

CHAPTER - 2

DEMOGRAPHY & AGRARIAN CHARACTERISTICS
OF WEST DINAJPUR

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2.1.1 GENERAL CHARACTERISTICS OF BACKWARD REGION

Backward areas are deficient of industrial infrastructure and establishment. In backward areas the individuals are trapped in what has been termed "absolute poverty". They are caught up in a malaise of malnutrition, illiteracy, disease, underemployment, unemployment and low life-expectancy. They, in fact, are condemned to exist beneath any rational definition of 'fair standard' of living.

Backwardness may be of many types. What we are talking about here is economic backwardness — both industrial and agricultural. Again backwardness is a relative term. The magnitude of backwardness is measured within a few sets of attributes.

The "absolute poor" in the world number about 1200 million individuals. They constitute as much as 40% of the entire population in most developing societies. Unless specific efforts are made to help them release their own productive potentials, no degree of traditional welfare, designs or redistribution of inadequate national wealth can fundamentally alter the circumstances that impoverished them. Unless they are engaged in a suitable industry, they can neither contribute to their country's economic progress nor can they share equitably in its benefits. They stand largely outside, isolated and untouched by the entire developing process. In the light of every reasonable human value they need not and should not be continued to live in such wretched condition. Absolute poverty can be substantially reduced through industrialisation. Given the requisite resources and the sustained efforts it can even finally be eliminated. It follows from this that the main thrust of Government policies and planning in the years to come should harmonize with the

growth and development and improvement of the quality of life for those who live in backward rural sector.

2.1.2 IDENTIFICATION OF BACKWARD DISTRICTS IN INDUSTRIALLY BACKWARD STATES AND UNION TERRITORIES.

The first attempt to determine backwardness of an area was made by the Committee on Dispersal of Industries which was set up following the decision taken at the meeting of Small Scale Industries Board held in April 1960.¹ The Committee recommended two criteria viz. (i) Poverty of the people as indicated by low per capita income and per capita consumption (ii) High density of population relative to development of productive resources and employment opportunities, for determining the backwardness. Then the whole question of backward areas was reviewed by the National Development Council in 1968. Lastly, under the Chairmanship of Shri B. D. Pande, the then Secretary, Planning Commission, Pande's Working Group was set up for identification of backward districts and states. This Working Group laid down the criteria as follows :-

- * Districts outside 50 miles from large cities or large industrial project.
- * Poverty of the people indicated by low per capita income starting from the lowest to 25% below the state average.
- * High density of population in relation to the utilization of productive resources and employment opportunities as indicated by : (a) Low percentage of population engaged in secondary and tertiary sector (25% below the state average) may be considered as backward. (b) Low percen-

tage of factory employment (25% below state average) (c) Non or under utilisation of economic and natural resources.

- * Adequate availability of electric power or likelihood of its availability within 1-2 years.
- * Availability of transport and communication facilities or likelihood of their availability within 1-2 years.
- * Adequate availability of water of likelihood of availability during 1-2 years.

2.2.1 INTRODUCTION TO WEST DINAJPUR - A BACKWARD DISTRICT

The District of West Dinajpur is a product of partition of Bengal in August, 1947. But since then the district has undergone several significant changes in its geographical appearance. It has expanded in area and reorganised in administrative structure. After the partition, the district was formed with that portion of the old Dinajpur district of undivided Bengal which fell to the western side of the International Boundary.²

District West Dinajpur has taken its present shape in 1956 when a portion of Bihar was transferred to Bengal (under Transfer of Territories Act 1956)³ and included in this district. The district is divided into three Subdivision viz. Balurghat (Sadar), Raiganj and Islampur, which are further divided into sixteen Police Stations (C.D. Block); 157 Gram Panchayets and 3133 Mouzas (Annexure - 4)⁴

The district lies between the parallels $25^{\circ}10'55''$ and $26^{\circ}35'15''$ north latitude and $87^{\circ}48'37''$ and $89^{\circ}0'20''$ east longitude. The length of the district is 153 miles i.e. from Chopra (north) to Hili (south east) and the highest and lowest breadth are 50 and 8 miles respectively. According to Census report the total area of the district is 2061.9 (5206 Sq. Km.) Square mile, which is 6.03 percent of the area of the State of West Bengal.

The district is bounded on the north east by the district of Darjeeling and the Rongpur district of Bangladesh, on the south and south-east by the Rajsahi and Bogra districts of Bangladesh, on the south-west by the district of Malda and on the west by the Purnea district of Bihar (India).

2.2.2 POPULATION AND ITS GROWTH

The distribution of population in the district over four successive census has been given in Table No. T 2.2.1, P.S. and Rural-Urban wise.

The district had a population 24, 02, 763 in 1981 and ranked ninth among all the districts in terms of population. The decadal growth for 71-81 was 29.19%. The statement (T 2.2.2) reveals that West Dinajpur has a steady and gentle growth of population. The decade 1941-51 witnessed a big increase in the population of the district inspite of the great famine of 1941. This was due to the large migration into the district during partition. The stream of immigrants from across the borders in the early sixties and again during the Bangladesh turmoil on the eve of 1971, has swelled the population of the district enormously during the decades.

TABLE NO. T 2.2.1
DISTRIBUTION OF POPULATION (1951 TO 1981) IN WEST DINAJPUR DISTRICT - P.S. WISE

Name of P.S.	1 9 5 1			1 9 6 1			1 9 7 1			1 9 8 1		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Hili	38787	30441	8346	37145	31213	6032	43565	37469	6096	50115	44054	6061
Balurghat	101471	83350	18121	120848	93849	26999	189138	122050	67088	257554	145023	112531
Kumarganj	55905	55905	-	68998	68998	-	86217	86217	-	104635	104635	-
Gangarampur	61307	61307	-	86506	76835	9671	115867	101058	14807	153347	130580	22767
Tapar	70644	70644	-	89851	89851	-	121564	121564	-	147570	147570	-
Raiganj	101870	86397	15473	150072	117782	32290	208274	165083	43191	270357	204669	65688
Kaliyaganj	67366	67366	-	93911	79433	14478	122407	101238	21169	153608	126852	26756
Hemtabad	34680	34680	-	46769	46769	-	62000	62000	-	76896	76896	-
Itahar	80953	80953	-	104709	104709	-	142855	142855	-	182184	182184	-
Kushmandi	56314	56314	-	73448	73448	-	95165	95165	-	120077	120077	-
Islampur ^{1*}	57317	57317	-	87942	78443	9499	133949	118234	15715	173794	147442	26352
Karandighi	47165	47165	-	75191	75191	-	122232	116610	5622	169304	161902	7402
Chopra	52858	52858	-	68868	68868	-	101570	101570	-	126434	126434	-
Goalpokhar	98969	98969	-	63118	63118	-	116653	116653	-	171103	171103	-
Chakolia ^{2*}	-	-	-	-	-	-	97210	97210	-	114367	114367	-
*Bangshihari	51276	51276	-	72414	72414	-	101221	101221	-	131418	131418	-
West Dinajpur	976882	934942	41940	1323997	1224828	98696	1859887	1686197	173690	2402763	2135206	267557

1* Attached to West Dinajpur in 1956, cutting from Benar.

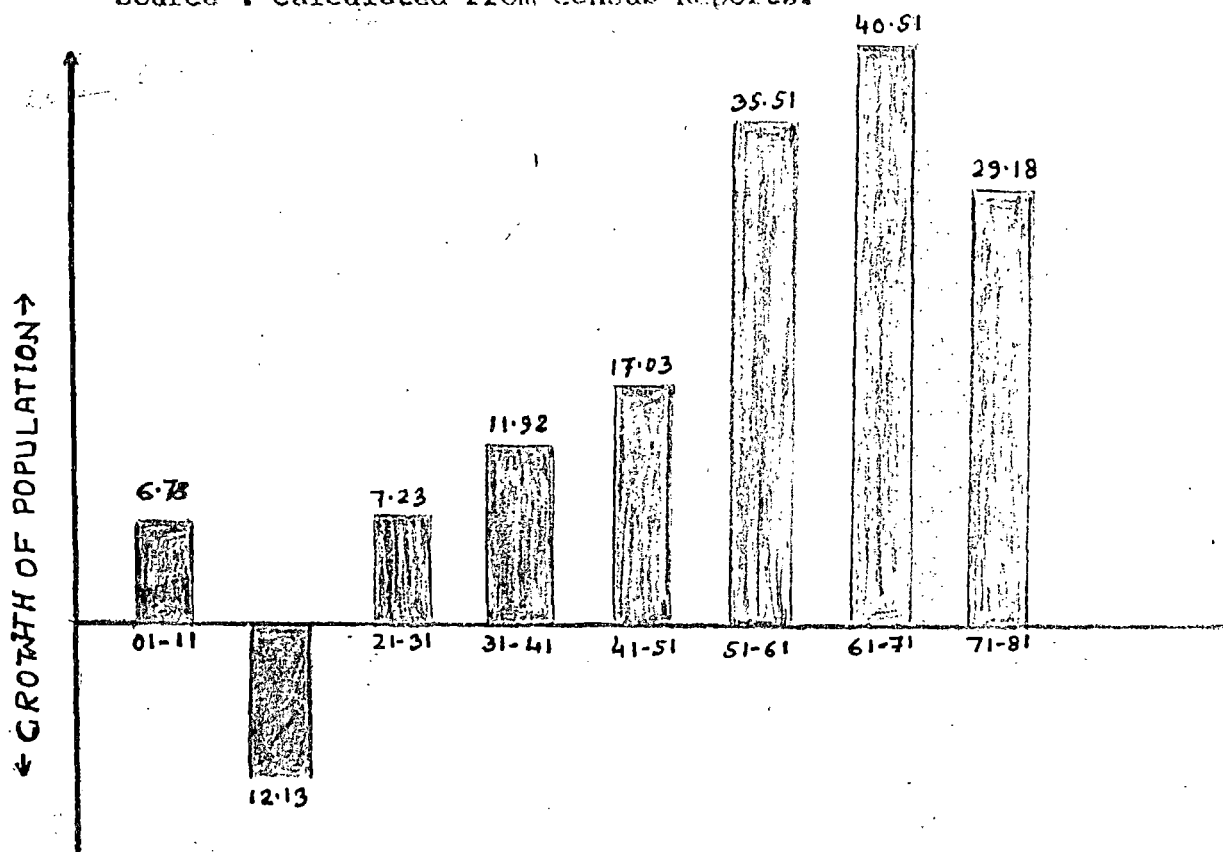
2* Created in 1964, breaking Goalpokhar

Source - Census Reports of 1951, 1961, 1971 and 1981

TABLE NO. T2.2.2
GROWTH OF POPULATION DURING THE CENTURY IN WEST DINAJPUR

Year	Population	Decade Variation	Percentage of Variation	Major Reasons
1901	741284	-		
1911	791512	+50228	+6.78	
1921	695536	-95976	-12.13	Great epidemics
1931	745821	+50285	+7.23	
1941	834724	+88905	+11.92	Migration Famine
1951	976882	+142156	+17.03	Migration
1961	1323797	+346915	+35.51	Migration
1971	1859887	+536090	40.51	Migration
1981	2402763	+542876	29.18	

Source : Calculated from Census Reports.



2.2.3 SEX RATIO

Out of the total population of 1981 in West Dinajpur 12,40,353 were males and 11,62,410 were females. The sex ratio therefore comes to 937, which is appreciably higher than the ratio of 911 in the State. The sex ratio has moved in the district in an irregular manner over the decades since 1901. (*Sex ratio = Females per 1000 males*).

A substantial reduction in child, and maternal mortality since the late forties is one of the factors making for the upward movement of the sex ratio as observed in the State. In spite of the immigrants from East Pakistan and neighbouring State, the Sex ratio has obviously been favourable in the State as a whole and also in districts like West Dinajpur, which received a large number of migrant families (Table No. 2.2.3).

2.2.4 AGE COMPOSITION

Along with a gently rising Sex ratio, the age composition of the population is also undergoing a slow change in the district. West Dinajpur has a larger proportion of children and infants in the total population than the average of the State. The proportion of the old people (age 60+) is on the other hand, slightly higher in the State than in the district. The high proportion of the young is a natural corollary of the continuous and steep rise in the population, which the district has witnessed during the last 3 decades. The population of the working age 15 to 59, consequently has to bear a heavier burden of dependency in the district as compared to the State, which indicates a greater constraint on the economic development of the region (Table No. T 2.2.4).

2.2.5 DENSITY

West Dinajpur is one of the relatively thinly popu-

TABLE NO. T2.2.3
SEX RATIO (Female per 1000 males)

	1951	1961	1971	1981
West Dinajpur	884	906	913	937
West Bengal	865	878	898	911

Source : Census of India

TABLE NO. T2.2.4
DISTRIBUTION OF POPULATION BY AGE GROUP

	Age 0-14	Age 15-29	Age 30-39	Age 40-59	Age 50-59	Age 60+
West Bengal	42.89	24.39	12.59	9.05	5.57	5.30
West Dinajpur	46.35	22.54	12.38	8.62	3.38	4.72

Percentage in terms of total Population

Source : Census Report.

TABLE NO. T2.2.5
DENSITY PER SQ. KM. : WEST BENGAL & WEST DINAJPUR

Year	West Bengal	West Dinajpur
1951	296	187
1961	393	254
1971	504	357
1981	614	449

Source : Census of India

lated areas of the State. The density of population of this district was 449 per square Km. in 1981 as against 614 per square Km. in the whole of West Bengal. Being a function of population, density is moving upward quite rapidly in the district, with the steep rise in population from decade to decade (Table No. T 2.2.5).

2.2.6 URBANISATION

West Dinajpur is overwhelmingly a rural district. In 1981 the district had a rural population of 21, 35, 206 out of total population 24, 02, 763 i.e. 89 percent. If urbanisation is an indicator of development, then, with a tenth of its population in the urban areas, West Dinajpur may be regarded as a typical example of an underdeveloped area. Not only the degree of urbanisation is low in the district, the progress of urbanisation was also very slow (Table No. T 2.2.6).

2.2.7 LITERACY

West Dinajpur is one of the most backward of all districts from the point of view of literacy and education. The overall rate of literacy was just 50% of that of the State in 1951 (24.42% of the State West Bengal and 12.77% of West Dinajpur). However during 30 years it has improved to 26.92 percent as against 40.88 percent of the State. The low rate of literacy and non-availability of educational facility is one of the major constraints to economic development. The qualitative aspect of education is not satisfactory either. The increase in the rate of literacy is not only due to establishment of more institutions, but due to success of Adult education Programme in the remote village areas. There is dearth of vocational training centres. The district possesses only two vocational schools, namely, Industrial Training Centre and Junior

TABLE NO. T2.2.6
 URBAN POPULATION : WEST BENGAL & WEST DINAJPUR
 (Percentage of Total Population)

Year	West Bengal	West Dinajpur
1951	23.88	4.29
1961	24.45	7.45
1971	24.75	9.33
1981	26.49	11.13

Source : Census of India.

TABLE NO. T2.2.7

LITERACY AMONG POPULATION : WEST BENGAL & WEST DINAJPUR (Percentage in terms of Total Population)

Year	West Bengal		West Dinajpur			Total No. of Institutions		Vocational Institutions		Training Centre		
	Total	Male	Female	Total	Male	Female	Pr.	MP + HS	No.	Std	No.	St per session
1951	24.42	34.14	12.74	12.82	19.92	3.58	504	54	-	-	-	-
1961	29.28	40.08	16.98	17.06	25.96	7.24	1136	125	6	78	2	90
1971	33.20	42.81	22.42	22.12	31.09	12.37	1998	182	5	NA	2	NA
1981	40.88	50.49	30.33	26.92	36.13	17.08	2509	255	5	NA	2	NA

- Source - 1. Census Report of 1951, 1961, 1971 & 1981. 2. Education Directorate, Govt. of West Bengal
1. Training Centre includes : Basic Training and Junior Basic.
 4. Vocational includes : Industrial Training Centre : Junior I.T.I. : Dhokra Training Centre and others, Handloom & Sericulture Training Centre.
 5. Not included 784 Adult Education Centres and : Deaf and Dumb School.

Industrial Training Centre. Non-availability of vocational training is one of the major reasons for slow growth of entrepreneurship among the people. This district needs effort to develop vocational quality and entrepreneurship among people (Table No. T 2.2.7).

2.2.8 RELIGION

Hindu and Muslim are the two major religions in the district. The Hindus are the majority community and account for 63.07 percent of the population. The Muslims constitute 35.89 percent. The Christians are small in number comprising about 0.95% of the population.

2.3.1 BACKWARD CLASS — SCHEDULED CASTE AND SCHEDULED TRIBES

No account of the population will be complete without a discussion on scheduled castes and scheduled tribes of the area. The scheduled castes and scheduled tribes being almost synonymous with backwardness. The proportion of these communities to total population are often an indicator of the backwardness of the area. In our society, caste pattern is the other name of occupational pattern. The people, who are engaged in manual work and less value added work (though value is a relative quantity) fall within the category of "lower caste". So a study of cottage industry remains vague without the study of scheduled caste and scheduled tribes.

In Dinajpur district scheduled caste and scheduled tribes taken together constitute 35% of total population i.e. more than one-third. It is a compact area of concentration of scheduled caste and tribe. The distribution of this class given in Table No. T 2.3.1 (Blockwise) shows

TABLE NO. T2.3.1
 DISTRIBUTION OF Schedule Caste and Scheduled Tribes
 P.S. Wise.

Police Station	SC % of Total population	ST % of Total population
West Dinajpur	23.10	11.90
Hili	19.75	20.10
Balurghat	17.89	18.91
Kumarganj	24.41	21.11
Gangarampur	21.62	17.40
Tapan	28.06	25.75
Raiganj	32.29	6.79
Yaliyaganj	51.50	4.45
Hemtabad	38.50	6.59
Itahar	26.64	9.99
Kushmandi	45.34	9.38
Banshihari	22.14	22.60
Islampur	10.76	2.77
Karandighi	6.57	5.73
Chopra	9.59	11.34
Goalpokhur	4.74	5.85
Chakolia	12.62	7.38

Source - 1981 Census Report.

that the two-third of the blocks viz. Hili, Balurghat, Kumarganj, Gangarampur, Tapan, Kushmandi, Raiganj, Hemtabad, Itahar, Banshihari and Kaliyaganj have scheduled castes and scheduled tribes more than 50% of the total population at an average.

Of the total population belonging to the scheduled castes Rajbanshis and Poliyas account for 33.46 and 24.13 percent respectively. The other castes are Bagdi (8.12), Namasudra (3.73), Bhuimali (2.39), Doai (3.63), Gonrhi (2.96) Polia-Kaibarta (1.64), Hari (2.77), Chamar (2.12), Nuniya (1.07), Dosadh (1.19) and Dhoba (0.20). Santhals constitute 60% of total tribes population. The others are Karmali, Korwa, Lohar, Parhoiya and Savar.⁵

2.4.1 IMPACT OF PARTITION

West Dinajpur is one of the districts that were affected seriously by the partition. It was affected in two ways. First, the most fertile portion of the total agricultural land area of this district has gone to East Pakistan (presently Bangladesh) and secondly, a huge number of refugees came to this district leaving East Pakistan. It is one of the major recipients of migrated people in West Bengal from East Pakistan. The migration started from partition and is continuing still now. This immigration was further boosted by the turmoils in East Pakistan on the eve of 1971. According to 1951 Census 1, 15, 510 persons reported migrated from East Pakistan which is 16 percent of the then total population. This immigration amounted to 1, 72, 237 in 1961, 1, 97, 266 in 1971 and 2, 56, 023 in 1981, which are 13 percent, 10% and 11% of the total population respectively.⁶ The influx of the

huge amount of displaced persons caused serious dislocation to the economy of West Dinajpur.

The study of last residence of immigrated people is very much important from the point of view of economic study since these people mostly adopt the same occupation as they had before. Thus, immigration does not affect all forms of occupation symmetrically. For example, if a person was in a village and migrated to another place, he might either join as agricultural labour or may start any cottage industry, thus, affecting agriculture and cottage industry. Though no specific study has been made in this respect, by studying a moderate number of samples we came to know that most of the immigrated people of West Dinajpur had come from the villages of Pabna, Jessore, Khulna, Dinajpur, Rongpur and Rajshahi districts of East Pakistan. These districts were once famous for cottage industry, specifically for handloom products. Thus it follows that partition on the one hand overcrowded the district, and on the other, caused in structural imbalance.

2.5.1 LIVELIHOOD : LABOUR PARTICIPATION RATIO

Labour-participation-ratio is the ratio of workers to total population. This ratio is very much significant for study of employment or productive capacity of an area. This ratio indicates, how many people are engaged in production and how many people are sharing their (workers) yield. The higher participation-ratio indicates the economic well being of an area and vice-versa. The trend of participation is also an indicator of economic developmental effort. The participation ratio acts in two ways :-

- * it acts as an indicator of poverty or backwardness and
- * it acts as an indicator of economic growth.

TABLE NO. T2.5.1
 WORKERS PARTICIPATION RATION ; PERCENTAGE OF WORKERS
 & NON-WORKERS TO TOTAL POPULATION

Year	India		West Bengal		West Dinajpur	
	Workers	Non-workers	Workers	Non-Workers	Workers	Non-Workers
1951	40.31	59.69	27.68	72.32	26.26	73.74
1961	42.97	57.03	33.10	66.90	32.71	67.29
1971	34.17	65.83	28.09	71.91	27.97	72.03
1981	37.55	62.45	30.98	69.02	32.05	67.95

Source: Census Reports

The participation ratios of West Dinajpur were much lower in comparison to that of the State (West Bengal) and the Country (India) as a whole (Table No. T 255.1). It shows a higher degree of poverty (or backwardness) against the average condition in the State and Country as a whole. This ratio was 32.71% in 1961 against 33.10% of the State and 42.97% in the country. This ratio came down to 32.05% in 1981. But in comparison to State, it is a bit higher (State 30.98). This reflects the general economic condition of the State and economic stagnation in the district.

Non-workers are those who are dependent upon workers. This includes students, infants, retired persons, employment seeking persons etc. The portion of non-workers of the age group of 15 to 59 indicates the presence of unemployment problem. In West Dinajpur it is 35 to 40 percent of the total non-workers.⁷

2.5.2 LIVELIHOOD : OCCUPATIONAL STRUCTURE

Occupational pattern shows distribution of workers in different occupations. The tracing of workers, industry-wise, helps in understanding the nature of the economy. The study of occupational pattern is also essential for future planning of development. It assists in identification of neglected sectors, areas having employment potential and so on.

The economy of West Dinajpur is predominantly agricultural. The percentage of workers engaged in agriculture through the decades were 63.95, 84.74, 85.35 and 81.37% of total workers in 1951, 1961, 1971 and 1981 respectively (T 2.5.2)

TABLE NO. T2.5.2

OCCUPATIONAL PATTERN : Sectoral Distribution of Workers.

	I	II	III	IV	V		VI	VII	VIII	IX
ar	Culti- vators	Agricultural labours	Live Stock & Forestry	Mining & Quarry	Manufacturing House- hold	Other than House- hold	Construc- tion	Trade & Commerce	Transport & Communica- tion	Other Services
51	28.06	35.89	Neg	Neg	4.44	NA	NA	4.73	Neg	10.23
51	63.63	21.11	.50	Neg	2.25	1.55	0.47	4.13	0.66	5.65
71	57.04	28.31	.60	Neg	1.34	1.71	0.25	3.71	1.14	5.93
51	47.17	34.25	1.05	Neg	2.08	2.27	0.031	6.19	1.09	5.85

o : Calculated from Census report. o : Percentage of Total Workers

* The District has no Mining & Quarry.

For the State as a whole the proportion of cultivators and agricultural labourers were much lower, being 30.64 and 24.82 percent in 1981 respectively. Excessive dependence on agriculture is an indicator of :

- * backwardness of the district and;
- * low development in the industrial sector.

According to Table No. T 2.5.2 Primary Sector⁸ employs as much as 82.42% of total worker against 61.58 in the State in 1981. The Secondary Sector⁹ accounts for a small proportion of 4.35% and tertiary sector¹⁰ 7.31% of the workers in West Dinajpur in 1981.

2.5.3 CHANGE IN SECTORAL DISTRIBUTION OF WORKERS

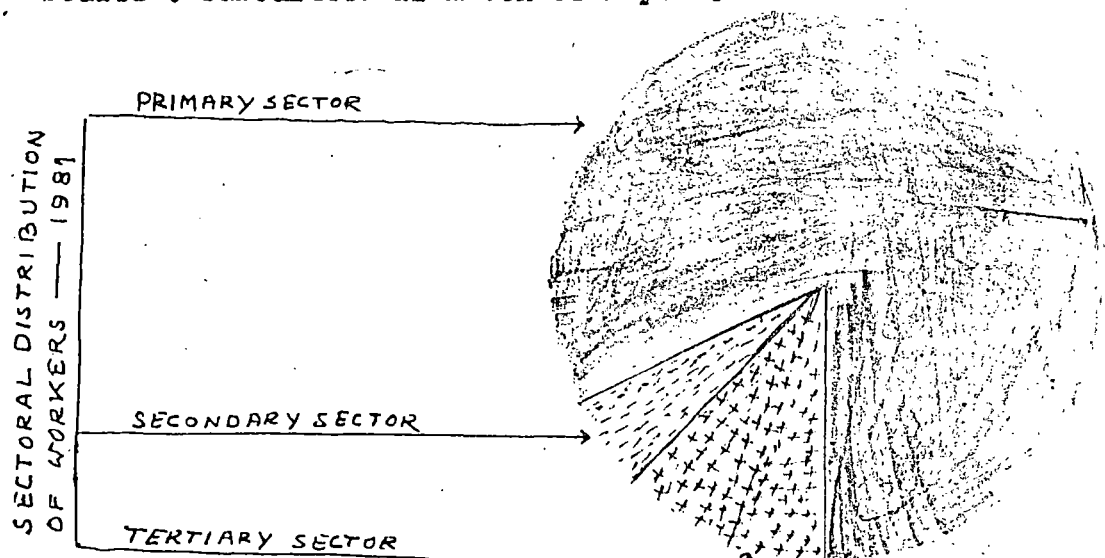
7, 17, 225 persons were recorded in the district as workers in 1981 as against 4, 33, 144 in 1961. There was thus a net addition of 2, 84, 081 to the total number of workers although the participation rate as already observed, came down from 32.71 to 32.05 during this period. The growth rate of the working population fell far short of the growth of total population. But what is more important is the shift in the distribution of workers in between the different sectors of the economy.

(1951 and 1971 figures were not considered for comparison. Since 1951 is just after partition and 1971 is just after Bangladesh turmoil. So for comparison we have considered the period 1961 and 1981.)

TABLE NO. T2.5.3
Change in occupation pattern in West Bengal.

Categories		% in 1961	% in 1981
Primary Sector	I	63.63	47.17
	II	21.11	34.25
	III	.50	1.05
	IV	Neg	Neg
Secondary Sector	V(a)	2.25	2.08
	V(b)	1.55	2.27
	VI	0.47	0.31
Tertiary Sector	VII	4.18	6.19
	VIII	0.66	1.09
	IX	5.65	5.86

Source : Calculated from Census Report.



According to Table No. T 2.5.3 agriculture has been the main occupation of the people of the district for decades. It has occupied the same dominant position in 1981 as it was in 1961, though this Sector has witnessed marginal decrease in terms of percentage of total workers. The agriculture sector accounts for 81.42% in 1981 as against 84.74% in 1961. Further, the composition of the agriculture sector itself has also undergone a significant change. In 1961 the proportions of cultivators and agricultural labourers in the district were 63.63% and 21.11% respectively. The proportion of cultivators has come down quite sharply to 47.17% in 1981 while that of the agricultural labourers ~~again~~ climbed upward to 34.25%. In absolute terms the number of cultivators has increased from 2, 67, 636 to 3, 38, 383, only during the period; that is, by 70, 747 only. But the agricultural labourers added 1, 54, 307 to their numbers as they totalled 2, 45, 709 in 1981 as against 91, 402 in 1961. The sharp increase in agricultural labour in this district is to a great extent attributable to migration of people from East Pakistan, though increase in the number and proportion of agricultural labourers is universal throughout West Bengal and in the country as well. In 1961 the proportion of agricultural labourers in the state was 15.30%. It has reached 24.82% in 1981. The proportion of cultivators has correspondingly come down to 30.64% in 1981 as against 38.50% in 1961. Besides migration, it is also observed that the new entrants in the rural labour market have joined and swelled the rank of the agricultural labourers because of lack of employment opportunities in non agricultural sectors.

As the Primary Sector retained its position, the Secondary and tertiary sectors witnessed a marginal increase in their proportion in comparison to 1961. The proportion of

secondary and tertiary sector in 1981 were 4.35 and 7.59% as against 3.90 and 5.31% in 1961. The only industry which has suffered is household industry; the proportion of which came down to 2.03% in 1981¹¹ as against 2.35% in 1961. The decline of this industry deserves some analysis to overcome the situation in view of its importance in the economy of rural as well as backward areas.

2.6 NATURE OF AGRARIAN ECONOMY

2.6.1 TOPOGRAPHY

The district, West Dinajpur, is situated in the Gangetic plain between the Himalayas and the Ganges. The district has been formed mainly by the actions of the rivers 'TISTA-KARATOYA' and the 'MAHANANDA' and the offshoots of the 'TISTA-KARATOYA' which are the 'TANGON', the 'PENARBHAVA' and the 'ATRAI'. The Country slopes gently from north to south and the general trend of the rivers is in the same direction. The soil of West Dinajpur is alluvial in the western part and non-alluvial in the eastern half.

2.6.2 INTRODUCTION

The district, West Dinajpur is predominantly agricultural. In old days, Dinajpur was agriculturally very prosperous. It was primarily due to the favourable formation of the land that agriculture prospered. In recent years the district still remains one of the big rice procurement centres of the state though with the partition of Bengal in 1947, only the less fertile agricultural land came over to the Indian side.

2.6.3 LAND UTILIZATION

The total area of the district as it is constituted to-day, is 13, 18, 567 acres (5, 34, 019 hector). Out of this during 1981 the net area sown amounted to 11, 46,716 acres (4,64,419 hectars). This means that 87% of the total area of the district was used for agriculture. The total cultivable area and net sown area of the district during 1961 were 13,13,280 acres (5,31,878 hectars) and 11,32,800 acres (4,58,784 hectars) respectively. It indicates a land utilization of 86% for agricultural purpose. Thus, no significant change is noticed as regard to the horizontal utilization of land.

Land reclaimed during 1961 to 1981 is reported to be 13,916 acres, which is only 1.21% of total cultivated land of 1981. Thus, we may conclude that the district has already reached the saturation point of horizontal extension of land utilization. For agricultural development, the only way available is to improve vertical use of land i.e. intensive ~~and~~ cultivation, multiple cropping, irrigation, use of fertilizer etc.

2.6.4 VERTICAL UTILIZATION OF LAND

The land utilization of West Dinajpur is by and large dependent upon rainfall. So most of the land is sown just once in a year. Because of inadequacy of irrigational facilities, only lower land is available for cultivation twice in a year. So the efficiency of land utilization is far behind the average standard. During 1951-61 only 9% of the cultivated area is sown twice in a year. However this situation is improving following progress in irrigational facilities. During 1981 the double crop land reached to 40% of the then cultivated land (T 2.6.1)¹² (In course of investi-

TABLE NO. T2.6.1

USE OF LAND

Year	Total Cultivable Land	Total Cultivated Land	Single Crop Land (%) of 3	Double Crop Land (%) of 3
1	2	3	4	5
1961	13,13,280	11,32,800 (a=86.25)	91%	9%
1981	13,18,567	11,46,716 (a=86.96)	60%	40%

* No Tripple Crop Land Source - PAO -West Dinajpur.

* Figures in bracket indicate

a = Percentage of Total Cultivable Land

gation we found neither any tripple cropped land nor infrastructure for this type of utilization of land). The increase in the utilization of land is made possible by the efforts of the Government, particularly under Comprehensive Area Development Project (CADP).¹⁴

2.6.5 IRRIGATION

The scope for bringing virgin land under plough in this district is limited. Agricultural productivity will have to be maximised through intensification and diversification of agriculture by the introduction of multiple cropping. Irrigation is a vital input for such intensification. Rainfall in West Dinajpur is concentrated in a few months of the year and the available moisture in the weather is not adequate to support multiple cropping. Hence there is the need for having assured irrigation facilities.

In normal years when rainfall is adequate irrigation is a minor problem to the agriculturists especially for Kharif Crops in this district. But often monsoon either comes too early or too late. The irregularity of monsoon causes serious loss of production and accordingly production moves up and down.

The irrigation department of the Government has not yet executed any major scheme for supplying water for the purpose of irrigation in this district. Hence cultivation in this district, mostly is dependent on rainfall except for some volume of water which is available for irrigation from tanks improved under the Bengal Tanks Improvement Act 1939 and from the lift irrigation with the help of pumpsets

TABLE NO. T2.6.2
IRRIGATION IN WEST DINAJPUR

Year	Area irrigated in Acres	% of Total Cropped area	S o u r c e					Main Crops Irrigated	
			Govt. Canal	Private Canal	Tank under TI Scheme	Private Tank & Pump Set	Deep & Shallow Tubewell		Others
1951	6,908	1.00	-	-	-	6,908	-	-	Main Crops irrigated in order are : Wheat, Oil seeds, Paddy, Sugarcane and other Non-food Crops.
1959	39,200	3.46	-	17,700	500	19,300	-	1,700	
1971	1,17,508	10.24	-	14,300	2,116	50,338	45,089	5,665	
1981	3,06,172	26.00	-	12,200	4,938	1,22,367	1,60,494	6,172	

Source : P.A.C., West Dinajpur on 31.3.81 - No. of deep Tubewells and Shallow Tubewells are 142 and 8816 respectively (published report).

purchased with the loan granted by the Agriculture Department. In recent years the Irrigation Department has emphasised on the use of underground water in areas where tanks are not available. Accordingly the department has been sinking deep tubewells and shallow tubewells.

Prior to 1959, irrigation in this district was negligible. Just some amount of land were irrigated using 'Dongas' made of Bamboo for cultivation of pulses. According to the report of the Agriculture Department, the amount of irrigated land in the district was just 39,200 acres in 1959, which was only 3.46% of the total cropped land. However this situation improved over the years and reached 26% in 1981 (Table No.T2.6.2

The only major project, that the Govt. has undertaken for irrigation in North Bengal is 'TISTA PROJECT'. It is expected that on successful completion of the Project, this district will be benefited to some extent.

2.6.7 USE OF AGRICULTURE EQUIPMENT

The agricultural equipment used in this district is extremely primitive in nature, and the description of these was given by Dr. Buchanan Hamilton in early nineteenth century. This may perhaps be used with a fair degree of accuracy even to-day in describing it. According to Dr. Buchannan, "the plough is of the wretched construction usual in India, and has neither to cut the soil nor mould board to turn it over". "The 'MOYI' is an instrument made of two bamboos about six feet in length, which are joined together by some cross bars like a rolling stone" "The 'BIDA' or 'NANGOL' is made with wooden teeth, which is drawn by two oxen and is employed only in free Soils," 14

TABLE NO. T2.6.3
USE OF AGRICULTURAL EQUIPMENT

Year	E Q U I P M E N T I N N U M B E R									
	Tractor	Plough wooden	Plough Iron	Harrow	Spade	Small Items	Combiners or Harvestors	Pump Set	Deep & Shallow Tubewells	- Carter
1951	1	128059	95	55414	119465	3,31,786	-	-	-	NA
1956	7	192722	61	-	398395	-	-	43	-	58089
1971	42	NA	NA	NA	NA	-	-	1723	709	NA
1981	89	NA	NA	NA	NA	NA	-	4123	8958	NA

- : Statistical abstract, West Bengal 1960.
- : State Water Investigation Directorate, Govt. of West Bengal.
- : Lead Bank Offices, West Dinajpur
- : Home (Transport) Department.

According to the report of the Agriculture Department, there were only 7 tractors for use in cultivation in 1956 in the district. The number of tractors has reached to 89 in 1981. No other modern equipments like, 'Harvestor', 'Combinor' are in use, according to the report of the Agriculture Department (Table No. T 2.6.3).

Mechanised cultivation in this district is neither possible nor feasible as the plots are very small. No significant effort has been made for land improvement or for establishing joint farming societies as is evident from the report.¹⁵

2.6.2 USE OF FERTILIZER

Fertilizer is an important input for production of crops. According to a report of a Settlement Officer, "The Cultivators of Dinajpur are well aware of the value of manure".¹⁶ In course of journey one could see neat cones of cowdung and also of gala, earth dug out from tanks, pitted throughout the paddy stubbles, ready for ploughing in, as soon as the monsoon starts. The use of indigenous manure is indeed, very small. The use of chemical fertilizer in the district is also meagre. The availability and the use of it is gradually increasing following its benefit. According to a report of State Warehousing Corporation 220.47 Tones of Chemical Fertilizers were released for this district in 1961. The quantity of fertilizer used in the district reached to 15,705 Tones in 1981 (T 2.6.4). Though the quantity used

TABLE NO. T2.6.4
USE OF CHEMICAL FERTILIZERS
(In Tonnes)

Year	Nitrogen	Phosphate	K Potassium	TOTAL
1961	167.567	19.295	33.620	220.47
1981	9753.000	3967.000	1985.000	15705.000

Source : i) P.A.O., West Dinajpur
ii) Report of West Bengal State Warehousing Corporation.

is not significant enough in comparison to volume of land, we can not have any comment on it, because the information relating to the volume of indigenous fertilizers used is not available.

2.6.9 JOINT FARMING

Joint or Collective Farming Societies in this district is reported to be non-existent. This is perhaps due to ignorance of the farmers as to the benefit of joint farming. (Agriculture Survey Report - 1980 - P.A.O., West Dinajpur).

2.6.10 PROBLEMS OF LAND

Land is the major factor of production in agriculture sector. Though total land is constant by nature, but agricultural land is variable. The quantity of agricultural land depends upon its use, conversion of non-cultivable land into cultivate land etc. Land problem, labour relation and agricultural production are closely linked. In the last few decades a large number of research work have been carried out by Economists, Scholars and Research Institutes on agriculture in India. Some of the pioneers in this area are :- S. R. Sen - The strategy of Agricultural Development; G. D. Agarwal - "Size of Agriculture Holdings - Actual and operational"; A. Rudra - Indian Agricultural Economics Myths and Realities; C. H. Hanumantha Rao - "The optimum firm - a comment;" G. R. Saini - "Holding Size, Productivity and some related aspects of Indian agriculture" A. M. Khusro; A. K. Sen; A. K. Dasgupta; P. Bardhan; P. C. Joshi, M. L. Dantwala and D. R. Gadgil. They have seen that the size of land holdings (ownership and operational), fragmentation, size of firm, 'Land-Man' relation, Labour relation

technology of production, are important factors in agricultural productivity and production. They have also seen that these factors have their impact on agricultural employment and unemployment. Many studies have been carried out on agricultural employment, unemployment, disguised unemployment, surplus labour and they have seen that there are acute problems of unemployment, disguised unemployment; and surplus labour in Indian agriculture. The study of agricultural labour is important for study of cottage industries, since agriculture sector provides flow of labour to industry. Hence the need for study of land problems.

2.6.10.1 LAND HOLDINGS

Small land holdings or small size farms are one of the main hindrances for agricultural development. Like all other parts of India, agriculture in West Dinajpur is characterised by predominance of small size farms. The study of settlement records (of 1951) shows that, out of total number of farmers, 55% were holding landless than 5 acres (i.e. marginal and small farmers); and 26.5% were medium farmers holding land 5 to 10 acres. In other words 81.45% of farmers belonged to small and medium group. Their total holding of land was 40% of total cultivable land. Being a function of ownership (which is again a function of hereditary division) and transfer (sale of land), it is natural that land holding gradually decreases. According to the report of P.A.C.; of the total cultivators as on 1980, about 93% belongs to marginal and small farmers category, holding landless than five acres. The sharp increase in the number of marginal and small farmers category, was not only due hereditary division or transfer of land but also includes those landless labourers, who were given the vested land. This category of farmers were holding

30% of total cultivable land.

2.6.10.2 SIZE OF FIRM AND FRAGMENTATION OF LAND

Most of the agricultural firms in West Dinajpur are small. According to the report of P.A.O.; 90% of farms are in between 1.5 to 3 acres. Fragmentation of land is also an acute problem in this district. At an average one acre of land is divided into 7 to 10 plots. Not only fragmentation, but ownership of farms, have wide dispersion. Sometimes it is 5 to 7 Km. from their place of residence. In some cases, the dispersion is due to donation of land as dowry to daughter at marriage, who have married at a long distance.

2.6.10.3 EMPLOYMENT OF BARGADER

The land cultivation system, i.e., owner cultivation vs tenancy cultivation is very important from the point of view of productivity. Ownership plays an important role in the progress of agriculture.

In this district, employing of bargaders or share cropping is also an important factor, which is noticed. It appears from the Settlement records of 1951, there were 47737 (about 80% of total cultivators) bargaders of different size in the district. Proportion of cultivators employing bargaders to total cultivators was 21.47%. In case of higher holdings of land (more than 15 acres), it was 54.82%. According to the Settlement record of 1980 the employment of bargaders has sharply fallen. But this does not mean that the total number of bargaders have fallen. Now bargaders are employed on unwritten basis and they are changed by rotation. This change in attitude is due to the

TABLE NO. T2.6.5
PERSONS CULTIVATING OWN LAND OR EMPLOYING BARGADAR WITH SIZE OF LAND OWNED/OR GIVEN IN BHAG ON 1951

Areas of cultivated land owned in Acres	Total No. of cultivator	No. of cultivator employ- ing No. of Bargadar	Employing Bargadar	NUMBER OF PERSONS EMPLOYING BARGADAR FOR THE FOLLOWING CUT OF TOTAL LAND OWNED															
				0.15 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 4.00	4.01 to 5.00	5.01 to 6.00	6.01 to 7.00	7.01 to 8.00	8.01 to 9.00	9.01 to 10.00	10.01 to 15.00	15.01 to 20.00	20.01 to 25.00	25.01 to 33.33	33.34 and above	
TOTAL	50794	47737																	
0 to 1.00	3735	3291	444	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.01 to 2.00	7225	6516	739	132	607	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.01 to 3.00	8143	7131	1012	160	183	669	-	-	-	-	-	-	-	-	-	-	-	-	
3.01 to 4.00	8089	6932	1157	173	248	139	597	-	-	-	-	-	-	-	-	-	-	-	
4.01 to 5.00	6215	5305	910	87	208	142	95	378	-	-	-	-	-	-	-	-	-	-	
5.01 to 6.00	4203	3411	792	50	115	183	86	64	254	-	-	-	-	-	-	-	-	-	
6.01 to 7.00	4339	3519	820	75	102	117	129	50	48	299	-	-	-	-	-	-	-	-	
7.01 to 8.00	2553	1849	604	44	93	71	123	56	35	18	164	-	-	-	-	-	-	-	
8.01 to 9.00	2206	1664	542	29	79	62	72	70	24	37	17	151	-	-	-	-	-	-	
9.01 to 10.00	2773	2031	742	62	70	81	88	105	34	60	27	25	190	-	-	-	-	-	
10.01 to 15.00	4608	2993	1615	40	145	151	215	180	140	150	97	66	89	342	-	-	-	-	
15.01 to 20.00	1962	1703	1253	46	57	72	87	74	72	114	77	71	182	147	254	-	-	-	
20.01 to 25.00	1312	568	744	27	23	27	45	41	35	48	50	38	60	127	94	129	-	-	
25.01 to 33.33	1209	434	775	13	13	23	28	34	36	34	38	47	69	135	112	79	114	-	
33.34 and above	1147	284	863	13	09	24	17	12	16	14	11	14	41	70	99	84	126	313	

* Excluding Islampur Sub-division
* Source DIST. IC Settlement Report.

Percentage of Cultivators to Total number of Cultivators Holding Land upto 5.00 acres = 54.95
 Percentage of Cultivators to Total number of Cultivator Holding Land 5.00 to 10.00 acres = 25.61
 Percentage of Cultivators to Total number of Cultivator Employing Bargadar = 21.47
 Percentage of Cultivator to Total number of Cultivators Holding Land more than 15.00 acres Employing Bargadar = 54.82

legislation, which has been enacted for converting tenants into owners. Though this legislation has confirmed the right of bargaders on land they are cultivating, but in majority cases bargaders have been discharged from land, due to this legislation, by the owners. Therefore, new form of contract emerged, in which, bargaders are more uncertain about their future.

2.6.10.4 VESTED LAND AND ITS DISTRIBUTION

In view of gigantic number of landless cultivators in one hand, and large holdings of land on the other, Government has fixed the upper ceiling of land holding. Cultivators having land more than ceiling are vested and distributed among the landless. In this district upto 1980 only 32282.6 hectares of land were vested, which is only 6% of the total agricultural land. These land have been, distributed to 126024 beneficiaries at an average of 0.26 hectares. The progress of land reforms in this district may be regarded as negligible.

2.6.10.5 LAND RE-CLAIMED

All cultivable land are not cultivated, because of certain difficulties. These non-cultivable land required to be converted into cultivable land. The progress of land reclamation is negligible in the district. Hence little change in total area of cultivable land. In spite of having large quantity of hollow land the farmers were unable to process them due to scarcity of finance and technology.

2.6.10.6 LAND POSITION

Land position has a great impact on the agricul-

tural productivity. From this point of view, agricultural land is divided into two parts - one is upper land and the other is lower land. Lower land is generally more fertile than upper land; but production in lower land is uncertain. Since often they go below the water due to flood or heavy monsoon and thus crops are destroyed. West Dinajpur is a district of 5 rivers and large number of canals. Being an area of heavy rainfall the district has large number of 'Bills' and 'Ponds'. The land of the district is basically low. About 60% of the total agricultural land is low. It is a common problem to the cultivators of the district of West Dinajpur.

2.6.10.7 AGRICULTURAL UNEMPLOYMENT

There are acute problems of unemployment and underemployment in agriculture in the district of West Dinajpur. We have noticed that 93% of the cultivators in this district are marginal and small ones. Besides, there are agricultural labourers whose number has more or less tripled from 1961 to 1981. As the growth in agricultural productivity index and total cultivated land is negligible, one can imagine the extent of unemployment, or underemployment in the agricultural sector in the district of West Dinajpur.

2.7.1 MAJOR CROPS AND AREA UNDER CULTIVATION

The major crops grown in the district are āman, āus (Bhādoi) and boro paddy, jute and mestā, rape and mustard, wheat, chillies, pulses, sugar cane, potato, tea and tobacco. Some amount of vegetables are also produced, but the quantity is not very significant. The most important crop is āman paddy followed by Bhādoi (āus), jute,

wheat and mustard. As much as 70.08% of the total cropped area is utilised for cultivation of āman paddy (Table No. T 2.7.1), while bhādoi, jute, wheat and mustard account for 23.53, 12.64, 8.36 and 6.30 percent respectively. Chillies, onion and potato come next. These are main vegetables which are exported from this district. These figures are for the year 1981. A comparison (Table No. T 2.7.2) of 1961, 1971 and 1981 figures shows that 1971 was the best for agriculture production both in respect of yield and utilization. Though production to a large extent depends upon nature, the inference that we can draw from the Table is one of the changing pattern of crops production. Jute cultivation in terms of area is gradually falling. The areas under jute cultivation were 14.86% in 1961, 13.32 in 1971 and 12.82 in 1981. Bhādoi is taking the area of jute as they are products of the same season. This is probably due to falling price of jute and increasing demand for food crops, following increase in population. As to the Rabi crops, particularly wheat and mustard are increasing their position. The area sown for mustard was 4.97% and 6.30% in 1971 and 1981 respectively. The increased utilization of land for rabi crops was made possible by increased facility for irrigation. It is expected that in near future the production of wheat and mustard will go further ahead and jute will fall further.

Chillies, onion and potato are the main exportable vegetables from this district. The report of 1971 shows that about 500 hectares were planted for chillies and 3100 hectares were sown for potatoes.

Among the others Tea and Tobacco are the main crops. Tea is totally exported and Tobacco is totally consumed for domestic purpose.

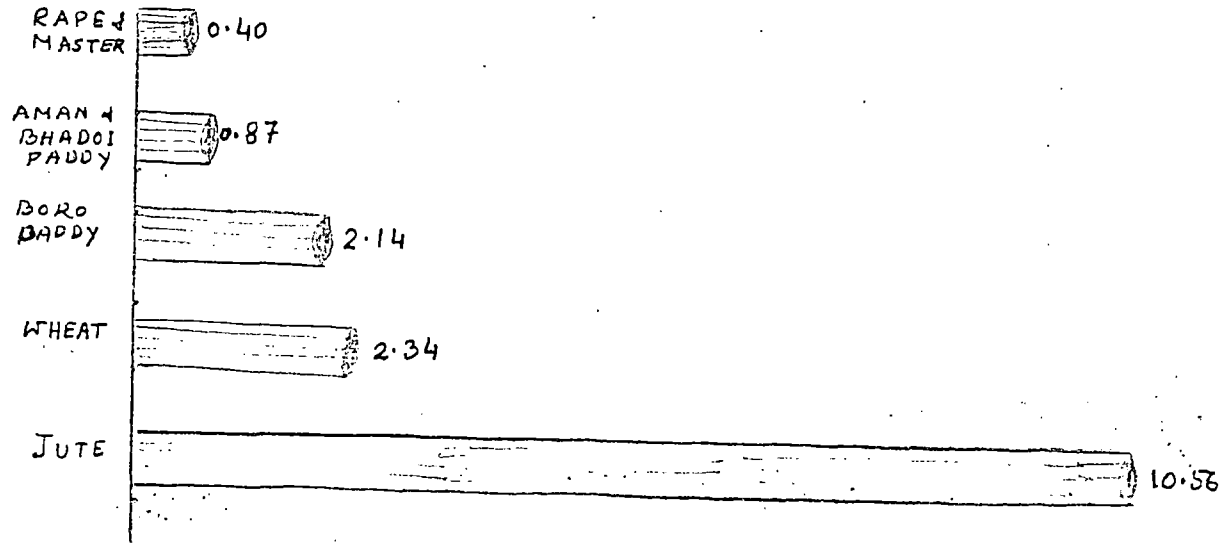
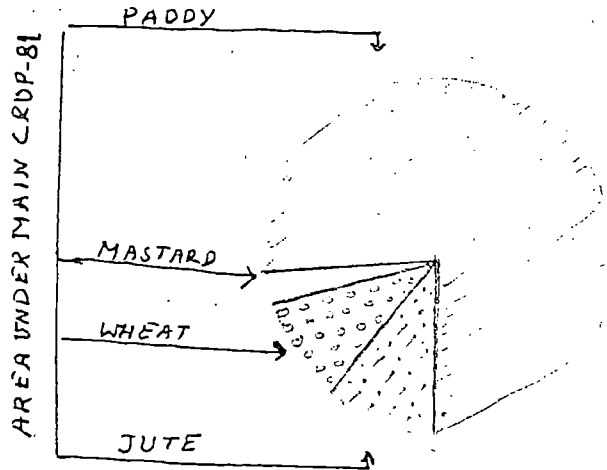
TABLE NO. T2.7.1

Percentage of Land under Main Crops and Yield - in West Dinajpur

	1961		1971		1981	
	% of Total Cropped Land	Yield in Hector	% of Total Cropped Land	Yield per Hector	% of Total Cropped Land	Yield per Hector
P A D D Y	67.65	.9548	73.36	1.032	70.08	.9044
	14.00	.7223	26.60	1.172	23.53	.8766
	.08	.5000	.60	3.285	1.64	2.144
	14.86	966.8	13.32	13.18	12.82	10.56
	0.21	.3000	4.30	2.489	8.36	2.347
RAPE & MUSTARD	6.00	.2509	4.97	.2925	6.30	.4020

: Yield - Tones per Hector

: Calculated from Agri. Prod. Report.



COMPARATIVE PRODUCTIVITY PER HECTOR →

TABLE NO. T2.72
 PRODUCTION OF PRINCIPAL CROPS AND AREA CULTIVATED IN WEST DINAJPUR

Crops	1951		1961		1971		1981	
	Area '000 Hectar	Production '000 Tones	Area '000 Hectar	Production '000 Tones	Area '000 Hectar	Production Tones	Area '000 Hectar	Production '000 Tones
P *1 Aman	204.4	158.1	310.4	296.4	337.5	348.3	323.4	294.1
A *2 Bhadoi	19.1	15.3	64.1	46.3	122.4	143.5	108.6	98.2
D Boro	Negligible	Negligible	0.4	0.2	2.8	9.2	7.6	18.3
D TOTAL	223.5	173.4	374.9	342.9	462.7	501.0	439.6	405.6
Y *3								
Jute	18.2	81.6	68.2	329.7	61.3	404.0	59.2	312.7
Wheat	0.6	0.4	1.0	0.3	19.8	49.2	38.6	30.6
Tobacco	0.4	0.4	0.3	0.2	0.5	0.2	NA	NA
Chillies	NA	NA	1.8	1.6	2.0	1.0	NA	NA
Rape & Mustard	25.4	11.0	27.5	6.9	22.9	6.7	29.1	11.7
Tea	NA	NA	1.0	0.21	NA	NA	0.3	0.34
Potato	NA	NA	3.9	16.0	3.1	17.0	5.2	35.7

*1 - Winter Crop.

*2 - Summer Crop.

Source: P.A.O. West Dinajpur.

*3 - Thousand bales of 200 Kg. each (excluding mesta)

2.7.2 YIELD

The average yield per hector of āman paddy varies from 0.9 to 1.5 tones (900 to 1050 Kg.) For āus and boro yield rate are 0.3 to 1.5 and 2 to 3, tone respectively. Among the paddy boro is highest in terms of yield rate. The yield rate for jute, wheat and mustard are 1056, 2.347 and 0.4020 tones per hector respectively in 1981. The yield rates for all production in 1971 recorded highest, following favourable climate. The yield rate of mustard doubled during the period following better irrigation facilities (Table No. T 2.7.1).

In comparison to average yield rate of the State the yield rates of West Dinajpur is lower. This is because of primitive agricultural method and other constraints like lack of knowledge, non-availability of irrigational facility etc. On the whole, inspite of having better agriculture potential, the agrarian structure of West Dinajpur is very backward.

2.8.1 SUMMARY

West Dinajpur is a backward district and was greatly affected by the partition. Large section of the population belongs to the Scheduled Castes and Scheduled Tribes. There exists a structural imbalance, so far occupational pattern is concerned. A great portion of people is dependent upon agriculture and volume of landless agricultural labour is increasing over the period. The expansion in the secondary and tertiary sector is limited. All these are reflected in the negative movement in the participation ratio. Though agriculture constitutes the core of Dinajpur economy, this sector is still backward.

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7. Calculated from age distribution of non workers in Census reports.
8. Primary Sector = Cultivators + Agricultural Labour + Livestock & Forestry.
9. Secondary Sector = Mining quarry + Household Industry + Manufacturing other than Household.
10. Tertiary Sector = Construction + Trade & Commerce + Transport & Communication.
11. In the State the proportion of workers in household sector was 5.03% in 1961 and came down to 4.12% in 1981.
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