

Agriculture with Special reference to Bihar

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Abstract:

Bihar is the third most populous state in India with mass of its population depending on agriculture. Thus, agriculture proves to be the means of income, employment, source of livelihood and mainstay of rural, urban, state and county development. It is taken as a backbone of all progress and prosperity. In rural area more than seventy percent of population depends on agriculture for their food and roughly half of India's work force is still engaged in agriculture for its livelihood. Being both as a source of livelihood and food security for a vast majority of low income, poor and vulnerable sections of society, agriculture sector is of great value and importance. Its performance assumes greater significance in view of the proposed National Food Security Bill and the ongoing Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) scheme. The experience from BRICS (Brazil, Russia, India, China and South African) countries indicates that a one percentage growth in agriculture is at least two to three times more effective in reducing poverty than the same growth emanating from non-agriculture sectors. Thus with proper thrust on technologies, institutional direction, farm level support services, all delivery mechanisms, improved farm infrastructure including rural connectivity, Bihar could be developed as a granary of India. It can also be developed as the major hub of fruits, vegetables, and fisheries for both national and global markets. The entire economic growth processes in Bihar depends on the dynamics of agriculture. There are successful experiments in different parts of the country, which if adopted, can provide an answer to various problems which Bihar is facing in its race to higher productivity levels. Bihar can then surely catch up with the present productivity levels of rice and wheat in Punjab and other cherished goals in maize, pulses, oilseeds, horticulture and livestock production in the next few year Plans. The paper tries to prove that if agriculture is nurtured systematically, it can be one of the major profit earning sectors for Bihar.

Keywords: - Agriculture, its growth, Economic development and Problems of agriculture

Introduction:

Bihar the state with third largest population after UP and Maharashtra is a land of farmers and has a large proportion of population dependent upon agriculture for their livelihood. According to the 2011 census, 88.70 percent of populations live in rural areas where agriculture is the main occupation. According to IRDA (Insurance Development and Regulatory Authority) rural area consists of 400 persons per square kilo meter and 32 percent of male force should engage in agriculture work, you may say in cultivation. It is quite clear that majority of Indian are engaged and dependent on agriculture for employment and livelihood. The population is expected to reach 20 crore by 2025. Therefore, increase in demand for food will need to be met through higher agricultural productivity or by increasing food imports. Agricultural development is an integral part of overall economic development. At the time of independence, agriculture was the main source of national income and occupation in India. Therefore, it is a base of any development. Agriculture yet forms the backbone of development. An average Indian still spends almost half of his/her total expenditure on food, while roughly half of India's work force is still engaged in agriculture for its livelihood. Being both a source of livelihood and food security for a vast majority of low income, poor and vulnerable sections of society, its performance assumes greater significance, in view of the proposed National Food Security Bill and the ongoing Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) scheme. The experience from BRICS (Brazil, Russia, India, China and South African) countries indicates that a one percentage growth in agriculture is at least two to three times more effective in reducing poverty than the same growth emanating from non-agriculture sectors. The concept of development is very wide. The challenge of development economies lies in the formulation of the economic theory and in application of policy in order to understand better and to meet these core components of development (A.P. Thirlwall, 1989). Agriculture plays a vital role in growth of State's economy by establishing the framework for industrialization. In long terms, it must provide food for urban population; contribute to the market for industrial goods, security of food and rising surplus of production in excess of subsistence needs. The paper shall discuss in general the role of agricultural sector in the development process. The paper will discuss the transitional change in agriculture due to which the productivity ascended in the last 5 years. The paper will also highlight the change in cropping pattern and

productivity of Bihar in last 12 years and suggest measures through which agriculture could help in development process of the growing state.

Bihar has a glorious past. Dating back to 493 BC, the Bihar had been ruled by powerful rulers like Bimbisara, Ajatshatru, Ashoka and Chandragupta Maurya whose rise and success was related with the wise advice of Kautilya (Chanakya- the great economist). Not only this, Bihar is also famous for the world reputed universities like Nalanda and Takshashila. The religions like Buddhism and Jainism originated in Bihar. Gautam Buddha got enlightenment under the tree (Pipal) is in Bihar. Therefore, it is obvious that Bihar was one of the leading states of India with rich alluvial soil of Gangetic plain and affluent culture. Bihar has been also a centre of attraction for the British as it had fertile land and cheap labour. In the period immediately following India's independence, per capita output in Bihar stood at 80% of the country's mean. Since then, however, the state has had a chequered history. By the early 2000s, the state's per capita GSDP had fallen to about a third of India's (Chanda 2011). However, in the past decades everything went wrong with the state law and order problems, low human capital investments, agricultural and industrial stagnation—the list is endless

Bihar is endowed with fertile, Gigantic, alluvial soil with abundant water resources, particularly ground water resources. With different soil categories associated with different agro-climatic zones, the farmers in the state grow a variety of crops. Besides cereals, the state produces pulses, oilseeds, fiber crops, sugarcane, fruits, vegetables and other minor food crops. Recently there has been diversification in the production of crops, including the introduction of floriculture in many districts of the state, catering to the rising demand. It has a geographical area of 93.6 lakh hectares with three important agro-climatic zones — North-West, North-East and South. The North-West zone has 13 districts. The zone receives an annual rainfall of 1040-1450 mms. The soil is mostly loam and sandy loam. The North-East Zone has 8 districts. This zone receives rainfall ranging from 1200-1700 mms. The soil here is loam and clay loam. Finally, the South-Zone having 17 districts receives an average rainfall of 990-1300 mms and the soil consist sandy loam, loam, clay and clay loam.

Although, in the last few years the economy has shown a turnaround, throwing new issues and enhancing people's aspirations but, despite this progress, rural Bihar is still far from benefiting fully from the opportunities generated by rapid growth. The state government is trying utmost to bridge the rural-urban divide by promoting higher agricultural growth. The

support mechanisms for enhancement of agricultural development are being further strengthened to ensure that growth of Bihar economy remains sustainable in the years ahead. Support services like irrigation, seed, fertilizers, farm mechanization, credit flows, and awareness program are being stressed to make agriculture more viable. The state government is exploring ways so that rural areas (all sections and communities within them) can participate fully in the growth process for a more prosperous Bihar.

The agricultural economy of Bihar presents a paradox of poor agricultural performance amidst plenty of natural resources, rich river streams, fertile soil of the Gangetic plain and hard working labour resources. As a result more than 3/4th of the population in Bihar earn their livelihood from agriculture and its allied activities. To raise the prospects of development in Bihar, the vast potentials of agriculture and its allied sectors need to be exploited. Despite the productivity improvements in the agricultural sector over recent decades, it still remains low by national standards whereas the share of agriculture in GSDP in Bihar is higher than India. Although the growth rate of agriculture and animal husbandry during the last 5 years has been 3.73 percent, compared to 2.40 percent in previous 5 years, this sector requires special significance for the state's economy as nearly nine-tenth of its population living in rural areas primarily earns their livelihood from this sector.

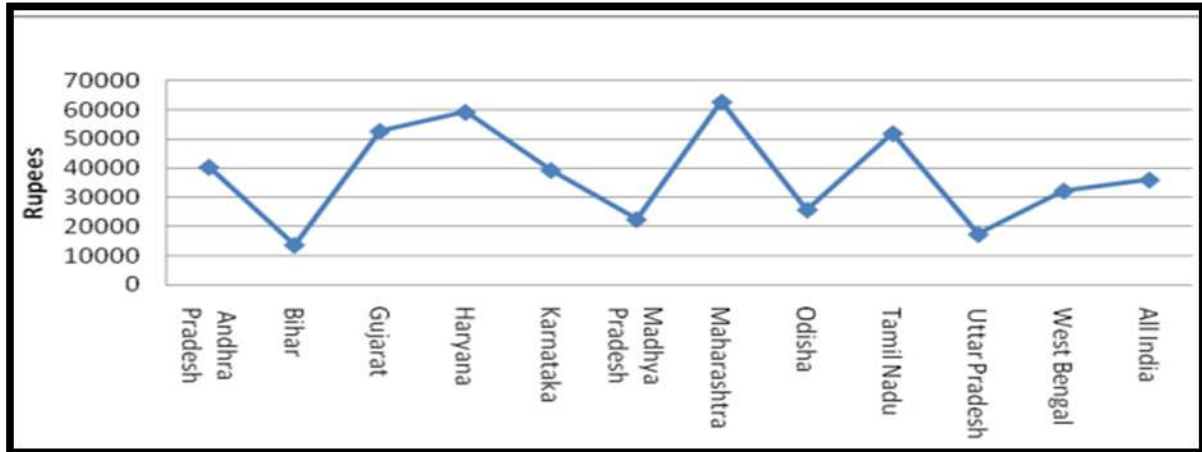
Relation between Agriculture and Economic Development:

Agriculture plays a pivotal role in Bihar's economy and this sector's better performance is vital for inclusive growth. The dualistic models of Lewis (1954), Boeke (1953), Ranis and Fei (1961) are particularly important as these models presume that a less developed country is made up of two sectors-traditional and modern. The process of economic development unfolds as a result of interaction of these two sectors. According to Johnston and Mellor (1961) agriculture (traditional sector) has a number of functions to perform. It must provide food and labor for expansion of the modern sector and the savings to finance the expansion of the latter.

Growth with inclusiveness can be achieved only when agricultural growth accelerates and is also widely shared amongst people and regions of the country. All these factors point to just one option: that agriculture has to be kept at the centre of any reform agenda or planning process, in order to make a significant dent on poverty and malnutrition, and to ensure long-term food security for the people. In long terms, it must provide food for urban population;

contribute to the market for industrial goods, security of food and rising surplus of production in excess of subsistence needs.

Per-capita income for selected states in India:



Source: Indicators of development, Census 2011

States	Per capita NSDP (Rs) (at constant prices) (2004-05 prices) (2010-11)	Gross State domestic product (at constant prices) (2004-05 prices) (2010-11) (crore)	Literacy (2011)	Population (2011) (in Million)	GSDP in Agriculture and Allied sectors (at constant prices) (2004-05 prices) (2010-11) (crore)
Andhra Pradesh	40366	381942 (7.8)	67.66	84.67	80330
Bihar	13632	144472 (3.0)	63.82	103.80	28151
Gujarat	52708	365295 (7.5)	79.31	60.38	NA
Haryana	59221	166095 (3.4)	76.64	25.35	257710
Karnataka	39301	279932 (5.7)	75.6	61.13	41383
Madhya Pradesh	22382	182647 (3.7)	70.63	72.60	NA
Maharashtra	62729	775020 (15.9)	82.91	112.37	66557
Odisha	25708	128367 (2.6)	73.45	41.95	22238
Tamil Nadu	51928	391372 (8.0)	86.33	72.14	31987
Uttar Pradesh	17349	394499 (8.1)	69.72	199.58	91682
West Bengal	32228	317786 (6.5)	77.08	91.35	6096
All India	35993	4885954	74.04	1210.19	700390

Source: CSO and Census 2011

From the above table showing few development indicators of some selected states in India, it is clear that Bihar lies at the bottom line with PCI of Rs. 13632 which is lower than all the other selected states .Bihar's GSDP is only 3 percent of the total India's GDP; therefore, it is much below other states whose share range between 15-7 percent of GDP. Bihar's GSDP in agriculture is 4 percent of India's agricultural GDP, although more than 80 percent of population of Bihar is rural, its contribution in agricultural GDP is only 4 percent, which is really shocking. Considering other two indicators, it is clear that Bihar lies below the national average of 74.04 literacy rate and in population, its position are 3rd after U.P. and

Maharashtra. Therefore, all the indicators prove that Bihar is yet much below in the ladder of development.

Basic Features of the Economy of Bihar:

The state of Bihar was reorganized on November 15, 2000 with 38 districts, 9 divisions, 101 sub-divisions, 533 blocks and 45,098 villages (Census, 2001) . Bihar is the third most populous state and 12th largest state in terms of geographical area of about 94.2 thousand square kilometers (Census, 2001). It is divided by river Ganges into two parts i.e., (I) North Bihar with an area of 53.3 thousand sq. kms and (II) South Bihar with an area of 40.9 thousand sq. kms. After the bifurcation of the state, agriculture has become more important because all the rich mineral resources have gone to the state of Jharkhand. The state is left with residual natural resource endowment such as; cultivable land, fertile soil and abundant water. Due to this the economy of Bihar is mainly based on agricultural and allied sectors. Therefore, the proper economic development of the Bihar's economy is not possible without the growth of agriculture and allied sectors. The agriculture sector holds the key of the state's economy by contributing more than one-fourth (26.51 percent) to GDP (at 1999 constant price) in 2008-09 (CSO, 2009) and providing employment to 81 percent of workforce in the state (GoI, 2008). It also assumes great importance because near about 90 percent of the population of the state living in rural areas are directly or indirectly depend on agriculture and allied activities for their livelihood. Bihar is the third largest producer of vegetables and 7th largest producer of fruits in the country (GoI, 2009). The gross cropped area (GCA) in Bihar is 79.57 lakh hectares. The net sown area comprises of 57.25 lakh hectares (GoI, 2008) . The state has several rivers such as Ganga, Sone, Bagmati, Kosi, Budhi Gandak, Punpun, etc. Statistics reveal that about 41 percent of cultivated area is floodprone and another forty percent is drought-prone. As the state is endowed with appropriate climatic conditions for the cultivation of a wide range of crops and trees. Based on soil characteristics, rainfall, temperature and terrain, three main Agricultural Climatic Zone (Agro-Climatic Zones) in Bihar have been identified (GoB, 2009).

Important Features of Agro-Climatic Zones of Bihar:

Zones	Districts	Area in (M. Ha)			Soil	Ph	Initiation/ Cessation of rainfall	Total rainfall (mm)	Temperature (Degree Celsius)		Main Cropping Systems
		Total Area	NSA#	Irrigated					Max	Min	
Zone-1	West and East Champaran, Gopalganj, Saran, Siwan, Sitamarhi, Muzaffarpur, Darbhanga, Vaishali, Samastipur, Sheohar, Madhubani, Begusarai	3.26	2.15 (65.95)*	0.86 (40.00)**	Sandy Loam, Loam	6.5 - 8.4	12 th June/30 th Sep to 10 th Oct	1040-1450 (1245)	36.6	7.7	Rice-Wheat, Maize-Wheat, Maize-Arhar, Maize-Potato-Moong, Maize-Sweet Potato-Moong, Maize-Mustard-Moong, Rice-Potato-Maize, Rice-Sugarcane
Zone-2	Purnea, Katihar, Madhepura, Saharsa, Araria, Kishanganj, Supaul, Khagaria,	2.08	1.21 (58.17)	0.24 (19.83)	Sandy Loam, Clay Loam	6.8 - 7.8	7 th June/30 th Sep to 10 th Oct	1200-1700 (1450)	33.8	8.8	Jute-Rice, Jute-Wheat, Jute-Rice-Wheat, Jute-Rice-Wheat, Jute-Khalai-Wheat, Jute-Rice-Wheat, Jute-Potato, Jute-Khalai-Wheat, Jute-Mustard, Jute-Pea, Rice-Wheat-Moong
Zone-3 (A)	Banka, Munger, Jamui, Lakhisarai, Shekhpura, Bhagalpur	1.11	0.49 (44.14)	0.21 (42.86)	Sandy Loam, Clay Loam, Loam, Clay	6.8 - 8.0	15 th June/30 th Sep to 10 th Oct	990-1240 (1115)	37.1	7.8	Rice-Wheat, Rice-Wheat-Moong, Rice-Gram-Rice, Rice-Potato-Onion, Rice-Rai-Moong, Rice-Bar seem, Rice-Wheat-Moong, Rice-Wheat, Rice-Gram-Rice, Rice-Gram-Moong, Rice-Gram-Moong, Rice-Wheat
Zone-3 (B)	Patna, Gaya, Jahanabad, Nawada, Rohatas, Aurangabad, Buxar, Kaimur, Arwal	2.92	1.68 (57.53)	1.37 (81.15)			10 th June/30 th Sep to 10 th Oct				
Total	Bihar	9.37	5.53 (59.02)	2.68 (48.46)							

Source: Ministry of Agriculture, Government of Bihar

Agro-Climatic Zone-wise Map of Bihar:



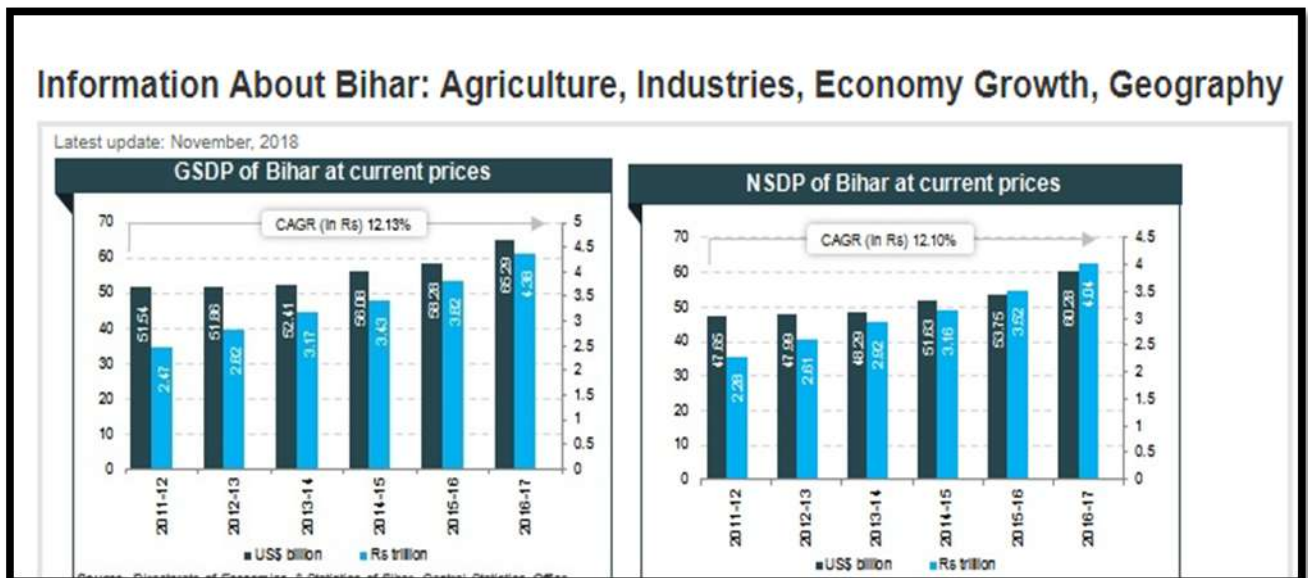
Source: www.krishi.bih.nic.in

Basic Features of the Economy of Bihar:

Description	Bihar	India
Total Geographical Area, (Sq. Kms.) Census, 2001	94163	3287240
Population Density (2001)	880	324
Sex Ratio (Number of Female Per Thousand of Male) (2001)	921	933
Decadal Growth of Population (1991-2001)	28.4	21.3
Total Population in Millions (2001)	83.0	1028.7
Total Rural Population (in Millions) (2001)	74.3	742.5
Total Urban Population (in Millions) (2001)	8.7	286.1
Total Male Population (2001)	43.2	532.2
Total Female Population (2001)	39.8	496.5
Percentage of Urban Population (2001)	10.5	27.8
Percentage of Rural Population (2001)	89.5	72.2
Total Literacy Rate (2001)	47.5	64.8
Total Rural Literacy Rate (2001)	43.9	58.7
Total Urban Literacy Rate (2001)	71.9	79.9
Total Male Literacy Rate (2001)	33.1	53.7
Total Female Literacy Rate (2001)	33.1	53.7
Rural Female Literacy Rate (2001)	29.6	46.1
Total Poverty Ratio (NSSO-61 st Round, 2004-05)	41.4	27.5
Total Rural Poverty Ratio (2004-05)	42.1	28.3
Agriculture Worker as Percentage of Total (Main + Marginal Worker) (2001)	74.6	58.4
Agriculture Worker as Percentage of Total Rural Worker (2001)	81.3	73.3
Work Participation Rate (2001)	33.9	39.3

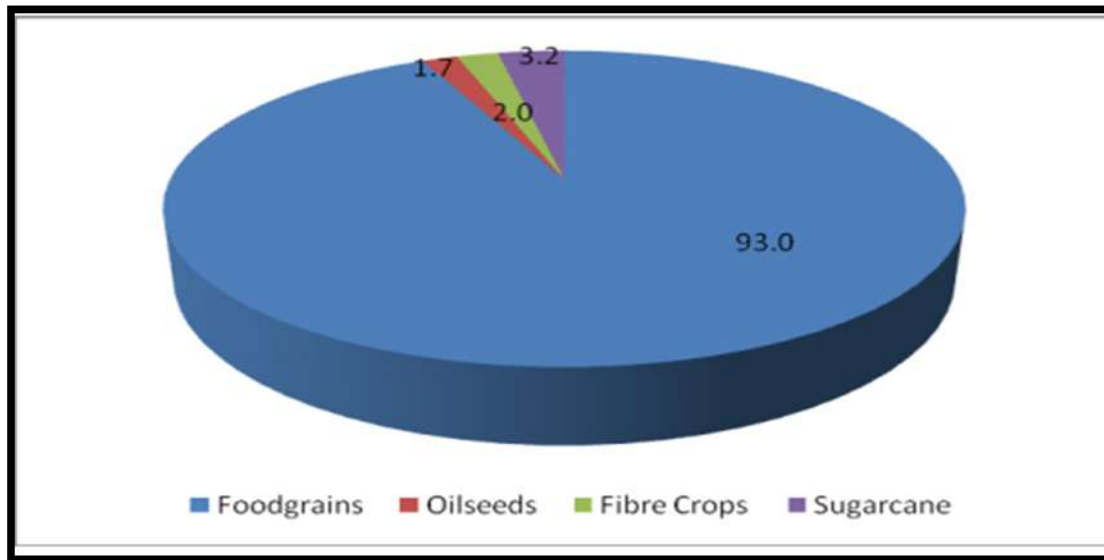
Source: Census 1991 & 2001 and NSSO, Govt. of India, New Delhi.

The state is the poorest by all the means of socio-economic indicators (Table Above). A large group of landless labour from rural areas of the state migrates to other states like Punjab, Delhi, Mumbai and even in some parts of U. P in the sowing and harvesting seasons for their livelihood.



Source: Directorate of Economics & Statistics of Bihar.

Cropping Pattern in Bihar



Source: Directorate of Economics & Statistics of Bihar.

Problems of Agriculture in Bihar

1. Small and fragmented land-holdings:

The problem of small and fragmented holdings is more serious in densely populated and intensively cultivated states like Kerala, West Bengal, Bihar and eastern part of Uttar Pradesh where the average size of land holdings is less than one hectare and in certain parts it is less than even 0.5 hectare..

Large holdings (above 10 hectare) accounted for only 1.6 per cent of total holdings but covered 17.4 per cent of the operated area .Hence, there is a wide gap between small farmers, medium farmers (peasant group) and big farmers (landlords).

The main reason for this sad state of affairs is our inheritance laws. The land belonging to the father is equally distributed among his sons. This distribution of land does not entail a collection or consolidated one, but its nature is fragmented.

2. Seeds:

Seed is a critical and basic input for attaining higher crop yields and sustained growth in agricultural production. Distribution of assured quality seed is as critical as the production of

such seeds. Unfortunately, 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.

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.

The Indian seed industry had exhibited impressive growth in the past and is expected to provide further potential for growth in agricultural production: The role of seed industry is not only to produce adequate quantity of quality seeds but also to achieve varietal diversity to suit various agro-climatic zones of the country.

4. Irrigation:

Although India is the second largest irrigated country of the world after China, only one-third of the cropped area is under irrigation. Irrigation is the most important agricultural input in a tropical monsoon country like India where rainfall is uncertain, unreliable and erratic India cannot achieve sustained progress in agriculture unless and until more than half of the cropped area is brought under assured irrigation.

This is testified by the success story of agricultural progress in Punjab Haryana and western part of Uttar Pradesh where over half of the cropped area is under irrigation! Large tracts still await irrigation to boost the agricultural output.

5. Lack of mechanisation:

Despite the large scale mechanisation of agriculture in some parts of the country, most of the agricultural operations in larger parts are carried on by human hand using simple and conventional tools and implements like wooden plough, sickle, etc.

Little or no use of machines is made in ploughing, sowing, irrigating, thinning and pruning, weeding, harvesting, threshing and transporting the crops. This is specially the case with small and marginal farmers. It results in huge wastage of human labor and in low yields per capita labor force.

6. Soil erosion:

Large tracts of fertile land suffer from soil erosion by wind and water. This area must be properly treated and restored to its original fertility.

7. Agricultural Marketing:

Agricultural marketing still continues to be in a bad shape in rural India. In the absence of sound marketing facilities, the farmers have to depend upon local traders and middlemen for the disposal of their farm produce which is sold at throw-away price.

In most cases, these farmers are forced, under socio-economic conditions, to carry on distress sale of their produce. In most of small villages, the farmers sell their produce to the money lender from whom they usually borrow money.

8. Inadequate storage facilities:

Storage facilities in the rural areas are either totally absent or grossly inadequate. Under such conditions the farmers are compelled to sell their produce immediately after the harvest at the prevailing market prices which are bound to be low. Such distress sale deprives the farmers of their legitimate income.

The Parse Committee estimated the post-harvest losses at 9.3 per cent of which nearly 6.6 per cent occurred due to poor storage conditions alone. Scientific storage is, therefore, very essential to avoid losses and to benefit the farmers and the consumers alike.

9. Inadequate transport:

One of the main handicaps with Indian agriculture is the lack of cheap and efficient means of transportation. Even at present there are lakhs of villages which are not well connected with main roads or with market centres.

10. Scarcity of capital:

Agriculture is an important industry and like all other industries it also requires capital. The role of capital input is becoming more and more important with the advancement of farm

technology. Since the agriculturists' capital is locked up in his lands and stocks, he is obliged to borrow money for stimulating the tempo of agricultural production.

Gross State Domestic Product (GSDP) at Current Prices:

S. No. ↕	State / Union territory ↕	GRDP per capita (nominal) ↕	Data year ↕	Per capita PPP ¹ (2017 INT\$) ^[1] ↕	Comparable country (PPP) ↕
1	Andaman and Nicobar Islands	₹136,823 (US\$1,900)	2016–17 ^[2]	INT\$7,700	Guatemala
2	Andhra Pradesh	₹142,054 (US\$2,000)	2017–18 ^[3]	INT\$8,000	Philippines
3	Arunachal Pradesh	₹119,481 (US\$1,700)	2016–17 ^[2]	INT\$6,730	Angola
4	Assam	₹67,303 (US\$940)	2016–17 ^[2]	INT\$3,790	Tuvalu
5	Bihar	₹38,860 (US\$540)	2016–17^[4]	INT\$2,170	 Yemen
6	Chandigarh	₹242,386 (US\$3,400)	2015–16 ^[5]	INT\$13,640	South Africa
7	Chhattisgarh	₹92,035 (US\$1,300)	2017–18 ^[2]	INT\$5,180	Honduras
8	Delhi	₹329,093 (US\$4,600)	2017–18 ^[6]	INT\$18,520	Guyana
9	Goa	₹375,554 (US\$5,200)	2016–17 ^{[2][5]}	INT\$21,140	Bulgaria
10	Gujarat	₹214,285 (US\$3,000)	2016–17 ^[7]	INT\$12,000	Armenia
11	Haryana	₹196,982 (US\$2,700)	2017–18 ^[8]	INT\$11,090	Ecuador
12	Himachal Pradesh	₹160,719 (US\$2,200)	2017–18 ^[2]	INT\$9,050	Jamaica
13	Jammu and Kashmir	₹86,108 (US\$1,200)	2017–18 ^[9]	INT\$4,850	Timor-Leste
14	Jharkhand	₹63,754 (US\$890)	2015–16 ^[5]	INT\$3,540	Djibouti
15	Karnataka	₹174,551 (US\$2,400)	2017–18 ^[2]	INT\$9,830	Georgia
16	Kerala	₹163,475 (US\$2,300)	2016–17 ^[2]	INT\$9,200	Jamaica
17	Madhya Pradesh	₹74,590 (US\$1,000)	2016–17 ^[2]	INT\$4,214	Cambodia
18	Maharashtra	₹180,596 (US\$2,500)	2017–18 ^[10]	INT\$10,170	Georgia
19	Manipur	₹58,501 (US\$810)	2016–17 ^[2]	INT\$3,300	Cameroon
20	Meghalaya	₹73,291 (US\$1,000)	2016–17 ^[2]	INT\$4,130	Cambodia
21	Mizoram	₹128,998 (US\$1,800)	2016–17 ^[2]	INT\$7,260	Laos
22	Nagaland	₹90,168 (US\$1,300)	2016–17 ^[2]	INT\$5,080	Timor-Leste
23	Odisha	₹80,991 (US\$1,100)	2016–17 ^[2]	INT\$5,560	Honduras
24	Puducherry	₹198,156 (US\$2,800)	2017–18 ^[2]	INT\$11,150	Ecuador
25	Punjab	₹142,958 (US\$2,000)	2017–18 ^[7]	INT\$8,050	Philippines
26	Rajasthan	₹100,551 (US\$1,400)	2017–18 ^[2]	INT\$5,660	Moldova
27	Sikkim	₹297,765 (US\$4,100)	2017–18 ^[2]	INT\$16,760	Jordan

Source: [Gross State Domestic Product \(GSDP\) at Current Prices](#), Planning Commission Government of India.

Out of total population of Bihar, 11.29% people live in urban regions. The total figure of population living in urban areas is 11,758,016 of which 6,204,307 are males and while remaining 5,553,709 are females. The urban population in the last 10 years has increased by 11.29 percent.

Of the total population of Bihar state, around 88.71 percent live in the villages of rural areas. In actual numbers, males and females were 48,073,850 and 44,267,586 respectively. Total population of rural areas of Bihar state was 92,341,436. The population growth rate recorded for this decade (2001-2011) was 88.71%. Per Capita Income among all the states, Bihar ranks the lowest.

Conclusion

The study shows that the Bihar has diversified agriculture production in favor of horticulture and commercial crops at very slower rate during the post-bifurcation period. But, it is important to highlight that the area under food grains still occupies more than 86 percent of total cropped area due to the traditional cropping pattern as well as traditional food habits. Therefore, area, production and yield of non-food grain crops are more stable as compared to food grain crops. Among the agro-climatic Zones in Bihar, highest share in area and production of aghani rice, linseeds, sesamum, pea, gram and lentil has been found in Zone-3(B), while bhadaï rice, wheat, rapeseeds and mustard, and arhar has been found in Zone-1. Similarly, highest share of area and production of summer rice and sunflower has been found in Zone-2. Whereas, the highest share of area under moong cultivation has been found in Zone-2, but its production has not been maintained. As a result, share of production of moong has been recorded highest in Zone-1. Amongst the agro-climatic Zones of Bihar, the per capita income is highest in Zone-3(B) which is higher than the state average followed by Zone-3(A), Zone-1 and Zone-2. The most prosperous Zone in Bihar is Zone-3(B) and within it, Patna appears at the top. While, in Zone-3(A) and Zone-1, Munger and Begusarai appears most prosperous districts enjoying highest per capita net district domestic product (PCNDDP). Zone-2 is dominated by agriculture and allied sector and it is the least prosperous Zone in the state. In this Zone, Katihar appear to be the highest prosperous district, while Araria at the bottom is having lowest per capita income.

After the bifurcation of Bihar, the growth rate in terms of both GSDP and NSDP showed remarkable increase in almost all sub-sectors as compared to pre-bifurcation period. However, agriculture and allied sector has accounted miserable growth rate as compared to industrial and services sector. The share of agriculture and allied sector has declined from

46.70 percent to 26.51 percent during 1990-91 to 2008-09. Despite sharp decline of its share in NSDP, agriculture still plays a vital role in the development of Bihar.

The urgent need of the hour is to increase Investments in rural infrastructure for water management/soil conservation/ construction of roads to link rural area with urban area etc. With appropriate technology, infrastructure and policy support, it is possible to reverse the declining trend in food grain production and check the migration of the people from Bihar to other states.

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