

Technological Development and Agricultural Revolutions in India: A Case Study

Amzad Ali Gazi^{1*}, Om Prakash Mahto²

¹ Research Scholar, Department of Geography, Madhyanchal Professional University, Bhopal, India.

² Guide, Department of Geography, Madhyanchal Professional University, Bhopal, India

Abstract - Various government policy, schemes, grants etc. have a considerable impact on the Indian economy at various time. But the most revolutionary event among them was the revolution in agriculture. As a result of this revolution, India's place on the world agricultural map rose to a high place. India's food problem is almost solved. Increases India's food security. Green revolution (food grains production), Blue revolution (fish production), White revolution (milk production), Yellow revolution (oilseed production), Gray revolution (fertilizer production) etc. are important in agricultural revolution. The invention of advanced research technology related to agriculture, the use of modern machinery, through changing the character of the land etc. the production in the field of agriculture will increase dramatically. As a result, the domestic demand met as well as earning a lot of foreign exchange through exports. However, due to lack of proper government policy, the impact of the agricultural revolution was not felt by all the states of India, Indian states like Gujrat, Punjab, Uttar Pradesh, Haryana, West Bengal have developed rapidly, but other states like Bihar Tripura, Jharkhand, Chhattisgarh etc. have not had the success of the agricultural revolution. However, at present, efforts are being made to solve this problem through like the second Green Revolution, Evergreen Revolution etc.

Keywords - Change of agricultural operations, Development of Technology, Increase agricultural production, Agricultural Revolution, Increase Food security, Regional Inequality of production, Remedies.

-----X-----

INTRODUCTION

Agriculture has been practiced in India since ancient times. Cultivation of food grains was prevalent. The production per hectare was vary low. With the rapid increase in population, it was not possible to meet the needs of all the people with the crop produce. So import of food grains from abroad started. But the discovery of high-yielding wheat seeds by Mexican scientist Norman Borlaug and their use in India under leadership of MS Swaminathan brought about a revolution in Indian crop production. Then Varghese Qurien led Operation Flood, and Hiralal Chowdhury led the Blue Revolution in agriculture in India. Although the benefits of this agricultural revolution did not spread evenly across India, its impact was far-reaching.

PURPOSE OF THE STUDY:

- Impact of agricultural Revolution on Indian Economy.
- Discuss how production decreases with less use of technology.
- Regional disparities in the Agricultural Revolution.
- Discuss the impact of the Agricultural Revolutions on the environment.

- Various steps taken to eliminate regional disparities.

A GEOGRAPHICAL PROFILE OF STUDY AREA

India is an important country in Asian continent. The Tropic of Cancer extends along the middle of India. Its latitudinal extent is 644 N to 3530 N and longitudinal extent 687 E to 9725 E. Countries in the Asian continent surrounding India are Nepal in the north, Bangladesh in the east, Myanmar in the south, Sri Lanka in the south and Pakistan in the west. India is the seventh largest country in the world (3287263sq. km). Population of India was 142.86 crore (UN Population Fund Data) and total arable land was 159.7 million hectares.

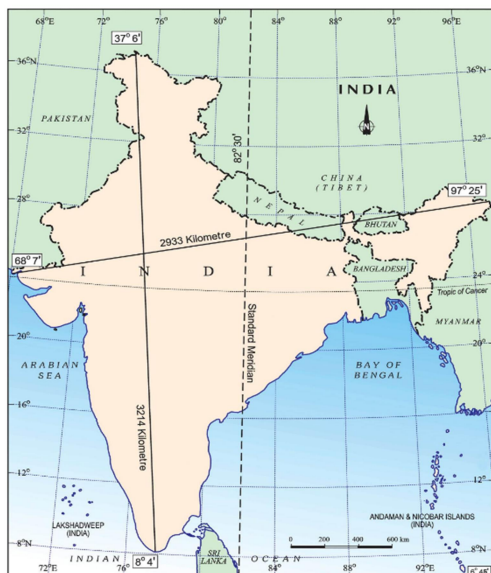
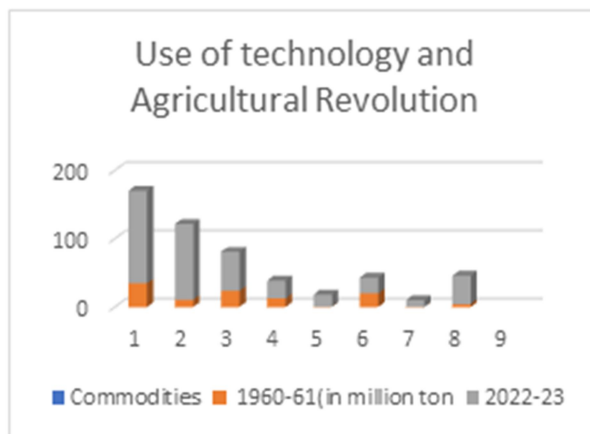


Figure 1: India



(Source: Ministry of Agriculture, Govt. of India.)

DATABASE AND METHODOLOGY

If we look at the agricultural production in India before the Agricultural Revolution and after the Revolution, we can see the impact of the revolution. That information is presented below with the help of secondary data-

Commodities	Periods (production million ton)	
	1960-61	2022-23
Rice	34.58	135.76
Wheat	11	114
Cereals Coarse	23.74	57.32
Pulses	12.70	26.06
Oilseeds	4.36	41.5 m.m.t
Fish	0.66	17.55
Milk	20	23.06
Egg	1.83 Billion	138.38 Billion no
Fertilizer	419 h ton	2.65
Coffee	68.169 ton	0.352
Meat	.179	9.77

RESULT AND DISCUSSION

From the above table, we can see that in the year 2022-23 the production of food grain, oilseeds, fish, meat, etc. is improved compared to the year of 1960-61. It has been possible to use high yielding breeds, use of advanced technology, application of large amounts of fertilizers, irrigation facilities. Which has resulted in the following benefits in India-

- Indian economy has become stronger (GDP 3.18 lakh crore, 2021)
- Imports of cereals, eggs, meat are low and exports have increased in some cases.
- As the use of modern machinery increased, manual labor and animal labor decreased.
- The use of organic and inorganic fertilizers has increased.
- Capital investment and production per hectare increased and employment has increased.
- The standard of living of people has increased.

Technological development and consequent agricultural revolution are limited in some states of India. Only the large farmers in India have achieved greater success and profit by investing heavily in capital and using advanced machinery.

EVALUATION

The application of advanced machinery to agricultural land and the Agricultural revolution had many drawbacks, but its benefits are very high. Second Green Revolution, Evergreen Revolution, it is possible to put something in this sector by increasing the use of organic fertilizers etc.

REFERENCES

- Ann Racboline Lincy Eiazer Nelson, Kavita Ravichandran; oct, 2029. "The impact of the Green Revolution on indigenous crops of India", Journal of Ethnic Foods.
- Ayesha Ameen, Shahid Raza; Jan, 2018, "Green Revolution: A review, International

Journal of Advances in Scientific Research”,
3(12), 129, India.

3. Ramesh Chand: March 2023, “India’s White Revolution Achievement and the next phase”, India.
4. Charu Singh, Dr. Prabha Rani, Dr. Kishore Kumar; sept, 2023, “Impact of Blue Revolution in India-Analytical Study, vol-5, issue 9, International Research Journal of Modernization in Engineering Technology and Science.

Corresponding Author

Amzad Ali Gazi*

Research Scholar, Department of Geography,
Madhyanchal Professional University, Bhopal, India.