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AGRICULTURAL LAND USE OF BHAGALPUR DISTRICT, BIHAR

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INTRODUCTION : The land in the geographical sense is a two dimensional concept, its most useful manifestation being soil, crop; bearing and animal supporting soil. It is but natural to identify natural resources in general with land (Zimmermann, S.W. pp. 83-84).[1]An analysis of the general existing pattern of agricultural land use must naturally precede discussion on problems and characteristics of land use in a particular area. Land utilization deals with the study of the problems arising to the process of decision by man between alternative major types of land uses and in the putting all types of land to their optimum use (Ibid, pp. 83-84).[2]

Agriculture includes raising of crops from land, animal husbandry, agro forestry and pisciculture. This district is pre-eminently an agricultural as agriculture has been practiced here since time immemorial. About 82 per cent of its total populations are engaged in agrarian sector for their sustenance.

Agriculture is the main stay of Bhagalpur district economy. It constitutes the backbone of rural livelihood security system. This activity is the core planned economic development of this micro-area as the trickle down effect of agriculture is significant in the reducing poverty, inequality prevailing in its different part. Growth in agriculture has a maximum cascading impact on other sectors leading to spread of growth, equity and benefits over the entire economy.

Agriculture and allied sectors have great role to play in the society particularly in economically backward and culturally depressed Bhagalpur district, in spite of its rich past cultural heritage. The area in relation to the establishment of permanent agriculture during pre-historic period which were of sedentary nature, coming to present state of Green Revolution.

REGIONAL SETTING : Hemmed in between the geographical co-ordinates extending from 25º2'30" North to 25º30'30" North latitude, and lying in between 86º37'30" East and 87º30'30" East Longitude, the district of Bhagalpur has on area of 2569.5 km^2 (2.72% area of the state of Bihar) and population of 24,30,331 persons (male : 12,94,192; female : 11,36,139) (2.92% of the state) according 2001 census count. Bhagalpur district is located in almost central part of eastern Bihar. Bhagalpur is the division (commissionary), district, and Sadar Sub-division of State of Bihar having same name. This district contains in its ambit as much as 4 Sub-division (Bhagalpur Sadar, Sultanganj, Kahalgaon and Naugachhia) consisting of 16 Community Development Blocks-Cum-Anchals, 242 Gram Panchayats and 1536 villages and five small towns except city of Bhagalpur. The study area is surrounded in the north by the southern boundary of the districts of Madhepura, Purnea and Katihar, on the

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east by the western boundary of Sahebganj and Godda districts of Jharkhand State respectively, on the south by the northern boundary of Banka district. It is fringed by the Khagaria district in the north west and flanked in the west by the Munger district. In length it extents roughly 52 kms from north to south and its breadth varies from 85 to 95 kms along the east-west directions. The district corresponds to central portion of historic 'Anga Kingdom' which flourished in ancient times.

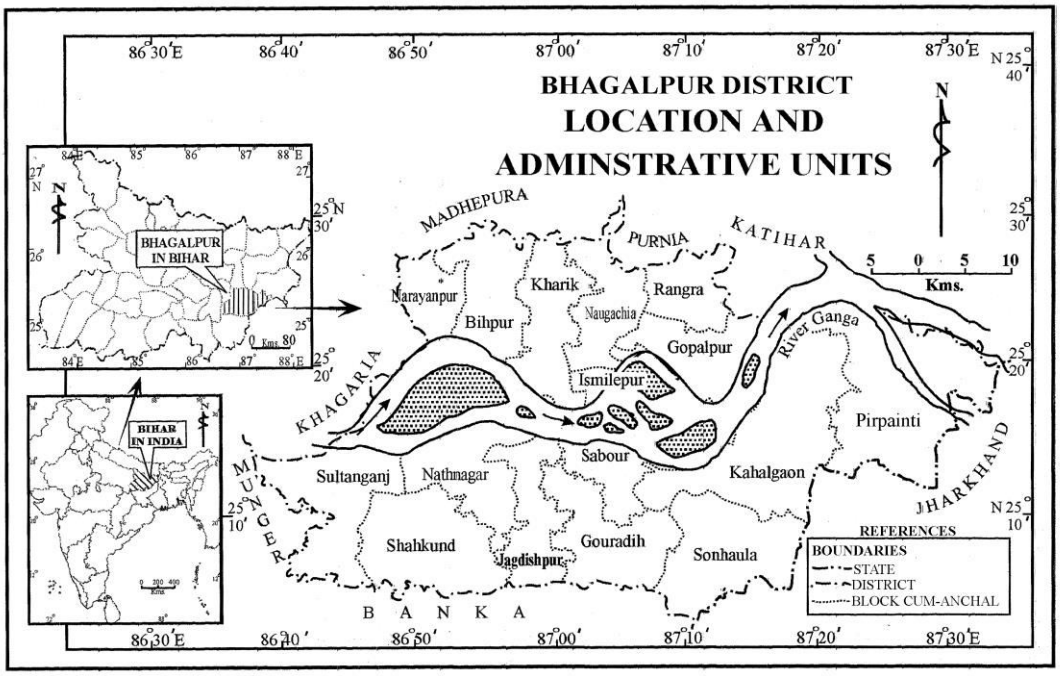

Fig: 1

Bhagalpur city (Headquarters of Bhagalpur commissionary, district and Sadar Sub-division) is situated on the southern bank of the river Ganga. The mighty river flow Ganga east-west direction enters in the district at Gangania in the west and lives it at Chhoti Mohanpur village in the east, divides the study area into two unequal halves. The smaller portion of the north Bhagalpur comprising of the seven C.D. Blocks viz., Narayanpur; Bihpur; Kharik; Naugachhia; Ismailpur; Rangra Chowk and Gopalpur fall under Naugachhia Sub-division; covers an area of about 870 km^2 (29.71 percent of the total area of the district). The major portion of the district falls in the south of Ganga covers an area of 1699 km^2 (71.29% of the total area of the district) comprising of as many as nine C.D. Blocks (fig. 1.). This district has population density: 943 persons per Km^2, sex ratio 878 female per 1000 males, literacy rate: 45.08 further, the districts has 1304 Educational Centres/Institutes (primary, middle and secondary level), 20 colleges (4 in north of Ganga and 12 in south of Ganga). Engagement in Silk industries, metal, agro-based and food processing industries, handloom and powerloom woven tassar silk, cotton cloths, making and wine preparation are major secondary and tertiary occupation of the region. The district has 48 police station, 125 Banks, The National Highway (N.H.) 31 runs in north of Ganga enters at Singhpur in the west and relinquishes the district boundary near Sadhua village near Kursela in the east, covering nearly 60 kms distance. N.H-80 enters in the west near Gangania and covers about

70 kms, quits boundary of Bhagalpur district at Fauzdari village in the east. The total length of road (metalled and unmetalled) are 1574 kms, forms a formidable net-work of transportation.

The surface configuration (relief) matters a good deal in the analysis of the soils and agricultural land use. The average elevation of the area from sea level is 43 meter (141 feet). The district's northern part, though relatively small, is purely alluvial and southern part is partly alluvium. The parts of the area fall in northern limit of Banka district are partly hilly. Only 36% of the total agriculture area is irrigated. Area under new alluvium is falls 56.22%, old alluvium 28.76% new plus old alluvium and 15.02 very old alluviums. Area falls along the northern limit of Banka district, is partly hilly. The 90 per cent of the study area may be termed as monotonous flat and featureless, most of the land is suitable for agriculture. Some hills and hill locks are found scattered hither and thither and break the monotony of the relief, like moles on smooth skins. The drainage lines run from west to east. Many basin shaped depressions, diaraland, chaur, kol, bheel, mouns and other wetland features may be seen along the courses of the river. The general slope of north region is south and south east but in southern region it is south to north and north east and east. 90 per cent of the areas of region is formed of silt, sand, loamy materials. Whole northern region and northern portion of the southern region is flood prone. During monsoon rain which persist from mid-June to mid-October the area remains flooded. The soil of the district is extremely fertile as they get renewed every year, most suitable for crop diversity. The area spread over south of Ganga, and extents towards south up to the northern boarder of Banka district is limited by the contour line of 46 m (150 ft.). The area between plain and plateau sub-regions forms watersheds. The level of land thus gets higher and higher towards south. Obviously it has generally level surface except towards its extreme southern portion. The area in traversed by several minor streams and rivulets which have their origin in the hills of Santhal Pargana (Jharkhand). Chandan River is important among them. Other minor streams are worth mentioning only for their flow during the peak monsoon period (July-August). This transitional area between northern plain and southern hilly area is agriculturally rich. Rivers, streams, rivulets not only provides a backdrop to 'Khadar' and 'Bhagar'. Soil formation but also act as a life line for the age-old crop cultivation and agricultural development.

The salubrious climate coupled with favourable ecological conditions and bounties of nature offered new vista for agricultural land use in this micro-area. In this physically compact micro region the climate and weather conditions more or less uniform. There is a seasonal rhythm with less pronounced climatic differences from one year to another. Broadly this region is characterized by a hot dry summer, hot moist monsoon and a cool dry winter.

The study area has three types of soils locally known as Balsundari (Sandy loam), Chikni mitti (Clay) and Matiyar. Balsundri soils are commonly found along the Ganga riparian tract, i.e. blocks located in north of Ganga, whereas Chikani mitti with proportion of clay covers-bulk of the southern most part of the district. South of the Ganga in Sultanganj, Kahalgaon, Pirpainti, Sabour, Nathnagar, Jagdishpur and Shahkund Anchal-Cum-Block are dominated by Matiyar soils. Based on the process of alleviation, soils are of two categories

i.e., Bhangar and Khadar. Former denotes the older in composition and later, is for the newer alluvium. For instance, Bhangar occupies comparatively by elevated terrain, away from streams. Khadar is generally found in surfaces of lowland terrene, lies in the immediate vicinity of river and streams. During rains due to spill-flooding these soils are subjected to surface inundation and are almost every year renewed with fresh silt and sand which enhances soil fertility.

To counter precarious and unpredictable, monsoon, long gap between the incidence of rain, wide fluctuations in occurrence, and such other characteristics features, irrigation is only solution. The major sources of agricultural water supply in the district are canals, tanks, tube wells, wells, rivers, bamboo boring, storage reservoirs and other well lift irrigation, etc.

AIMS AND OBJECTIVES: The present study aims to analyze the various agricultural land use patterns of the Bhagalpur district, different means of irrigation prevalent in the area and resultant patterns of agriculture. It also highlights the present status of the land and agriculture resources of the area and their potential to be used and developed in future. It is also an objective to understand the areas of specialization of different crops grown in the district and to find out the cropping pattern of the district.

SOURCES OF DATA AND METHODOLOGY: The present investigation is based on the secondary data collected from the District Statistical office of the Bhagalpur and land records available in the block office. The data regarding land use and cropping pattern has been computed for the blocks and on the basis of information gleaned. Both statistical and descriptive methods have been used in the present work. The data findings have been represented by appropriate cartographic techniques. The block in the unit of study. For the analysis and comparison the entire data is reduced to per cent. The relevant informations have been organized, classified and tabulated and mapped using suitable techniques and methods of Geography.

LAND USE PATTERN: To present an overall scenario of land use pattern of the district for which three yearly averages of figures from 2006-07, 2007-08 and 2008-09 are given below:

Table-1: Bhagalpur District: Land Use Pattern

Serial Number	Land Use Category	Area in ,00 hectare	Percentage of Total Area
1.	Net Sown Area (NSA)	1365.4323	53.14
2.	Current Fallows (CF)	212.7546	8.28
3.	Other Fallows (OF)	111.0024	4.32

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4.	Cultivable Waste (CW)	89.4186	3.48
5.	Miscellaneous Trees and Orchards	68.3481	2.66
6.	Pasture and Grazing Lands	50.8761	1.98
7.	Forests viz. weeds, shrubs etc.	30.06315	1.17
8.	Land put to Non-agricultural Uses	354.84795	13.81
9.	Barren and Uncultivable Land	286.7562	11.16

Source: District Statistics Office, Bhagalpur.

The land uses categories have been grouped into the nine classes (Table-1) in the region depending on the agricultural use to which the considerably more elaborate than the one prevailing before 1950. The sequences of the classes are us given in the table above to a much higher level.

From the above table it would be obvious that around 66 per cent of the total land is cultivated. Of the total net sown area in the district roughly 47 per cent is sown more than once. Fallow lands plus the cultivable waste land amounting to nearly 19 per cent provide a measure of the scope for extension of cropland. It also indicates an intensive use of land and further means that land as an asset of the area is in active operation throughout the agricultural calendar so that maximum returns are obtained to provide sustenance to an over growing number of people.

Table-2

Agricultural Situations of Bhagalpur District

Serial Number	Name of Blocks	Area (in square km.)	Population (2001)	NSA (sq.km.) Average of (2006-09)	Major Crops Grown
1.	Nathnagar	129.76 (5.10)	121933 (5.01)	76.39 (5.81)	Maize, Wheat, Rice

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2.	Sultanganj	219.64 (8.64)	199869 (8.22)	113.11 (8.61)	Rice, Wheat, Maize
3.	Shahkund	170.17 (6.89)	153151 (6.30)	110.65 (8.47)	Rice, Wheat, Khesari
4.	Kahalgaon	289.01 (11.36)	300706 (12.37)	185.89 (14.15)	Maize, Wheat, Rice
5.	Pirpainti	332.72 (13.08)	219268 (9.02)	133.96 (10.19)	Maize, Rice, Wheat
6.	Sanhaula	175.34 (6.89)	150567 (6.19)	110.67 (8.42)	Rice, Wheat, Maize
7.	Jagdishpur	81.97 (3.23)	471441 (19.90)	48.76 (3.71)	Rice, Khesari, Wheat
8.	Sabour	106.74 (4.20)	109551 (4.50)	50.79 (3.86)	Rice, Wheat, Maize
9.	Gauradih	146.38 (5.76)	112647 (4.63)	86.52 (6.56)	Maize, Wheat, Rice, Khesari
10.	Naugacchia	114.03 (4.48)	122750 (5.05)	70.57 (6.37)	Maize, Wheat
11.	Kharik	138.41 (5.44)	102873 (4.23)	61.60 (4.69)	Maize, Wheat, Banana
12.	Bihpur	182.40 (7.17)	96955 (3.99)	65.13 (4.96)	Maize, Wheat
13.	Narayanpur	117.42 (4.62)	81947 (3.37)	26.56 (2.02)	Maize, Wheat, Barley
14.	Gopalpur	86.63 (3.41)	76434 (3.14)	56.86 (4.33)	Maize, Wheat, Urid
16.	Ismailpur	117.86 (4.63)	37629 (1.55)	52.97 (4.03)	Maize, Wheat, Urid
17.	Rangrachowk	134.65 (5.30)	72611 (2.98)	63.78 (4.85)	Maize, Wheat, Urid
	Total	**2569.5 (100)**	**24,30,331 (100)**	**1314.21 (100)**	

Source: District Statistics Office, Bhagalpur (2007)

Note: Figures in parenthesis show percentage of the District's total area, population and NSA

The N.S.A. is the unit of land cropped or used just once in an agricultural year to obtain. The above table reveals that land under productivity from the soil.

N.S.A. in sole support of an over-whelming majority of the people. The proportions of N.S.A. (53.14%) plus double cropped area (23.2%) are indicative of a well established agriculture in this area. There are highest regional variations in N.S.A. most of the anchals-

cum-block of the district i.e. highest Kahalgaon block and lowest in the 2.02 in the Narayanpur block.

Nearly 8.28 per cent (c.f. table-2) of the total area were under current fallow during 2006-09. Those cultivated lands which remain fallow from 1 to 2 years due to climatic vicissitudes and serious flooding problems, are shown as C.F. This proportion need to reduce. Those lands which remain fallow from 2 to 5 years due to natural calamities as also due to continuous family feud or restrictions imposed by legal institutions for the use by the landowners are categorized as other fallow. Table-1 shows clearly that nearly 4.32 per cent of total land can be converted into N.S.A. which are fallen remain idle, if better land practices are adopted under the Government derive and initiative. Some blocks particularly in flood ravaged and ragged terrain where proportion of such land is high i.e. Gopalpur and Bihpur 8 and 9 per cent respectively. In recent years, the area under other or old fallows in likely to undergo further reduction on account of improved method of cultivation. This is also the result of population increase and relative pressure on land. Cultivable waste land includes all such land that may be available for cultivation be taken up for cultivation but in real sense, land may not be operated for last five years or more in succession for one reason or he other (Das, K.N. p.103).[3]

The term waste lands which are intermediate between barren lands on the one hand and fallows on the other (Choudhary, B.N., 1982, p.5)[4]. This also includes public lands e.g. Gairmazarua aam and left out chunks alongside the roads. The total area under such categories was 3.48 per cent. The area under the head of miscellaneous trees and orchards is 2.66 per cent. The cultivated orchards bear fruits like banana, litchi, mango and jackfruit etc. Besides these palm, jamun and date trees are indigenous to this district. All the blocks have such type of land ranging from 2 to 10 per cent of the total land area.

Northern portions of the district have less and under this category. Lands used for grazing the livestock which 1.98 per cent of the total area of the district. During past few decades, there is a steady decline in the area under this category. This results in the deterioration of the health and hygiene of cattle wealth. Conversion of such area into agricultural land is main reason behind it. Area under forests or natural vegetation is so meager, (below 0.5 per cent), that the ecological balance is in danger as it should 33% of the total land. Such land has reduced to 1.17 per cent due to mass conversion of land into settlements and agricultural uses. Land under non-agricultural uses includes settlements (built up areas), homestead and bari lands, roads, footpath, railways, playgrounds, canals, ponds and water bodies, embankments, etc. The area under this head is 13.81 per cent. The rise in population number allied economic activities is causes behind the increase in the area and reduction in agricultural land area. This emphasizes the need for proper land utilization survey which may become the basis of future land use planning where by the growing demand for non-agricultural purposes may be met without encroachment on good farmland (Gosal, G.S. and Ojha, B.S, 1967, p.11)[4]. Planning suggests an ordered scheme for the use of scarce resources and a regard for the wider interests of the country, as a whole and not merely short-term sectional interests. (Willatts, E.C. 1951, p. 289).[5] Class of land consists of land

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agriculturally barren and unproductive are about 11.16 per cent. The proportion of such land is much higher above 11 per cent. Area under this category of land is highest in Nathnagar (more than 18 per cent). The incidence of such lands may be attributed to serious flooding problems and at times, frequent changes in the courses of rivers at a number of places. The 'tal' lands and 'diara' covering vast chunks of land along Ganga. Due to saline effervescences where by they set converted into Usar lands. A decline in the area of barren land has taken place because of Governmental programmes to conversion of these lands into productive land by facilitating irrigation means. Sandy tracts are being reclaimed but rate is very slow and sluggish and most of it is beyond hope and redemption. It is difficult to bring these lands under plough without involving exorbitant cost and capital. It appears to be the chief stumbling block in the realization of this objective.

AGRICULTURAL YEAR AND HARVESTS: As is common in the entire Middle Ganga Plain, the agricultural year in divided into four principal agricultural seasons or harvests, i.e., bhadai, aghani, rabi and garma. The bhadai and aghani harvests taken together are nomenclature as Kharif. The above classification is, however, flexible as ploughing and harvesting done for preparing the land for a particular harvest commences a month or two before actual sowing in done (Annual Season and Crop Report, 1964-65)[6]. The figure-2 and table-3 well explain the fact that aghani and rabi harvests are most important which are grown on 71.61 and 22.97 per cent of the total sown area respectively. These crops are followed by bhadai (3.42) and garma (2.4 per cent). Bhadai (Autumn) crops are grown approximately in May mid-June and harvested in August to mid-September. This harvest covers an area of 315481.41 hectares. Maize and Jute, vegetable are major crops of this season of harvest.

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Table-3: Block wise Agricultural Harvests and Crop Distribution (Average 2006-09) in Bhagalpur District.

S.No.	Name of the Block	Block Wise Area under Different Harvests in Hectares					Area Under Major Crops (as a percentage of N.S.A.)						
		Aghani	Bhadai	Rabi	Garma	Total	Rice	Wheat	Maize	Gram	Barley	pulses	Potato
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Jagdishpur	4496.04	110.98	90.18	2473.94	7171.14	63.08 4498(9.97)	28.32 2019(5.57)	2.16 154 (0.29)	0.34 24 (0.77)	0.58	302 (1.66)	84 (2.88)
2	Gauradih	4078.57	587.09	408.37	2738.35	7812.38	56.38 4395 (9.74)	26.42 2066 (4.66)	9.03 704 (1.33)	3.05 238 (7.63)	0.76	462 (3.02)	95 (3.03)
3	Sabour	708.96	269.97	500.62	2554.31	4033.86	9.63 384 (0.85)	35.71 1422 (3.22)	34.81 1386 (2.62)	2.12 86 (2.78)	0.63	198 (1.08)	129 (4.40)
4	Nathnagar	1405.73	5005.04	1294.41	3761.72	11466.90	12.21 1380 (3.06)	15.55 1756 (3.98)	68.74 7763(14.70)	1.11 126 (4.07)	0.64	2290 (12.54)	119 (4.08)
5	Sahkund	10404.33	145.67	133.46	6651.36	17334.82	59.06 10212(22.64)	24.06 4161 (9.42)	0.80 139(0.25)	2.34 404(13.04)	0.86	968 (5.32)	202 (6.92)
6	Sultanga	6555.7	1518.2	656.16	4983.8	13713.9	47.45	26.27	16.36	1.89	1.56	1959	159

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	nj	7	4		2	9	6467 (17.34)	3581 (8.11)	2230(4.32)	258 (8.33)		(10.77)	(5.45)
7	Kahalgaon	5658.48	4788.25	2950.52	11361.95	24759.20	20.00 4896 (10.85)	29.52 7221(16.35)	34.33 8398(15.91)	2.76 676(21.83)	0.73	1763 (6.69)	1094 (37.45)
8	Pirpainti	3447.91	5611.17	1133.8	5838	16030.88	21.13 3257 (7.22)	20.56 3169(7.20)	32.92 5094(9.61)	2.67 413(13.34)	1.78	1265 (6.95)	330 (11.30)
9	Sanhaula	9193.12	945.06	303.17	5349.81	15791.16	43.84 9193 (20.38)	14.48 3037(6.88)	32.95 6909 (13.09)	1.86 3.90(12.59)	1.44	260 (1.42)	101 (3.46)
10	Naugachhia	203.49	2502.46	886.8	4555.85	8148.60	1.09 89 (0.20)	31.59 2561 (5.81)	57.83 4699 (8.90)	0.07 6 (0.19)	0.08	2568 (14.12)	161 (5.51)
11	Gopalpur	2434.91	1746.72	841.44	2236.94	7260.01	0.52 38 (0.08)	24.07 1735(3.93)	36.06 2599 (4.92)	2.21 160 (5.17)	0.89	1182 (6.52)	73 (2.51)
12	Bihpur	746.62	1929.44	904.43	4606.93	8187.42	0.46 36 (0.08)	31.17 2459 (5.57)	38.56 3018 (5.71)	1.10 87 (2.81)	3.87	1952 (10.73)	109 (3.72)
13	Ismailpur	1926.61	1834.34	524.17	2298.99	6584.11	0.26 17 (0.04)	29.53 1944 (4.40)	39.42 2596 (4.91)	0.53 32 (1.03)	----	1576 (8.66)	25 (0.87)

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14	Rangra Chowk	1390.89	1711.9	220.04	2762.08	6084.91	0.72 44 (0.10)	34.89 2121 (4.80)	36.24 2203 (4.17)	2.41 146(4.72)	1.40	204 (1.12)	24 (0.83)
15	Kharik	359.9	1436.74	806.86	4238.09	6841.59	2.75 185 (0.41)	43.13 2896 (6.56)	41.10 2760 (5.23)	---	----	684 (3.75)	135 (4.63)
16	Narayanpur	404.03	1405.34	585.18	3218.65	5613.20	0.33 18 (0.4)	36.37 2003 (4.54)	38.72 2132 (4.04)	0.92 51 (1.65)	5.67	684 (3.75)	782.67
Total		**53415.36**	**31548.41**	**12239.61**	**69630.79**	**166834.17**	**45106 (100%)**	**44151 (100%)**	**52766 (100%)**	**3097 (100%)**	**20.89**	**1818 3**	**3622.67**

Source: District Statistical Offices, Bhagalpur.

Table-4: Block wise area under different crops in Bhagalpur District (Average: 2006-09) (Area in hectare)

Block	Paddy	Wheat	Maize	Gram	Barley	Khesari	Masoor	Arhar	Moong	Kulthi	Urid	Mustard Seed	Grant Total	Crop Diversity
Jagdishpur	4497.52	2019.44	154.32	24.34	41.58	259.55	7.00	2.32	5.24	-	3.85	17.05	1732.21	639.29
Sabour	4394.68	2059.70	704.22	237.71	59.37	37.61	91.42	26.67	1.21	7.87	300.25	36.87	3802.66	316.88
Nathnagar	383.51	1421.80	1385.89	84.46	25.10	28.48	29.86	-	13.35	-	-	-	88867.91	1395.98
Sultanganj	1379.84	1756.04	7763.38	125.87	71.09	332.22	295.78	15.29	-	16.29	50.12	9.43	13467.77	1224.34
Shahkund	10211.57	4161.20	139.34	404.07	150.07	1001.36	864.33	8.63	7.42	4.57	-	18.92	16971.32	1542.84
Goradih	6466.68	3580.78	2230.01	258.30	212.87	123.05	90.37	7.46	2.83	0.24	-	20.19	7699.82	699.98
Naugachhia	4893.27	7220.76	8398.03	675.66	179.90	56.98	-	54.70	2.03	36.00	103.91	200.20	7820.93	710.99
Gopalpur	3257.26	3169.27	5074.13	412.55	275.26	46.54	-	-	-	748.46	1613.04	28.92	14400.60	1600.06
Bihpur	9193.12	3037.04	1909.09	389.67	302.47	-	332.78	12.75	42.68	46.74	580.52	637.18	7637.83	694.35
Ismailpur	89.20	2566.59	4699.18	6.07	6.07	19.00	-	-	-	43.69	1857.49	14.10	6558.68	728.74
Rangrachowk	37.98	1735.07	2599.47	159.80	64.21	32.98	30.09	-	-	105.36	1261.18	25.23	6054.72	605.47
Kharik	36.20	2458.55	3017.65	87.01	305.77	-	40.62	0.19	2.49	105.47	55.56	200.01	6245.80	567.80
Narayanpur	17.16	1944.46	2595.70	32.24	34.84	41.97	181.46	9.14	44.68	66.03	289.50	76.26	5225.17	435.43
Kahalgaon	43.94	2121.27	2203.11	146.50	85.06	93.54	652.27	344.25	44.41	55.54	33.65	168.50	22819.78	1901.65
Sanhaula	184.72	2896.37	2760.38	-	-	578.19	191.73	65.46	40.00	-	-	158.55	20865.33	2608.16
Pirpainti	18.48	2002.51	2131.88	50.79	312.47	96.45	370.85	219.08	-	141.83	522.36	225.14	13764.18	1251.29

Source: District Statistics Office, Bhagalpur

Aghani (winter) crops have the highest percentage of T.S.A. i.e. 71.48 (534151.36 hectares). Paddy is the main crop of aghani harvest which occupied an area of 99.52 per cent

of the total area under this harvest followed by very negligible are under kulthi, ghaghra, potato. Figure no. 2 and table-3 reveals intra-regional differentiation in the area of aghani harvest. Rabi (spring) harvest ranks second after aghani with an area of 315481.41 hectares (23.05 per cent of T.S.A). Wheat, barley, khesari, arhar, gram are main crops of this agricultural season. Figure-2 and table-3 showing rabi harvest exhibits a relatively simplified picture of its spatial distribution crops under garma (summer) seeds are sown approximately in the period from February to march and gathered between the months of April and May. Maize, paddy, vegetable, mango and other fruits are grown as garma harvest which occupied a total area of 69630.79 (1.64 per cent of T.S.A).

CROPPING PATTERN: The agricultural land use pattern, of which cropping patterns form apart, has always been a dynamic phenomenon. It is most efficient use of land and other resources. Usually cropping pattern means both the time and space sequence of crops (Pandey, S.N., 1996 p. 4.21.)[7].

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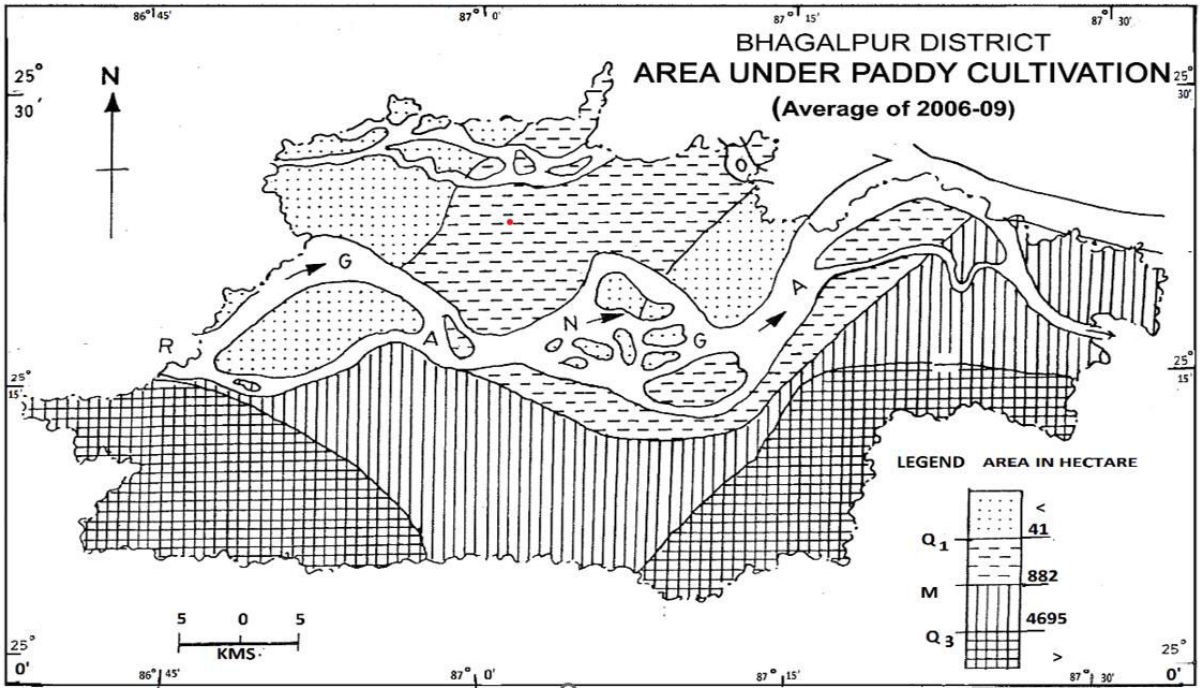

Fig: 2.1

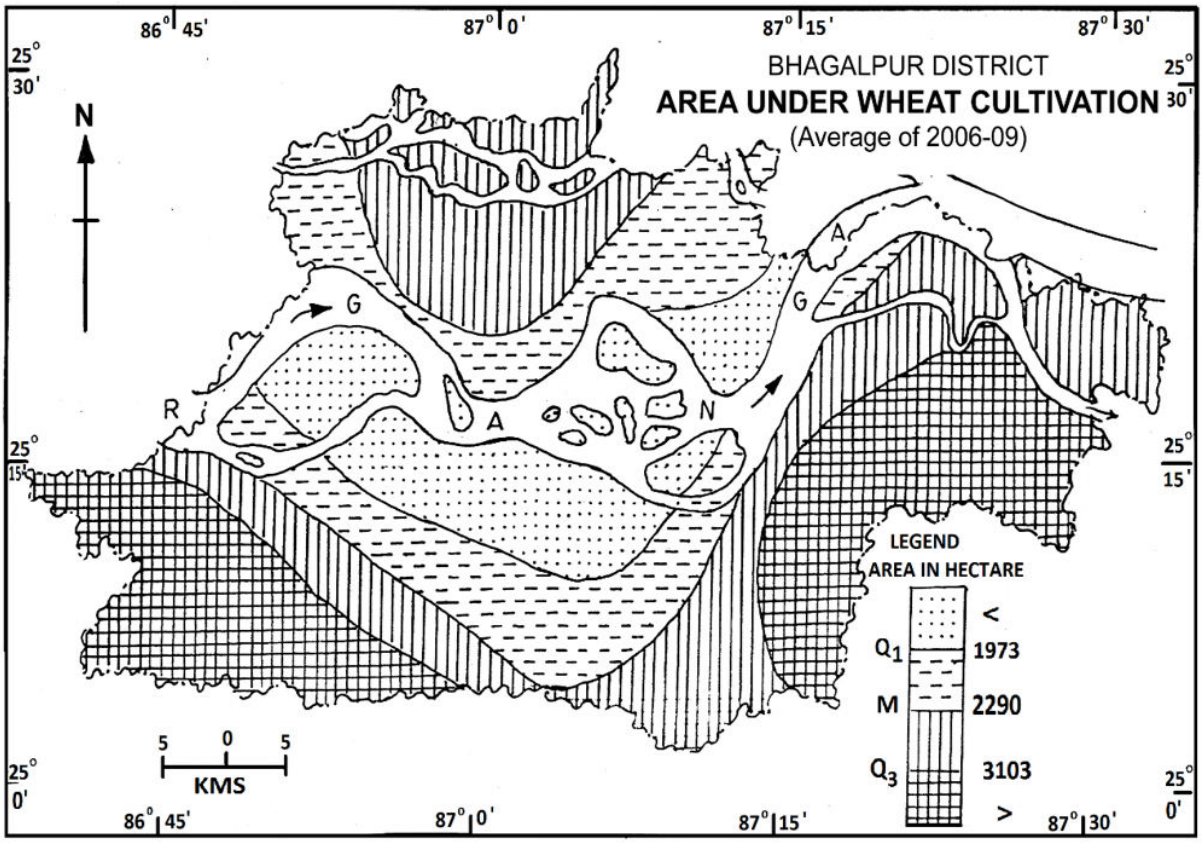

Fig: 2.2

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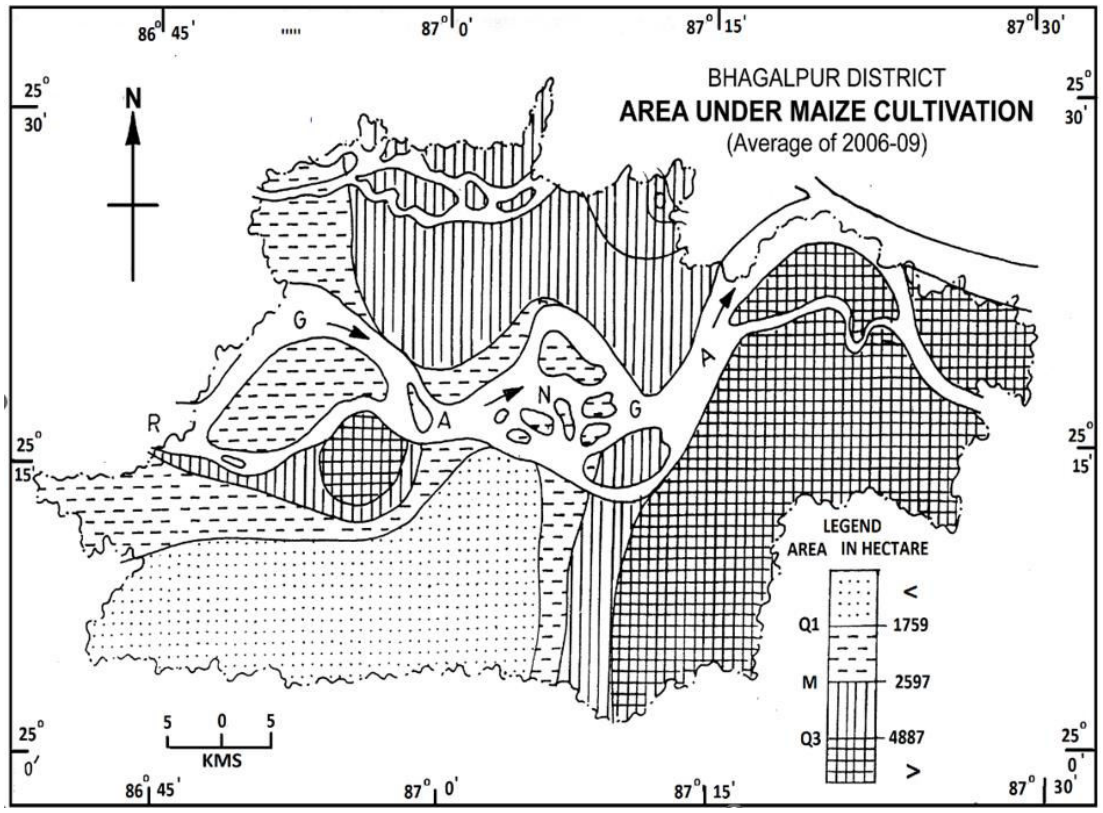

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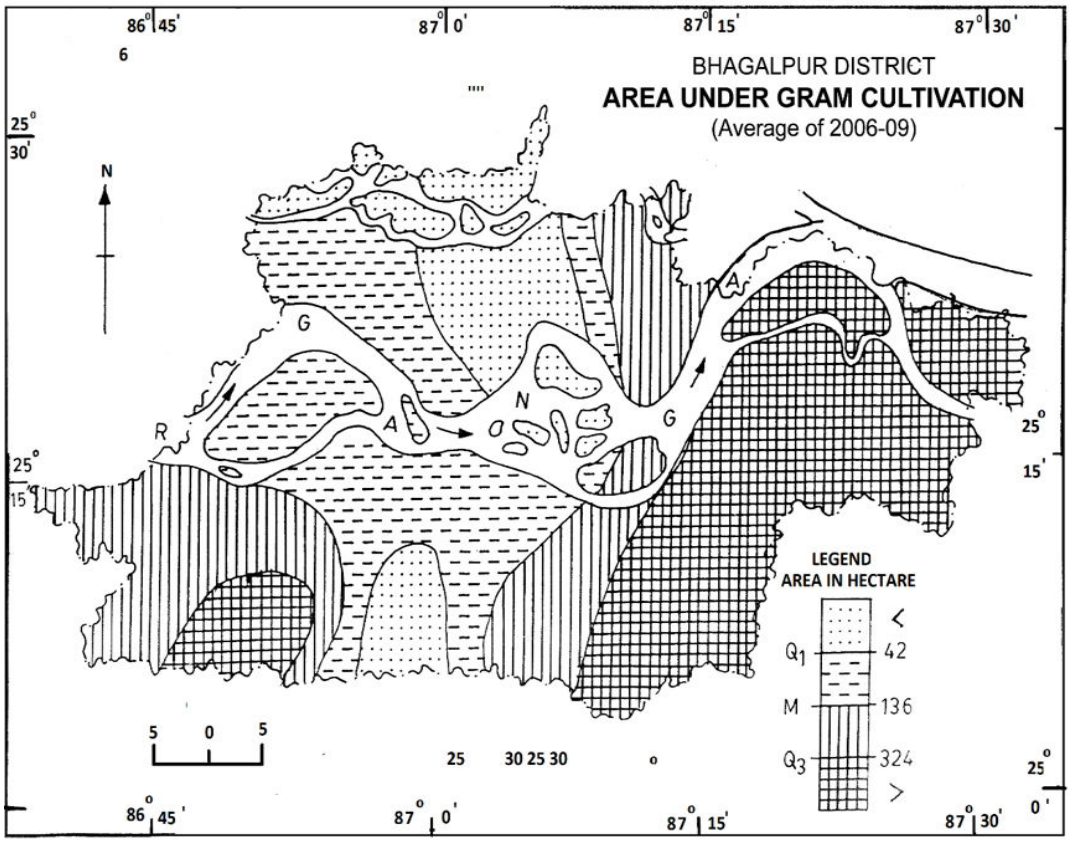

Fig: 2.4

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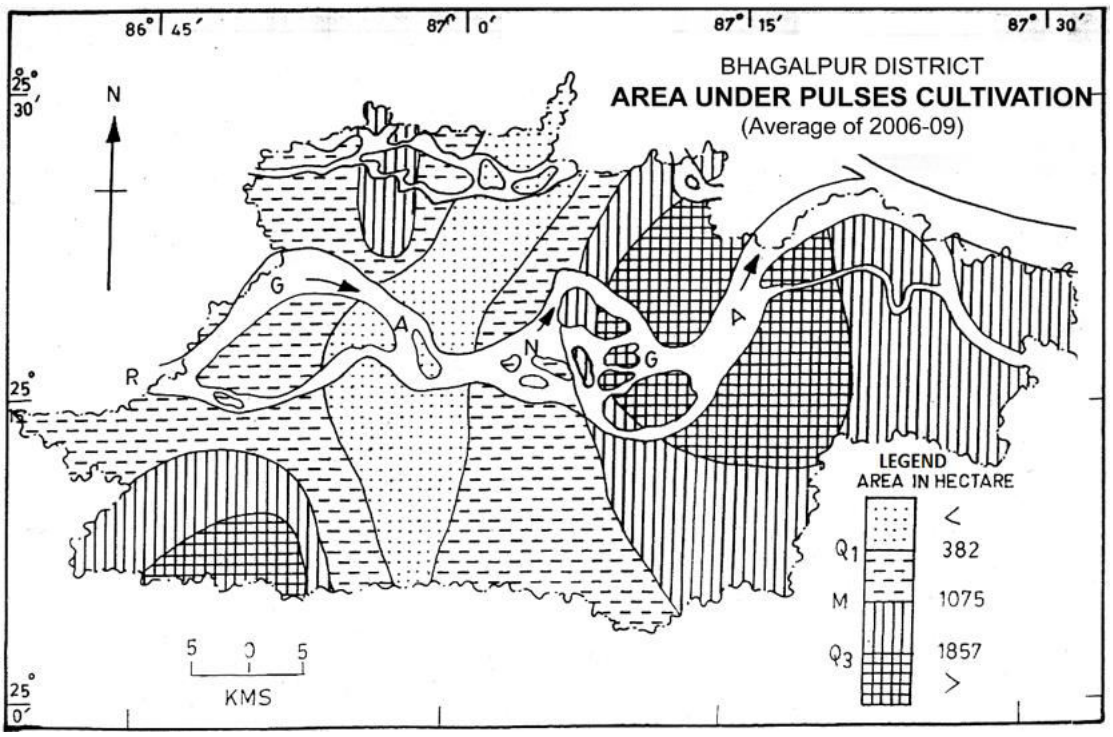

Fig: 2.5

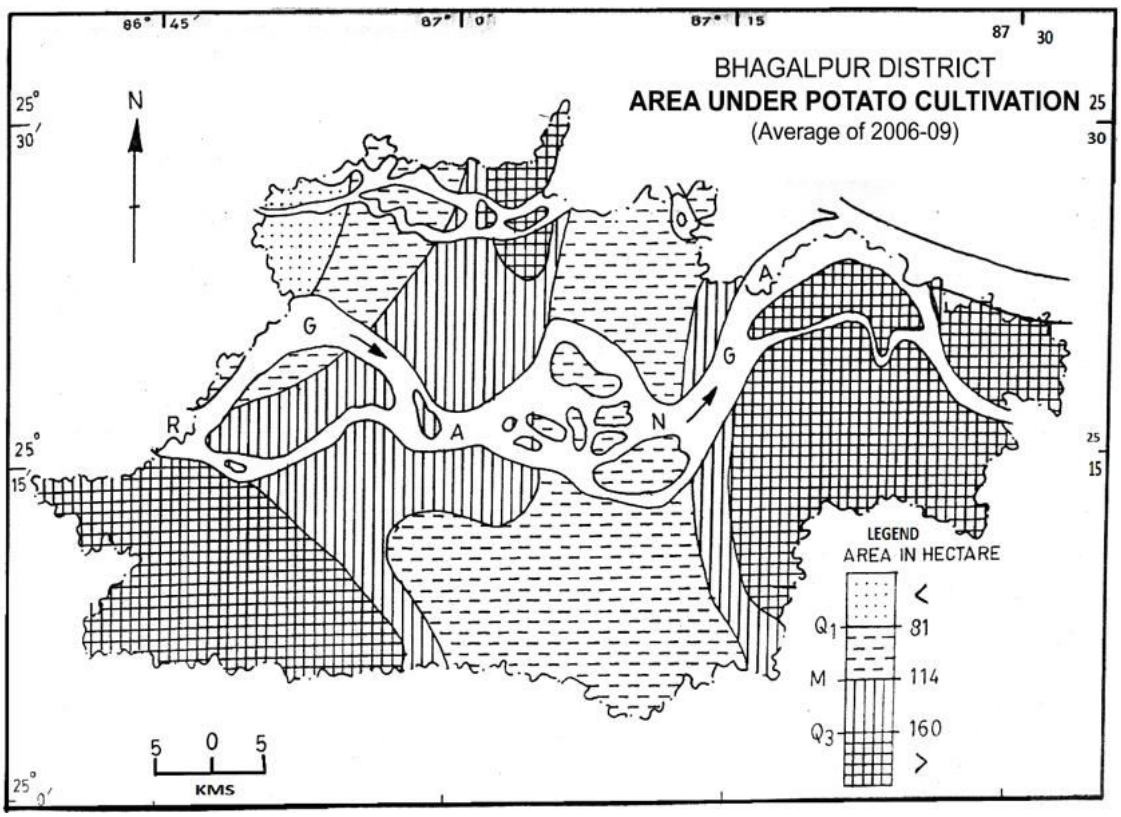

Fig: 2.6

Single cropped land accounts for 67 per cent of the total cropped area, while double cropped 17 per cent, treble cropped (9 per cent) and multiple cropped 5.8 per cent. Monoculture is

getting absolute preference due to increasing pressure of population on cropped land. The average size of farm holding is roughly 36 hectares. The sedentary subsistence farming meet directly to raise food crops for direct human consumption. Except diara belt. paddy is cultivated as monocrop covering nearly 53 per cent of the N.S.A. (average 2006-09) followed by maize (7.1 per cent), pulses (14.2 per cent), wheat (12.7 per cent), barley (9.3 per cent), and oil seeds (2.5 per cent). The production of barley and oilseeds is insignificant in the district as its percentage did never exceed 10 in any block

CONCLUSION : It is obvious from above analysis and discussion that the region under study has immense potentialities for future development. Efficient utilization of agricultural resources necessitates, a prior preparation of an exhaustive inventory of potential agricultural attributes of land use, knowledge of their present status of utilization and problem faced at regional and local levels. The policy, progarmmes and plans for the development of agriculture framed by the Central as well as State Government must be followed in true sense of implementation. So that the agriculture of this area may be boon for feeding the teeming millions.

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