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**FINAL REPORT OF THE THIRD
REGULAR SETTLEMENT OF THE
DELHI DISTRICT, FOR 1906—10.**

FINAL REPORT
OF THE
THIRD REGULAR SETTLEMENT
OF THE
DELHI DISTRICT,

BY
MAJOR H. C. BEADON, I A.,

Settlement Officer.

1906-1910.

Published by Authority.



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FINAL REPORT

OF

SETTLEMENT OPERATIONS

IN THE

DELHI DISTRICT.

Carried out during the years 1906-1910 (the Third Regular Settlement).

CHAPTER I.—GENERAL DESCRIPTION OF THE DISTRICT.

1. The district of Delhi which forms a part of the Provincial Division of that name is a strip of country on the right bank of the river Jumna. Constitution and Boundaries.

The city of Delhi, which is conspicuously marked on any map of India, overlooks the river at a point somewhat to the south of the middle of the district with a geographical position given as Latitude $28^{\circ}39'40''$ North and Longitude $77^{\circ}17'45''$ East. The district is sub-divided into three tahsils Sonapat, Dolhi and Ballabgarh, counting from the north. The greatest length is about 76 miles and the average breadth 18 miles, though in one place (just through the city) the width expands to as much as 26 miles. The total area is about 1,270 square miles, but varies according to what channels of the Jumna are for the nonce accepted as the deep stream.

With the exception of the Jumna river on the east, which is the provincial boundary with the United Provinces districts of Meerut and Bulandshahr, the district boundaries follow no natural features, having been formed for convenience of administration. The district marches to the north with the Karnal District (Tahsil Panipat), to the west with the Rohtak District (Tahsils Gohana and Sampla) and with the Gurgaon Tahsil of the district of that name, and to the south with the Palwal Tahsil also of the Gurgaon District.

2. The conformation of the country is decidedly interesting. As is evidenced by the direction of the Jumna, the general slope of the district is from north to south: beginning from the north the Western Jumna Canal passes down a barely perceptible watershed irrigating the gentle slopes on either side: to the east the drainage passes into the Jumna, and to the west passes by natural depressions southwards, to find a resting place in the Najafgarh Jhil. Just north of the city the Delhi Ridge of historic memory, the culminating spur of the Mewat branch of the Aravelli hills, forms an insuperable bar to the would-be line of drainage: this range forms a fresh watershed, so that the normal drainage on the right bank of the river passes at Delhi as it were into a new series. Again a canal, in this case the Agra Canal with its head works at Okhla, passes down the local watershed and the conformation as described in the north is reproduced. The tract thus described though exhibiting none of the beauties of mountainous districts, possesses a considerable diversity of physical feature and in parts is not wanting in picturesqueness, which it owes to the hills and to the river. The former, skirting the present city on the north-west and west, stretch away nearly due south to Mahrauli: before reaching this place, however, they branch out into two halves, one going full south, the other

sweeping round in a curve to the south-east to Arangpur, whence again it turns south-west and, uniting with the other branch below Bhati, holds on southward to Kot and so out of the district into Gurgaon. But though the main direction may thus be described, there are here and there irregularly shaped spurs, which break the continuity of the range and at the same time greatly extend its area. The irregular oval enclosed by the branching halves above spoken of is really a plateau of a light sandy soil, lying high and generally dry, but with a very useful slope to the south-east. Here in different places are earthwork dams aggregating several miles in length, made to catch the drainage. The hills of Delhi, though not attractive in themselves, give a pleasant view across the Jumna, and in clear weather allow it is said even a glimpse of the Himalayas. Their surface is generally bare, supporting little or no vegetation save a stunted *kikar* (*Acacia Arabica*) or *karil* (*Capparis aphylla*) or the small bush of the *ber* (*Zizyphus numularia*), which with its prickly thorn is so inhospitable to the pedestrian. The surface of the ground is sprinkled with thin laminae of mica which shine in the sunlight like gold. The stone, which juts up from the ground here and there, is hard and often sharp edged. Water of course lies very deep, and irrigation by well is almost everywhere impracticable. A moderate pasture is obtained by flocks of sheep and goats herded by Gujar boys. The highest point of the range probably is near Bhati, 1,045 feet above the sea and 360 above the Jumna Railway Bridge at Delhi.

The hills divide the district into two parts: the northern which is the larger is also the more fertile and more populous. Without going minutely into details which can with more advantage be recorded in describing the various assessment circles, it may be said that this larger half of the district consists of three parts, the Khadar or Riverain of the Jumna, the Bangar or level mainland and the Dabar or lowland subject to floods. The Khadar lies rather low, has a light sandy soil, and easy irrigation from wells. The Bangar is higher and by nature dryer: the Western Jumna Canal, however, traverses its whole length and affords satisfactory irrigation to a tract which before the realignment was being seriously damaged by *shor*. The Bangar too is traversed by the Delhi-Umballa-Kalka Railway with four stations at Ganaur, Sonapat, Narela and Badli: and in the extreme south there is the Nangloi station on the Southern Punjab Railway. The Grand Trunk Road passes through the edge of the Khadar close to the Bangar boundary.

The Dabar lies to the west of the hills and consists of the low basin, which is the receptacle for drainage from the hills and parts of the neighbouring districts of Gurgaon and Rohtak. In years of good rain an area of 20 square miles is flooded, the Najafgarh escape channel carrying off to the Jumna water which, if held up, would flood an even larger area. Thirty years ago the floods extended to as much as 80 square miles, but, owing to the diversion of the Sahibi Naddi and the silting up of tributary depressions, the flooded area has been much reduced: still in the main jhil depression on the Gurgaon border there is generally some 5 square miles of jhil during the cold weather. The eastern part of the Dabar is traversed by the Rajputana-Malwa narrow gauge line with one station at Palam.

As is well known modern Delhi is just to the south of the ridge and the ruins of the former cities extend southwards for eleven miles to Mahrauli. There can be little doubt that the Moghal Emperors chose the locality for the two important reasons, that building stone could be easily obtained from an inexhaustible source and that the Ridge prevented any possibility of erosion by the Jumna.

The country immediately south of Delhi as far as Mahrauli, Tughlakabad, and Molarband is rocky and undulating. This and the picturesque ruins abounding almost everywhere give the scene an interest not often found in the plains of India. Beyond this again to the south the country, lying between the hills to the west and the Khadar already described on the east, becomes more flat and open, and so fit for the passage down the eastern side of its length of the Agra Canal, which keeps an almost perfectly straight course at a low level down into the Palwal Tahsil. Parallel with it, roughly speaking, is the metalled road to Agra which passes through Ballabgarh at a distance of twenty three miles from

Delhi. The soil of this part is mostly a light sandy loam, which under good hands is fairly productive. The country between the Agra Road and the hills to the west, begins to get level a few miles below Badarpur : it is mostly sandy, bearing the *detritus* from the hill slopes, and in the rainy months is marshy and in places flooded : the passage of the water is towards the south where it debouches at the north of the Palwal Tahsil.

3. During the past thirty years the rainfall in Delhi has averaged $27\frac{1}{2}$ inches, but for the 10 years previous to the 1880 settlement the rainfall happened to average only $25\frac{1}{2}$ inches : throughout the district, however, there is considerable variation, as during the past 30 years the falls in Sonapat and Ballabgarh have averaged only 24 and 26 inches, respectively. Again the Mahrauli rain-gauge, which has only been established twenty four years, shows an average for those years much less than any gauge in the district.

The gist of the matter is that the cool river line attracts the rain and the hot stony hills repel the rain clouds, with the result that there is considerable local variation ; so it may be taken as a general fact that the rainfall in the Khadar tract averages 28 inches, in the Bangar 25 inches and in the hills probably not more than 22 inches.

The worst year that has been known for a long time was 1907-08, when there was less than 12 inches of rain in Delhi and the best was 1884-85 when as much as 49 inches fell ; but these are both extremes : generally speaking seldom less than 20 inches or more than 35 inches fall in any one calendar year. During the winter months (September to March) about three inches usually fall : of the balance about eight inches fall in July. Of recent years the variations have been very great : bad harvests are ordinarily due to the rain being deficient in quantity, but on many occasions there have been falls at untimely moments, which have damaged the standing or ungarnered crops.

The climate of Delhi is, as compared with the general climate of the province, an equable one. It is cold and bracing during a rather short cold weather and though in the summer it is for a short time uncomfortably hot, there is never that continuous over-powering heat, the apprehension of which clouds life in the Western Punjab. Fever is rife in September especially in years of heavy rain, but the district generally is a healthy one now that attention has been paid to the drainage, and that swamp cultivation in the Bangar has been abandoned. Delhi had an unfortunate notoriety for a scorbatic sore known as the Delhi boil, and retired Anglo-Indians of a former generation usually call it to mind on hearing of any one being posted to this station, but of recent years the disease seems to have disappeared : at all events little has been heard of it. Plague has been a frequent visitor during the past decade : with its well-known predilection for cold places it has frequented the Bangar tract where the moisture keeps the temperature at a low figure.

4. Except in the Kohi and Dabar circles the district is decidedly well-wooded, a fact which is at first surprising in view of the great demand for fuel and timber to which the city gives rise : this happy state of affairs may be put down to the two facts that the favourite fuel of the masses consists of dried cowdung cakes, and that the energies of the State Departments in the direction of arboriculture have provided a sufficiency of timber. In the Kohi the meagreness of the flora must be attributed to centuries of goat-grazing, and that in the Dabar is due to floods allowing such continuous cultivation. The most common tree to be found is undoubtedly the irrepressible *kikar* which thrives everywhere in spite of persistent mutilation : other common trees are the *nim*, *jaman*, *jamo*, *ber*, mango, and *farash*, the latter being found mostly in the sandy tracts of the Khadar. Along the canal banks and public roads *shisham* and *peepal* are very common. In the lowlying land near the Khadar there are extensive expanses of the tamarisk shrub and the saline lands are clothed with *karil* and *khair* as well as the ubiquitous *dhak*. The palmas which are found about the outskirts of the Delhi

orchards give a specially oriental touch to the scenery. The waste lands generally produce the *ak* and the thorny little shrub known as the *beri* which is so useful for hedges. Cactus and aloe grow freely where clearances are not made. The principal grasses are the tall *jhund*, so useful for making chicks and for thatching, and *gandar* whose root is used for making *kaskas tatties*. Of the water plants the *singhara* is the most important.

Few other common trees can be said to be indigenous, but of course in the orchards and horticultural gardens about Delhi are many varieties which need no mention here.

5. Once the drainage of the country and the general conformation had

Assessment Circle.

been realised the arrangement of assessment circles presented no difficulties.

It was clear that but for the disturbing element of the hills there would have been only two assessment circles, i.e., the Bangar or uplands and the Khadar or low riverain tract: but the hills have necessitated initially two extra circles, to wit, the hill tract itself and the areas on either side which form the receptacles for drainage, which in the absence of artificial channels would be prevented from passing into the Jumna. Accordingly these circles have been formed under the obvious names, of Kohi and Dabar respectively. At the last settlement an intermediary circle consisting of the sub-colline strip was kept distinct as a circle under the name of Zer kohi, but for reasons already explained in the preliminary report it was found feasible to merge its villages into the Kohi and Dabar.

The hills however indirectly have caused a fifth circle to be formed. The presence of the Delhi cities, whose existence is and was largely due to the proximity of building stone, have caused intensive cultivation and high rents to prevail in their vicinity, to meet which facts a special circle had to be formed: it has been given the name of Khandrat in recognition of the ruins which are sprinkled throughout it. This circle is really a Bangar tract for the most part and so must be recognised as a Bangar sub-circle with special attributes. Again the special circumstances of Manza Delhi, where rents are even higher, where there are many rich garden plots, and where even the waste brings in a handsome rent as pasture land, have justified not only a special circle being formed but also a special assessment report being written. Since these circles have been described in detail both in the preliminary and assessment reports it is unnecessary to make repetitions. A very few words will suffice.

The Khadar, being so low-lying generally, depends on the Jumna floods for its agricultural prosperity, but to the north in the Sonapat and Delhi Tahsils there are high-lying patches which are riddled with rich well cultivation: grazing is ample everywhere. The Bangar of the northern Tahsils is essentially a nahri tract, with well cultivation in the eastern villages to which the canal irrigation does not reach. In the Ballabgarh Bangar, the Agra Canal irrigates only a few hundred acres, so wells have been sunk with considerable freedom. The Dabar circles are of course dependent on floods for their crops: the prosperity of villages in the old Zer kohi circles has been augmented by the construction by the District Board of embankments to hold up the hill torrents during the summer months with a view to *rabi* cultivation. The soil of the Dabar is of a clay consistency, the silt from the hill streams having given a good burden to that which is in the depressions.

The Kohi is agriculturally a poor tract with a light soil thinly spread over the hot bed rock: the embankments made by Mr. Macopachie in 1880 have proved its salvation, as but for them wheat would have been unknown and the tract would have degenerated into an arid wilderness only fit for goat grazing. The Khandrat is also somewhat hot and dry, but on the well land the rich crops of tobacco and wheat, whose cultivation has been encouraged by the demand of a ready market, have enriched the tract to an unwonted extent. The gardens of fruit trees irrigated by the canal too are a special feature of this locality.

CHAPTER II.—REVENUE HISTORY.

6. In Chapter IX of the last Settlement Report Mr. Maconachie dealt as fully as was necessary with the early History up to the 1880 Settlement. fiscal administration, so it will now suffice to give such a brief summary as will indicate how the increase of wealth has been recognised in revenue assessments and how the variations of the moment have been met in our revenue administration.

Administration under British guidance first began in 1803 after Lord Lake broke the Mahratta power at the battle of Hindan : a British Resident was appointed to administer what was known as the Delhi Territories in the name of His Majesty Shah Alam, who with his relatives and suite received from the revenues a suitable provision for the upkeep of their position. The assigned territories in question extended to tracts some distance from Delhi, such as Rohtak and Panipat, and at all events included all the Delhi District except the estates of feudal chieftains, like the Rajah of Ballabgarh and the Nawab of Jhajjar. In 1822 the Resident was replaced by an Agent to Governor-General, an office which was only maintained for one year. In 1832 an Agency was again formed and the Delhi territories were formally annexed to the North-West Provinces Administration as a Civil Commissionership, an arrangement which continued till the Mutiny in 1857. After the fall of Delhi the district was transferred to the newly constituted Lieutenant-Governorship of the Punjab, since when its history and system of administration are well-known. At that time the estate of the Raja of Ballabgarh amongst others was escheated, and the district much as it now exists was formed into one revenue administrative unit.

Since previous to 1857 parts of the district were still under native rule, parts were included in different charges of the assigned territory, and settlements of a summary nature were constantly being made in isolated localities, I do not think that much is to be gained by delving into the old statistics in order to locate what can be termed a first or any other summary settlement or to determine the total assessments of the moment.

The first regular settlement of the district, excluding the estates belonging to the Raja of Ballabgarh and other jagirdars and chiefs, was made between the years 1842 and 1844 and resulted in an assessment of (roughly) Rs. 7,50,000. There was a summary assessment made directly after the Mutiny of the confiscated estates which amounted to (roughly) Rs. 2,60,000, so that the initial demand of the district, as first constituted some fifty years ago, was approximately ten lakhs of rupees. The various revisions and alterations which were made are detailed in Chapter IX of the 1880 Settlement Report, from which it appears that between the years 1844 and 1872 reductions were granted to the extent of Rs. 78,000. The details of this large sum are made up as follows :—

Tahsil Sonapat.—Rs. 23,000 reduced on account of deterioration from *shor* in the Bangar (Settlement Report-paragraph 183).

Tahsil Delhi.—Rs. 11,500 reduced mainly in the Jhajjar villages on account of over-assessment (Settlement-Report-paragraph 186).

Tahsil Ballabgarh.—Rs. 42,000 also on account of obvious over-assessment, mainly in the confiscated villages summarily assessed (Settlement Report-paragraph 187).

There were no doubt other minor adjustments of which there is no definite record : but anyhow by 1872 the *kistbandi* had been reduced to Rs. 9,22,166, which constituted the existing assessment with which the new settlement officer had to deal.

The bulk of those assessments having been framed under N.-W P. rules, based on Regulation IX of 1833, the standard of assessments was apparently two-thirds assets : initially the assessments were very high, but towards the end of the period of settlement, that is in the seventies, the burden of the demand on the revenue payers must have been appreciably lightened by the establishment of peace and settled rule, by the rise in prices which followed the

opening up of communications, and by the liberal reductions which have been detailed above : at any rate the revenue was collected without difficulty except in times of notorious distress.

7. The Second Regular Settlement was finished in 1880 after somewhat protracted operations lasting about eight years, the new revenue being collected from Rabi 1880. The principles on which the assessment was made were laid down in the rules under Land Revenue Act XXIII of 1871, which ordained that the half-net asset standard was to be adopted. The revenue rates reports of the Ballabgarh and Delhi Tahsils were submitted by Mr. Wood, whilst that of Sonapat was submitted by Mr. Maconachie : the latter officer who replaced Mr. Wood in 1878 announced the new revenue throughout the district. The data on which soil rates were founded were mainly two, village inspections and produce estimates and no use seems to have been made of the cash rents which were paid on some 54,000 acres throughout the district. The produce estimates which were made were very rough ones, and only served as a check on the assessments contemplated at village inspections, and, from the orders of assessment which were passed, it is clear that the settlement officer relied chiefly on the knowledge gained at inspection time : in this, no doubt the settlement officer was right, as from the notes on record it would appear that laborious inspections of the villages were made and that knowledge of the productive value of various soils was most patiently acquired. The result was a total assessment of Rs. 9,67,142 (of which Rs. 1,22,662 was the estimated fluctuating revenue, obtainable in the guise of "owner's rate") as against Rs. 9,22,166 representing an advance of 5 per cent. and, it was remarked by the Punjab Government that "the incidence of revenue per acre of cultivation i.e., Rs. 1-13-6 places the district in the very first class in the Punjab." Perhaps the most notable features in that settlement were the introduction of a fluctuating assessment in a few villages affected by the Najafgarh floods, and the institution of a dry assessment in the canal villages, supplemented by a fluctuating owner's rate (Settlement Report, paragraphs 259, 260).

In according sanction to the 1880 assessment (Revenue Proceedings No. 126, dated 28rd June 1885, paragraph 10) the Punjab Government opined that "in unirrigated estates the revenue assessed is one which is to be paid in full in ordinary years, but which Government does not expect to realise at once during severe and long continued droughts". The rainfall was fairly regular up till the year 1895-96, when a marked cycle of drought alleviated by occasional harvests of plenty set in : consequently up till 1895-96 the revenue was realised steadily and without difficulty. Distress was felt in 1897 during which year some minor measures of famine relief were undertaken. Since that time the precarious nature of the cultivation in the Ballabgarh Tahsil and the Delhi Dabar has been impressed on the district officers, with the result that after poor harvests suspensions have been freely granted : considering the great increase in prices and in rents which had taken place by 189F, the revenue had become generally light in its incidence, so possibly the suspensions have been granted somewhat too freely, at the same time there is no doubt that in years such as 1907-08 the prompt suspension of the revenue was financially sound, since the State was saved profuse expenditure in famine relief. The situation can be pithily described by recording that in the parts of the district where cultivation is precarious there has been a fixed assessment, which during the past fourteen years has been worked in a fluctuating manner. A few remissions have been granted for special calamities i.e., hail, flood, etc ; outstandings have been struck off when villages have been transferred to the United Provinces : at the time of the Coronation Durbar (1902) all outstanding revenue was remitted, and finally certain remissions have been granted at the introduction of the new assessment. The general tale is :—

Remitted	Rs. 3,42,620
Remaining under suspensions to be collected along with the new revenue	Rs. 4,02,866

The arrears to be collected with the new demand look somewhat formidable but with good harvests there is no reason why they should not be

realised, especially in view of the fact that after kharif 1909 as much Rs. 96,184 of these arrears was collected in the southern half of the district.

The remissions amount to 40 per cent. of the former annual demand. It seems on the whole a fair criticism to record that the 1880 settlement has from a fiscal point of view worked well except in the Delhi Dabar, where the great change in local circumstances could not have been foreseen, and no assessment of which a goodly share is not fluctuating could be expected to give satisfaction.

8. Though these have been briefly mentioned in the foregoing paragraph, elasticity of collection has been such an important feature of the revenue administration that rather more detailed information regarding suspensions in specified years must be given.

The following statement shows the more important suspensions and collections of arrears which have taken place since 1896:—

1				2	3	4	5
				SUSPENSIONS		REALISATIONS OF ARREARS	
After what harvest.				Year.	Amount	Year.	Amount.
					Rs.		Rs.
Kharif	..	...	...	1899	1,09,251	1904	1,45,9
				1905	1,45,079	1906	23,634
				1907	1,94,923	1908	30,272
				1908	58,212	1909	1,19,669
Rabi	...	...	...	1896	33,936	1905	4,356
				1897	74,064	1907	50,956
				1899	35,379	1909	87,254
				1900	1,08,490	...	...
				1902	31,260	...	...
				1904	42,836	...	...
				1906	1,21,409	...	...
				1908	1,86,123	...	...
				1909	12,777	...	...

Thus it appears that on sixteen occasions out of twenty-eight harvests has the revenue been varied by more than thirty thousand rupees in order to meet the circumstances of the moment, and that so elastic has been the system that in the year 1907-08 nearly half the revenue of the whole district was suspended. The action taken after kharif 1908 is especially noticeable, for on that occasion there had been abnormal rain, so that in the low-lying parts Rs. 58,212 had to be suspended, yet in the high-lying parts of the district where the rain had been beneficial it was possible to collect Rs. 30,272. Collections have been regular on the whole but are not shown to a full extent by the above list, as they have been more gradual than the suspensions.

The approximate figures of the recent remissions are Routine Rs. 16,000, Special 21,000, Durbar 1,40,000, New Settlement 1,65,000: Total 3,42,000.

The care and sympathy with which the land revenue demand has been administered, reflect credit on the responsible officers.

CHAPTER III.—GENERAL STATISTICS.

9. The main statistics of areas are summarised below, the figures representing acres.

Area Statistics.					Sonepat.	Delhi.	Ballabgarh	Total District.
Detail.								
Total area	...	...	...	...	2,89,061	2,73,237	2,49,275	8,11,573
Waste	...	...	...	...	87,771	87,810	91,937	2,67,518
Irrigated	...	...	...	...	1,25,273	60,186	19,349	2,04,808
Unirrigated	...	...	...	...	76,017	1,23,241	1,37,989	3,39,247
Total cultivated	...	...	...	...	2,01,290	1,85,427	1,57,338	5,44,055
Alteration per cent. in cultivation since 1880	...	...	...	...	+7	+4	-2½	+3

The percentages of cultivation on the total area in the three tahsils are Sonepat 69, Delhi 68 and Ballabgarh 63, from which it might be inferred that there is least room for extension in the Sonepat Tahsil: but this is not really the case because much of the waste in the other tahsils is made up of unculturable stony hills in the Kohi circles. Extensions of cultivation will take place no doubt, but they will be very gradual for two reasons, the one being that there are no wide expanses of culturable waste except in the Jumna Khadar where the soil is too poor or saline to encourage intake, and the other being that the people already feel the pinch of restricted grazing. The gradation in productive capacity of the three tahsils is self-evident from the proportions of the irrigated and unirrigated areas, for in Sonepat 62 per cent., in Delhi 32 per cent., and in Ballabgarh only 12 per cent., of the cultivated land enjoys irrigation facilities. About 6 per cent. of the total cultivation however is liable to flooding by the Jumna, the Najafgarh jhil or district bands, and it happens that in this advantage Sonepat has no appreciable share.

The return of waste land includes unproductive waste such as sites of villages, tanks, roads, canals and sand: the balance varying in productive qualities can be divided broadly into three heads. The waste in the hills is a stony expanse of gritty soil, which provides a meagre grazing for flocks in the shape of inferior grass and thorny shrubs: probably the most valuable use to which it could be put would be quarrying: in the uplands it is usually patches of inferior soil impregnated with salt and covered with the *ak* or thorn bushes: in the Khadar the waste, if not merely sand, is a light sandy soil covered with tamarisk or the grasses (*ghund* and *gandar*), the home of the jackal the hare and the pig.

10. The classification of soils has been in accordance with the general instructions found in the Settlement Manual, paragraph 259. The soils now recorded are as follows:—

- Irrigable*.—1. *Chahi* (105,976 acres) land irrigable from wells.
 2. *Nahri* (93,519 acres) land irrigable by canals.
 3. *Abi* (313 acres) land irrigable from other sources.

No land has been entered as *chahi* or *abi* which has not received water at least twice in the four years previous to measurements: land which has received water from the canals at all during the two years previous to measurement has been shown as *nahri*.

- Unirrigated*.—1. *Sailab* (33,176 acres): land naturally moist or submergible by the Jumna or other floods has been entered as

sailab (Dahri): land submergible from an artificial embankment has been entered as sailab (Band).

Unirrigated.—2. *Barani* (274,229 acres) is sub-divided into *dakar*, a stiff clay soil which ploughs up into solid clods, generally found in depressions, and *rausli*, the ordinary light loam of the plains, a mixture of clay and sand varying much in their relative proportions.

3. *Bhur* (31,842 acres). This is a light soil with just enough clay in the mixture to allow cultivation.

At last settlement the irrigated classes were also split up into their component soils; for instance *chahi-dakar*, *chahi-rausli*, *chahi-bhur* were shown in the records: this refinement has now been abandoned as unnecessary: the *bhur* entry generally is a liberal one. That the classification throughout the district has been satisfactorily carried out may be presumed as there have been no complaints on the subject: indeed the task of classification has been a light one because at the last settlement Mr. Wood evidently took great pains to obtain correct entries.

The waste areas have been shown in the records either as *banjar* (*jadid* and *kadim*) if culturable or as *ghair-mumkin* if unculturable: the latter has been qualified by explanatory terms such as *abadi*, *vasta*, *jhor*, *khandrat*, *nahr*, *sarak*, rail, etc., as the case may be. The total areas are *banjar* 135,330 acres, *ghair-mumkin* 131,296 acres.

As applied to *banjar* the term culturable is somewhat misleading because much of it would hardly repay cultivation on account of the inferiority of the soil.

11. The following figures give the percentages of areas under crop in the kharif and rabi harvests respectively:—

System of agriculture, Crops. Yields.							Sonepat.	Delhi.	Ballabgarh.	Total.
Kharif	...	...	...	...	...	...	52	58	51	53
Rabi	...	...	...	...	...	...	48	42	49	47

The bulk of the rain falls during the summer months and at that time too the canal irrigation is unstinted, so it is only natural that the cultivation should be more extensive in the kharif harvest than in the rabi. In the Ballabgarh tahsil however so much of the Khadar is flooded during the kharif harvest that it is unculturable, and the submersion in that circle and in the Dabar is the factor which encourages the cultivation of wheat and barley in the rabi. The figures for the Delhi tahsil do not represent quite the true proportions, since a goodly area in the Dabar chak has been cultivated in the kharif instead of in the rabi because of the diminution in floods. Of the crops sown eleven per cent. will fail to mature in a normal kharif harvest and twenty-four per cent. in a normal rabi harvest.

There is practically no double cropping except where manure is plentiful and then only on irrigated land: such conditions maintain near the towns and in a few sporadic villages. In respect to the *barani* fields a zamindar usually keeps some for kharif and some for rabi cultivation, only making a change when a failure in one harvest has obliged him to sow a larger area to make good his loss, or where timely rain has induced him to extend his sowings.

Taking the figures of the produce estimates and making an allowance for mauza Delhi, the value of the gross produce in the kharif is about 60 lakhs, and in the rabi 52 lakhs. Between 60·52 and 53·47 there is not much difference, so it may be assumed that throughout the district the profits per acre in the kharif and rabi are about equal.

The percentages of the total matured area under the more important crops are tabulated as follows, the figures being obtained from the crop statistics of the five years used in compiling the produce estimates :—

HARVEST.	CROPS.	PERCENTAGES IN			
		Sonepat.	Delhi.	Ballabgarh.	Total District.
Kharif	Millets	25½	37	31	31
	Pulses	5	6	6	5
	Cotton	11	5	9	8
	Cane	5	3	...	3
	Total	46½	51	46	47
Rabi	Wheat	29	16	9	20
	Barley	1	6	19	8
	Pulses, mainly gram	11	15	14½	13
	Oilseeds	1½	2	2½	2
	Total	42½	39	45	43
	GRAND TOTAL	89	90	91	90

Of the ten per cent. which is not accounted for, five per cent. is fodder, about one per cent. is under chillies and tobacco, and the small balance of four per cent. is made up of fruit, vegetables and miscellaneous unclassified products. Throughout the district the millets in the kharif predominate : a closer inspection of the statistics shows that maize is not grown very extensively, being almost entirely confined to the northern half of the district, where *bajra* and *jowar* are found in about equal proportions : in the southern half the area under *jowar* is only about two-thirds of that under *bajra*. Pulses run fairly level through the tahsils and cotton with cane naturally predominates where irrigation is the more plentiful : the fact of there being as much as 9 per cent. cotton in the Ballabgarh tahsil reveals a strength in the Bangar chak, which might otherwise escape recognition, and explains how Ballabgarh and Palwal cotton has a high standing in the Bombay market.

The rabi figures for wheat, barley and gram show clearly how inferior is the Ballabgarh tahsil to the others in point of productive capacity, since wheat being the more lucrative is always grown where the strength of the soil and the certainty of the moisture permits. In Sonepat and Delhi, too, gram is grown to a great extent alone; but in the southern half of the district it is seldom found unmixed with the barley. *Sarson* or rape is the most common oilseed.

Turning aside from the staples we find in specific localities interesting cultivation of special crops. The *chahi* of the Sonepat Khadar is famous for chillies which are sent direct to the Calcutta market ; round Sonepat and Delhi tobacco is raised with great care : Delhi itself is the focus of productive orchards in the west, and of rich melon and vegetable gardens elsewhere, where Jumna flooding and city sewage provide unrivalled facilities : and finally the little town of Faridabad makes a speciality of *mendi* cultivation. There are about 400 acres of this plant which if carefully nurtured for three or four years will flourish for a century with very little later attention.

The estimated outturns of the different crops in the different parts of the district are given in the assessment reports, to which reference can be made. Crop experiments were not so extensive as I should have liked, because during the time when they could be made by the settlement establishment, previous to the writing of the reports, the district was afflicted with bad harvests; however the surrounding districts had all been under settlement a year or two previously, so with the crop experiment returns and the yields assumed at last settlement, there was sufficient material from which to form an opinion. The estimates adopted ranged in maunds per acre as follows:—

CROPS.							Irrigated.	Unirrigated.
Jowar	...	...	...	...	...	...	10 to 6	8 to 4
Cotton	...	...	...	...	...	...	8 to 5	13 to 6
Sugarcane	...	...	...	...	...	...	35 to 16	.....
Wheat	...	...	...	...	...	...	14 to 10	10 to 5
Barley	...	...	...	...	...	...	16 to 10	11 to 4
Gram	...	...	...	...	...	...	10 to 8	10 to 5

The tobacco yield (on *chahi* only of course) was taken to be from 20 to 40 maunds in various parts.

These bald figures do not give much satisfactory information, but they suffice to show that care was exercised in compiling the produce estimates: the variations are considerable because the district comprises circles, whose productive capacities vary as widely as the rich Khandrat and arid Kohi, and soil so dissimilar as *bhur* and strong clay.

Since the dry cycle of years which began in 1895, must have left its mark on the estimates, it is not likely that the yields adopted have erred on the side of excess and in any case the pitch of the yields assumed has had little effect on the pitch of the assesment, which have been based mainly on the cash rent returns.

Population.

12. The population at the various censuses was as follows:—

Years.				POPULATION.			Change per cent. from previous census.
				City.	District.	Total.	
1881	...	...	...	173,393	470,122	643,515	...
1891	...	...	...	192,579	446,110	638,689	— 75
1901	...	...	...	208,575	480,464	689,039	+ 789

The city population is steadily expanding, as is to be expected from the growth in area of the city, of the factories and railways, and the increase in commercial business. The great decrease in the mofussil part of the district during the eighties has been ascribed to the fact, that the wet seasons which maintained in that decade have scourged the country with malarial fever and other diseases. Though the wet cycle continued till as late as 1894 there was a wonderful recuperation in seven years of comparative drought. The new census, which will be made in 1911, is expected to show a great increase: it will be no

surprise if the population has risen to—city two-and-a-half and district five lakhs in spite of the ravages of plague.

13. At last settlement there were 810 estates in the district, but this number has become reduced to 773 in the following way :—

Received by alluvion from the United Provinces	...	+8
Increased by sub-division	...	+2
Transferred by diluvion to the United Provinces	...	—14
Decreased by amalgamation	...	—28

The Jumna has cut into the Ballabgarh tahsil by adopting an old creek as its main channel, and in this way has transferred nine villages very recently to the Bulandshahr district. Mauza Delhi absorbed 14 villages into one estate and the remaining amalgamations were made (under due authority) chiefly in the Ballabgarh Khandrat where some of the villages were very small indeed.

The new returns show the tenures to be —

Zamindari	...	48
Pattidari	...	271
Bhaiachara	...	454
Total	...	773

The people now as a rule like the revenue to be distributed according to possession, so the number of *bhaiachara* villages has increased largely

Cultivating occupancy.

14. The manner in which the land is occupied is set forth in the following percentages :—

Occupied by owners	...	56
Occupied by tenants free of rent	...	2
Occupied by occupancy tenants	<div> <div>“cash rents”</div> <div>“kind rents”</div> </div>	<div> <div>9½</div> <div>½</div> </div>
Occupied by tenants-at-will	<div> <div>“cash rents”</div> <div>“kind rents”</div> </div>	<div> <div>25</div> <div>7½</div> </div>

At last settlement some 65 per cent. of the cultivation was *khudkasht*, but alienations to non-agriculturists and absentees has caused a diminution and an unhealthy cycle has resulted in some of the survivors having larger holdings than they can cultivate themselves. Tenants holding free of rent are usually Brahmans and menials who are allowed to cultivate for services: the former are termed *dholdars* and the latter *bhondidars*: but one finds many holdings in which no rent is paid because of temporary exchanges of cultivation between landlords. The average size of the holdings of tenants both with or without occupancy rights is just under 2 acres, but as tenants often hold from more than one landlord this figure does not give much information of value.

15. Nine-and-a-half per cent. of the cultivation is held in occupancy right, the majority of tenants being section 6 and section 8 tenants who pay rent at revenue rates with or without (mostly without) additional *malikana*. As so many pay rates without *malikana* the tenants are in a strong position, for if the landlords attempt to impose a *malikana* the tenants reply by claiming rights under a more privileged section. It is curious that landlords do not take the bull by the horns and obtain a court decision, because, even if unsuccessful, they would obtain some *malikana* which at present in most cases they do not. In the revision of the record of rights the old entries were maintained as a general rule, but, as a great

TENANTS AND RENTS.

Occupancy tenants and rights.

many tenants had been shown as holding occupancy rights under no specified section, the old files of the *tahkik-hakuk* (compiled in 1880) were examined and the records were amended through the medium of correction mutations. These files however were not always complete, so there are still a fair number of holdings in which occupancy rights remain unclassified.

I am afraid that many tenants are shown to have occupancy rights whose original rights were nebulous: before 1868 entries were made according to the idiosyncrasy of the patwari and, since mutation procedure was established, revenue subordinates have erroneously accepted mutations granting occupancy rights to *dholdars* and *bholdars* through misunderstanding the positions.

Some 32½ per cent. is cultivated by tenants-at-will who usually are of

Tenants-at-will.

the same agricultural tribes as the landlords and hereditary tenants:

they always reside close to their tenancies though not necessarily in the *abadi* of the *mauza* in which the holding is situate. Many of these tenants-at-will pay no rent beyond the Government dues for their land, and like the occupancy tenants are in a masterful position: they regard themselves as owners and are quite prepared to contest a demand for enhanced rent by claiming either proprietary or occupancy rights. I have little doubt that if the original inquiry had been more thorough many would have been shown as occupancy tenants long ago, and by such action friction would have been avoided.

In connection with the gardens a curious tenure is found known as the *sardarakhti* tenure. A *sardarakhtidar*

Sardarakhti and makbuza tenures

is a man who is a tenant of the land

paying rent to the owner, but who is himself the owner of the trees. Usually the *sardarakhtidar* pays a rental of about Rs. 6 or Rs. 8 per acre, but if a *quasi-batai* rent is paid, the landowner receives one-fourth of the price for which the fruit is sold. In respect to the revenue now assessed, I understand that parties have usually arranged to be responsible for their shares according to this *batai* proportion. The *sardarakhtidar* appears to be in very strong position, as on ejection he is entitled to compensation for the value of the trees. This *sardarakhtidar* tenant right must not be confused with a *sardarakhti mafi* right, which is a right granted by the State to retain all or part of the land revenue assessed.

Another curious tenure is known as the *makbuza* tenure by which the State or a public body such as the District Board may, with the consent of the owners, take possession of land free of cost for public purposes. The tenure originated when waste land at all events had no great value and when zamindars did not mind land being utilised in this way, more especially for roads and canals. Now-a-days the zamindars receive payment for land so utilised, because it is usually acquired outright, but in the case of land utilised as a *bund* or other land improvement, which will be of advantage to the owners and villagers concerned, the people willingly give up land on this tenure. It is a cardinal principle of this tenure that the State or public body must return the land if it is no longer utilised for a public purpose, a condition of the agreement which has been frequently fulfilled. The tenure has not been definitely recognised in a Civil Court, still the custom exists beyond doubt, so in any claim for restoration of land the issue should be one of fact, *i.e.*, whether the land is still required for a public purpose or not.

The area held by tenants paying rent amounts, as has already been stated to 42 per cent. of the cultivation.

Rents.

Produce rents are seldom paid by occupancy tenants and when paid by tenants-at-will there is generally a special local reason for it: either the arrangement is due to custom which has been handed down or the cultivation is so precarious, as for instance in the Dabar or Khadar, that the tenants will not run the risk of having to pay a fixed cash rent when there may be no crop. The usual rate of *batai* is one-half: in canal tracts the owner and tenant share the Government dues, the cost of seed, and the produce according to the *batai* rate, which is specially lowered to one-third if sugarcane is grown. Cash rents paid by occupancy tenants are almost invariably

rents expressed in terms of the land revenue, but tenants-at-will mostly pay *chakota* rents: such *chakota* rents are usually fixed at a rate calculated on the area, which is often roughly estimated by the contracting parties without reference to the revenue records. Rents on unirrigated land vary largely in the different circles: in the richer circles one rupee per *bigha* may be considered as a general average, but in the poorer circles the average dwindles down to ten annas: sandy *bluur* will let at only eight annas whereas rich *dakar* or *sailab* will often attain the high rental of two rupees. Rents on irrigated land average double those on the local *barani*, but where irrigation is specially good or there is abundance of manure abnormally high rents are found. For further details the assessment reports must be consulted.

16. Undoubtedly the best agriculturists are those who make a speciality of

Character of the agriculturists.

the Delhi market gardens and orchards in which are produced vegetables, flowers, fruits and melons. This cultivation is almost entirely in the hands of Malis: a few members of that tribe in scattered villages pursue the same calling, and with the Malis I must associate the Reahs who have similar qualities and antecedents. The Jats form the principal tribe however of true farmers and are well known for their capability and industry: they are found all on the three tahsils and their presence is always in evidence where the best *nahr* and *chahi* cultivation is found. The Gujars of the plains are also excellent cultivators, but those whose habitat is the hills are a pastoral race who live chiefly by profit from milch produce: their pastoral life has imbued them with a special desire to possess cattle, a desire which is often satisfied in a way that brings them into close connection with the thanadar. The Brahmans are large landowners and by no means bad cultivators: they belong almost entirely to the Gaur section, which after considerable delay and inquiry has been recently gazetted as an agricultural tribe in a detached group under the Land Alienation Act. The remaining Hindu cultivators are mainly Ahirs and Rajputs, Taga Brahmans and Sanis who are fairly good cultivators as a rule: the Ahirs are cattle fanciers in origin, but their inclinations are more towards plough than milch cattle.

Of the Muhammadan tribes the Sheikhs preponderate: their qualities seem to vary according to the tribes to which their forefathers belonged before embracing Islam, but as a class they are thriftless, with the result that their landed property is passing from them. A few Meos are found on the Palwal border near the hill range, which has derived its name (the Mewat spur) from their settlement: the tribe as found in this district is fairly industrious and careful. At Sonapat is a large gathering of Saiyids with a few Pathans: the former are a degenerate race who rarely cultivate themselves, but have no scruples in exacting high rents from their Jat, Brahman and Gujar tenants. Perhaps the most marked distinction in the character of the leading tribes can be exemplified by noting how the different clans adopt different pursuits when they leave the ancestral inheritance and go out into the world. The many Jats, Gujars and Rajputs will take service under the State as soldiers, whereas the Brahmans, Saiyids and Pathans will prefer clerical employment in the revenue and judicial departments.

17. The importance of Delhi originally as a royal and now as a commercial

Communications, markets, and trade.

city has brought railways in abundance. At last settlement, apart from the East Indian Railway which had a terminus at Delhi, only the narrow gauge Rajputana-Malwa Railway, with its one mofussil station at Palam, touched the district. Since then have been opened the Delhi-Umballa-Kalka Railway, the Southern Punjab Railway and finally the Agra Chord Line, with the result that there is now no village which is as much as a dozen miles from a railway station. These three railways respectively have followed the main roads leading north, west and south from the city and have superseded almost all but the local cart traffic. The Rajputana-Malwa Railway too runs parallel to but at some distance from the metalled road to Gurgaon. The unmetalled roads radiate from various centres such as Bawana, Najafgarh, Mahrauli and Tigaon and also of course from more important villages, where there are railway stations: these roads are ordinarily serviceable, but half an inch of rain is usually enough to hang up the cart traffic.

Apart from Delhi city the principal market towns are Murthal, Sonapat, Narela, Najafgarh, Mahrauli, Faridabad and Ballabgarh, whose traders as a

Markets and trade. rule transmit produce to the Delhi market. Murthal and Narela however make a speciality of chillies, which are grown so freely on the Khadar *chahi* land, to be sent direct to Calcutta : at both Sonapat and Ballabgarh are found a cotton ginning mill and press, whose products are sent to Bombay. There is no general export of grain or *gur*, because the city requirements are too extensive. About Delhi itself as a market I need write little as that is a subject for the gazetteer : with so large a population it is a great market for luxuries, but in this report I am concerned more with trade in necessities. The district supplies the city with its surplus grain, *gur*, chillies, tobacco, *ghi* and to a slight extent cotton, and the zamindars purchase in return cloth, both country and imported, salt and iron implements. The people within easy reach bring in grasses, tamarisk for, baskets, brushwood and cowdung cakes for fuel, from which a humble livelihood is earned. The timber supply comes in chiefly by rail from outside, but a small percentage is obtained from the Irrigation Department who keep a fleet of barges for this purpose.

18. The assessment reports have dealt fully with the subject of prices of land, so far as the figures can be used as a check on the pitch of the assessments. Comparisons of prices which have maintained at various periods are unsatisfactory, because land varies so much in value according as it is waste, *barani*, irrigated or specially situated, and an intelligent elaboration of prices of the various classes of land cannot well be made.

During the years 1868-74 the sale price of land was returned as Rs. 30 per acre (*vide* Settlement Report, Appendix XII) : the returns for sales of land (outside mauza Delhi, where prices would vitiate any comparison) since 1901, when the Land Alienation Act was introduced, show that Rs. 78 is the average price of an acre of land of which as much as 35 per cent. will be waste : thus it would appear that price of land has increased as much as 160 per cent. When we remember the increase in prices of agricultural and milch produce, the security of tenure, and the greater existing competition for land, we realise how the value of agricultural land must have gone up : the statistics however may be misleading, if in recent years a better quality of land has been changing hands.

A deeper scrutiny of the available statistics reveals that non-agriculturists used to pay before 1901 far higher (66 per cent.) prices than zamindars, probably because interest was included in the sale price, and moreover that the non-agriculturists were buying a rather larger proportion of waste than zamindars, indicating that grazing land is specially required by them.

19. The figures below show the percentages of the cultivated area which are now under mortgages or which have been sold since settlement. The figures of mauza Delhi are excluded as having no rural significance.

Tahsils.	AREA UNDER MORTGAGE.			AREA SOLD SINCE SETTLEMENT.		
	To agricul- turists.	To non-agri- culturists.	Total.	To agricul- turists.	To non-agri- culturists.	Total.
Sonapat	7	7	14	2½	2½	5
Delhi	5	3	8	6	3	9
Ballabgarh	11½	8	19½	4½	3	7½
Total District	8	6	14	4	3	7

From these statistics it is clear that the non-agriculturist has a fair footing in the district in the guise of a landowner, but that he is not making any

great progress. The agriculturists seem to be able to find money to accommodate their poorer friends, and alienations to non-agriculturists would be even less if the Gaur Brahmans had been accepted earlier as an agricultural tribe. The detailed statistics in the assessment reports show that since 1901 the area annually mortgaged to non-agriculturists is decreasing, and the redemptions are steadily increasing.

The village trader in this district is not as a rule anxious to become a landowner and really only does so *faute de mieux*, when there seems no prospect of a cash debt being settled: such men have often told me they would be glad if the land they hold on mortgage was redeemed at any reasonable price, and one can quite understand that the average village buniyah, who has his shop, does not want to be engaged in estate management. The principal non-agriculturists who do want to acquire land are the Bhoras, who are found mainly at Murthal, Mohana, Najafgarh, and Chandpur, and well-to-do city merchants or lawyers, who regard land as a safe investment for their savings. The Land Alienation Act has really hit the Bhora harder than any one: it has saved the thriftless Gujars and Rajputs from slow extinction as landowners, but has not made much difference to the Jats who are naturally shrewd and careful.

The unsecured debt of the proprietors is returned as thirty-five lakhs of rupees, a sum which is about four times the former land revenue demand and means a debt of some forty rupees per individual proprietor. I should be sorry to draw any inference from these figures, as the returns are so unreliable: some men naturally refuse to disclose in public their finances, others think that by admitting high debts their assessments will be lightened and in any case the villager's *andazan* has a very wide range. In one village, the returns of which I examined, I found that the true debt was of little import as the greater part was made up of intra-family accommodations and the buniyah's running accounts, which would be balanced, if not entirely liquidated, after the forthcoming harvest.

20. The following table shows the details of the existing agricultural stock and the figures of thirty years ago:—

Detail.	Year.	Sonepat.	Delhi.	Ballabgarh.	District.
Plough cattle	1880 ...	32,056	24,942	23,612	80,610
	1910 ...	36,683	26,785	21,536	85,104
Other cattle including young stock.	1880 ...	77,841	68,913	58,437	205,191
	1910 ...	83,257	72,789	49,381	205,427
Sheep and goats	1880 ...	15,552	11,259	27,174	53,985
	1910 ...	32,156	27,859	31,119	91,134

It is noticeable that cattle, both plough and milch, have increased in Sonepat and Delhi but have declined somewhat in Ballabgarh: the statistics of plough cattle seem to correspond with the changes in cultivated area, and the decrease in stock in Ballabgarh must be ascribed to the droughts in that tahsil which has caused more than one fodder famine. The great increase in sheep and goats is remarkable and, from the point of new arboriculture, deplorable, as the main increase is in goats: as is well known flocks in this country are a profitable source of income to the owners, who unscrupulously graze them where they choose. The flock owners are mainly butchers of Delhi, Ganaur, Faridabad, etc., who hand the animals over to Gujars and Chamars on a share profit system, by which the latter retain a proportion of the young. The two facts, that the flocks have multiplied and that the owners are butchers, show that the consumption of mutton and goat flesh has increased: the city demands for meat are of course greater than hitherto and meat has now become a regular article of diet with many whose ancestors were orthodox.

Transport animals have increased from 4,700 to 15,700 in round figures: the chief increase is in donkeys which are so freely employed now-a-days in carrying stone, clay, fuel, etc., into the villages and towns.

Excluding waste which can afford no grazing the average area of waste per head is about half an acre (the actual incidence of *Banjar* is '36 of an acre) but of course the cattle graze over the cultivated fields when fallow and are also given a considerable amount of fodder. It is clear that grazing facilities are becoming restricted since cattle have increased and cultivation has extended: the fact has been brought home to the people, for the landowners are anxious to impose grazing fees in villages where such a custom has never existed and substantial sums are paid by contractors as rent for grazing areas, especially near Delhi; indeed around the city the rental of waste is as much as the rental of light culturable soil in the mofussil.

The value of stock has increased about 80 per cent. within the past thirty years, so that the total value of the animals in the district is computed to be about $1\frac{1}{2}$ crores of rupees: the direct return from milch produce, sales of hides etc., (reckoned at 11 per cent.) amounts to between thirteen and fourteen lakhs: the indirect return from plough cattle is of course inestimable.

21. The amount received by the residents of the rural district in the way of pay or pensions from Government amount to Rs. 3,10,000, of which the greater portion is obtained by men who have taken military or quasi-military employment. There is no other source of income for which any specific amount can be named, but there is no doubt that the miscellaneous income of the district is very considerable. The three most profitable spontaneous products must be *jhau*, used for basket making, which grows so extensively in the Khadar, metallurgical material such as *kankar*, *bajri*, etc., which is plentiful especially about the Kohi tract, and *jhund* grass. The villages close to Delhi sell large quantities of fodder, fuel and other necessities such as poultry. Chalk to a minor extent is quarried about Mahrauli.

There is a great demand for labour at all times both in the city and out side: *kankar* digging, road mending, *bund* making and mending, sawing, splitting and stacking wood on the canal banks, well making etc., provide a livelihood for the needy, a fact which was strikingly brought out by the way in which the people weathered the year 1907-08 with no relief except suspension of revenue.

CHAPTER IV.—THE REVISION OF THE RECORD.

22. The first step taken was of course to examine the existing maps and to note their state. The old settlement maps had evidently been prepared generally with care, for in 88 per cent. of the villages it was found unnecessary to resort to remeasurement and they were brought up to date by the now well known process of correction, colloquially termed *tarmim*. In a few villages even, an abbreviated system known as *tarmim sarsari* was pursued, by which the unnecessary chaining of fields which have not altered is avoided: this system, however, was on its trial and was really devised too late for general use in this settlement. On the methods employed for bringing the maps up to date I need not descant at length as they are fully described in Appendix XXI to the Settlement Manual (Financial Commissioner's Circular letter No. 31, dated 16th March 1909), the provisions of which have been adopted almost *verbatim* from the instructions issued two years previously in this settlement: but one little matter I must mention. For a long time past Settlement Officers have tried to get their villages measured from a common base line and have tried without success in spite of considerable labour and expense. Here, however, success has been obtained by a simple process. There exists a Survey Department map on

the scale of four inches to a mile which was issued with five-inch squares already ruled. Since the patwaris' maps are on the scale of 16 inches into a mile, and the new maps had to be prepared on *masavis* which are 20 inches square, it was fairly obvious that the five-inch squares in the Survey Department map depicted the same area of country as one *masavis*: so in order to obtain squares on the survey Department map to equal the 16 squares on the *masavis*, 16 small squares, each $1\frac{1}{4}$ inches square, had to be ruled.

Accordingly to remeasure the whole district on the same base, that is, on a common system of squares, it was only necessary to plot off with care the *sehaddas* of each village on to the *masavis* and to hand them over to the establishment for the details of boundaries, fields, etc., to be filled in. When a village had to be remeasured, the patwaris obtained the position of the corners of an initial square by offsets from the line joining two *sehaddas*: when a village was to be subjected to *tarmim* the map was traced with the aid of carbonised paper, the position of two distant *sehaddas* having been made to correspond.

The system proved a great success and had the incidental merit of abolishing the interminable *khaka* files, which must have been the bane of many a revenue subordinate's life. Of course as in so much of the district the maps have been corrected by *tarmim*, the village boundaries in the new maps do not fit into one another accurately in *shape*, but the distances (*karukan*) from point to point are remarkably accurate and the maps are in every way suitable for the decision of boundary disputes.

In the riverain tract where field boundaries had been generally obliterated by floods, the maps of villages were reconstructed on the square system: mauza Delhi itself was entirely remeasured by triangulation. In the 1880 maps each *kiari* (or portion of a field bounded by a recognisable line) was given a separate number, but it has since been recognised that such minuteness of record is unnecessary: in the new maps a khasrah number is such as is defined in Standing Order No. 16, paragraph 12, but to facilitate girdawari work four bighas and twelve bighas have been taken as the limits for the size of irrigated and un-irrigated fields respectively. This abolition of the *kiariwar* survey has resulted in the field numbers being reduced from 1,157,233 to 896,912 or rather more than 22 per cent.

The measure of area in the old records was the *pakka* or *Shahjehani bigha* which is five-eighths of an acre, but, except in a few villages about the Delhi city, the people calculate their rents on the *kachha bigha* which is $\frac{3}{4}$ ths of an acre, so the smaller unit was adopted in this settlement. For purposes of measurement the unit was the *gatha* of 99 inches, so the local square measure runs:—

1 Square gatha = 3 biswansis.

20 biswansis = 1 biswa.

20 biswas = 1 bigha = $\frac{3}{4}$ ths of an acre.

The State copies of the new maps are made on the usual *masavis* which in many cases are of a material which is often not sufficiently durable to stand the wear of field work. The original copies are now all filed in the Revenue Record Room in special almirahs, accompanied by an attested copy where the original is at all indistinct or ragged. All the *masavis* have been neatly edged with cloth and carefully repaired, so they should last well for many years. The patwaris have been given copies on tracing cloth to be kept in tin cases with which they have also been supplied, and of course the usual maps on cloth for field use have been made. On these latter (following the Hazara precedent) the lengths of boundaries have been entered to save needless references to the copies on tracing cloth. Furthermore, the Irrigation Department have been supplied with maps on tracing cloth, with the usual concomitant *khakhas*, of all villages in which there is now, or likely to be in the future, canal irrigation: these records were prepared by the Settlement establishment free of any charge to the Department.

23. The revenue records which existed at the beginning of settlement were evidently very inaccurate, as Revision of the record of rights. during the past $3\frac{1}{2}$ years 129,283 mutations have been disposed of, a number which amounts to 86,938 per annum. From the returns the usual number disposed of annually in previous years was only 10,117, so it is obvious that some sins of omission must be laid on the normal district staff. As the original records in 1880 seem to have been drawn up with great care, the revenue subordinates had a fair start except in three matters to which I refer later.

I do not think however that there is much to be surprised at in the gradual loss of accuracy in the records, for the work is undoubtedly heavy. The zamindars mortgage, redeem, and remortgage their lands, by written deeds or verbally, often in uncertain unpartitioned shares, as freely as the ordinary English farmer takes off and puts on his coat: frequently no report at all is made to the patwari; indeed cases often came up where land had been mortgaged or sold a quarter of a century ago, for the transaction to be recorded. Again, many really simple cases which do come up for mutation of names are rendered confusing by the introduction of legal niceties, to which the proximity of Delhi civilisation gives rise. The general result of this is that mutations often remain unattested till an unduly late date.

The three matters in the 1880 settlement record which were unsatisfactory were:—

- (1) the want of simplicity in recording rights generally;
- (2) the obscure entries of the *biswedari* and *mafi* rights of assignees;
- (3) the inaccurate entries about State-owned land near the Delhi city.

To deal with the first, rights were often correctly recorded but wrapt in circumlocutory language which give great trouble to understand: again menials who took a share of the batai would be shown as co-sharers in the tenancy; sometimes the entry of rents would be so involved that without asking one could not tell whether it was rent or revenue, or which item was paid by the owner, the tenant or the sub-tenant. So one good work that has been done is the elucidation of entries and their conversion into a form which any newly joined munsiff will understand.

The entries of mafidars' rights in the records were particularly confusing; one found the mafidar's name written in thick black type right across the page: in the column of ownership would be the *shamlat deh* or an individual's name: in the tenant's column would be the mafidar's name and sometimes he would be shown as an occupancy tenant. These entries have all been corrected by mutations so that the mafidars' rights to receive revenue and rights of ownership or tenancy, as the case may be, have been separated and clearly recorded.

Again the State was shown as owner of a considerable area about Delhi itself over which, though confiscated by general proclamation after the mutiny, it had not exercised any effective rights of ownership: these entries have now been corrected so far as possible and the remainder will be corrected on the receipt of orders.

The new records consist of books of a convenient size nicely bound in leather at a cost of Rs. 1-1-per volume; they have been stored in specially made book-cases erected in the Revenue Record Room. The documents which have been bound up in the record of rights are—

- (1) preliminary proceeding showing the authority under which the record was prepared and giving a list of the papers included therein (*robkar ibtidai*);
- (2) genealogical tree of owners (*shajra nasab*);
- (3) a similar genealogical tree of the occupancy tenants, if any

- (4) alphabetical index of right-holders showing on what pages information will be found (*index radifwar*) ;
- (5) index of khasrah numbers, which shows in what khatauni the field is entered and on what *masavi* it is plotted ;
- (6) the jamabandi ;
- (7) list of revenue assignments, if any (*nakhshar mafiat*) ;
- (8) statement of rights in wells, if any (*nakhshah chahat*) ;
- (9) sanctioned mutations ;
- (10) the village administration paper (*wajib-ul-arz*) ;
- (11) the order of the Settlement Officer fixing the land revenue assessment, and the instalments in which the demand is to be paid ;
- (12) the order as to the system by which the revenue has been distributed (*bachh*) ;

The *shajra nasab* has been prepared in book form and not on continuous sheets, because the change to the latter style had not been inaugurated until most of the work had been finished. The *shajra nasab* of occupancy tenancy is not a legal revenue record and so no presumption as to its truth arises under Section 44 of the Land Revenue Act, but doubtless it will prove of service to the courts in elucidating disputes and it will certainly help the revenue officers who attest mutations. It was not very difficult to compile because, so long as there is no succession imminent, the zamindars are not prone to raise disputes and in many cases the descent of the occupancy tenants is already on record in respect to land held in full proprietary right. The index of khasrah numbers is prepared in the book form, which has superseded the custom of compiling the index on a separate *masavi* sheet. The jamabandis are in a special form which has columns for the old and new field numbers and wide columns for the entries of rights-holders : the old revenue has been shown in black and the new in red ink.

24. The former *wajib-ul-arz* or village administration paper was a very lengthy document which included many needless entries : some were platitudes, others were repetitions of the law, some were directly contrary to the law. The cumbrous nature of the record may be imagined from the statement that there were as many as 56 heads under which entries were made. The new *wajib-ul-arz* has been drawn up in accordance with Settlement Manual, Appendix VIII E., and the entries will be found under the eleven prescribed heads.

The procedure in revision was for the former entries to be reclassified and copied out under the new heads : the attestation was then carried out in the presence of the villagers by the Assistant Collector, 1st grade, who struck out all redundant clauses and made such alterations as were required : the finally attested entries were eventually transcribed in the regular form which is bound up with the settlement jamabandi. Great care was taken to see that the entries record facts only. There were only three matters about which there was any dispute. In some villages the owners wanted, and to my mind rightly wanted, to levy grazing fees from non-right-holders : milk produce has become so valuable that landowners object to grazing being generally free to one and all : in such cases ordinarily no change was made, but in a few instances an entry would be made that hitherto no fees had been levied, but that for the future the owners and resident non-right-holders have agreed to such and such arrangements. Again where landowners have found that the grazing area is insufficient they have asked for record to be made that certain areas of *shamlat* land are to be reserved for grazing ; in such cases the entry has been made so as to enable Section 150, Land Revenue Act, to be utilised.

In the former *wajib-ul-arz* entries had been made of various rights which existed inside the *abadi deh* : such entries, however, cannot now be made in view of Section 4 of the Land Revenue Act (*vide* Settlement Manual, para. 295, final

period). The exclusion of those entries caused some perturbation to the landlords, but they were satisfied with the assurance that their rights were in no way extinguished, but that Government has merely decided that the *wajib-ul-ara* is not the proper place for recording such rights.

25. A statement setting forth the tribal customs of the various tribes was prepared at last settlement in vernacular only, but, as Settlement Report, paragraph 206 shows, part of this statement was prepared in English by the Settlement Officer. The *riwaj-i-am* has now been thoroughly revised and brought up to date by the embodiment of changes in customs, which have been proved to have occurred, and of decisions of the Chief Court. The leading men of the various tribes in the different tahsils were collected at convenient centres and were asked the questions propounded in Tupper's Customary Law: their answers were recorded in vernacular and amplified by the examples which were quoted by them or were obtainable from the attested mutations. These replies have now been brought together in a convenient form in one volume for the whole district and copies have been supplied to the courts mentioned in Settlement Manual, paragraph 565. The original papers are filed in the Revenue Record Room. An English abstract of the customs has been prepared and will be issued shortly. The work has been carried out with great care by the Extra Assistant Settlement Officer, so the record should prove of great use to the courts.

26. The partition work was particularly heavy, as may be gathered from the fact that as many as 1,097 partition cases have been decided and 9,570 partition mutations attested: the high figure of the latter was due to there having been so many private partitions to which effect had not been given in the records, generally because there had been no definite acceptance of the partition as a permanent arrangement, until the parties were brought to issue by the settlement staff.

The work of partitions has been carried out with great care and substantial justice to the parties concerned, but I have always had an uncomfortable feeling that the system of partition might be improved to give the parties severally more valuable holdings. A joint holding which is being divided up consists generally of scattered plots, varying in quality, throughout the village, and the zamindars are so fearful of a neighbour getting the better of them, that they insist on each plot being sub-divided in preference to receiving their shares in one or two solid blocks. If the holdings could be consolidated the partition would be more satisfactory, but an officer conducting the partition follows the line of least resistance by conforming to the parties' wishes. In one village, (Mohana) the sub-division had come to such a pass that the people themselves complained of the inconvenience and, after throwing into the melting pot all the holdings belonging to the applicants, I was able to repartition their estate on a satisfactory basis.

Applications for definition of boundaries between minor holdings were not entertained whilst measurement work was proceeding, as the parties were directed to attend the measuring parties, who satisfied disputants in the ordinary course of the work: but the zamindars could obtain on application copies of the map and record of rights relating to their lands in the usual way. For this reason only 452 cases were instituted and decided.

There were very few disputes as to boundaries between villages and the only such cases of real importance were those which arose along the Jumna: these however with the aid of maps obtained from the United Provinces' districts were settled to the satisfaction of the villages concerned.

CHAPTER V.—REVISION OF ASSESSMENT.

27. The forecast report prepared in accordance with the orders in Settlement Manual, paragraph 223, by Major Parsons, Deputy Commissioner, is to be found in the Government Revenue Proceedings for July 1906. The Financial Commissioner accepting as facts that the increase in cultivation amounted to 5 per cent. and that the effective rise in prices amounted to 5 per cent. predicted that in the Ballabgarh tahsil there should be no increase in the assessment, but that in the rest of the district the increase should amount to some $1\frac{1}{4}$ lakhs of rupees. The subject of raising the canal rates to a pitch which would have added a further fluctuating demand of three quarters of a lakh was also discussed in the Settlement Commissioner's review, but the Financial Commissioner preferred, and as the result shows, rightly preferred, to confine the issue to the increase in true fixed land revenue. Since the demand for 1903-1904 (column 4, Statement III, Forecast Report) amounted to approximately $8\frac{1}{4}$ lakhs the expected increase was about 15 per cent., a percentage which equalled only the effective rise in prices, but which ignored the increase in cultivation and the great expansion of well cultivation.

The preliminary report on the subjects mentioned in paragraph 225, Settlement Manual, was sent on 22nd July 1907, to the Settlement Commissioner, by whom orders were passed in his No. 5968, dated 3rd October 1907. So far as revision in assessment is concerned, the net results of this report were that the old Zerkohi circle could be abolished as mentioned in paragraph 5, that two assessment reports would suffice for the rural district, and from a calculation made subsequently in paragraph 11 of the Settlement Commissioner's review of the South Report, that the assumption of a general 15 per cent. rise in prices was a very safe one.

For the mofussil portion of the district two assessment reports were written, the one dealing with the southern half of the district, comprising the Ballabgarh tahsil and the adjacent Kohi and Khandrat circles of the Delhi tahsil, and the other dealing with the rest, the northern half of the district: the statistics of tahsils were kept separate in order to facilitate subsequent compilations. The suburban area of Delhi itself which is made up of 14 former mauzas was treated to a separate report, a procedure which was necessitated by the exceptional value of the land in the proximity of the city. In the Khandrat circle of the Delhi tahsil are seven villages with rich gardens and nahri land which might well have been included in this report, and I note for the benefit of a future Settlement Officer that he will probably find it beneficial to adopt this suggestion. The orders on these reports will be found in the Punjab Government Revenue Proceedings for September 1909, February 1910, and May 1910, respectively.

28. The district from its geographical position has more of the attributes of the Agra province than of the Punjab, the most marked agricultural characteristic being that cash rents preponderate over produce rents: in fact, except in sporadic localities where there are special reasons for the custom, produce rents are unknown. In these circumstances the assessments have been based primarily on the prevalent cash rents, but produce estimates, based on somewhat unreliable data, were made, serving as a rough check that the cash rent estimates were not optimistic: in the produce estimates the usual deductions were made for dues paid to menials, eight per cent. being allowed, and for portions of certain crops out as fodder.

The cash rent estimates were drawn up on somewhat broad lines. Village inspections showed that in the various tracts certain customary rents per bigha were generally recognised and, when the rents actually recorded were totalled, it was found that the arithmetical result adhered to the recognised rentals sufficiently closely for very fair and reasonable rentals by soils to be assumed. No deductions were made for fallows, because land is

usually left fallow to give it a rest and very seldom for want of a tenant, but liberal deductions were made for short collections of rent, of which a portion generally remains outstanding, at all events, in insecure tracts.

On the whole there was no very great difference in the estimates made by the Settlement Officer and those finally accepted by the reviewing officers, and the total net assets of the landlords were calculated to amount to about 30 lakhs of rupees, so that in theory a full assessment would have amounted to 15 lakhs. The former assessment being only 8½ lakhs, to take the full amount would have involved taking an increase of 76 per cent., an enhancement which was out of the question both on account of the amount involved and because the pitch of assessment would have been unduly raised. The result was that the half net asset estimates showed the high-water mark of assessment and left it difficult to fix a mean which would be just to the zamindars and State alike: the estimates, however, were most useful in indicating the relative value of soils.

29. In Appendix III will be found listed the revenue rates as sanctioned by Government for the various circles. Whilst the settlement was in progress, the principle of assessing irrigated land was a subject of discussion, which was thrashed out in the reviews and orders on the Gohana (Rohtak) Tahsil Assessment Report. The previous practice had been to assess all soils according to their recorded areas, but a school of thought came to the front, which advised that the soil rates for irrigated land should be applied to the average areas sown according to the jinswars rather than to recorded areas, and that unirrigated rates should be applied to the remaining unirrigated areas. The final decision is that revenue rates are to be imposed on chahi sown, nahri recorded, and balance barani areas: the revenue rates fixed in the different tahsils however vary in this respect as we were passing through a transition stage. The revenue rates in the Sonapat tahsil and in the Bangar chak of the Delhi tahsil are somewhat low in view of the strength of the soil, but this was unavoidable as higher rates would have caused too great an enhancement of the revenue.

30. Before announcing the revenue in any circle I had prepared a statement showing the old revenue, the assessment at soil rates and the assessment for which I had noted the village at the time of the village inspection, the last-named being adjusted, if necessary, to meet the orders received. These lists were carefully revised and the proposed assessments were modified so as to make each village bear its fair burden: from my original intention I made considerable departures, because the assessment at circle soil rates gave a valuable mean, and indicated clearly if one was being misled by abnormal rents. At the same time I had no hesitation in assessing above or below rates, where the rents or circumstances of the village warranted such action. In some villages the enhancements were considerable, but I did not pay much attention to this, because the enhancements were being eased by progressive assessments, and it is better to assess villages at relatively the same pitch rather than to perpetuate the inequalities of a past assessment. Perhaps the most useful test of all was the figure of the average "barani unit crop parta", which is the crop incidence which results from an acre of irrigated crop being reckoned as twice the value of an acre of unirrigated crop: this arithmetical calculation is justified by the rental of irrigated land being double that of unirrigated and it is only by some adjustment of this nature that a true comparison can be made between villages, in which the proportions of irrigation vary. The revenue was announced by me personally at various centres: some 30 to 40 neighbouring villages were summoned for each day and the whole business in hand was disposed of at once, announcement, distribution of abiana on the wells, method of bachh: and the people, having been given a parcha showing the statistics of the new revenue, including the cesses and the cultivated and crop incidences, were dismissed to their homes with the minimum of delay and trouble.

Acquainting the people at once with the incidences in many cases reconciled them to what would have appeared otherwise an undue enhancement, and the people as they went away compared their incidences with much interest: yet when objections were lodged and the question was rediscussed, it was surprising how often complete ignorance of the new incidence was professed.

The improvement in agricultural conditions has been so general that in as many as 630 villages out of the 773 the revenue had to be increased: in 89 villages the revenue was not appreciably altered, (i.e., more than 5 per cent.) either way: in 54 villages substantial reductions of revenue were granted.

The reductions were mostly granted in the Delhi Dabar where the dry cycle has left its mark, and in the Ballabgarh Khadar where there had been diluvion or deterioration from shor. In such villages there had been considerable remissions, which with the outstanding suspensions indicated that the previous assessment could no longer be maintained.

In all 188 objections to the original assessments announced were lodged, and in 21 villages I made reductions to the extent of Rs. 2,175: all objections but 38 came from the northern half of the district, where the increase in resources had caused the principal increases.

Out of 76 appeals made to the Settlement Commissioner 64 were rejected, and in the remainder reductions to the extent of Rs. 2,111 were allowed.

The numbers of both objections and appeals were excessive owing to delay in promulgating the progressive assessments, a delay which was caused by the principles on which progression was to be allowed being under discussion: eventually principles more favourable to the revenue-payers than those laid down in the Settlement Manual were accepted.

31. At the 1880 settlement the distribution of revenue over holdings was practically confined to three systems: Distribution of revenue over holdings and wells. either the distribution was a summary distribution on the cultivated area, or there were two rates, the one on land recorded as irrigated and the other on unirrigated cultivation irrespective of soils, or there was a distribution by ancestral shares. As may be gathered from paragraph 278 of the 1880 Settlement Report the first-named was the most popular, being adopted in 70 per cent. of the villages, and the remaining systems were adopted each in 15 per cent. The refinements listed in that paragraph are of no great importance.

The procedure adopted at this settlement was for the Tahsildar at the time of the final attestation to compile a bachh file, in which he reported the wishes of the landowners, who were informed that they must think the matter over and be prepared to express their matured desires when the revenue would be announced. As a rule the grey-beards being conservative wanted no change and the more knowing owners wanted a system of Bachh by which they would personally profit, but finally I endeavoured to give effect to the following principles:—

- (1) that profitable gardens should be assessed separately and the revenue distributed on them in detail;
- (2) that an abiana should be imposed on each well cylinder according to its irrigating capacity;
- (3) that the distribution on soils should be *kismwar* unless the variation in soils was unimportant;
- (4) that when waste was valuable, a small rate should be placed on it.

The garden assessments are dealt with in paragraph 32.

The fixation of abiana on each well cylinder was carried out by the wells being placed in grades by the people themselves: a statement was prepared showing the average areas irrigated from each well during the five years utilized

Distribution on wells.

in making the produce estimate : it showed details of the first class crops (cane, tobacco, pepper, etc.) and second class crops (others) separately, and it was ordinarily used as a check that the gradation was a fair one. The total abiana fixed for the village was then distributed over the wells in even rupees according to grades, minor adjustments being made. This abiana system met with some opposition where it was not understood : in the southern half of the district the people accepted it eagerly, but in the Sonapat Khadar difficulties were made. The objectors were mainly those who owned no wells and who, having hitherto utilised the nearest well without hindrance, realised that they would now have to pay for water : they did not understand that there would be a rebate, in that their land would pay a dry assessment. In the end all the villages except a very few accepted the system, but in three villages with extensive well cultivation the well-owners refused to grade their wells themselves, but were satisfied with my gradation which was based on the crop statement mentioned above. The lowest abiana on a well is one rupee and the highest is Rs. 40 : very few wells are assessed at more than Rs. 25, and Rs. 12 is about the average, a figure which on the estimate of 30 years' purchase indicates that Rs. 360 is the average cost of constructing a well.

Once the abiana had been fixed the remaining distribution was easily made, the ruling proportions being five shares nahri, four shares barani and three shares bhar, if differentiation was necessary at all : in this connection it will be remembered that many of the villages of the district are so small and that holdings are partitioned so jealously in respect to quality of land, that a summary distribution as often as not gave substantial justice. In a few villages a minute rate was placed on waste generally with a view to strengthening a claim to levy fees for grazing from outsiders, and in a very few cases a distribution was made by ancestral shares.

That the bachh had been carefully carried out with a full measure of justice may be assumed from the fact that not a single appeal has been made to the Commissioner against the system of bachh and in only two cases have individual landowners appealed against the revenue which fell to their shares.

32. In paragraph 274 of the 1880 Settlement Report information on the subject of garden assessments is given, but that information is of statistical value only, because it merely gives the area of land which happened to be under fruit trees and which was assessed in accordance with the orders of the day at the ordinary village soil rates. The principles of assessment now utilised are those laid down in Settlement Manual, paragraph 511, by which ordinary gardens of no special value have been assessed and treated in the bachh as ordinary cultivation, but specially profitable gardens have been assessed separately. In the latter case the gardens were graded, in the same way as the wells were, by the garden-owners, and the total garden assessment was distributed as equitably as possible.

The special garden assessments imposed are recorded as follows :—

Tahsil.	Assessment Circle.	Area in acres.	Amount imposed.
			Rs.
Delhi	Bangar	210	946
	Kohi	30	90
	Khandrat Suburban	1,408	13,600
	Mauza Delhi	309	3,101
Ballabgarh	Bangar	23	125
	Kohi	40	155
	Total ...	2,020	18,017

As the foregoing figures show, except in the immediate vicinity of Delhi, gardens are seldom of great value, and so they were not noticed in the assessment reports. When I came to assess the suburban gardens in the Khandrat. I could

not assess up to the amount sanctioned (Rs. 16,000), because the original statistics were somewhat amended. Taken as a whole the renting value of the gardens around Delhi is not less than Rs. 27 per acre, so the assessment now imposed is well below the standard. The great increase in revenue is due mainly to the change in assessment policy.

CIRCLE AND TOTAL ASSESSMENTS.

33. The assessments sanctioned in this tahsil and as finally fixed after distribution over villages are the following:—
Sonapat tahsil.

Assessment Circle.					Sanctioned.	Finally fixed.	Percentage of increase over previous revenue.
					Rs.	Rs.	
Khadar	...	...	...	...	1,97,000	1,96,375	35
Bangar	...	...	...	...	2,83,000	2,80,845	45
Total					4,80,000	4,77,220	41

Apart from the general consideration of prices and railway extension the great enhancements in this tahsil were caused by (1) the increase of well cultivation in the Khadar, (2) the realignment of the canal in the Bangar which had brought irrigation to high-lying land and saved the depression from swamping, (3) the fluctuating owner's rate having been treated in 1880 as part of the land revenue.

The total assessment of the tahsil is 72 per cent. of the estimated half assets, and represents an incidence of Rs. 2-6 per acre cultivated. The *barani* unit crop incidences calculated on the five years returns utilised in the Assessment Reports work out to, Khadar Rs. 1-9, Bangar Rs. 1-10 : Total Tahsil Rs. 1-10.

If we apply the revenue rates of the 1880 settlement to the new areas, and add 15 per cent. on account of the rise in prices, an assessment at the old pitch would have amounted to Rs. 2,08,965 in the Khadar and Rs. 2,26,462 in the Bangar: so the Khadar assessments are yet at a lower pitch than the old revenue was at the time of its introduction. The Bangar appears to have been assessed at a higher pitch, but if we consider the former owner's rate as part of the fixed assessment, the pitch has been lowered.

34. In the Delhi Tahsil the assessments which were sanctioned and finally announced were as follows:—
Delhi Tahsil.

Assessment Circle.					Sanctioned.	Finally fixed.	Percentage of increase over previous revenue.
					Rs.	Rs.	
Khadar	...	...	...	...	26,000	27,157	22
Bangar	...	...	...	...	1,51,000	1,51,991	36
Dabar	...	...	...	...	99,000	99,625	4
Kohi	...	...	...	...	16,500	16,934	22
Khandrat	...	...	...	...	21,500	22,661	24
Khandrat gardens	...	...	...	...	16,000	13,600	293
Mauza Delhi	...	...	...	...	14,000	13,175	40
Total					3,44,000	3,45,143	26

In addition the fluctuating revenue of the Chak Jhil in the Dabar is estimated to yield Rs. 15,225, and if such revenue is realised the increase in that circle will be about $5\frac{1}{2}$ per cent.

The fixed assessment of this tahsil as now announced is 79 per cent. of the half net assets estimate, and if we exclude the statistics for the gardens and Mauza Delhi whose assessments are of an extraordinary nature, the incidence is Rs. 1-13 per acre cultivated. The *barani* unit crop *parta* works out to Rs. 1-8.

If the revenue rates actually used in 1880, increased 15 per cent. on account of prices, are applied to the new areas, the resultant figures show what the assessment would have been at the 1880 pitch:—

					Ra.
Khadar	...	...	...	...	32,415
Dabar	...	...	...	...	1,06,943
Bangar	...	...	...	...	1,35,178
Kohi	...	...	...	...	18,139
Khandrat, without gardens	...	...	...	...	20,373

Here again the Bangar is the only circle in which the pitch has been raised appreciably, but the same argument set forth in the preceding paragraph suffices to show that the statistics are misleading and that the pitch has not been raised at all.

35. In the Ballabgarh Tahsil the assessments sanctioned and finally fixed are as follows:—

Ballabgarh Tahsil.

Assessment Circle.						Sanctioned.	Finally fixed.	Percentages of increase on previous revenue.
						Ra.	Ra.	
Khadar	...	...	...	...	...	47,000	47,890	7
Bangar	...	...	...	...	...	1,23,500	1,24,095	28
Dabar	...	...	...	...	...	54,000	54,250	6
Kohi	...	...	...	...	...	23,500	24,330	18
Khandrat	...	...	...	...	...	18,500	18,650	41
Total						2,66,500	2,69,215	20

For the Khadar circle Rs. 50,000 and for the Dabar circle Rs. 53,000 were actually sanctioned, but alterations in areas subsequent to the writing of the assessment report caused the changes noted; in the former circle an area which would have been assessed at about Rs. 3,000 was suddenly transferred by river action to the United Provinces, and in the latter the sanctioned soil rates applied to the final areas gave a higher result.

The principal enhancements are in the Khandrat and Bangar circles where there is the most protection, where irrigation has extended, and where the city demand and the advent of the railway have caused the rents to rise. The total amount announced which is just 1 per cent. more than that sanctioned by the rates amounts to an increase in revenue of 20 per cent. The new demand is 68 per cent. of the estimated half net assets and represents incidences as follows:—

				Ra.	A.	P.
Per acre cultivated	...	...	...	1	11	8
Per acre cropped	...	...	...	2	0	5
Per barani unit acre cropped	...	...	...	1	14	0

The last two incidences are to a slight degree inflated because the harvests on which the produce estimate was made were admittedly rather below average.

To test how the assessments in this tahsil compare as regards pitch with those formerly in existence, I tabulate the following statistics:—

Circle.	Assessments at soil rates used in the last settle- ment	Add 15% for increase in prices	Total at old pitch.	Total assess- ment now imposed.
	Rs.	Rs.	Rs.	Rs.
Khadar	44,614	6,622	51,236	47,890
Bangar	99,252	14,885	1,14,140	1,24,095
Dabar	55,040	8,331	63,871	54,250
Kohi	22,690	3,403	26,093	24,330
Khandrat	17,705	2,626	20,131	18,650
Total	2,39,601	35,870	2,75,471	2,69,215

When imposing his assessments in 1880 the Settlement Officer departed very freely from the sanctioned revenue rates, in that he assessed the Khadar 9 per cent, the Bangar $1\frac{1}{2}$ per cent, and the Kohi 14 per cent. below rates and the Dabar 9 per cent and Khandrat 3 per cent above rates: but taking the figures as they stand it would seem that the pitch of actual assessment has been raised in the Bangar and lowered in the Dabar. That the pitch should be lowered in the Dabar is not a matter for surprise; the circle is peculiarly sensitive to drought and has passed through a time of stress. The present assessment is really not much below the pitch at which the assessment would have been in 1880, if the Settlement Officer had not assessed so much above sanctioned rates: and we must remember that the old assessment has proved high. The Bangar has been assessed higher than was originally proposed but the statistics fully warrant the enhancement: the advent of the railway has pushed up the rents to a remarkable degree in the western half of the circle, where there is most irrigation and better transport facilities.

Apparently in the whole tahsil, in spite of the increase in revenue, the pitch of the assessment has been lowered to a minute extent. Suspensions and remissions have been given so freely in this tahsil that the people have become very dilatory in their payments; the revenue collecting establishment must be energetic unless available arrears are to accumulate.

36. Progressive assessments have been ordered in accordance with the instructions conveyed in Settlement Manual, Appendix XX, paragraph 15. The following table gives the details:—

Tahsil.	Total deferred.	TO BE COLLECTED.	
		At Kharif 1914.	At Kharif 1919.
	Rs.	Rs.	Rs.
Sonepat	47,755	36,325	11,430
Delhi	17,083	13,015	4,068
Total	64,838	49,340	15,498

No progression was allowed in Ballabgarh because when the assessment report was written the instructions had not been issued and the Government orders did not direct progressive assessments. I see from the detailed village assessment statement that progression might have been allowed in about twenty villages, but the privilege is not really required.

Protective leases have been granted for thirty years in the Dabar and Kohi circles, elsewhere the term of exemption is the normal twenty years, but shorter period leases have been granted for cheap wells and old wells which had been renovated. The total number of leases amount to 1,917 involving an immediate remission of Rs. 17,689; the majority of these leases will expire by the year 1928: for fuller details Appendix IX must be consulted.

37. The proportion of the demand to be paid after the two harvests respectively, was fixed according to the circumstances of each village at the time when the revenue was announced. The *general* proportions of the assessment payable after each harvest in the various assessment circles works out as follows:—

PROPORTION OF THE DEMAND IN ANNAS PER RUPEE PAYABLE AFTER THE		Assessment Circle.
Kharif harvest.	Rabi harvest.	
Rs. a. p.	Rs. a. p.	
0 6 0	0 10 0	Ballabgarh Khadar.
0 7 0	0 9 0	Sonepat Khadar.
		Dehli Khadar and Khandrat.
		Ballabgarh Dabar and Khandrat.
0 8 0	0 8 0	Sonepat Bangar
		Delhi Bangar gardens and Mauza.
		Ballabgarh Bangar and Kohi.
0 9 6	0 6 6	Delhi Dabar.
0 10 0	0 6 0	Delhi Kohi.

The instalments have been sanctioned by Financial Commissioner's No. 4228, dated 17th September 1910, (*q.v.*). In some of the individual villages the instalments look from the statistics somewhat unsuitable, but in such cases instalments have been fixed such as the zamindars desired even after the discrepancy has been impressed upon them. If the Deputy Commissioner finds that unsuitable instalments cause trouble in collection, action can be taken under Land Revenue Act, Section 155 (1)*a*.

The dates by which instalments of land revenue and canal revenue have to be paid are:—

Tahsil.	Kharif.	Rabi.
Sonepat and Delhi	January 15th.	June 15th.
Ballabgarh	Ditto.	Ditto.

38. The cesses which are now levied are lambardari 5 per cent. and local rate $8\frac{1}{2}$ per cent. of the land revenue demand: the amount has been shown in the records against each holding so that the landowners may pay their due share. These cesses are payable in respect to holdings of which the land revenue is assigned. The proceeds of the lambardari cess are retained by the lambardars by way of inam, and the proceeds of the local rate are credited to the District Board funds.

At last settlement there were other cesses such as the dâk cess ($\frac{1}{2}$ per cent.), school cess (1 per cent.), road cess (1 per cent.) and patwar cess which varied locally from 4 per cent. to $4\frac{1}{2}$ per cent.; but these have been abolished at various times. So the cesses at last settlement amounted to 20 per cent., and the reduction to $13\frac{1}{2}$ per cent. is an appreciable boon to the landowners.

Cesses too have been paid hitherto on the owner's rate, but now that the canal dues have been consolidated and a percentage of the realisations is to be given to the lambardars and the District Board respectively, the cesses are merged in the total and the accounts are much simplified.

39. The financial results of the settlement operations can be brought together as follows:—

Detail.	Kistbandi of 1909.	New assessment.	INCREASE.	
			Actual.	Percentage.
	Rs.	Rs.	Rs.	
Land Revenue	8,52,307	11,06,803	2,54,496	30%
Cesses at $13\frac{1}{2}$ per cent.	1,13,641	1,47,574	33,933	30%
Average Canal Revenue (round) ..	3,25,000	3,25,000	...	...
Total	12,90,948	15,79,377	2,88,429	22.5%

From these figures it is clear that, as Rs. 56,000 is to be credited to the Irrigation Department as an indirect credit, the Revenue Department will profit some two lakhs of rupees annually, as soon as the protective leases lapse and the progressive assessments mature. The District Board, who receive five-eighths of the cesses, should obtain an increased income of Rs. 21,500. The total of Government dues paid by the zamindars as a whole will be increased nearly 22.5 per cent., that is by Rs. 0-3-7 per rupee, hitherto paid.

40. A re-settlement of a district is desirable when the assessment is burdensome on the people, or has become so light that Government is losing revenue to which it is entitled, or when the revenue records through neglect have become unserviceable. The latter contingency should not occur now that our mutation procedure is so firmly established, and our revenue subordinates have become more efficient. The district is now assessed at a full pitch: it is fully developed by railways: there is no likelihood of great extensions of either cultivation or irrigation in the immediate future: and it is inconceivable that there will be any further rise in prices of produce which will greatly increase the revenue-paying powers of the zamindars. In these circumstances I recommend that period of settlement be fixed for thirty years, a period which can be extended by the Government of the day if found advisable.

CHAPTER VI.—MISCELLANEOUS MATTERS.

41. The Delhi Branch of the Western Jumna Canal, which is the royal and ancient channel, is now merely one of three branches. It was found in the seventies that the canal tract in the district was badly water-logged and also that the water was required elsewhere, so a wise realignment (finished in 1886) was combined with extension of irrigation on other branches. The health of the canal tract has been thereby improved, swamp cultivation has been stopped, lands previously uncommanded have benefited by irrigation, and there is no doubt that the realignment has proved a great success, but that the extensions on other branches have been greatly felt by the Delhi zamindars. Remodelling schemes always require careful supervision, as the claims of new branches are very insidious, a fact which has been here exemplified in a marked manner by the history of the Sirsa branch which was originally opened as a kharif channel, but now carries more water in both harvests than either of the other branches. The dry sandy soil of Hissar will give a better financial result per unit of water than the clay soil of Delhi, so the unfortunate Delhi branch has suffered from exploitation; indeed it is not too much to allege that, but for the imperative necessity of giving adequate irrigation to the Delhi gardens, the district would fare very badly. This matter with cognate questions was represented in Chapter IV of the Northern Assessment Report, which with subsequent correspondence has been printed as a separate proceeding; the subject however dropped as the Financial Commissioner was unwilling to pass any orders.

At the beginning of each harvest the Superintending Engineer issues a rotational programme from which it can be seen how many days of flow are allotted to each branch in turn; the programme is departed from to meet circumstances, and a final rotational statement of the irrigation which has been given is also issued. From these it can be seen at a glance whether the Delhi branch has been allowed its one-third share of the running time. The Deputy Commissioner should examine these statements with care, and make strenuous objections if there is statistical evidence of any continued poaching.

The most recent notification of the rates to be charged for water is Punjab Government Notification No. 0250 R. I, dated 24th August, 1910, which is reprinted as Appendix IV to this report. In round figures the canal income from this district averages $3\frac{1}{4}$ lakhs of rupees, which will now be further supplemented by Rs. 56,000 as an indirect credit of a share of the fixed land revenue.

42. The Agra Canal commands at present in this district only about 1,000 acres, of which half are irrigated in each year, but a minor extension to Mauza Ladiapur is under contemplation. Some high-lying villages of the Bangar no doubt profit somewhat by the percolation, but the canal is by no means a blessing to this district, as since its construction the neighbouring Khadar villages have become troubled with *shor*, and no improvement in the shape of *bands* can be made near Badarpur without protracted consideration of possible damage to the canal banks.

The most recent orders as to canal charges are set forth in Punjab Government Notification No. 544 R. I, dated 1st April 1910, which is reprinted as Appendix V to this report.

43. At the time of writing the juridical boundary with the Meerut and Bolandshahr Districts of the United Provinces varies according to the position of the deep stream, but the custom as to ownership of land varies. In some villages the vagaries of the river do not affect proprietary rights and in others they do: the customs should be governed by the entries in the village *wajib-ul-arz*, but such entries are not always reliable because they are occasionally disregarded in practice, and are occasionally in conflict with the entries in the records of the opposite village.

The question of a fixed riverain boundary with the United Provinces is one which affects more districts than Delhi, and it was taken up some years ago, but negotiations fell through as the United Provinces Government was not prepared to recognise the necessity for action. (See Punjab Government Revenue Proceedings for *May 1904* and *June 1905*). Emboldened by the precedent of the Riverain Boundaries Act which has brought contentment to so many riverain villages in the Province, the Punjab Government have again approached the United Provinces Government with a view to a reconsideration of its decision. The senior Revenue officials of the two Provinces have met in conference with the result that a preliminary investigation is to be made shortly, and there seems every prospect of a satisfactory settlement being made. The correspondence on the subject is to be found in the Punjab Government Revenue Proceeding No. 421 of June 1909. If a fixed boundary along the Jumna is accepted, the demarcation will give a most suitable finish to the revenue settlements of the three districts Karnal, Delhi and Gurgaon.

44. There are six species of assessments concerning which the revenue staff have required instructions.
- Miscellaneous Special Assessments.

The most important is the method by which the fluctuating assessments in the Delhi Dabar are to be determined.

Fluctuating Assessment Rules.

The necessary rules, which have been sanctioned by Settlement Commissioner's No. 1946, dated 6th June 1910, are recorded in Appendix VI. Briefly the system entails a crop inspection conducted with special care to ascertain the areas of the various crops harvested: the crops themselves are separated into three classes and differential rates for each class of crop are fixed according as the field in question has received irrigation or not; "irrigation" is here used in the sense of either artificial irrigation from a well or the natural irrigation of submersion. By these means the State revenue which each cultivator is to pay is ascertained, and the revenue can be collected by the usual procedure. The rules have been kept as simple as possible and there is no reason why the system should not be worked successfully, so long as revenue officers do their duty.

The next important matter is the arrangement by which alluvion is to be assessed and the revenue of land diluviated remitted. The rules in question were sanctioned by Financial Commissioner's No. 6110, dated 8th December 1909, and are embodied in Appendix VII to this report. Hitherto a similar system had been in force but there were no detailed rules on the subject. The principal change made is the recording of only two classes of land instead of three; the rules themselves are quite simple and are well understood by the revenue subordinates.

Alluvion and Diluvion Rules.

Experience has shown that in the past a few villages, notably in the Ballabgarh Khadar where the line of the Agra Canal has caused an interruption to the natural drainage, have deteriorated through the appearance of shor. This evil has made itself apparent in patches all over the district at various times, and only requires fiscal attention when it assumes serious proportions in individual villages. Hitherto villages have been allowed to drift into a condition which has been officially termed "distressed" and they have been placed on a roster for quadrennial assessments, but not until the deterioration had become conspicuous. New rules which were sanctioned by Punjab Government (Revenue and Agriculture-Revenue) No. 2906-S, dated 2nd September 1909, are reprinted as Appendix VIII to this report, the principle enforced is that at the quadrennial attestation the Tahsildar is to report if any action is necessary and the Collector is empowered to reduce the revenue of the village in proportion to the deterioration. Besides the shor ridden villages a few others were classed as distressed for other reasons, but the revenue of these has been put on a proper footing either by the introduction of a fluctuating assessment or by assessment at a pitch which is not likely to prove so severe.

Shor Rules.

During the course of Settlement special rules issued (*vide* Financial Commissioner's No. 4767, dated 14th September 1909) for the revision of land revenue on wells which may go out of use. The rules in question have however been considered, and rightly considered, too elaborate, and have been cancelled (*vide* Financial Commissioner's No. 3272, dated 14th July 1910). It is intended to elaborate paragraph 441 of the Settlement Manual so as to provide a procedure by which its provisions can be enforced, but for the present there is transition stage during which the rule is in abeyance. The remission work will be very simple in this district as the *abiana* payable by the owners of each well is entered in the records. The Tahsildar consequently will only have to ascertain that the conditions for remission have been fulfilled, and will not have to estimate the amount of the remission.

But in Mauza Kami and Mauza Delhi the revenue has been distributed according to the *chahi* area and no specific *abiana* has been placed on the well cylinders, so in these two villages a little more trouble may be entailed.

The system under which *kankar* can be obtained and the royalty due to Government (*vide* Standing Order No. 42) assessed, has been found to be faulty. A new set of rules has been drafted but as the matter is pending with a view to uniform rules for the Delhi Division being issued, it is not possible to print the sanctioned rules with this report.

The following rules have been recommended in Settlement Officer's No. 70, dated 17th June 1910, to facilitate the collection of canal revenue, but at the time of writing have not received the sanction of higher authority.

Rules I and II have already been introduced by Settlement Commissioner's No. 895, dated 11th March 1907, and are working satisfactorily and the remaining rules have been recommended for the Gurgaon District also, according to paragraph 66 of the Settlement Report of that district.

- I. The Deputy Commissioner will initially supply the Executive Engineer of the Irrigation Department with a *hasia* containing entries of the first five columns of the *hasia* girdawari.
- II. After each girdawari a list of changes in ownership and occupancy signed by the Field Kanungo will be sent to the Canal Zilladar concerned by the Revenue Patwari, so that the Irrigation Department records may be kept up to date.
- III. The Executive Engineer of the Irrigation Department will arrange for the Canal *khataunis* to be sent direct to the Tahsildar concerned by December 1, and May 15, reporting to the Deputy Commissioner that this duty has been performed.
- IV. The canal *khataunis* will be prepared by the Canal patwaris, *pattiwar*, so that the dues to be collected by each lambardar may be known: if the *khataunis* received are not sufficiently clear for this purpose the revenue patwari will make out a fresh *dhāl bāchh*.
- V. The lambardars will pay the canal revenue into the tahsil by February 1, and June 30, at the latest.

45. The revision of *mafis* in respect to their tenure and system of record has been one of the most important works which have been carried out. Settlement Officer's No. 243, dated 31st May 1910, deals with the subject in detail, but, as that letter was submitted so recently, of course orders have not yet been received.

Paragraphs 266 *et seq.* of the 1880 Settlement report deal at some length with the revision proceedings of that time, and with miscellaneous matters in connection with the *mafis*. The table in paragraph 273 shows how many *mafis* then existed and that the aggregate assigned revenue was Rs. 53,189.

The *mafis* of the district are very intricate: the method of record of *mafi* rights has been unsatisfactory: the files relating to *mafis* have not been stored on a proper system and no one has really ever understood properly the miscellaneous assignments which, as they exist in this district, can only be described as revenue freaks. The chief duties which have been performed in this respect are:—

- (1) In every case where the revenue of any area has been found to be enjoyed by any one except the State, a file has been compiled and the authority (if any) for the assignment recorded in the remarks column of the *jamabandi*; any conditions which may appertain to the *mafi* have been recorded also. Where valid authority was not forthcoming or the conditions of the assignment had been broken, the case has been reported for resumption or other orders.
- (2) The rights of *biswadari* or occupancy held by persons, who happened to be also assignees of the land revenue, have been carefully examined, and entries in the record have been corrected by means of the legal mutation procedure.
- (3) Arrangements have been made for the transfer of all vernacular files relating to assignments from the judicial record room to the revenue record room: on their arrival there the files of small *mafis* (which are due to the sub-division of land) are being attached to the parent *mafi* file, so that all information on the subject may be easily obtainable.
- (4) Similarly the files in the English office which relate to *mafis* are being examined and papers which relate to each parent *mafi* are being brought on to one file.
- (5) In accordance with the Settlement Officer's No. 243, dated 31st May 1910, paragraph 11, new *mafi* registers have been prepared *tahsilwar* in both English and Vernacular. The English copy is filed in the English office: one vernacular copy is in the charge of the *sadr wasil baki nawis*, one in the charge of the *sadr kanungo* and there is one copy in each *tahsil* concerned. The form of the register is an adaptation of that prescribed in the Standing Orders and room is provided for subsequent mutations.

The registers in question are—

- (1) Perpetual *mafis* granted before 1857 which are alienable.
- (2) Perpetual *mafis* granted after 1857 which are not alienable.
- (3) Quasi-perpetual *mafis* which are held during the pleasure of Government.
- (4) Conditional *mafis* which are granted subject to the assigned revenue being devoted to the upkeep of a religious institution.
- (5) Conditional *mafis* which are granted subject to the land being kept under trees.
- (6) Temporary *mafis* which should be resumed as they lapse.

As a perusal of the Settlement Officer's letter already quoted will show, the revision of the *mafis* has been carried out with much patience and care. I have no doubt that the future administration will be much easier than heretofore, but I would strongly urge the responsible officials to remember that it is in the careful upkeep of the revenue record that success in *mafi* administration lies: the *mafi* registers are merely lists maintained for the compilation of statistics.

1	2	3	4	5	6	7	8	9	10	11	12	13
ASSIGNMENTS GRANTED.	TAHSIL SONEPAT.			TAHSIL DELHI.			TAHSIL BALLABGARH.			DISTRICT.		
	Number of mafs shown in the register.	Area of which the land revenue is assigned in acres.	Value in rupees.	Number of mafs shown in the register.	Area of which the land revenue is assigned in acres.	Value in rupees.	Number of mafs shown in the register.	Area of which the land revenue is assigned in acres.	Value in rupees.	Number of mafs shown in the register.	Area of which the land revenue is assigned in acres.	Value in rupees.
1 In perpetuity and capable of alienation ...	18	1,208	2,918	611	7,474	24,160	58	4,388	5,383	687	13,070	32,461
2 In perpetuity but inalienable ...	3	614	628	10	93	602	10	7,435	11,916	23	8,142	13,146
3. During the pleasure of Government ...	1	4	6	...	...	...	12	307	316	13	311	322
4. Conditionally during the upkeep of institutions.	5	93	177	27	296	511	95	777	3,465	127	1,166	4,153
5. Conditionally during the upkeep of trees ...	2	11	24	2	26	309	5	23	54	9	60	387
6. Temporarily for life or lives or term of Settlement	...	...	...	4	45	1,111	16	92	139	20	137	1,250
TOTAL ...	29	1,930	3,753	654	7,934	26,693	196	13,022	21,273	879	22,886	51,719

The statistics concerning the assignments of the district are conveniently epitomised in the subjoined statement:—

Thus the total assignments amount to Rs. 51,719, which is 4·7 per cent. the total land revenue demand. Recommendation has been made to Government that half the land revenue for the term of settlement of 128 acres of suburban gardens should be assigned : the total amount of such assignments would be Rs. 1,412 : if these proposals are sanctioned the Deputy Commissioner should have the details incorporated in Register No. VI.

46. At the 1880 settlement Mr. Maconachie compiled statistics of each village in eight bulky volumes and added thereto the remarks of the Settlement Superintendent, concluding with Mr. Wood's notes and his own order of assessment. The maps of the villages were bound up in a separate volume. These books, repaired and rebound, have been restored to the District Office.

The inspection note-books of this settlement consist of 18 volumes foolscap size. They contain six full pages for each village, as follows :— (1) Index map, (2) and (3) statistics, (4) and (5) inspection notes of the Settlement Officers in 1880 and 1910, (6) the new assessment order in detail. The inclusion of the more important statistics and the remarks of the Settlement Officer of 1880 render these volumes complete in themselves : the villages are entered in alphabetical order, which is a convenience, and the assessment circles are kept distinct. The Deputy Commissioner will doubtless find these books of great use if he wants to know any detail about any village ; the volumes are filed in the District Office.

47. To facilitate the administration of the land revenue a scheme has been drawn up in accordance with Standing Order No. 30, part G., the important features of which are reprinted in Appendix X to this report.

Briefly, abstract village note-books of an approved pattern have been prepared for each assessment circle in which abbreviated statistics of each village are to be entered after each harvest : from the entries it is possible to see at a glance how the village has been faring, and how the incidences of the harvest compares with the normal. The incidences shown are those of the *barani* unit croppings which give a more valuable guide than all round crop incidences. For each assessment circle at least one danger rate has been fixed, but in the Ballabgarh tahsil, where the circles are not so homogeneous, two danger rates have been found necessary : the danger rate is double the normal incidence of the tract.

The villages throughout have been classified as secure, insecure and very insecure according to their circumstances, the general tale being—

Detail.	Sonepat.	Delhi.	Ballabgarh.	Total.
Secure	207	106	51	364
Insecure	31	27	57	115
Very insecure	3	132	158	293
Total ...	241	265	266	772

These statistics indicate unmistakeably the relative fiscal attention which each tahsil will require.

The Deputy Commissioner has been supplied with a still more abbreviated abstract from the note-books for his personal use, to which he can refer when

dealing with suspensions and collections. In Appendix X will be found a few words of advice and, as these are tendered after experience of the revenue administration during eight harvests of all kinds, I can feel sure that future administration will be facilitated if the instructions are carried out and the advice followed.

48. This subject has been dealt with in accordance with the instructions in Settlement Manual, paragraph 576, and the orders will be found in the correspondence ending with Punjab Government letter No. 266 (Revenue), dated 29th September 1909.

The former patwari establishment was found to be adequate, but the distribution between the Sonapat and Delhi tahsils was not satisfactory: the defect has been remedied by the transfer of ten patwaris from the latter tahsil to the former, so that the work is now fairly divided: these transfers have caused of course a complete revision of the patwaris' circles. In the Ballabgarh tahsil the circles have had to be revised also, chiefly to confine a single patwari charge within one assessment circle. To meet the increase in patwaris in Sonapat the kanungo establishment has been increased by one: still the number of kanungos could not be reduced in the Delhi tahsil for various reasons, the chief one being the imposition of a fluctuating assessment in the Dabar over an extended area.

The following figures show the establishments as they will eventually stand:—

Tahsil.	Number of kanungos.	NUMBER OF PATWARIS.				Number of naib patwaris	REMARKS REGARDING KANUNGOS' CHARGES.
		1st grade.	2nd grade.	3rd grade.	Total.		
Sonapat	5	24	46	23	93	5	Khadar 2 Bangar 3
Delhi	4	18	36	18	72	4	Khadar and Khandrat 1 Bangar 1/2 1 Dabar 1/2 1 Bangar 1/2, Dabar 1/2 and Kohi. 1
Ballabgarh	3	15	30	15	60	3	Khadar and Bangar 2 Dabar, Kohi and Khandrat. 1
Total District ...	12	57	112	56	225	12	

No patwaris' circle is shared between two assessment circles and the kanungo circles have been formed so as to confine the kanungos as much as possible to one or more complete assessment circles.

The pay of the patwaris has been fixed at Rs. 15, Rs. 13 and Rs. 10 for the three grades respectively. The naib patwaris, who amount to one per kanungo, will receive Rs. 8 per mensem.

49. In paragraph 297 *et seq.* of the 1880 Settlement Report there is a clear account of how the *zails* were constituted in 1880. For the whole district

Zaildars.

as many as 44 *zaildars* were appointed, but subsequent experience led to the conclusion that the district would be better served if the number were reduced, and further that a graded system of *inams* would be more suitable than the system by which *zaildars* received as *inams* 1 per cent. of the revenue of their *zails*. Orders to this effect were passed in Financial Commissioner's No. 412, dated 26th January 1910, and the sanctioned scale is now as follows:—

Grade.						Number of <i>zails</i> .	Inam.	Total.
							Rs.	Rs.
1st grade	...	...	...	...	...	7	350	2,450
2nd grade	...	...	...	...	...	14	300	4,200
3rd grade	...	...	...	...	...	6	250	1,500
Total						27	...	8,150

Of the 27 *zaildars* the allotments are Tahsil Sonapat 10, Tahsil Delhi 9, and Tahsil Ballabgarh 8, and the number vary from two to four per rural *thana*: in the recasting of the *zails* endeavour was made to disturb the former arrangements as little as possible, the villages of a reduced *zail* being divided amongst the neighbouring surviving *zails* according to the tribe or affinity of the landowners: the *zaildars* whose *zails* came perforce under reduction received suitable personal *inams* as compensation. The *tahsilwar* *zail* books prescribed by Standing Order No. 21 have been prepared, and the *zaildars* themselves have been supplied with *zail* books which contain extracts appertaining to their *zails*.

As indicated in paragraphs 308 to 310 of the 1880 Settlement Report, *ala* *lambardars* were originally appointed in all villages with three or more *lambardars*, but of recent years it has become recognised throughout the province that the appointment does not entail any extra efficiency, and that the remuneration of one per cent. of the land revenue bestowed in this fashion is not economic. Orders were passed in Financial Commissioner's No. 3824, dated 11th June 1906, that vacancies amongst *ala* *lambardars* were not to be filled up.

The reduction in the *zaildars* and the gradual abolition of the *ala* *lambardars* is undoubtedly a wise measure, as though the incumbents for the most part received *inams* which were adequate in view of the services rendered, the general provision for *inams* was being frittered away to no good purpose. By Financial Commissioner's No. 412, dated 26th January 1910, thirty-two *inamdars* drawing *inams* of Rs. 80 each have been sanctioned and appointments have been duly made. There is no specific allotment for each *tahsil*, nor need there be one *inamdar* in each *zail*, but in making the initial appointments the claims of each *zail* and each *tahsil* have been considered, and the various agricultural tribes too have received due recognition. In some of the smaller *zails* an *inamdar* has been considered unnecessary, and thus in the larger *zails* often two and more have been appointed. Initially the *inams* happen to have been allotted—

Sonapat	...	...	...	...	...	11
Delhi	...	...	...	...	...	11
Ballabgarh	...	...	...	...	...	10

and the tribes of the inamdars are as follows:—

Jat	...	...	...	...	...	17
Gujar	...	...	...	...	...	8
Brahman	...	...	...	...	...	3
Ahir	...	...	...	...	...	1
Muhammadian	...	...	...	...	...	6
Others	...	...	...	...	...	2

but these statistics are merely of temporary interest.

It has been ruled that the zaildars should be graded for the district as a whole and not by tahsils, so a seniority list has been prepared. The order of precedence has been arranged so as to give initially each tahsil a fair share of the *inams* and to recognise the claims of individuals of long service or efficiency to the higher rewards. New zaildars have to be appointed at first in the lowest grade (*vide* Land Revenue Rule 12), and the Deputy Commissioner will be well advised if grade promotions are made strictly by seniority according to the list except in cases of flagrant demerit.

The system by which zaildars (there were no inamdars) have been appointed hitherto has not been a satisfactory one: the custom has been for a file of appointment to be drawn up, a file which began with individual applications: and, an application being regarded as a *sine qua non*, the number of applications has engendered confusion and futile litigation. The trouble is that, as there are few really prominent men of substance, the district authorities can seldom appoint off-hand a man whose qualification is pre-eminent. As a remedial measure a list of candidates for the appointment of inamdar and zaildar, limited to five names, has been prepared in each *zail*: this list contains the names of men who have been chosen at leisure for their local influence and attitude towards the administration, and will form a useful nucleus from which the Deputy Commissioner can select, at the same time considering any applications which may be lodged. Vacancies in the list will be filled up once a year by the Deputy Commissioner on the report of the Revenue Assistant and Superintendent of Police. It is hoped that this system will be found helpful in making future appointments, but of course the system is not binding on future Deputy Commissioners as it is merely a principle which the present district officers have accepted as likely to meet with success.

50. In the correspondence ending with Financial Commissioner's No. 5891, dated 5th November 1908, will be found the directions as to the reduction of lambardars. When lambardars were first appointed far too many appointments were created so that the lambardari files have been needlessly increased. It has been ruled that reductions should be made, when possible in view of the history of the village, so that each lambardar should be responsible for a reasonable amount of revenue. In conformity with the orders a register has been drawn up for each tahsil on the lines indicated in Standing Order No. 20, paragraph 5, from which the Deputy Commissioner can see how reductions can be equitably made as opportunity arises. Vernacular copies of this register have been made over to the tahsils concerned.

At the beginning of the settlement there were 2,261 lambardars, since when three new posts of lambardars owing to increases in revenue have been established, 70 lambardaris have been reduced (a few by transfer of the villages to the United Provinces), so 2,194 lambardars remain. If reductions are made to the extent which the scheme advocates, there should finally be not more than 1,759 lambardars in the district.

51. By the term Crown lands is meant that area which is entered in the records as the property of *Sarkar Daulatmadar*, but which is not handed over to any special State Department for administration: the Deputy Commis-

sioner administers the Crown lands outside Mauza Delhi, but shares with the Municipal Committee the administration of those inside. This large estate became the property of Government through escheat at the time of the mutiny and consists of whole villages, shares of villages and definite plots mainly in the Ballabgarh tahsil and to the south of Delhi. (See Settlement Report, paragraph 314 *et seq.*). The Crown tenants are generally tenants-at-will, but there are several holdings held by occupancy tenants and hitherto rents have been usually expressed in terms of the land revenue with a certain number of *chakota* rents also. Some of the waste lands near Delhi have been hitherto annually let by auction.

At various times properties have been sold under the orders of Government either by auction or other means, so that by 1906 the total area denominated as Crown lands amounted to 11,137 acres of cultivation and 5,626 acres of waste. As the partly files in the district and higher offices indicate, the administration of this valuable property was not proceeding smoothly, and Government in the Punjab Government letter No. 31, dated 31st January 1906, decided that all Crown lands should be sold by the Settlement Officer whenever possible without loss to Government and injustice to the zamindars. I may perhaps mention that there is really no reason why Crown lands should be difficult to administer: for, once rights are properly recorded, once the revenue is fixed and once the rents are expressed in terms of the land revenue, Crown lands have the happy knack of running themselves. This must be fairly obvious when we remember that land abandoned by one tenant is forthwith cultivated by another on the spot, under proper arrangements the lambardars collect the State dues, and in reality the Crown property is just as if it were in the position of ordinary land whose revenue (*i.e.*, the rent made up of revenue, cesses and *malikana*) is at a higher pitch. The trouble arose partly through the doubtful position of the tenants, but mainly through misguided zeal in the direction of tampering with the rents during the period of settlement.

Any one who has digested the voluminous correspondence must realise that now-a-days sale of Crown lands can be effected by a simple process. The sale price which Government will accept is thirty times the *malikana*, which is, for purposes of sale only, fixed at two, six, or twelve annas per rupee of land revenue, according as the purchaser is already an occupancy tenant under section 5 (1) (a), section 5 (1) (b), (c), (d), or section 6 or 8 of the Tenancy Act: if the purchaser has no rights, the *malikana* is assumed to be sixteen annas per rupee of land revenue. With the price thus fixed the purchasers are called on to pay earnest money to the extent of 10 per cent. of the full price, and the balance with interest at $6\frac{1}{4}$ per cent. is recovered in equated half-yearly instalments (not more than twenty) just like a *takuri* loan. The purchasers on payment of the earnest money are shown in the record as full owners, but the holdings are shown as encumbered with a collateral mortgage to the extent of the balance due to the State.

On these principles (with a few refinements which need not be detailed here), an area of 8,819 acres cultivated and 5,308 acres waste has now been sold to the zamindars. The instalment registers have been lodged in the tahsils so it is now incumbent on the Tahsildar of the tahsil concerned to take steps to collect the instalments as they fall due, a matter in which success can only be obtained by energetic action.

The remaining Crown lands which either could not be sold or were not offered for sale, will be administered by the Deputy Commissioner or Municipal Committee as the case may be. Suitable rents expressed in terms of the land revenue have been fixed, the entries regarding rights have been carefully made, and so, provided that there is no unnecessary meddling with rents, there is not the least reason why there should be in future any difficulties of administration.

The estate of Rakh Shikargah Tilori in the Ballabgarh tahsil is still a Government estate: it was being colonised but all the uncultivated land has been transferred to the United Provinces by diluvion. The tenants are now paying equitable rents and no special action is required until the boundary is

Rakh Shikargah Tilori.

again changed. The circumstances of the village will need examination, at all events when a fixed riverain boundary is obtained: after that the whole estate can be sold at once provided no further colonisation of waste is deemed advisable.

52. In the Kohi tract and its surrounding fringe the conformation of the country lends itself to the making of embankments of conservation, works of improvement which were initiated and constructed with great care under the guidance of Mr. Maconachie, the Settlement Officer in 1880. He drew up a scheme of *bands* for the guidance of his successors, but unfortunately the subject did not receive proper attention. In this settlement a fresh start has been made: four new *bands* have been made at a cost of some Rs. 6,000 and several *bands* which were either incomplete or breached have been put into a serviceable condition. The matter is of such importance that it has been the subject of a separate printed report which deals comprehensively with the management, programme of works, and the financial situation. There are in the District Board office plenty of copies of this report which can be perused for details so I will here only briefly outline the salient points.

The existing *bands* are now to be managed by the District Board under the provisions of the Minor Canals Act. To simplify the executive management a set of rules has been drawn up, in which are detailed the duties of the various officials from the Tahsildar down to the humble chowkidar: and, to prevent excuse for future inaction, a list has been made of *bands* which require immediate attention and a list of projects with advice as to priority of selection has been compiled. To render the financial position secure estimates of probable expenditure have been made and rates of *abiana* have been fixed, which will in no way press on the zamindars, but which in normal years should both cover the anticipated expenditure and provide a comfortable surplus for further *band* making. The rates per acre cropped, which have been sanctioned by Punjab Government Notification (R. and A. I) No. 114—119, dated 8th August 1910, are:—

		Per acre.
		Rs. a. p.
Wheat alone or mixed with other grain	...	1 8 0
Other crops	...	1 0 0

The method of assessment is to be found in the executive rules alluded to above.

The importance of the existing *bands* as an agricultural improvement can be best explained by the quotation of a few rough figures. The capital sunk amounts to Rs. 78,000; through unsatisfactory management the annual expenditure has exceeded the income: about 3,000 acres should be submerged in each year if the supervision is careful: the enhanced outturn should be not less than 20,000 maunds of grain, and if we include the benefits which accrue from percolation both to actual crops and to the wells the *bands* must create wealth at a modest computation to an extent of not less than half a lakh of rupees per annum.

The charge of the *bands* is one of the most important sections of the district administration: efficiency can be maintained only if the Deputy Commissioner takes a personal interest, and so I lay special stress on the subject. The correspondence in which full information will be found ends with Punjab Government letter No. 128, dated 17th August 1910.

The same correspondence shows that the rate of *abiana* for irrigation from the Najafgarh Jhil drain from Kharif 1910 is to be Re. 1 per acre for all crops matured. The *abiana* collected is credited to land revenue, but, it is negligible in amount as the area irrigated is so small.

53. In Chapter I of the 1880 Settlement Report Mr. Maconachie has recorded a detailed description of the natural drainage of the district. South of the Delhi city the drainage is of no great importance, as in that tract the

country is benefited by the holding up of as much water as possible rather than by arranging to facilitate its passage. Just as the *band* work is so important in the south, so is the clearance of the country drains an important work in the northern half of the district. The most marked work which has been carried out in this connection was the realignment of the Western Jumna Canal in the eighties, a work which was accompanied by the clearance of the local drains where both rain and canal water had caused unhealthy and deleterious swamping. Since those days the drains have been left to take care of themselves, probably because during the dry cycle through which we have passed floods did not attain conspicuous proportions: anyhow the result is that the drains have become blocked either through the zamindars' cultivation or from natural silt. The fact was brought home to us in 1908, when the monsoon was heavy, by the floods which were extensive in various localities: it may be remembered that the Sonapat town and the adjacent villages in the cold weather of 1908-09 suffered cruelly from malaria, and that special remissions of revenue had to be given in Mauza Dobaitha and Mauza Sahibabad.

The matter has been examined with the result that the Deputy Commissioner has been supplied with a note on the subject: the "clearance of drains" files have been unearthed and consolidated in the District Board Office, and the responsibility for the work has been fixed on the District Board, who will work in future in conjunction with the Irrigation Department. By the scheme evolved the main drains will be cleared first and the subsidiary drains later according as urgency demands and funds permit.

54. Settlement Manual, paragraph 552, directs that the Settlement Officer should revise the Gazetteer. Revision has accordingly been made, and the draft gazetteer is left in the district office to be dealt with later. A new Census will take place next year so it seems inadvisable to issue a gazetteer of which Chapter I C at all events would be at once considerably out of date: moreover the proof requires careful correction which I could not undertake whilst away on leave, unless permission was given for the gazetteer to be printed in England. In the circumstances I propose to put the finishing touches to the gazetteer on my return from leave, and to arrange for its issue in 1912 if its Census statistics are ready by then.

55. Since the Settlement Report of 1880 is silent on this point, a brief note must be made to show how records destroyed during the mutiny were replaced.

The records in question seem to have been prepared in accordance with the orders conveyed in Punjab Government letter No. 307, dated 19th April 1858. At the time of the 1872 Settlement, the question arose as to what was the legal status of this record, a reference to Government eliciting the reply found in Punjab Government letter No. 2045, dated 21st December 1874. The records described below as the "1858-59 records" are the ones which were prepared in this district rather later and which are loosely spoken of as the 1864 *Settlement*: the term *Settlement* however is a misnomer since there was no settlement made: destroyed records were replaced by a fresh survey and compilation of *jamabandis* with a view to preventing disputes and collecting the revenue which had been previously assessed. The correspondence shows that the Settlement Officer of 1872 was directed to accept these records as a basis for revision.

The Financial Commissioner in forwarding the Government orders to the Commissioner, under his No. 51, dated 4th January 1875, wrote: "The general result of the reference to Government is, that although the record of 1858-59 has not the force of a record of a regular settlement sanctioned by the local Government for the purposes of the Punjab Tenancy Act, yet that, as it is the best evidence procurable of the nature of the tenures, it should not be lightly set aside. But the person who seeks to correct the record should be called upon either to prove his right in a suit or should procure the consent of other parties."

to the alteration he proposes to make." Attached to the record of each village is a file showing how the record was made, the attestations of the revenue officers and the order of the Collector consigning it to the record room as the standing record of the village concerned. Since the documents were officially prepared under the due authority of Government there can be no reason for not considering such records as having been prepared in accordance with the law for the time being in force, or for excluding them from the privilege granted by section 44 of Act XVII of 1857.

56. Settlement Manual, paragraph 550, lays down that in the settlement report prominent notice should be drawn to points in the revenue administration which require special attention on the part of revenue officers. Before detailing these I must however, allude to the general question of district administration. At settlement time all revenue details are tested on the settlement and any one, who has read this chapter and the various reports which have been submitted from this district of late, must have been struck by the fact that after so many years of settled rule an undue number of faults have come to light. To give point to this statement, I would recapitulate a few of the more important: the confusion in the *nazul* affairs which has required the services of a special establishment for its unravelling: the unsatisfactory nature of the Crown lands administration: the unpractical *abiana* system and the neglect of *bands*: the neglect of the drainage lines: the exploitation of the Delhi branch water supply: the confusion as to the rights of *mafidars*: the superfluity of *zaildars* and *lambardars*.

I write with no desire to belittle the past District Officers: far from it: their very names are a guarantee that the best possible has been done. My object is to place on official record the fact, that so long as the direct administration of the city and the district is in the hands of one officer, the latter must go to the wall.

Of recent years the work in connection with the city has increased enormously owing to its expansion, railway extensions, additions to the garrison, archæological activity, frequent visits of high officials, etc., so a time has arrived when the Government must really recognise that the joint charge of the city and district is too much for one officer with the assistance at present given to him. In other parts of India smaller cities than Delhi, *e. g.*, Allahabad and Cawnpore, have separate administrative officers of several years standing for municipal work, the Collector merely supervising: so some reorganisation must be carried out before long, unless Government is willing that the administration of the rural district shall be inefficient.

The heads of administration to which I would draw prominent attention are as follows: the entry in brackets indicates who is the subordinate immediately responsible to the Deputy Commissioner:—

- (1) Assessment of fluctuating revenue in the Delhi Dabar (Revenue Assistant).
- (2) Scheme for suspension, etc., of land revenue (Revenue Assistant).
- (3) Band Administration (Secretary, District Board).
- (4) Control of the Kakranla Regulator (Secretary, District Board).
- (5) Repairs to feeder roads and clearance of drainage lines (Secretary, District Board).
- (6) Collections of instalments of the price of Crown lands sold (Tahsildar, Ballabgarh and, to a minor extent, Delhi).
- (7) Administration of Nazul lands (Secretary, Municipal Committee and Revenue Assistant).
- (8) Maintenance of a full supply of canal water in the Delhi Branch.

No Dastur-ul-amal has been issued because all revenue orders have been issued to the patwaris as they have been received and all special instructions in amplifications of published orders are printed appendices to this report.

57. When the forecast was made it was anticipated that the settlement operations would last four years, and that the expenditure would be 5½ lakhs of rupees. The work has been finished comfortably within the prescribed time at a cost of only 4½ lakhs of rupees: the actual figures are tabulated in Appendix XI. The estimated enhancement in land revenue was Rs. 1,25,000, but the actual increase amounts to Rs. 2,52,422: so the cost of settlement will be recovered by two years' full collection. In view of this fact and since the settlement, in which there has been a substantial saving in the expected cost, has been entirely finished within the appointed time, I trust that Government will be satisfied with the settlement operations and their result.

In accordance with the orders in Settlement Manual, Appendix XIX, the amount recoverable from the jagirdars as their share of the costs of the assessment, has been computed. It amounts to only Rs. 6,340 as noted in Financial Commissioner's No. 4861, dated 24th October 1910.

58. The subordinate revenue establishment of kanungos and patwaris found in the district when the settlement began, were not up to the standard which present-day settlements can accept. Out of the sixteen kanungos as many as six had to be removed, and of the patwaris no less than 83 or 87 per cent. disappeared from the scene through resignation, retirement, or dismissal. Several of the latter had been patwaris at the last settlement, the *doyen* being an old man of forty years' service (he really might have stepped out of a Curry and Rice picture), who kept his records in Hindi, as he could not write or decipher Urdu. The older men received the retiring *inams* which are admissible under the rules and in many cases I was able to employ descendants even to the third generation. The special settlement staff amounted to 65 kanungos: a temporary establishment totalling 141 settlement patwaris, including men under training, was employed at one time or another. The kanungos had mostly come on from other settlements, as had a few of the patwaris, but as a general rule the latter were local youths who were accepted as candidates. The permanent establishment has been brought up to full strength by the appointment of such settlement kanungos and patwaris as are residents of this locality: possibly a few more men should have been weeded out, but at all events the district authorities have now an efficient subordinate revenue service. Of the kanungos I should mention Mohammad Akbar, Mitha Mal, Faqir Chand and Elahi Bakhsh for the excellence of their field work and Alam Ali who slaved at the *masfi* revision files.

During the operations plague was rife every spring in one part of the district or another: the men stuck bravely to their work and their conduct in this and other respects was admirable. The casualty list was a small one, amounting to one kanungo and eight patwaris of whom only two died of plague.

The recognised settlement training was given to—

Assistant Commissioners	...	...	...	...	6
E. A. C. candidates	...	...	...	...	8
Tahsildar candidates	...	...	...	...	8
Naib Tahsildar candidates	...	...	...	...	10
Kanungo candidates	...	...	...	...	12

and also to 21 officials of Native States, of whom nineteen came from Tonk (Rajputana).

59. The Extra Assistant Settlement Officer was Chaudhri Mohammad Din who came from Dera Ismail Khan, where he had been employed latterly in a similar capacity: for two months in 1908 he acted also as Settlement Officer whilst I was on leave. On him fell the burden of the partition work and the revision of records and he also gave me great assistance in the distribution of revenue

over villages: of this officer I cannot write too appreciatively since his work has been performed with great care and complete integrity. He is now Settlement Officer in the Maler Kotla State, an appointment which I have no doubt is only a stepping stone to further advancement.

Of the Tahsildars, Munshi Kamal Din and Pir Gulab Shah are Government servants of long service who both did good work: their experience in record work lightened greatly the work of supervision. The former is now on the eve of retirement and the latter has been rewarded by being accepted as an Extra Assistant Commissioner candidate and by employment as a Divisional Tahsildar. The Tahsildar who was in charge of the Ballabgarh tahsil throughout was Pandit Mana Ram; he somewhat unexpectedly did extremely well, a fact which was due to his first making sure that he understood orders correctly and then carrying them out implicitly.

Of the Naib Tahsildars, Sardar Massu Khan, Sardar Hazara Singh, Lala Kahn Chand and Munshi Mahbub Ali enjoyed a special reputation for honesty, and their work on the whole was perhaps better than that of others. Pandit Raja Ram finished off his circle creditably and undertook successfully the arduous work of arranging to sell the Crown lands. I am also much indebted to Lala Vishnu Sarup and Lala Kishan Chand: the former, a senior Naib Tahsildar, finally attested a few villages as a Tahsildar but was mainly employed in the statistical work of assessments in which he gave me the greatest assistance; the latter was head clerk during most of the settlement and carried out his duties to my satisfaction.

My reader throughout was Munshi Sultan Ahmad whose experience in the Patiala Settlement, and capabilities, won him the appointment of Sadar Kanungo. His work throughout was most reliable and satisfactory.

In conclusion too I beg to express officially my gratitude to Mr. Humphreys and Mr. Barron (who have been the Deputy Commissioners in charge of the district whilst the settlement has been proceeding) for the cordial way in which they have always co-operated. A Settlement Officer has to bring forward for correction shortcomings in district administration, and the subordinate revenue establishments when serving under two masters are always prone to make difficulties; it is only by the tact of the Deputy Commissioner that trouble is avoided. I have been very lucky.

DELHI:
29th September 1919.

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H. C. BEADON,
Settlement Officer.

APPENDICES.

- I. Gazette Notifications relating to the Settlement
- II. Statement of Areas
- III. The Revenue Rates sanctioned by Government
- IV. Notification of Rates in force as Canal dues on the Western Jammu Canal
- V. Do do. on the Agia Canal.
- VI. Rules for framing Fluctuating Assessments
- VII. Alluvion and Diluvion Rules.
- VIII. Rules for the Administration of Land Revenue in villages affected by *shor*
- IX. Statement of Protective Leases granted in respect to Well Assessments
- X. Instructions for the up-keep of Abstract Village Note Books and Suspension and Collection of Arrears of Land Revenue.
- XI. Comparative Statement of Land Revenue
- XII. Statement of Expenditure.
- XIII. Map.

APPENDIX I.

GAZETTE NOTIFICATIONS RELATING TO THE SETTLEMENT.

Notification No. 219 Revenue and Agriculture (Revenue), dated 22nd September 1906.

Under section 49 (i) of the Panjab Land Revenue Act, 1887, it is hereby notified, with the sanction of the Governor-General in Council, that a general re-assessment of the Land Revenue of the Delhi District is about to be undertaken.

Notification No. 220 Revenue and Agriculture, Revenue, dated 22nd September 1906.

Whereas it appears to H. H. the Lieutenant-Governor that the existing records of right for the estates included in the Delhi district require special revision, the Lieutenant-Governor in exercise of the powers conferred upon him by section 32 of the Panjab Land Revenue Act, 1887, hereby directs that the records of rights of the said estates shall be especially revised.

By Gazette Notification No. 2156, dated 13th October 1906, Captain H. C. Beadon was appointed to the charge of the Settlement and re-assessment operations of the Delhi district, with effect from the afternoon of 6th October 1906.

By Gazette Notification No. 2108, dated 6th October 1906, Chaudhari Muhammad Din was appointed Extra Assistant Settlement Officer of Delhi, from the forenoon of 28th September 1906.

By Gazette Notification No. 1769, dated 25th September 1908, Chaudhari Muhammad Din was appointed to hold charge of the office of Settlement Officer during the absence of the Settlement Officer on privilege leave (two months).

APPENDIX II.

STATEMENT OF AREAS.

1	2	3	4	5
Soil	Sonepat Tahsil	Delhi Tahsil	Ballabgarh Tahsil	Delhi District
Chahi and Abi	65,656	22,236	18,397	106,289
Nahri	59,617	47,950	952	98,519
Total irrigated	125,273	60,186	19,349	204,808
Sailab	1,123	13,762	18,291	33,176
Dakar and Rausli	67,841	106,166	100,222	274,229
Bhnr	7,053	5,313	19,476	31,842
Total unirrigated	76,017	125,241	137,989	339,247
Total cultivated	201,290	185,427	157,338	44,055
Waste	87,771	87,810	91,927	67,518
Total area	289,061	273,237	249,275	11,578

APPENDIX III.

THE REVENUE RATES SANCTIONED BY GOVERNMENT.

1	2	3	4	5	6	7	8	9	10	11
Tehsil.	Assessment Circle.	Gardens.	Cultivated Soils.					Waste.		
			Chahi sown.	Nabhi recorded.	Sailab recorded.	Bhur recorded.	Barani balance recorded.	Residential.	Special.	Grazing.
Sonapat.	Khadir	...	3 0	...	2 0	1 0	1 14	...	...	...
	Bangar	...	3 8	2 8	...	1 0	2 0	...	...	...
Delhi.	Khadir	...	3 0	...	1 10	1 0	1 10	...	...	...
	Bangar	...	4 4	2 4	...	1 0	1 12	...	...	...
	Dabar	...	2 8	...	1 12	0 10	1 8	...	...	...
	Kohi	...	3 4	...	1 4	0 12	1 0	...	...	...
	Khandrat	12 0	4 4	2 4	2 8	1 0	2 0	...	...	...
	Mauza Delhi	10 0	5 8	9 8	4 0	...	3 0	5 0	4 0	1 0
Ballabgarh.	Khadir	...	3 0	...	1 8	1 0	1 5	...	...	...
	Bangar	...	3 4	2 4	...	1 0	2 0	...	...	...
	Dabar	...	3 0	...	2 0	1 2	1 11	...	...	...
	Kohi	...	3 4	...	1 4	0 12	1 0	...	...	...
	Khandrat	...	4 4	...	2 0	1 0	2 0	...	...	...

APPENDIX No. IV.

NOTIFICATION OF RATES IN FORCE AS CANAL DUES
ON THE WESTERN JUMNA CANAL.

Gazette Notification, the 24th August 1910.

No. 0250 R. I—Notification.—In exercise of the powers conferred by section 75 of the Northern India Canal and Drainage Act, No. VIII of 1873, and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to direct the publication of the following schedule of occupiers' rates which will be applicable to the Western Jumna Canal, in supersession of the schedule published in Notification No. 431-I., dated 19th February 1895.

Punjab Government Notification Nos. 1005-I., 1006-I., 1007-I., and 1008-I., dated 11th April 1899, are also hereby cancelled.

SCHEDULE OF OCCUPIERS' RATES.

Class.	Nature of Crops.	RATE PER ACRE.		Per.
		Flow	Lift.	
		Rs. a. p.	Rs. a. p.	
I	Sugarcane	9 0 0	6 0 0	Crop.
II	Rice and Waterbuts	6 8 0	4 0 0	Crop.
III	Tobacco, poppy, vegetables, gardens and orchards, drugs and spices.	5 8 0	3 8 0	Gardens and orchards per half year: the rest per crop.
IV	Cotton, indigo, and all rabi crops, except gram, masur, maize.	4 0 0	2 8 0	Crop.
V	All other kharif crops, gram and masur	2 8 0	1 8 0	Crop.
VI	Single watering before sowing between 15th June and 15th September not followed by a canal irrigated crop in the same or subsequent harvest.	1 0 0	0 8 0	Watering.
	Crops grown on the moisture of a previous crop			Crop.

APPENDIX V.

NOTIFICATION OF RATES IN FORCE AS CANAL DUES ON THE AGRA CANAL.

GAZETTE NOTIFICATION.

The 1st April 1910.

No. 544 R. I.—*Notification*—In exercise of the powers conferred by section 75 of the Northern India Canal and Drainage Act, 1873 (VIII of 1873), and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to direct that the occupier's rates published in the following schedule shall be levied in respect of lands irrigated from the Agra Canal in the Delhi and Gurgaon districts.

Punjab Irrigation Branch Notification No. 691 R. I., dated the 10th December 1907, is hereby cancelled.

Schedule of Occupier's Rates for the Agra Canal (Delhi and Gurgaon districts.)

Class	Nature of crop.	RATE PER ACRE.		Per.
		Flow.	Lift.	
		Rs. a. p.	Rs. a. p.	
I	Sugarcane	8 0 0	3 0 0	Year.
II	Rice	5 0 0	5 0 0	Crop.
III	Tobacco, poppy, vegetables, orchards, gardens, and waternute and all rabi crops except gram, linseed and peas.	5 0 0	2 8 0	Orchards and gardens per half year, the rest per crop.
IV	Gram, linseed, peas and all kharif crops other than those specified in classes I, II and III.	3 0 0	1 8 0	Crop

APPENDIX VI.

Rules for framing Fluctuating Assessments, (sanctioned in Settlement Commissioner's Letter No 1946, dated 6th June 1910).

A.—SUBSTANTIVE.

I.—The limits of the area to which these rules apply have been fixed for each village by the Settlement Officer, but may for sufficient reasons be extended by the Deputy Commissioner with the sanction of the Commissioner.

II.—The schedule of rates sanctioned for application to the acreage of matured crops in the areas to which these rules apply is as follows :—

Class.	Crop.	RATE PER ACRE.	
		Chahi and Dahri	Barani.
		Rs. a. p.	Rs. a. p.
I	Sugarcane	6 0 0	8 0 0
II	Rice, cotton, til, hemp, indigo, wheat, fruit, gojra, gochni, orchard, vegetables, and gardens.	3 8 0	2 8 0
III	Barley, gram, bejhar and rabi oil-seeds	3 0 0	2 0 0
IV	All other crops	2 0 0	1 0 0

III.—In the case of mixed crops other than those expressly provided for in the schedule of rates, each separate crop will be assessed at the rate of its class.

IV.—If in any field the crop is less than 4 annas, nothing will be charged. If it is 4 annas or more, but less than 8 annas, only half rates will be charged; if it is 8 annas or more, full rates will be charged.

V.—The Settlement Officer was given authority to vary the second and third class rates from village to village in multiples of 2 annas within a limit of 8 annas above or below the scheduled rate. In any village assessed above the minimum rates of these classes, the Collector may, if he thinks the assessment is working badly, reduce the settlement rate by any multiple of 4 annas which he thinks appropriate, provided that he does not go below the minimum rate. An order of the Collector under this rule must be reported to the Commissioner for sanction.

N. B.—In this district such discretion was not exercised as the Settlement Officer considered variation of the rates unnecessary.

VI.—New masonry wells brought into use during the currency of the settlement will be granted protective leases, and crops irrigated from them will during the term of the lease be assessed at the village rate for *barani* crops.

B.—PROCEDURE.

1. Before the commencement of the rainy season the patwari will draw a map on paper of that part of a village which is subject to natural flooding (*dahri*), or will indicate it in one of the copies of the field map prepared by the Rama or other mechanical process, which have been supplied to him for the purpose. During the rainy season he will inspect the areas in question after every appreciable fall of rain, and will draw a line in red ink on the *shajra* showing the limits of the land flooded. Each line shall be signed and dated by the patwari and every entry made by him shall be checked by the field kanungo. If at any of the patwari's inspections there has been no fresh flooding, he need only add a date to the previous line. At the harvest inspection all fields or parts of fields included within the line of flooding will be entered as *dahri*, and the field kanungo and revenue officers will see that this is done. The work of the patwari and kanungo will be carefully checked by the revenue officer of the circle and by the revenue assistant or other assistant collector, 1st grade, specially deputed for this work by the Collector.

2. Unless otherwise ordered by the Collector, the dates for commencement and completion of the *girdawari* shall be as follows:—

Girdawari.					DATE OF	
					Commencement.	Completion.
Kharif	...	...	...	...	September 16th ...	October 31st.
Rabi	...	...	...	...	February 16th ...	March 31st.
Extra Rabi	...	..	...	...	May 15th ...	May 31st.

3. The results of the *girdawari* will be entered in a form of *khasra girdawari* appended (A) especially sanctioned for villages under fluctuating assessment. It contains entries for one year only and a new register will be opened annually.

4. Patwaris will be supplied with duplicate *parcha girdawari* forms (Form B). These forms will be stitched together in book form. As soon as the patwari has inspected the first field of a landowner or occupier he shall give him, if present, a *parcha* with the entry of field number and area under crop relating to that field. He will take the thumb impression of the person on the counterfoil of the *parcha*. If the landowner or occupier be absent, he will make the *parcha* over to the lambardar. Entries will be added to each *parcha* as the patwari proceeds with his crop inspection.

5. In the case of fields in which the patwari thinks that *kharaba* should be given he will leave blank columns 9—12 or 17—20 as the case may be, of the *khasra girdawari* and will enter the fields in a separate *kharaba* list which he will keep up as he makes his *girdawari* (Form C).

6. Every field in this list, and any other field regarding which *kharaba* allowance is claimed, must be inspected by the kanungo or naib tahsildar. The kanungo must inspect as many of these fields as he can and the naib tahsildar must inspect all the remaining as well as 25 per cent. of the fields inspected by the kanungo.

7. Having inspected the fields entered in form C, and any other fields regarding which *kharaba* is claimed, the kanungo or naib tahsildar will comply with the instructions noted in form C, and will then fill up columns 9—12 or 17—20 of the *khasra girdawari* and columns 6—8 of the *parcha girdawari* if the owner or occupier is present, informing him of the entry made. Any field not seen by the kanungo or naib tahsildar must be treated as fully matured. All corrections must be made by the kanungo and naib tahsildar with their own hands, and against every field inspected and every entry made by them they must put their initials. The naib tahsildar shall be finally responsible for the correctness of the *girdawari*, and for disposing at once on the spot of all oral objections made by the zamindars.

8. When the naib tahsildar has completed his check of the *girdawari* of a village, the revenue officer or other assistant collector, 1st grade, specially deputed by the Collector, shall inspect it and shall satisfy himself of its correctness. He shall dispose on the spot of all objections preferred to him whether oral or written, and shall record in his inspection note a list of all corrections ordered by him. These corrections will be made in red ink by the field kanungo under his own initials. The assistant collector, 1st grade, will also record his recommendations on the reports submitted by the naib tahsildar under rule 7 and transmit them to the Collector for orders.

9. After the revenue assistant or other assistant collector, 1st grade, has completed his check of a village, the patwari shall at once call in all *parcha girdawari* and after comparing them with the *khasra girdawari* make any corrections and additions necessary. It shall be the duty of the kanungo to see that the patwari carries out this order properly and without delay. The patwari will then make in the *khasra girdawari* page totals of all columns left blank and totals for the whole village. These totals shall be carefully checked and initialled by the kanungo and naib tahsildar. The patwari will then complete the ordinary *jinswar*, and after entering it in the village note-book forward it to the field kanungo.

10. The patwari shall then immediately prepare from the *khasra girdawari* a *khatauni* in form D. carefully complying with the following instructions:—

- (a). *Khewat* and *khatauni* numbers will be those of the last *jamabandi*.
- (b). Columns 4 and 5 will be in accordance with the changes found at *girdawari* if mutation has been sanctioned or if no mutation is necessary. Where a mutation is necessary but has not yet been sanctioned, the old entry will be maintained in column 4 and the change noted in the column of remarks.
- (c). Entries for the extra rabi will be made in the *khatauni* of the next kharif demand with which the extra rabi demand will be collected.

11. After the *khatauni* has been checked, signed and dated by the field kanungo and naib tahsildar, it shall be submitted not later than November 20th in the kharif, and April 20th in the rabi, to the tahsildar together with the map referred to in rule 1, and an abstract in form E. After the tahsildar has checked and signed the *khatauni* and abstract, and has had the demand entered up by the tahsil *wasil baqi nawis* in his *khatauni*, he shall forward them to the assistant collector, 1st grade, who inspected the *girdawari*. The assistant collector 1st grade will, after satisfying himself as to their correctness send them to the sadr kanungo who will, after checking the calculations, lay them before the Collector by December 1st at the kharif and May 1st at the rabi. When orders have been passed by the Collector, and the sadr *wasil baqi nawis* has noted the sanctioned demand, the *khatauni* and abstracts will be returned to the tahsil for preparation of the *kistbandi* and recovery of the demand.

12. On receipt of the *khatauni* and abstracts in the tahsil, the tahsildar will at once order the patwari to prepare the *fard bachh* by *pattis* in the usual form. The *fard bachh* must be completed and delivered to the lambardar concerned not less than one month before the date of the harvest instalment. Meanwhile the tahsil *wasil baqi nawis* will compare the *goshtwaras* with his *khatauni* and make any corrections that may be necessary, and will then make them over to the tahsil office kanungo who will prepare a general abstract in the same form. A copy of this general abstract together with all the village abstracts arranged by assessment circles will be sent to the sadr kanungo. The sadr kanungo after checking the general abstract with the village abstracts will prepare a statement in form F. for submission to the Financial Commissioner through the Commissioner. The sadr *wasil baqi nawis* will compare the figures with his records and sign the statement.—The sadr kanungo will then make over the general and abstract statements to the English office for translation, and they should reach the Commissioner by the end of December for the kharif and by the end of July for the rabi.

FORM -A.

KHAIRA GIRDAWARI (FLUCTUATING)

Village _____, Tahsil _____ District Delhi,
for A. D. 19 _____ Sambat 19 _____

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Field number.	Name of talaf or patti.	Name of proprietor with brief description and reference to last jamabandi number	Name of cultivator with brief description.	Area	Class of soil according to last year's girdawari.	KHARIF, 19 _____							RABI 19 _____								
						Detail of area cultivated and uncultivated under crop according to class of soil.	DETAIL OF CROPS.							Detail of area cultivated and uncultivated under crop according to class.	DETAIL OF CROPS.						
							Crop with class.	Share of kharaba.	Matured.	Kharaba.	Scale of assessment.	Signature of officer.			Crop with class.	Share of kharaba.	Matured.	Kharaba.	Scale of assessment.	Signature of officer.	
													Transfers of rights, cultivation, rent, and rough temporary sketch, with calculation of area.								Transfers of rights, cultivation, rent and rough temporary sketch with calculation of area.

NOTE.—Columns 7 and 15.—The dimensions ^{E. N.} of such area as it is necessary to chain must be entered in these columns.

Columns 9 and 17.—For orders about the share of kharaba see rule IV. of the rules for framing assessments.

Columns 12 and 20.—The scale of assessment will be either "full rate," "half rate" or "free," vide rules for framing fluctuating assessments.

FORM B.

GIRDAWARI SLIP.

Number of slip _____ No. of slip _____ Harvest 19 _____ Village _____

Name of Village _____ Tahsil _____ District Delhi _____

Harvest, _____

1	2	1	2	3	4	5	6	7	8	9
Date on which the slip is made over to zamindar.	Signature or thumb mark of the person to whom the slip is made over.	Field number.	Name of owner.	Name of cultivator.	Area.	AREA UNDER CROPS.				Remarks
						Name and class of crop with area and soil.	Matured.	Failed.	Scale of assessment.	

NOTE.—This part will be retained by the patwari as a receipt book.

NOTE.—(1) The patwari will make over this slip to the person liable for payment of land revenue.

FORM C.

LIST OF KHARABA.

Village _____, Topographical No. _____, Assessment Circle _____

Tahsil _____ District Delhi (for 19).

1	2	3	4	5	6
Field number.	Subsidiary number according to supplementary map (if any).	Name of crop.	Total area under crop.	Fraction to be allowed as kharaba.	Signature of field kanungo or naib tahsildar with date of entry.

NOTE.—(1). A separate list will be prepared for each girdawari.

(2). The patwari will make entries in this list except column 5 and the field kanungo or naib tahsildar will after inspecting the field fill in column 5 and affix his signature in column 6

FORM D.

KHATAUNI OF FLUCTUATING ASSESSMENT.

Mauza No. _____, Tahsil _____ for the

harvest 19 _____ A. D. Sambat _____ 19

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Khat number.	Khatauni number.	Name of patti with name of lambardar and Jama.	Name of owner with description.	Name of cultivator with description.	Field number.	DETAIL OF CROPS.		ASSESSMENT.			DEDUCTIONS ON ACCOUNT OF		BALANCE DUE			
						Area matured with name of crop and class of soil.	Class of crop.	Scale.	Rate.	Demand.	Protective leases.	Total.	Revenue.	Cesses.	Total.	Remarks.

NOTE.—Columns 7—11.—Total of columns 7—9 must be worked out for each holding and page in order that form E may be compiled. Columns 10 and 11 therefore should be filled up against these totals for the holding, and not against each field.

Patwar circle _____, Tahsil, _____, for _____ harvest 19
Sambat 19

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31																	
Serial number.						Assessment Circle						Topographical number.						Name of village						Area sown						Area ..						Rate ..						Demand ..					
Detail						AREA UNDER MATURED CROPS																		BALANCE TO BE RECOVERED																							
						Chahs and dahrs								Other								All soils		Land revenue.																							
						Class I.		Class II.		Class III		Class IV.		Class I.		Class II.		Class III		Class IV		Class III																									
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						Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate																							
						Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate																											
						Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate																							
						Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate																											
						Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate																							
						Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate																											
						Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate																							
						Full rate		Half rate		Full rate		Half rate		Full rate		Half rate		Full rate		Half rate																											

FORM F.

District Delhi, Harvest 19 Sambat 19 .

1	2	3	4	5	6	7	8	9	10	11	12	13
Serial number.	Tahsil.	Assessment Circle.	Matured.	Failed.	Sown	Total assessment.	Khalasa.	Assigned.	Total.	Average assessment of previous harvest since settlement.	Average assessment as calculated at settlement.	Remarks explaining the difference between the amount in column 7 and those in columns 11-12.

Notes.—The average in column 11 will be calculated on the same harvests as those for which the abstract is prepared, e. g., if the abstract is for the kharif harvest, the average in column 11 will be that of the previous kharif harvest only.

APPENDIX VII.

A.—ALLUVION AND DILUVION RULES RELATING TO ESTATES SUBJECT TO THE ACTION OF THE JUMNA RIVER IN THE DELHI DISTRICT SANCTIONED IN FINANCIAL COMMISSIONER'S No. 6110, DATED 8TH DECEMBER 1909.

1. When by river action land assessed as cultivated is carried away or rendered unfit for cultivation (or land assessed as pasture is carried away or rendered unfit for grazing), the assessment thereon shall be remitted.

2. New cultivated land added by alluvion since settlement shall on first cultivation be assessed at the full rate stated below if the crops grown are of the first class, and at half that rate if the crops are of the second class. The full rate shall be Re. 1-8-0 per acre throughout the district except in mauza Delhi where it will be Re. 3. All crops excepting peas, masur, melons, vegetables, and fodder are first class crops. If land fit for grazing is alluviated to mauza Delhi the assessment shall be As. 8 per acre.

3. No assessment shall be imposed under rule 2 on crops which yield a 4-anna outturn or less, and if the outturn is more than 4 annas and less than 8 annas only half the rate assessable under these rules shall be imposed.

4. Land assessed below full rates under rule 2 or rule 3 shall be assessed at the full rate as soon as first class crops are grown on it. The settlement rate, or the full rate imposed under rule 2, shall not subsequently be lowered because the land is found to be sown with inferior crops, unless there is reason to believe that its quality has deteriorated owing to river action. The words river action (*sadma darya*) include a continued change in the course of the river which prevents land assessed at first class rates from continuing to produce first class crops.

5. The classification of land should not be too minute. If a survey number is not very large, it will usually be best to apply a single rate to the whole number although different parts of the field may differ somewhat in the character of the crops grown.

6. In calculating the revenue, no fractions of a *bigha* less than half will be taken into account. Any number of *biswas* below six will be disregarded. Six to fourteen *biswas* will be treated as half a *bigha*, and any number of *biswas* above 14 as a whole *bigha*.

B.—PROCEDURE RULES.

1. In each year as soon as the river has fallen to its ordinary cold weather level, which will ordinarily be the 1st of December, measurements will be made in the case of estates affected by river action, in order to bring on to the record the changes caused by the river, and to enable land to be assessed which has improved or deteriorated from the same cause.

2. If changes have occurred in a village of which the boundaries are fixed, the total area will not be altered and the only result will be an alteration in the area of each class of land. If changes have occurred in a village in which the deep stream rule is in force, the total area of the village will be changed as well as the area of one or more classes of land, and the patwari will have to make measurements to ascertain the extent of the changes.

3. The patwari should first make a tracing from his map of the village of the part of the area liable to be affected by river action, and will show on this the area—

- (1) lost by diluvion;
- (2) thrown out of cultivation by water or sand;
- (3) gained by alluvion;
- (4) brought into cultivation for the first time; or
- (5) liable to have its assessment altered.

It will seldom be necessary to show the whole *bet* in this tracing but on the other hand he should not be satisfied with merely showing the actual fields affected. He should also show all fields which actually touch any field which has undergone alteration, so as to indicate at once the position in the whole village map of the fields in which change of area has occurred, or in which the assessment has to be revised. These tracings will be on ordinary "Hinai" paper.

4. The simplest case is where the only change is loss by diluvion, or where land has been thrown out of cultivation by water or sand. Here the patwari will by offsets from the nearest squares plot on his di-alluvion tracing for the year, the position—

- (1) of the near edge of the deep stream; and
- (2) the line of erosion, which will not necessarily coincide with the edge of the deep stream.

He will show the former by a red line and the latter by a blue line, at each end of which he will affix the year and his signature. He should write *dhar kalan* against the

deep stream and *burdi* against the blue line. If whole fields have been carried away, his last year's *jamabandi* will give him the area of each. If only a part, then he will chain what remains and so ascertain the area washed away. Where there has been no other change except diluvion, he may show it on his last year's tracing and there will be no necessity for making a fresh tracing each year.

5. When land has been gained by alluvion, the position of the edge of the deep stream and of the land gained will be ascertained by producing the squares of the village and taking offsets. The patwari will indicate the position of the deep stream and the limit of the old land by red and blue lines as in rule 4, writing *dhar kalan* and *baramad* with the year at each end of the line to which the entry relates. The field numbers to be given to the new area should start from the last number in use in the old map, the highest numbers being given to those fields nearest the river. If the new land is all uncultivated, the limit of the survey numbers should correspond with the limits of the squares. In case these square survey numbers should be divided up into cultivated fields in subsequent years (when it should be necessary to number them according to Revenue Rule 82) sufficient room should be left in the page of the *khasra girdawari* in which they appear.

6. In villages with fixed boundaries, in which land which was before uncultivated has been brought under cultivation, the patwari will on the ground reproduce the squares covering the part of the village affected, and will plot in by offsets from them the new fields which have been formed, numbering them according to the system laid down in Revenue Rule No. 82. If this can be done on the last year's di-alluvion map without producing confusion, he need not prepare a fresh tracing, but in other cases he should prepare a fresh copy of the tracing. Whenever at the end of the fourth year special attestation is carried out, a fresh tracing will have to be prepared by the patwari for his own use.

7. All fields which are affected by river action and which are surveyed under the operation of either of the three preceding rules will be entered by a patwari in a *khasra* (form A appended). The kanungo will check the measurements and the statements which the patwari has filled up, and will satisfy himself that the patwari has included in his maps and field book all land which should be included. As soon as the *khasra* has been checked by the kanungo, the patwari will prepare from it in duplicate in form B a village abstract of changes due to river action. He will make all the entries in columns 1 to 3, and also those giving the details of area and revenue for the previous year, in ink. The entries showing deductions and additions and the area and revenue for the current year will be made in pencil. So that improvement in the conditions of fields already unassessed or assessed at second class rates may not be overlooked and so that an assessment at higher rates may be imposed at the proper time, the patwari will keep a separate register of those fields (form E attached). Any fields in which enhancements of revenue are necessary will be dealt with by the tahsildar under the rule following.

8. The tahsildar will test the maps, etc., on the spot and pass orders as to classes of soil and rates after inspecting the fields and examining the entries in form A and B. He will cause to be entered in ink in the *khasra* the class and rate for each field as determined by himself and will see that the necessary entries are made in the register E of fields assessed below full rates. He will add a brief note to the file, explaining the changes which have occurred at his assessment proposals. He will then sign the maps, *khasras*, extract from register and abstracts of area and revenue (form B), taking over the extract and the Government copies of the other papers.

9. When the Collector or revenue officer deputed by him to pass final orders on the assessment disposes of the case, any corrections in the papers required will be made in the Government copies, and the patwari will be ordered to correct his own copies. He will also prepare in duplicate a *khewat* showing the result of the new assessment (form C), and forward both copies to the tahsildar through the kanungo. The tahsildar will see that the *khewat* agrees with the orders, and signing both copies will file one with the record and return the other to the patwari. The latter will embody the new figures in future *bachh* papers, and will give a *fard* showing the result, free of charge, to each *khewatdar* concerned.

10. The whole file regarding changes of assessment due to river action will be prepared on Lucknow paper, stitched at the back in book form. The tracings of maps will be on sheets not exceeding the size of a *masawi*. These will be placed in an envelope of the full size of the file, and will not be folded more than twice.

11. Form D, the statement of changes in assessment due to river action, will be prepared *tahsilwar* as prescribed in Revenue Circular No. 83.

APPENDIX VIII.

RULES FOR THE ADMINISTRATION OF LAND REVENUE IN VILLAGES AFFECTED BY *SHOR* (SANCTIONED BY PUNJAB GOVERNMENT No. 49, (REVENUE), DATED 6TH FEBRUARY 1909 AND APPLIED TO THE DELHI DISTRICT BY PUNJAB GOVERNMENT LETTER No. 2006 S. (REVENUE), DATED 2ND SEPTEMBER 1909).

A.—GENERAL.

1. At harvest inspections field kanungos and revenue officers shall pay special attention to fields assessed as cultivated at settlement, which have become unculturable owing to *reh*, and to fields on which the land revenue has been remitted owing to *reh* which are again cultivated.

2. When a new harvest inspection register is opened, column 5 shall show in red ink the class of soil at settlement (*i. e.*, according to the *jamabandi* of 1909-10) in addition to the class of soil according to the last *jamabandi*, provided that the latter differs from the former, *i. e.*, *ghair mumkin nahri reh*.

B.—REMISSION OF LAND REVENUE ON LAND BECOMING UNCULTURABLE OWING TO *REH*.

3. Any field or part of a field, which owing to the spread of *reh*, has become unculturable shall be entered by the patwari in his harvest inspection register as *ghair mumkin reh*.

Ordinarily such a field shall be deemed unculturable if it has not been cultivated for successive harvests.

4. During the progress of the rabi *girdawari* the patwari shall draw up in the form annexed (form A) a list of fields newly entered during the year as *ghair mumkin reh*. Only those fields shall be entered of which the whole area is affected, or if less than the whole area is affected, of which the area affected is not less than three *bighas*.

5. When complete the list shall be forwarded to the field kanungo, who shall inspect any field entered therein which he has not already inspected at the harvest inspection, and then after checking and signing it shall forward it to the revenue officer of the circle. The latter after inspecting 50 per cent of the fields entered in the list (if he has not already done so at the harvest inspection) and satisfying himself of its correctness shall forward it to the tahsildar if he is not himself the tahsildar. The list should reach the tahsildar not later than April 15th.

6. The tahsildar shall have an abstract prepared for his tahsil in form B annexed, and shall submit it together with the detailed list to the Collector by April 20th.

7. After passing orders on the proposals the Collector shall suspend the land revenue which he considers remissible, and shall submit to the Commissioner of the Division a statement in the prescribed form for sanction to remit the sum in question.

8. The suspension order passed by the Collector shall be at once communicated to the tahsildar, who will have effect given to the order in the harvest *bachk*.

On receipt of sanction to the proposed remission the amount shall be struck off the next fixed rent roll.

C.—RE-IMPOSITION OF REMITTED LAND REVENUE.

9. During the rabi *girdawari* the patwari shall draw up a list in form C attached, of fields or parts of fields on which the land revenue assessed at settlement has been remitted owing to *reh* and which have been cultivated during the year. No entry shall be made in the list unless the whole field has been cultivated, or where only part has been cultivated unless that part exceeds three *bighas*. At the time of making the entry a *parcha* in form D annexed shall be given by the patwari to the person affected by the entry, or in his absence to the lambardar. Objections may be preferred to the tahsildar by the persons affected within 15 days of the delivery of the *parcha*.

10. The lists after being dealt with as in rule 5 shall reach the tahsildar not later than April 15th. The tahsildar after disposing of the objection (if any) shall prepare an abstract in form E annexed and submit it with the lists and objections to the Collector by April 30th.

11. After passing orders the Collector shall prepare and submit to the Commissioner a statement in the prescribed form for sanction to the proposed increase of land revenue, and shall return the abstract and lists to the tahsildar with orders to collect the amount in question with the rabi instalment as fluctuating land revenue. On receipt of sanction the new land revenue shall be added to the next fixed rent roll.

A.—List of fields damaged by REH (SHOR) requiring remission of ~~muon~~ land revenue in Patwari circle No. _____, Tahsil _____ District Delhi, for Rabi.

1	2	3	4	5	6	7	8	9	10	11
Serial number.	Name of village with had-bast No.	Number of holding of last jamabandi, khewat, khatanni.	Number of landowner with brief description.	Name of cultivator with brief description.	Field number.	Area	Land revenue.	Cesses.	Total	REMARKS.

NOTES —1.—Column 6.—When part of a field is affected the word "min" should be entered.

2.—Column 7—10.—If there are more entries than one in any village, total for the village should be entered

3.—At the end of entries for each village number of acres in column 7 and rate per acre in column 11 should be noted in red ink.

B.—Abstract of fixed land revenue remissible on account of REH for Rabi 19 _____ in _____ Tahsil, Delhi District.

1	2	3	4	5	6	7	8
Serial number.	Number of had-bast.	Name of village.	Area in acres of land rendered unculturable by reh.	LAND REVENUE REMISSIBLE ON AREA NOTED IN COLUMN 4			REMARKS.
				Land revenue	Cesses.	Total	

C.—List of fields for which the re-imposition of remitted land revenue is proposed in Patwari circle No. _____ Tahsil _____ District Delhi, for Kharif.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Serial number.	Name of village with topographical number.	Number of holdings of last jamabandi, khewat, khatanni.	Name of landowner with brief description.	Name of cultivator briefly.	FIELDS OF WHICH LAND REVENUE WAS REMITTED OWING TO reh, BUT WHICH HAVE SINCE BEEN CULTIVATED.			Harvest and year in which land revenue was remitted.	Harvest in which subsequently cultivated.	DETAIL OF REVENUE TO BE IMPOSED			REMARKS.
					No. of field.	Area.	Crop sown.			Land revenue.	Cesses.	Total.	

NOTES.—Columns 6-7—1.—If only part of a field is affected enter the word "min."

Columns 7 & 11—13—2.—If there are more entries than one for any village, totals for the village should be entered.

3.—At the end of entries for each village number of acres in column 7 and rate per acre in column 11 should be noted in red ink.

D.—Parcha relating to the re-imposition of land revenue.

Parcha relating to the re-imposition of land revenue on account of cultivation of land affected by reh No.
 counterfoil.

1	2	3	4					
No.	Foil.	Name of malguzars with parentage, caste and residence.	Signature, seal, or thumb impression of malguzars or lambardar.	Field No.	Area.	Land Revenue to be imposed.	Harvest from which proposed.	Signature of patwari with date of delivery.

NOTE—Objection can be preferred to the tahsildar within 15 days after which they will not be entertained.

E.—Abstract showing fixed land revenue required to be re-imposed on lands which are again cultivated after the land revenue has been remitted on account of reh for kharif 19 tahsil, district Delhi.

1	2	3	4	5	6	7	8
Serial number.	Topographical number.	Name of Village.	Area in acres the land revenue of which was remitted for reh, but which has since been sown	LAND REVENUE TO BE RE-IMPOSED.			REMARKS.
				Land revenue.	Cesses.	Total.	

APPENDIX IX.

STATEMENT OF PROTECTIVE LEASES GRANTED IN RESPECT TO WELL ASSESSMENTS

1	2	3	4	5	6	7	8	9
Harvests in which leases will expire.	SONEPAT.		DELHI		BALLABGARH.		DISTRICT.	
	Number of wells whose leases will expire	Amount of abiana falling due	Number of wells whose leases will expire.	Amount of abiana falling due	Number of wells whose leases will expire.	Amount of abiana falling due	Number of wells whose leases will expire.	Amount of abiana falling due
		Rs.		Rs.		Rs.		Rs.
Kharif 1910	42	485	4	11	5	64	51	563
" 1911	55	704	21	130	8	110	84	944
" 1912	49	617	24	155	4	29	77	801
" 1913	67	733	26	200	5	60	98	983
" 1914	48	560	19	95	11	123	78	778
" 1915	68	793	41	316	14	139	124	1,248
" 1916	82	829	39	198	12	93	133	1,120
" 1917	69	787	50	309	11	110	130	1,206
" 1918	79	921	27	169	14	143	120	1,233
" 1919	80	879	53	268	13	169	146	1,280
" 1920	43	461	41	199	10	76	94	736
" 1921	37	417	26	158	21	250	84	825
" 1922	50	585	21	106	12	113	83	804
" 1923	60	656	13	90	23	203	96	949
" 1924	68	761	16	81	16	166	100	1,008
" 1925	61	673	14	107	17	152	92	932
" 1926	59	627	19	109	13	96	91	832
" 1927	30	350	15	112	15	87	60	549
" 1928	7	80	20	109	10	52	37	251
" 1929	"	"	7	23	7	33	14	56
" 1930	"	"	5	46	2	27	7	73
" 1931	"	"	10	44	6	27	16	71
" 1932	"	"	12	56	5	17	17	73
" 1933	"	"	21	72	4	18	25	80
" 1934	"	"	12	60	3	18	15	78
" 1935	"	"	28	106	5	14	33	130
" 1936	"	"	1	3	2	6	3	11
" 1937	"	"	2	4	5	89	7	82
" 1938	"	"	"	"	2	26	2	26
Total	1,055	11,928	587	8,330	275	2,422	1,917	17,689

A. B.—Under the orders conveyed protective leases were granted to new masonry wells for twenty years throughout the district, but in Chaka Kohi and Dabar the period of protection was extended to thirty years.

APPENDIX X.

Instructions for the use of Abstract Village Note Books and for suspension and collection of Arrears of Land Revenue sanctioned by Settlement Commissioner's No. 2738, dated 29th July 1901.

Abstract Village Note Books in the big-plot form printed below have been prepared and bound up in interleaved volumes for each assessment circle:—

تعمیل		ABSTRACT OF AGRICULTURAL STATISTICS AND REVENUE COLLECTIONS.				
Assessment circle.	چک تشخیص	Land Revenue (exclusive of garden assessment) announced 1909-10.				
	موضع	Instalments	Kharif	خريف	Rabi	ربيع
tion by Settlement Officer.		Barani unit crop parta (round).				
تشریح حیثیت معجزہ صالح - مہتمم ہندوستان		„ „ danger rate.				
Remarks by Settlement Officer.		Special assessment on gardens.				
		کیفیت صالح مہتمم ہندوستان				

N. B.—(i) The figures omit statistics of areas and revenue relating to gardens especially assessed.

(ii) The number of *barani* units matured in columns 6 and 10 is obtained by doubling irrigated area matured, and adding to the *barani* matured area so column 6 = column 3 \times 2 + column 4. It follows that column 12 = column 11 \div column 6, and column 17 = column 16 \div column 10.

- (۱) نقشہ ذیل میں اعداد رقبہ و جمع باغات شامل نہیں ہیں
- (۲) رقبہ پختہ مصورت دارانی خانہ نمبر ۶ و ۱۰ رقبہ پختہ اپناش کے درجہ کر رقبہ پختہ دارانی میں جمع کر کے حاصل ہوگا۔ پس خانہ نمبر ۶ و ۱۰ خانہ نمبر ۳ \times ۲ + خانہ نمبر ۶ اسی طرح خانہ نمبر ۱۲ برائے خانہ نمبر ۱۱ \div خانہ نمبر ۶ اور خانہ نمبر ۱۷ برائے خانہ نمبر ۱۶
- نمبر ۱۰۔

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Year.	سال	Crop Statistics.								Revenue Statistics.								Total remaining under suspension at the end of agricultural year.	Cultivated area under mortgage.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		Kharif.				Rabi.				Kharif.				Rabi.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Average 5 years of assessment reports.	پنج ساله اوسط درجہ رپورٹ تفصیلی	Area irrigated matured.	رقبہ پختہ آبپاش	Area unirrigated matured.	رقبہ پختہ غیر آبپاش	Area failed.	خرابہ	Total barani units matured.	کل رقبہ پختہ بصورت بارانی	Area irrigated matured.	رقبہ پختہ آبپاش	Area unirrigated matured.	رقبہ پختہ غیر آبپاش	Area failed.	خرابہ	Total barani units matured.	کل رقبہ پختہ بصورت بارانی	Land revenue demand.	معاملہ	Barani unit crop parts.	مقدور بارانی بڑے رقبہ پختہ	Land revenue suspended.	معاملہ ملتویہ	Land revenue remitted.	معاملہ معاف شدہ	Suspended revenue collected.	معاملہ ملتویہ وصول شدہ	Land revenue demand.	معاملہ	Barani unit crop parts.	مقدور بارانی بڑے رقبہ پختہ	Land revenue suspended.	معاملہ ملتویہ	Land revenue remitted.	معاملہ معاف شدہ	Suspended revenue collected.	معاملہ ملتویہ وصول شدہ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

An abstract of the statistics of permanent interest has been prepared in English in the following form, so that the Collector may have to hand in an abbreviated form information, to which he can refer when necessary.

1	2	3	4	5	6	7	8	9
Tahsil.	Assessment circle.	Village.	Classification.	AVERAGE BARANI UNIT CROP PARTA.		DANGER RATE BARANI UNIT CROP PARTA.		REMARKS.
				Kharif.	Rabi.	Kharif.	Rabi.	

Note to Column 4.—The villages have been placed in three classes.

A. Secure, i. e., villages in which suspensions will probably be never required.

B. Insecure, i. e., villages which can weather one bad harvest, but which will require suspensions if bad harvests succeed one another in close proximity.

C. Very Insecure, i. e., villages whose revenue may have to be suspended after one bad harvest.

Note to Column 5-8.—The produce estimates prepared for the assessments reports show that the cash rate per acre of crops (of owner's rent or the Government share) is as a rule almost exactly double on irrigated land of what it is on unirrigated. For the purpose of these columns therefore the irrigated area cropped is multiplied by two and added to the unirrigated area, and the total is divided into the demand to obtain the "barani unit crop parta."

2. The classification of villages in the various circles, with the reasons for it, is shown in the following table, in which the danger rates are also given. One danger rate has generally been found sufficient for a circle, but in four circles of the Ballabgarh tahsil the conditions are such as to require their sub-division each into two parts, with separate danger rate.

1	2	3	4	5	6
Tahsils.	Assessment Circles.	Classification.	DANGER RATE (BARANI UNIT CROP PARTA PER ACRE CROPPED).		REMARKS
Sonepat ...	Khadir ...	Secure ...	3 4 0	3 4 0	Protected by wells generally. A few villages in secure sailab area unimportant.
Do. ...	Bangar ...	Do. ...	3 4 0	3 10 0	Protected by the Western Jumna Canal. Villages on the eastern border protected by wells. A few villages insecure.
Do. ...	Khadir ...	Secure ...	3 0 0	3 8 0	Protected by wells or by river flooding. A few villages insecure.
Do. ...	Bangar ...	Do. ...	3 0 0	3 8 0	Like Sonepat Bangar.
Do. ...	Dabar (Chak pakka).	Very insecure	3 0 0	3 4 0	Almost entirely dependent on the rainfall. A few villages secure owing to sufficiency of wells.
Do. ...	Dabar (Chak jhil)	Secure ...	...	...	Under fluctuating assessment.
Do. ...	Kohi ...	Very insecure	2 8 0	3 8 0	Entirely dependent on rain.
Do. ...	Khandrat ...	Secure ...	4 0 0	4 0 0	Protected by Western Jumna Canal to a small extent near Delhi. Generally protected by wells, but a few barani villages are insecure.
Do. ...	Mauza Delhi ...	Do. ...	...	...	Circumstances are special, canal, wells, and river flooding afford security.
Ballabgarh	Khadir ...	Very inse- cure.	{ 2 8 0 3 0 0 }	{ 3 0 0 4 0 0 }	Secure quite close to the river owing to the floods but insecure elsewhere. Wells are insufficient.
Do. ...	Bangar ...	Do. ...	{ 3 0 0 4 0 0 }	{ 3 8 0 4 0 0 }	Generally insecure as canal and well irrigation is insufficient. A few secure villages.
Do. ...	Dabar ...	...	{ 3 0 0 3 8 0 }	{ 4 0 0 4 8 0 }	Entirely dependent on rain, but a few villages are secured by bands.
Do. ...	Kohi ...	...	{ 2 4 0 2 8 0 }	{ 3 0 0 3 8 0 }	Ditto. ditto.
Do. ...	Khandrat ...	Secure ...	4 0 0	4 0 0	Generally protected by wells. A few villages protected by bunds, but several villages are almost entirely barani.

Note.—To columns 4-5.—See note column 5-8 of table in paragraph 1.

3. To assist the office kanungo in making entries in the Abstract Village Note-book, the patwari will file with the Jinswars a slip showing the harvest statistics in the following form :—

1	2	3	4	5	6	7	8	9
Village.	Harvest.	Area irrigated matured.	Area unirrigated matured.	Area failed.	Total barani units matured.	Land Revenue demand.	Barani unit crop parta of the harvest.	REMARKS.

The office kanungo after checking will enter up the required columns of the Abstract Village Note-book.

4. For all villages in which the Barani Unit Crop Parta tops the danger rate, the office kanungo will prepare form A (Standing Order No 30, paragraph 2) and place it before the Tahsildar. The class of the villages A, B and C, (see note to column 4 of the table in paragraph 1) should be entered in column 3 of the form.

5. Similarly for all villages in which suspended revenue is outstanding and the normal barani unit crop parta is not appreciably exceeded, the office kanungo will prepare form C and lay it before the Tahsildar.

6. The Tahsildar will submit his recommendations to the Collector through the Assistant Collector, who has inspected the girdawari of the tract in question, and both his recommendations and those of the Assistant Collector should be based on their knowledge of the local conditions and not merely on the statistics of the Abstract Village Note-book.

7. Form B will be prepared only when special occasion arises.

8. The Collector in anticipation of sanction will pass orders for the immediate suspension of the present demand or the collection of the suspended revenue, and subsequent procedure is laid down in the Standing Order No. 30. Both he and the revenue subordinates should bear in mind the following for general consideration.

9. The kharif is a fodder crop generally except where cotton, sugarcane and pepper prevail suspensions will seldom be necessary except where the crop has been flooded out in the Kharif.

10. The rabi is essentially a food and profit crop: a bad rabi will probably necessitate suspensions varying in degree in all class C villages and possibly in a few class B villages.

11. Ordinarily suspensions should be given of the whole, a half, or a quarter of the demand. The simplest way of passing an order is to direct that so many annas per rupee of land revenue will be suspended. For forming a decision as to the amount to be suspended the barani unit incidence (see note to table in paragraph 1) is the statistical guide: if the danger rate is reached probably half the harvest kist should be suspended, and if the danger rate is appreciably exceeded a full suspension may be necessary.

12. Suspended revenue should be collected in fractions of the current demand primarily as gauged by the incidence. Except in special years the collections of suspensions after a kharif harvest ought not to be great. After a good rabi harvest up to double the existing demand can be realised.

13. Harvests in the Ballabgarh tahsil being generally very precarious there is often the possibility of famine. It should be remembered that prompt suspension of land revenue will save profuse expenditure in famine relief: at the same time care must be taken not to demoralise the people by excessive leniency, so collections of arrears should be resolute.

APPENDIX XI.

COMPARATIVE DEMAND STATEMENT OF THE DELHI DISTRICT.

1	2	3	4	5	6	7	8
Tahsil.	Assessment Circles.	Revised Settlement, 1880.		Third regular settlement, 1909-10.		Percentage of increase of the new demand.	REMARKS.
		Demand.	Incidence per acre of cultivation.	Demand.	Incidence per acre of cultivation.		
Sonapat.	Khadir	1,47,052	2 0 0	1,96,375	2 7 5	34	
	Bangar	1,92,568	1 10 10	2,80,845	2 5 0	46	
	Total ...	3,39,620	1 12 10	4,77,220	2 5 11	40	
Delhi.	Khadir	20,517	2 1 2	27,157	2 1 0	32	
	Bangar	1,12,648	1 9 3	1,51,091	2 0 10	35	
	Dabar (pakka)	1,08,849	1 8 10	98,625	1 9 4	6	* Estimated revenue.
	Do. (jhil)			*15,225	1 11 9		
	Kohi	13,879	1 0 10	16,934	1 1 11	22	
	Khandrat	22,303	2 5 6	22,661	2 11 1	2	
	Do. gardens	3,451		13,609	9 10 6	293	
	Mauza Delhi	9,374	2 13 9	*13,175	7 5 10	41	* Includes Rs 3,101 on 809 acres of garden land.
	Total ...	2,91,021	1 10 0	3,60,368	1 14 10	24	
Ballabgarh.	Khadir	51,474	1 4 4	47,890	1 6 1	-7	Decrease on account of burdi and shor.
	Bangar	97,455	1 9 11	1,24,095	2 1 3	27	
	Dabar	51,404	1 8 8	54,250	1 0 7	8	
	Kohi	20,645	0 15 10	24,330	1 1 2	18	
	Khandrat	13,289	1 14 9	18,650	2 8 7	40	
	Total ...	2,34,267	1 7 2	2,69,215	1 11 5	15	
	Total District ...	8,64,808	1 10 3	11,06,803	2 0 0	27	

N. B.—The figures for the revised settlement are calculated so as to refer to exactly the same areas as the figures for the 3rd regular.

Major head of service.	Budget heading.	Total expenditure.
	Salary and settlement Allowances of Gazetted Officers	Rs. 99,854
	A.—OFFICE ESTABLISHMENT.	
	(1). Office Establishment of Assistant Settlement Officers
	(2). Office Establishment on fixed pay, including English-writing allowance of Office Kánúngós.
	(3). Office Kánúngós	18,579
	(4). Menial Establishment	23,358
	Total Office Establishment	41,637
	B.—FIELD ESTABLISHMENT.	
	(5). Settlement Tahsildárs	27,707
	(6). Settlement Naib Tahsildárs	43,173
	(8). Field Kánúngós	65,211
	(9). Field allowances of Field Kánúngós	
	Total Field Establishment	1,36,091
	(10). Temporary Establishment	77,231
	(11). Settlement allowance to District Patwáris	18,213
	(12). Special allowance to Head Clerk and Názir	276
	Total Pay of Establishment	2,73,448
	Travelling allowance of Officers	4,748
	Ditto of Establishment	16,847
	Contingent expenditure except Stationery and Lithography	43,984
	Stationery	4,900
	Lithography	2,617
	Total Contingent Expenditure	51,501
	GRAND TOTAL	4,46,898
	Cost per square mile of { (a) total area	352
	{ (b) cultivated area	525