goes to Dr. M. S. Swaminathan's visits to them. The Green Revolution has more than doubled productivity by eliminating the use of new technologies, hybrid seeds, high yielding seeds, etc. The increasing use of chemical fertilizers during the Green Revolution period has had an environmental impact on soil and agricultural productivity. It is necessary to enable dual and high yielding crops to adopt new technologies in agriculture. Availability of irrigation facilities is an important factor in greenery. The use of new technology increases the importance of chemical fertilizers. After the use of hybrid seeds, it became possible to double and reap crops besides increasing yields. The Green Revolution did not increase the production of all crops, but some crops have definitely benefited from this revolution. The biggest beneficiaries of this revolution were wheat production.

Keywords: Green Revolution, Technologies, Agriculture etc.

Research Methodology

The research paper based on secondary data collected.

The Objective of Research:

The main objectives of the research presented are as follows.

- 1) To study agricultural development in Uttar Pradesh.
- 2) To know the positive and negative effects of the Green Revolution.

Data Collection

Data has collected from newspaper, books, magazines, reports, and websites.

Introduction:

The success of successful agricultural programs and increasing productivity has been termed as Green Revolution. It is important to see how successful this Green Revolution has been in the case of Uttar Pradesh. Even today there is a 20% decrease in food grains. The use of chemical fertilizers in the state is also low. The production of sugarcane, wheat, and rice is increasing and the production per hectare of paddy and sugarcane is also increasing. However, the production of millet and oilseeds declined. There are fluctuations in the case of wheat. There is no increase in other products. This is not a satisfactory situation. Uttar Pradesh has lagged behind other states in agricultural development. Since agriculture in Uttar Pradesh is completely dependent on rainfall, a term like the Green Revolution is not appropriate in the case of Uttar Pradesh. However, some politicians point out that Uttar Pradesh agricultural development has accelerated due to the Green Revolution.

Since 1966, the increase in the use of high yielding seeds has led to a huge increase in food production. Production of food grains, mainly wheat and rice, has increased considerably. Wheat production increased considerably compared to rice. As a result, many farmers started using high yielding hybrid seeds. The increasing use of high-yielding seeds as well as chemical fertilizers gave impetus to the Green Revolution in India. Chemical fertilizers need to be continuously applied to ensure proper growth of high yielding seed crops. This improves soil fertility and crop texture. India has consumed 24,909,000 tonnes of chemical fertilizers in 2008-09. The expansion of irrigation facilities has contributed significantly to the Green Revolution in India. The use of chemical fertilizers is necessary for high-yielding seeds, and irrigation is necessary for the use of chemical fertilizers. By 2006-07, India's total irrigation capacity has increased to 102.8 million hectares, while the actual utilization of irrigation capacity has increased to 87.2 million hectares. Irrigation reduces crop damage, so indirect irrigation expansion encourages the use of new seeds. High yielding B-seeds greatly increased productivity per hectare of various crops. But with the increase in organic crop production, the incidence of crop diseases also increased. The use of fertilizers increased the incidence of various diseases and pests. Therefore, it is necessary to try to achieve maximum productivity from new seeds by adopting various measures of crop protection.

The development of rural infrastructure in India during the First and Second Five-Year Plans was the catalyst for a Green Revolution. Infrastructure components include transportation, regulated markets, warehouses, agricultural education and training, agricultural extension, and research. Adequate provision of such infrastructure to farmers encourages the use of new technological farming methods. The expansion of infrastructure has led to a Green Revolution in

India. If new machinery is used for agricultural development, workers become unemployed and unemployment increases. Nevertheless, the use of new machinery is necessary for agricultural development. The machine is used to take 2-3 crops in a year. The use of tractors, harvesters, threshers, electric motors, drips, and sprinkler irrigation systems has increased during the Green Revolution in India. The land is being used to the maximum by adopting a multi-cropping system by expanding the available irrigation facilities in the country and developing new irrigation potential.

Positive effects of the Green Revolution:

During the period of the Green Revolution in India, food grain production increased significantly due to an increase in the area of farming, intensive farming, use of high yielding seeds, increase in irrigation, etc. During the Green Revolution period, food grains were being imported as per PL 480. But with the Green Revolution, India became self-sufficient in food grain production in 1976-77. The field of agriculture in India has been growing since 1947. The area under farming increased in Uttar Pradesh during the Green Revolution. With the increase in irrigation facilities and mechanization, the area under cultivation has increased. This increased food grain production.

Due to the green revolution, productivity increased in Uttar Pradesh due to new technologies in agriculture, hybrid seeds, irrigation research, etc. The productivity of wheat, rice, and other crops increased rapidly. The Green Revolution increased the production of cash crops like sugarcane, cotton, and oilseeds as well as the production of sorghum, millet, and maize. In 2010-11, India's food grain production increased to 230 million tonnes. During the same period, wheat production increased to 87 million tonnes. Farmers in Uttar Pradesh were looking at agriculture as a means of subsistence. But due to the green revolution, for the first time in Uttar Pradesh, farmers in Uttar Pradesh are ready to use hybrid seeds, chemical fertilizers, and machinery. The farmer came to the market in a commercial manner. Farmers started taking food crops as well as cash crops. The emergence of new varieties that give higher yields in less time has increased the income of farmers. Raised their standard of living.

Since only 38% of India's arable land is irrigated, the rest of the farmers and their farming are dependent on monsoon rains. Due to the green revolution, mechanization, drip, and sprinkler irrigation system, etc. in Uttar Pradesh have increased crop productivity and production. The Green Revolution has helped to improve the economic condition of 78% of small and marginal farmers

with 5 acres of land in the country. Improving economic conditions has improved the living standards of farmers. Has elevated his place in society. Farmers have started using modern facilities and means. Another benefit of the green revolution is the creation of employment in the agricultural sector, which involves the use of labor power and efficient use of labor. The Green Revolution created Forward and Backward Linkage, which has helped in eliminating invisible, visible, and semi-unemployment in agriculture.

Due to the increase in the number of crops taken by the Green Revolution, the unemployed in rural Uttar Pradesh have started getting employment throughout the year. The increase in various secondary occupations has led to an increase in the employment of agricultural workers as well as wages. Naturally, the socio-economic status of agricultural workers has increased due to the increase in their living standards. Farmers' income has increased due to the green revolution, commercial crops, crops 2-3 times a year, an increase in productivity and production, price stability, etc. With the increase in income from agriculture, capital investment has increased and agriculture has grown. Due to digging of wells, power pumps, pipelines, tractors, threshing machines, harvesters, leveling of land, construction of dams, increase in business related to agriculture, etc., huge investment has been made in agriculture.

Negative effects of Green Revolution:

It is criticized for not spreading the benefits of the Green Revolution everywhere. The Green Revolution had adverse social, economic, and environmental consequences. The Green Revolution has led to a decline in productivity due to changes in crop morphology, growing two to three crops a year, use of chemical fertilizers, use of pesticides, more irrigation, etc. The introduction of forest land under cultivation has reduced the forest area and soil erosion. In short, the Green Revolution increased food production, but it has also led to land degradation. The Green Revolution has affected the production of crops like wheat, rice, maize, millet, etc. However, the production of oilseeds, cotton, and hemp has not increased much in Uttar Pradesh. Agricultural research has created new varieties of some food crops but has not increased the production of pulses. At the same time, the productivity of crops in different parts of Uttar Pradesh is different. In short, the impact of the Green Revolution was not seen in the production of many crops.

The Green Revolution has increased inequality in crop production in the state. The impact of the Green Revolution was limited due to the geographical expansion of the country. It is supported that taking 2 to 3 crops in a year leads to the Green Revolution. However, due to mechanization, the use of tractors, threshing machines, etc., the work of agricultural laborers has reduced. Agricultural

laborers in Uttar Pradesh became unemployed and started migrating to urban areas. The migration of agricultural workers to Uttar Pradesh has increased due to a lack of growth in various agro-processing industries.

Conclusion:

In 2010-11, food grain production was 230 million tons, while the goal of the Second Green Revolution is to produce 400 million tons of food grains. Experts estimate that this will be possible in the year 2020. For this, the growth rate of the agricultural sector in the next 9-10 years should be 5 to 6%. The role of science and technology will be very important for the second green revolution. The use of biotechnology as well as genetic technology will double the productivity of agriculture per acre. This requires the use of new technologies, private sector participation, market expansion of genetic products, etc. If genetic crops are planted all over the country, there will be another green revolution in food production. Agriculture should be seen not as a means of subsistence, but as a business. Farmers should invest in agribusiness with the expectation of profit. Government participation and control in agribusiness should be minimal. For this, the role of farmers should be that of a responsible entrepreneur.

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