

District Profile

Chhotaudepur is a pre-dominantly tribal district. It was carved out of Vadodara district in 2013 with its headquarters at Chhotaudepur town. The district headquarters is located 110 km away from Vadodara. It shares its borders with the two States of Madhya Pradesh & Maharashtra. The district was created to facilitate decentralization and ease of access to government services. It has six blocks, viz., **Chhotaudepur, Pavi Jetpur, Naswadi, Kawant, Bodeli & Sankheda**. The workforce in the district is pre-dominantly engaged in agriculture and also consists of migrant labour. *Sankheda* is famous for its ethnic furniture and is an industry by itself. Chhotaudepur district has a large deposits of dolomite, fluorite, granite and sand, all of which are mined. Soil of the district is black to sandy-loam type.

Agriculture sector engages vast segment of the total workforce. Consequent upon availability of improved irrigation potential, 'Agriculture' sector is gaining advantage and people are taking up the farming activities with vigor. The rural households coming in Below Poverty Line (BPL) category comprise tribal population (79.94%) spread over in six blocks. The district provides tremendous scope for horticulture and agro-processing activities.

The major crops grown in the district are cotton, maize, tuwar and paddy. Banana, Mango, Guava and Papaya are the main horticultural crops. Brinjal, Okra, Cluster bean and Tomato are cultivated extensively in the district. In some patches, cultivation of Ginger, Turmeric and Fenugreek is also taken up.

1. Agro-climatic conditions

Based on the agro-climatic conditions of the regions, Gujarat has been divided into 8 Agro- Climatic zone. Chhotaudepur district falls under 'Middle Gujarat' Agro-climatic zone which is categorized as semi-arid zone. Cash crops occupied substantial area as compared to other crops in the district. The major crops grown in the district are Cotton, Tur, Maize, Paddy, Soybean, etc. Banana, Mango, Papaya etc. are the main horticultural crops. Vegetables are grown extensively in all the 6 blocks. As monsoon continues to be erratic, greater focus on water resource management are needed. Farmers need to be incentivized for saving water by adopting suitable cropping pattern on their farms. There is a need for conserving soil moisture so that "more-crop-per-drop" can be achieved.

1.1.1 Soil Type

Soil type of the district is "black" to "sandy loam". District comes under the agro-climatic zone of 'Gujarat Plains and Hills Region – Middle Gujarat'. The climate is semi-arid. The average rainfall of the district is 1012 mm.

1.1.2 Cropping Area

Gujarat is a diversified agricultural economy. The State's agriculture economy has witnessed a shift towards high-value crops like cotton, fruits and vegetables and spices from low-value crops. The district with a gross cropped area of 232600 ha has cropping intensity of 122.24%. The net sown area of 190278 ha constitutes about 54.85% of the total geographical area (3,46,871 ha) and the net irrigated area (1,01,527 ha) forms 53.35% of the net sown area

(Source: District Statistical Handbook 2020-21).

LAND UTILIZATION [Ha]

Block	Total Area Reported	Forest Land	Area Not Available for Cultivation	Land for non-agricultural use	Permanent pasture and grazing land	Cultivable Wasteland	Current Fallow	Area in ha		
								Net Sown Area	Area Cultivated More than Once	Gross cropped area
Bodeli	51400	2540	1700	4200	1350	160	120	31174	7978	39152
Chhotaudepur	62410	18650	4324	4422	2850	110	206	33793	8199	41992
Jetpur pavi	62500	10280	2703	5618	2140	510	227	33250	6655	39905
Kawant	58510	15772	2975	2770	3020	1220	455	33161	6171	39332
Naswadi	53479	16422	1122	3051	2660	780	0	30535	7010	37545
Sankheda	51230	3003	1534	4865	1180	93	314	28365	6309	34674
Total	339529	66667	14358	24926	13200	2873	1322	190278	42322	232600

Landholding

Out of the total landholding of 1,13,377, 72% land holdings belong to small & marginal farmers. However, 59% of the total area is with big farmers.

Block wise Land holding pattern is as under

Block	Marginal Farmer (With agricultural land holding up to 1 ha)		Small Farmer (With agricultural land holding 1-2 ha)		Large Farmers (with land holding more than 2 ha)		Total holding	
	Number	Area (ha)	Number	Area (ha)	Number	Area (ha)	Number	Area (ha)
Bodeli	8627	4689	6946	9895	6540	22237	22113	36821
Chhotadeupur	8686	5193	7919	9909	4224	19246	20829	34348
Jetpurpavi	8672	5092	7670	10803	4212	14426	20554	30321
Kawant	6514	4113	7379	10379	5095	18787	18988	33279
Naswadi	4164	2405	4593	6581	4592	17298	13349	26284
Sankheda	5482	3254	5564	8109	6498	21654	17544	33017
Total	42145	24746	40071	55676	31161	113648	113377	194070

Block wise/Castwise Land holding pattern is as under

Block	Cast	Marginal Farmer (With agricultural land holding up to 1 ha)		Small Farmer (With agricultural land holding 1-2 ha)		Large Farmers (with land holding more than 2 ha)		Total holding	
		Number	Area (ha)	Number	Area (ha)	Number	Area (ha)	Number	Area (ha)
Bodeli	SC	149	80.00	97	146.00	125	298.00	371	524.00
	ST	1794	807.00	1054	1509.00	1252	3677.00	4100	5993.00
	Other	6683	3801.00	5793	8237.00	5162	18339.00	17638	30377.00
	Indst.	1	1.00	2	3.00	1	23.00	4	27.00
	Total	8627	4689.00	6946	9895.00	6540	22337.00	22113	36921.00
Chhotadeupur	SC	191	94.00	78	112.00	47	166.00	316	372.00
	ST	8185	4940.00	7654	9532.00	3993	18277.00	19832	32749.00
	Other	310	159.00	184	261.00	185	804.00	679	1224.00
	Indst.	0	0.00	2	3.00	0	0.00	2	3.00
	Total	8686	5193.00	7918	9908.00	4225	19247.00	20829	34348.00
Jetpur pavi	SC	130	61.00	44	60.00	13	34.00	187	155.00
	ST	2098	1101.00	1295	1810.00	590	1853.00	3983	4764.00
	Other	6444	3930.00	6331	8934.00	3607	12506.00	16382	25370.00
	Indst.	0	0.00	0	0.00	2	32.00	2	32.00
	Total	8672	5092.00	7670	10804.00	4212	14425.00	20554	30321.00
Kawant	SC	91	46.00	38	55.00	34	132.00	163	233.00
	ST	6261	3987.00	7223	10155.00	4928	18114.00	18412	32256.00
	Other	162	80.00	118	169.00	133	541.00	413	790.00
	Indst.	0	0.00	0	0.00	0	0.00	0	0.00
	Total	6514	4113.00	7379	10379.00	5095	18787.00	18988	33279.00
Naswadi	SC	80	46.00	100	145.00	49	156.00	229	347.00
	ST	3321	1899.00	3489	5004.00	3502	12621.00	10312	19524.00
	Other	763	460.00	1004	1432.00	1039	4341.00	2806	6233.00
	Indst.	0	0.00	0	0.00	2	179.00	2	179.00
	Total	4164	2405.00	4593	6581.00	4592	17297.00	13349	26283.00
Sankheda	SC	329	191.00	217	310.00	122	382.00	668	883.00
	ST	1153	655.00	1150	1746.00	1992	5697.00	4295	8098.00
	Other	3999	2407.00	4197	6052.00	4381	15462.00	12577	23921.00
	Indst.	1	1.00	1	1.00	2	14.00	4	16.00
	Total	5482	3254.00	5565	8109.00	6497	21555.00	17544	32918.00
Total		42145	24746.00	40071	55676.00	31161	113648.00	113377	194070.00

Land holding pattern in the district is as under:

Category	Number ('000)	Area('000 ha)
Marginal Farmer (With agricultural land holding up to 1 ha)	42.04	25.75
Small Farmer (With agricultural land holding 1-2 ha)	39.17	55.67
Large Farmers (with land holding more than 2 ha)	32.16	113.65
Total holding	113.37	194.07

(Source: District Statistical Handbook 2020-21)

Demographic Information for the Chhotaudepur District

Block	No.of Village	No.of GP	Total Area (Sq.mt)	literac y rate	Total Population			SC Population				ST Population			
					M	F	Total	M	F	Total	%	M	F	Total	%
Bodeli	149	81	547.13	69.97	92905	87465	180370	2158	2007	4165	2.31	52667	49618	102285	56.71
Chhotaudepur	144	49	765.46	43.51	121337	120040	241377	4066	3795	7861	3.26	106064	105442	211506	87.62
Jetpurpavi	130	57	582.32	57.66	91234	87453	178687	1740	1652	3392	1.90	78077	75125	153202	85.74
Kawant	131	54	607.76	45.96	105615	104387	210002	2669	2484	5153	2.45	98506	97897	196403	93.52
Naswadi	216	60	535.17	58.54	78838	76605	155443	696	672	1368	0.88	68972	67383	136355	87.72
Sankheda	118	50	430.87	72.27	54920	51032	105952	1703	1637	3340	3.15	29614	27527	57141	53.93
Total	888	351	3468.71	57.985	544849	526982	1071831	13032	12247	25279	2.36	433900	422992	856892	79.95

AREA, PRODUCTION OF MAJOR CROPS (Year 2021-22)

Block	Cereal Crops		Pulses Crops		Oilseed Crops		Cotton		Fruit Crops		Vegetable Crops		Flowers Crops	
	Area (ha)	Prod (Mt)	Area (ha)	Prod (Mt)	Area (ha)	Prod (Mt)	Area (ha)	Prod (Mt)	Area (ha)	Prod (Mt)	Area (ha)	Prod (Mt)	Area (ha)	Prod (Mt)
Bodeli	6401	9353.90	2493	4187.40	404	50.57	22211	3389	5869	327318	3352	68004	93	879
Chhotaudepur	16656	7971.40	5787	3270.40	588	25.52	10739	2628	746	9193	2178	39176	74	696
Jetpurpavi	14274	9970.60	2272	2677.80	771	27.41	16752	3125	1027	31871	2563	55255	102	943
Kawant	7791	6980.90	6734	2517.00	64	30.25	14128	3045	225	4183	2375	45719	47	435
Naswadi	6568	3429.70	2935	2600.60	513	198.49	19260	3868	803	33487	3039	61135	73	672
Sankheda	1911	3304.30	3860	3202.00	156	1.89	20703	4170	3835	215719	2019	36672	81	770
Total	53601	41010.80	24081	18455.20	2496	334.13	103793	20225	12505	621771	15526	305961	470	4395

Block	Cereal Crops						Pulses Crops					Oilseed Crops			
	Rice	Wheat	Juvar	Bajra	Maize	Total	Gram	Mung	Tur	other	Total	Groundnut	Sesame	Castor	Total
Bodeli	765	526	20	254	4836	6401	510	456	1120	407	8894	7	107	290	404
Chhotaudepur	7120	65	0	0	9471	16656	120	265	2504	2898	22443	534	54	0	588
Jetpurpavi	5230	92	0	31	9021	14374	43	54	1916	259	16646	0	58	713	771
Kawant	2327	0	0	5	5459	7791	74	126	3568	2966	14525	0	64	0	64
Naswadi	240	110	20	8	6190	6568	185	120	2310	320	9503	0	420	93	513

Sankheda	228	113	0	18	1552	1911	108	140	3581	31	5771	0	4	152	156
Total	15910	906	40	316	36529	53701	1040	1161	14999	6881	77782	541	707	1248	2496

1.1.3 Water Resources

Chhotaudepur district has a huge potential of Surface Water Resources. Water of the *Narmada* river has been harnessed by Sardar Sarovar Dam and, consequently, a large part of the district now forms a part of *Narmada Canal Command*. *Orsang* is a major river in the district. Besides, other rivers are Bharaj, and *Hiran* which do sustain some base flow up to February / March supplementing irrigation needs along the course.

Rain water is the major source for recharge of ground water in the district. District has average rainfall of 1012 mm. As per the available information, there is excess rainfall in the district in the last three years. Besides natural source, artificial sources can also be developed to recharge the ground water. The district has moderate to high rate of ground water development, mainly in areas of western part where multi-layer aquifer systems exist.

At present, the stage of ground water extraction for the district is 41.31% (Stage of groundwater extraction is the ratio of annual ground water draft to net annual ground water availability in percentage). Total recharge excluding natural discharges was 49296 Ham and total ground water extraction was 20362 Ham, making 28934 Ham more ground water available during 2020. Since, the stage of ground water is less than 70%, Chhotaudepur is categorized as safe district (Source: CGWB).

1.1.4 Farm Mechanization

Indian agriculture is diverse and capable of producing most of the food and horticultural crops of the world. Agriculture Mechanization is crucial for modernization and commercialization of agriculture as it improves productivity and timeliness of agriculture operations, aids in value addition, brings down the cost of cultivation and enables climate change adaptation. The growth of farm mechanization sector is impeded by some of the characteristics of Indian agriculture such as fragmentation of land holdings, a large presence of small and marginal farmers, unaffordability of farm technology and the practising of subsistence agriculture. About 85 % of the total land holdings are small and marginal in size, and hence require appropriately designed machinery, tools and implements. Effective use of agriculture machinery helps to increase productivity & production of output, undertake timely farm operations and enable the farmers to quickly rotate crops on the same land. By raising a second crop or multi-crops from the same land, there is improvement in the cropping intensity and making agricultural land commercially more viable.

At present, there are 3525 threshers, 36 power tillers, 7445 Diesel engines and 20221 pump set in the district. Details are as under:

Block	Harvester/ Thresher	Power Tillers	Diesel Engine	Pump set
Pavi Jetpur	214	5	3600	3017
Chhotaudepur	110	7	1428	2742
Kawant	131	6	1264	3405
Naswadi	235	11	505	2259
Sankheda	2822	5	648	8511
Bodeli	13	2	0	287
Total	3525	36	7445	20221

(Source DAO Chhotaudepur 2016-17)

1.1.5 Plantation & Horticulture

Horticulture sector that includes production, post-harvest management, processing, marketing and export of wide range of crops such as fruits, vegetables, flowers, spices, plantation crops, medicinal and aromatic plants contributes significantly to the economy of the State as well as Country. Growing plantation & horticulture crops is an ideal option to improve livelihood security, enhance employment generation, attain food & nutritional security and increase income through value-addition. Since the past decade, India has witnessed a huge demand for horticultural produce from domestic market due to increase in per capita income and shift in consumption pattern of the population and international markets as well. This phenomenon has provided a big opportunity to the farmers for fetching higher income through high-value horticultural crops.

The agro-climatic conditions of the district are conducive to development of various

horticulture crops. Horticulture crops occupy 14.77% (28112 ha) of the net sown area. The main horticulture crops are - Fruits: Mango, Papaya, Custard apple, Guava, etc.; Vegetables: Brinjal, Okra, Tomato, Cluster bean, Cucurbits, etc.; Flowers: Marigold, Rose, etc.; Spices: Ginger, Turmeric. The area & production shows slight increase in the last three years. Details for the previous three years are as under:

Particulars	2018-19		2019-20		2020-21	
	Area (ha.)	Prod. (MT)	Area (ha.)	Prod. (MT)	Area (ha.)	Prod. (MT)
Fruits	11976	561581	12270	590684	12132	591817
Vegetables	13818	269101	14564	285428	14704	284957
Spices	775	11231	790	11460	805	11673
Flowers	608	5830	579	5589	471	4403
Total	27177	847743	28203	893160	28112	892850

(Source-DoH GoG)

Production of Major Horticulture Crops in the last 2 Years:

Sr. No.	Crop	2019-20		2020-21	
		Area (ha)	Prod. (MT)	Area (ha)	Prod. (MT)
1	Mango	2080	13728	2095	13932
2	Guava	520	8788	525	8636
3	Custard Apple	468	4961	473	5052
4	Tomato	4569	135242	4678	136130
5	Okra	2983	37735	2998	38075
6	Brinjal	2358	47632	2361	44363
7	Ginger	373	7624	375	7688
8	Turmeric	245	3491	250	3625
9	Rose	240	2268	200	1800
10	Marigold	248	2455	210	2058

(Source-DoH GoG)

1.1.6 Forestry and Waste Land Development

Forests are essential for sustenance of life as well as for maintenance of ecological, biological and environmental equilibrium. Besides, their role is crucial in meeting the fuel wood, fodder, small timber and other forest produce requirements of the rural population. The National Forest Policy 1988 recommends coverage of at least 33% of the geographical area under forest & tree cover to maintain the ecological balance of any region which is envisaged through sustainable interventions. As per latest India State of Forest Report, 2021 the total Forest and tree cover in Gujarat is 11.09% of the State's geographical area which is far below the recommendations of the National Forest Policy, 1988. According to rainfall pattern, the State is divided into eight agro-ecological zones wherein maximum area of the State is in Arid zone while minimum area is under heavy rainfall zone. The average rainfall of the district is 1012mm.

Availability of forest cover in the blocks are as under:

Block	Forest area (ha)
Chhotaudepur	18650
Pavi Jetpur	10280
Kawant	15772
Naswadi	16422
Sankheda	3003
Bodeli	2540
Total	66667

(Source –DAP Chhotaudepur)

1.1.7 Animal Husbandry – Dairy

Dairy farming is one of the major subsidiary activities in the district providing employment opportunities to the rural poor. The total milk production in the district during 2020-21 was 79.09 million litres. (Source: District Statistical report 2020-21). The per capita availability of milk per day in the district is 202 gms as against the State average of 617 gms per day and recommended intake of 250 -300 gms per day. There is, thus, a good scope to increase the production of the milk in the district. Of the total milk production, 9 % comes from crossbred cows, 22% from indigenous/non-descript cows, 65% from buffaloes and 4% from goats.

As per 20th livestock census, total cattle and buffalo population in the district is 3.24 lakh and 2.09 lakh respectively. People prefer the indigenous cow over cross-breed. The average milk yield of cross-bred cows, indigenous cows and indigenous buffalo is 8.4 kg, 3.68 kg and 4.5 kg per day respectively. There exists a wide gap between the average yield and attainable yield and / or potential yield which offers scope for improvement in productivity.

Animal husbandry (particularly *Mehsani* / *Surati* buffalo) is the main sector of the farming system in district. This sector's vast potential can be harnessed for growth in employment and income. The emerging efficient and modern system of marketing and processing will certainly provide a boost to this sector in the district. Farmers of the district have a long tradition of rearing animals for milk production; dairy farms provide employment to a large number of landless families in rural areas.

1.1.7.1.1 Dairy animals -Population/Productivity/ Share in total Production - District & State

Sr. No.	Description	Place	Cows (CB)	Cows (Indigenous)	Buffaloes	Goats
1	No. of productiveAnimals ('00')	Chhotaudepur	262	1273	2859	1861
		Gujarat	17907	31985	60447	32233
2	Productivity (milk yield per day per animal) (kg)	Chhotaudepur	5.47	2.78	3.68	0.33
		Gujarat	6.43	2.76	3.39	0.28
		Gujarat	25.57%	22.14%	50.08%	2.20%

Source : 37th Livestock survey report of Gujarat 2019-20 (undivided vadodara)

2.1.1 Animal Husbandry - Poultry

Poultry farming can be taken on a commercial basis and also as rural backyard units. They provide supplementary income to the under-employed rural poor besides providing nutritional security. Poultry is an important activity under Animal Husbandry and good scope exists in Chhotaudepur for poultry farming in view of the ever-increasing demand for poultry meat and eggs. As per the 20th Livestock Census 2019, there were about 335932 poultry birds. The egg production in undivided Vadodara during 2019-20 was 327 lakh which is 1.69% of the total eggs production in the State (Source:37th survey report, GJ Govt). The per capita eggs availability (in undivided Vadodara) is very low i.e., 7.84 eggs per annum, against the State average of 32 eggs/ annum (Source: 37th Survey Report, GJ Govt).

1.1.8 Animal Husbandry – Sheep, Goat, Piggery, etc.

As per the 20th livestock census, goat and sheep population as on 31 March 2019 was 1,83,686 and 87 respectively. Goat rearing activity is traditionally undertaken mostly in tribal areas. In fact, very meager financing is taking place for sheep rearing. Piggery development is not taking place in the district.

in Nos.

Block	Cow	Buffalo	Sheep	Goat	Horse	Total
Bodeli	54596	42959	22	15180	14	112771
Chhotaudepur	64745	45197	17	69768	28	179755
Jetpurpavi	59170	53793	1	34201	9	147174
Kawant	67712	29185	2	33620	35	130554
Naswadi	64840	19786	11	20434	59	105130

Sankheda	13154	18776	34	10483	10	42457
Total	324217	209696	87	183686	155	717841