By feigning to retreat, he drew them on for some distance, and then turning upon them with his cavalry, distributed into five bodies, he cut up about 100 of them, and scattered the rest in wild flight to the city. The walls of the city and fort were manned with a number of matchlock men, and Captain Hodson did not therefore consider it wise to make any further attack, and after riding round the city he drew off to the north and encamped at Jassia. Thence he returned to Delhi by the way of Sunipat. But the lesson had its effect, and the Rohtak Muhammadáns were much less troublesome thereafter, and ceased to roam the country in large bands, although faction fights among the villages were still vigorously pursued.

The end of the disturbances.

36. The authority of Government was not restored openly and permanently until twelve days after the memorable 14th of September, on which Dehli fell. On the 26th of that month, General Van Cortland with a force of Punjab levies and contingents from the Pattiala and Bikanir States, and accompanied by Mr. Ford and Misr Mannu Lal, marched into Rohtak, and proceeded to distribute justice among all concerned in the late disturbances. The actual money loss to Government had been the plundering of about 3½ lakhs of treasure and Rs. 9,000 worth of stamps, and the destruction of all government buildings and records except at Gohána: the canal, however, had not been injured. Many rebels were shot and hanged; property stolen was as far as possible recovered: the district was effectually disarmed throughout; the outstanding revenue was promptly collected; the villages which had been most prominent in evil doing were fined Rs. 63,000; rewards were given to the deserving, and the lands of the guilty were confiscated. The worst evil doers of the time had been the Shekhs of the Fort, the butchers and the Ránghars, and on these the heaviest punishment fell. But it should be remembered in extenuation, that many Shekhs and Ránghars serving in our army remained faithful to their colors, and did excellent service for us at Dehli and elsewhere, for which they received due rewards. It is more pleasing to turn to the other side of the picture, and note instances in which (to quote the words of the Secretary to the Punjab Government, now Sir R. Temple, on the Dehli territory in the first Administration Report after the Mutiny) "there were found many natives, often "of the humblest orders, who were kind to our fugitives, and who, sometimes "at imminent peril to themselves, fed the hungry, clothed the naked, and shel-"tered the houseless." A Ját of Mahmudpur, Gohána, conveyed a party of women and children to Panipat, at no small risk to himself, and his son still shows with pride the picture of the Queen-Empress which the grateful refugees afterwards sent to him. The Jats and Baniyas of Baland and Mehim protected and escorted to places of safety certain officers of the Customs line and their families,—in the latter place at the risk of their own lives, from the violence of the Ránghars. The Gohána Chaudries passed on in safety various officers of the Canal and Customs departments, fleeing before the storm. A party of women and children from Gurgaon were conducted by a Jat, Anand Ram, from Kánaundh where they were under the protection of the Jhajjar Nawáb, to Panipat; and

Services and rewards.

Sir T. Metcalfe was similarly escorted by a Rajput of Bond,—Naurang Singh. Mr. Loch was twice accompanied from the district, once by a Jat of Khanpur Kalan, Gohána, and once, as related, by some Ránghars stationed at Bahadurgarh. All these services, and others performed elsewhere by Rohtak men, were suitably rewarded. Chaudri Rustam Ali received a revenue assignment of Rs. 1,000 per annum in perpetuity to him and his heirs male; but the latter have unfortunately failed. The Mehim Jats and Baniyas who saved European life, were similarly rewarded by grants for three generations, and the Baland men by grants in perpetuity. Anand Ram and Naurang Singh received lands revenue free out of Chuchakwas; the inhabitants of Rohtak, Jassia and Sánghi, who had furnished Captain Hodson with supplies in August, reaped the return due to their readiness; and Risaldar Sandal Khan had assigned to him the revenue of Bábra in Jhajjar. Mir Barkat Ali Khan, Risaldar of the 1st Bengal Cavalry, was allowed to purchase Bir Bahadurgarh, now Bir Birkatabad, to be held on a revenue fixed in perpetuity; the Thanadar of Karnal, Kamdar Khan, received a large grant out of Chuchakwas revenue free, and other grants have since then been made for good services rendered in the Mutiny. It may be remarked that the general population of the district throughout their rioting bore no special ill-will towards the British Government. On the contrary, they always speak of the "Sircar" and their old officers in unusual terms of affection, and there are no more loyal and well-disposed subjects of the empire in ordinary times. But it was not to be expected that they, who had so lately laid aside a warlike for an agricultural character, should remain perfectly passive and quiet, when deserted by their local officers, and incited by mutinous troops, and a small disaffected portion of the community.

37. From early in October complete order was restored in the old Rohtak district, of which Mr. R. Jenkins became first Deputy Commissioner. 200 Jhínd horse were stationed at head-quarters, and 50 at Gohána, and Mr. Ford was at leisure to go south to the Jhajjar territory. A force under Colonel R. Lawrence as Political Officer, had already been detached to pacify the country lying south-west of Delhi, and arrest its traitor Chiefs, to whom we must now turn. On the outbreak of the Mutiny the Nawáb Abdurrahman Khan* at once sent news of the events at Delhi to the Lieutenant-Governor of the North-Western Provinces at Agra, and, in reply, he was ordered to place himself under Mr. Greathed's orders. This he failed to do as he failed to send the force demanded of him to Rohtak; on the other hand, he did despatch some troopers to Mr. Ford's assistance at Gurgaon, on 13th May. The bearing, however, of the men sent was unsatisfactory, as was later the case in Rohtak, and as had been the behaviour of the Jhajjar escort, when the Commissioner, Mr. S. Fraser was cut down in Delhi, and Sir T. Metcalfe was attacked. When

Conduct of the Jhajjar Nawáb.

* NOTE.—In "The Punjab and Dehli in 1857," it is said that the Nawáb was in Dehli on 11th May. This is incorrect: he was at Narnol at the time; the fact of his being at Dehli was never alleged against him on his trial. There are many other mistakes in the same book: for instance, the Nawáb of Dádri is said to have paid the penalty of his treason with his life.

the latter came to Jhajjar on 14th May, the Nawáb did not see him, but sent him on to Chuchakwas, and from there (according to Sir T. Metcalfe) turned him out of his territory. On the other hand, the Nawáb protected the lives of a number of women and children made over to him from Gurgaon, and had them conveyed by Anand Ram to Panipat, at the end of July. He did not possess sufficient loyalty or courage to enable him to join the British forces on the ridge ; and while he played a double game, and made professions to Mr. Greathed, 250-300 Jhajjar troopers, under his father-in-law, Abd-us-Samud Khan, fought against us at Dehli, and especially at the battle of Badli-ka-Serai, and were paid by the Nawáb. But again 70 Jhajjar sowars stationed at Karnal, remained faithful throughout the Mutiny, and were afterwards incorporated in the 3rd Sikh Cavalry. Still, in short, he had utterly failed to do his duty ; and when, on the assembly of Colonel Lawrence's force at Dádri, he was summoned to come to Chuchakwas and there surrender himself, he at once obeyed the order, and gave himself up to take his trial on 18th October. On the same day the fort of Jhajjar was occupied, and on the following day that of Narnol. The Jhajjar troops were ordered to give up their arms, but most of them broke loose and fled south to join the Jodhpur mutineers. The Jhajjar territory was taken under management by Colonel Lawrence, until the result of the Nawáb's trial should be known, and for a time 600 Pattiala foot and 200 horse were stationed there. The trial of the Nawáb took place in Dehli, in the Royal Hall of Audience, before a Military Commission presided over by General N. Chamberlain. It commenced on the 14th December, and judgment was given on the 17th. The charges against the Nawáb were laid under Act XVI of 1857, and consisted of allegations that (1) he had aided and abetted rebels and others waging war against the British Government in places being at the time under martial law ; (2) that he had furnished troops, money, food and shelter to the rebels ; and (3) that he had entered into treasonable correspondence with them. Sir T. Metcalfe, Mr. Ford and Mr. Loch gave evidence against the accused, together with some other officers and native witnesses. The sanad which granted the estate to the Nawáb Nijabat Ali Khan contained a condition that in times of difficulty and disturbance, or when required, the Nawáb should furnish 400 horsemen, and, moreover, should always remain a well-wisher and devoted friend of the English Government. These conditions the Nawáb could not pretend to have fulfilled, and his country therefore clearly stood forfeited in any case. The evidence given proved that the Jhajjar troops did nothing to protect the English officers in Dehli ; that they had fought against us there ; that during that time they had been paid by the Nawáb, with money sent from Jhajjar ; that other sums of money had been sent to the rebels at Dehli ; that the traders of Jhajjar had been compelled to subscribe to a forced loan for the king ; that a prince of the Dehli house had been received and entertained at Jhajjar ; and that the Nawáb had been in treasonable correspondence with the king of Dehli, and among other things, had promised to send a regiment of cavalry and five lakhs of rupees as soon as his revenue should be collected. It was also proved

His trial.

hat the forts of Jhajjar and Narnol were in a complete state of military pre- ration when seized. The defence of the Nawab was prepared by an old servant of his, Ram Richpal, who is still alive, and is now an Honorary Magistrate of the town of Jhajjar. It consisted merely of the allegation that the troops were beyond his control, and had acted as they pleased. This was vehemently denied by the prosecution, but there was nevertheless a certain amount of truth in the statement. The Muhammadan troops at Jhajjar did mutiny against their Hindu officers, whose village and houses they attacked, and whose women and children they killed, and their disorderly conduct in other places than Jhajjar has already been mentioned. The Nawab was never a man of any great resolution, and there is no doubt that he was largely influenced in his unwillingness to go to the Dehli ridge by fears for the honor of the ladies of his family. That he failed in what was his clear duty, and that he abetted and assisted the rebels, is undoubted, and the loss of life and country paid the forfeit ; but his treason can hardly be designated as of the worst type, and, at any rate, no English blood was shed in the Jhajjar territory, though the opportunities of shedding it were many.

The sentence.

He was found guilty by the Commission without hesitation, and was sentenced to be hanged, and all his property to be confiscated ; his execution took place on 23rd December, in Dehli, before the Fort. The latter portion of the order was confirmed by the Chief Commissioner and the Government of India, and was duly carried out. All the dependents and members of the family received small pensions, and in the end of 1858 they were transferred to Ludhiana and Lahore. One branch of the family, represented by Shayista Khan, and which had not been implicated in the events of the mutiny, was permitted as a favor to live at Saharanpur.*

Conduct of the Bahadurgarh Nawab.

38. The Nawab of Bahadurgarh was at Dádri, where he usually resided in May 1857, and he remained there until he surrendered like his cousin to the British troops in October. The Dádri troops stationed at Hissar mutinied with the Irregular Horse and Hurriana Light Infantry there, and joined in the murder of the Collector and other Englishmen ; but no active participation in the events at Dehli could be proved against the Nawab himself. He had indeed sent an offering to the king, and addressed him in a letter of fulsome adulation, and the rebels in Dehli had drawn supplies from Bahadurgarh. But this was all ; and as the Nawab had really no control over the villages distant only 15 miles from the capital and 30 miles from himself, and as he had wished to aid Sir T. Metcalf in his escape, it was decided that, taking all this into consideration, together with his old age and decrepitude, it

* NOTE —The correspondence concerning the trial and punishment of the Nawab of Jhajjar is to be found in the following letters :—Commissioner Dehli to General Commanding Dehli Division, No. 20 of 26th November 1857 ; Commissioner Dehli to Chief Commissioner Punjab, No. 24 of 2nd January 1858 ; Chief Commisioner Punjab to Government of India, Foreign Department, No. 1 A. of 18th February 1858 ; Government of India to Chief Commissioner Punjab, No. 453 and 1035 of 28th May and 2nd September 1858.

was not necessary to try him for his life. To this decision the Government of India acceded; adding, that it "is just and "necessary that the Nawab shall forfeit all his pos- "sessions, which he held on condition of loyalty and good service." The forfeiture was carried out, and Bahádur Jang Khan was removed to Lahore where he enjoyed a pension of Rs. 1,000 a month, and where he died in 1866.* In this manner did the once powerful Bharaintch family pass away from among the ruling Chiefs of North India.

The punishment.

39. The Bahadurgarh estates were added to the Sampla tahsil, five detached villages to the east going to Dehli; and Jhajjar, including Narnol, Kanaundh, Dádri, and the rest of the old territory, was created into a new district. Two Dádri villages—Sempál and Kahrari, and one Jhajjar village, were included in the Rohtak tahsil, and five Jhajjar villages in the Sampla tahsil; for a time nine others (called the Mándauthi villages) were also added to Sampla, but these were taken back again later. The two districts of Rohtak and Jhajjar, together with the rest of the Dehli and Hissar divisions, passed to the Punjab by the Government of India Notification No. 606 of 13th April 1858. Shortly afterwards, the loyal services of the Phulkian Chiefs were rewarded by the assignment of Dádri to the Raja of Jhind, of Narnol to Pattiala, and Kanti and Bawal to Nabha. The summary settlements of the remaining Jhajjar pargunnahs and of Bahadurgarh were commenced by Mr. J. S. Campbell, the first Deputy Commissioner of Jhajjar, and in the middle of the work, India passed from the Honorable East India Company to the Crown by the Proclamation of 1st November. Things soon settled down to peace and order throughout the districts, of which one was not to last long. It was determined to cancel a debt due to the Nabha and Pattiala States, by assigning to them portions of the Kanaundh pargunnah, and the Raja of Jhind was allowed to purchase some of the villages also. This left only the two pargunnahs of Jhajjar and Badli in the new district, and from 1st July 1860 it was abolished, and the Jhajjar tahsil added to Rohtak, seven Badli villages being transferred to Dehli, 21 to Gurgaon, and two detached Jhajjar estates going to the Raja of Jhind. In the following year, when the general revision of tahsils throughout the Punjab took place, that of Mehim was abolished. The old eastern estates of Rohtak-Beri were made over to Sampla, which also received 12 villages from Dehli; a few Mehim villages and Bhiwani (now created into a new pargunnah) went to Hissar, and the rest were added to the Rohtak tahsil. These changes were completed by 1st July 1861. In the same year occurred the famine, and a second followed in 1868-69. Otherwise, the course of events in the district has, generally speaking, been uneventful. The regular settlement of the Jhajjar and Bahadurgarh villages was completed by Rai Partáb

Constitution of the present district.

1858-1880.

* NOTE.—The case of the Bahadurgarh Nawab was discussed in the following letters—Commissioner Dehli to Chief Commissioner, No. 57 of 3rd March 1858; Chief Commissioner to Government of India, No. 123 B—12 A of 9th March; Government of India to Chief Commissioner, No. 1266 of 19th May 1858.

Singh in 1862 : muuicipalities and Honorary Magistrates have been appointed ; the Customs line was abolished in 1879 ; the new alignment of the western Jumna Canal has been put in hand since 1878, and the drainage channels in Sampla have unfortunately been constructed. The rainfall and flood of September 1875 are perhaps the only other occurrences to be noted, together with the present settlement, and the second Revenue Survey of the district. The Deputy Commissioners best remembered by the people in the district, have been Cols. Voyle and Hawes, Captain Grey, and Mr. F. E. Moore, who was murdered by a Jat while sleeping outside his house on 6th August 1877, to the great grief of every one in the district, to whom his kindliness had greatly endeared him. Nawab Hasan Ali Khan of Dujana died in 1867, and his son and successor, Saádat Ali Khan, in 1879 : the present Nawab, Mumtaz Ali Khan, is a boy of 15 years of age, whose State is managed for him by his uncle, Nijabat Ali Khan.

Famines.

40. There is only one other point which calls for notice in the past history of Rohtak ; unfortunately, it is one which exercises periodically an evil effect on the tract, *viz.*, the famines. Those which are still especially recollected by the people, are the following. A famine is termed *Akál*.

A. D.		*Sambat.*		*Names.*
1753-54	...	1810	...	...
1782-83	...	1840	...	Chálisa.
1802-03	...	1860	...	Sathá.
1812-13	...	1869	...	Unhattara.
1817-18	...	1874	...	Chauhattara.
1833-34	...	1890	...	Nawwia.
1837-38	...	1894	...	Chauránawe.
1860-61	...	1917	...	Sattrah.
1868-69	...	1925	...	Pachisa.
1877-78	...	1934	...	Chautisa.

The famines seem to have occurred irregularly, and to have nothing of a cycle nature about them ; eight in the present century give one every ten years on an average ; as a fact, two have occurred in each of the second, fourth and seventh decades, and none in the third, fifth, and sixth, though the famine of 1860-61, was only just outside the last. From the terrible "Chálisa," which lasted three years, and in which grain sold at five seers the rupee (equal perhaps to 1½ seers at present values,) a very large number of villages of the district date their refoundation in whole or in part. Curiously enough, no sayings or songs regarding this famine are commonly known among the people, or at least could be discovered. Its terrible ravages have been described by a master pen in the "Rajas of the Punjab," and need no feebler narration here. In the "Sátha" famine, grain sold at 10 seers the rupee, two consecutive harvests having failed. The efforts made by M. Perron to alleviate distress in this year are still gratefully remembered by the people. The "Unhattara" famine

was most severe in the Bágar country, from which large numbers flocked to Rohtak, and especially to the Jhajjar tahsil, and settled as cultivators. Grain sold at 7-8 seers per rupee.

Early famines.

The "Chauhattara" like that of 1877-78, was a fodder famine chiefly; the price of grain did not rise above 12 seers for the rupee. The "Nawwia" famine was very severe; grain is said to have been altogether unprocurable, though prices did not rise to an unprecedented pitch. Of this famine the people have a saying "*Baniya bhar gaya kothi men, Balak rowe roti men,*" meaning that "the shopkeeper hid in his house, and the child wept over its meals," and expressing the trouble and hunger which fell on all. The "Chaurahawe" famine was less severe again. The "Sattrah" famine was the first in which relief was regularly organized by the British Government. It was severest in Márwár and Bikanir, and thousands of hunger-stricken people swarmed in from these parts. The rains of 1859-60 were poor, and those of 1860-61 failed almost entirely, so that the Najafgarh *jhil* ran dry—an occurence unknown before,—and grain sold in Rohtak for some time at 8 seers the rupee. In the official report of the Commissioner (No. 169 of 17th August 1861) it is stated that nearly 500,000 people were relieved by distribution of food, and in other ways, that nearly 400,000 had been employed on relief works, (chiefly tanks, and a few roads), and that 34,378 rupees had been spent on these objects; 247,971 rupees of land revenue were ultimately remitted. The number of deaths by famine was put at 144, but the Commissioner admitted that it was impossible to guess the real number of deaths caused by gradual starvation. The *kair* (or *karil*) bush yielded an abundant supply of berries, as it seems always to do in famine years, and the people lived largely on its fruit for weeks. The stores of the country had been generally exhausted by three bad harvests previous to the actual famine year, and the villages were most severely tried by it, though fortunately not permanently injured; the loss of cattle was considerable, but nothing like that in 1877-78. The 11th paragraph of the Commissioner's letter is well worth quoting, and runs thus—"With a very limited amount of moisture, the "soil of this country is exceedingly prolific; all, however, depends on the rain "fall. When rain fails, everything is lost, and the soil becomes hard as iron. "The feature of *absolute drought* and failure of rain is a remarkable one in "these parts. Every considerable town and village can point to its former "site or sites, prior to such and such a famine or drought, which depopulated "the country, and these occurrences appear to serve as eras in the popular "record of the past." The following sayings of the "Sattrah aksá" are commonly in the mouths of the people:—

Famine 1860-61.

Parte kál Jullahe mare, aur bich men mare Teli,
Utarte kál Baniye mare; rupiye ki rahgai dheli;
Channa chironji hogaya, aur gehun ho gae dákh;
Sattrah bhi aisa para chalisa ka bap;

that is "In the beginning of the famine died the weavers (menials); in the "middle the oil-men (village servants); at the end the traders, and a rupee "became worth only half its value; grain sold at the price of pistachio nuts,

"and wheat at the price of raisins ; the famine of seventeen was more severe "than that of forty." Of the same famine there is a well known song of some length, from which the following couplets are taken :—

Bodi bhagar ki láliya (lagákar) bol,
Baniyon ne kar diyá mahngá mol.
Tút gae tákri (tarázu), phát gae bát,
Ji gae Baniya, mar gae Ját.
Tút gae gadhi, mar gae bail ;
Be muklawa ho gae gail ;

which, being interpreted, mean:—"The traders collected old and bad grain, "and sold it for an enormous price. The beam of their scales broke, and their "weights were worn away (by constant use) ; the trader lived, and the Jat "died. The carts remained useless, for the oxen were dead ; and the bride "went to her husband's house without the due formalities." The last line is most expressive of the intensity of the distress: the parents being no longer able to feed their daughter, she was forced to go in an irregular way to her husband's house—a terrible breach of marriage etiquette.

Famine 1868-69.

41. In the "Pachisa" famine of 1868-69 the distress in Rohtak was as severe as in any part of the Punjab. In the early months of 1868 there was a fair amount of rain, but the fall of July, August and September failed entirely, and before the end of the year grain was selling at 10 seers the rupee, and relief works had to be started. The showers which fell elsewhere in January and February did not extend to the Hissar division, and misery became intense throughout the summer of 1869, till at last good rain fell in September, and saved the district from a possible repetition of the events of 1780-83. 719,000 destitute persons received relief; 1,250,000 were employed at various times on relief works ; 1,33,000 rupees nearly were spent in alleviating the calamity, and 2,09,269 rupees of revenue were in all remitted. Of the money granted, 12,000 rupees were given in the shape of advances, 25,000 rupees were spent in the purchase of food, and the rest was expended on works—chiefly the clearance of village tanks. The special feature of the relief in this famine was the amount made up by voluntary subscriptions of the people themselves, which was nearly 45,000 rupees. The loss of life was considerable, although at the time this was not admitted ; the loss of cattle was nearly 90,000 head, and some 50,000 were said to have been sent off to the hills in order to save them from starvation. It may be remarked that the numbers relieved directly, or on the works, varied for some reason in an extraordinary manner from week to week.

Drought 1877-78.

42. The last drought in the Rohtak district, so far as the present century has advanced, took place during the progress of the present settlement in 1877-78, and the loss of cattle in these years was perhaps greater than had ever been known before. There was but little rain in June, none in July or August, and only two inches in

September, when it was too late to sow anything. Grass withered away from the face of the soil, the cattle began to die in large numbers in the autumn of 1877, and famine prices were soon reached. Matters were made worse by the gambling transactions of the traders in grain (*badni*); credit was refused to the cultivators; food stores began to be largely exported from the district, and the people in consequence became greatly exasperated. In the beginning of the trouble, the unhappy death of Mr. Moore occurred, and presently disturbances commenced. Highway robberies grew common, grain carts were plundered, and finally the bazar at Bádli was attacked and gutted by the Játs of the place. The prompt and severe punishment which followed this outbreak, prevented similar designs from being carried out, but there was still an uneasy feeling on the country side which did not die away for some months. The winter-rains again failed, and the mortality among cattle became terrible; still no relief was considered necessary by Government: the revenue demand was not even suspended. Fortunately, good rain fell at last in July and August 1878, and though the later rains were scanty, an abundant crop of fodder was obtained, and a fair crop of grain. During the cold weather of 1877-78, I inspected every village of the Rohtak and Gohána tahsils for the purpose of assessment, and visited the larger number in Sampla and Jhajjar. The aspect of the country was desolate beyond description. There was literally no crop in the rain-land villages; in a ride of 20 miles not even two or three plots were to be seen. The grass had wholly disappeared, and nothing but thorns and weeds met the eye in the fields. The loss of cattle of agriculturalists amounted to 176,000 in one way or another:—by sale, deaths or transfers, and it will take the district many years to recover from this. It is doubtful if the enforced collection of the revenue was a well-judged step; a very large area was sold and mortgaged in consequence of this, and many a cultivator had to dip deeply into the trader's books. Ultimately 80,000 rupees of the collections due in the spring of 1879, were suspended, and this perhaps gave a little relief. It may be devoutly hoped that the drought of 1877-78 will not prove so sinister an omen to the present settlement as the famine of 1837-38 did to the first regular settlement. Of this drought the people quote the following lines:—

Ek roti ko bail biká aur pisa bik gayá únt,
Chautisa ne kho diya báins gáe ka bunt;
Chautisa ne Chautis mára, jiye Baish Kassai,
Wuh máre tákri (tarazu), aur us ne chhuri chalái.

—"An ox sold for a piece of bread, and a camel for a farthing: the year "thirty-four has destroyed the stock (root) of oxen and of buffaloes. The "year thirty-four has killed thirty-four tribes (out of the thirty-six, two only) "the trader and butcher have survived, the one by use of his scales and "the other by use of his knife (to slaughter the cattle)." Another song, composed by a well-known local poet, who lives at Dujána, is of considerable artistic merit, but is much too long to be quoted here: it will be found in the printed volume of English Memos. and Notes which accompanies this Report.

Effects of the famines.

43. The people declare that the loss of cattle from famines is now much greater than it used to be, and in so far as there are now no large grazing grounds in the district and the number of cattle has greatly increased, this is true. But fodder is now perhaps more carefully preserved than in former days, and famines from actual scarcity of food causing general starvation cannot occur. But again the traders though they keep by them larger stores of grain than formerly, speculate more freely now a days, and export largely, where they had in old days to confine themselves to the local markets : their relations also with the people are more strained than they used to be. The recurrence of famines is the most important historical feature in the revenue administration of the district, of whose area only 11 per cent. is artificially protected against them, and it affects the agriculturists to some degree in various relations of life. The people of rain-land villages strive to get a few acres of canal land to cultivate in years of drought, and so great is the burden of this to the dwellers in canal estates, that they will not marry their daughters into rain-land villages, if they can help it. The songs are full of reference to this—"*mere bebehe* (O sister) *naddion par dharti dedehe*" (give me some canal land) ;—"*mere bhaiyone* (O brother) *nahron par dharti baiyo ne*" (sow some land on the canal). The people do, more or less, provide against the famines, but they are exceedingly short-sighted in their arrangements, and as population grows denser, these become more and more difficult to make. Severe droughts and famines shake even the strongest estates to their very foundations, and must always be regarded by the revenue officers with the most lively apprehensions, affecting as they do the people and cattle both in the most serious manner. There is, of course, no remedy for them, but there is no need to aggravate their effects by insisting on the collection of the land revenue in such seasons. Special efforts might, of course, be made to increase the area protected by canal and well irrigation. This has been done to some extent already as regards the latter, an average sum of Rs. 6,200 yearly, since 1869, having been distributed in agricultural advances (called by the people *tagái*) for the sinking of new wells chiefly in the Jhajjar tahsil.

PART III.

SOCIAL AND ADMINISTRATIVE.

Population.

44. The population of the Rohtak district, according to a census taken during Settlement, amounts to 5,53,317 souls. According to religions, these are divided thus—

Native Christians	...	...	18
Hindus ...	...	...	4,77,093
Muhammadans	...	...	76,206
		Total ...	5,53,317

Eighty-six per cent. of the people are therefore Hindus; and of the Mussalmans, about half are comparatively recent converts to Islamism. Divided according to callings and occupations, the list is as follows :—

Class and Name.	Enumeration.		Area.	
	Numbers.	Percentage.	Acres.	Percentage.
I.—Cultivators.				
Jats—Hindu	1,92,832	35	6,45,283	67
Jats—Mussalman-Múla	1,412	...	2,466	...
Brahmins	60,067	11	78,291	8
Ahirs	15,813	3	25,747	3
Rajput—Hindu	6,072	1	54,641	6
Rajput—Mussalman	20,563	4	77,012	8
Afghan's	5,208	1	22,178	2
Mali's	7,652	1	2,231	
Biluch's	2,248		4,357	
Gujar's—Hindu	1,163		2,912	
Gujar's—Mussalman	1,989	1	925	2
Dogars	246		794	
Rórs	396		1,284	
Shekhs	6,965	1	6,091	
Total ...	3,22,626	58	9,24,215	96

Class and Name.	Enumeration.		Area.	
	Numbers.	Percentage.	Acres.	Percentage.
II.—Traders and professionals.				
Mahájans	42,627	8	17,006	2
Kassáb's—Butchers	6,792	1	803	...
Kaiyath's—writers	1,253	...	3,011	...
Syads	737	...	4,618	...
	51,409	9	25,438	3
III.—Village servants.				
Dhobi—Washerman	2,767	...	36	...
Kháti—Carpenter.				
Hindu	10,700	2	3,163	...
Mussalman...	60	...	...	...
Lohar—Blacksmith.				
Hindu	5,232	2	738	...
Mussalman...	1,563	...	19	...
Kumhar—Potter.				
Hindu	10,108	2	99	...
Mussalman...	1,465	..	...	...
Sakha—Waterman	3,733	...	15	...
Teli—Oilman	5,798	2	659	...
Hajjam—Barber.				
Hindu	10,012	2	926	...
Mussalman...	486	...	...	...
Chipi—Dyer.				
Hindu	4,243	1	447	...
Mussalman...	249	..	...	...
Nilgar—Dyer	2,062	...	24	...
Total ...	58,478	11	6,12[illegible]	...
IV.—Village menials.				
Chamar—Tanners	48,621	9	230	...
Dhanuk—Weavers	16,921	3	...	...
Chuhra—Sweepers	17,706	3	3	...
Kahar—Coolie	3,988	1	136	...
Total ...	87,236	16	369	...
V.—Religious classes.				
Jogis	3,451	...	357	...
Mussalman Fakirs	4,032	...	81	...
Byragis	5,662	...	1,664	...
Total	13,145	2	2,102	...
VI.—Miscellaneous	20,423	4	3,907	...
Grand Total ..	5,53,317	...	9,62,157	...

N.B.—The area given in this return is that parcelled out among the various owners. To this total

The Settlement classification has divided the population into 3,56,266 agriculturalists, and 1,97,051 (36 per cent.) non-agriculturists. The arrangement in classes above given shows that about 58 per cent are engaged directly in agriculture, 27 per cent. in ministering directly to the wants of the agriculturalists, and some 9 per cent in ministering indirectly by trading, while about 7 per cent. are employed in miscellaneous ways. The number of men, women, and children is as follows :—

Men	...	...	...	...	1,93,633
Women	...	...	...	...	1,61,163
Children	...	...	...	...	1,98,521
				Total ...	5,53,317

The children form nearly 34 per cent. of the whole, and it is in their ranks that the increase of population since 1868 has taken place ; the other figures are nearly the same now as then. The proportion of females to males is much the same among children and adults, but is 3 per cent. higher among Muhammadans than with the Hindus. Considering the obligations laid on them by law to marry, an extraordinarily large number of Jats remain bachelors. It is common enough to find instances in every pedigree table where the eldest of a number of brothers only is married, or perhaps one or two, and though the people would never admit it, it is most probable that in such cases a modified system of polyandry does prevail. The Baurias and Sánsis entered in the census of 1868 must have been laborers on the canal ; there are none in the district now. The miscellaneous population consists of some 56 tribes, chiefly hangers-on in the towns and artificers in the villages. Only the Meos and A'gris of the Jhajjar tahsíl deserve mention among them—the former on account of the unsatisfactory character of their kinsmen in Gurgaon, and the latter as the manufacturers of salt at Záhidpur and Silanah : the Rhabáris, or camel owners, may also be noticed.

Increase of population.

45. It is difficult to say what the increase of population has been of late years, inasmuch as owing to the great changes made in the constitution of the district, and the absence of former records in detail by villages, it is not easy to compare with the present ones even such former statistics as survived the Mutiny. In the Gohána Assessment Report, it has been shown that the population of that tahsíl advanced by 18 per cent. from 1853 to 1875. The five towns of Rohtak Beri, Gohána, Mehim and Kulanaur show an increase of only 9 per cent. during the same period, but the advance in towns would be expected to be less than in villages. The Bahádurgarh estates show an addition to the people of 13½ per cent. since 1862, and the present census gives an increase for the whole district of

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we must add 1,82,656 acres of undivided common land of the villages, 5,637 acres on account of the area of the Government reserves, and 3,097 acres on account of other miscellaneous lands owned by Government, which make up a total of 11,53,547 acres. The discrepancies between the percentages of numbers and area of any tribe, explain themselves, as a rule, and where necessary will be noticed further.

4½ per cent. during the seven years since that of 1868. This advance has taken place in the three southern tahsils only, and, proportionately, to the greatest extent in Jhajjar, as would be *primâ facie* supposed. For the purpose of examining the increase of the actual able-bodied male agricultural population for a longer period, the pedigree tables of the forty largest estates of the district have been abstracted for five generations with the following result. In the 5th generation from the present time there were 6,558 owners of land, who in the last generation before the present, (whose tale is not yet complete of course, and shows only 10,536 names), had 16,037 descendants. That is, that within a period of 100 years, the male agricultural population of the district increased by 145 per cent. This is not unlikely, considering what we know of the progress of the district; and it must be remembered that this increase refers only to families already resident five generations ago, and that no account is taken of recent settlers. In canal villages, however, which have suffered of late years from swamping, there has been a falling-off of population, in a few cases to the extent of 10 per cent., and recently the villages on the drainage lines in Sampla have also suffered. These deserve close watching hereafter, and the comparison of the results of the coming census with those of 1868 and 1875, should be carefully noted. The incidence of population per square mile of cultivation is 390 for the whole district, and for each tahsil as follows:—Gohána 450, Rohtak 363, Sampla 427, Jhajjar 345. In the canal circles, the population amounts to as much as 500-550 per square mile, and in some of the large Jat villages to over 600, and even 700.

Character of the people.

46. Of the Jats, Sir George Campbell has truly written, that "they have "great physical and moral energy, are admirable culti- "vators, and, under a fair system, excellent revenue pay- "ers, are prodigiously tenacious of their rights in land, and very orderly and "well-behaved while in possession of those rights; in fact in every way they "are beyond doubt the finest population in India." Mr. Gubbins has noted that the Jats of Rohtak are inferior to none of their tribe for patient industry and skill, and to these commendations I have nothing to add. The Jats call themselves, as a tribe, "zemindars," and they are true lords of the soil. They

Jats.

are intensely clannish, and a man is a clansman before he is a tribesman, and calls himself a Dahiya, Malik, Hudah or Jákhar, when asked of what race he is before he calls himself a Jat. The women assist the men in all tasks of agriculture, except ploughing and driving carts, and to their efforts the renown of the tribe as cultivators is largely due. The Jats are somewhat looked down upon, because of the customs of retaining married girls in their father's house for a long number of years, and of *kerewa*, or widow-marriage, which prevail among them, and in scorn of the latter of which this alleged saying of Jat fathers to their daughters is quoted—

Ajá beti lele phere,
Yih mar jawe, aur bahutere.

"Come, my daughter, join hands and circle (the marriage fire): if this "husband dies, there are many more." Of the Jatin, as well as the Kunbin, it may be said—

Bhali ját Játin, ki kurpi hath,
Khet niráwe apne khàwind ke sáth.

"Of good kind is the Játin who, hoe in hand, weeds the fields in company "with her husband." A good wife is one of the four things necessary for a man's happiness; a bad wife is one of the four things that make his life a hell :—

Sánthi chaoul, báins dúdh, ghar kalwanti nár,
Chauthe pith tarang ki bihistnisháni chár;
Gore bhojan, hej dhan, ghar kalihári nár,
Chauthe maile kápre, narknisháni chár.

"Red rice, buffaloe milk, a good woman in the house, and, fourthly, a horse "to ride, these four are heavenly things; but extravagant living, little "wealth, a bad woman in the house, and, fourthly, dirty clothes, these four "are hellish things."

There is also a saying concerning the Játs which reminds one of the well-known lines as to women and spaniels and walnut trees—

Mitti, kutti, kápra, san aur munj aur pát,
Yih chahon kúti bhali, aur sátwán Ját.

"The soil, fodder, clothes, hemp, munj grass, and silk, these six are best "when beaten, and the seventh is the Ját"; and again,

Ját, Bhát, Kátira, chauthi bidwa nár,
Yih charon búkhe bhale, dhápe kare bigar.

"The Ját, the Bhát, the caterpillar, and, fourthly, a widow woman, "these four are best hungry; if they eat their full, they do harm." I do not know why these hard things should be said of the Jats, who, in their way, are quiet, orderly, intelligent fellows as a rule, though, as Mr. Purser has aptly said, when a Jat does wander from the straight road "he takes to anything, from gambling to murder, with perhaps a preference to cattle stealing," and, it may be added, abduction. Their conduct in 1857 has been noticed already. Large numbers of young Jats once flocked to our service, but now it is difficult to find sufficient recruits for the Jat horse, and the few other regiments who seek for men from this district. As has been seen above, more than $\frac{2}{3}$rd of the lands of the district are in their hands, the average area per head being $3\frac{1}{3}$ acres. The Mula Jats, though generally recent converts, are already far inferior to the Hindus, and own only half as much land per head as the latter do. There is no special pre-eminence of one clan over another in cultivation; the area held by the tribe is divided among the clans as follows :—

		Acres.
Malik	Játs	37,154
Golia	„	21,061
Ráthi	„	21,119
Jakhar	„	26,402
Dahiya	„	23,101
Hudáh	„	28,778
Dalál	„	26,357
Dhankar	„	17,433
Ahlawat	„	22,040
Kadian	„	18,976
Deswal	„	12,336
Sahrawat	„	10,227
	TOTAL	264,984
Miscellaneous	„	380,299
	GRAND TOTAL	645,283

Ahirs.

The Ahirs are perhaps superior even to the Jats in patient and skilful agriculture, and their well cultivation is famous. The area which they own in Rohtak averages only $1\frac{2}{3}$ acres per head, but they cultivate lands for miles round Kosli in the Jhajjar and Rewari tahsils; even headmen of Ahir villages may be met with working with their own hands as tenants elsewhere, and the Ahirs have paid revenue demands which even Jat estates could not have borne. So far has sub-division of property gone with them, that the shares in some wells which are worked by each sharer for one year in turn, come round after 15 and even 25 years! The common saying of them, as represented by their chief village Kosli, is—

Kosli ka Ahir.
Kheti ki tadbir.

The surrounding Jats are somewhat jealous of them, and say—

Báwan bangle Kosli, aur bánke kai hazár,

"Kosli has fifty houses (of stone) and several thousand swaggerers," but the character is undeserved.

Rors.

In habits and nature they are very similar to the Jats, and, like the former, they also practice widow marriage. The Rors as cultivators rank with the Jats; they are common in Karnal, and bear a good reputation there. These three tribes form the first class of cultivators in Rohtak, and own nearly 70 per cent. of the divided lands of the district.

47. In the second class may be ranked the Brahmins, the Hindu Rajputs of the Rohtak tahsil, the better Ránghars and Gujars, and the Dogars: the worst cultivators are the Jhajjar Rajputs and Biluch's, with the inferior Brahmins, Ránghars and Gujars. Few of the Afghans, Shekhs, Syads, or Mahajans cultivate with their own hands; they prefer to make use of tenants, often at little or no profit to themselves.

Brahmins.

The Brahmins are a quiet inoffensive set, generally

illiterate, but in a few cases well educated, especially in Gohána. The people respect them, but do not trust them,—

Kál Bágar se upje, bura bahman se ho.

"As famines come from the Bágar country, so comes evil from a Brahmin": the character has probably been given them after long experience. In most instances their women do light work in the fields, and they are generally found to be better cultivators when they are located in some Ját estates, than when sole owners of a village themselves. In former days, as has been said above, no village was founded without Brahmins settling also: this is shown by the fact that the 27 villages held by them contain only 34,467 acres out of the 78,294 owned by the tribe. The Hindu Rajputs in Rohtak are well-disposed, peaceful men, and very like the Jats in their ways, but better featured: in Jhajjar many of them are dissolute, discontented and troublesome, though some are among the best men of the district. The very large area per head of this tribe is partly due to estates recently acquired by a few Rajputs in that tahsil, as is also the case with the Afghans. The Ránghars have been aptly described as "good soldiers and indifferent cultivators, whose real *forte* lies in cattle-lifting." They are a quarrelsome turbulent body of men, few of whom really cultivate land, and most of whom belong to bands of cattle rievers or salt smugglers: the latter profession has, however, ceased now. Worse villages, from a criminal point of view, than A'nwal or Nigánah it is impossible to imagine; and it is not to the credit of our administration that they should have been allowed to continue to bear the reputation they do for so long. A large number of Ránghars still enlist in the army—chiefly in the 1st and 12th Bengal Cavalry. The conduct of this tribe in the Mutiny has been fully referred to in the preceding chapter. It bears the worst possible character among the people of the country side, with whom the common saying is—

Hindu Rajputs.

Mussalman Rajputs.

Ránghar Gújar do, kutta billi do;
Yih chárou agar na hon, Kiwáron khule so.

"The Ranghar and Gujar are two, the dog and cat are two; if all these four "did not exist, you might sleep with open doors"; and again—

Gujar goda, jánt jar, bar pipal sikhrant.
Ránghar hárá janiyo naino nir dhalant.

"You may know that the end of a Gujar has come when he is lame, of the jánt "tree (when it dies from its) root, of the bar and pipal (when they die from their) tops, and of a Ránghar when the rheum (of old age) flows from his eyes." Their turbulence and lawlessness is commemorated in the following well-known lines—

Delhi se peintis kos Kanhaur Nigáná,
A'phi bowen, áphi kháwen, kisi ko na dewen dáná.

"Though Kanhaur and Nigánah are but 35 kos from Delhi, the people eat "themselves what they sow, and pay not a grain (of revenue) to any one." Of the good qualities of the tribe the following is said—

Ránghar bhala kalál ke, kai bándhe khána,
Kai ghore ki pith par, kai dunge dháná.

"A Ranghar is best in the shop of a wine-seller, or in prison, or on horseback "(as a trooper), or in a deep hole (and out of the way of harm)." The

Afghans.

Afghans of Gohána are a dissolute set; the Jhajjar Pathans are generally in debt, but are more respectable, and not a few serve in the cavalry. The Guriani Pathans are very superior to either, and many of them enlist in the Frontier Force: they used to be noted as horse-breeders, but lately they have been giving this pursuit up. The Biluch's are trying to become cultivators, but not with any striking success, so far. The Dogars are quiet inoffensive cultivators, who live at Rohtak, and own the adjoining estate of Parah. The Kaiyaths and Mahajans call for no special remarks; the Syads of Kharkhaudah are a useless and somewhat dissolute lot; the Shekhs are found chiefly at Rohtak itself, are exceedingly troublesome, and supply recruits to our armies and jails with praiseworthy indifference. The Gujars are supposed to have abandoned their former evil ways, and this is no doubt true generally, but it would be interesting to learn by what means the Mussulman Gujars who have less than two roods of land per head to feed them, gain their livelihood. Their general reputation formerly may be gathered from the fact of their being coupled with the Ránghars.

Biluch's.

Dogars.

Kaiyaths, Mahajans, Syads, Shekhs.

Gujars.

48. The non-agricultural portions of the population deserve perhaps a longer notice than is usually given to them. In most of the villages these classes have to pay hearth-fees, as noted in para 27, as a sort of tribute to the lords of the soil. The usual fee is Rs. 2 per house per annum, but the trader is often made to pay more. An income of no less than Rs. 40,400 is realised from this source by 323 out of the 481 inhabited estates of the district. Curiously enough, the largest proportional number of estates in which these fees are not realised, is found in the Rohtak tahsil. As a rule, they are not taken in the towns, or in recently settled estates, or in Brahmin villages, which are generally badly off for menials, or in estates held by many miscellaneous owners, such as Hasangarh. The traders are nearly all Mahajans or Baniyas (so called from *banaj* = trading), and there are hardly any Khatris or Bhoras. A few in Beri, Jhajjar and Rohtak, and one or two in Kharkhaudah and Bahadurgarh, are men of some capital; the rest possess very small means. Their origin is from Agroha and Márwár; there are 18 clans in all, of whom the Garag, Goil, and Singal are commonest in Rohtak, and after these the Bánsal, Mital, and Jíndal. After the Játs, Brahmins and Chamárs the Mahajans form by far the largest body of the population. Most of the Mahajans are Bishnuis, but at Rohtak, Gohána, and Bahadurgarh there are a number of Saráogis. The butcher class is the very worst in the district, and is noted for its callousness in taking human life, and general

Non-agriculturalists.

Hearth-fees.

Traders.

Butchers.

turbulance in all matters. It is curious to note how equal the numbers of carpenters, potters and barbers are ; the blacksmiths are, as would be expected, much fewer, and, as a rule, they are poorer than the carpenters. Both, however, are often well-to-do, and own some of the best houses in the villages ; as a class, they are all quiet and peaceable, though apt to wrangle angrily if their customary remunerations are disputed or withheld. The inferior menials amount to nearly $\frac{1}{6}$ of the population, and form a most important body, without whom the cultivation would be almost impossible. The Chamárs outnumber every tribe of the district, except the Jats and Brahmins, and the Dhanaks and Chúras have only the Mahajans and Ránghars between them and the Chamárs. They receive at harvest time certain acknowledged dues, for which they render fixed services, and they eke out their substance by working as day laborers, and pursuing their special callings :—the Chamárs, the preparation of leather ; the Dhanaks, weaving of coarse cloth and the others, miscellaneous crafts, while the Kahárs make neat baskets. The Chamárs belong to a large number of clans, of which the commonest are the Cháhal and Súhal ; they do not marry in their own clan, or in the other three which are forbidden among the Játs. They worship the goddess Mátá as a rule, and burn their dead, as do the Dhanaks and Kahárs ; but the Chuhras, who pray to the Lál Guru, bury theirs. As a class they are exceedingly reckless and improvident, and are seldom removed from intense poverty : in a famine they are only saved from instant starvation by the number of carcases of animals which fall to their share. Their relations with the owners have in many cases become strained of late, and in some villages they are masters of the situation, especially in sanitary matters.

Village menials.

49. The area held by cultivators is distributed as follows :—

	Numbers.	*Acres.*	*Per cent. of area held to whole.*
Owners	93,213	8,19,991	82
Occupancy tenants ...	11,978	49,457	5
Tenants-at-will ...	19,869	85,194	9
Non-resident tenants ...	7,917	38,621	4
Total ...	1,32,977	9,93,263	100

This area includes the small patches of jungle attached to the holdings of the proprietors and owned by them, and is, therefore, largely in excess of the total cultivated area of the district, which (revenue-paying and revenue-free lands, both included) amounts to 9,07,358 acres. Similarly, as it includes cultivated common lands of the villages, it is larger than the figure in paragraph 44, which refers to the parcelled-out lands only. The area held by tenants without rights of occupancy is shown now as very much less than it was at the time of the assessment reports. This is due chiefly to the owners having had their lands generally thrown back on their hands in the year of drought 1877-78, and partly to their dislike of entering a tenant's name in the settlement record for fear he

should claim occupancy rights hereafter. The area held by occupancy tenants is large, 5 per cent, and in not a few cases they have forced themselves on to weaker communities from outside estates; one-fourth of them are owners in the same or other villages. The tenants are Jats and Brahmins, Ahirs in Jhajjar, and a few menials; nearly one-half belong to the body of owners; the tenants from outside (usually called *sukhbási*) are of the same classes, more than half being owners as well. Omitting 2,560 occupancy tenants, 9,675 tenants-at-will and 4,345 outside tenants, who are all also owners, from the total number of cultivators, we have an average area to each of the remaining 1,16,387 agriculturists of 8 acres per man; the average area per owner *qua* owner is 10 acres; of occupancy tenants and tenants 4 each; and of non-resident tenants 5. 1,756 owners, chiefly Ránghars, Baniyas, etc., owning 13,295 acres, and 167 occupancy tenants, holding 505 acres, do not cultivate at all themselves, but leave their lands entirely to the care of others. Further information under this head will be found in the fourth portion of the Report, under paragraph 81.

Distribution of cultivators.

50. The settlement enumeration shows that the population of 5,53,317 souls is housed in 1,36,151 dwellings, and supplied with the necessaries of life by 7,510 shops. This gives one shop to every 18 houses, and 4 souls to each house, or, including the shops, which are generally dwellings also, 3·85. In the two English counties, whose area agrees so closely with that of Rohtak, the population is 4,30,797 souls, or ¼ less, and the number of houses is 92,811, which gives an average of 4·64 to a house. As both these counties are purely agricultural, and contain no large towns, the comparison is a fair one. The proportions of urban and rural populations have already been noticed in paragraph 12. In addition to the details given in paragraph 9, it may be here added that only 53 villages have a population less than 200 souls; only 135 others one less than 500; and only 327 in all one less than 1,000. While the Rohtak villages contain an average of 1,076 souls each, no other district in the Punjab shows an average population of 800 even, and only three boast of one between seven and eight hundred.

Houses.

51. The villages of the Jhajjar tahsíl, which have thatched and sloping roofs to the houses, are not unlike river-side villages in the Punjab, but they are more regularly built, and the immense open cattle yards of the latter are not found in them. The villages elsewhere throughout the district are of one special type, which deserves a full description. On approaching them it is seen that the roads where they converge on the village or village-jungle, are flanked by banks and thorns, in order to prevent the cattle, on their way to grazing, from breaking into the fields. The jungle itself generally encloses the village on every side, but sometimes it is confined to one or two sides only, and elsewhere the fields come up to the village walls almost. Scattered round about are the tanks (*johars*) for the cattle, and into which the rain-water, caught by the jungle-lands, drains; some fine trees will be found on the banks here, one or two

Appearance of villages.

wells often handsomely finished with masonry platforms and superstructure, and perhaps a masonry *ghát*. Close round the skirts of the village are placed the enclosures for fodder and fuel (*gatwáre* and *bitore*), strongly fenced with thorns, resounding in the morning with the noise of the chopping of fodder, and at times full of women arranging the cakes of dried fuel, or preparing to carry them off in baskets to the houses. A ditch nearly always surrounds the village itself, and the outer walls of the dwellings are completely closed towards it, except round some open space, into which the doors of the houses open, and where the streets debouch. The roads leading into the village are generally broad enough to admit a cart up them; they often end in a blind alley, each sub-division of the village being cut off internally from the rest. The doorways opening on to the streets are usually handsomely made of wood. Inside is the courtyard in which the cattle are stabled, and beyond this the room where the household live; in many cases the door opens into this room itself. Through the gloom of the smoke, due to the meal which is cooking, it may be seen that substantial wooden pillars support the roof, and that throughout the room brass dishes and pots, spinning wheels, baskets, receptacles of grain, etc., are scattered about in comfortable confusion, while the subdued murmer of the grinding of the corn-mill is heard from some hidden recess. A ladder connects the roof with the ground through a trap-door; on the top of the house fodder is stored, cotton and grain are placed to dry, and the family sleep in the hot weather. The village rest-house (*pawas*) will be found situated outside the walls or in the middle where several roads meet. Before it, on the platform, are beds and cooking pots for the use of travellers, on whom the barbers and chamár, whose turn it is, wait. In the poorest villages the rest-house is merely a large open shed. But in most it is handsomely faced with wood-work, and part of the walls are brick built; while in many the rest-houses are made of masonry throughout, and the plastered walls are decorated on their exterior with pictures of tigers and horses, elephants, and railway trains, Hindu gods and British soldiers. The house of the carpenter will be discovered by the wood collected round it, and that of the blacksmith by the little furnace below the trees in front of it; the oil-man may have a buffalo at work on the mill; the dyer's dwelling is recognisable by the skeins of bright colored threads hung out to dry; and the pony of the barber will announce where that official lives. The trader will be found cleaning cotton outside his shop, whose wall is adorned with texts and the blood-red hand (ominous emblem! called *thápá*), or squatted inside amid grain bags, oil jars, and multifarious ledgers. Outside the village walls, and often in a separate colony beyond the village ditch, the houses of the menials will be seen: those of the chamárs with high-smelling tanning vats, and skins full of curing matter hanging from the trees, and those of the Dhanaks with the webs stretched in front of them, and the women and men going up and down, and twisting the threads or brushing them into regularity. The potter's house, in villages where he exists, will also be found outside the walls, surrounded by broken potsherds and asses

Description.

Pigs and chickens rush wildly about at the sight of the stranger and his horse, and dogs set up a hideous clamour on every side. Riding through the village you are probably looked down on by monkeys from the roof-tops; long lines of women and girls will be seen carrying up water in brass or earthenware vessels from the tanks; an odd cart or burthened man will come up with a load of fodder; cattle stand round about the tanks and in the open spaces before the streets, and children, clad principally by sunshine, roll in the dust and play hockey (*génd kuli*), tip-cat (*bitti danda*), or blind man's buff (*ánkh michkáv*). In the morning and evening, as men go forth to their work and return again, the scene is very animated; but at noon-day the village seems almost deserted; except for the smoke of the fires on which the evening meals are simmering.

Household furniture.

52. There will be found in every house a bed for each grown up person, a corn-mill (*chakki*), the huge pestle and mortar of wood (*úkal* and *músal*), a spinning wheel (*charkha*), and a cotton cleaning machine (*charki*); along the walls are arranged large receptacles for grain, made of mud and called *kothi*. A number of cooking vessels (which are of brass, if in a Hindu's house, and of tin, if in a Mussalman's) are scattered about the room, the commonest of which are trays called *tháli*, *parát*, *támbiya* and *tásh*, cooking pots (*bartiya* and *patíli*), the *hándi* for preparing *rábri*, and the *kharáoni* for boiling milk: there will also be seen *lotahs* and cups (*katorah*), and the iron plate for cooking cakes (*tawá*) will be on the hearth (*chúla*). Milk is made into curds in the *barela*, and into *ghi* in the *balona*, or churn. Baskets are called *khári*. The water, which is brought up in brass large vessels, called *tokni*, is kept in the house in others named *matka*; some is poured into the *kún*, or large earthenware bowls, in the yard for the cattle to drink from. The dress of the people is simple, and is much the same in all classes. The men wear a *dhoti* and *chadar* (sheet), and above this a *dohar* or double-sheet, a turban (*pagri*) and shoes (*pátan*): in the winter they put on a vest (*kamri*), and make themselves warm with a blanket and padded quilt (*dholara* and *razai*). The better class of headmen have lately taken to wearing the long white linen tunic, but only during the last ten years. The value of a man's dress is about Rs. 9, the cost to him is much less of course, as the women make the thread, which is then woven by the Jullaha's or Dhanak's at the rate of Rupee 1-4-0 per 65 yards, and dyed (if for the use of the women) by the *chipi*. The chumar supplies the shoes. The women wear a petticoat (*lahnga* or *gagri*), a breast-cloth (*angiya*), and a single and double sheet (*chundri* and *dulâhi*). The *orhna* is a worked colored sheet, worn on festal occasions, when European cloths are also displayed. The cost of a woman's clothes is much the same as a man's. The Mussalman women usually wear the *páijámas*, and a short jacket, and prefer a dark blue to any other color. A married woman whose husband is alive (*sohágan*), generally possesses jewellery to the value of some 60-70 Rupees. The commoner articles are the nose ring (*nath*), earrings (*dánde* and *báli*), necklace (*hasla*), necklaces

Dress.

Jewellery.

formed of severals rows (*pachlara* and *sathiara*), and necklaces of rupees (*jhalra*), which are very commonly worn by women and children. The boys of well-to-do fathers generally have a rupee or some other coin strung round their necks; and I have seen a Greek coin brought back from Cyprus so displayed:—how it will puzzle antiquarians when found in a Jat village 1,500 years hence! Silver ornaments on the arm are called *bázuband*; bracelets on the wrist, worn above the "*churiyon*" of lak and glass, are called *tád* and *pacheli*: heavy anklets of silver (*pazeb*) are also worn. The men put on gold earrings and necklaces of gold beads at festivals and marriages: and the wealth of an estate may be fairly guaged by the amount of jewellery seen on the persons of the women and children.

Food.

53. The food of the people is simple and of little variety. Two or three meals a day are eaten, according to the season of the year and the amount of work to be done, and sometimes four. The morning meal consists of three or four cakes made of flour of wheat and gram or *joar*, according to the time of the year, and the evening meal of *rábri* (gram or *joar* allowed to ferment in butter-milk, and then cooked) or of *khijri* (*khichri*) of *bajra* or *mung* in the winter. Vegetables (*ság*) and pulses are eaten with the cakes, and in its season a good deal of sugar-cane is munched; this is the only rich food which the people enjoy in any quantity, and it is for them rather a necessity than a luxury. Large quantities of milk and butter-milk are consumed daily, and salt and seasoning are freely used; melons and root vegetables are not commonly grown or eaten. The morning or mid-day meal is usually taken in the fields, whither it is carried by the women to their husbands and brothers. A grown man does not eat less than a seer a day, or 9 maunds in the year, and if a woman's consumption is put at 6½ maunds and children's at 4, a total amount of 35,84,340 maunds is needed to feed the population of the district for a year. The Jats and Ahirs are very much addicted to the use of tobacco, and the chamárs are perfect slaves to smoking: women do not touch the pipe.

The daily task.

54. From the day that he is old enough to control unruly cattle, and is considered worthy of some scanty clothes and a pair of shoes, the life of the Rohtak agriculturist is one monotonous round of never-ceasing work. The fields must be ploughed and prepared at least three or four times every harvest; the crop has to be sown, weeded, and protected from numerous enemies, winged and fourfooted, a long and most wearisome task; it has to be cut, to be threshed, and the grain and fodder have to be carried to the village. Then the ground has to be cleared again of the thorn and *pálá* bushes; the leaves of the latter have to be beaten out for fodder for the cattle, and the thorns have to be carried to the fences or enclosures, and then it is time for the land to be got ready for the next crop. The cattle must be seen to and tended daily; money must be earned by taking off the young stock to sell at the fairs, or by carrying grain for the trades to the distant markets; in the well villages the wells have to be worked; and in the canal villages the water has to be

watched and divided and laid on the fields. The sugar-cane crop with the peeling, carting and crushing of the canes forms a three-weeks task, and at intervals it may be necessary to drive the cattle off to the hills in order to save them in a year of drought. To the very last days of his life the Jat must do something : few, perhaps, live to a very old age, but those who do must turn to the tasks of childhood again,—herd the cattle, rock the babies, and even turn the spinning-wheel. The women work as hard as the men, if not harder. The heavy tasks of bringing in wood and fuel and water fall on them ; they have to cook the food, and carry it daily to the fields ; they have to watch the crops ; to them the peeling of the sugar-cane and picking of the cotton belongs ; and when there is nothing else to do, they must always fill up the time by tasks with the spinning-wheel. If Jats do not sleep soundly of nights, it is not for want of hard physical labor.

Indebtedness.

55. As a rule, the people are well-to-do and free from debt. The area which has been sold since last settlement is only 1·25 per cent. of that cultivated, and the lands mortgaged amount to only 5 per cent. of the same ; even this figure is above the normal state of things, and has been brought about by the drought of 1877-78. The land hypothecated bears a debt of 6½ lakhs, or a sum about equal to two-thirds of a year's revenue, wet and dry. The indebtedness occurs largely in the Ránghar and Rajput villages, and in some canal estates which have lived beyond their means. The ordinary rates of interest charged by the traders are as follows :—On the security of landed property 18 per cent., or in the case of a large transaction, 12-18 per cent. ; on personal security, 24-30 per cent. ; on the security of a crop, a quarter as much again as the advance made. The accounts are generally settled yearly, and many cultivators do not need to have any recourse to the money-lenders even in seasons of famine. These seasons add no doubt heavily to the debts of many for the time being ; but a Jat is by no means a lost man because he mortgages his land : he and his sons are nearly sure to redeem it sooner or later. The people complain of course of the revenue demand to all new officers—"*Ogáhi kalara*," they say,—"The revenue is heavy" ; but in their hearts they know that it is light, and I never found a single authentic case of debt caused by the necessity of paying revenue alone, although of course this is always put forward as the first reason. Enquiry from people themselves, in almost every village of the district, has shown me that as long as a family has its proper complement of workers, male and female, it is well-to-do. But where sons are idle, or the father becomes old while they are still boys and unable to work, or dies leaving them to the mother's care, or where there is no woman in the family or only a bad one, the home is certain to fall into difficulties. Marriage expenses, the cost of litigation, loss of cattle, and other special causes of debt, exist of course ; but by far the commonest causes are those given above, which may be termed natural ones, and the debts resulting from which are generally paid off in the end.

56. The ceremonies connected with marriage in the Rohtak district are much the same as elsewhere, and do not call for any lengthy notice. There is no limit to the number of wives which a Hindu may marry, either by the full or, among the tribes which practise it, the irregular form (*shádi* and *karewa*), and three or four wives are not uncommon : usually one only is "*byahta*" or married by the full rights, but all the wives and their children are equal. The Mussalmans observe the limit fixed by their law ; Rajputs and Ránghars keep concubines, but not commonly. In the case of Hindus, there are some 25 distinct steps in the ceremonial, the most important of which are (1) the betrothal (*sagái*, *ropna* or *nátha karna*) ; (2) the *barát*, or bridal procession, which goes to the house of the father of the girl when she is 9-10 years old ; (3) the *shádi*, or marriage ceremony, which takes place on the second night after, and when the bride and bridegoom walk hand in hand four times round a fire of *dhák* wood ; and (4) the consummation (*gonah* or *mukláwa*) which takes place when the bridgroom carries his wife off to his house. Among respectable and fairly well-to-do persons, this occurs 3-4 years after the marriage ceremony. But in most cases among the Jats the services of the girl at her home are so valuable to her family, that she is detained by her father as long as 8 or 10 years, and does not join her husband till she is 18 or 20 years old. Among the Mussalmans, marriage takes place when the girl is 15 or 16, and she goes at once to her husband's home : many of the ceremonies among the converted Muhammadans are the same as those among the Hindus, and a Brahmin is always present ; the *nikah* is read by a *kazi*. A girl's marriage costs from Rs. 100-150 to her father, and a boy's from Rs. 70-100 to his father ; so that the average expenditure from both sides on a wedding is Rs. 170-250. These expenses are much too high, and the people would gladly see them reduced, but no one dares to begin the reform. It was formerly considered a dire disgrace for the father of the girl to take money for her ; but this custom is beginning to prevail among the poorer Jats and others who have little self respect, and it is said that the necessities of recent famines have given a great impulse to it. *Karewa*, or widow marriage, is accompanied by no ceremonies of any kind : the woman merely resumes her jewels and colored clothes which she ceased to wear on her husband's death. Properly it can only take place with a brother's or cousin's widow ; but this connection is commonly formed under many other circumstances as well, and no difference is held to exist as regards the offspring. The main reason for the connection inside the family is to transfer the control of her deceased's husband's land from the widow to his brother or other new relation. Where children have been born to the deceased husband, *karewa* will not usually take place, unless they and their mother are very young. A widow cannot be compelled to marry, but no doubt the influence of the family is usually too strong for her on such a point, and she has to yield to their wishes : if the younger brother or any younger brother or the next heir at law is unmarried, or has no children, a *karewa* marriage with the widow is

Marriage and other customs.

Widow marriage.

more likely to take place than if he has children, or is married. *Karewa*, under these conditions, may be called marriage with reference to reasons affecting the woman, but such unions often take place from causes which have regard to the man only. If the first wife is childless or old, or if a man is well-to-do, an irregular marriage is pretty sure to take place, and often against the rules of clan inter-marriage. These are that a man shall not marry a woman of his own clan, or of his mother's or of her mother's, or of his father's mother's, but the third restriction seems likely to be abolished by practice. The same restrictions apply of course to the marriage of women, so that the invariable form is exogamous not endogamous.

Rules for clan marriages.

Jats, Ahirs, Gujars and Chamárs practise *karewa* marriage universally ; I do not know of any families of these tribes in which the practise is reprobated. In the preceding portion of the Report the fact of non-intermarriage of certain clans of Jats was noted. Besides the instances there given, the following may be quoted, but the list is certainly not exhaustive. The Mundlana and Ahulana Jats do not intermarry by reason of old feuds ; the Golia Jats do not marry with the Dágar or Salanki, for while they were Brahmins the latter were their clients (*jajmán*), and when they lost their caste, the former only of all Jats would at first give them of their daughters in marriage ; the Deswal do not marry with the Chaudhran or Phoghát, nor the Hudah with the Dabás, nor the Gallat with the Salaklán, nor the Chílar with the Chikára, nor the Malik with the Daláls of the Sampla tahsíl, though they will marry with other Daláls. Funeral feasts (*káj*) which take place in the families of leading men are exceedingly expensive ; they often cost as much as a thousand rupees, and half the country side is assembled at them. Customs as to inheritance, succession, etc., will be found noticed in the volume of Notes attached to this Report, under the abstract of the Record of Customs of the country.

Funeral feasts.

57. Hindu and Mussalman agriculturalists of Rohtak are alike exceedingly indifferent observers of their religions ; the Jats will drink water brought up in a skin from the tank or well ; the Baniyas are stricter, especially the Saraogis. Every Hindu has his *parohit*, to whom he is client or *jajmán*, and who accompanies the barber when bound on the business of bethrothal, and the women of the household, if they are obliged to journey anywhere. The *parohit* receives certain acknowledged fees, and often obtains a gift of land out-and-out, or in *dholi*—that is, the owner cultivates the plot for him yearly, and makes over to him the crop : the *parohits* of the district hold 4,063 acres in this way ; the gift is commonly made on some occasion when the donor goes to the Ganges to bathe. The ashes of deceased Hindus are always sent to be thrown into the sacred stream, and a large amount of holy water is brought back by the bearers to the district. The *guru* is an entirely distinct person from the *parohit* ; he is not an hereditary guide, but is appointed by each Hindu for himself, and teaches his scholar the necessary religious ceremonies. A peculiar feature of the country side is the large number of religious institutions which

Religions.

are found on it. There are no less than 299 monasteries, called *asthals*, with 659 resident ascetics, and grants of land amounting to 2,725 acres attached to them. Byragis form half the number; after them Kanphara Sádhs, Sádhs, Gosayans, and Udási Sádhs are the most numerous. Many of the holy men bear an exceedingly unholy character, especially the Kanphára Sádhs of Bohar; and the claims of any establishment to learning and sanctity are very small, except that of Chhudáni in Jhajjar. The Bohar institution consists of a fine block of buildings situated 4 miles east of Rohtak town on the high road to Delhi, and has a more than local reputation; but its inmates are of evil character, and the yearly fair which takes place there is of a decidedly disreputable nature. There are not many local gatherings in the Rohtak district, but such fairs as there are are of a religious origin, except the great cattle fair at Jehazgurh, which will be mentioned in the next section. Gatherings in honor of Mahadeo are held at Kailoi in Rohtak and Birdhánah in Jhajjar; in honor of Sitla at Rohtak, Bidhlan, Jhajjar and Rindhana; and in honor of the Gúga Pir at Rohtak and Silanah (Jhajjar). Small local fairs take place at Beri and Kosli, and one is held weekly at Bairampur in the name of the Gheibi Pir, whose shrine is perched on the top of the rocky hill there. There are also two in remembrance of Muhammadan martyrs at Gohána. Most of these gatherings take place in March, April, and in August. Those held in honor of the Gúga Pir are of a special character, and are largely frequented by the menials. They are called "*Chhariyon ka mela*," because of the red flag which is carried about and adored, and to which offerings are made. The story of the Gúga Pir is that he was a Rajput of Dadrera in Bikanir, who slew his brothers or cousins in a quarrel with them concerning some land, and was cursed by his mother in consequence. Wandering forth into the solitude of the desert, he called upon the earth to open and swallow him up, when a heavenly voice replied, that this could only happen if he became a Mussalman. Accordingly he embraced Islamism, and was then received into the bosom of the earth. He was a very favorite saint of the Mahrattas, and the efficacy of prayers to him in cases of snake bite is much believed in.

Fairs.

58. The people are not very superstitious as a rule, and it is not easy to say how far they really believe what they profess to, except when it suits their convenience. Certain lucky and unlucky days and omens are noted for the commencement of sowing and reaping: no one must start for a journey or sell cattle on Wednesday, and buffaloes must not change hands on Saturday. When a human being is ill, a rupee and four annas are wrapped in a cloth with some rice and placed in a corner of the room in the name of some deceased relation of the sick man; on his recovery, this is given to some Brahmin, and on the same day the dogs and holy men of the village are fed, and perhaps some excavation is done on a tank. When disease attacks animals, the best course is believed to have charms read over them, and to suspend others across the entrance of the village. The people often call their sons by mean names, such as *Molar* (bought), *Mangtu* (borrowed), and the like, to deprecate the wrath and envy of the

Superstitions.

gods. Ghosts are feared at the burning grounds (*chahání*), though not elsewhere apparently ; but they are firmly believed to possess people sometimes, and the ravings of these sufferers are carefully noted. The cure for the affliction is said to be the application of red pepper !

Divisions of times etc.

59. The names of the months in common use among the people are the same as those prevailing in the rest of the south of the Punjab. Bhádon is called Bhádua, and Kártik has the second name of Kanwár. The days of the week are also similar to those elsewhere, but Thursday is called Birwár as well as Brihispat, and Friday is named Sukarwar. The spring harvest is Sádhu, and the autumn harvest Sáwanún. The year is divided into three seasons, the *garmi* or hot weather from Phagan to Bysakh (March—June) ; the *chaumása*, or the rainy months, from Asár to Asoj (July—October) ; and *jarah*, or the cold months, from Kártik to Mágh (November—September). The divisions of the times of the day are as follow—

Adhi Dhale,—12 p. m.-2 a. m.
Pasar—after 2 a. m.
Pila Bodal or *Parbát*—dawn.
Abar,—after dawn.
Tarka,—5-7 a. m.
Kaliwar,—8 a. m.
Do Pahra,—twelve o'clock.
Dindhala,—2 p. m.
Tisra pahar,—4 p. m.
Sánj or *kándewar*—4-6 p. m.
Gindholak,—after sunset.
Diwabale or *Rotiyon ka wakt*.—Evening meal time.
Adki rat,—midnight.

The Government standard weights and measures are in common use among the people ; accounts are sometimes made up with the *máp* (1¼ mds.), *barola* (2 seers), and *matkana* (¼ seer), but no such actual measures of capacity exist. Their square measure is the *kacha bigah*, of which three go to a Government *bigah*, which is equal to ⅝ of an acre. The country *kós* is about one mile and a quarter ; *tirna* is the distance of an arrow's flight, and *golimár* that which a pellet from a sling can travel.

Antiquities.

60. There are no antiquities of the very least note in the Rohtak district. The real history of the old sites detailed in paragraph 9 is lost. Excavations at the Bohar Kokra Kote would seem to show that three cities have been successively destroyed there ; the coins found in Mohan Bári are the well known ones of Raja Samant Deva, who is supposed to have reigned over Kabul and the Punjab about 920 A. D. They are found throughout the Cis-Sutlej tracts, and bear on the one side a humped bull lying down, with the superscription "*Sri Samanta Deva*," and on the other a mounted horseman with a lance.* Twenty-six giants' graves (*naugazá's*) are found in the district, 17 at Baniani in Rohtak ; but the only well known one is that in the masonry *khangah* at Kanwah in Jhájjar. There are some old tombs at Jhájjar, Mehim and Gohána, but none of any special architectural merit ; the finest are at the first place. There is one old *baoli* at Rohtak and another at Mehim : of the latter a full

* NOTE.—For this information on a subject of which I know absolutely nothing myself, I am indebted to Major General Cunningham.

description is given by the author of "Pen and Pencil sketches"; it must have been in much better repair in 1828 A. D., than it is now. The "Gáokaran" tank at Rohtak and the Búawallia tank at Jhájjar are fine works, and the masonry tank built by the last Nawab at Chuchakwas is an exceedingly handsome one. The Bohar *asthal* is the only group of buildings of any architectural pretension in the district; the Jhajjar palaces are merely large houses on the old Indian plan. And as objects of antiquity are wanting, so also are leading men on the country side conspicuous for their absence. There is no single family of any wealth or influence: the leading one perhaps is that of the Rajputs Thakars of Kutáni. The want of men removed somewhat above the level of the ordinary agriculturalist is sadly felt; only 15 persons in the whole district are entitled to a seat in the Lieutenant-Governor's Darbar, and of these six are retired native Military officers, and two are pensioned Civil officers. The recent creation of Boards of Honorary Magistrates at Jhajjar and Bahadurgarh as well as at Rohtak, is one step in the direction of raising some men of influence in the district, and the appointment of Zaildars ought to be another: 27 men of the district in all receive chairs.

Leading men.

61. The are four revenue sub-divisions of the Rohtak district: Gohána in the north, Rohtak and Sampla side by side in the west and east of the centre, and Jhajjar lying below them in the south. Ever since Rai Partab Singh was Settlement Officer and Extra Assistant at Jhajjar, it has been customary to station an officer of that rank there, although the place is only 20 miles distant from the head-quarters of the district. The police divisions are shown in one of the maps in the volume appended to this Report. In the Gohána tahsil there is only one station, with two outposts at Mundlanah and Siwanah Mál; in the Rohtak tahsil there are four stations, at the head-quarters, Beri, Kulanaur and Mehim, and a *quasi* post at Bainsi; in the Sampla tahsil there are three stations at Sampla, Kharkhaudah and Bahadurgarh; and in the Jhajjar tahsil two stations only,—at Jhajjar and Sálhawas, and two posts at Bádli and Chuchakwás. Road side posts are maintained on the highways to Delhi, Hissar and Bhiwáni. The civil station and public buildings at head-quarters lie east of the town: the first civil station was situated north-west of the city by the "Gaokaran" tank, but the present site was adopted before 1830 A. D. The public garden and station roads are well shaded by fine trees, and the little place is far from being an ugly one. The Jail contains about 230 prisoners, and the treasury usually has a balance of some Rs. 1,50,000. The normal head-quarters' staff is a Deputy Commissioner, an Assistant Commissioner, an Extra Judicial Assistant Commissioner, a Superintendent of Police, and a Civil Surgeon; an Assistant Engineer in the Irrigation branch has also hitherto been usually stationed at Rohtak. The tahsil buildings of Gohána and Sampla are of the Mutiny type, with high walls and flanking towers; a fine avenue leads from the town to the former; the surroundings of the latter are bare, and it is situated at a mere village. In Jhajjar the local courts occupy the old

Administrative divisions.

Administrative statistics.

palace of Nawab Feiz Muhammad Khan : this, as well as the rest-house, is a fine building, and there are a number of well grown trees round them : the garden in which the latter once stood has unfortunately been allowed to be destroyed. There are 13 Post offices in the district, and the average number of letters received is said to be about 2,000 weekly. The District Committee consists of 58 members—far too many, and there are six municipalities at the following places, with the number of members and approximate annual income entered opposite them—

Municipalities.

Name.	*No. of Members.*	*Income.*
		Rs.
Beri ...	15 ...	6,800
Rohtak ...	18 ...	6,000
Jhajjar ...	16 ...	5,700
Gohána ...	14 ...	3,800
Bahadurgarh ...	12 ...	3,600
Kharkhaudah ...	9 ...	1,750

There are also three benches of Honorary Magistrates who sit at Rohtak, Jhajjar and Bahadurgarh.

Police and crime.

62. The police force of all ranks in the district numbers 463, including 68 municipal police : this gives an average of one to every 4 square miles. The chief crimes of the district are cattle-stealing, robberies and dacoities, in which the Ránghars and butchers and a few notorious Jat villages are principally engaged ; salt smuggling has now become a crime of the past with the abolition of the Customs line. The population as a rule is quiet and law-abiding ; when a comparative return of all murders from 1862-72 was prepared for the Punjab, Rohtak was 23rd only in figure of demerit, and as long as the table showing the proportion of crime to population was kept up, the district was shown as one of the least criminal of the Punjab. The gangs of robbers and cattle-lifters are well known, and should have been broken up long since ; but the preventive provisions of the Criminal Procedure Code have not been made sufficient use of ; an average of only 83 persons yearly has been put on security for good behaviour from 1871 to 1877. There are, no doubt, some special difficulties to be encountered, such as the adjoining native territories, the large number of headmen in the villages with the consequent trouble of fixing their responsibility, the small number of watchmen in some estates, and the great heat of summer, which makes night journeying imperative at that season. The custom, however, of placing village guards on the roads, called "*Thíkar Chaukidari*," serves somewhat to lessen the dangers attendant on belated travellers, and the appointment of chief headmen and zaildars should greatly strengthen the hands of the police in all preventive measures, if proper use is made of them. The district is also unfortunate in the fact that till now no District Superintendent of Police except one has held continuous charge for a whole year since 1871. Punitive posts have been estab-

lished in some eight villages since the Mutiny, and Chhárá ought never to be without one; the old post has, however, been recently removed.

Health and sanitation.

63. In sanitation the district is as backward as any in the Punjab, and this is the more dangerous because man and cattle alike drink from the open tanks (*johaxs*) and not from the wells, as in many parts. Much might be done by encouraging the leading men in efforts in this direction, but I am not aware that anything has been done. The death rate is put at 21 per 1,000, but this is of course, as elsewhere, much below the real mark: the normal birth rate of six Municipal towns is put at 38 per 1,000. The average number of deaths for the last 10 years since 1869 has been 11,044—*viz.*, from fevers 16 per 1,000, from small pox 1½, from bowel complaints 1, and from miscellaneous causes 2½, and including ½ per 1,000 from violence or wounds caused by animals or reptiles. The number of deaths from fever is over the average for the whole Punjab; the number of cholera deaths in the 10 years was only 324, but in the two years of the Hardwar fair, just outside this period, *viz.*, 1867 and 1879, they were 1,066 and 2,930. There is not the least doubt that the cholera in 1879 was brought from Hardwar. The first cases occurred seven days after the great day of the fair, and of 168 villages attacked, people from 135 had been to the fair. There were over 4,000 seizures in all; and the towns suffered less than villages as compared with 1867: nearly all the villages which suffered most were in the Rohtak tahsil,—Beri, Sanghi, Nidánah, Mehim and others. Small-pox was prevalent in 1869, 1877 and 1878: in the first year nearly ⅔ of the deaths were due to this disease. The average number of deaths for ten years up to 1878 was, as has been said, 11,044; but the deaths of the last year of that series, and of the year just gone by (1879), reach the startling figures of 20,178 and 35,782. During the last two years a terrible scourge of fever has fallen on the district, and the deaths of these two seasons have equalled those of no less than 5½ average preceding years. Over 46,000 deaths of the above sad tale were due to fever, and last autumn the sickness was so severe that the crops could not be cut, and the usual harvesting wage to the reaper was *one half of* the yield. This sickness cannot fail to have been a great blow to the people, one-tenth of the population having been taken away in two years, and it is to be devoutly hoped that its ravages have now ceased. It has been often observed, I believe, that severe fever follows cholera, and this has certainly been the case in Rohtak this year, but it was not so in 1867: the people maintain that severe sickness always follows shortly after a year of drought, which they are disposed to believe generates noxious influences in the soil. In 1877 and 1878, when small pox was raging, the people turned readily to vaccination, but it is not popular among the children and women; and when a sudden stampede of the former, accompanied by violent yells and sudden falls, has taken place as I entered a village, I have been informed, by way of apology, that it was not I whom the children feared, but that they supposed that I was the "*tikawalla Sahib.*" There are four dispensaries in the district, that of the Sampla tahsil being situated at Baha-

Sickness of 1879.

Dispensaries.

durgarh. The number of out-patients is about 11,000 yearly and of in-patients 500; the cost is about Rs. 5,300. Attempts, more or less successful, have been made during the last two years to distribute febrifuge mixtures through the head-men, and if such fatal and general fever prevails again, it would seem that special arrangements should be made for its treatment. There are a number of *baids* and *hakims* in the district, of whom several receive stipends from Government, and work among the sick gratuitously; one or two have more than a merely local reputation. The average deaths of the first four months of the year are 2,792, or 698 per month; of the second four months 3,410, or 852 a month; and for the last four months, 4,842 or 1,210 per month. Sickness increases suddenly with the fevers of September; October and November are the worst months of the year; in December there is a fall again to the level of December, and in January to the nominal standard of the first third of the year is reached. The subject of sanitation cannot be treated without reference once more to the state of the villages swamped by the canal and drainage channels.—The former were inspected by Dr. Dempster in 1847 A.D., and again by Dr. Taylor in 1867; the reports of both have been printed, and the state of things disclosed in them is most melancholy. In 1847 the percentage of persons suffering from enlarged spleen in the worst villages on the main canal was 44, and in 1867 in the same villages it was 25. In the case of the drainage channels the evil has been entirely and gratuitously caused by the Irrigation Department, and in the worst cases of canal swamping are almost entirely due to the same Department. The people of Mahmudpur prayed again and again that a sub-way might be made under the canal to let the drainage-water, which was held up against the banks, pass below it and flow on, and they even offered to pay for the cost of the work, but nothing was done. The new alignment of the canal will do away with much of the worst suffering in Gohana; but the source of the evils of the Sampla drainage lines is still untouched, and the whole question needs the careful notice and watching of the district authorities from a sanitary point of view.

Canal villages.

64. In a purely agricultural district the state of education would be expected to be backward, and such is the case in Rohtak. In all there are 43 schools, of which 35 are village institutions, and 2 female, but there is no real female education. English is taught at Rohtak and Jhajjar, and the first Ját who thoroughly mastered English,—Jumna Das of Bohar, was made a District Inspector of schools. The average number of scholars is about 2,700; for the size of the villages and density of the population, the district is perhaps the least advanced of any in the Punjab. Our system is possibly not suited to an agricultural people; if a little simple reading were taught with cyphering in the native method, and a knowledge of accounts and the patwaries' papers, they would be more ready to send their children to acquire some "scholaring." The Brahmins of Ahmadpur Majra have some local reputation as well-educated pandits. The people collect eagerly to hear passages of the *Ramayana* or

Education.

Mahábhárata declaimed at the village rest-house, and reward the reciter for his performance liberally ; the women also gather on these occasions, sitting by themselves in a separate corner. A number of songs are well known to the people, and none better than that of "Sarwan." This young lady lived in Gangana in the Gohána tahsil, which is commonly called *Sarwan ka Gangana* after her : the song is a common one of the dancing-girls of North India. The people are very far from wanting in natural intelligence and shrewdness ; and nearly any cultivator can draw a map of his fields in the dust, if he is encouraged a little in a kindly way. The language of the country is full of Hindi words and phrases, and very different to that spoken in the Punjab. A small vocabulary of 300 common words will be found in the volume of Notes attached to this Report. I have never been able to give time for the complete examination of the language, which I have always wished to make.

General character of the people.

65. Mr. Thomason well described the Rohtak district when, in his remarks on the Settlements of the Delhi territory, he wrote as follows (Vol. I of Despatches, p. 79) : "The "soil is generally fertile, especially if by any means "it can be irrigated, whilst the villages are substantial and well built, and "the inhabitants as fine a body of well-clothed independent manly peasants "as any country can produce." To this I have nothing to add. The people are manly without false pride, independent without insolence, good-natured, light-hearted, and industrious. There are no more loyal subjects of her Majesty in India, and none who are more attached to such of their rulers as mingle freely among them. No one, I imagine, could be associated with them for any time without conceiving both respect and liking for them. The revenue which they pay with a small irrigated area and scanty rain-fall, and in spite of famines and droughts, marks them as the first people in the Punjab.

PART IV.

MEANS OF PRODUCTION AND METHOD OF AGRICULTURE.

66. According to an enumeration made in 1875, by Settlement officials, the number of cattle in the district was as follows :— Cattle.

Of Agriculturalists.		*Of Non-Agriculturalists.*	
Bullocks	97,036	Horses ...	4,237
Cows	2,14,853	Asses ...	11,888
Buffaloes	1,05,540	Camels ...	2,426
Bulls	1,545	Goats and Sheep....	47,119
		Pigs ...	8,014
Total ...	4,18,974	Total ...	73,684

The number of bulls and buffaloe bulls is obviously much under the mark, but as these animals belong to no one in particular, and stay out in the fields or jungle at night, this result is not surprising. The number of camels is also too low, but many of these owned in the district may no doubt have been absent carrying elsewhere at the time of the enumeration : the incorrectness of the account of the pigs is not very important perhaps. The number of cattle of agriculturalists gives an average of about five to a house ; but as very few are found in the towns or with certain classes, such as Afghans and others, the actual number owned by each Jat family is nearly double of this. Unfortunately the district no longer contains all these cattle. The drought of 1877-78 was the most disastrous, in point of loss of stock, which ever occurred in Rohtak ; and by deaths, or sales, or transfers, the cattle of the people were so reduced in numbers that when a re-enumeration was made in May 1878, the survivors were found to be only as under:—

	Number.
Bullocks	59,281
Cows	130,772
Buffaloes	50,568
Total	240,621

showing a loss of 176,808 head of cattle. These figures were confirmed by a second enumeration, made in November 1878, of the oxen and the cows in the district, and which showed the numbers to be—oxen 64,050, cows 119,767 ; the increase in the oxen was chiefly due to a different method of fixing the age of calves from that formerly used, and perhaps in part to purchases of new animals for the sowings of the spring crop of 1879. Some of the animals found missing in May and November may, no doubt, have been away in the Siwalik hills, but there is no reason to believe that any great numbers were there. The loss one way or another was at least 150,000 head, of which number perhaps one-third were sold at nominal prices. This calamity was due simply to the drought. It is the practise in the district to stock large stores of fodder in order to provide for a five months' supply of food to the cattle yearly, and as a safeguard against seasons of drought ; but the autumn harvest of 1876 had not been a very good one in this respect, and in 1877 not one single unirrigated field of *joar* or *bajra* came to maturity. The stocks of fodder, which were already low, soon became exhausted ; grass entirely disappeared ; and such of the weakly cattle as could not be sold, were left to die of simple starvation. The loss to the people has been very severe, and it will be at least five years before it is fully recovered. The evidence of its reality depends on no mere enumeration only ; the dead animals cumbered the ground round the villages, and carcases were scattered everywhere in the fields : I have myself seen 20-25 dead beasts carried out of a large village on a single morning. It is an ill wind, however, that blows nobody good ; and all through the year of 1877-78 the *chamárs* and other menials lived royally on the dead animals ; without that supply they would have been dying of starvation themselves.*

Losses of 1877-78.

67. The oxen and cows of Rohtak district are of a very good breed, and particularly fine in size and shape. A touch of the Hánsi strain probably pervades them throughout. The oxen of the villages round Beri and Jhájjar have a special reputation, which is said to be due to the fact that the Nawab of Jhajjar kept some bulls of the Nágor breed at Chuchakwás, and allowed the cattle of the surrounding villages to have recourse to them. A fairly well-to-do Jat will have 6-10 head of cattle of kinds, small and large, in his yard, and these will yield him about 4 cart loads of manure yearly. The people realise large sums from the sale of cattle and manufacture of ghi,—the income from the former for the whole district has been put at 8 lakhs of rupees yearly, and from the latter at 1½ lakhs. The zemindars have a practice of selling their oxen after one crop has come up, and buying fresh ones for the next sowings, thereby avoiding the expense of their keep for 4 or 5 months : this custom is peculiar, I believe, to the Delhi territory. An ox is called *bachra* for the first two years of his life, then

Breed.

Oxen.

Note.—In the returns for the Revenue Report of 1878-79, the number of oxen and cows in the Rohtak district is given as 88,723. I am not aware where these figures are obtained from, nor can I in any way reconcile them with those of the Settlement enumeration. It is uncertain whether the number of buffaloes is not also included in above return.

bahra for two years more, after which he is a full grown *balad*, and is put to work: if taken care of, he will be fit to labor for 10 years, after which he becomes old, and is called *dhandán*. The oxen are emasculated at the age of about 2½ years by the *chamárs*, who follow the usual eastern practice of destroying the parts by blows from small sticks. A pair of fine oxen in full strength and vigor will ordinarily cost 80-100 rupees; at present, owing to the recent losses and drain for carriage for the Kabul war, it is quite possible that prices are very much higher than this.

Cows.

A cow bears names corresponding to the males till she is four years old, and has her first calf, when she becomes a *gáe*. Where she is well looked after, she will bear five or six calves, and live 18 years. The average yield of milk is about five seers a day. A good cow costs Rs. 20-25. The bulls of the country side are not all good. A large number of inferior animals, who have been released as an act of piety, are allowed to wander about the villages, and old bulls are left to mingle with the herds long after their prime of life has passed. As they belong to nobody, nobody looks after them, but as they trespass in the fields and pilfer the crops boldly on all sides for themselves, they are generally in fair condition. A few Hissar bulls were supplied to some leading agriculturalists of the district, but they nearly all died, and the experiment has not been repeated, I believe.

Bulls.

Buffaloe bulls.

Buffaloe bulls are not common; most of the male calves are sold to dealers who take them to Sirsa and elsewhere where there is a demand for them. A young male buffalo is called *katra* for two years, and then for two years more *jhotra*; after four years of life he reaches the dignity of a full grown bull—*jota* or *bainsa*. The cow bears her first calf when 4½ years old, and will produce 6 or 7 in all: her cost is about 45 rupees. An old buffaloe is called *kholah*. The Rohtak buffaloes are fine animals, and, owing to the presence of the tanks, are found almost in as large numbers in many rain-land villages as in the canal estates. Those of the villages round Butánah and Nidánah (Rohtak) are famous for their breed.

Cows.

68. Other Cattle:

Most of the so-called horses are the merest ponies, and belong to barbers, traders and religious mendicants. Till quite recently, no village headmen used to possess horses: a few, however, have now begun to display equestrian tastes. As has been already remarked, the Guriani Pathans were once famous horse breeders, but of late years they have found the occupation almost unprofitable, and they are generally abandoning it. There is hardly such a thing as an animal of good blood in the district; but since 1877 there have been three Government stallions at head-quarters, which are freely resorted to by the owners of mares, and an improvement of the country strain may therefore be looked for. A colt is called *bachera*, and a filly *bacheri*, till three years of age.

Horses.

Asses.

The asses belong entirely to the potters; they are of poor breed, wretchedly fed, and cruelly overworked; an ass costs Rs. 12-15. The camels are owned

chiefly by a class called Rhabáris; they rarely belong to Jats except in Matanhel (Jhajjar) and a few other villages. A camel is called *bota* or *boti* till it can carry a burden, and then *únt* or *úntni*. The female bears after five years, and will produce six or seven young up to the age of twenty-five, and will live for thirty-five or forty years. A full-grown camel costs Rs. 70-90: they are employed chiefly in carrying sugar, salt, and cotton to and from Bhiwani and Rewari, and places in the Gangetic Doab, which is called by the Rohtak people *Miygn Dáb*=Darmiáni Doáb. The goats and sheep (*bher*) are owned as a rule by the village menials: in a few Jhajjar estates and round Chándi in Rohtak, the zemindars also keep them. The females produce usually four kids, one at a time; lambs are called *bhedi*, kids *pát* or *pátaira*. The butchers of the towns and Mussulman villages buy up the animals for slaughter. The wool of the sheep is cut twice a year,—in April and October; the annual yield of wool of a black sheep sells for four and half annas, and of a white sheep for about six annas. The skins and flesh of animals which die in all villages belong by custom to the village *chamárs*; the sweeper class receives one-tenth share of the flesh, and takes the hides of horses, donkeys and camels. A good skin of a cow or ox is worth Rs. 5 unprepared, and Rs. 9 when tanned, and the skin of a buffaloe Rs. 7 and Rs. 12; poor skins are worth much less. The shoes which a *chamár* has to supply to a family during the year, are worth about Rs. $3\frac{1}{2}$. Cattle poisoning for the sake of the skins is happily rare.

Camels.

Goats and sheep.

Skins.

69. Such information as I have been able to collect on the subject of diseases of cattle, and their cure, is very imperfect; the subject is one which might be taken up and enquired into by the district officers with advantage. A long list of vernacular names of diseases and their symptoms has been submitted to me, but it is as hard to identify the one as to understand the other. Cattle disease, *i. e.* rinderpest, is, I believe, unknown, and foot and mouth disease is rare; the commonest evils are staggers, colic, and scab; a few deaths are caused annually by snake bites on the tongues of browsing animals. The usual cures are drenches of kinds, in which pepper and oil play a prominent part, and branding also is freely resorted to; but the chief reliance of the people is placed on the efficacy of charmed tags hung over the entrance of the village. The cattle are very much neglected in many ways. They are left to stand in filthy enclosures, ancle deep in half liquid manure, and, as a rule, except for chopped fodder, they are allowed to shift for themselves; the wiser agriculturalists will give the oxen chopped sugarcane, or a little green wheat occasionally, but this is not common: the buffaloe is perhaps better tended than the other animals are. The extensive breaking up of land which has taken place since 1840 has greatly restricted the grazing grounds of the villages; the present fodder supply grown in the fields is not much more than sufficient for the yearly consumption of the cattle, and leaves but a small margin out of which to provide for against seasons of drought; and in many canal estates diffi-

Diseases of cattle.

Grazing.

culty is already being experienced on this score. But few decent sized stretches of village jungle now exist anywhere, and our unfortunate policy of giving proprietary grants has caused the reduction of more than half of the area of the Jhajjar and Bahadurgarh preserves. It is most important that these should not be reduced any further now, and that the remaining village jungle lands should be protected; a clause with this object has been inserted in each village Administration Paper. In 109 villages grazing fees are taken from the non-proprietary body,—chiefly in the Gohána tahsil. These fees are usually Re. 1 per buffaloe or camel per annum; 8 annas per ox, cow or horse; 4 annas per calf; and 2 annas per goat. A great fair for the sale of cattle takes place twice a year, in September and March, at Jehazgarh; the average yearly number of cattle attending both fairs since 1871-72, has been nearly 38,000, of which about half are generally sold, largely because of the custom mentioned in paragraph 67. Till 1871-72 the fees from the fairs were farmed, and in that year they realised Rs. 8,000: since then they have been collected as head fees on each animal exhibited for prizes, and on one occasion only has the sum realised exceeded Rs. 4,000; Government has now sanctioned their levy by a percentage on the price of the animals sold, according to the practice at most Punjab fairs. The prices prevailing at the fair are generally low, many inferior animals being offered for sale, and the cultivators being desirous in many cases to be rid of their stock. The spring fair is slightly the larger of the two.

Jehazgarh fair.

70. With moderate rain the cattle have no lack of grass pasture for most months of the year: from April to June grass is always scanty. The owner of a field is entitled to reserve it for the grazing of his own cattle for 12-15 days after the crop has been cut; then all the cattle of the village browse over the fields without distinction. The best and commonest grass is the *dúb*, which, with a fair rainfall, lasts all the year round. It is by far the most highly prized by the people, who say, "*Aur ghás jal jáwegi, dúb rehegi khúb*"—"Though all other grass be burned up, the *dúb* will remain fresh." It grows along the ground with long sprays, and has deep roots, which the people dig up as fodder in famine seasons. Most of the other grasses spring up with the early rains, and last only a few weeks or months: the best kinds are called locally *chaprúr, sánwak, makra, ánjan, palua* and *gándhi*. The *dáb* grass which grows most commonly in the low-lying naturally-flooded lands, is of a coarse and hurtful kind—"*Márega, kyá dáb charega*"—"though an animal die, yet should he eat *dáb*." The *káns* grass is said to be good for horses—(*Ghore ko káns, admi ko báns*"—"*Káns* grass for the horse, a staff for a man") and is much relished by camels and goats. *Palua* and *gándhi* form the special food of buffaloes, and *ghatil* of donkeys; most animals eat the other kinds, but many are not nourishing, and only allay hunger. *Sánwak, makra, chaprúr*, and *palenji* bear small seeds, which are gathered and eaten by the people in famine seasons. At such times, too, the cattle have to put up with fodder mixed with sprays of trees, bushes and thorns, especially from the *raunj, jánt, kikar*,

Grasses.

shisham, *siris* and *jhár pálá*; these form a most important stand-by in such seasons, and in allusion to their admixture with straw, it is said "*Bángar ka dángar, kháe píl sángar*,"—"the cattle of the highlands eat the fruit of the *jál* and *jánt*." The *jhár-pálá* bush, also called *jhár-beri* (*zizyphus nummularia*) has been fully described by Mr. (Lord) Lawrence in his Report on the Rewari pergunnah, paragraph 19. When green and growing in the middle of the crops, it is called *gobla*;—when the crop has been removed, the thorny sprays are cut off close to the ground, and given to the camels to eat, or mixed with fodder for other cattle: the leaves of the bushes in the jungle, or whose branches dry up in the fields, are beaten off them and collected in bundles; the thorns are used to protect the roads and enclosures for fuel and fodder. The plant also bears a fruit called the *jungli ber*, which is largely eaten in famine years. Besides the *pálá* bush, camels feed on the *jhojhru*, which grows commonly on *bhur* soil, and on sprays and leaves of *kikar*, *raunj*, *pipal*, *jánt*, and *badber* trees. Goats are fond of the leaves of the *babúl* and of the *badber*, and *ák* trees, but they will not touch *ták*. "*Unt ne chhora ák, aur bakri ne chhora dhák*"—"The camel does not touch the *ák*, nor the goat the *ták*."

Trees: their uses.

71. It will be convenient to mention here the other uses to which the trees of the district are put by the people, besides the levy of contributions for fodder from them. A nearly complete list of the common trees will be found at p. 552, Vol. I of the "Punjab Products"; the only ones which are not mentioned there are the *jánt* (*prosopis spicigera*) and *siris* (*albizzia Lebbek*). Most of the trees are self-reproducing, but the *pipal*, *farash*, *siris* and *shisham* usually require to be planted out. The *kikar* is the tree most commonly used for nearly all purposes of building, and for household and agricultural instruments; the wheels of carts are generally made of this wood, and its boles furnish the solid blocks which are placed upright in the ground, and form the lower portion of the sugar-mills. The *siris* also, which is called *sirdár darakhtán*, furnishes these stumps. *Shisham* wood is used for nearly all the same purposes as *kikar*, but less commonly; only the red kind is adapted for agricultural implements. The timber of the *beri*, *pipal*, *jáman*, *túl*, *jánt*, *siris*, and *farásh*, is used in buildings; the *mango* and *jál* (which is safe from the attacks of white ants) for doors; the *hingo* and red *nímber* for ploughs, rakes, etc., and especially for churns; and the *rahíra* for bed-posts. The *jánt* and *farásh* supply the wattlings for the unlined wells of the Jhajjar tahsil; the *raunj* and *dhák* are largely made use of for well timbers, as they are unaffected by water. The fire-wood of the country is supplied by the *beri*, *jál*, *dhák*, *raunj*, *farásh* and *kendu*: the Golia Jats and Mussalman alone burn the *pipal*; the best charcoal is made from the *kikar*, and after that from the *jánt*, *raunj*, and *dhák*. This last tree furnishes the wood for the general pyres and marriage hearths—ominous conjunction! The *jánt* tree has a seed called *sángar* (and when dry *jhínj*) which the poorer people eat: the *jál* bears a sweet fruit (*pílu* or *pilu*), which is especially abundant in famine years, ripening in May, and giving a welcome supply of food to the people. But the greatest stand-by of the lower classes in years of the distress is the *kair* bush (not *khair*). This useful plant bears

first a flower called *bárwáh*, which is eatable, and then a fruit which, when in its green state is called *tint* and is made into a pickle, and when ripe and fit to eat *pinjú*; in years of famine, it is said, that the bush flowers twice. The plum of the *jhár pálú* has already been mentioned. The *kesu* fruit of the *dhák* tree is used for dyeing; a gum also is exuded from this tree, and from the *kikar*, whose bark is used for tanning and in the manufacture of country spirits.

Agricultural implements.

72. The implements of agriculture are few and simple. Some few are fashioned by the agriculturalists themselves, but most are made and repaired by the blacksmith and carpenter, in return for their customary fees and without charge; the supplying and mending of the implements cost these village servants about Rs. 6 each per landlord a year. The following list comprises all those in common use :—

Hal,—plough.	*Kuhári*,—hatchet.
Sohága,—clod-crusher.	*Kasi*,—large spud.
Sándra,—drag-rake.	*Kurpa*,—grass-spud.
Jeli,—fork.	*Kasola*,—large mattock.
Daránti,—sickle.	*Kodáli*,—smaller do.
Gandási,—axe to cut thorns.	*Gádi*,—cart.
Gandásа,—fodder chopper.	*Kolhu*,—sugar mill.

Plough.

The chief parts of the plough are the yoke,—*júa*; the pole from the yoke to the plough,—*halas*; the share,—*kas* or *pháli*; the wood below the share,—*panihári*; the hollow bamboo drill with a cup at its head, attached to the side of the plough in order to drop the seed,—*orna*; and the ox-whip,—*sánta*. The sugar mill is made up of the following principal pieces—the *kolhu*, or wooden stump, in the top of which the cup for crushing the cane is; the *lát*, or crusher, revolving within the cup;

Sugar mill.

the horizontal beam from the top of this, which joins the far end of the other beam to which the oxen are yoked, and whose base revolves round the side of the *kolhu*—the former called *mánik mal*, and the latter *pát*. The method pursued for expressing the cane juice has been correctly described by Mr. Powell in his "Punjab Products," and needs no further account here. There are about 1,000 sugar mills in the district, of which half are in the Gohána tahsil; as a rule the zemindars manufacture *gur* only, but refined sugar also is made by them in some villages, and that of Bidhlan, Sissánah, Busánah, Mundlánah, Mahmudpur, and Madinah has a considerable local reputation. Many of the carts of the country side are very fine ones, capable of carrying a weight of 40-45 maunds, and drawn by five or six oxen; the carts used for agricul-

Carts.

ture exclusively are smaller, and drawn by two oxen. There are between twelve and thirteen thousand carts in the district of which two-thirds are large ones, and ply in the carrying trade. Though the receipts of the zemindars from this source have

certainly fallen off since the railways opened, some two lakhs of rupees a year are still made by carrying; few carts comparatively are owned in Jhajjar. The names of the important pieces which make up a cart are as follows: wheels (*pahiya*) made of *kikar*; axle *dhúrah*; the solid bars outside the wheels which keep them close to the body of the cart, *bánk*; the main pieces which run from end to end, which are made of *sál*, and on which the upper work of the cart rests, *phar*; the side netting of bamboo and cord, *kunta*; the cross sticks, which support the cart in front when standing, *dhi*; and the log of wood, which similarly holds it up behind, *olárwa*. A large cart, *gádi* or *ladhá*, costs Rs. 75. The furnishings of a well are as follows: the wheel *charkhi*; the wood work by which the wheel is supported, *dhánah*; the rope, *lúo*; the leathern bucket, generally made of buffalo skin, *charas*; and the iron ring, round which the bucket hangs, *mándal*. Besides the above implements there may be mentioned as necessary for the work of agriculture the threshing ground, *gáhita*, with its upright pole (*mend*), round which the oxen treading out the grain are driven; and the *chháj* or winnowing tray; the platforms made of earth or supported on upright poles (*ter* and *dámchah*), which are needed for the watcher of the crops to protect them from the birds, and the *gopyia* or *sling* which he uses. Not a few of the implements are clumsy, but in some cases at least with cause. The cart must be heavy and strong to stand the joltings of the ruts of village roads; the plough must be light and not penetrate too deeply at the time of sowing, for the rain-fall is not always sufficient to penetrate far into the soil, and a damp bed of not a few inches deep is needed below the seed, for its roots to shoot down into. To have a heavy plough for the preparation of the fields and a light one for sowing, is, of course, quite beyond the ideas of a Ját cultivator. Winnowing in the Indian fashion, by pouring the grain from a basket held by a man standing on a stool and allowing the wind to bear away the chaff, is till the present day the common practice in parts of Ireland, I believe. The sugar-mills are no doubt unnecessarily clumsy, and both the quantity and quality of the juice expressed are affected by the practise of cutting the cane into small pieces. One or two iron mills introduced experimentally did not find much favor, but a second attempt, if made, would perhaps be more successful.

Wells.

Miscellaneous.

73. The soils of the district have already been described briefly in paragraph 7, and there is little more to add here. It is not always easy to say what class any particular field belongs to, as each soil passes by fine gradations into the other. At the present settlement the *matiyár* has been overstated somewhat, especially in the Sampla tahsil, and the *bhur* understated in the three northern tahsils. In years of good rain there is but little to choose between *dákar*, *mátiyar* and *rausli*; and *bhur* has this advantage, that it will often grow a crop on a rain-fall which is quite insufficient for any other class of soil. The area of each soil according to the present measurements of the cultivated lands paying revenue to Government, is as follows :—

Cultivated Area : Soils.

	Acres.	Percentage.
Manured	32,054	4
Dákar	21,051	2
Matiyár	58,677	7
Rausli	671,901	75
Bhur	110,732	12
Total ...	894,415	100

The manured area is undoubtedly lower than it should be, in spite of the clearest orders issued for its careful record; more than $\frac{2}{3}$ of the *bhur* soil is found in the Jhajjar tahsil. Of the total area of the district, which is 11,53,547 acres, the following is the detail :—

Unassessed.			Assessed.		
	Acres.	Percentage.		Acres.	Percentage.
Revenue-free ...	15,509	1	Culturable...	163,336	14
Unculturable ...	66,554	6	Fallow ...	13,733	1
			Cultivated ...	894,415	78
Total ...	82,063	7	Total ...	1,071,484	93

Detail of total area.

The area entered as culturable is high, some of it being undoubtedly unculturable, and most of it consisting of the village reserved jungles, which cannot in any case be broken up. Of the revenue-free area 12,943 acres are cultivated, so that the total area in the district to which cultivation extends is 9,07,358 acres. The Settlement figures agree in a remarkable manner with those of the Revenue Survey made during the currency of Settlement operations in the cold seasons of 1875-76 and 1876-77.

Revenue Survey areas.

The comparison of the results may be made thus :—

Tahsil.	Cultivated Area.		Total Area.	
	By Revenue Survey.	By Settlement Measurements.	By Revenue Survey.	By Settlement Measurements
	Acres.	Acres.	Acres.	Acres
Gohána ...	171,503	169,922	214,644	215,056
Rohtak ...	299,789	299,432	374,924	378,464
Sampla ...	219,298	215,667	262,343	261,778
Jhajjar ...	224,236	222,337	298,502	298,249
Total ...	914,826	907,358	1,150,413	1,153,547

The difference between the total areas of the two surveys is thus 3,134 acres (5 square miles) or ·27 per cent. ; only that of the cultivated area is 7,468 acres or ·82 per cent, and is due entirely to the difference between the seasons in which the two surveys were made. The accuracy of Mr. Purser's measurements has been acknowledged by the Punjab Government ; and I have only to add that as the previous Revenue Survey of Jhajjar in 1858-60 put the total area of the tahsil at 298,123 acres, our measurements differ less from the present survey than it differs itself from the former. The cultivated lands are classified as follows in the Settlement papers, with respect to artificial irrigation and the rainfall :—

Irrigation &c.

	Acres.	*Percentage.*
(1).—Canal irrigated ...	96,776	11
(2).—Canal and well irrigated ...	5	—
(3).—Canal and flood irrigated ...	92	—
(4).—Well irrigated	20,595	2
(5).—Well and flood irrigated ...	1,740	—
(6).—Flood irrigated	9,540	1
(7).—Rain-land	765,665	86
Total ...	894,415	100

Two-thirds of the canal-irrigated area are in Gohána ; about six-sevenths of the well lands, nine-tenths of the flooded lands, and all the well and flooded lands are in Jhajjar ; items (2) and (3) in the above list are due to an unnecessary refinement of classification. The system of cultivation under each of the above set of conditions may now be noticed briefly.

Canal lands.

74. Canal irrigation is effected almost entirely by flow (*tor*) ; only 2,496 acres in the whole district require the water to be lifted to them (*dál*). At last Settlement the area irrigated by lift bore a considerable proportion to that irrigated by flow ; but the silting of the canal, and the consequent constant heightening of its banks, have now raised the water above the level of the country at almost all points. Whether this is an unmixed advantage is doubtful ; the abuses of the present system have been noticed in paragraph 38 of the Gohána Assessment Report. In many villages the irrigated area has been allowed to increase out of all proportion to the necessities of the estate ; this point has been fully noticed in the separate report on owners' rates, published in Punjab Proceedings, No. 13 of October 1879, and which is bound up with the Assessment Reports. The new system of owners' rates will, it is hoped, effect some change for the better here. The water leaves the canal through masonry outlets called *mori* ; the larger water-courses are named *khánds* in Gohána, and *dhánah* in Rohtak and Sampla, and the lesser *phánke* ; *rajbehas* are the main distributaries. The system of irrigation from the canal will be found detailed in the notes prefaced to each canal circle in the Village Note-books, and in the separate irrigation records which have been prepared

for each canal and village. The general system of distributing water from the canal is not sufficiently adhered to; in all seasons of pressure, *bewár* (getting water out of turn) is apt to prevail, and places endless opportunities of corrupt dealings in the hands of the subordinates of the Irrigation Department. The canal requires to be cleaned out thoroughly down to the proper level of its bed; there is always some trouble in effecting the work of clearance, as the Jats will not, as a rule, do it themselves, although they do clean out their water-courses, but send their menials to do the work. The district officers might give much useful assistance to the Canal department in this matter. The discrepancies between our canal irrigated areas and those of the Irrigation department have been fully noticed in the Assessment reports. Time will show which set of figures is more nearly correct on an average. In paragraph 7 allusion has already been made to the development of saline efflorescence caused by the canals. The origin of this pest has been fully discussed in the papers of the recent Aligarh conference, and I have no intention of adding anything to the controversy here. The villages above Mundlanah in the north-east corner of Gohána and the estate of Muazzamnagar above Kharkhaudah in Sampla, which suffer most from actual efflorescence, seem to have been attacked as forming the highest ground near; in none of these cases is there any serious check of natural drainage, nor are the lands liable to be swamped, as they are in Chatera, Siwanka and Mahmudpur, along the main line of the Rohtak canal, and in which this cause alone is the origin of the evil. In Mirzapur, and Chhichhrana on the Gohána border, and in Sisrauli in Rohtak, the salt is probably developed by soakage from the canal, whose bed is there high above the level of the country. In no other canal villages is the efflorescence as yet badly developed in the cultivated lands; but, thanks to the escape floods from the Dehli canal, it is developing fast in Bidhlan, Sehri and Khandah, in Sampla. Four small estates have had a five years' settlement made with them on account of the ravages committed by this pest; in every case the existence of the evil has been entered in the Village Note-book, and its possible spread should be carefully watched by all revenue officers. It is to be hoped, however, that in the Gohána estates at least the area affected will gradually diminish as the good effects of the new alignment of the canal are felt. It may be noticed here that the scale of charges which now prevails for the use of water—occupiers' rates—was fixed in 1866, and is more than double the old scale which prevailed under the contract system at last Settlement. The present rates are as follow—

Saline efflorescence.

Class.	Crop.	Rate per acre.					
		Flow.			*Lift.*		
		Rs.	a.	p.	Rs.	a.	p.
I.	Sugarcane and gardens ...	5	0	0	3	5	4
II.	Rice, tobacco, vegetables, and water nuts ...	3	0	0	2	0	0
III.	Indigo, cotton and all spring crops	2	4	0	1	8	0
IV.	All autumn crops not given above...	1	10	0	1	0	0
V.	A single watering before ploughing to fallow lands ...	1	0	0	0	10	0

The rate for gardens is per annum, the others are per crop : a single watering is called by the people *palewa* or *paleo*.

Well lands.

75. There are 2,088 irrigation wells in use in the district, and 639 out of use. Of the wells in work, 1,511 are in the Jhajjar tahsil, and 340 in Sampla ; 1,793 are lined with masonry, and 275 are simply dug in the earth. A very great number of the wells have been sunk since 1860, and an area of 4,300 acres attached to 372 wells is at present exempted from assessment at well rates under the cover of protective leases. They are all worked by the well-known system of the bucket and rope (*láo* and *charas*) ; no Persian wheels are found in the district, although they could be certainly used in the flooded tracts. As most of the irrigation wells are situated where water is near the surface, the average depth to the water in them throughout the district is only 27 feet, as compared with 52 feet, or nearly double, in drinking wells. There are a few wells fitted with four and three buckets, but these are rare ; nearly one-fourth of the wells have two buckets, the rest are worked by a single one. The unlined wells are generally of larger circumference than the masonry ones, in order to prevent the water spilling on their sides. They are of three kinds, and nearly all in the Jhajjar tahsil. The first kind consists of those which are strengthened by a wooden frame-work down below as well as by wattling of *farásh* boughs : these are called *kothawallas* and will last 15-20 years ; they cost Rs. 60-70. The second kind have wattling only, and are termed *jhárwallas*, they cost Rs. 25-30, and last 10 years. The third class have no protective lining of any kind, and are called *galawallas*, they are few in number, cost Rs. 15 each to excavate, and last, if there is no extraordinary rain-fall, for 5 years. A large number of unlined wells used to exist in the Gohána tahsil (and no doubt in Sampla also), as is shown by the returns of the first Revenue Survey in 1825-30 ; but as the canal irrigation extended, these fell in, or else fell out of use. The water in wells affected by canal irrigation has risen enormously since the canal was restored ; the point has

Unlined wells.

been noticed in paragraph 5 of the Gohána Assessment Report, and it may be added that there is found in some wells of the low-lying canal villages 50-60 feet of water, showing how far the natural level was once below what it now has artificially become. In some villages which lie along the course of the old Kashâoti Naddi in Jhajjar, the depth of the water from the surface has become greater since the floods ceased to come down. The masonry wells in the south-east corner of Jhajjar are made of stone, procured from the little hills on that side; elsewhere they are lined with bricks; in the villages for miles round Mohan Bári, the materials for lining wells have been dug out of the old site there. The stone wells of Kosli are remarkable for their very small circumference, and their water for its qualities; the people call it nectar (*amrat ka páni*). Mr. Purser, in paragraph 8 of the Jhajjar Assessment Report, has fully described the qualities of the various kinds of water in the district. The wells in use and out of use are classified as follows, according to the quality of their contents :—

Water of wells.

	No. of wells.
Sweet-water	1,310
Malmala „	546
Matwalla „	39
Bitter „ (*shor khára*)	604
Salt water (*shor kallar*)	228
Total ...	2,727

Nearly all the wells out of use belong of course to the last two classes; salt water wells include those of the A'gris for the manufacture of salt. The sweet wells are found principally in the naturally flooded tracts, which thus have a great advantage over the other portions of the district. Few of the wells are naturally sweet, they are made so and kept so by the tanks and floods of the streams. The land irrigated by the bitter wells has to be changed every year or two years in order to avoid the excessive development of *reh* efflorescence; this system of change is called *sál-palat*. Salt efflorescence is present in considerable quantities in the Rajput estates in the south-east corner of Jhajjar, and again in a few villages above Guriani and round Bhurawás; the development of this evil should be carefully watched, as if it causes many wells to fall out of use, the distribution of the revenue made at Settlement is apt to become very unequal. The irrigated area per well throughout the district is 10 acres, and in the Jhajjar tahsil 12; about 2 acres more of irrigable land are attached to each well; the area irrigated by each wheel is about 8 acres. The special system which prevails among the Ahirs, of each sharer working the well year by year in turn, has been noticed in paragraph 46. About 5,000 pairs of oxen are required to equip the wells of the district fully, and only about 125 pair of this number were found short at the time of Settlement measurements. The cost of masonry wells for irrigation varies from Rs. 400 in the naturally flooded circles to more than twice as much in the rain-land tracts of the northern tahsils; the average

cost of a complete well is about Rs. 600. In the Sahibi depressions, *dhenklies*, or levers with pots attached to them, are used by village menials to water little plots of land ; the zemindars themselves do not use them.

Drinking wells.

There are 1,173 drinking wells (*panghat ka kúá*) in the district, of which 1,115 are lined with masonry and 946 sweet ; they are nearly always sunk on the edge of tanks, and their water ceases to be sweet as soon as these dry up ; but except in some Jhajjar villages and a few on the west border of Rohtak, the people are not, as a rule, badly off for drinking water. Curiously enough, nothing will induce them to drink the canal water, which is really far purer than that in the wells of the canal villages. There are about 500 village tanks in each of the four tahsils, but those in Jhajjar are poor and inferior, except along the northern border.

Cultivation in the flood depressions.

76. There is little to be added to the account of cultivation in the naturally flooded tracts and round the Najafgarh *jhil*, written in 1838 by Lieut. (Sir H.) Durand :—"The villages on "the *jhil* are dependent upon its supply for the irrigation of some of their most "valuable lands, *viz.*, those bordering the *jhil*. Experience has acquainted them "with the ordinary height of the water, and thus enables them by careful atten- "tion to the levels selected for the purpose, to plant sugar-cane in February "and March, with every prospect of a rich crop in December. In the month "of November the main line and both branches" (those to Bupániah and Bahadurgarh) "are thus fringed with fields of sugar-cane. Such ground as "is favourably situated with reference to the *jhil*, but not occupied by the "sugar-cane, is that first prepared for the *rabbi*. The water expended in its "tillage and by evaporations lays bare a certain portion more, which is immedi- "ately ploughed up and sown. For the purposes of facilitating the irrigation "of the sugar-cane and of the lands first sown with wheat and gram, short cuts "are made from the lower levels as far as the sugar-cane levels ; beyond this, cuts "hardly ever extend. The higher and more retired land produces the usual "báráni crops." These cuts are only dug of course where the water remains permanently all the year round ; they are most commonly made use of in Kote Kalal, Jehangirpur and Surah. To meet the peculiarities of cultivation in the depressions, the fields are formed into long strips (*patties*) running down from the higher lands into the water ; thus every field benefits or suffers equally from the rise and fall of the floods. The water is lifted from the cuts and thrown into the fields themselves or into ducts to the fields by two or more pairs of baskets (*chháj*). The wells are situated above the level of the floods along the edges of the depression in Jhajjar : in Bupániah only do they extend right across it. The crops of the depressions are often very luxuriant : and tremendous tales are told of the yield of certain favourable years, especially in Yakúbpur. An area of 1,289 acres remains permanently under water all the year round ; usually the floods dry rapidly elsewhere, and enable a large spring crop to be sown. In consequence it was not thought necessary to put any of the flooded villages under a fluctuating assessment, as has been done in a few cases in Delhi and Gurgaon. It is true that in years of unusual rainfall, such as 1875, some thousands of acres remain

submerged for 6-8 months together, and in that year some of the villages were entirely cut off from all connection with others for whole weeks ; but in such cases the sugar-cane crop repays twice over the loss caused. The water in the depression is held up by the Bádli *band* constructed by Nawab Feiz Mahammad Khan ; the *band* is an earth-work of some dimensions with four small masonry sluices in the middle, which allow the floods to pass on. There was some talk of imposing a light water rate for the maintenance and repairs of the *band* in 1877. This is unnecessary : as I pointed out then, it ought to be quite easy for the tahsildar to arrange for the repairs by the villages benefitted through the zaildars and chief-headmen.

Rain-lands.

77. Irrigation from tanks is never practised : the people have religious prejudices against this. Shallow cuts (*ágam*) are made from the jungle lands to the fields, to guide the rain-water to the latter, and low-lying plots are highly prized—

Unki bairi kya kare, jin ke mit diwan,
Unki bairi kya kare, jin ki khet niwan.

—"What can the enemy do to the man whose friend is the magistrate, or whose field is in low ground." The unirrigated lands of the district form 86 per cent. of the cultivated area, as has been seen in paragraph 73 : the importance therefore of a full and timely rain-fall for the Harriana country may be seen at a glance. When the rain is satisfactory, the soil produces most luxuriant crops, and sometimes most astounding ones ; the people talk of a single acre of *joar* producing a yield of 40-60 maunds in some years. The autumn crops on rain-lands are *joar* and *bájra*, with pulses sown below them ; the spring harvest consists of gram and a little *sarson*, and in years of good winter rains, of some extent of barley. The soil, though freely cropped, shows no signs of general exhaustion, call it old and worn-out though the people may : the famines cause enforced fallows at intervals, and the crops of the following season are always more luxuriant than usual, if the rain-fall is sufficient. No such system as that mentioned by Mr. Channing in his Gurgaon Report, of exchanging blocks of lands periodically (*pánáh palat*), exists in any village of the Rohtak district. The number of ploughings which the soil undergoes are as follows for each crop :—pulses and poor grasses 1-2, gram 2-3, *joar*, *bájra*, rice, 2-4, cotton 4-6, wheat and barley 5-8, sugar-cane 5-10. The ploughing is done very effectually, the whole soil being finely pulverised and no clods left in it. Manure is not used except in irrigated lands ; sugar-cane requires an immense deal, and rice must have manure also ; most of the rest goes to the wheat and cotton. Canal lands receive more manure than well lands, the object being to counteract the greater coldness of the canal water. Fallows proper are not practised : the pressure of population and the division of property are perhaps too great to allow this. For rain-land cultivation the agriculturalist generally sets aside over two-thirds of his lands for the autumn crop, and somewhat less

Ploughings.
Manure.
Fallows.
Rotation.

than one-third for the spring, and the land gets rest till the season for which it is kept comes round again : if there is heavy summer rain, the whole area will perhaps be put under the autumn crop, and in that case no spring crop is taken at all. These arrangements are due to the nature of the seasons, rather than to any care for the soil. On lands irrigated by wells and canals a crop is taken every harvest, as far as possible ; the floods of the natural streams usually prevent any autumn crop, except sugar-cane, being taken on the lands affected by them. Rotation of crops is acknowledged and followed in a very imperfect way only, and for the sake of the crop rather than the soil ; after cotton, gram and barley are generally sown ; after rice and indigo, gram ; after *joar* and *bájra*, wheat and *gochni* on irrigated lands, and gram on unirrigated ; before and after sugar-cane a grain crop is usually taken.

Rainfall.

78. The rain-fall of the last 19 years, from 1860-61 to 1878-79, has been as follows, in inches and tenths :—

	Inches.		*Inches.*
1860-61 ...	9·1	1870-71 ...	13·2
1861-62 ...	23·6	1871-72 ...	18·2
1862-63 ...	27·2	1872-73 ...	26·7
1863-34 ...	28·8	1873-74 ...	24·7
1864-65 ...	16·3	1874-75 ...	16·2
1865-66 ...	16·6	1875-76 ...	31·1
1866-67 ...	12·6	1876-77 ...	21·2
1867-68 ...	20·3	1877-78 ...	15·0
1868-69 ...	11·2	1878-79 ...	21·2
1869-70	17·0		

The average rain-fall for the period is 19½ inches, which is distributed thus according to months in each tahsil :—

	Gohána.	*Rohtak.*	*Sampla.*	*Jhajjar.*	*Average.*
January	·5	·3	·4	·4	·4
February	·5	·5	·3	·4	·4
March	·7	·7	·4	·4	·5
April	·4	·3	·3	·3	·3
May	·9	·7	·6	·6	·7
June	2·3	2·0	2·0	2·0	2·1
July	5·6	6·7	6·6	6·7	6·4
August	4·1	3·7	4·0	3·6	3·9
September	4·1	3·8	3·6	3·8	3·9
October	0·3	0·4	0·4	0·3	0·3
November	0·0	0·0	0·0	0·0	0·0
December	0·7	0·5	0·4	0·6	0·6
	20·1	19·6	19·0	19·1	19·5

The rain-fall is greater in the northern tahsil than in the others, as would be expected, though, curiously enough, the Gohána tahsil shows the lowest figure in three out of the five years of scantiest rain since 1860-61. For the six years from 1850-51 to 1855-56, the average fall, according to the returns of the North-Western Provinces Revenue Reports, was 22·1 inches, but the record was perhaps not so carefully kept then as now. It will be seen that the fall of July is nearly double that of any other month; that the fall in August and September is about equal, and that the rains cease early; the average fall in October being only ⅓ inch. The rain-fall may be divided off into the following periods:—

December—February	1·4
March—May	1·5
June and July	8·5
August and September	7·8
October and November	·3
Total ...	19·5

Roughly speaking, thirteen inches go to the sowing of the autumn crops, and five inches to the sowing of the spring. November is the only month which shows no rain-fall at all. The winter rains are scanty; about an inch for the gram crop and two inches (one more) for the wheat and barley. The early summer rains enable cotton to spring up well, and the *bájra* and fodder to be sown, and they are especially beneficial in replenishing or preventing the further exhaustion of the stores of water in the tanks which begin to fail rapidly from the middle of May forward, but the really important rain is that of July. Thus in 1866-67, and again in 1874-75, the fall of the whole year was as poor as in the famine seasons and in the drought 1877-78, but such rain as did come fell in June and July, and no famine or serious drought took place. The lowest recorded rain-falls of the district are 9 inches in 1860-61, 12·6 in 1866-67, 11·2 inches in 1868-69, and 13·2 inches in 1870-71; the highest occurred in 1862-63, 1863-64, 1872-73 and 1875-76, when the gauges registered 27·2, 28·8, 26·7, and 31·1. The lowest record in any tahsil is 4·5 inches at Gohána in 1860-61, and the highest 37·5 at Sampla in 1875-76, which was the heaviest fall by far ever known in the district. The people consider the rain good when it moistens the soil to a depth of 2½ feet from the surface. The terms for the various degrees of rain are as follows:—

Dongra,—scattered drops.
Chadar bhe,—sufficient to damp their clothes.
Khúdwáni,—a furrowfull.
Kiari bhar,—a field full.
Dolah or náka tor,—sufficient to break the field's boundaries.
Músal dhár,—a heavy downpour.
Desa bharn,—general rain.

After the falls of rain and especially after the last fall in the autumn, extraordinarily heavy dews set in at nights; these are almost as beneficial to the crops as the rains themselves.

79. The commoner crops grown in the Rohtak district, with their English and vernacular names, are as follows—the corresponding botanical terms may be found in Mr. Purser's Montgomery Settlement Report :—

Crops.

Harvest.	Crop.		Area in acres.
	Vernacular name.	*English Name.*	
I.—Autumn ...	Joar	Great millet ...	3,71,826
	Bájra	Spiked do.	2,60,793
	Moth	Pulse	10,278
	Mung	„	1,421
	Másh or Urd ...	„	691
	Gwár	„	12,099
	Dhán	Rice	4,327
	Bári or Bun ...	Cotton	44,126
	Ikh	Sugar-cane	14,908
	Nil	Indigo	1,387
		Total ...	721,856
II—Spring ...	Gehún	Wheat	35,845
	Jau	Barley	19,949
	Channa	Gram	107,418
	Gochni	Gram and wheat...	17,318
	Gojra	Barley and wheat.	661
	Bejar	Barley and Gram...	1,410
	Tambáku	Tobacco	170
	Sarson	Rape Seed	1,473
	Tarkári	Vegetables	645
		Total ...	184,889
		Grand Total	906,745

Besides the above crops, an area of 2,243 acres, or ·24 per cent. of that occupied by them was found under some 20 kinds of miscellaneous produce, which need not be detailed here, one-fourth being under fodder. The above area includes revenue-paying lands only, and the total is made up to the present figure by the lands under double crops, which, however, have been returned far below their real mark. The cultivation of opium, it may be noticed, is not permitted in the Hissar division. The large area sown with wheat and gram mixed is peculiar perhaps, as is the small amount of land under rape seed and pulses,—the latter, however, are grown largely at the foot of *bajra* and *joar*. The gram area is much below the true one ; this is chiefly due to incorrect record at Settlement measurements, owing to a misunderstanding of the orders issued on the subject ; but little gram is grown in Jhajjar. On the other hand, nearly all the barley is cultivated round the wells of that tahsil, and the greater portion of the *moth* and *bájra* (*Jákhar ka des, Jahan moth bájra*

hamesh): little cotton, however, is found there. The pulse *gwar* is grown principally for fodder, and is but little eaten. Indigo cultivation is also below the real mark; it is grown for seed only. The sugar-cane area is considerable—half of it is in the Gohána tahsil, where also nearly all the rice is found in the bed of the Nai Naddi. The cotton area is equally divided among the three northern tahsils. It is the only crop that ever gives a double yield; that of the second year is said to be better than that of the first, but all the same it is not usual to leave the plants in the ground for a second season. Tobacco and vegetables occupy in our returns a less area than they do in reality; the latter are grown almost entirely at the Jhajjar wells, and chiefly by Ahirs and menials; the Jats seem to consider the cultivation of vegetables derogatory to them. In paragraph 43 of the Gohána Assessment Report, a comparison was made between the areas under crops at this Settlement and last; a similar comparison as regards Sampla gives the same general results. Indigo did not exist in the district in 1838; the sugar-cane area was under 2,000 acres, and there was little wheat, compared with what there now is. The proportion of the chief crops to the whole cultivated area is much as follows—millets, 69 per cent. (high); gram 12 per cent. (low); wheat and better spring grain crops, 8 per cent.; cotton 5 per. cent; pulses 3 per cent; and sugar-cane 2 per cent.

Cultivation of crops.

80. As regards the soils of the district, with the exception of *bájra*, which is generally grown in the lightest soils, and rice, which is always grown on clay, the crops are sown in any and all indifferently. The sugar-cane, indigo, and rice are always irrigated, the wheat and barley usually so, the second, third and fourth from the canal only, (roughly speaking,) the first by the *Sahibi* floods also, and the barley from the Jhajjar wells. In years of good rain, a large area will be found under cotton; tobacco is grown at the Gohána wells only. Sugar-cane, indigo, and cotton will never give even a moderate yield, unless fair rain falls on the crop; water applied to the roots alone does not suffice for them.

Seeds.

Seed is taken by the less thrifty cultivators from the traders on the terms of paying back half as much again at harvest time; the seed is often very bad and old: one-fifth more than elsewhere is usually needed in the lighter soils. There are not many varieties (of seed) in the Rohtak district,—as a rule, only one kind is well known, and generally used. The wheat is of two kinds, red and white, the latter the more costly; the rice is of three species,—*Sunipati*, which is white and fine; *hansraj*, which is white and coarse; and *sánthi*, which is red, small and coarse, but far the most commonly sown. *Joar*, which hangs its head, is called *lámpa*: it is the best and sweetest kind; *jogiyá* is the red drooping *joar*; and *dhoti* white *joar* which grows with head erect. The *bájra* commonly sown on *bhur* soil is the *bágri*—other kinds are the *chindausi* and *deswáli*, the last of which is marked by the smallness of the ears. Of *másh* three varieties are commonly used: the black, green and *úrdi*, which is a small black species that ripens very rapidly; *gwár* is called *arak* and *deswál*—the former is poor

and grows here and there in a wild state, when it is called *ráná*. A great deal of the *joar* and *bájra* is grown for fodder only; at measurements sufficient attention was not paid to the distinction between fodder and grain crops. Nearly the whole of the *gwár*, $\frac{1}{8}$ to $\frac{1}{4}$ of the *joar* and *bájra* crops, according to the season,—and $\frac{1}{15}$—$\frac{1}{12}$ of the gram crop, is either cut before it is ripe, or else is actually sown and grown as fodder. Green food in the shape of young wheat or barley is rarely given to the cattle, and turnips are nowhere grown for their use.

Fodder crops.

81. All the crops of the district are of good quality, but I do not know that any one except the Kasendi tobacco has a special reputation outside. Locally famous is the red wheat of Silanah (Sampla), Kulàsi and Làth and the white wheat of Mahrah and the villages round Jauli in Gohána. Barley is best in Kosli: rice in Mahmudpur and Gohána; *bájra* in Nauganwah and Bir Birkatábad; *múth* in Daryapur, and *mung* in Dighal. The cotton of the Sampla villages, which are naturally flooded, and of the estates round Barodah in Gohána, is the best of its kind; and sugar-cane of the first class is grown in Busánah, Sarsádh, Mahmudpur, Rohnah, Gopalpur and Sissanah, and among the naturally flooded villages at Bahadurgarh, Surah and Jehangirpur. The yield of the crops on each kind of [illegible] is pretty much the same throughout the district. Differences of yield have been fully noticed in the Assessment reports; and the general results accepted, which agree closely with those of the neighbouring districts, are as follows:—

Well known crops.

Yield.

	Yield per acre.			Yield per acre.			
				Irrigated.		Unirrigated.	
	Mds.	Seers.		Mds.	Seers.		Mds.
Joar ...	7	0	Wheat ...	14	20	...	9
Bajra ...	5	20	Barley ...	14	0	...	8
Gram ...	12	0	Gochni ...	16	0	...	12
Moth ...	6	0	Rice ...	16	0	...	—
Mung ...	5	0	Cotton ...	6	0	...	4
			Sugar-cane.	40	0	...	—

There is but little wheat ever grown without irrigation, and the unirrigated barley is only of any extent in years of unusual rain. The evils and diseases which attack the crops and spoil their yield are many, but this again is unfortunately a subject on which there is little exact information at my disposal, though much that is general. A large number of ills caused by worms and caterpillars, and which it would need much study to identify, are put forward by the people. The rust (*kungi*) on wheat and barley is well known, and a similar disease attacks other crops. Frost is the enemy of sugar-cane, cotton, and gram; hail often damages the wheat and barley just as it is ripening; strong winds hurt the spring produce, and hot winds the autumn. Deer, hedge-hogs, and, above all, monkeys, as regards the sugar-

cane, are a perpetual source of trouble and mischief to the people, and the whole air seems to have become alive with birds at the time when the crop ripens. Swarms of locusts are not uncommon, but they either kindly pass on south, or, if they stay, settle on the sand-hills and deposit their eggs there, where it is comparatively easy to destroy them.

Round of agricultural works.

82. The round of the common task of agricultural operations does not call for more than a brief record. The cotton and sugar-cane are planted in April and May, and the indigo and early fodder crops are sown while yet the fields are being cleared of the wheat and barley : rain with hail in these two months may do great harm. In June the *bájra* and early *joar*, the later cotton and *santhi* rice are sown, and the cotton and sugar-cane fields are cleared ; for all these crops early rain in June is most beneficial. In July and August all the *joar* goes into the ground and the pulses, and the fields have to be constantly cleaned ; moderate rain at intervals throughout the two months is what the agriculturalist prays for ; too heavy rain is apt to injure the crops and cattle both. In September the early *bájra* is cut, and the gram begins to be sown ; on the final rains of this month depend the yield of grain of the autumn crops, and the extent of the spring crops. In October rain is not needed ; the later *bájra*, and the *joar* are cut, and the spring sowings of wheat and barley commence ; in November and December the autumn crop is threshed out and stored, the picking of the cotton begins, and the last fields possible are put down with the spring crops : rain in December is good for the gram. In January the sugar-cane ripens, and is cut and pressed, and the cotton is cut down ; some rain is desirable in this month and in February for the wheat and barley. In March the gram is cut, and after this month rain is no longer needed ; if it comes, it only does harm. Such in brief, is the calendar of the year's agricultural work. I had a considerable collection of weather-wise sayings of the people bearing on this subject, but unfortunately it has been lost, and it is now beyond my power to make the loss good again.

Owners and tenants.

83. In paragraph 49 some statistics as to the distribution of cultivation between owners and tenants have already been given. The area which each cultivator holds in canal-circles is 5 acres, in well-circles 9 acres, and in purely rain-land tracts 7½ acres. The distribution of the crops of each cultivator over these holdings may be put with approximate correctness as follows :—

Rain-land.	Acres.	*Well.*	Acres.	*Canal.*	Acres.
Joar ...	4	Joar, Bájra ...	3½	Joar ...	1½
Bájra ...	2	Cotton ...	1	Cotton ...	1
Gram ...	1½	Barley ...	4½	Sugar-cane	0½
				Wheat ...	2
Total ...	7½	Total ...	9	Total ...	5

No one except a fairly well-to-do man can afford to cultivate sugar-cane; in the majority of cases, therefore, another half acre would be found under cotton instead. The gram area of Settlement being very low, the proportion of gram to *bâjra* shown here does not tally with that of the respective areas shown under these crops in paragraph 79. The number of full-grown male cultivators who go to plough is little less than three (2·82); the area per plough throughout the district is 20 acres, and comprises one holding and a third; the area per plough is lowest in Sampla—17 acres, and highest in Rohtak—23 acres. Farm servants are unknown in the district, and day laborers from outside are rare; they are employed occasionally when there is a very heavy crop, and generally come from the Bâgar country. The menials have also been already noticed in paragraph 48; they work as day laborers during harvest time, as soon as the crop of their master is got in, and receive wages by payment in kind. With regard to the payment of rents, the area held by tenants is distributed as follows:—

I.—OCCUPANCY TENANTS.

Tahsil.	Tenants paying the revenue only.			Tenants paying Rate Rents.			Tenants paying Lump Rents.			Tenants paying Kind Rents.			Total.		
	Number.	Area in acres.	Revenue in.	Number.	Area in acres.	Rent in.	Number.	Area in acres.	Rent in.	Number.	Area in acres.	Rent in.	Number.	Area in acres.	Rent in.
			Rs.			Rs.			Rs.			Rs.			Rs.
Gohana ..	896	2,233	3,483	894	2,276	5,522	..	..	..	..	..	..	1,790	4,509	9,005
Rohtak ..	1,750	7,375	5,174	256	1,701	1,402	138	646	1,200	..	..	..	2,144	9,522	7,776
Sampla ..	3,336	10,017	12,525	18	85	108	81	254	669	..	..	..	3,435	10,356	13,302
Jhajjar ..	3,105	14,141	14,385	638	6,311	5,016	731	3,970	5,324	135	648	1,925	4,609	25,070	26,650
Total ..	9,087	33,566	35,567	1,806	10,373	12,048	950	4,870	7,193	135	648	1,925	11,978	49,457	56,733

II.—NON-OCCUPANCY TENANTS.

Tahsil.	Paying Revenue only.			Paying at Rent Rates.			Paying at Lump Rates.			Paying in Kind.			Total.		
	Number.	Area in acres.	Revenue in.	Number.	Area in acres.	Rent in.	Number.	Area in acres.	Rent in.	Number.	Area in acres.	Rent in.	Number.	Area in acres.	Rent in.
			Rs.			Rs.			Rs.			Rs.			Rs.
Gohana ..	3,165	8,429	12,243	3,369	14,849	33,465	501	2,444	5,776	180	631	1,177	7,215	26,353	52,661
Rohtak ..	6,055	25,686	21,044	2,694	20,839	24,214	719	4,579	4,336	107	334	1,401	9,575	51,429	50,995
Sampla ..	4,229	14,362	14,355	28	126	172	1,346	6,152	18,345	154	500	713	5,757	21,140	33,585
Jhajjar ..	1,973	6,774	7,652	7	67	42	2,709	15,541	25,896	451	2,471	4,324	5,140	24,853	37,914
Total ..	15,422	55,251	55,294	6,098	35,872	57,893	5,275	28,716	54,353	892	3,936	7,615	27,687	1,23,775	1,75155