



A STUDY ON THE AGRICULTURE AND ECONOMIC PROGRESS WITH SPECIAL REFERENCE TO BIHAR

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Abstract

Economy of Bihar is mostly founded on horticultural and subsequently, financial advancement of the Bihar's economy is unimaginable without the development of farming. After, the bifurcation of Bihar, the improvement rate similarly as both GSDP and NSDP demonstrated surprising augmentation.

This paper re-visitations of the profound established proposal that advancement of agriculture adds to all around financial new development, and finds out if the relationship really holds in a relentlessly globalized world. The examination shows that the Bihar has widened agribusiness creation for development and money crops at exceptionally more moderate rate during the post-bifurcation time frame.

Then again decrease in per farming labourer business openings in provincial territories has brought about expansion in labour movement from Bihar. Strategy creators ought to include themselves in vital intercessions to utilize accessible assets to upgrade the per-capita pay of the ranchers in Bihar.

Keywords: - *Economy, Farming, Agriculture, Strategy.*

1.0 Introduction

Horticulture is the prime division and it accepts a critical capacity in the improvement of a making state like Bihar. It is undeniable truth that agro-normal condition of Bihar is extremely incredible for formation of various field and vegetable harvests, natural items, creatures, fish, nectar, etc. Bihar has controlling framework in progress of litchi and makhana in the country and rose as critical creator of nectar and fragrant and therapeutic plants during latest 5 years.

Public and private interests in agribusiness have declined during latest 15 years which achieved decline in State net rustic local thing by 0.44 percent during 1999-2006 and rot of one percent in Ninth Five Year Plan. In case we take a gander at the rustic improvement in Bihar for longer period (30 years), there has been a conspicuous advancement in cultivating division yet the State is still much behind to public agrarian unforeseen development

1.1 Significant highlights of Bihar Economy

The territory of Bihar was adjusted on November 15, 2000 with 38 region, 9 divisions, 101 sub-divisions, 533 squares and 45,098 towns. After the bifurcation, cultivating has gotten more critical as the state is left with extra ordinary resources, for instance, cultivable land, ready soil and ample water. As a result of this the economy of Bihar is essentially established on cultivating and brought together divisions.

Table: 1.1.1 Highlights 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-Potato, 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	6.8	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)	Fatna, Gaya, Jahanabad, Nawada, Nalanda, Rohatas, Bhujpur, Aurangabad, Buxar, Kaimur, Arwal	2.92	1.68 (57.53)	1.37 (81.15)	Clay Loam, Loam, Clay	7.0 - 8.0	10 th June/30 th Sep to 10 th Oct				
Total	Bihar	9.37	5.53 (59.02)	2.68 (48.46)							

Source: MOA, Govt. of Bihar

Therefore, the right money related progression of the Bihar's economy is silly without the advancement of cultivation and bound together sections. The cultivation region holds the key of the state's economy by offering multiple 1/4 to GDP and offering work to 81 percent of labour force in the state.

2.0 Review of Literature

Shah Anita (1997) in her paper 'Food Security and Access to Natural Resources: A Review of Recent Trends' has examined the progressing designs in the making of food-grains in the country. She saw that disregarding the way that district under food-grains crops has diminished conceivably during the post-changes time frame, the model isn't uniform across yields and territories.

Dev (2002) in his paper "Striking Initiative Needed on Agriculture and Rural Employment" has explored the various components impacting the advancement of agribusiness division. He similarly inspected the moderate progression in this section and its horrible impact on the nation business.

Deshpande et al. (2007) in their paper named "Collect Diversification and Agriculture Labour in India" have meticulously reviewed the pattern of yield development in cultivating and its impact on agribusiness work.

Mathur et al. (2006) have separated the improvement design in cultivation creation the nation over and zone. They have moreover separated the different parts for the advancement in cultivating. There are gigantic between state contrasts being developed movement of cultivating and significantly more so for food-grains.

Thakur (2006) in his paper named "Improvement and Diversification of Agriculture in Eastern India" saw that there is a tremendous expansion for country expanding in the eastern states of India. Agribusiness can be expanded between the yield, live stock, fisheries, development, agriculture, and sericulture, etc., for which north-eastern states have bountiful potential.

Birthal and Joshi (2006) in their paper "Extension towards High Value Agriculture-Role of Urbanization and Infrastructure" have analyzed the expanding cycle in Indian agribusiness towards high worth products (HVCs) for instance natural items, vegetables and tamed creatures things.

Hussain (2004) in his paper saw that the entire North-East has lack in food creation. The Brahmaputra valley, the Bark valley in Assam and the little Imphal valley in Landlessness among the middle class have extended altogether, considering centralization of land in barely any hands.

Chattopadhyay (2005) has made an undertaking to examine the distributional impact of plant improvement on commonplace West Bengal during the latest twenty years of the previous century. It was even not actually the extent of improvement of the provincial and complete people of the state.

3.0 Research Design

The current examination is chiefly established on discretionary data. The estimations are assembled from different power chronicles of Government of India and states appropriated by different Government bodies and authority destinations. These data have been grouped for different agro-climatic Zones of Bihar for extra assessment. For this reasons we have used some direct and easy to understand authentic contraptions in the light of the objectives and nature of the data.

4.0 Research objectives

- To study the pattern of agricultural growth in Bihar state.
- To analyse the role of agriculture in economic progress of Bihar state.

5.0 Role of Agriculture in Economic Progress of Bihar

Cultivating and collaborated divisions are the establishment of Bihar economy. Most of the quantity of occupants in Bihar is dependent on agriculture. 74.57 percent of complete authorities (agribusiness and non-agriculture) are cultivating workers and simply 25.43 percent are non-provincial workers in Bihar. Hence, an upheld agrarian advancement in Bihar will have the beneficial outcome on the condition of the workers and help in alleviation of poverty in Bihar since prevailing piece of the people living underneath dejection line in the state are cultivating labourers.

Bihar falls behind in green execution interestingly with various states in India considering its standard altering models and powerless forces. For example, Bihar has about 2.9 percent of irrefutably the created locale of the country and 8.07 percent of the country's general population, and produces about 4.92 percent (10,710 thousand tons) of the full scale food-grains in 2016-17. The yield of food-grains in the state was 1740 kg/ha as against the public typical of 1999 kg/ha during a comparable period. The yield of rice in Bihar was 1485 kg/ha as against public ordinary of 2123 kg/ha. Hence, the yield of wheat was 1907 kg/ha as against the public typical of 2709 kg/ha.

Without agreeable estate and non-farm business openings, they are moreover constrained to live underneath desperation line. This is proposed not solely to free the little and negligible farmers from the destitution trap, yet furthermore to fulfil the country's growing requirements for natural items, vegetables, milk a lot things, meat, fish, eggs, etc which generally show rising examples with extending levels of per-capita pay in the economy.

6.0 Key findings

- Vegetable cultivators don't get even 50% of customers' expense of vegetables.
- Access to control is confined to only 5 % of rural families appeared differently in relation to 44 % extensively; nonattendance of nation shock is a noteworthy limit to both farm and non-farm improvement.
- Floods, water logging, powerless waste, and lacking public endeavours on developing and keeping up surface water framework structures.

Table:-6.1 Zone-wise Annual and Average Annual Growth Rate Area, Production and Yield of Food Crops

Crops	Agro Climatic Zones	Growth Rates in Area						Growth Rate in Productions						Growth Rates of Yield											
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	AAGR	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	AAGR	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	AAGR			
Aghani Rice	Zone-1	2.1	-2.5	1.9	-0.4	-3.4	0.6	-0.3	-2.3	19	-29.8	4	-50.6	30.2	4.92	-4.3	22.1	-31.1	4.4	-48.8	29.5	4.70			
	Zone-2	-12.1	1.1	-1.7	0.4	-4.9	-0.7	-3.0	-17	-14.8	12.8	27.4	-46.8	23.6	-2.47	-5.6	-15.7	14.7	26.8	-44.1	24.4	0.08			
	Zone-3 (A)	57.5	-15.8	14	-2	-12.4	5.3	7.8	44.8	-11.7	23.9	-3.3	-34.3	11.8	5.20	-8	4.9	8.7	-1.4	-25	6.1	-2.45			
	Zone-3 (B)	-3.5	-1	-2.2	2.9	-21.8	3.3	-3.7	-5	5.2	-6.9	8.7	-78	196.8	20.13	-1.6	6.3	-4.8	5.7	-71.9	187.3	20.17			
	All Bihar	0.3	-2.6	0.6	0.9	-12	1.8	-1.8	-3.6	4.7	-9.5	9.1	-62.8	77.1	2.50	-3.9	7.5	-10.1	8.2	-57.8	74	2.98			
Summer Rice	Zone-1	-8.3	-5.9	14.8	-9.1	2	-7.8	-2.4	12.7	3.7	5.2	-34.9	-12.3	-16.2	-6.97	22.9	10.2	-8.4	-28.4	-14	-9.1	4.47			
	Zone-2	1.9	-8.7	4.1	-2.4	-3.7	1.4	-1.2	-17.7	4.3	-13.8	-9	-4	18.3	-3.65	-19.2	14.2	-17.2	-6.8	-0.3	16.7	-2.10			
	Zone-3 (A)	40.3	-28.3	-24.3	3.6	-14	5.7	-2.8	22.7	-18.8	-89.3	456.9	-17.3	7.2	60.23	-12.5	13.3	-85.9	437.7	-3.8	1.4	58.37			
	Zone-3 (B)	22.8	-10.4	-16.3	-25.1	153.4	-67.5	9.5	4.5	9.7	-33.6	-30.4	122.1	-61.4	1.82	-14.9	22.5	-20.7	-7.1	-12.3	18.7	-2.30			
	All Bihar	0.4	-8.4	5.7	-3.7	-22	-0.9	-1.5	-13.6	4.1	-11.2	-13.8	-4.8	13	-4.38	-14	13.6	-15.9	-10.5	-2.7	14.1	-2.57			
Bhadai (Autumn) Rice	Zone-1	6.6	3.7	-1.7	-6.1	1.5	-5.6	-0.3	0	5.2	-20.2	9.9	-29.6	-3.5	-6.37	-6.2	1.4	-18.8	17.1	-30.6	2.2	-5.82			
	Zone-2	19	-10.6	-14.3	13.7	-4.3	5.9	1.6	72.7	-38.4	-7.9	29.7	-15.5	5.7	7.72	45.1	-31.1	7.5	14.1	-11.7	-0.2	3.95			
	Zone-3 (A)	-2.2	100.9	-42.6	-16.2	41.3	-15.2	11.0	7.8	96.5	-50	-4.5	4.9	-15.3	6.57	10.3	-2.2	-13	13.9	-25.8	-0.1	-2.82			
	Zone-3 (B)	-15.7	195.6	-76	102.4	-46.5	114.9	45.8	-5.7	179.6	-77.2	114.4	-60.6	134.5	47.50	11.9	-5.4	-5	6	-26.4	9.1	-1.63			
	All Bihar	9.5	0.9	-5.6	-1.6	-0.1	-2.5	0.1	12.7	-5.7	-18.8	14.1	-26.5	-0.7	-4.15	2.9	-6.5	-13.9	16	-26.4	1.8	-4.35			
Wheat	Zone-1	-1.3	2.6	-0.9	-2.9	1.7	0.7	0.0	-1.5	-6.5	-10.7	-10.9	8.7	-24.9	-7.63	-0.2	-8.8	-9.9	-8.2	6.9	-25.4	-7.60			
	Zone-2	4.5	7.6	-1.9	-3.9	4.2	-3	-0.2	4.1	-9.1	-9.6	-24.6	4.8	-41.6	-12.67	-0.4	-15.5	-7.9	-21.6	9.3	-39.8	-12.65			
	Zone-3 (A)	4.4	-9.5	-1.4	6.1	-5.2	-8.9	-2.4	7.4	-13.2	-7.1	18.2	-25.5	-10.4	-5.10	2.9	-4.1	-5.8	11.4	-21.4	-1.6	-3.10			
	Zone-3 (B)	-3.7	3.8	3.3	-3.1	-6.2	-1.3	-1.2	-11.6	14.8	-4.7	-3.8	-34.1	13.7	4.28	-8.2	10.7	-7.8	-0.7	-29.7	15.2	-3.42			
	All Bihar	-0.7	2.9	0.2	-2.5	-2.4	-1.3	-0.6	-3.6	-0.6	-8.1	-8.6	-11.5	-14.9	-7.88	-3	-3.3	-8.3	-6.2	-9.4	-13.8	-7.33			

Source: MOA, Govt. of Bihar

Table:-6.2 Statistics with respect to Yield of Different Food Crops (Agro-Climatic Zone-wise)

Crops	Agro Climatic Zones	Area in lakh Hectares (Lha)						Production (in lakh Metric Tonnes (LMT))						Yield (Production lakh MT/Area lakh Hectares)										
		2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
Aghani Rice	Zone-1	8.93	9.12	8.89	9.06	9.03	8.72	8.77	12.36	12.08	14.38	10.1	10.5	5.19	6.76	1.38	1.32	1.62	1.11	1.16	0.6	0.77		
	Zone-2	6.34	5.57	5.63	5.54	5.56	5.29	5.26	7.58	6.29	5.37	6.05	7.71	4.1	5.07	1.2	1.13	0.95	1.09	1.39	0.78	0.96		
	Zone-3 (A)	1.91	3.01	2.53	2.88	2.83	2.47	2.61	2.52	3.64	3.22	3.99	3.85	2.53	2.83	1.32	1.21	1.27	1.38	1.36	1.02	1.09		
	Zone-3 (B)	12.13	11.71	11.58	11.33	11.65	9.11	9.42	23.56	22.37	23.53	21.91	23.83	5.25	15.57	1.94	1.91	2.03	1.93	2.04	0.58	1.65		
	All Bihar	29.3	29.4	28.64	28.81	29.07	25.6	26.05	46.02	44.38	46.49	42.05	45.9	17.07	30.23	1.57	1.51	1.62	1.46	1.58	0.67	1.16		
Summer Rice	Zone-1	0.22	0.2	0.19	0.22	0.2	0.2	0.19	0.31	0.34	0.36	0.38	0.24	0.21	0.18	1.39	1.71	1.88	1.72	1.23	1.06	0.96		
	Zone-2	1.02	1.04	0.95	0.99	0.96	0.93	0.94	2.14	1.76	1.84	1.59	1.44	1.38	1.64	2.11	1.7	1.94	1.61	1.5	1.49	1.75		
	Zone-3 (A)	0.01	0.01	0.01	0	0	0	0	0.01	0.01	0.01	0	0.01	0	0.01	1.86	1.63	1.84	0.26	1.4	1.34	1.36		
	Zone-3 (B)	0.01	0.01	0.01	0.01	0	0.01	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.83	1.56	1.91	1.52	1.41	1.23	1.47		
	All Bihar	1.25	1.25	1.15	1.21	1.17	1.14	1.13	2.47	2.13	2.22	1.97	1.7	1.62	1.83	1.98	1.7	1.93	1.62	1.45	1.42	1.61		
Bhadai (Autumn) Rice	Zone-1	4.06	4.33	4.49	4.41	4.14	4.21	3.97	5.72	5.72	6.02	4.8	5.28	3.72	3.59	1.41	1.32	1.34	1.09	1.27	0.88	0.9		
	Zone-2	1.31	1.55	1.39	1.19	1.35	1.3	1.37	1.22	2.1	1.3	1.19	1.55	1.31	1.38	0.93	1.35	0.93	1	1.14	1.01	1.01		
	Zone-3 (A)	0.01	0.01	0.02	0.01	0.01	0.02	0.01	0.01	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
	Zone-3 (B)	0.03	0.02	0.07	0.02	0.03	0.02	0.04	0.03	0.03	0.08	0.02	0.04	0.02	0.04	0.04	0.02	0.04	1.16	1.3	1.23	1.17	1.24	0.91
	All Bihar	5.41	5.92	5.87	5.63	5.54	5.53	5.39	6.98	7.87	7.42	6.03	6.88	5.06	5.02	1.29	1.33	1.24	1.07	1.24	0.91	0.93		
Wheat	Zone-1	9.15	9.04	9.27	9.19	8.92	9.07	9.13	20.07	19.78	18.5	16.51	14.72	16	12.02	2.19	2.19	2	1.8	1.65	1.76	1.32		
	Zone-2	3.47	3.62	3.9	3.82	3.67	3.52	3.42	7.14	7.43	6.76	6.11	4.6	4.82	2.82	2.06	2.05	1.73	1.6	1.25	1.37	0.83		
	Zone-3 (A)	1.58	1.65	1.5	1.48	1.57	1.49	1.35	2.66	2.86	2.49	2.31	2.73	2.03	1.82	1.68	1.73	1.66	1.56	1.74	1.37	1.35		
	Zone-3 (B)	6.61	6.36	6.6	6.82	6.61	6.2	6.12	15.96	14.1	16.19	15.42	14.83	9.78	11.12	2.41	2.22	2.45	2.26	2.25	1.58	1.82		
	All Bihar	20.81	20.67	21.26	21.3	20.77	20.28	20.02	45.84	44.17	43.93	40.36	36.89	32.63	27.78	2.2	2.14	2.07	1.89	1.78	1.61	1.39		

Source: MOA, Govt. of Bihar

Table:-6.3 Statistics related to yield of Major Crops

Region	Crops	Year			CAGR		
		2001-2002	2010-2011	2017-18	Pre	Post	Over-all
Area (In'000 Hectare)	Food grains	7408 (84.5)	9883.2 (87.5)	9876 (86.3)	3.14**	2.70*	2.57*
	Non-Food grains	1359.5 (15.5)	1410 (12.5)	1570.8 (13.7)	1.03***	1.11*	1.13*
Production (In'000 MT)	Food grains	9192 (31.4)	12066 (38.9)	11770 (34.0)	6.46*	1.65***	0.27
	Non-Food grains	20107 (68.6)	18969 (61.1)	22797 (66.0)	-1.74	-0.53	-0.17
Yield (Kg/Hectare)	Food grains	1241 (7.7)	1221 (8.3)	1192 (7.6)	3.22**	-1.02	-2.24**
	Non-Food grains	14790 (92.3)	13453 (91.7)	14513 (92.4)	-2.74***	-1.62**	-1.28***

Source: MOA, Govt. of Bihar

- In excess of 90% farmers offer their produce in towns to transient sellers on fewer than 80% of winning business area cost.
- Some farmers offer their produce to intermediaries since portion is made through bank mind securing centres and bigger piece of close to nothing and fringe farmers don't have records in Bihar.
- There is a need to develop a sensible promoting plan which obliges the need of pretty much nothing and negligible farmers in the State.
- The weak agrarian enlargement structure is another huge reason behind moderate cultivating improvement in Bihar. Agrarian enlargement system has almost folded in Bihar.

7.0 Conclusion

Growing work and wages in cultivation energizes interest for non-provincial items and adventures, giving a lift to non-farm nation vocations too. Critical harvests created in Bihar are rice, wheat, maize, gram, red gram, sugarcane, potato and various vegetables. Public methodology needs to zero in on among nearby and intra-social differentiations, particularly the opportunities for little farm uphold in advocated markets.

The basic need critical is to grow Investments in commonplace establishment for water the board/soil conservation/improvement of roads to associate nation district with metropolitan locale, etc. With appropriate development, structure, it is possible to extend food grain creation and check the development of the people from Bihar.

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