IJNRD.ORG ISSN : 2456-4184
INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG
An International Open Access, Peer-reviewed, Refereed Journal

# Agricultural Growth in India: A Study and Review

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## ABSTRACT

Agriculture is the life, breath and heritage of India. About majority of the population derive their livelihood and income from agriculture and allied activities. On the occasion of 75th year of India's independence ,The AZADI KA AMRIT MAHOTSAV , the success of National Agricultural Research, Education and Extension System in Achieving national food security and farmer's prosperity is worth remembering. The study examines the agricultural sector development in the post independence and it's contribution in the nation's development for the period from 1960 to 2022.It explores the overview of the Agrarian sector and further discuss the issues and challenges faced by the primary sector. After Independence, the government introduced various programmes for the development of Agrarian sector and the first five year plan was mainly focused on the development and achievement of self sufficiency in the agricultural sector. The study very carefully examines the contribution of agriculture sector to Gross Domestic Product and the role it has been playing in the economic development and providing employment. Here, the study mainly focused on the actual contribution of agriculture sector and the data is collected from secondary sources.

**KEYWORDS**
Agricultural sector, Indian economy Gross Domestic Product, five years plan.

## INTRODUCTION

Agriculture is the foundation for livelihood, civilization and culture of India. Even today also agriculture is the backbone of Indian economy. Indian agriculture begins as early as human civilization with the domestication of animals and cultivation of plants as evident in the ancient literature. Since, the beginning of human civilization, Indian agriculture has made lot of progress but there are certain exemptions due to various reasons for the shortage of food grains, due to calamities people suffered with hunger

Agricultural sector is an important sector of Indian economy and it's contribution to the Gross Domestic Product at present is 18.8 and provides primary source of living for about 58 percentage of the Indian population. The food grain production has increased from 51 million tonnes in 1950-51 to 314.47 million tonnes in 2021-2022(estimates). The rapid growth in the agricultural sector has placed India as one of the top countries in the agricultural sector production of crops such as paddy, wheat, sugarcane, tea, groundnuts, fruits and vegetables. However, the Indian agriculture sector still has been facing so many problems in many areas such as selling and transportation of crops to the market and improper accessibility to the market reliable information to the farmers. In addition to this there are problems in post- harvesting losses such as higher dependence on middle men multiple market intermediaries, sometimes unable to get proper minimum common price and other socio- economic factors. To achieve sustainable development agricultural sector plays very crucial role. Agricultural sector development is so important in poverty eradication and the prosperity of the people and also raises the economic standards of the people. As we know agricultural sector is pivotal in the economic growth of any country, agricultural sector contributes 6.4 percentage of total world. But, unfortunately the agrarian sector across the globe facing so many problems due to usage of pesticides, extreme weather conditions have been affecting a lot on the agricultural production and resulting in higher food prices and growing hunger. Even the climate change has bad effects on the yielding of crops, impact on the production .The changed food habits causing ill health to the people, threaten to the globe and rise of unsustainable level of pollution and waste.

## INDIAN AGRICULTURAL SCENARIO

At the time of Independence in the year 1947, the agricultural sector production was low at 50 million tonnes. As the agriculture was mainly depended on monsoon and traditional farming methods were using for the cultivation of agriculture. More than 85 percentage of rural population dependent on agricultural sector for their livelihood. The royal commission on agricultural sector had stressed the usage of scientific methods of cultivation for the increase of agriculture productivity in irrigated, arid and semi- arid areas. However, the quantum of efforts put in for a agricultural engineering research are very meagre and the problems were waiting for their disposal. The man power for agricultural research engineering in Indian Council of Agricultural Research is inadequate, poor mechanization and costly inputs such as seeds, fertilizers, irrigation water.

Agriculture along with its allied sectors is the largest employment provider in India, mostly in rural areas. It contributes substantial portion in the Gross Domestic Product. Around sixty percent of land is cultivable in India second only after United States of America (The world Bank Data, 2017). Indian agriculture sector is dominated by the small scale holdings that are predominantly owner occupied (OECD, 2007).

India has achieved abundance in agricultural sector production, as it has marched towards progress from food grains imported to a nation of food grains surplus production. The journey of this transformation from

Green Revolution in the mid 1960s , the yellow revolution in the 1990s,Gene revolution in 2000s and the pulse revolution in the 2010s. Now, India has emerged as the top producer of pulses , millet and cotton and the second largest producer of rice , wheat, groundnuts , mustard and sugarcane.

Between 1951 to 2021 the crops production increased by six - fold. Many premier institutions such as Central Rice Research Institute established in the year 1946 and Central Research Institute for Jute and Allied Fibres became very important for the development of improved crop varieties. Since, 2001 onwards efforts have been strengthened for the new agricultural technology innovation for better crop yielding , initiated research and innovation in the field of biotechnology and genetic engineering.

## GREEN REVOLUTION

The Green Revolution is one of the best innovative initiative, which helped the achievement of higher productivity of food grains almost tripled the production in about three decades from 1968 to 2000. Such outstanding achievement helped to overcome food insecurity eradication of poverty. Before the invention of Green Revolution, the country had been depended for food grains imported from USA under PL- 480 scheme for about 10 million tonnes.

During 1966, India launched a pioneering project under this programme aimed at imported large quantities of seeds of semi- dwarf varieties of wheat from Mexico, the varieties are sonara 64 and Lerma Rojo 64, semi-dwarf high- yielding Mexican wheat varieties. Within a short span Indian breeders developed high- yielding verities of wheat seeds such as SD 227 ,C 306 and sonalika lead to higher harvest in the country.

## YELLOW REVOLUTION

After Green Revolution, Yellow Revolution took place under this revolution oilseeds crops helped to achieve self- sufficiency in edible oils in India during the early 1990s. Just in a decade period from 1985 to 1996 the area under oilseeds crops cultivation increased from 19.0 Mha to 26.0 Mha and in terms of production from 10.8 million tonnes in 1985-86 to 24.7 million tonnes in1998-99.

## SUGAR REVOLUTION

India has been emerged as one of the countries having high production of sugarcane . Sugarcane production has been increased from 57.05 Mt( 1950-51) to 405 .42 Mt (2019-20). The innovative research in sugarcane has helped the development of high yielding varieties, which are short duration and drought- disease tolerant sugarcane varieties. The “WONDER" sugarcane variety Co 0238, which was notified in 2009 with rare combination of high cane yield and sugar recovery.

## GENE REVOLUTION

India has achieved tremendous progress in the development of Gene revolution. The partnership of Mahyco with the multi- national private company Monsanto, formulized with the efforts from ICAR and Department of Biotechnology led to the development and release of three genetically modified Bt cotton based on transgenic technology in India in 2002. The Bt cotton has helped India emerged as second major exporter of cotton. In 2019, cotton exports earned three billion US dollars.

## PULSE REVOLUTION

India has witnessed the pulse revolution and almost achieved self sufficiency in the late 2010s. The indigenous production of pulses has registered a impressive growth rate of 16.26 Mt(2015-16) to 25.72 Mt ( 2020-2021). The dependency on imports has sharply reduced to mere 2.46 Mt in 2020. The research and innovation in pulse revolution has helped to develop the High Yielding varieties, a total of 716 High Yielding verities have been developed.

## REVIEW OF LITERATURE

The role of agriculture sector is very crucial in the development of any country. History shows that through the development of agriculture sector the nations had with stood any calamities and during the ancient and mediaeval times the agrarian sector was the main contribute of development. Even in modern times also agriculture sector has been playing very progressive role in the poverty eradication and maximum employment opportunities and the backbone of rural economy. ( Timmer,2009). The relationship between agricultural sector and economic growth broadly reciprocate each other. The low productivity in agricultural and allied sectors leads to slow economic growth and mostly people are under poverty line to eradicate poverty particularly in rural areas agricultural productivity has to be increased but this increase has been depended on many factors and the government is taking progressive measures for agricultural sector growth in most of the developing economies. (Alston and Pardey, 2014).

Various studies have shown that the increase in agricultural sector production leads to economic growth and often backed as very important tool and crucial sector for encouraging economic growth and fighting poverty (world Bank, 2008, Gollin 2010).

In developing countries agricultural sector is providing large scale employment and major contributor to the Gross Domestic Product. ( Cervantes- Godoy and Dewbre, 2010).

Jean Jacques Dethier and Alexandra Effenberger (January 2011) Agriculture and Development:

**A Brief Review of Literature.**

The agricultural sector continues to play very crucial role for the economic development of any country. In most of the developing countries agricultural sector plays very crucial role in terms of production of food grains and vast employment opportunities. Though in the developing economies simultaneously existence of traditional agricultural sector and the modern capitalist sector. But , the rural population still very much depended on the primary sector. Even, today also agriculture sector plays very crucial role in the poverty eradication and rising employment opportunities in agricultural and allied sectors.

**Agriculture sector growth in India: A study and Review -2**

**Objectives of the study**

1) To know the overview of agriculture sector in India and the role it is playing in rural areas.

2) To know the agricultural sector contribution to economic growth

3) To know the actual contribution of agriculture sector to Gross Domestic Product in India.

**Hypotheses of the study**

1) How the agricultural sector production is contributing to the generation of rural employment opportunities and the contribution to Gross Domestic Product.

2) It is shown that how important the contribution of agriculture sector in the economic growth of the country and how important it is among three sectors of the economy and it's role in developing economies as supply chain of food grains.

**Research Methodology**

1) The study uses the quantitative methods as it provides information and justification that are adequate to realize the objectives of the study.

2) The study uses the secondary sources of data.

3) The data is collected from various national and international organisations such as Reserve Bank of India, World Bank database, Food and Agricultural Statistic, Indian Council of Agricultural Research, etc.

**Variables used for data analysis from 1961 to 2021 pertaining to agriculture sector contribution to GDP Growth rate (%)**

| Year | GDP Growth Rate | Agriculture Growth Rate(%GDP) | Year | GDP Growth Rate | Agriculture Growth Rate(%GDP) |
|---|---|---|---|---|---|
| | 3.7 | | | | |
| 1961 | 2.9 | 44.1 | | | |
| 1962 | 6 | 43.3 | 1992 | 5.5 | 30.5 |
| 1963 | 7.5 | 41.4 | 1993 | 4.8 | 29.8 |
| 1964 | -2.6 | 42.6 | 1994 | 6.7 | 29.7 |
| 1965 | -0.1 | 44.6 | 1995 | 7.6 | 29.3 |
| 1966 | 7.8 | 42.4 | 1996 | 7.5 | 27.2 |
| 1967 | 3.4 | 43.4 | 1997 | 4 | 28.1 |
| 1968 | 6.5 | 46.2 | 1998 | 6.2 | 26.8 |
| 1969 | 5.2 | 45.1 | 1999 | 8.8 | 26.7 |
| 1970 | 1.6 | 44.9 | 2000 | 3.8 | 25.4 |
| 1971 | -0.6 | 43.5 | 2001 | 4.8 | 23.9 |
| 1972 | 3.3 | 41.8 | 2002 | 3.8 | 23.8 |
| 1973 | 1.2 | 41.8 | 2003 | 7.9 | 21.5 |
| 1974 | 9.1 | 44.9 | 2004 | 7.9 | 21.5 |
| 1975 | 1.7 | 41.8 | 2005 | 9.3 | 19.7 |
| 1976 | 7.3 | 39 | 2006 | 9.3 | 19.5 |
| 1977 | 5.7 | 37.1 | 2007 | 9.8 | 19 |
| 1978 | -5.2 | 38.5 | 2008 | 3.9 | 18.9 |
| 1979 | 6.7 | 36.8 | 2009 | 8.5 | 18.4 |
| 1980 | 6 | 34.9 | 2010 | 10.3 | 18.4 |
| 1981 | 3.5 | 36.7 | 2011 | 6.6 | 18.9 |
| 1982 | 7.3 | 35.3 | 2012 | 5.5 | 18.5 |
| 1983 | 3.8 | 34.1 | 2013 | 6.4 | 18.2 |
| 1984 | 5.3 | 34.8 | 2014 | 7.5 | 18.6 |
| 1985 | 4.8 | 33.4 | 2015 | 8 | 18 |
| 1986 | 4 | 32 | 2016 | 7.1 | 17.5 |
| 1987 | 9.6 | 30.8 | 2017 | 6.8 | 17.9 |
| 1988 | 5.9 | 30.3 | 2018 | 6.5 | 17.1 |
| 1989 | 5.5 | 31.3 | 2019 | 3.7 | 17.6 |
| 1990 | 1.1 | 30 | 2020 | -6.6 | 18.4 |
| 1991 | | 30.1 | 2021 | 8.95 | 20.2 |

Source: GDP Growth data.worldbank.org/country/India

**Findings and Data Analysis:**

The data shown in the table describe that since 1960 to 1990 the contribution of agriculture sector has been contributed hugely to the gross domestic product but since 1992 onwards the contribution of agriculture sector to the GDP has come down. Probably there are so many reasons for this downwards trend even the introduction of liberalization, privatization and globalization might effected but the output of production of food grains steadily increased.

**Conclusion:**

The study shows that gross domestic product affected by the decreasing contribution of agrarian sector. The study urges that some measures are required to protect the agriculture sector. Further the findings confirm that there is a strong relationship between economic development and agriculture productivity, as these two activities play very crucial role for the robust growth of gross domestic product.

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