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Agricultural Problems of Hazaribag District, Jharkhand

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Abstract: ***The economy of most of the countries on the globe depends upon agriculture. Also Agricultural problems are more or less the same throughout the III world. So far India is concern, it is a country of villages. Population residing in these villages solemnly depends upon agricultural yields for their livelihood and fulfilment of the other requirements. As a sample unit a project has been planned to study the decision approaches in the agriculture sector of Hazaribag district in Jharkhand state. In this connection primarily agricultural problems of the agriculture sector in Hazaribag district have been identified- which are more or less found everywhere.***

Keywords: Agriculture, Rural farmers and problems

1. Introduction

The case study pertains to Hazaribag District. On the global grid of longitude and latitude its length and breadth is confined between 23.5°-24.5° latitude in the Northern Hemisphere and 85.1°-85.9° longitude comprising some 4,302 square kilometers. The life line N.H.33 (Old) and N.H.20 (New) within Jharkhand State passes through its township connecting the capital of the state, Ranchi- some 96 kilometers to the South of it. Hazaribag is the Head quarter of North Chotanagpur Commissionary. It is abundantly rich in coal deposits and employs many people in coal production and transporting works. But other industries are conspicuously absent. In this circumstance a large population depends solely upon agricultural activities for their livelihood. The primary sector agriculture, even today in modern digitalized India, post- Independence, serves as the back bone of Indian economy. It absorbs nearly 50% of the population in direct, indirect, full time, part time and /or in disguised employment and that Hazaribag District is no exception. That Hazaribag Districtis comprised within the geographical north Chotanagpur plateau region. It is endowed with mines and minerals and stony tracts of lands interspersed with some forest lands and some low lying fertile soil by the rivers and rivulets. Thus it has scanty, periodic seasonal water flows. The vagaries of Monsoon plays upon the uncertainty associated with Agricultural problems. Here lack of assured irrigation is the key problem. All efforts and intensions of the successive governments in the past could do precious little in this sphere. They failed totally in contriving ways and means to provide the much needed assured irrigation facilities to the farmers of Hazaribag District. And when this assured irrigation facilities is conspicuously absent, all problems pertaining to Agricultural problems, within the Hazaribag District, brazenly stare into the eyes of the helpless, hapless farmers. They are no doubt, putting in their physical efforts, but only to eek out ameager return. This return is much below the national average standard of return and thus only adding to their woe of poverty, low standard of living, poor consumption rates, weak health being susceptible to sickness, and improper education to children, who are deprived due to minimum parental economic wellbeing in essence. All know that Rabi and Kharif crops are sown here. All the inputs required for agricultural output are needed. Organic manure to chemical fertilizers are made available but that in this region, the very absence of assured irrigation facilities plays the spoil sport. Is a big deterrent. So only half hearted attempts obviously result in poor returns. It gives rise to vicious circle of economic nature so above mentioned. The climate of Hazaribag plays a dominant role in agricultural activities and in particular monsoon plays the pivotal role. Total rain fall recorded in the rain gauze stands at 1234.5 mm per annum. But the distribution of rain fall records 80% of the rainfall during monsoon season itself. The temperature falls to 2 to3°C in December to January and rises to 44°C in May to June. The average temperature annually is 23 °C. The topography of Hazaribag consists of mountains and valleys, forests and stones. The agricultural lands are broadly classified into Tands, Doan and paddy lands in Register II of the land records. Forest lands are reserved for forestry. Large populations of tribals are dependent upon forest products for their lively hood. Forest products include Mahua, Kendu, Katha, Piar, Bamboo, Sahtoot, etc. especially in the Southern Hazaribag. The populations of Northern Hazaribag have cleared forestlands for Agricultural activities. And over decades are engaged in producing rice, maize, ragi, wheat and vegetables. Vegetables mainly consist of potatoes, tomatoes and coriander leaves. The soil of Hazaribag district is not suitable for agriculture. The three distinctive soils are classified as Entisols (18.1%), Inceptisols (7.8%) and Alfisols (71.9%) as per the Wikipedia, thankfully acknowledged hereby.

Table 1: Rainfall and Temperature

S.N.	Name of town	Rainfall (mm)	Temperature (in centigrade)	
			Maximum	Minimum
1	2	3	4	5
1	Chauparan (CT)	929.5	46	5
2	Barhi	929.5	41.5	6
3	Konra	928.5	45	5
4	Bishnugarh	928.5	46	4
5	Cherra(CT)	928.5	47	5
6	Hazaribag(Nagar Parishad)	929.5	45	3
7	Meru (CT)	928.5	45.3	4

8	MaraiKalan (CT)	928.5	42	5
9	Okani-II (CT)	927.5	45	5
10	Palawa (CT)	928.5	36	6
11	Masratu (CT)	928.5	43	7
12	Kadma No-II (CT)	929.5	47	5
13	Urimari (CT)	928.5	46	4
14	Charhi (CT)	987.2	45	4
15	Dari (CT)	987.2	43	8
16	Religara Alias Pachhiari (CT)	987.2	46	7
17	Gidi (CT)	986.2	42	7

After a brief survey of different villages in this district the following problems of rural farmers have been identified.

1. Fragmented Land Holding: The socio-economic legal provisions of family partition are the main reason behind fragmented land holdings here. Some 140 million farmer families, over generations have adopted this family partition of agricultural lands taking share on pro rata basis in each chunk of land for equal valuation, quality and quantity purpose. The sad result is that on the average these families hold less than 2 acres of land as their share that too in 3 to 5 different areas, spread in two to three different villages at times. Inheritance of such fragmented land holdings in narrow stripes renders it economically in operative for extensive farming operations. The economy of mass production is out of question. The exceptionally small areas available for cultivation, irrigation, harvesting, gathering, storing et al makes it an expensive affair, time consuming, unnecessarily tedious and economically less remunerative exercise. The absence of chunk division is the root cause of uneconomically fragmentation of paternal land distribution system a defective legacy, detrimental to progressive thinking and financial efficiency, in the practical world of technologically empowered agricultural efforts. The advantages of large farm holdings are lost ab initio for the large number of farmer families.

Figure 1: Small Area Field

Figure 2: Large Area Field

Figure 3: Farmers at work

2. Irrigation Problem: This is a comparative world and the comparative study of irrigation graph and statistics reveals much information. India is second only to China as per world irrigation statistics. Yet only one third of the total cropped agricultural area is under irrigation in India. But Hazaribag District being a mountainous region, with varying heights of contours does not have assured irrigation sources. And we all know that assured irrigation facilities are the most important agricultural input. Rainfall in Hazaribag is erratic, unreliable and uncertain- affecting agriculture in a big way. In the absence of assured irrigation in Hazaribag District sustained progress in agriculture cannot be achieved and comparing agricultural progress with Punjab, Haryana and or Western part of Uttar Pradesh where 50% cropped area is irrigated, Hazaribag stands exposed as inefficient and poor. Assured irrigation is a must. Water is the life source for vegetation and crops entirely depend upon it. The geographical topography with difficult terrain makes the job of providing assured irrigation in and over 4,302 sq. miles of Hazaribag District an extremely difficult proposition especially economically speaking even for the governments with best of intentions. Here assured irrigation schemes, at best can serve to a very small tract of lands in a go because of mountainous terrain. The solution to this challenging factor of assured irrigation in study area lies in the quotation quoting Einstein- To raise new questions, new possibilities, to regard old problems, from a new angle, requires creative imagination and marks real advance in science.

3. Lack of Mechanization: The universe likes speed. Today machines of all types and sizes and efficiency have taken the agricultural operations in their stride. Those sections of society, farmers for any reason, say- fragmentation of land or lack of assured irrigation, paucity of capital and or being technically and technologically backward has to suffer economically, physically, health wise and educationally eventually. Thus lack of mechanizations in agricultural operations leads to the vicious circle of poverty and inefficiency of the farmers of the study area in question.

4. Seed Problem: The seed problem for the marginal farmer of this study area is on two counts. The first is paucity of capital to invest and secondly lack of assured irrigation to irrigate their fields with regularity with sufficient quantity of water requirement. Neither the National Seeds Corporation (N.S.C) established in1963 nor the State Farmers Corporation of India (S.F.C.I.) in 1969 or the High yielding variety programme (H.Y.V.P.) launched in 1966-67 as a major thrust plan have anyhow been utilized here for reasons so above mentioned. For lack of irrigation, fragmentation of

land, lack of mechanization these improved "Seed" input remain un-utilized or under-utilized thereby contributing little to the progress of agriculture in these areas till date.

5. Inadequate Transport: Though"Pradhan Mantri Sarak Yojna" is in full swing yet many roads and lanes in the tens and hundreds of villages within the subject area stand grossly neglected and poorly connected. The repair and upkeep of road is absent for years at a stretch and so traffic and transport of goods become a major problem for the farmers in Kharif season. Absence of all season roads, as macadamized roads only leads to enhance the woes of the farmers in general. Even the timely supplies of bulk fertilizers in season are adversely affected. Marketing of produce is adversely affected and distress sale promoted.

6. Inadequate Storage facilities: Grossly Inadequate storage facilities in rural areas have direct impact on the farmers economic conditions. At times storage facilities are completely absent in the study areas. Thus the agriculturists are circumstantially forced to sell their produce immediately to mitigate wastage from spoiling. These distress sales result in economic losses to farmers. The Food Corporation of India (F.C.I.), the Central Warehousing Corporation (C.W.C.) And State Warehousing Corporation (S.W.C.) are limited in number, stationed at district head quarters at best. Their branches are few and far in between. So the farmers cannot avail the facility of storage, profitably.

7. Agriculture Marketing: Agriculture marketing of their produce for farmers in the study area is predestined mostly distress sale propositions. The farmers, suffering under loan, local money lenders loan at exorbitant high interest rates have no choice but to opt for quick sales of their agricultural produce. This socio-economic pressure results in the sale of agricultural produce to the money lender himself, obviously at a reduced rate, due to prevailing low market rates of crops during harvest season. To break this vicious circle of distress sale by farmers, has been a dream, an illusive one.

8. Scarcity of capital: Nationalized banks and the governmental incentives have definitely brought the loan options at farmers door steps but with riders. Slowly this paucity of loan, due to banks active interaction and participation under governmental obligation is improving but as the farmers of the subject area are subjected to multi problems simultaneously, the marketing of agriculture produce remains a major problem for them with a big margin of disadvantage. As money-lenders, traders and commission agents are the main loan providers in agricultural season to rural farmers, they all have their vested interests. The money-lenders charge exceptionally high interest rates. The traders prefix the sale of produce rates. The agents charge commissions over and above market rates to make available the funds needed for investment in agriculture as inputs. The distress sale at great loss is the result, a foregone conclusion, as yet.

9. Educational Problem: Farmers constitute 65% of the population in India and form the back bone of Indian economy. Food is the basic consumption factor for humanity and Indian economy depends for it on farmers. Hazaribag District, the case study area of this project, is affected by poor conditions of input, aggravating poverty. Poverty of the farmers have telling effects on the education of their children. Learning, we all known involves a pattern. Proper schooling, follow up action by parents, new incentives, economic stability of the family, care free mind all add up to conducive atmosphere of good education. But sadly, this is not with the children of the farmers facing poverty and hardships. Family problems, lack of good schools, lack of health and conducive environment at home, has depressing effects on budding minds and poor conditions result in poor education, generally speaking, sparing the exceptions- if any. Gender wise literacy rate can be seen from the table below,

Table 2: Number of literates, percentage of literates by sex in sub-districts, 2018 (Provisional)

S.N.	Name of Sub-district	Number of literates			Literacy rate			Gape in male-female literacy rate
		Persons	Males	Females	Persons	Males	Females	
1	2	3	4	5	6	7	8	9
1	Chauparan	88321	49897	38457	71.4	81.2	61.95	19.25
2	Barhi	99109	58819	40283	69.1	80.9	56.96	23.94
3	Padma	42605	24789	17900	69.01	80.85	57.6	23.25
4	Ichak	66202	37534	28597	73.8	83.5	63.9	19.6
5	TatiJhariya	39207	22997	16124	62.02	72.3	52.2	20.1
6	Daru	39111	22322	16722	73.03	82.9	62.8	20.1
7	Barkatha	61083	38252	22763	63.06	78.98	47	31.98
8	Chalkusa	36211	22052	14099	68.9	83.7	53.8	29.9
9	Bishungarh	88805	54377	33931	64.03	78.03	49.3	28.73
10	Hazaribag	2427051	130539	112288	83.4	91.8	79.3	12.5
11	Katkamsandi	46941	26798	20070	69.3	79.01	59.35	19.66
12	Katamdag	58282	32707	25462	71.9	80.6	62.7	17.9
13	Keredari	50743	29571	21034	66.03	76.88	54.8	22.08
14	Barkagaon	99272	56641	42610	67.4	76.86	57.9	18.96
15	Churchu	25908	15240	10639	69.9	81.75	57.75	24
16	Dadi	51168	29110	22013	72.01	81.75	62.1	19.65

10. Farmers Health problems and remedies: Extensive use of chemicals in fertilizers, insecticides, pesticides and fungicides has a direct bearing upon the unprotected skin and health of the farmers. Long hours of exposer to the sun

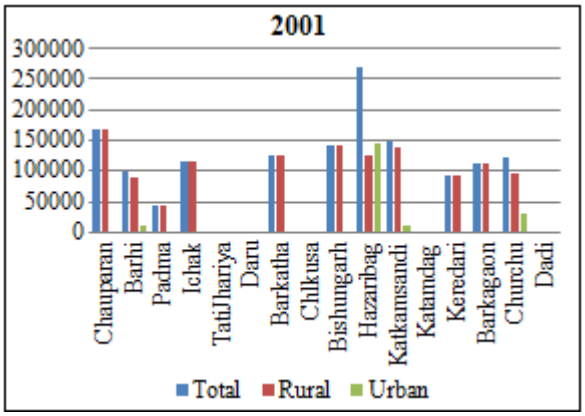
rays, perspiration, soil, affect their skin too. When neglected, as often they are, these skin diseases develop into cancerous diseases. Many a times, inhaling such toxic chemicals cause respiratory diseases. And respiratory diseases further deteriorate their health and so their efficiency to work and to support their agricultural activities. Air is polluted. And so is the water. Arsenic water in rural areas is a common reported feature. The precautionary, preventive measure even if known are only reduced to verbal or paper knowledge, not applied practically. National Institute of Occupational Safety and Health (N.I.O.S.H.) have time and again advised for the extensive use of proper respiratory gears duly approved by the concerned authorities. But the farmers are careless, and/or wilfully avoid meeting the cost as preventive measure. As a result, pay in multiples due to sickness, poor health and untimely deaths. That even if aprons and boots are purchased to keep them safe and protected they fail to secure the purpose. As a routine, daily cleansing of the boots and aprons with soaps and detergents, disinfectants is required. But due to carelessness, fatigue or willful disregard for the follow up precautions, they are left unattended to, for weeks. The result is adverse effect, contagion of microbes do the damages.

11. Migration from rural to urban

S.N.	Tahsil	Population								
		2001			2011			2018(Provisional)		
1	2	3	4	5	6	7	8	9	10	11
	Block	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	Chauparan	167246	167246	0	161814	156453	5361	152299	143937	8362
2	Barhi	98779	88846	9933	131669	111544	20125	175712	133853	41860
3	Padma	43411	43411	0	56014	56014	0	72616	72616	0
4	Ichak	115777	115777	0	112815	112815	0	109149	109149	0
5	TatiJhariya	0	0	0	48549	48549	0	72589	72589	0
6	Daru	0	0	0	52305	52305	0	62703	62703	0
7	Barkatha	125868	125868	0	122269	122269	0	117989	117989	0
8	Chlkusa	0	0	0	52068	52068	0	63069	63069	0
9	Bishungarh	142862	142862	0	156477	146351	10126	167331	152205	15126
10	Hazaribag	270664	126644	144020	290098	118276	171822	320043	105266	214776
11	Katkamsandi	147753	137995	9758	108361	93513	14848	84985	60783	24202
12	Katamdag	0	0	0	82385	69150	13235	95706	17453	78253
13	Keredari	91241	91241	0	91357	91357	0	92271	92271	0
14	Barkagaon	110958	110958	0	136839	131891	4948	170596	163364	7232
15	Churchu	123434	94921	28513	53705	46863	6842	43705	33862	9843
16	Dadi	0	0	0	77770	49770	28000	82770	48770	34000

Table 4

Block	Total	Rural	Urban
Chauparan	167246	167246	0
Barhi	98779	88846	9933
Padma	43411	43411	0
Ichak	115777	115777	0
TatiJhariya	0	0	0
Daru	0	0	0
Barkatha	125868	125868	0
Chlkusa	0	0	0
Bishungarh	142862	142862	0
Hazaribag	270664	126644	144020
Katkamsandi	147753	137995	9758
Katamdag	0	0	0
Keredari	91241	91241	0
Barkagaon	110958	110958	0
Churchu	123434	94921	28513
Dadi	0	0	0

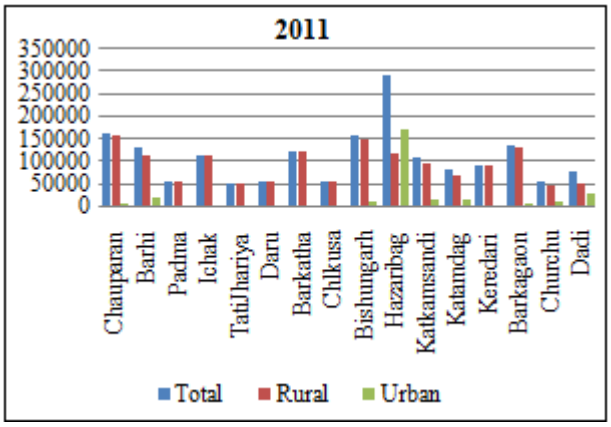


Graph 1

Table 5

Block	Total	Rural	Urban
Chauparan	161814	156453	5361
Barhi	131669	111544	20125
Padma	56014	56014	0
Ichak	112815	112815	0
TatiJhariya	48549	48549	0
Daru	52305	52305	0
Barkatha	122269	122269	0
Chlkusa	52068	52068	0
Bishungarh	156477	146351	10126
Hazaribag	290098	118276	171822
Katkamsandi	108361	93513	14848
Katamdag	82385	69150	13235

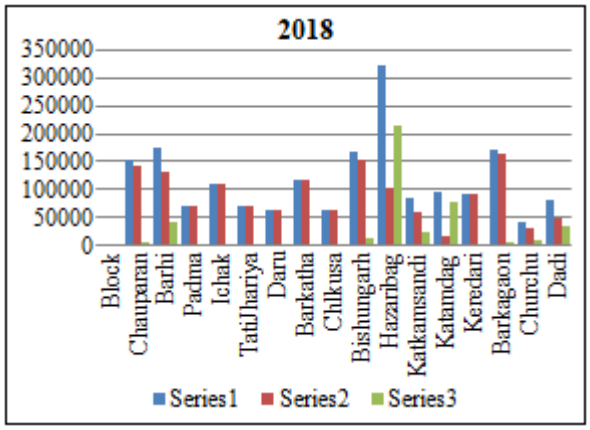
Keredari	91357	91357	0
Barkagaon	136839	131891	4948
Churchu	53705	46863	6842
Dadi	77770	49770	28000



Graph 2

Table 6

Block	Total	Rural	Urban
Chauparan	152299	143937	8362
Barhi	175712	133853	41860
Padma	72616	72616	0
Ichak	109149	109149	0
TatiJhariya	72589	72589	0
Daru	62703	62703	0
Barkatha	117989	117989	0
Chlkusa	63069	63069	0
Bishungarh	167331	152205	15126
Hazaribag	320043	105266	214776
Katkamsandi	84985	60783	24202
Katamdag	95706	17453	78253
Keredari	92271	92271	0
Barkagaon	170596	163364	7232
Churchu	43705	33862	9843
Dadi	82770	48770	34000



Graph 3

From the population data and its respective graphical representation it appears that the rural populations have decreasing trend while the urban population is increasing which results in increase of slum and unauthorized occupied areas.

2. Future Work

As our economy is based by and large on the condition of agriculture sector, it should also be declared as Industry and accordingly micro and macro level study for sustainable growth of this industry are to be made through mathematical linear/ non-linear programming models.

3. Conclusion

Do all those that should be done. All agricultural research in India makes an interesting reading, yes! But the application of the remedies suggested is the key that opens the locked locks. Enumerating the problems once again to recapitulate is the norm with application of the remedies suggested in the hind mind, a reminder is presented here under. The Hazaribag District under subject study is facing numerous problems awaiting being addressed to since decades, post independence. They are Illiteracy, Lack of proper irrigation facilities, Fragmentation of Land Holdings making it uneconomic agricultural propositions, Inadequate Storage facilities, Inadequate Transport Facilities, Defective Agricultural Marketing, Paucity of Capital to invest in agriculture, seeds amongst others posing to the main problems in the development of agricultural growth in the Hazaribag District. Assured irrigation when absent in a small tract of fragmented land, all modern concept of Mechanizations, High yielding seeds, storage, labour efficiency et al ab initio fail both conceptually and practically. Governments should come with Einstein type new thinking to finally address it.

4. Acknowledgement

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