



BACKGROUND INFORMATION ABOUT THE DISTRICT

3.1 General feature :

Muzaffarpur district is situated in the Northwest alluvial plain zone among the present six agro-climatic zones of undivided Bihar. It mainly comprise the basins of Gandak, Burhi Gandak Laskhan deyee and Bagmati rivers. This district is bounded in the north by Sitamarhi and East Champaran, in the south by Vaishali and Chapra, in the east by Darbhanga and Samastipur and in the west by Saran and Gopalganj. The district is situated between 24°54'N and 26°23' latitudes and 84°53'E and 85°45' longitude with a height of 51.81 m from MSL.

Administratively the district is divided into two subdivisions, sixteen blocks (one recently formed), twenty eight police stations, eleven outposts, six TOPs, 344 panchayats, 1852 villages (1712 inhabited and 140 uninhabited).

Muzaffapur has a natural river system and forming the distinct tracts. These tracts are richest, most fertile and productive tract of the district consisting of large block of upland, midland and chaurs (waterlogged lowland).The important rivers of the district are Baghmati, Burhi Gandak, its tributary the Lakhandai and the Baya.

The district is very rich in flora, fauna, avifauna and fish varieties in different zones. Besides other commodities litchi (*Litchi chinensis*) is the identification mark of the district in the country due to its typical agro-ecological situation & productivity. Every Agro-Ecological Situation in the district has its own production system, technological gaps and other limitations like marketing, storage, processing, etc.

AGROCLIMATIC ZONES OF UNDIVIDED BIHAR

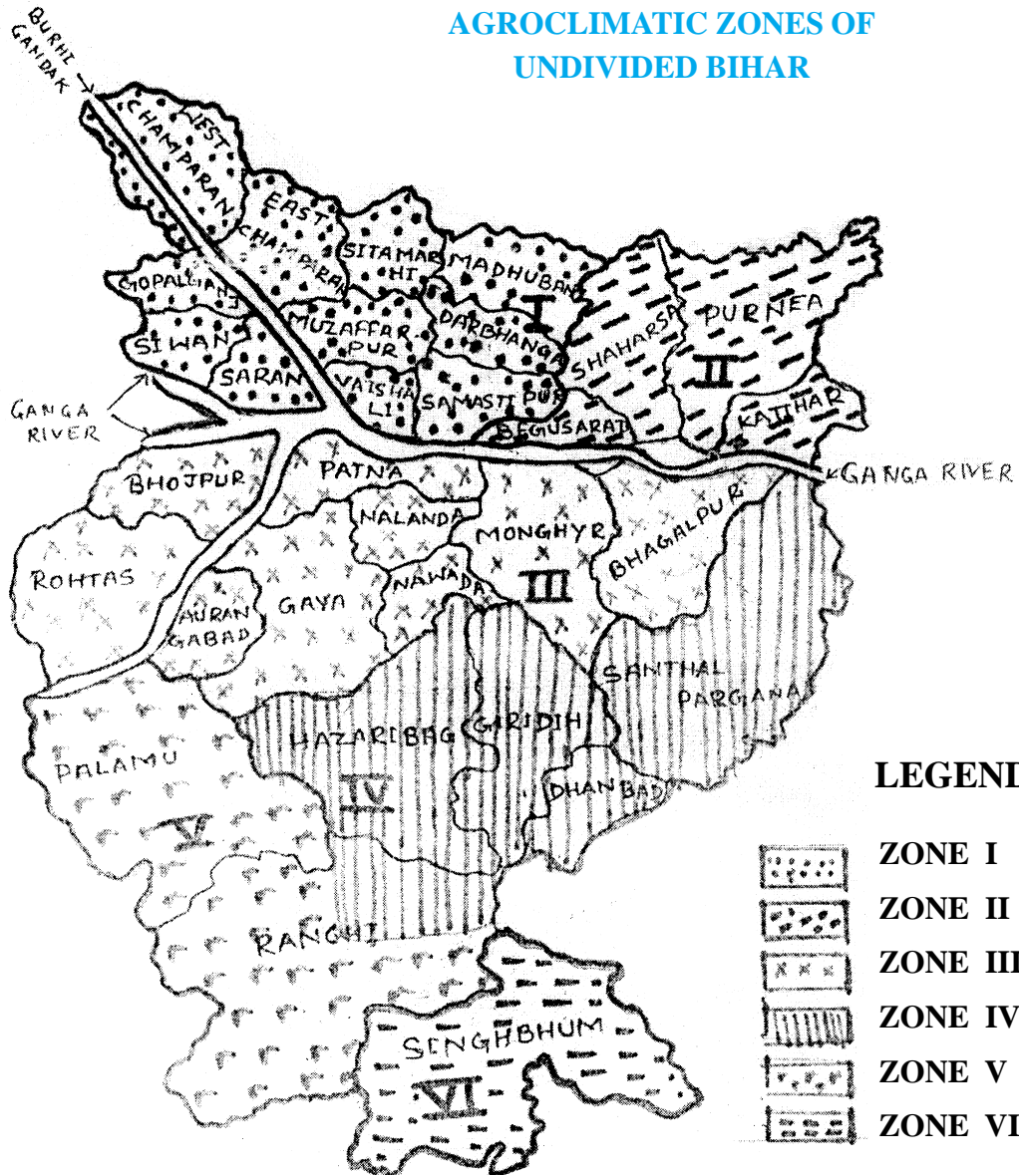


Table No. 3A : General features of the district Muzaffarpur.

Sl. No.	Name of the block	Geographical area	No. of Gram Panchayat	No. of villages
1.	Mushari	19610	21	117
2.	Muraul	7195	8	37
3.	Bandra	12350	10	87
4.	Sakara	17492	25	121
5.	Bochaha	16140	19	134
6.	Gaighat	21342	25	84
7.	Katara	18115	18	-
8.	Aurai	19677	24	116
9.	Minapur	23660	23	154
10.	Kanti	28714	30	176
11.	Motipur	30056	34	137
12.	Sahebganj	20079	18	131
13.	Paroo	29150	28	158
14.	Saraya	24650	24	154
15.	Kudhani	26652	37	166
Total :		303332	344	1852

Source : District Agriculture Office Muzaffarpur

3.2 Demographic Structure

The total geographical area of the district is 3122.56 sq.kms with a population of 4180226. The male number is 2158664 and female 2010464 constituting a male/female ratio of 1000:931. The urban population is 274965 in which Muzaffarpur town alone contribute 241107. The SC population is 548752 constituting 13.1% of the population whereas ST population is almost nil. Out of the 851995 literate 603298 are male and 248697 are female. The population density is 1340 sq.km with a 2.5%/year or 25% decennial population growth rate. The population group between 0-6 years of age is 804651.

Table 3B : Demographic information for the Muzaffarpur district.

Sl. No.	Name of Block	As per semi census 2000 (Unpublished population)	Literacy (%)	Male	Female	Labour	
						Agril. Labour	Other labour
1.	Mushari	1532824	60	700029	742807	26474	69582
2.	Muraul	140322	61	70765	69556	19384	8115
3.	Bandra	144748	42	81674	69574	20314	9648
4.	Sakara	193712	58	100122	93590	20807	10926
5.	Bochaha	138530	47	71320	67210	24536	4602
6.	Gaighat	160335	48	85099	75236	25400	7269
7.	Katara	15014	48	73043	73992	19263	33172
8.	Aurai	170887	41	90296	80591	28033	7070
9.	Minapur	200628	76	106851	93777	28525	5227
10.	Kanti	264878	62	138962	125916	32142	15300
11.	Motipur	226999	65	117554	109445	28490	8553
12.	Sahebganj	150373	48	7823	72140	18236	5127
13.	Paroo	232627	40	117336	115291	25000	8118
14.	Saraya	204815	47	105579	99236	21841	6036
15.	Kudhani	271904	42	141801	130103	29266	13266
	Total :	4180226		2158664	2010464	367763	201553

Source : District Agriculture Officer, Muzaffarpur

3.3 Pattern of land ownership

The total member of operational holding in the district is 282556, out of this the maximum is under marginal (25.94%) followed by medium farmers (6.41%), large farmers (2.5%), and very large farmers (0.26%) respectively. More than half of the farming family (64.86%) is landless. The details of land holding pattern is in Table-3C &3D.

3.4 Rainfall

The Muzaffarpur district has monsoon subtropical climate characterized by hot summer, wet monsoon and dry winter. The summer season (March to June) is characterized by gradual rise in temperature with occasional thunder showers and hail storm. Occasional rain during this period is 60 to 120 mm. The maximum temperature during this period ranges from 32° to 40°C and the minimum ranges from 20 to 26°C. Relative humidity during this period is between 50 to 75%.

The monsoon season (June to September) is characterized by cloudy weather, high humidity, frequent rains and variable surface wind with a moderate rainfall between (1100-1300 mm). The maximum temperature during this period ranges from 31°-34°C and lowest from 25-26°C. The relative humidity during this period is high between 75 to 81%.

The post monsoon period (October-November) is followed by winter season (December-February). In post monsoon maximum temperature falls marginally from 31° to 28°C but minimum temperature falls from 21° to 15°C and relative humidity from 81% to 68%. The winter is cool and dry and at times temperature falls to 9°C. Relative humidity remains between 70% to 75%. Rainfall during this period ranges between 35 to 40 mm which is evenly distributed. The details of rainfall is given in Table 3E,3F and 3G.

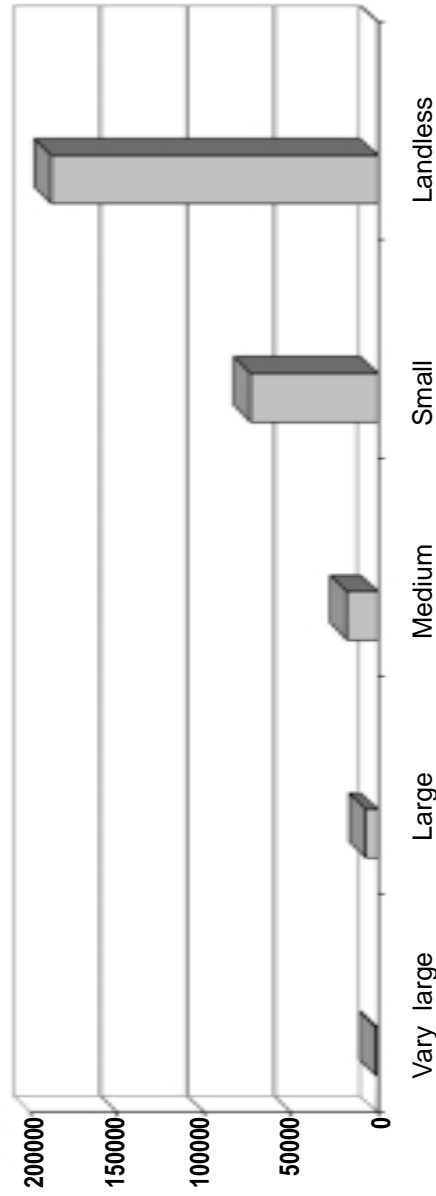
Table 3C : Information on operational land holdings.

Sl. No.	Name of the block	Operational holdings(Nos.)				
		Very large	Large	Medium	Small	Landless
		No. of holding	No. of holding	No. of holding	No. of holding	No. of holding
1.	Mushari	90	410	1225	8915	20212
2.	Muraul	25	112	980	3225	7103
3.	Bandra	5	80	325	1580	4511
4.	Sakara	70	320	1110	5615	15684
5.	Bochaha	65	325	810	7825	14498
6.	Gaighat	140	271	675	6950	16800
7.	Katara	44	414	711	5580	17325
8.	Aurai	2	20	583	2637	8215
9.	Minapur	40	77	980	2810	9115
10.	Kanti	75	230	1015	2200	2816
11.	Motipur	71	565	2312	6465	20974
12.	Sahebganj	32	88	164	815	18980
13.	Paroo	0	924	4986	12389	11782
14.	Saraya	100	102	1020	2011	5021
15.	Kudhani	0	3130	1230	4300	9250
	Total :	759 (0.26%)	7068 (2.50%)	18126 (6.41%)	73317 (25.94%)	188286 (64.86%)

Source : District Agriculture Officer, Muzaffarpur

Table 3D : Comparative figure of operational land holdings

Holding	Area in Hec.
Very Large	>10
Large	4 to 10
Medium	2 to 4
Small	1 to 2
Landless	>1



Source : District Agriculture Officer, Muzaffarpur .

Table 3 E : Block wise rainfall received for the last three years

Sl. No.	Name of the block	Information on Rainfall in mm		
		1996-97	1997-98	1998-99
		Mm	Mm	Mm
1.	Mushari	155	1509	1380
2.	Muraul	1516	1657	1200
3.	Bandra	-	-	-
4.	Sakara	1842	2276	1379
5.	Bochaha	1208	1397	986
6.	Gaighat	1244	1069	776
7.	Katara	783	1141	1128
8.	Aurai	999	1117	803
9.	Minapur	1108	1336	1140
10.	Kanti	1473	970	431
11.	Motipur	1241	1171	1208
12.	Sahebganj	997	1057	1179
13.	Paroo	1355	1085	745
14.	Saraya	1455	1177	1300
15.	Kudhani	1224	1227	1220

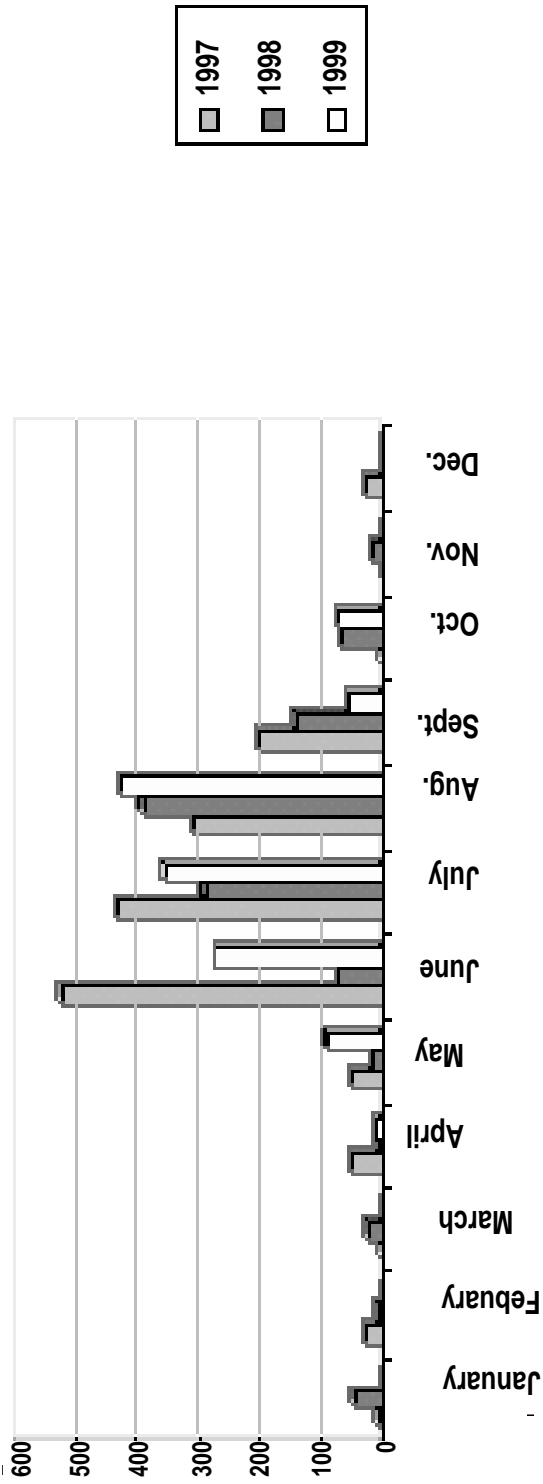
Source : District Agriculture Office, Muzaffarpur

Table 3 F : Average rainfall of District for the last ten years

Sl. No.	Name of the month	Normal rainfall	Average rainfall of 1990	Average rainfall of 1991	Average rainfall of 1992	Average rainfall of 1993	Average rainfall of 1994	Average rainfall of 1995	Average rainfall of 1996	Average rainfall of 1997	Average rainfall of 1998	Average rainfall of 1999
1.	Jan	15.0	1.2	18.3	1.2	12.4	48.0	14.6	29.2	10.6	47.5	0.0
2.	Feb	16.8	24.9	3.9	0.7	13.8	33.3	14.1	29.5	28.3	9.8	0.0
3.	March	18.4	18.6	9.4	0.0	7.2	0.4	1.9	2.5	3.0	25.8	0.0
4.	April	13.7	9.7	16.1	0.9	43.4	8.2	0.0	1.8	49.4	8.8	12.1
5.	May	51.3	45.9	33.9	54.3	64.9	39.5	1.8	3.8	51.6	19.4	92.4
6.	June	178.1	100.1	09.5	73.0	148.1	93.8	145.3	332.7	531.0	73.7	275.3
7.	July	315.0	396.0	507.4	204.6	170.5	201.9	224.0	252.9	413.1	294.5	360.6
8.	Aug	322.6	122.4	376.6	210.0	448.2	200.7	455.7	396.6	315.0	393.2	417.8
9.	Sept	223.3	204.3	161.4	49.8	289.7	202.3	171.4	128.3	205.4	147.2	56.1
10.	Oct	58.4	23.5	6.9	59.0	22.4	1.6	8.1	82.7	5.0	68.0	71.6
11.	Nov	7.1	0.0	0.0	0.4	31.9	15.4	27.9	0.0	1.0	18.4	0.0
12.	Dec	3.1	0.0	6.4	0.4	0.0	0.4	15.8	0.0	30.1	2.6	0.0
	Total	1212.8	936.6	922.8	634.3	1272.5	8455.5	1080.5	1259.8	14463.5	1078.9	1296.2

Source : District Agriculture Office, Muzaffarpur

**TABLE 3 G : MONTHWISE ACTUAL RAINFALL OF THE DISTRICT
FOR THE LAST THREE YEARS 1997,98,99**



Rainfall in mm

Source : District Agriculture Office, Muzaffarpur

3.5 Land use pattern

Out of total geographical area of 3.15 lakh ha of this district, the net average area sown is 2.19 lakh ha and the gross cropped area is 2.56 lakh ha. Thus, nearly 85.5% area is cultivated and rest 15% is occupied for barren, non-agricultural use, current fallow, range land and rest barren. There is no forest in the district as detailed in Table 3H AND 3I.

3.6 Irrigation

The total effective irrigated area in this district is 65.15 thousand ha (25.38%) against the potential irrigated area of 1 lakh ha (38.96%) of net cultivated area due to different reasons like unavailability of canal water during different cropping season, siltation of canal, tube well failure, electricity problem etc. Out of this, the area under canal irrigation is 0.97%, Govt. tube well 0.58%, private tube well 21.03%, lift irrigation 0.05% and other source 2.72%. The canal irrigation is mostly due to canal system of Gandak Command in the west and south west part of the district. Private tube well is the major source of irrigation. The details of irrigated area from different source in the district is given in Table 3J & 3K.

3.7 Soils

The majority of soil of Muzaffarpur district is calcareous in nature containing upto 40% free calcium carbonate, only few blocks on its eastern edge have non-calcareous deposits. Due to canal irrigation and construction, the natural drainage of this area has been disturbed resulting into rise in water table and ultimately developing salinity in scattered patches on vast stretch of land. The situation is now that a separate class of soil as per taxonomy has come into existence.

The non-calcareous soils come under Haplaquents, Udifluvents and Haplustalfes as per soil taxonomy with inception or slight development of genetic horizons. These soils are whitish, pale yellow to olive in colour, neutral to moderately alkaline in reaction, of medium light to medium heavy in texture on surface and underlain by medium to heavy textured soils. Soil series near the streams are coarse textured upto an appreciable depth. Soils on lowlands have relatively heavy texture.

Table 3H : Land use classification

Sl. No.	Name of the block	Geographical area	Cultivable area (hec.)	Cultivated area (ha)	Cultivable waste	Current fallow	Forest	Pasture	Land put to non agri. use	Land under misc. plantation	Barren & Uncultivable land (Waste land)
1.	Mushari	19610	14571	10040	-	255	-	-	4132	1015	127
2.	Muraul	7195	6090	6664	6	170	-	-	2345	1210	328
3.	Bandra	12350	10000	NA	-	-	-	-	-	-	-
4.	Sakara	17492	13502	6497	-	282	-	-	3704	1002	36
5.	Bochaha	16140	13769	11165	-	15	-	6	3343	600	520
6.	Gaighat	21342	16536	10478	-	-	-	24	3079	888	-
7.	Katara	18115	14265	8666	-	-	-	-	3570	290	200
8.	Aurai	19677	16519	8459	-	42	-	-	3075	460	77
9.	Minapur	23660	19160	13700	177	35	-	28	4601	1410	257
10.	Kanti	28714	23892	14352	-	82	-	-	7396	1320	348
11.	Motipur	30056	26303	14900	155	29	-	42	5956	885	812
12.	Sahebganj	20079	15290	14238	-	-	-	-	1973	910	199
13.	Paroo	29150	255227	16004	-	-	-	-	4943	450	1205
14.	Saraya	24650	21299	14809	6	10	-	50	3920	1440	136
15.	Kudhani	26652	21067	16252	-	155	-	20	4099	802	396
	Total	315509	257857	219693	344	1075	-	170	56127	12684	4640

Source : District Agriculture Office, Muzaffarpur

On the whole the organic matter content is low to medium, available N - low to medium, available P_2O_5 – low to medium and Potassium medium in these soils.

The calcareous soils come under calciorthents as per soil taxonomy with slight development of genetic horizons. The soils are white to olive grey in colour, dark grey in chaur and tals. These soils are of light or medium light texture except in low lands. These soils are moderately alkaline (7.5-8.5) and low to medium in available N, available P_2O_5 and K_2O . More than 75% of these soils are deficient in zinc and about 40% in iron and 15 to 20% in available boron.

The calcareous saline soils come under NatrustalFs as per soil taxonomy. These soils are similar to the soils of the calcareous groups except that the Usar patches has higher pH upto 9.5 or more. In fertility status these soils are more or less similar to calcareous normal soils with problematic patches.

Table 3L: Information on soil for the district Muzaffarpur.

(Classification of soil with area (percentage) under problematic soil)

Sl. No.	Name of the block	Alluvial	Micronutrient deficient soil
1.	Motipur	All the soils of the district are alluvial.	Calcareous saline deficient in Zinc (75%) Boron (30%) Iron (40%)
2.	Kanti		
3.	Sahebganj		
4.	Aurai	Eastern edge non-calcareous	Zinc deficient
5.	Gaighat		
6.	Katra		

Source : District Agriculture Office, Muzaffarpur

Table 3I : Classification of Agriculture Land in Muzaffarpur District

Sl. No.	Name of the block	Classification							Flood prone area		
		Geographical area	Cultivable land	Upland	Medium land	Low land	Deep water	Total	Every year	Occasion-ally	Total
1.	Mushari	19610	14571	3550	6730	3943	348	14571	1336	1185	3621
2.	Muraul	7195	6090	1106	2228	1306	-	6090	853	4887	5740
3.	Bandra	12350	10000	2115	4410	3100	375	10000	1840	1430	3270
4.	Sakara	17492	13502	4722	3425	4640	705	13502	250	265	515
5.	Bochaha	16140	13769	2720	9956	625	495	13796	1010	6510	7520
6.	Gaighat	21342	16536	4838	4455	3874	3359	16526	11230	5296	16526
7.	Katara	18115	14265	2206	5748	5909	402	14265	10443	3819	14262
8.	Aurai	19677	16519	686	566	15114	150	16519	16039	480	16519
9.	Minapur	23660	19160	4000	9856	4974	380	19160	425	12200	12625
Total of east Sub division		156182	124429	25947	47374	43485	1214	124429	44426	36072	80498
10.	Kanti	28714	23892	5910	11900	5992	90	23892	1340	-	1340
11.	Motipur	30056	26303	6575	10319	9499	975	26303	1010	-	1010
12.	Sahebganj	20079	15290	4073	4480	2998	3999	15290	1135	2025	3140
13.	Paroo	29150	255227	6835	11862	2830	4000	255227	2200	5000	7200
14.	Saraya	24650	21299	4860	9147	7184	608	21299	2407	-	2407
15.	Kudhani	26652	21067	5267	16800	5000	-	21067	2208	3096	5304
Total of west Sub division		159327	133828	33521	58508	33503	8872	133828	10300	10101	20401
Total		315509	257857	59467	105882	79988	15086	257857	54726	46173	100899

Source : District Agriculture Office, Muzaffarpur.

3.8 Banking facilities

The status of banking facilities is very sound in the district having one district central cooperative bank. However 10 branches two are urban and one is semi-urban. Land development bank is having six branches. The Vaishali Kshetriya Gramin Bank with its head office at Muzaffarpur, on which 9 are urban and 16 are semi-urban . There are seventeen commercial banks having 106 branches. Details of banks in block wise is presented in Table 3M. Above banks to play their role in the development of the area by development through credit. NABARD officers are being approached by ATMA officers on request of farmers to ascertain timely loan.

3.9 Processing units :

Limited processing facilities are available for agricultural and horticultural produce which limits value addition for farmers produce. However , Sudha Dairy is pioneering in processing of dairy products. The details are descried in table 3N, 3O.

3.10 Agricultural Marketing : The status, constraints & prospects

The importance of providing remunerative price to the farmers can hardly be exaggerated for raising out-put. The motivation to produce more finally comes from the price that the farmer gets from his produce, at the same time it is equally important to protect the interest of the consumers. If the consumer do not get agricultural commodities and food grains at a reasonable price, increased production has no meaning in the welfare of society. Thus, a good marketing system protects the interest of both producer and consumer, which is a pre-requisite for any planned economic development.

Status

The agricultural marketing in the district can be broadly classified in to two categories – The village hat or Mandi and the other the regulated market.

There are three regulated markets in the district, these markets get loan facilities from various banks & co-operative societies. There are 51 (fifty one) rural & semi-urban branches and 45 urban branches of banks. Apart from these 72 RRBs, 6 LDBs, 5 CCB, 163 pacs, and ten FSS in present in the district. The assess of farmers is more to the hats and Mandis for selling their produce with a minimum interference.