

## CHAPTER IV.

### PRODUCTION AND DISTRIBUTION.

#### SECTION A.—AGRICULTURE, ARBORICULTURE AND LIVE STOCK.

Table No. XIV. gives general figures for cultivation and irrigation, and for Government waste land ; while the rainfall is shown in Tables Nos. III. and IIIA. and IIIB. Table No. XVII. shows statistics of Government estates. Table No. XX. gives the areas under the principal staples, and Table No. XXI. the average yield of each. Statistics of live stock will be found in Table No. XXII. Further statistics are given under their various headings in the subsequent paragraphs of this chapter. Land tenures, tenants, and rent, and the employment of field labour have already been noticed in Chapter III., Section D.

(The quality of crops is reported by the Deputy Commissioner to be improving steadily, and wheat, tobacco, cotton and sugar-cane to be taking the place of inferior crops, such as *jawár*, *bágra* and *moth*. *Bágra* is now extensively grown only in the Pipli *tahsil*. The cultivation of cotton has largely increased of late years, the annual yield being now double the yield of 10 years ago. These improvements are the result merely of an increase in material prosperity, enabling the peasantry to incur a larger outlay upon their farms. Throughout the greater part of the district the regular two-year course of agriculture prevails, land lying fallow for a whole year and then being cultivated for two successive crops. The benefits of the long fallow are well understood, and it is only in the exceptional circumstances of irrigated lands, or of an unusually favourable rainfall, that the practice is departed from.)

The total annual fall of rain and the manner in which it is distributed throughout the year are shown in Tables Nos. III., IIIA., and IIIB. The seasons, so far as they affect the staple food grains, have been discussed in Chapter III., page 31.

(Table No. XIV. gives details of irrigation. Further information will be found at pages 177 to 203 of Major Wace's Famine Report, compiled in 1878. At that time 12 per cent. of the cultivation was irrigated from canals, 6 per cent. from wells, 1 per cent. was flooded, and the remaining 81 per cent. was wholly dependent upon rain. But the area of canal irrigation seems to have been largely over-estimated, and later statistics show the total irrigation of all kinds at less than 10 per cent. of

#### Chapter IV, A.

#### Agriculture, Arboriculture and Live Stock.

General statistics of agriculture.

General standard of agricultural practice.

The Seasons :  
Rainfall.

Irrigation.

## Chapter IV, A.

Agriculture, Ar-  
boriculture and  
Live Stock.

## Irrigation.

Agricultural  
implements and  
appliances.Manure and ro-  
tation of crops.

the cultivated area of the district. The number of wells then existing in the district was 6,675, of which 2,836 were unbricked. Their average depth to water was 39 feet, and the maximum depth about 70 feet. The cost of a masonry well was returned at Rs. 500, and it required two pairs of bullocks which cost Rs. 120. Both the Persian-wheel and the rope and bucket are used for irrigation.

Table No. XXII. shows the number of cattle, carts, and ploughs in each *tahsil* of the district as returned in 1878-79. The stock necessary for the cultivation of a small holding, say one of 10 acres, is, with the exception of the oxen, covered by a few rupees; a pair of plough bullocks may be bought for Rs. 100, and the other implements would not cost more than Rs. 10. For well-land an additional expenditure of perhaps Rs. 220 is required for two pairs of bullocks and the well-fittings.

The following description of the use of manure and the system of rotation of crops as practised in the district was furnished for the Famine Report of 1879 (page 256) :—

“The following table shows the percentage of cultivated land that is manured yearly, constantly and occasionally.

—	Constantly manured.	Occasional- ly manured	Not ma- nured.	Total.	Percentage of pre- vious column which bears two or more crops annually.
Irrigated land ...	50 8	24 15	26 77	100 100	111,000 acres, or 11·6 per cent. on 953,061 acres.
Unirrigated land ...					
Total ...	29	19½	51½	100	

“On land constantly manured the average weight of manure per acre is 300 maunds; on land occasionally manured 350 maunds per acre every fourth or sometimes every fifth year.

“Land cropped with wheat has generally lain fallow since the last *rabi* crop or on dry lands since the penultimate *kharif*; it is ploughed very often, as many as eight times, and never less than five times. In October after ploughing, wheat land is ‘closed,’ as it were, with the *sohāga*, *i. e.*, bushed and rolled, and left till sowing time in November. For gram agriculturists are not nearly so particular; the land is not ploughed often, and hard rice land is used. Barley is cultivated like wheat. Wheat and barley land is often cropped with sugar-cane and cotton afterwards, lying fallow after the *rabi* harvest in April till sowing time, which for cotton would be in *Asār* (June), or for sugar-cane till the following March, in which case the land will have had a rest of nearly a twelvemonth. After a gram crop the same land is generally cropped with rice, and in the same way gram may follow rice. Where sugar-cane is grown, the land, as explained before, lies fallow all through the *kharif*; it is ploughed a number of times—more, even, than wheat land. In *barāni* land there is usually a two-harvest (*i. e.*, a whole year’s) fallow before and after a cane crop. After ploughing in October the surface soil is closed up and smoothed across with the *sohāga* for the entire cold weather, and in March the sugar-cane is sown; after every successive shower of rain it is weeded and earthed up. Among *kharif* crops, cotton land is ploughed in the cold weather, and it is sown in June. It does not particularly matter when the other kinds of *kharif* crops, such as *makkī*, *jowār*, *bijra*, are sown, and the land does not require much previous ploughing.

“As regards rests to unmanured lands, wheat land is commonly cropped with *chari* at once after a wheat crop and then lies fallow for a whole year, and rice land and sugar-cane land also are generally left

fallow afterwards, or during the cold weather season, though if there is an early crop of rice, owing to the favourable and seasonable rain, land cropped with rice is not unfrequently cultivated with gram; but, except on *khadar* land near hill streams, gram on rice land is a catch crop. The only particular difference in treatment of manured and unmanured and irrigated and unirrigated land is, that irrigated land which has been manured will be ploughed much oftener than unirrigated land which has not been manured, but there will not be any material difference in the rotation or succession of crops.

Table No. XX. shows the areas under the principal agricultural staples. The remaining acres under crop in 1880-81 and 1881-82 were distributed in the manner shown below:—

Crop.	1880-81.	1881-82.	Crop.	1880-81.	1881-82.
<i>Kangni</i> ... ..	1,013	3,541	Chillies ... ..	584	497
<i>China</i> ... ..	12,440	14,735	Other drugs and spices ... ..	174	288
<i>Mutar</i> ... ..	1,456	1,714	Linseed ... ..	3,509	3,624
<i>Mash</i> (Urd) ... ..	16,869	18,045	Mustard ... ..	14,569	11,355
<i>Mung</i> ... ..	1,528	1,359	<i>Til</i> ... ..	1,001	2,278
<i>Masur</i> ... ..	23,110	30,953	<i>Tara Mira</i> ... ..	3,422	6,275
<i>Ayher</i> ... ..	...	661	Hemp ... ..	1,830	7,225
Turmeric ... ..	...	14	<i>Kusumba</i> ... ..	12,012	13,126
Coriander ... ..	162	42	Other crops ... ..	216	8,169
Ginger ... ..	...	1			

The staple crops are wheat, barley, and gram for the spring harvest, and rice, *jawar* (great millet), *bajra* (spiked millet), Indian corn, *moh* (*phaseolus aconitifolius*), *mash* (*phaseolus radiatus*), cotton, and sugar-cane in the autumn. Poppy and tobacco are both grown in small quantities in the spring, and hemp in the autumn; but only in quantities sufficient for local consumption.

Table No. XXI. shows the estimated average yield in lbs. per acre of each of the principal staples as shown in the Administration Report of 1881-82. The average consumption of food per head has already been noticed at page 32. The

Grain.	Agriculturists.	Non-Agriculturists.	Total.
Wheat ... ..	9,64,320	9,08,289	18,73,109
Inferior grains ... ..	10,29,042	18,16,579	37,46,221
Pulses ... ..	13,93,031	14,03,720	27,97,351
Total ... ..	42,88,093	41,28,588	84,16,681

an estimated population of 10,35,488 souls. On the other hand, the average consumption per head is believed to have been over-estimated. A rough estimate of the total production, exports and imports of food grains, was also framed at the same time; and it was stated (page 151, Famine Report) that an annual import of some 2,985,500 maunds of grain was required to supplement the local production, consisting of rice from across the Jamná, and of wheat, maize, gram, and other pulses from the Panjáb.

## Chapter IV, A.

Agriculture,  
Arboriculture  
and Live Stock.

Manure and rotation of crops.

Principal staples.

Average yield.  
Production and consumption of food grains.



## Chapter IV, A.

Agriculture,  
Arboriculture  
and Live Stock.Arboriculture  
and forests.

## Kalesar Forest.

Table No. XVII. shows the whole area of waste land which is under the management of the Forest Department. The following note on the forests of the district has been kindly furnished by Mr. Down, of the Forest Department:—

"This Forest in the Ambála district, consisting of 11,829 acres, is situated on the right bank of the river Jamná near the heads of the Western Jamná canal, and about 32 miles north of the Jagádhri Railway Station. It is bounded on the north and west by the territory of the Rájá of Náhan, on the south by the territories of the Rájá of Náhan and of the Sirdár of Kalsia and village lands of Khizrábád and Lála Bansi Lál, and on the east by the lands of Kalesar. The Kalesar Government Forest lies principally between two low ranges of Siwálík hills running west from the Jamná. The valley is about nine miles long and is narrow, being about  $1\frac{1}{4}$  miles broad at the east end, and gradually decreasing towards the west. The forest in the valley is divided by a broad water-course called the 'Suk Ráu,' which carries off the drainage of both ranges into the Jamná.

"The growth in the valley is *sál* with a slight mixture of miscellaneous trees. The inward slopes, however, are  $\frac{3}{4}$ th miscellaneous and  $\frac{1}{4}$ th *sál*, *barkli* (*Lagerstromia parviflora*) being very plentiful, though more so in the northern than the southern ranges. The outward slopes of both ranges are very precipitous. The Government forest also extends to the south of the southern range from the Jamná to the Chekan Ghát. The ground here, however, is composed of small low hills much intersected with water-courses, and the growth is poor. There is no bamboo in the valley, but the Burror and Nangal Sotes south of the southern range contain a large quantity, but of small size. *Babar* grass is plentiful all over the low hills. The principal trees at Kalesar are *sál*, *sein*, *sandan*, *barkli*, ebony, *dhaman*, *bahera*, *hurror*, *huldu*, *kachnál*, *bel*, *siris*, *khair*, *awnla*, &c., &c. The produce is at present insignificant. The soil is good in the valley as far as the Chekan Ghát, west of which it becomes inferior and mixed with reddish clay. Boulders exist for a great depth everywhere, even on the hills. The soil south of the southern range is very inferior.

"Government rights are absolute; but the Pathán *jágirdárs* of Khizrábád hold seven shares of Rs. 65 each in the gross revenue. Water is very scarce, and during the hot months is only found in two or three places. The *sál* in the valley is protected by fire conservancy.

Jagádhri planta-  
tion (reserve).

"This plantation, consisting of a long narrow strip of 200 acres 3 rods and 10 poles, was commenced in 1868-69. It is composed entirely of *shisham*, and is situated on the right bank of the Jamná about five miles from the railway station of Jagádhri. It extends from near and below the railway bridge over the Jamná for about two miles down stream. The soil is good *sailába*."

## Livestock.

Table No. XXII. shows the live stock of the district as returned in the Administration Report. Rájputs, when they can afford it, always, and Játs generally, have a mare, large or small, to ride and breed from. The Rájputs, because they consider it more like a gentleman to ride than to walk, and because they are fond of horses. Gújars and Kambohs are more attached to cattle: Gújars as a pursuit, Kambohs as the means of improving their lands. It has been before remarked that the Rájputs have an unfortunate longing for other men's cattle. The other domestic animals are pigs and poultry. Pigs are kept by none but *chúhrahs*, who eat the flesh of these filthy feeders. Fowls are kept by Musalmáns, *kanjars*, and *chúhrahs*, who all eat

the birds and their eggs. The village dogs generally belong to the village; they are sometimes the property of the *Gadaryas*, or shepherds. There are but a few shepherds in the country under report. However, in villages near towns herds of sheep and goats are kept. They are owned by the butchers. It is thought degrading to tend sheep and goats; and men of good caste who are reduced to doing this find a difficulty in getting married. The dogs are more valued than Europeans have any idea of; they guard the village from strangers and thieves, and assist the sweepers, *chamárs*, cows, pigs, and sheep, in doing the work of scavengers of the village.

The prices of live stock are thus given by the Deputy Commissioner:—Animals used for agriculture: bullock, Rs. 20 to Rs. 100; buffalo for working wells, Rs. 10 to Rs. 25. Animals used for carriage: horse, Rs. 20 to Rs. 200; mule, Rs. 75 to Rs. 150; donkey, Rs. 15 to Rs. 50; camel, Rs. 50 to Rs. 150; buffalo, Rs. 10 to Rs. 25. Animals used for food and trade; cow, Rs. 20 to Rs. 40; sheep, Rs. 4 to Rs. 10; goat, Rs. 4 to Rs. 10; she-buffalo, Rs. 30 to Rs. 75.

A few Government stallions have been kept in the district since the year 1868; but very little horse-breeding has been done. There are now three stallions, stationed at Ambála, Jagádhrí, and Pipli; and a native *salutri* has been attached to the district for two years. He is a successful castrator; but the operation is not yet popular. There are no Government bulls or rams in the district; and there are no cattle fairs nor horse fairs.

## Chapter IV, B.

## Occupations. Industries and Commerce.

Live stock.

Government breeding operations: fairs.

## SECTION B.—OCCUPATIONS, INDUSTRIES, AND COMMERCE.

Table No. XXIII. shows the principal occupations followed by males of over 15 years of age as returned at the census

Occupations of the people.

Population.	Towns.	Villages.
Agricultural ...	13,815	516,451
Non-agricultural ...	126,517	410,480
Total ...	140,332	926,931

of 1881. But the figures are perhaps the least satisfactory of all the census statistics, for reasons explained in the Census Report; and they must be taken subject to limitations which are given in some detail in Part II., Chapter VIII. of the same report. (The figures in Table No. XXIII. refer only to the population of 15 years of age and over. The figures in the margin show the distribution of the whole population into agricultural and non-agricultural, calculated on the assumption that the number of women and children dependent upon each male of over 15 years of age is the same whatever his occupation. These figures, however, include as agricultural only such part of the population as are agriculturists pure and simple; and exclude not only the considerable number who combine agriculture with other occupations, but also the much larger number who depend in great measure for their livelihood



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**Occupations, Industries and Commerce.**

upon the yield of agricultural operations. More detailed figures for the occupations of both males and females will be found at pages 88 to 96 of Table No. XIIA. and in Table No. XIIB. of the Census Report of 1881. The figures for female occupations, however, are exceedingly incomplete.

**Principal industries and manufactures.**

Table No. XXIV. gives statistics of the manufactures of the district as they stood in 1881-82. Commercially and industrially the district is not an interesting one. Its manufactures are few and unimportant. Ropar is famous for its production of small articles of iron-work, and Ambāla for *darris* (carpets). Coarse country cloth is woven in almost every village, but for local consumption only. Mr. Lockwood Kipling, Principal of the Lahore School of Art, has kindly furnished the following note on some of the special industries of the district:—

"Considering the history and traditions of this district it is disappointing to find so few remnants of either Muhammadan or Hindu art still alive and in practice. At Sahind and other places in the neighbourhood are unusually fine but little known examples of Pathān architecture, while some parts of the district are peculiarly sacred in Hindu estimation. At Ambāla itself there is nothing to be seen but the large military cantonment. A Lucknow figure-modeller has established himself in the *bāṭāra*, and produces small figurines in terra-cotta, representing servants, *fajirs*, and other characteristic types. These are quite equal to the average standard of Lucknow figure-modelling. Basket-work in bamboo is a growing trade. Lady's work-tables, occasional tea-tables, flower stands and other fancy articles copied from European originals are the usual forms, in addition to baskets for native use. At Dera Basi and some other villages cotton prints, unlike those of any other district in the Panjāb, are made. Country cloth of very narrow width is used, and the patterns are generally diapers equally distributed, resembling the prints imported into Europe from which the first idea of "Indian chintz" was taken. The usual Panjāb practice now is, on the other hand, to treat the surface to be ornamented as a complete composition, with borders and panels. These prints are sent into the hills and carried a long way into the interior. In some of the more elaborate patterns the fabric is strikingly like woollen cloth. Jagādhri has a well-deserved reputation for brass-ware. Tasteful and pretty lamps with branching arms touched with colour on the leaves, and many other forms of brass-ware are here exceptionally well made. Shēhābād is spoken of as excelling in some handicrafts, but they seem to be practised by one or two individuals only. Two silversmiths from this place contributed to the Exhibition of 1882 very good specimens of chiselled silver, such as openwork bracelets set with turquoises, and belt clasps of excellent, though somewhat minute, workmanship. They are also the best seal-engravers in the Province, being capable of cutting intaglios of armorial and other subjects, as well as the usual Persian writing for signet rings. Here also is a *virtuoso* in the manufacture of musical instruments, such as *saringis*, *tumbūras*, &c. Mulberry and *tun* are the woods generally employed, and ivory carving and inlay with wood-carving in low relief are freely introduced. He has also produced the *pique* inlay known in Bombay work-boxes, made by arranging tiny rods of metal, sandalwood, and particoloured ivory of geometric section in patterns which are glued up and then sawn across in sections, each section, like a slice of the English sweetmeat called 'rock,' being a repetition of the pattern ready for insertion in a ground. From the same place from time to time specimens of one of the many puerilities in which native ingenuity and skill are so often wasted are sent. This is a sort of paper lace—writing paper cut into a dainty openwork of foliage and other forms with great delicacy and some skill in design. There are examples of this triviality in the Lahore Museum."

Terra-cotta.

Basket work.

Cotton prints.

Brass ware.

Shēhābād industries.

Musical instruments.

Paper lace.

## Chapter IV, B.

## Occupations, Industries and Commerce.

## Course and nature of trade.

There are no statistics available for the general trade of the district. The exports and imports of food-grains have already been noticed at page 49. Many of the more considerable towns have their weekly market days for the disposal of country produce; and it is at these markets that most of the business of the district is transacted. The principal weekly markets are at Jagádhrī, Khizrābād, Búria, and Kharar: at Ambála, Ropar and a few other places, supplies are always plentiful, and no special market day is recognized. The trade of the towns is noticed under their several headings in Chapter. VI.

Ambála, Ropar and Jagádhrī, all situated on the Railway, are the chief trading centres in the district, and even from these there are no well established lines of trade. The district is the most populous in the Panjáb, and it is doubtful if it does more than supply its own wants in the way of food grains, and in bad years large imports are required of both grain and fodder. All miscellaneous products find a ready sale in the numerous hill stations within easy reach of the district.

Ambála city is a considerable grain mart, receiving grain and cotton in large quantities from the district, and from the southern parts of the Ludhiána district, and also from the independent native states of Patiala, Nabha and Jind, and exporting them both up and down country. It carries on a considerable trade in hill products, such as ginger, turmeric, potatoes, opium, and *charas*, &c. From the south it imports English cloth and iron; and from the Panjáb, salt, wool, woollen and silk manufactures. In return, it manufactures and exports cotton goods, especially *darrís*, in considerable quantities.

Ropar is an important mart of exchange between the hills and plains: it carries on a considerable trade in grain, sugar and indigo; salt is largely imported from the salt range mines, and exported to the hills, in return for iron, ginger, potatoes, turmeric, opium, and *charas*. Country cloth is manufactured in the town and largely exported to the hills. The smiths of Ropar have a reputation for the manufacture of locks and other small articles of iron.

Jagádhrī carries on a considerable trade in metals, importing large quantities of copper and iron from the hills and from Calcutta and Bombay, converted into vessels, &c., of different sorts and sizes, and exporting to the North-Western Provinces and Panjáb.

A considerable quantity of borax is manufactured at Sadhaura, and sal-ammoniac at Gumthala and Seana Saiyadan, and is exported both up and down country.

During the American War a large cotton market was established at Kurali in the Kharar *tahsíl*, on the Ropar and Kharar road, and for many years a thriving trade was done. The cotton of the neighbourhood is still celebrated, but the special importance of the market has passed away now that the normal condition of the cotton trade has been restored. But even now it is said that as much as five lakhs worth of cotton changes hands at Kurali in the year.

# Chapter IV, C. SECTION C.—PRICES, WEIGHTS AND MEASURES, AND COMMUNICATIONS.

## Prices, Weights and Measures, and Communications.

Prices, wages, rent-rates, interest.

Table No. XXVI. gives the retail *bázár* prices of commodities for the last twenty years. The wages of labour are shown in Table No. XXVII., and rent-rates in Table No. XXI., but both sets of figures are probably of doubtful value. The figures of

Period.	Sale.	Mortgage.
1868-69 to 1873-74 ...	27-2	22-4
1874-75 to 1877-78 ...	35-0	26-0
1878-79 to 1881-82 ...	35-3	32-8

Table No. XXXII. give the average values of land in rupees per acre shown in the margin for sale and mortgage; but the quality of land varies so enormously, and the value returned is so often fictitious, that but little reliance

can be placed upon the figures.

## Labour.

The supply of day labourers is derived either from the *chamár* caste, or by temporary immigrants from Bikáner and Hariána. When employed in harvesting, labourers are paid in kind, receiving generally eight seers of grain per day in the neighbourhood of towns, and five seers in villages where labour is more plentiful and the necessities of the labourer smaller. Other agricultural labour is paid for in money at the rate of 2½ or 3 annas a day. Wages in kind seem to remain stationary, but money wages have doubled within the last few years. Since, however, the prices of food and necessities of life have risen in almost the same proportion, it is doubtful whether the actual condition of the labourer is much better than it was in old days. Skilled labour is better paid in towns than formerly, in consequence of an increased demand. Artisans (such as carpenters, smiths, masons) can earn from three to five, or even six annas a day according to their ability.

## Weights and measures.

The following is a list of the weights in use :—

Adhpaiya	= ¼th seer	Dhaiseri	= 2½ seers.
Paiya	= ¼th "	Tinseri	= 3 "
Adhseri	= ½ "	Chauseri	= 4 "
Ser	= 1 "	Panseri or vatti	= 5 "
Derhseri	= 1½ "	Dhahi	= 10 "
Doseri	= 2 seers	Dhoñ	= 20 "
		Man	= 40 "

Metal weights are in use for all except the last two. The weights are *kachcha* weights. A *kachcha man* is either 16, 16½, 17, or 20 *pakka sers* : 17 is common.

The following tables are also in use :—

Grain weights.		Gold and Silver weights.	
5 Rupees' weight	= 1 chittak	8 Grains of rice	= 1 rattí
16 Chittaks	= 1 ser	8 Rattis	= 1 masha
40 Sers	= 1 man	12 Mashas	= 1 tola.

The following measures of length are in use :—

Ungal	= one finger breadth	Hath	= elbow to finger tip
Chappa	= breadth of four fingers	Gas	= about 2 háths
Mutthi	= clenched fist	Kadam	= 16 chappas, or a double pace of 54 to 57 inches.
Bolisht	} = span, thumb tip to		
or biland			



Table of Carpenters' and Masons' Measure.

6 <i>Taswas</i>	=	1 <i>Pain</i> .
2 <i>Pains</i>	=	1 <i>Adhwani</i> .
2 <i>Adhwani</i>	=	1 <i>Tassu</i> or $\frac{1}{3}$ th of an English yard.
24 <i>Tassus</i>	=	1 <i>Gas</i> .

The measures of area are the *páo-bigha*, *adh-bigha*, *pauna-bigha*, *bigha*, and so on. The *zamindár* does not talk of *biswas*. Inside the village site they measure not by *kadams* but by *gaz*.

The ordinary unit of land measurement is the *kachcha bigha* of 20 square *kadams* varying from 850 to 1,000 square yards in different parts of the district. In the Government records of last settlement land is measured by the *pakka bigha* of 3,025 square yards, but for the purpose of the new settlement a fixed *kachcha bigha* standard has been set up of  $\frac{1}{3}$ rd the *pakka bigha*. In any case the *bigha*, whether *kachcha* or *pakka*, is divided into 20 *biswas*. In a few villages in the north of the district the *zamindárs* use the *kanil* and *marla* standard common everywhere.

The figures in the margin show the communications of the district as returned in quinquennial Table No. I. of the Administration Report for 1878-79; Table No. XLVI. shows the distances from place to place as authoritatively fixed for the purpose of calculating

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Prices, Weights and Measures, and Communications.

Weights and measures.

Communications.  
Telegraph. Post.

Communications.	Miles.
Navigable rivers, Sutlaj and Jamna ...	72
Railways ...	95
Metalled roads, viz., District roads, Grand Trunk road, and Ambala and Kalka road ...	92
Unmetalled roads ...	445

travelling allowances; while Table No. XIX. shows the area taken up by Government for communications within the district.

The Sutlaj and Jamná (except within the hills) are both

Rivers.	Stations.	Distance in miles.	Remarks.
Sutlaj ...	Sarai ...	...	Ferry and mooring place.
	Awankot ...	4	
	Miani ...	3	
	Rapar ...	4	
	Chahilan ...	8	
Jamna ...	Mulana ...	4	Do.
	Bibipur ...	...	
	Raj Ghat ...	4	
	Dika ...	6	
	Paubari ...	1½	
	Gumthala ...	5	

navigable for country craft throughout their courses within the district; through traffic on both these rivers is confined to certain portions only. The table in the margin shows the mooring places and ferries, and the distances between them,

following the downward course of each river.

The Sindh, Panjáb and Delhi Railway from Saháranpur to Ludhiána and the branch line of the same company from Doráha to Nálágarh runs through the district with downward stations as follows:—

*Main Line.*—Sarhind to Sarai Banjára, 9 miles; Rájpora, 6 miles; Simbhú, 7 miles; Ambála City, 6 miles; Ambála Cantonments, 5 miles; Kesri, 7 miles; Barára, 8 miles; Mustafábad or Uncháchandna, 6 miles; Hingoli, 3 miles; Jagádhri 7 miles.

*Branch Line, Ropar.*—Doráha to Bagáwal, 3 miles; Nilon, 3 miles; Máchiwára, 6 miles; Powáwat, 5 miles; Bahlolpur, 3 miles; Kheri, 1 mile; Khallaur, 2 miles; Chamkaur, 3 miles; Siswán, 4 miles; Budki, 2 miles; Ropar, 2 miles; Canal head,

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Prices, Weights  
and Measures,  
and Communica-  
tions.

## Roads.

2 miles; Sadábarat, 2 miles; Ghanauli, 2 miles; Bikkon, 2 miles; Nálágarh, 8 miles.

There are three metalled roads in the district—(1) The Grand Trunk Road, which enters it from Karnál a few miles east of Thánesar, and runs nearly north as far as Ambála; from this point it turns north-west, and passes, a few miles further on, into Patíálá territory. It crosses all the hill streams by bridges. The principal bridges are those of the Márkanda, the Tángri, and the Ghaggar. Its total length within the district is 38 miles. (2) The Saháranpur road, running south-east *viz* Mullána and Jagádhri. This road was metalled in 1866, but has not been kept in repair. Its length in this district from the Jamná to Ambála is 39 miles. (3) The Ambála and Kálka road (for Simla). This leaves the Grand Trunk Road four miles above the Ambála Cantonment, and runs nearly due north to Kálka, at the foot of the hills; distance 39 miles. The Ghaggar is crossed by a ford, 20 miles from Ambála; all other streams are bridged. A detention of a few hours sometimes occurs at the crossing after heavy rain in the hills. During the rainy season the mails are carried across upon elephants. At most seasons, however, the river is easily fordable. The following table shows the principal roads of the district, together with the halting places on them, and the conveniences for travellers and troops to be found at each. Communications on the road from Ambála to Kálka are often interrupted in the rains by floods on the Ghaggar river, which is not bridged, and which crosses the road at Mubárikpur:—

Route.	Halting Place.	Distance in miles.	Remarks.
Ludhiana and Kálka road, unmetalled.	Morinda .....	---	Unmetalled. Encamping-ground; police rest-house and a <i>kuchka sarai</i> .
	Kharar .....	10	Unmetalled. Encamping-ground; <i>sarai</i> , with a <i>burj</i> for European travellers.
	Rurki .....	8	Unmetalled. Encamping-ground.
	Chandigarh .....	9	Unmetalled. Encamping-ground; road bungalow, P. W. D.; and a <i>sarai</i> .
Ambála and Kálka road, metalled.	Ambála Cantonments .....	...	Metalled-road. Encamping-ground; regular barracks for troops stationed; <i>dak</i> bungalow; hotels, and <i>sarai</i> in the <i>sadr bazar</i> .
	Lalra .....	13	Encamping-ground; <i>sarai</i> with <i>burj</i> for European travellers; and P. W. D. road bungalow.
	Mubárikpur .....	9	Encamping-ground; and a P. W. D. road bungalow.
	Chandigarh .....	11	Encamping-ground; P. W. D. road bungalow; and a <i>sarai</i> .
Grand Trunk Road.	Bara .....	...	Encamping-ground; <i>sarai</i> with <i>burj</i> for European travellers.
	Ughana .....	13	Ditto ditto ditto.
	Mughal-ki-sarai .....	10	Ditto ditto ditto.
	Ambála Cantonments .....	11	Encamping-ground; <i>dak</i> bungalow; hotels and <i>sarai</i> .
	Shahabad .....	13	Encamping-ground; district officer's rest-house; P. W. D. road bungalow; and <i>sarai</i> .
	Pipli .....	13	Encamping-ground; <i>sarai</i> ; P. W. D. road bungalow.
Ambála to Saháranpur.	Ambála Cantonments .....	...	Encamping-ground, &c., as stated above.
	Shahabad .....	13	Encamping-ground, &c., as above.
	Arhoa .....	11	Unmetalled. Encamping-ground.
	Chhappar .....	9	Encamping-ground; P. W. D. road bungalow; and a <i>sarai</i> .
	Jagadhri .....	9	Encamping-ground; <i>taluk</i> and <i>thana</i> ; district officer's rest-house; and a <i>sarai</i> .

There are also district unmetalled roads from Ambála city to Pihova, 33 miles; Pihova to Thánesar, 16 miles; Thánesar *viá* Pipli to Ládwa, 13 miles; Ládwa *viá* Radaur to Jagádhri, 21 miles; Jagádhri *viá* Khizrábád to Kalesar, 24 miles; Khizrábád *viá* Bilaspur, Sadhaura to Naraingarh, 30 miles; Naraingarh to Mani Májra, 26 miles; Mani Májra to Kharar, 11 miles; Kharar to Ropar, 18 miles; Ambála to Kála-Amb, 29 miles; Ambála to Ropar *viá* Kharar, 46 miles. There are police and district rest-houses in several places.

(A Telegraph line runs along the whole length of the railway with a Telegraph Office at each station, as well as on the road from Ambála to Kálka with Telegraph Office at Ambála cantonments and Kálka.)

(There are Imperial Post Offices at Ambála Cantonments, M.O., S.B.; Ambála city M.O., S.B.; Bihta, Barara, M.O., S.B.; Biláspur M.O., S.B.; Búria, Chamkaur, M.O., S.B.; Chandigarh M.O., S.B.; Chhappar M.O., S.B.; Dádúpur M.O., S.B.; Garhi Kotáha, Gumthala Rao, Ismáilábád, Jagádhri, M.O., S.B.; Kesri, Kharar, M.O., S.B.; Kuráli M.O., S.B.; Ládwa M.O., S.B.; Mani Májra, Morinda, M.O., S.B.; Mubárikpur M.O., S.B.; Mullána M.O., S.B.; Naraingarh M.O., S.B.; Pihova M.O., S.B.; Pipli M.O., S.B.; Radaur M.O., S.B.; Raipur M.O., S.B.; Rájpura M.O., S.B.; Ropar M.O., S.B.; Sadhaura M.O., S.B.; Sanghaur M.O., S.B.; Sháhábád M.O., S.B.; Shahzádpur M.O., S.B.; Sarhind M.O., S.B.; Thánesar M.O., S.B.; Ambála City Railway station M.O.

Note.—M.O. indicates Money Order Office, and S.B. Savings Bank.

Chapter IV, C.

Prices, Weights and Measures, and Communications.

Roads.

Telegraph.

Post.