



IMPACT OF GREEN REVOLUTION ON INDIAN ECONOMY

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Abstract :

India is primarily an agricultural economy, with the most of its population depending on the farming sector directly or indirectly. Eastern India suffered the biggest food shortage in India's history in 1943, when the Bengal famine claimed about 40 lacks lives. As India was on the verge of a mass famine in 1961, it became imperative to take swift and harsh action to increase agricultural yield. The green revolution was consequence of this action. This period of agricultural progress is known as the Green Revolution in modern times. The term green revolution describes an increase in agricultural productivity. This study makes an effort to evaluate the effects of the green revolution on Indian economy.

Key Words: Green Revolution, Food Grain, High Yielding Varieties (HYVs).

Introduction:

India is primarily an agricultural economy, with the most of its population depends on the farming sector directly or indirectly. The Roman words ager and cultural are the origin of the word agriculture. The terms 'ager' and 'culture' both denote cultivation. When taken as a whole, it means cultivation in the fields. Agriculture is described as the study of the art of farming the land, growing and harvesting crops, and raising livestock for commercial purposes. Although its share of the GDP has decreased the agriculture sector still makes a major contribution to the nation's economy. For the Indian population, this sector provides a variety of employment opportunities. Almost half of India's population is engaged in agriculture sector.

After gaining independence, India's agricultural sector saw remarkable expansion. During the time of independence, the nation was reliant on other nations for its food grains, but once the green revolution was put into place, it was able to meet both its own internal needs and part of its exports to other nations. The first green revolution deserves all of the credit. New agricultural tactics were predominantly used during the third five-year plan of India in 1960. The green revolution in Indian agriculture was what allowed the nation to become self-sufficient in food production. The green revolution included many different elements, including improved irrigation systems, the use of fertilizers, the introduction of high yielding seed types, herbicides, insecticides, mechanization, and institutional changes. The green revolution's efforts have led to a huge rise in the agricultural production of wheat and rice.

Objectives –

1. To understand the concept of green revolution.
2. To know about the historical background of green revolution.
3. To find out the impact of green revolution on Indian economy.

Research Methodology – In this research paper, used secondary sources, such as reference books, websites, journals and research projects etc.that arepublished elsewhere.

Historical background of Green Revolution – The green revolution is a movement that had its start in the early 1960 when international financing organizations supported improvements in agricultural output. The phrase 'Green Revolution' is established by Willian Gaud who is subsequently regarded as the father of the green revolution. The development of the green revolution was greatly aided by American crop pathologist and agricultural scientist Norman E. Borlaug. The rapid global population rise was the driving force behind this transformation. There is a shortage of food produced as a result of the population's fast growth. Hence, individuals are forced to develop a novel approach to agriculture. In Mexico, where he conducted research in 1940, he developed a novel disease-resistant wheat variety that produces a high yield. Mexico produces far more wheat than is needed by its population by combining Borlaug's wheat variety with cutting-edge agricultural methods. By 1960, the nation is exporting a lot of wheat as a result of this.

The green revolution was successful, and throughout the 1950 and 1960, its methods and concepts spread all over the world. In particular, the United States imported almost 50% of its wheat in 1940, but after applying green revolution innovations, it becomes self-sufficient in 1950 and also changed to being an exporter by the end of 1960. The Rockefeller Foundation, The Ford Foundation, and several governments throughout the world funded more research that used the green revolution technologies to produce more food. With the assistance of this institution, Mexico founded The International Maize and Wheat Improvement Centre in 1963.

Eastern India suffered the biggest food shortage in India's history in 1943 when the Bengal famine claimed about 40 lacks lives. As India was on the verge of mass famine in 1961, it became imperative to take swift and harsh action to increase agricultural yield. However, from 1947 until 1967, the Indian government focused on enlarging farming lands without paying attention to productivity or technical developments. Green revolution was the consequence of this activity. The counsellor to the Indian minister of agriculture, Dr. M S Swami Nathan, extended an invitation to Norman Borlaug to visit. The Ford Foundation and the Indian government worked together to import wheat seed from the worldwide maize and wheat development centre in spite of administrative obstacles established by India's grain monopolies. The Punjab State was chosen by the Indian government to be the first region to experiment with the new crops due to its consistent water supply, the existence of the Indus Plains, which make it one of the world's most fertile plains, and a track record of agricultural success. India started its own green revolution initiative that included funding for agrochemicals, developing irrigation systems, and breeding new plants.

The county's agricultural growth entered a new phase as a result of the Green Revolution. India experiences a golden era of agricultural prosperity. Subsequently, the geneticist M.S. Swaminathan, generally regarded as the Father of the Green Revolution in India, helped the Indian government launch the Green Revolution in 1965. This revolution has been a huge success since it has elevated the nation from the lowest-performing and poorest agricultural nation in the world to one of the richest. It covered the years 1967 through 1978.

Impact of Green Revolution on Indian Economy-

As is seen from the following situations, India's economy and way of life have been significantly impacted by the Green Revolution, much like other developing nations.

Increase Crop Production- The output of agricultural products, particularly food grains, has increased dramatically since the Green Revolution was implemented. The crop of wheat received the most benefits from the Green Revolution among the food grains as well. India's production of food grains increased significantly. It was an astonishing rise. The Wheat Grain was the main winner of the strategy. From only 11 million tonnes in 1960, wheat output rose to 55 million tonnes in 1990. Despite the population growth that has occurred so quickly, the net availability of food-grains per person has also grown, rising from 395 grams a day in the early 1950 to a level of 436 grams in 2003. Between 1967–1968 and 2003–2004, the output of wheat more than tripled, whereas the production of all other cereals rose only by a factor of two. Only after the green revolution did India's population's dire situation improve. High-yielding varieties (HYV) of short-stemmed wheat were developed by Prof. Norman S. Borlaug and his colleagues. These HYVs are fast-maturing, pest-resistant, and, most significantly, high yielding. As a result, wheat tonnes per hectare saw an enormous growth that was before unthinkable.

Increase Farmers' Income - After the Green Revolution got underway, farmers were able to raise their earnings. Farmers increased output by reinvesting their spare funds in their farms. Because to their huge financial investments in HYV seeds, fertilizer, machinery etc., the large farmers who owned more than 10 hectares of land benefited the most from this revolution. It further backed commercial farming. The farmers' incomes climbed along with the growth in agricultural output, and they enjoyed prosperity.

Reduced Import of Food Grain - The biggest advantage of the Green Revolution was the rise in food grain production, which led to a significant drop in imports. We now have enough food grains and stock in the central pool to be self-sufficient. We can occasionally export food grains as well. India was finally heading towards independence after the green revolution. The population was now being produced in an amount sufficient for them to develop a stock in case of emergencies. For our food supply, we didn't have to import cereals or rely on other nations. India even managed to start exporting its agricultural goods. In the middle of 1960, shortly after the start of the green revolution, it was discovered that using cutting-edge technology to help farming could greatly increase output. Midway through 1970, India achieved food self-sufficiency, and by the mid-1990, it possessed a vast stockpile of food crops. India's agriculture sector has witnessed a significant transition during the last 60 years. In addition to being self-sufficient in grain production, India today exports grains to a large number of nations.

Increase Industrial Growth - Large-scale farm mechanization brought about by the green revolution sparked a need for a variety of agricultural devices like tractors, harvesters, threshers, diesel engines, electric pumps etc. Also, there was significant growth in the need for chemical fertilizers, herbicides, insecticides etc. Hence the industries that produce these goods advanced rapidly. Moreover, several agricultural products are utilized as raw materials in various industries. They are referred to as agro-based industries. Some notable examples of agro-based industries are textile, sugar etc.

Increase Rural Employment - Several people were worried that commercial farming would make them jobless. But some studies noticed an increase in rural employment. This is a result of the supporting industries producing jobs. The workforce gained new occupations as a result of marketing, transportation, food processing, and irrigation. Due to fertilizer use and multiple cropping, there was a noticeable rise in the demand of agricultural laborers. The green revolution produced a large number of employment, both for industrial and agricultural people, by constructing infrastructure like factories and hydroelectric power plants. Green revolution has produced lakhs of new employment in Punjab, claims Gobind Thukral. Here, almost fifteen lakh low-income individuals from Bihar, Uttar Pradesh and Orissa labor. According to Bhalla and Chadha's research, The impetus for mechanization was largely prompted by the paucity of labor and relatively high pay rate notably during peak agricultural operations in Punjab. Farm workers from Bihar and Uttar Pradesh have recently moved in huge numbers to Punjab, where they may find better employment possibilities.

The Green Revolution had certain problems even after it was acknowledged as one of the most important advancements in the agriculture industry worldwide. All food grains like wheat, rice, jawar, bajara and maize have profited from the revolution; however, other crops, like coarse cereals, pulses and oilseed have not profited in its purview. Important cash crops including sugarcane, cotton, jute, tea, and cotton were also largely untouched by the green revolution. The technical advances of the Green Revolution have led to increasing regional and global economic disparities. 60% of the whole agricultural land is still intact, leaving just 40% of it damaged thus far. Some areas most badly damaged in the Punjab, Haryana, Uttar Pradesh, Andhra Pradesh and Tamil Nadu states. The dry and semi-arid parts of Western and Southern sides in India as well as the Eastern region, which encompasses Assam, Bihar, West Bengal, and Orissa, have seldom ever been impacted. The green revolution only influenced areas that were already in a stronger position agriculturally. As a result of the green revolution, the issue of regional inequality has grown worse. During the green revolution, pesticides and synthetic nitrogen fertilizers were frequently utilized to enhance irrigation techniques and crop varieties. Yet, little to no effort was made to alert farmers about the significant risk associated with the heavy use of pesticides. Untrained agricultural workers typically sprayed pesticides on crops without taking any safety precautions or according to any guidelines. This pollutes the land and environment and does more harm to crops than good.

Conclusion - Millions of people throughout the world were in danger of starvation and famine before the green revolution. Because of its widespread embrace of the green revolution initiative, this country can now guarantee food security to all its citizens. The Green Revolution has had both positive and negative effects on the Indian economy. The primary focus of the Green Revolution in India has been on the cultivation of wheat and rice, which makes substantial use of land, water, and outside inputs. The country's agricultural productivity and associated economic advantages were advanced by the green revolution. In the green revolution other agricultural crops were given no attention while the yield of cereal grain production progressively grew. Ultimately, the Green Revolution gave India unprecedented amounts of domestic food production, which is a huge achievement. It represented the successful advancement and dissemination of scientific advancements in agriculture

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