Journal of Advances and Scholarly Researches in Allied Education
Vol. XIV, Issue No. 1, October-2017, ISSN 2230-7540

Agricultural Development in Bihar

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Abstract – The Agriculture and allied sector is one of the most important sectors in the development of the country. Its most important contribution has been seen in providing livelihood and employment to millions of marginal farmers as well as helping in the production activities of other sectors in the economy. Agriculture provide food security and nutrients to the population of the country. In the given article, the importance of agriculture, its total production and its contribution to the Gross Value Added (GVA) of the country as well as its growth in Bihar has been discussed. The article also provides an overall view of the agricultural development in the country and Bihar state and various measures taken by government in this regard.

Key Words: Agriculture, GVA, Economy, Production, Irrigation, Development

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INTRODUCTION

Agriculture is the prime source of wealth in India and is the key to the overall development of the country's economy. Agriculture plays a vital role in the state of Bihar, as well. For India, 54.6% of the population is engaged in agriculture and allied activities (Census 2011) and it contributes 17.4% to the country's Gross Value Added for the year 2016-17 (at current prices). In case of Bihar, 74 percent of population depends on agriculture and allied activities which contribute 20 percent to the state's GSDP. Government of India has taken several steps for its sustainable development. Steps have been taken to improve soil fertility on a sustainable basis through the soil health card scheme, to provide improved access to irrigation and enhanced water efficiency through Pradhan Mantri Krishi Sinchai Yojana (PMKSY), to support organic farming through Paramparagat Krishi Vikas Yojana (PKVY) and to support the creation of a unified national agriculture market to boost the income of farmers. Further, to mitigate risk in agriculture sector a new scheme "Pradhan Mantri Fasal Bima Yojana (PMFBY) has been launched for implementation from Kharif 2016.(Economic survey 2017-18). As per the land use statistics 2014-15, total geographical area of the country is 328.7 million hectares, of which reported net sown area is 140.1 million hectares and the gross cropped area is 198.4 million hectares with a cropping intensity of 142 percent. The net area sown works out to be 43 percent of the total geographical area. The net irrigated area is 68.4 million hectares.(Annual Report, 2017-18). For Bihar, the gross cropped area was 76.54 lakh hectare in 2016-17 and the cropping intensity was 1.45. Agricultural development is overall getting a pace in both on the country level as well as in Bihar. These development can mark a way for a developing and changing mind set of the people and towards a bright future.

AGRICULTURAL DEVELOPMENT IN INDIA:

The table 1 below shows the GVA of agriculture and allied sectors and its share in total GVA of the country at current prices series during the last 4 years:

Table 1

Gross Value Added in agriculture for select years (in Rs. crores)

SECTOR	YEAR			
	2013-14	2014-15	2015-16	2016-17
GVA of Agriculture and Allied Sectors	1926372	2068958	2175547	2372085
Percent to total GVA	18.6	18.0	17.5	17.4

Source: Central Statistics Office, Ministry of Statistics and Programme Implementation, Govt. of India.

Agriculture and allied sectors contributed approximately 17.4 percent of India's GVA at current prices during 2016-17. There has been a continuous decline in the share of agriculture and allied Sectors in the GVA from 18.6 percent in 2013-14 to 17.4 percent in 2016-17. Falling share of agriculture and allied sectors in GVA is an expected outcome in a fast growing and structurally changing economy. (Economic survey, 2017-18)

The falling GVA does not mean that the production is decreasing but just signifies that its share in total GVA is decreasing and other sectors share is

increasing which is also a good sign for a developing economy.

Growth (over the previous year) in the total Gross Value added (GVA) of the economy and that in the GVA of agriculture and allied sectors at 2011-12 basic prices is given in Table 2 below. Agriculture and Allied sectors witnessed a growth of 5.6 per cent in 2013-14, (-) 0.2 per cent in 2014-15, 0.7 per cent in 2015-16 and 4.9 in 2016-17 at 2011-12 basic prices. The changes the growth pattern in the agricultural and allied sector have implications for overall growth of GVA .

Table 2

Growth rate in GVA and agricultural GVA

YEAR	Total GVA(in %)	Agriculture and Allied sector GVA(in %)
2013-14	6.1	5.6
2014-15	7.2	-0.2
2015-16	7.9	0.7
2016-17	6.6	4.9

Source: Central Statistics Office.

Also in 2016-17 the percentage contribution to total GVA growth was much larger than in 2015-16. However it was able to overcome the slowdown of the previous year when agricultural growth rate was negative.

The improvement in the production and the enhanced development in the allied sector is the result of various efforts and measures adopted by government in this context.

AGRICULTURAL GROWTH IN BIHAR:

Agriculture shows a gradual increase in its growth rate as the table 3 below shows.

Table 3

Growth rate of agriculture in Bihar

Year	Growth rate in agricultural sector at constant price
2000-01 to 2004-05	-0.4 (at 1990)
2005-06 to 2009-10	4.4 (at 2004-05)
2010-11 to 2013-14	3.8 (at 2004-05)
2005-06 to 2014-15	5.33 (at 2004-05)

Source: Economic Survey of Bihar, 2013-14 and 2014-15

This table clearly shows the increasing growth rate of the agricultural sector in the economy. Though the pace of growth is slow but the and event fluctuating also but more or less the condition of the agricultural sector is far better than before. Table 4 below shows clearly that the growth rate in the year 2014-15 is much better than the growth rate of 2013-14. The agricultural sector was growing at a negative growth rate in 2013-14 but had shown far better scenario in 2014-15 where it was 4.4%.

Table 4

Agricultural growth rate (Bihar)

Year	Growth rate at constant prices(in %)
2013-14	-6.1
2014-15	4.4

Source : Economic Survey Bihar, 2013-14 and 2014-15.

Thus, agricultural sector has shown an improvement and this will give a stability and base which is very important for overall growth of the economy.

Main problems in agriculture in Bihar:

Agriculturists in Bihar face many problems which have tended to hamper the growth of the sector (Mondal, n.d.) and hence the state. Some of these are mentioned below:

1. **Small and fragmented land holdings:** The size of land holdings is small which prevents the farmer to applying new technologies in the agriculture. The failure of the land reforms is one of the cause behind this. The law of inheritance and continuous division of land-holdings has led to large-scale fragmentation which has adversely affected productivity.

2. **Good quality seeds** are out of reach of the majority of farmers, especially small and marginal farmers mainly because of exorbitant prices of better seeds. In order to solve this problem, the Government of India established the National Seeds Corporation (NSC) in 1963 and the State Farmers Corporation of India (SFCI) in 1969. Thirteen State Seed Corporations (SSCs) were also established to augment the supply of improved seeds to the farmers. High Yielding Variety Programme (HYVP) was launched in 1966-67 as a major thrust plan to increase the production of food grains in the country.

3. **Failure of Green Revolution** to equally spread across the length and breadth of the

country is another drawback which has caused the regional imbalances in the country. While the Western states achieved an accelerated growth riding on the benefits of the Green revolution in the 60s -70s, many of the Eastern states continued to trail far behind. This has created a spatial misbalance in the development profile of the country leading to other problems such as migration to the affluent states.

4. **Manures, Fertilizers and other inputs like irrigation** facilities are not available in adequate amount at the affordable prices. Also the farmers are often ignorant or careless about the quantity of these inputs that ought to be used. This results in excess fertilizers causing a loss in the fertility of the soil. Further the excessive use of fertilisers leads to accumulation of chemicals in the farm products which reduces the shelf-life of these products and is very harmful to the consumers who eat them.

5. **Agriculture marketing and storage facilities are also not well developed.** Lack of these facilities cause the perishable items to get spoilt before reaching the market and intended consumers.

6. **Lack of irrigation facilities:** Agriculture remains a gamble in the monsoons for many farmers due to comparative under-development of irrigation facilities. This problem is multiplied if we consider the huge amounts of water being wasted due to non-judicious use of groundwater, lack of concern for recharging lakes, reservoirs, groundwater etc.

SCHEMES FOR AGRICULTURAL DEVELOPMENT IN BIHAR:

The Central government has announced a number of schemes to ensure the development of this vital sector. The government of Bihar had accepted these plans and attempted to follow them in the state to improve the situation of agriculture and to increase productivity. This is all the more important as Bihar is mainly an agrarian state. Below we discuss some important schemes that have been initiated in the past decade to help farmers and to improve the returns from agriculture:

1. **Pradhan mantri krishi sinchayee yojana-** The scheme was launched by the Department of Agriculture & Cooperation, Ministry of Agriculture in January, 2006. It is centrally sponsored scheme for Micro Irrigation. The objective isto increase investment in irrigation and use sustained water conservation practices by reusing treated municipal waste water and promoting water harvesting, water management, and crop alignment.

2. **Rashtriya krishi vikas yojana-** The scheme was launched in 2007 as an umbrella scheme for development of agriculture and allied sectors. It makes farming remunerative economic activity through strengthening the farmer's efforts, risk mitigation and promoting agribusiness entrepreneurship and empowers youth.

3. **National food security mission-** It was launched in October 2007. The Mission was successful and achieved the targeted production of rice, wheat and pulses.

4. **National horticulture mission (NHM)-** It gives importance to horticulture sector in the growth of Indian agriculture. It was launched in budget speech on July 8, 2004.

5. **Soil health card scheme -** Prime Minister Narendra Modi launched the Soil Health Card (SHC) Scheme on 19th February 2015 at Suratgarh in Rajasthan. It provides soil health cards to farmers in every two years and enable them to address nutritional deficiencies in soil.

6. **PM fasal bima yojana-** The Pradhan Mantri Fasal Bima Yojna was launched on 18th February 2016 by Prime Minister Shri Narendra Modi. It was implemented by 21 states in Kharif 2016 whereas 23 states and 2 UTs implemented it in Rabi 2016-17.

7. **National mission for sustainable agriculture (NMSA)-** On 1st April 2014, NMMI was subsumed under this mission and implemented as one of the components under "On Farm Water Management" (OFWM) during 2014-15.

8. **National agricultural market (e-nam)-** National Agriculture Market (eNAM) is a pan-India electronic trading portal aiming at integrating the existing Mandis to "One Nation One Market" for agricultural commodities and was launched on 14th April 2016, by the Prime Minister Shri Narendra Modi.

9. **Krishi vigyan kendras (KVK) -** The first KVK was established in 1974 in Pondicherry. Since then, KVKs have been established in all states, and the number continues to grow. However, higher-level research about modern agricultural trends and other pressing concerns like climate change and genetically

modified seeds takes place in universities of the country.

10. **Mera gaon-mera gaurav-** Around 6,000 scientists have been involved and institutes of the Indian Council of Agriculture Research (ICAR) plus 15,000 scientists working with state agricultural universities. This programme is called Mera Gaon Mera Gaurav (MGMG). It works for upliftmen selected villages by providing technical knowledge personally or on telephone.

11. **Price stabilization fund** -In view of the fluctuating nature of international prices in plantation crops and the dependence of growers on the export markets, Government launched and implemented the Price Stabilization Fund (PSF) Scheme from 1st April, 2003 to 30th September, 2013 to provide financial relief to small growers of coffee, tea, rubber and tobacco having land holdings up to four hectares(PIB).

12. **Paramparagat krishi vikas yojana-** The Paramparagat Krishi Vikas Yojana (PKVY) is launched in 2015. It is an extended component of Soil Health Management (SHM) under National Mission on Sustainable Agriculture (NMSA). It support and promote organic farming and results in improvement of soil health.(2017)

WAY FORWARD:

Apart from the schemes mentioned above, there are certain other steps that should be taken to ensure development in the agricultural sector. This is specifically necessary for Bihar as agriculture continues to be the main occupation of the people in the state. Increasing incomes from agriculture is necessary for ensuring development of the state. Some such ways are mentioned below:

1. **Irrigation:** Per Drop More Crop: It is time to make a shift to micro-irrigation and drip-irrigation so that the efficient and judicious use of scarce water resources can be made possible. High initial costs deter farmers to adopt this technology. While big farmers can easily avail of this technology, the government should consider giving subsidies to small farmers to boost the adoption of this technology. Another point to be noted is the removal of subsidies on power. Availability of cheap power leads to reckless crop watering practices leading to wastage.

2. **Second green revolution:** India had achieved exemplary agricultural productivity when the Green revolution was initiated. But now the trend has stagnated and returns are not growing. Also the benefits of the new techniques of production tended to be concentrated in a few states leaving the rest far behind. The country needs a second green revolution to rationalise the development process spatially and to ensure food security to its billion-plus population, to remove the distress of the farming community, and to make its agriculture globally competitive. To achieve these goals, yield rates of food grains, pulses, oilseeds, dairying and poultry, horticultural crops, and vegetables need to be enhanced; and forward-backward linkages of agriculture with technology, food processing industry needs to be strengthened to match soil to seed, and product to market.

3. **Research and Development:** Research and development has not received much importance in our country. India spent 31% of its agricultural GDP on research and development in 2010, in the same year China spent almost double that amount. Even Bangladesh spent 38% of its agricultural GDP on research and development in that year. As a result of this resource crunch, there has not been a diffusion of new agricultural innovations and practices that are critical for enhancing farm productivity. As the Economic Survey (2017-18) notes, even in states where agriculture is relatively more important (as measured by their share of agriculture in state GDP, agriculture education is especially weak if measured by the number of students enrolled in agricultural universities. There has also not been any major contribution from the private sector towards research and development. The government should thus woo private players by giving them incentives to play a major role in agricultural research and development.

4. **Other initiatives:** 'More from less' should be the aim of agriculture because rapid industrialization and climate change have raised the scarcity value of land and water. Genetically modified crop technologies have 'significant net benefits.' Evolved regulation is needed to allay public fears so they can be deployed.

Pulses and oilseeds use less water and help in the enrichment of soil with atmospheric nitrogen through nitrogen fixation compared to cereals like wheat and rice. Government policy should be so directed as to increase the cultivation of coarse cereals, pulses and oilseeds by providing support pricing with procurement prices reflecting their social contribution

Regulatory measures for quality seed production have to be tightened to discourage the sale of

spurious seeds to the farmers. Also steps must be taken to initiate the development of seeds in the country and popularization of seed-banks.

Agricultural research has the biggest impact on yield and profitability but it is weak in states where agriculture is relatively more important (eastern and northern states, except Punjab and Haryana). It is necessary to encourage the participation of private sector in to agricultural research as this sector has the resources to finance such research.

CONCLUSION:

Agriculture is the mainstay of Bihar's economy. As such the government and the people must take steps to ensure the viability of this sector. While it is necessary to increase productivity of the sector by popularizing the use of scientific methods of cultivation, steps must be taken for diversification in agriculture. the generation of employment opportunities beyond the farm sector will help in reducing the population pressure on land. Also by diversifying into non-farm activities the cultivator can enhance his total income. Development of food-processing units is a must for accelerating the growth rate of the sector. These are some ways by which agricultural development in the state can be sustained for times to come. Though it has to develop a lot and also need to make an effort in this regard to a much higher level for the prosperous future of the state.

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